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Editorial Board: Mariana IOVIŢU, Adrian GHENCEA, Claudiu POPA
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Quality Management System-Management Tool to Maintain and Continuously Improve Product Quality

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Quality management is a set of activities aimed at achieving goals by optimal use of resources. Product quality is the final expression of the quality of production processes, which summarizes the technical performance, economic, psycho-sensory, availability, etc. On the other hand, the quality of marketed products is perceived differently by customers and suppliers.

This paper presents how quality management is a tool for maintenance and continuous improvement of quality products made by SC ELIS Ltd.

Theoretical considerations on quality management

“Product quality is not everything, but everything is nothing without quality.” (Peters and Waterman - “In Search of Excellence”).

Quality, which means the quality of processes and outcomes, is and will always be a major competitive factor, if not the most important.

ISO 8402 defines quality as “the different characteristics of an entity that gives it the ability to meet the needs expressed or implied.”

Quality management is a set of activities aimed at achieving some objectives by optimum utilization of resources. This set includes planning, coordination, organization, control and quality assurance. Now proposes a series of “strategic objectives”: economic, social, technical, commercial, which is achieved through “operational objectives”. The latter include: obtaining products and services of appropriate quality requirements, quantity requested, the date agreed and are available at the desired market place, however, in terms of cost.

A good quality management system must have the following characteristics:
• to be established in writing;
• to ensure customer requirements;
to ensure that the requirements of the organization;
• to be applicable in all activities of the organization.

Benefits of implementing the quality management system are obvious for customers but also for the organization which provides:
• increasing revenues and reducing costs;
• credibility (customers and potential customers prefer to make purchases from ISO certified suppliers, knowing that they rigorously monitor all processes within the organization acquires products at minimum cost and quality guaranteed)
• improving the image of the organization;
• differentiation from the competition;
• increasing customer satisfaction;
• facilitate participation in tenders;
• control of all processes within the organization;
• awareness (accountability) staff involvement in achieving the organization’s objectives;
• certificate attesting operation of a quality management system is a valuable marketing tool.

ISO 9001 specifies requirements for a quality management system where an organization needs to demonstrate it’s ability to provide products that meet customer and applicable regulatory requirements aimed at improving client satisfaction. The standard is focused on addressing procedural organization in order understanding and meeting the quality requirements, focusing on continuous process improvement.

Quality management system, the organization must meet an acceptable level requirements of stakeholders. They are: employees, owners and investors, suppliers and other partners, society as a whole.

**Quality management system to sc elis ltd**

Quality management system as a management tool to maintain and continuously improve product and service quality, get real satisfaction because:
• increase labor productivity through efficient use of personnel, equipment and resources is often generally;
• improve the organization’s image and it’s credibility in the market;
• are stimulated communication and teamwork - that rewarding staff organization;
• is aware of the need to staff the organization achieve product / service quality, developing quality-oriented culture;
shortcomings are removed from the processes of organization and tense working atmosphere, which results in improved organizational climate, relationships between employees.

A system of quality management in a company gives confidence that products and services meet the requirements demanded by the customer, statutory and regulatory requirements, the organization is able to develop specific market.

**Brief overview of SC ELIS Ltd**

In 2006 manufacturers of paving and curbs local market estimated at 66 million, and in 2007 grew by 30%-40% to over 90 million. Upward trend due to urban and rural infrastructure investments financed from EU funds, and the constant development of residential construction. Paralysis of the banking system in late 2008 was felt more acutely in 2009 and then decreased proportional, according to estimates this market reaching a value of 75 million euros and a volume of approximately 9,000,000 square meters. One of the companies that have continually increased the market was SC ELIS Ltd. 19-year-old market, the company currently has two production unit's in Petresti - White and Stoenesti - Prahova. They provide a volume of approximately 240,000 sqm / month, producing it here at paving residential paving for patios, industrial pavements and curbs, gutters and bricks to.

Strategy regarding future short-term investments is considering only those industries which aim to increase profitability and efficiency is excluded work. An investment in increasing production in the medium term if the market demands it. From an analysis performed by SC ELIS Ltd for the first half of 2011 it was found that the highest sales volumes were recorded for industrial products: industrial pavements, curbs and gutters. Share curb sales of total sales amounted SC ELIS Ltd somewhere over 30%, which is kept for several years, with small variations of a few percent. Only 5% is the share of direct contracts with state contracts obtained through public auctions, most works are in production areas Alba and Prahova. The rest works with state partners is achieved by the company. SC ELIS Ltd has, besides the national network of distributor (deposit's of construction materials), and partnerships with some of the big retailers like Dedeman and Brithouse, but the percentages obtained from sales through this channel are still low.

**ELIS S.C Pavement Management S.A.** states that implementation and integrated quality management system certification and occupational safety sanatate environment is a priority for sustainable development of society and a factor to increase confidence of customers and partners.
General requirements for quality management system

The organization has established, documented and maintained an integrated management system that includes quality management system according to the requirements of ISO 9001:2008, Environmental Management System according to the requirements of ISO 14001:2004, Security management systems and health work according to the requirements of OHSAS 18001:2007 and social responsibility management system as required by the SA 8000:2008.

Integrated management system is built on quality management system structure.

SMI is subject to a continuous process of improving it’s effectiveness by planning, monitoring and analysis, followed by appropriate actions in all relevant functions in the organization.

Relevant levels and functions set out in organizational management are:

- Level 1 (the highest management level): CEO, CEOs
- Level 2 (management functions): Heads of departments.

Process types are defined:

1. management processes;
2. basic processes (business);
3. support processes
4. processes of analysis, measurement, improvement.

Sequence and interaction of these processes are established process map in Annex 2.

For processes that have or may have an impact on the environment by appropriate documentation are set environmental issues, their environmental impacts, and measurable environmental parameters and/or actions necessary to minimize or even eliminate the impact.

If the process SSM is associated risks, identify hazards and assess risks in SMI documents.

Social responsibility requirements, are designed to protect the rights of workers, to improve working conditions and communication between workers and management, in accordance with national laws and all requirements to which SC ELIS Ltd. subscribed.

When SC ELIS Ltd choose to outsource some processes that affect product conformity / work requirements, the company provides control of these processes fulfilling the requirements of PP-7.4 “Supply” (in the assessment).

Currently outsourced processes - all or part are: transport (partly),
measurement checks, internal audit SMI, computer network maintenance.

The most important step in quality planning is to identify specific processes within the company, processes capable of producing features of the service. Thus, in developing, implementing and improving effective quality management system was adopted procedural approach, meaning a system of processes, together with the identification, interaction and management.

Procedural approach emphasizes the importance of:
- Understanding and meeting the requirements of the standard;
- Need to take into account the value added processes;
- Achieve results in terms of performance and effectiveness of the process;
- Continuous improvement of processes based on objective measurement;

Existing quality management system in SC ELIS Ltd since 2005, is based on processes that are in principle three ways:
- The main processes for manufacturing a product - are processes for which the customer pays that creates value, determines the quality of products;
- Support processes, supporting - are processes that support the core processes and management processes, which ensures their normal operation without loss;
- Management processes - processes that workflows are the main and support processes.

**Quality objectives**

Strategic planning and quality policy provides a framework for determining quality objectives, which once established should lead to improved firm performance.

Objectives should be measurable to facilitate the performance by the management of an effective and efficient analysis.

The general objectives are set out in policy statements of the Director General and are developed by planning specific objectives are set:
- Relevant organizational functions and levels in accordance with the organization;
- The principles S.M.A.R.T.;
- In accordance with the statements, angajamanent mentioned.

For each specific objective quality, environmental, health and safety and social responsibility is the target goal set by a measurable performance indicator.

When setting quality objectives, environment, health and safety and social responsibility are taken into account:
- Current and future needs of the organization and the market served;
• legal requirements and other requirements for environmental, health and safety, social responsibility;
  • significant environmental aspects;
  • risk assessment of accidents and occupational diseases;
  • stakeholder views
  • results of management reviews;
  • consistency with policy statements of quality, environmental, health and safety and social responsibility, including the commitment to prevention of pollution;
• actual performance of processes and products / works;
• customer satisfaction and stakeholders;
• competition analysis results;
• resources needed to implement the objectives.

Analysis of the quality management system of sc elis pavement

Analysis functioning quality management system as a whole using the valuation methods described below:

t- Monitoring and measurement of processes (through their performance indicators) require verification of their as planned - documenting, describing what is checked, what methods are acceptance criteria etc. Responsibility for achieving set performance indicators, monitoring, measurement and analysis process, setting and actions to achieve continuous performance improvement process belongs to the owner of the process.

  Monitoring and measuring customer satisfaction - Measuring customer satisfaction is produced annually, based on measurement plan prepared. Measurement plan includes steps that are to take place, namely:
  • characteristics of the service will be subject to investigation;
  • collection methods and sources of information;
  • collecting information;
  • functions involved in data collection;
  • allocation of resources (human, material) to perform measurements;
  • reporting deadline conclusions and measures to improve service;

Measuring customer satisfaction is achieved by analyzing information, investigation sources of data from statistical and direct research.

  Internal audit - At planned intervals are conducted internal audit’s necessary to determine whether the SC ELIS Ltd, quality management system complies with:
  • requirements of the planned services and products;
requirements of the reference standards;
• requirements set for it;
• is implemented and maintained effectively.

Depending on the importance of areas audited, the results of previous audit's and quality objectives, annual planning by a Program Officer QMS Internal Audit including audit required frequency, which is approved by Director General as the Management Representative.

**Strengths - Weaknesses of the quality management system in SC Elis Ltd**

**Strengths:**
• Identify and apply processes in the organization are well monitored. Are presented delimitation processes and interactions identified;
• The company has a quality manual reference standards ISO 9001:2008;
• Procedures are documented as required by ISO 9001:2008;
• Top management undertakes the development and continuous improvement of SMI are clearly set objectives;
• It identifies the quality requirements of customers;
• Quality policy is established;
• There are internal and external means of communication in the organization;
• There have been quarterly management reviews;
• Reports were prepared corrective and preventive actions;
• Management provides financial and human resources for implementing quality management system;
• Customer focus actions and activities to obtain and increase it's satisfaction;
• Staff are aware of the overall objectives;
• It identifies product realization processes and resources;
• Execution are developed technological documentation;
• Perform product inspections and checks;
• The existence of long-term relationships with suppliers;
• Order written confirmation of acceptance by providers and from them.

**Weaknesses:**
• Not all rules were established storage and protection of documents;
• Insufficient knowledge by some as a responsible way of keeping in
• Control of documents and records;
• Failure to update the document for reference in each compartment;
• Heads of departments not verify awareness and understanding of it by his staff;
• Lack of employee motivation and interest in training and quality audit’s;
• Inadequate training of employees in quality.

Conclusions

Integrated quality management system - environment must ensure continuous improvement of the organization’s performance through the positive impact it can have as a result of proper risk management, cost reduction, organization credibility and customer satisfaction.

To achieve this aim the following objectives:
• Maintain and continuously improve the level of customer satisfaction and organizational partners to the services offered and how collaboration;
• Providing training and awareness needs of all staff on customer requirements, the legislative provisions and other applicable regulations, environmental and health and safety obligations it has;
• Strengthen brand image of the organization by meeting all legal requirements and all requirements, both in terms of organization activities and environmental protection and health and safety.
• Identifying risk factors for injury and disease, associated activities of the organization in order to establish measures to eliminate / reduce them, in order to ensure jobs with a high level of security as
• The organization should be aware aware that only good management can achieve the desired performance by providing the necessary resources to maintain and continuously improve integrated quality management system - environment
• All staff of the organization to support the work and continuous operation of the system, to fully respect its provisions and to actively contribute to its improvement.

Strategic Decision of SC ELIS Ltd to implement, certify and maintain a quality management system in accordance with reference standard SR EN ISO 9001:2008 led to major changes throughout the organization on how to conduct the entire activity.

A system of quality management in a company gives confidence that products and services meet the requirements demanded by the customer, statutory and regulatory requirements, the organization is able to develop specific market.
Management at the highest level of SC ELIS Ltd defined quality policy as a tool to lead the organization to improve its performance in order to increase the confidence of customers, suppliers and employees. The entire management system of the company has been remodeled so that they can guide and control the quality organization in the direction of obtaining maximum satisfaction to all concerned, referring here primarily to customers, but also all other stakeholders.

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Economic Globalisation, A Worldwide Priority

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Contents:

1. The coordinates of approaching globalisation as a whole;
2. The determining factors of economical globalisation;
3. Main factors of globalization;
4. New approaches of a” modern new economy”.

Nowadays globalisation is made up of new features being “a planetary priority”. The repercussions of globalisation in a certain part of the world are reflected upon the issues and societies worldwide.

Contemporary economical globalisation generates a series of discussions emphasized by various schools of economical thinking which have been influenced by the quick spreading of modern technologies, the decrease of transportation and communication prices, of the organisation of new competing firms.

Being both contradictory and complex contemporary economic globalisation becomes a new concept generating a series of discussions which have been emphasized within various schools of thinking, which are deeply influenced by the speed of spreading of the new technology, the decline of communication and transportation prices, of the organisation of new continually competing new firms.

There is a great number of definitions of globalisation. The definition given by the International Monetary Fund stands out, the permanent increase of the ideological flux, people, merchandise, services and capital leads to a beneficial socio-cultural integration. The acceleration of this process means the liberalisation and development of IT and modern communication.

It must be mentioned that the diversifying and the liberalising of transactions triggers a welfare factor on the international level where the main forces, the engines of globalisation are technological innovation and the leading part played by the liberal ideology making up a triumph of market economy with no barriers in it’s appearance.
Nowadays we are heading towards a new” type of economy” depending on computer science and computer networks and going far beyond the economical and industrial economic systems. By using digital information and the internet the range of activities and services is larger and more performing.

The “new economy”(which appeared in the USA at the beginning of the 21st century) is not yet globalised worldwide as in most of the states the old traditional economy is still predominant. The country all people are heading towards is the boundary less world of global economy, which will generate a mood of calm, security and welfare eradicating poverty.

**Keywords:** globalisation, geographical areas, interdependence, globalisation engines, integration

### The coordinates of approaching globalisation as a whole

Globalisation represents a controversial and irreversible process having numerous causes and in which the events taking place in a part of the world has ample repercussions on the societies and issues in another part of the world.

From an economical and social point of view globalisation opens” a new age in which the peoples worldwide are more and more subjected to the sanctions of the global market\(^1\).

Being a complex process which acquires various political, economical, technical, technological, social and cultural components which manifest themselves either separately or concomitantly as they are interdependent.

Economic globalisation represents a subsystem a new reality, a new way of thinking and interpreting which belongs to a crucial period of time, a time of debate which makes up the hard core of the movement. The catalysts of globalisation are supported by:

- reducing transportation and communication costs,
- a commercial flux with no barriers,
- extension of financial capitalism worldwide as a consequence of the disappearance of communism,

From a theoretical point of view globalisation is represented by three schools of thinking (the hyper-globalistic, the sceptical and the transformative school) each school of thinking representing the direction and dynamics of the

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global transformation of a personal point of view as follows:

• the hyper-globalistic school consider globalisation a process of global integration of mankind,

• sceptics emphasize that the main stages of globalisations generate bumps among themselves,

• while the transformative school thinks globalisation is a contradictory process in which the trajectory of change is insecure and indeterminate.

Globalisation is a secular process which finds a written expression in the French and American writings of the 60’s culminating with the early 80’s when these issues acquired international importance.

The economic mechanism is mostly marked by the speed of spreading and use of modern technology while reduction transportation and communication price lead to co-operation and fierce competition among firms. It is thought that globalisation appeared in the late part of the 20th century and the beginning of the 21st century “representing the almost natural consequence of the course of history if not renaissance then at least the first industrial revolution.”

The determining factors of economical globalisation

As a contradictory and ample process economic globalisation has been defined on the basis of it’s many implications, which make it dynamical and irreversible.

”Globalisation is a process my which geographical distances become an ever less important factor regarding the establishment and development of relationships among states with no boundaries; the relationships are economical, political, social and cultural. The relationship of works and the dependency upon each other acquire an even greater potential to become international and planetary integrating modern man into the planetary community.

In Abrow Martin’s approach “globalisation concerns all the processes which include all people of the world into a worldwide society, a global society”.

Anthony Giddens considers that “globalisation is the intensification of social relations worldwide which connects cities to such an extent that the events which take place at a local level are looked upon through another similar events and vice versa.

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According to Richter Emanuel’s opinion: “Globalisation is the network which is gathering together isolated and scattered communities in a mutual interdependence and the unity of the world.

The International Monetary Fund’s opinion is that” Globalisation is a process in which the continuous increase of thinking, human resources, merchandise, services and capital lead to economical and social integration.

The World Bank defines”Globalisation as the liberty and the individual’s and the firm’s capacity to initiate voluntary transactions with residents of other countries. “The factors which accelerate are trade liberalization together with the development of IT technology and communications.”4

V. Beck’s opinion is that “Globalisation is an abstract phenomenon which cannot be shifted into static or mathematical patterns, it is undoubtedly is the most commonly used key word. Globalisation is an overused term in politics.

Marsh Mc Suhan uses “global village” to express production nationalisation by trans-national firms of homoglobalus who promotes:

- the inter-nationalisation of production by means of international firms,
- the integration of the financial and capital market by increasing their interdependence,
- the use of new technology to shorten distances,
- the appearance of the following planetary phenomena;
- the environment and water sources protection,
- a massive population migration generated by poverty, ethnic and military conflicts,
- International expansion of organised crime and terrorism.

Marsh Mc Suhan opinion is that the solution to all these issues need a global, no boundries approach in order to be solved.

Professor Bari, I.T concludes that world economic globalisation is the most dynamic process of state interdependence as a result of an increased state interdependence, as a consequence of the expansion and deepening of relationships in ever larger and varied parts of the economical, political, social, cultural and national leading mostly rather to a global solution than a national one.”5

One could consider that regardless of the significance or pertinence of the definitions economical globalisation is a fact which cannot be doubted, it is modern and it belongs to the future. Globalisation has a new point of view on the market, it a generated a trend where the economical and social relations disregard distance and

4 http://www.inf/external/npexr/glossareg/showterm/as p.91
5 Beck V, What is globalisation? Errors of globalism, Trei Publishing House Bucharest,2003,p.29
interstate foundries. The final result is the formation of a unique and irreversible world with no contradictions which have to disappear.

“The axiom on a planetary level is that intensification, liberalization, and intensification of transactions especially on an international level become a welfare factor.”

**Main factors of globalization**

The main causes of globalisation looked upon as the real engines of globalisation are technological innovation and the hegemony of liberal ideology.

1. Technological innovation is based upon information and communication lead information revolution getting beyond the national boundaries thus increasing the effect beyond the state boundaries thus increasing the beyond the boundary visibility thrice, so that an event taking place in a country should have an instantaneous impact upon another country. Thus globalisation acquires special and temporal dimensions and determines:
   - the extension of the economical, political and social activities to other areas of the world,
   - connections which should be detectable at an ever greater magnitude,
   - the augmentation of interactions and global processes together with communication development.

The greatest technological and social event is the appearance of the Internet which increased the speed of information communication worldwide. The information was used and processed within networks.

All information is conveyed through very specialised means called: “the first electronic highways of the world.”

The hegemony of neo-liberal ideology, which represents the triumph of the market economy ideology based on democracy, becomes an associate of the latter.

The neo-liberal ideology asks politicians to liberalise markets, to decentralise economies and to privatise state companies.”

The Neo-liberal ideology Leadership is a triumph of economical market economy which sets aside barriers and it relies on democracy.

The Neo-liberal ideology invites politicians to liberalize the markets and to privatise

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state companies.\textsuperscript{9}

Nowadays one could say that” the leadership of neo-liberalism may be considered the main important force which leads to the development of globalization. It cannot be stated that the consequences of globalisation had been desired or even anticipated by the neo-liberal thinkers. Globalisation allows easier circulation of merchandise, money and people. Nowadays” we witness the formation of an economy based on networks.

**New approaches of a ”modern new economy”**

The “new economy”(which appeared in the USA at the beginning of the 21\textsuperscript{st} century) is not yet globalised worldwide as in most of the states the old traditional economy is still predominant. The country all people are heading towards is the boundary less world of global economy, which will generate a mood of calm, security and welfare eradicating poverty.

**Stage of preparation of different classes of countries and the new economy**

<table>
<thead>
<tr>
<th>District</th>
<th>VAT per 1000 persons</th>
<th>Telephone lines per 1000 persons</th>
<th>Cel-phones per 1000 persons</th>
<th>Computers per 1000 persons</th>
<th>Internet services providers per 1000 persons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Countries with low incomes</td>
<td>138</td>
<td>56</td>
<td>37</td>
<td>25</td>
<td>8</td>
</tr>
<tr>
<td>Countries with low incomes to medium</td>
<td>227</td>
<td>92</td>
<td>115</td>
<td>79</td>
<td>15</td>
</tr>
<tr>
<td>Countries with medium incomes to high</td>
<td>297</td>
<td>120</td>
<td>189</td>
<td>129</td>
<td>75</td>
</tr>
</tbody>
</table>

\textsuperscript{9} Ibidem, p.22
<table>
<thead>
<tr>
<th>Countries with high incomes</th>
<th>662</th>
<th>268</th>
<th>567</th>
<th>388</th>
<th>265</th>
<th>482</th>
<th>311,2</th>
<th>441</th>
<th>60,76</th>
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</tr>
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<tr>
<td>World</td>
<td>247</td>
<td>100</td>
<td>146</td>
<td>100</td>
<td>55</td>
<td>100</td>
<td>70,6</td>
<td>100</td>
<td>9,45</td>
<td>100</td>
</tr>
</tbody>
</table>


Conclusions

Contemporary economical globalisation generates a series of discussions emphasized by various schools of economical thinking which have been influenced by the quick spreading of modern technologies, the decrease of transportation and communication prices, of the organisation of new competing firms.

References

Optimization of Management Strategies

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Strategic management is essential in the design and substantiation hotel business, being grounded and organic correlated with function prediction involves deciphering and anticipating change and patterns that must be made inside the hotel and it's relationship with the environment, receptivity to new dynamism and flexibility in management positions, providing highly competitive.

Strategic management is based on the strategy to be successful and to find optimal solutions for some problems.

This paper presents an analysis of strategic management and strategies used by Hotel Bali Spa Cornu.

The concept of strategic management

Strategic management is essential in designing and reasoning activities of companies, being a crucial materialization of the forecast.

Based and organically linked with the function of forecasting, strategic management involves deciphering and anticipating change and patterns that must be carried out within the company and in it's relations with the environment, the new maximum responsiveness, dynamism and flexibility in management positions, to avoid discrepancies between supply and demand between new and old, providing highly competitive.

Strategy management concept includes a general program of action and allocation of resources to achieve long-term major goals.

Strategic management comprises a set of decisions and actions resulted in the formulation and implementation of plans designed to achieve objectives.

Dimensional character is specific for the formulation and implementation of strategic management with the following forms:

• a rational and analytical (economic dimension), it's core mission is
formulating foreign economic and technical guidelines, taking into account the opportunities and constraints of the environment on the one hand and on the other hand, the strengths and weaknesses of the company;

• one socio-political (human dimension), is important in strategy formulation. Balance of power and socio-political pressures internal and external negligible impact on the operation of the company;

• bureaucracy (organizational dimension), consisting of all persons and departments in a company assigned specific configuration and of all relations between them to achieve goals.

Advantages and limitations of strategic management

Need to face many challenges that currently characterizes the business environment leads companies to practice strategic management offers the following benefit’s:

1. Provides an overview of the future COHERENCE firm and coherent framework for decision and action at all levels of management;
2. Provide increased awareness of environmental threats and opportunities which firms operate;
3. Provide a better understanding of competitors strategies and taking necessary measures to counteract their impact;
4. Is a valuable guide for setting priorities in resource allocation;
5. Ensure consistency with the current strategic decisions and tactical coordination and best of all operational and functional unit’s within the company;
6. Help clarify and understand the mission and purpose of the organization and therefore raise employment of all staff for their achievement and business strategy;
7. Strategic decisions based on broad participation of managers and specialists of different hierarchical levels, ensure development of team spirit;
8. Help motivate employees and reduce resistance to change by formulating explicit strategies by combining close of strategy formulation and implementation.

Despite it's indisputable advantages, strategic management has a number of limitations and drawbacks:

• Work on strategy formulation, require a long time, it can be done in detriment of other responsibilities within the company;
• If the strategy involved in the foundation are not involved in it's implementation, they can evade the responsibilities of individual decision-making
input;

- When the participation is low, subordinates may perceive managers mistakenly inputs related to the solutions chosen may feel disappointed with the policy options chosen.

**Development strategy hotel bali spa cornu**

Strategic management is essential in the design and substantiation hotel business, being grounded and organic correlated with function prediction involves deciphering and anticipating change and patterns that must be made inside the hotel and it’s relationship with the environment, receptivity to new dynamism and flexibility in management positions, providing highly competitive.

Strategic management is based on the strategy to be successful and to find optimal solutions for some problems.

One of the fundamental components of management is the strategic planning, with an interface between the hotel and the environment in which it operates. Strategic planning is driven by strategic management. At present, the management of Bali Spa Cornu, has proposed a development strategy aimed at obtaining qualitative and quantitative performance superior to those made in previous years by strengthening the competitive capacity of the hotel, which is based on good economic situation, coupled a considerable technical and commercial potential.

Future hotel, designed in the form of strategies, is achieved by exploiting a varied informational material provided by multiple sources inside and especially outside the hotel.

In substantiation development strategy Bali Spa Cornu took into account the following key elements:

1. Development strategy adopted in the hotel, differ according to the stage of it’s life, which is the period of growth, seeking to occupy a good position in the market, which would allow making a profit. Strategic features of the hotel, at this stage of life are:
   - providing standardized services on the domestic market,
   - there are numerous strong competitors;

2. In substantiation development strategy, taking into account the internal and external factors, of Hotel Bali Spa Cornu, to harmonize the different categories of interests, so were considered:
   - employees who must be paid, motivated, developed and adequately
protected;
  • managers to manifest a quality professional competence;
  • hotel guests who expect quality services to ensure their satisfaction and comfort;

3. Development strategy must be flexible susceptible changes for adoption, depending on changes in the internal and external environment, because Cornu Spa Bali hotel is in constant motion, these changes can significantly affect managerial behavior, commercial and its function.

**Strategy formulation**

Strategy formulation is formed differentially, depending on the target:
  • The overall level of the hotel, looking at the influence of external environmental factors and internal strengths and weaknesses, opportunities and threats;
  • The departments, taking into account the overall problems of the company.

According to the general environment in which it operates Hotel Bali Spa Cornu, it’s management has adopted a comprehensive long-term strategy which covers all hotel departments and the resulting partial following strategies:

<table>
<thead>
<tr>
<th>Department</th>
<th>Strategy</th>
<th>Term</th>
</tr>
</thead>
</table>
| Financial-accountant        | Economic strategy based on economic criteria, aimed at achieving a reasonable profit:  
- laying rates and prices;  
- cost-oriented and technological advantage. | - short  
- medium |
| Human resources             | Organizational strategies:  
- recruitment and selection, staff well trained and meeting target position;  
- recovery for some employees. | - short  
- medium  
- medium |
| Commercial                  | Business strategies:  
- diversification of services;  
- development;  
- The choice of the most appropriate suppliers;  
- offensive promotion;  
- supply diversification. | - medium  
- medium  
- short  
- long  
- short |
| Judicial                    | Legal Strategies:  
- based legal compliance. | - short  
- medium  
- long |
Development strategies hotel Bali Spa Cornu – proposals

Development strategy aimed at achieving better results above (both qualitative and quantitative), strengthening the competitiveness of hotelului. This strategy requires the promotion of important qualitative changes in all fields of the hotel.

To increase customer satisfaction, reduce the risk of losing customers to real and potential to have a strong competitiveness, variety, quality and diversity, are means to ensure competitiveness and efficiency through content enrichment choice and higher quality.

Because the last three years, average length of stay decreased and occupancy in Hotel Bali Spa Cornu measures be taken to increase operating efficiency and maximum service supply.

Thus, analyzing the situation in which the Hotel Bali Spa Cornu, based on the strengths and weaknesses of it’s departments, compared to the situation of competitors to obtain a good rate and a market where high reputation is proposed to develop strategies derived from the global strategy for each department of the hotel:

For commercial department:

• Addressing a strategy of delivering unique services originals to be strongly promoted both domestically and internationally, to meet international standards and to attract a large number of clients, this can be done by creating a team well organized and competent management that can enhance the value of services and come up with new ideas and performance, but also rely on well-trained, perfectionist and specialized rooms leading to a competitive development.

• Promoting marketing strategies that rely on forms of communication, the marketing department and to make known hotel deals and collaborate with as many travel agencies in the country and abroad;

• Developing penetration strategies that build on existing services and market by formulating a set of actions that would increase the percentage of market share, which can be done by own production of services, to eliminate competition;

• Adoption services development strategies, promoting and enhancing the quality of services, which must always happen;

• Permanent use of the services strategy, much needed in relation to competition and to achieve a high return activity;

• After the development strategy to be adopted promotional pricing strategy by offering lower rates to all services and even the introduction of additional service
charge for customer acquisition and loyalty.
• Formulating a strategy for integration into a chain which helps to know the reputation of the hotel and the promotion and marketing services under one brand;
• Adopting the approach of maintaining strong customer strategy to boost tourism and relaxation.
• Using partial strategies, targeting weak areas of the hotel, such as marketing activities that are necessary and useful for creating the desired image of hotel management and pursuing business activities, refreshment, stimulation and motivation without which not possible to achieve any strategic objective;
• Differentiation hotel image among customers who act differently to a particular image, even when competing offers are similar. A successful image is the result of identities and a hotel to create this being possible through the support of strong promotional campaigns, both domestically and internationally and integrating a chain known to help to form an image, a reputation and identity, to streamline activities Bali Spa Cornu.
• Develop strategies positioning and differentiation of services for different customer needs, each attracted to offer. Differences that the hotel will have to do, you must meet the following requirements in order to be effective:
  • Adoption of a strategy aimed at occupying a better position on the market, it is necessary for a clear and concise long term hotel management from a range of services innovation by increasing their and their supply to quality, to be effective and sustained promotion and maintenance services to a higher level of quality, to form a specialization in services, or to provide certain services that are not offered by competitors.

  For the HR department:
  • Adopt strategies to blur the conflicts in the hotel, by preserving and fostering skilled, well trained, generating ideas by changing old mentalities by promoting a permanent communication, mutual trust;
  • It is necessary to address differentiation strategies. Differentiation strategy to be used continuously, is the staff so the hotel can get a strong competitive advantage by hiring and training of staff of high quality staff of competitors.
Criteria of this strategy, which must meet hotel employees are:
• competence (knowledge and skills necessary to have the position held)
• kindness (employees must be careful, respectful and friendly)
• credibility (to be trustworthy)
• safety (must fulfill, promptly and consistently, obligations),
  • spirit of responsibility (to act and respond to urgent requests and customer problems),
  • communicability (to be social, to understand it’s customers and to express their meaning).

For technical department:
1. Strategy formulation and innovative approach, introducing modern technology, continuously in business and the range of services offered;
2. Strategies to maintain competitive advantage through the use of technical means and equipment maintenance, high quality, to increase the level of comfort;

For financial and economic department and management:
1. Financial strategies that must be taken to improve profitability and return parameters of the hotel;
2. Adopting economic strategies aimed at increasing profit’s and turnover, by providing high quality services, which are attracted and retained more clients.

Conclusions

Analyzing the situation in which the Hotel Bali Spa Cornu, based on the strengths and weaknesses of it’s departments, compared to the situation of competitors to obtain a good rate and a market where high reputation is proposed to develop ways:
• increasing the number of employees in all departments, as soon as possible, load the Human Resources manager;
  • organizing training courses, whenever appropriate;
  • ensuring a high degree of comfort and accommodation of the full capacity of high quality services to the present;
  • revenue growth in housing activity by increasing it’s occupancy;
  • achieve recreation, which should lead to significant revenue from this activity;
• achieve as flexible structures to various forms of tourism (weekend, individual tourism) by attracting tourists throughout the year and increased occupancy accommodation capacity;
• daily labor productivity growth by increasing the length of the working day, which would result in a higher return on hotel business;
• cultivate brand image, by granting commissions to travel agents for tourist groups, expressed as: thanksgiving phones, diaries and calendars hotel letterhead with promotional, marketing department;
• reinvest profit’s in new bases tourist or upgrade existing ones.

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Statistics Indicators on the Labour Market

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During the past years, amid the economic crisis and the high number of unemployed workforce, in Romania have emerged and have developed a number of web sites that have as main object of activity the intermediation of jobs. In Romania work placement offices of labor have been introduced since the beginning of the 19th century, largely in the form of communal placements, County and regional authorities.

Statistical analyses and research

At the national and territorial level the situations and developments on the labour market are monitored primarily using a system of statistical indicators regarding:

a) human resources;
b) active population;
c) employed population;
d) unemployed persons;
e) job vacancies;
f) unemployment allowance;
g) sticking out of the unemployment population through employment, and by leaving the labour market;
h) unemployment rate.

The system of statistical indicators and the methodology for their calculation is established by the National Institute of Statistics in collaboration with the Ministry of Labour and Social Solidarity. The National Agency for Employment, on the basis of primary documents for the registration of the unemployed, the communications made by the employment services providers accredited and employers concerning job vacancies, calculates statistics indicators referred to above, as well as other
specific labour market indicators.

The National Agency for employment drawn up, depending on the needs, analyses, studies and statistical researches on situation and development of special unemployment and employment, at national and territorial fields. In order to achieve the tasks provided for by law, the National Agency for Employment provides material, organizational and managerial conditions, develops and manages the primary documents, constitute and exploit's their own base.

For conducting analyses, studies and statistical researches regarding the nature of those special referred to above, the National Agency for Employment may engage the services of specialized suppliers. Methodology of special statistical surveys will be permitted under the law of the National Institute of Statistics.

National Agency for Employment is required to make public statistics on labour market indicators, with a periodicity that will be determined along with the system of indicators. The National Agency for employment will provide the Ministry of labour and Social Solidarity statistics indicators, the results of statistical surveys, analyses and special statistical studies.

Employment services accredited providers have the obligation to communicate monthly to the employment agencies in whose area have their registered data on the number of the unemployed enclose in the work field.

Regarding the development strategies and policies, as well as for the adoption of measures on the labour market at national level, on fields, branches, economic sectors or areas, Ministry of Labour and Social Solidarity initiates regulations on employers to communicate the necessary information with regard to the workforce.

With regard to the labour market, the National Statistics Institute has the following tasks:
  a) calculates statistics for indicators;
  b) provides the National Agency for employment labour force data, statistical research results;
  c) elaborates in cooperation with the Ministry of Labour and Social Solidarity a system of indicators of labour market statistics and the methodology for their calculation;
  d) endorses the special statistical research carried out by the National Agency for Employment or the Ministry of Labour and Social Solidarity.
Classification of occupations

The classification of occupations in Romania is the identification system, outlining, coding occupations in the economy, it is drawn up by the Ministry of Labour and Social Solidarity in collaboration with the National Institute of Statistics, along with other ministries and public institutions concerned and approved by decision of the Government.

Changing the content of the Classification of occupations is approved by the decision of the Government, at the proposal of the Ministry of Labour and Solidarity and with the notification of the National Institute of Statistics.

Inclusion of new occupations in the Classification of Occupations in Romania is approved, at the request of the interested parties or on the basis of special regulations, by order of the Minister of Labour and Social Solidarity, that will be published in the Official Monitor of Romania, Part I. The use of Classification of occupations in Romania is compulsory at completion of official documents.

Measures to prevent unemployment

In the case of restructuring of activity that can lead to substantial changes in the number and structure of the professional staff, employers are required to notify the agencies for employment with regard to the adoption of measures to combat unemployment and prevent adverse social effects of the restructuring.

In such cases employers are required to give notice, in accordance with the provisions of the Labour Code or collective labour agreement, to the employees who are going to be made redundant.

During the period of notice employees will participate in the pre-redundancy services made by the agencies for employment or other accredited providers of employment services in the public or private sector, selected by them, in accordance with the law.

In order to prevent unemployment the following activities take place:

a) information on legal provisions relating to the protection of the unemployed and providing employment services and training;

b) placing on the job vacancies available locally and training in ways of searching for a job;

c) retraining within the establishment or through training courses of short duration;

d) polling opinion of employees and advising them on measures to combat unemployment.
Measures for stimulating employment

Specialized services
Measures for employment stimulation cover:
 a) increasing the chances of employment of persons looking for a job;
 b) stimulation of employers for the pertaining to work of unemployed persons and the creation of new jobs.

Measures for employment stimulation are addressed both to individuals looking for a job, and employers and are made by specialized services, provided by agencies for employment or other providers of services in the public or private sector.

Providers of specialized services for employment stimulation may provide, on the basis of contracts concluded with the employment agencies, employment services financed from the unemployment insurance budget, only if they are accredited. Accreditation of service providers is done by the National Agency for employment.

For accreditation, the National Agency for employment establishes a fee whose amount is fixed annually by the Ministry of labour and Social Solidarity, in its proposal, for each type of service provided. The amounts resulting from the payment of fees for accreditation constitutes income from unemployment insurance budget.

Providers of specialized services to stimulate employment, which finances these activities from other funds than the unemployment insurance budget, are accredited by the National Agency for employment.

Increasing the employment opportunities of persons looking for a job
The increase employment chances of persons looking for a job is carried out mainly through:
 a) the vocational information and counselling;
 b) labour mediation;
 c) vocational training;
 d) advice and assistance for starting self-employed or for initiating a business;
 e) completion of wages of employees;
 f) stimulate labour mobility.
**Information and professional counselling.**

Instruction and vocational counselling constitutes an ensemble of services provided free of charge to persons looking for a job, aimed at:

a) the provision of information concerning the labour market and the evolution of occupations;

b) assessment and self-assessment of personality to professional orientation;

c) development ability and self-confidence of persons looking for a job in order to take the decision on his own career;

d) training in the methods and techniques of searching for a job.

Information and vocational counselling is carried out by specialized centres, organized within the agencies for employment, as well as other centres and accredited service providers in the public or private sector, which conclude with the agencies for employment contracts, in accordance with the law.

Information on the labour market, establishing professional route, evaluation and self-evaluation is done through self information, through the provision of advisory services individual or group provided, upon request, persons looking for a job or job clubs organized by the employment agencies.

Vocational counselling and training in the methods and techniques of searching for a job and presentation at the employment interviews are carried out by guidance counsellors, career information and advice centres on career or, upon request, in the framework of other organized forms of training.

**Work mediation**

Mediation is the activity through which the work is carried out in relation to employers with people looking for a job, for the establishment of employment relationship or service.

Employment agencies have an obligation to identify job vacancies from employers and make them known to people looking for a job. Mediation services for people looking for a job are granted free of charge by the agencies for employment and consist of:

a) information on job vacancies and conditions of their employment through publication, display, organizing fairs of work places;

b) electronic mediation aimed at putting the automatic mailing of vacancies and applications for employment through computers;

c) corresponding requirements candidates pre - selection of jobs provided and in accordance with the training, skills, experience and interests.

In order to implement the measures for stimulating employment,
employment agencies have an obligation to draw up, for each person looking for a job, an individual mediation plan. The procedure for the drafting, content and monitoring individual mediation plan will be laid down by Order of the President, the National Agency for Employment.

For unemployed persons receiving unemployment benefit’s under the conditions provided for, by law 76/2002, participation in mediation services, at the request of the agencies for employment on which they are registered, is mandatory. The unemployed who do not receive unemployment allowance must submit a request to the Agency for employment to be taken in order to mediate in the case of non-employment, to renew the request at every 6 months.

Labour mediation can be achieved, with a payment to the specialised service providers, from the public or private sector, accredited by the National Agency for employment.

**Methods of stimulating the employers to insert in the working field the unemployed persons**

Stimulation of the employers for the pertaining to work of unemployed persons is carried out by:

a) subsidizing of jobs;

b) grant credit's in advantageous conditions for the creation of new jobs;

c) granting facilities.

From unemployment insurance budget and other sources allocated according to legal provisions can subsidize labour expenses incurred in realizing programs aimed at temporary occupation of the workforce from among the unemployed, for the execution of the works and activities of interest to local communities.

There may be subsidized in the previously mentioned sources, mainly the following categories of services:

a) public service restoration and maintenance of the infrastructure, greening and achievement of architectural works, organized by the local public authorities, private companies or non-governmental organizations, with the opinion of the local public administration;

b) social services that include home care activities for children, the sick, the elderly, persons with disabilities, organized by the local public authorities, non-governmental organizations and other bodies, in accordance with the law.

The subsidies provided for employers will be granted for a period of not more than 12 months, at the request of local authorities, for each person employed
with the individual contract of employment, from among the unemployed.

Graduate of an educational institution means the person who has obtained a diploma or a certificate of studies in law, in one of the secondary education institutions, professional, special, secondary, post-secondary or higher, State or private, authorized or accredited in accordance with the law.

Employers who fall under the aforementioned graduates are required to maintain employment relationships or service there of at least 3 years from the date of conclusion. Employers who cease from their employment or service of graduates, sooner than the term of 3 years are obliged to repay, in full, the agencies for employment amounts received for each graduate, plus interest calculated at the relevant level to that of the State Treasury for the unemployment insurance budget.

Previous provisions will not apply in the event of termination of employment or service takes place in the initiative or for reasons attributable to the employee.

**Conclusions**

In Romania work placement offices of labour functioning form of communal placements, County and regional authorities.

During the past years, amid the economic crisis and the high number of unemployed in Romania have emerged and have developed systems of analysis which have as their object of activity intermediation jobs.

**References**

[3] Creating Commercial Websites
Integrated System of Jobs Intermediation for Young Graduates

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*During the past years, amid the economic crisis and the high number of unemployment, in Romania have emerged and have developed a number of web sites that have as object of activity jobs intermediation.*

*According to a recent study, the publication of vacancies in companies working through sites aimed to arrange jobs in order to bring more candidates than an ad in the newspaper, while being less costly.*

**Dynamics of economic processes and phenomena**

Information base is made up of all entities and parts of attributes that describe the dynamics of phenomena and economic processes at a trader over a period of time.

The contents of the information base is represented by the single crowd and unordered information entities used for the establishment of a centralized pool of information that ensures the required output of the recipient computer system.

**Design of informational base**

The information base is to be converted to the data collections organized by main files or database through a management system database.

Database design information presupposes: the determination of the contents of information entry and use algorithms and structuring information in database entities.

In order to determine the input attributes need to be examined the way in which the information contained in getting output statements designed or in all documents inventoried in the system depending on the version that we have chosen in the overall design.
In situations of output are two categories of information: information obtained by simply transferring a value similar to the input and information that is obtained from the application of a calculation algorithm.

**Design and implement a web site**

**The presentation of the application**

Application intended for assisting the Agency’s operations staff recruitment is designed and carried out in the form of a web site.

It acts as an intermediary between employers and prospective employees. The Site is composed of three main modules, these speaking to employers (companies), persons looking for a job (candidates), the third mode being reserved for the Administration site.

In the realization of the application there have been used HTML languages, for graphics, PHP interface for data processing and query tables, JavaScript for rollover effects and the engine of MySQL databases.

To be able to have access to information, any of the three categories of users must go through a phase of authentication, this consisting in providing the user a username and a password.

To determine which is the username, and the password, any user (candidate or company) must fill out a form containing information about the user’s identity.

As I mentioned earlier, to be able to have access to information, a user must go through a phase of authentication, provide a user name and password.

For them, the user must fill in a form, supplying personal data, necessary for a possible contact.

![Figure 1: Creating a user account.](image)
It includes data required user authentication (user name, other than the real one, as well as a password) and personal data of the user. Also during this phase, the user is prompted to provide a question and an answer, replied that as the password, is confidential. These last data requested are necessary in case of forgetting password.

Before the information to be stored in the database, verify that the user name supplied is already used by another user. If so, the user is warned and requested the introduction of another. Enrolment form is shown in the following figure:

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**Figure 2**: Registering users.

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**Figure 3**: Options available to the users.
Figure 4: “Personal Data” Form.

Figure 5: CV Form

Figure 6: Wanted work place.
Figure 7: Search for a work place.

Figure 8: Results.

Figure 9: New job form.
**Figure 10:** Jobs offered by company

**Figure 11:** Search candidates

**Figure 12:** Search result of a candidate.
The administrator does not have access to the information of the users identified.

Also, the administrator cannot change the information. The only operation allowed is deleting them. In the case of companies, for the administrator are displayed...
in both information on the company and it’s offer of jobs. The administrator can delete the account of the company, or just a specific job offer. Deletions or user accounts, as well as jobs offered will be determined by objective reasons, such as the expiry of validity, a long time since the last access, etc.

Although one can have multiple administrator accounts, it can change their identification data.

Conclusions

Among the advantages of use of computer applications to assist the operations of a recruitment agency staff we note:

1. reducing the cost and time of recruitment per employee;
2. to increase the quality and number of resumes received from an ad;
3. CV Management and communication with employers is done in one place;
4. to promote the company and career opportunities offered;
5. avoidance of congestion at the agencies for employment;
6. avoid birocracy;
7. customer Mobility, which can use this service from any city;
8. access to information 24 hours a day, 7 days a week;
9. daily records of operations performed.

According to a recent study, publication of vacancies companies working through sites aimed to arrange jobs brings many more candidates than an ad in the newspaper, while being less costly.

In addition, specialized sites offer services that no newspaper can provide:

1. ad showing visitors a prolonged period of time, can contain a large amount of information;
2. can be seen all CVS in one place, not consume paper, toner and especially time;
3. you can enter filters, made searches and can communicate with candidates select simple and efficient.

The unprecedented development of information technology has made that the National Agency for employment to have recourse to modern methods, developing in this to regard to an application called “Electronic Service of mediation of labour”. The National Agency for employment (ANOFM) is currently an integrated computer system, designed for people across the country who are seeking a job through specialized offices within the NEA. The project underlying this system was carried out in the most part by the specialists of the Ministry of Labour and Social Solidarity (MMSS) together with the employees of the Agency, and the contribution
of consultants from abroad.

In carrying out the project was pursued as the technologies that are at the base of the system to be the cheapest on the market but also the most cost effective at the same time. Thus, on the County's servers is installed the operating system Linux Red Hat, Unix servers running centres (IBM AIX), and workstations will operate under Windows. For databases was chosen solution DB2 from IBM. Specific applications which provide practical working process of the system include: processing requests and providing unemployment benefit's, an integrated labour market placement, as well as track the collection of contributions for unemployment fund-applications being differentiated in relation to the central County, respectively.

According to the specifications of the project there will be used products that comply with international standards, choosing the open and non-proprietary standards.

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Small and Medium Romanian Enterprises and Accessing the European Funds

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Romanian SME’s often face difficulties in financing their development and innovation. European funds are the source of growth productivity Romanian enterprises and reducing productivity gaps with the European Union average. For Romanian SME’s, European funds are welcome and needed support during the current economic crisis.

The importance of small and medium romanian enterprises

The Small and Medium Enterprises (SME’s) are the most active sector of a modern economy. The main positive effects generated by the development of SME’s in the Romanian economy are [5]:

• creating new jobs and reducing unemployment;
• improving the competitive environment, leading to increased quality of products and services on the market;
• SME’s stimulate innovation and technology transfer and optimizes the use of resources;
• development of the SME sector contributes to regional and rural development;
• increased investment, household savings as sources;
• attracting foreign investment by offering quality related services necessary for their development;
• development of infrastructure components business, SME’s acting as specialist suppliers of parts, components and services for large enterprises;
• is stimulated competition, reduce the possibilities of creating a monopoly position that would lead to price increases;
• although SME’s are the most affected by the current economic crisis is also
the sector that can contribute significantly to future economic growth.

![Graph showing annual evolution of the number of SME's](image)

**Figure 1:** Annual evolution of the number of SME's, *Source: Strategia Consiliului National al Întreprinderilor Private Mici și Mînjocii din Romania 2012 – 2016, p. 10*

SME’s through their flexibility, gives a high adaptability to all a modern economy.

In Romania, SME’s account for 99.7% of total number of enterprises and generates two-thirds of jobs in the business. However, the number of SME’s per 1,000 inhabitants is only 24, is considerably lower than the EU average of 42 SME’s. Due to the economic crisis, the number of Romanian SME’s decreased continuously after 2008 (Fig. 1).

**Need of funds to small and medium romanian enterprises**

SME’s in Romania, is in direct competition with all companies offering products and services in global markets. To provide quality products and services, Romanian SME’s should have the necessary financial resources to invest in new technologies and beyond. SME access to credit remains a significant problem to solve; banks are reluctant to finance SME’s activity were still sources of systemic risk in the economy.

Main financing conditions for SME’s are:
- own resources;
- private loans shareholders/associates;
- trade credit (loan providers, payment in advance);
- bank loans;
- easing;
• factoring;
• micro credit;
• grants [3].

SME’s have difficulties in accessing funds from the state budget or of the European Union, as well as credit institutions because the record, most often financial loss.

SME’s do not have the education to encourage access to funds from the state budget and the European Union.

Are presented below, specific financial instruments to finance each stage of the development of SME’s.

*Financing to start a business* is not a problem, more than 10,000 companies were registered a month before the crisis (2003-2007).

*Initial funding* is difficult to obtain for most entrepreneurs, because does not exist instruments to accord the capital of risk and flexible financing instruments relatively small (up to 200,000 euro).

*Finance the first phase of development* is difficult especially for new and innovative small businesses for the same reasons stated on the initial funding, in this case the amount required to finance is higher.

*Financing Development of SME* through bank credit is more developed form of funding, supported and the development guarantee funds. Bank credit remains available only for a maximum of 25% of SME’s (in particular SME’s), to 70-80% of SME’s in developed European countries.

*Financing the development phase of SME’s* through investments capital is possible (for dozens of medium enterprises), but highly selective due to the relatively high value transactions (over 2 million) and rigorous selection criteria.

Criteria for selection of SME’s for providing financing for investment are:
• profitable economic activity over a period of several years;
• exceptional growth potential;
• strong position on the market.

In the current economic crisis it is necessary to work towards diversification and a better targeting of financial instruments intended to support the SME sector by developing existing tools to prepare for economic recovery.

A better access to finance for SME’s can contribute greatly to encourage and support investment, which would lead to economic recovery, create jobs and reduce technology gaps [3].
Accessing european funds by romanian small and medium enterprises

European funds that can be accessed by SME’s in present
An important source of financing for SME’s is the European Union structural funds, in Romania was signed by April 2012 approximately 6,000 contracts on the main lines of financing for the SME sector.

For 2007-2013 there are three financial instruments known as Structural Funds, namely:
• European Regional Development Fund (ERDF) support for SME’s, transport, environment, energy, education, health, tourism, research and development, territorial cooperation;
• European Social Fund (ESF): education and training, adaptability of workers and enterprises, social inclusion, administrative efficiency;
• Cohesion Fund (CF): large transport infrastructure and the environment [7].
Active programs that can be accessed to obtain European funds currently are:
• National Rural Development Program which has a budget of 1,359,146,997 Euro in 2012. The program’s overall objective, increasing competitiveness of the agriculture-food and forestry, improve the environment and countryside, improve the quality of life in rural areas, diversification of the rural economy, starting and operation of local development initiatives.
• Increase of Economic Competitiveness Operational Program, with a budget in 2012 of 456,947,159 Euros. The program’s overall objective, increasing productivity of Romanian companies to reduce productivity gaps with the EU average.
• Regional Operational Program, with a budget in 2012 of 663,832,914 Euros. General aims, supporting sustainable economic, social, territorially balanced and sustainable development of the Romanian Regions focusing on urban growth poles, improving the infrastructure and business environment.
• Sectoral Operational Program Human Resources Development, with a budget for 2012 of 666,545,305 Euros. General aims: human capital and competitiveness, by linking education and lifelong learning with the labor market.
• Sectoral Operational Program Environment, with a budget in 2012 of 848,813,721 Euros. General aims: to protect and improve the environment and living standards in Romania, focusing in particular with the environmental acquis.
• Sectoral Operational Program Administrative Capacity Development with a budget of 24,604,847 euros in 2012. General aims: creating a government more efficient and effective socio-economic in benefit of the Romanian society.
Fishing Operational Program, with a budget in 2012 of 42,262,575 Euro. General aims: to develop a competitive fishing sector, modern and dynamic, based on sustainable fishing and aquaculture activities, which take account of the environmental, social and economic welfare.

Sectoral Operational Program of Transport, with a budget in 2012 of 1,053,278,629 euros. General aims: to promote a sustainable transport system in Romania, that will facilitate the safe transport, fast and efficient transport of the people and goods at an appropriate level of services to European standards.

Eligibility criteria in accessing European funds by Romanian SME’s

The general eligibility conditions for both project beneficiaries and projects submitted to obtain financing from EU funds are presented below.

Eligibility criteria for projects submitted are:

- the project will be developed and implemented in Romania;
- fall within the types of projects presented in the currently active and operational program and addresses to the area or target group as Implementation Framework Document (ICD) or the Guide for Applicants (if applicable);
- duration and amount of the grant within the limit’s imposed for this type of project;
- the project respect the Community and national policies and public procurement, state aid, namely equality, sustainable development.

Applicant’s eligibility for financing from EU funds is:

- the applicant (SME’s in this case) is constituted and operates in Romania as required by law;
- has no outstanding obligations under the law;
- has no public debt;
- project applicant has value in nature or in cash, own or bank financing, of the amount of the total project co-financed and ineligible expenditures according to the Guide for Applicants;
- meets the eligibility criteria set out in the Framework Implementation Document for each major area of intervention (Framework Implementation Document) that can be found on the websites of the ministries in which the Managing Authorities);
- respect the specific requirements set by the Managing Authority to the launch of “call for projects” and the Guidelines for Applicants (eligible beneficiaries are listed in the Guide for Applicants for each grant program).
Barriers to accessing European funds by Romanian SME's

Existence of EU funds for SME's is an opportunity for them. It is known that the rate of absorption of structural funds by SME's in Romania is relatively low, and this is caused by the existence of legal barriers, the difficulties of implementation, low administrative capacity of the institutions responsible, etc.

Thus, there are legislative barriers affecting the rate of absorption of EU funds, these intervening at all stages of implementation of operational programs.

The main barriers to accessing European funds to SME's are considered to be:

- SME's have difficulties in providing co-financing of projects implemented under the Operational Programmes, with grants from the European Union (EU);
- SME's have difficulties in accessing EU funds because record financial loss;
- low level of entrepreneurial culture among managers and lack of experience are barriers to access and / or implementation of EU-funded projects;
- formalities for accessing European funds are multiple;
- lack of clear information tools for SME's about financing possibilities;
- lack of accurate information about the risks of SME's involved in accessing European funds and implement projects accepted for funding.

Administrative capacity to manage EU funds is low, mainly due to the appearance difficulties arising from the large number of vacancies and inactive and insufficient training of personnel [12].

Lengthy administrative procedures in the Managing Authorities / Intermediate Bodies, contribute to delays in signing contracts for funding.

Situation absorption of structural and cohesion funds at March 31, 2012 is presented in Table no. 3.1.1. [13].

Table: 3.3.1: Absorption of structural and cohesion funds - on March 31, 2012 -

<table>
<thead>
<tr>
<th>Operational Program</th>
<th>Projects submitted</th>
<th>Projects approved</th>
<th>Contracts / Funding decisions</th>
<th>Total payments to beneficiaries - million-</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transport</td>
<td>129</td>
<td>77</td>
<td>62</td>
<td>1.386,44</td>
</tr>
<tr>
<td>Environment</td>
<td>465</td>
<td>328</td>
<td>259</td>
<td>2.745,52</td>
</tr>
<tr>
<td>Regional</td>
<td>8.093</td>
<td>3.104</td>
<td>2.723</td>
<td>4.969,14</td>
</tr>
<tr>
<td>Human Resource Development</td>
<td>10.217</td>
<td>2.999</td>
<td>2.468</td>
<td>4.626,62</td>
</tr>
</tbody>
</table>
Romanian SME’s and accessing the European funds case study: S.C. Iliana S.R.L. - Romanian SME

The company is a medium-sized enterprise with a total of 120 employees, of which more than half are women. Headquarters are in town Targu-Jiu, Gorj. Qualified personnel are 70%, with the following specializations: economist engineer, economist, engineer, carpenter, electrician, fireman, locksmith, and mechanic. Working personnel represent 98% of total staff.

SC ILIANA SRL is equipped with performance machines used in the manufacture of wood windows and doors (CNC machining centers, grinding machines, multiple circular and so on). The products are of best quality and great design. Most customers (90%) are external customers (Germany, Austria) [1].

Because SC ILIANA SRL need to extend their products range with own small investment, turned to financing by accessing European funds.

The company submitted a project to provide purchase equipment to increase existing production. It’s contribution to the financing of the project is 20%.

The project was approved, so SC ILIANA SRL has funded business development through the Economic Competitiveness Operational Program, the program with the overall objective - increasing productivity of Romanian companies to reduce the gap to the average productivity of Union Europe.

Duration of the project is one year and includes as main activities:
• purchase of equipments for the production of veneer sheets;
• creating of 20 jobs will be filled by staff who work on equipment purchased from the project.

Following project implementation, the sale proceeds of realized production will increase by 30%.

Thus, in the economic actually crisis, SC ILIANA SRL, Romanian SME’s, managed to keep the wood products market and even to develop successful
business from accessing European funds.

Strengths of SC ILIANA SRL are:
- the existence of a top management based on knowledge;
- implementation of the enterprise a management based on knowledge and management based on proximity;
- competent staff, employees based on knowledge;
- skilled staff and willing to work.

Conclusions

Started with 2009, the economic crisis has had negative effects on access to credit both in Romania and worldwide. Magnitude lower access to credit is still much higher in Romania than the European Union average.

Indicators measuring level of credit’s fell below the EU average in 2009, when about 40% of SME owners have noticed a decline in banks’ willingness to lend, one third of them have seen a decrease in accessibility of public Guarantee, almost half of SME’s requested were denied loans by banks [14].

SME’s lack the education to encourage access to funds from the state budget and the European Union. Therefore, SME’s consider that their resources are the most important and accessible source of funding, followed by bank credit and ultimately grant from European Union funds.

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[12] Fondul Nasional de Garantare a Creditelor pentru IMM-uri - Ghid de informare privind Fondurile structurale
[14] European Commission - Fisa informativa SBA Romania 2010 / 11
### Authors:

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Management styles in companies are very different, based on methods and communication skills of managers. For an activity to be successful, regardless of the activity, should be considered a series of elements such as the readiness of employees, their age and sex, habit’s, cultural and religious traditions, sexual orientation, etc. We meet people with a direct communication style, clear and concise, which addresses open any dispute of opinions, and people who communicate in an indirect way, detour, with nuances of meaning, avoiding as much as possible confrontations. About valuing cultural differences and harmonization, management styles and issues “expats” are discussed in this article.

Intercultural communication problems within the companies are concerning with how they perceive notions of good and evil, relationships and roles of men and women, how time is perceived, what traditions are considered to be important, the language used, how that is responsive to other cultures and how the exchange of information flows.

We meet people with a direct communication style, clear and concise, which addresses open any dispute of opinions, and people who communicate in an indirect way, detour, with nuances of meaning, often hesitant, avoiding as much as possible confrontations. Most times, the first ones consider this style of communication as a waste of time, vaguely to transmit information and an ineffective way to deal with disagreement or conflict. In turn, the others are bothered by the style directly, openly, frankly, considering it aggressive, rude and even offensive.

Multicultural theme is to iron out these sites and cultural clash in harnessing the huge potential that diversity can play in developing an organization. Lately, it is said

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$^1$ This work was supported by the strategic grant POSDRU/89/1.5/S/62259, Project “Applied social, human and political sciences. Postdoctoral training and postdoctoral fellowship in social, human, and political sciences” cofinanced by the European Social Fund within the Sectorial Operational Program Human Resources Development 2007-2013.
even about a new profession, that of manager of corporate diversity

Valuing and harmonizing cultural differences

Many companies change their structure in an attempt to become more flexible, more agile, better able to adapt quickly to new environmental challenges of economic, political, social or military fields. Networked organizations or those based on work teams, networks and/or cells or global virtual teams are some structural changes adopted to optimize collaboration and communication within companies (Matveev and Milter, 2004).

Without denying the benefit’s of these organizational structures, have stressed that their effect would be insignificant if not matched by an exercise of management towards employees’ creativity and encourage their active involvement in achieving a common goal, namely organizational welfare. Team spirit is not allowed, under any circumstances, to remain at goal or ideal, but felt it must be taken by each employee. Talking about a real team, the above authors consider being “a small group of people with complementary skills who are committed equally to a common purpose or objective and adopt a work style fully informed” (p. 105). Based on this definition, the authors sketch team picture performance that managers mobilize the energy and synergy of cultural differences to get multiple perspectives and constructive approach to business problems. More specifically, a leader must face the following challenges:

• to resolve potential conflicts arising from cultural diversity of employees;
• to encourage and maintain a working atmosphere conducive to creativity, for a co-operation and free expression of individuals;
• to promote open communication within the team by establishing interpersonal relationships based on empathy.

Although these requirements appear, naturally, the privilege of a modern and efficient management style, their implementation requires an arsenal of personal characteristics and management techniques, which may be described generically as ‘intercultural competence’ (Matveev and Milter, 2004). It’s purpose is valuing cultural differences within a group, is talent establish and maintain relationships with others, ability to disseminate information relevant to a specific objective, there are personal characteristics (for example: empathy, warmth, charisma, openness, etc.), knowledge of culture/cultures that are in contact, or ability to cope with hostile feelings, anxiety, uncertainty, etc. These are the ingredients of cultural competence model proposed by the authors already mentioned, starting
at the idea that harmonization of cultural diversity requires knowledge about the culture they interact with (language, traditions, beliefs, rules, etc.), personal skills (clear communication, correct understanding etc.) and personal orientation (empathic interaction, emotional reactions, tolerance, etc.). We can say that the identity of an enterprise is given by its culture, because it gives it a unique set of features and personality, that distinguish it from other organizations (Collins, 2005). And yet, should not ignore the fact that within this apparently homogeneous entities are found many micro-cultures (at the office or department, for example), and these in turn are composed of individuals with their own cultural profile. As noted by Armstrong (2006), personality and individual values are reflected, explicitly or implicitly, in the performance or competence, competitive and innovative spirit, ability to work in teams or how to relate to others. It is easy to see that we deal with diversity in double propagation direction: from top to bottom we have a dissipation, whereas the bottom-up all these profiles converge to build enterprise culture. This recalls a cultural dilemma: report of mutual determination between the individual and organization. Another report to determine which can be raised is: to what extent organizational culture influenced the leadership styles practiced within the company? We believe that this question is justified given that different employees have different impacts on organizational culture. This statement is not intended to minimize the contribution of individual on creating a particular culture, but to emphasize the link between leadership styles and the type of culture that is sketched in time. Whether we talk about charismatic, autocratic, democratic or transformational leaders, relationship between culture and management style is cyclical: “Every manager has his own style which is influenced by company culture, leading to the imposition of a particular style of management that is gradually early time behavior of employees and managers adopted “(Armstrong, 2006, p 309).

It seems relevant in this case study published by Albanese (1988, pag.32) on M. Brown Inc. company, manufacturer of office furniture, which in five years has increased sales from $ 3.5 million to $ 25 million, number of employees from 35 to 135 and number of work points from 1 to 4 by moving from an autocratic management style to a democratic and relaxed one, preferred by North American workers.

**Different management styles - expressions of cultural differences**

As people from different cultures believe different things, dress and speak differently, the same way they behave differently at work because of their attitudes
and values. Although the literature abounds with management models developed, for example, by geographic regions (U.S., Europe, Japan, etc.), below we review some approaches to this issue in the light of materials published in recent years. Thus, Miroshnik (2002) presents results of a study of management styles in nine European countries, USA and two Asian countries: Indonesia and Japan. Subjects’ responses mirrored significant discrepancies in the understanding and application of management concepts such as hierarchical position and exercise of power, problem solving or professional competence. With clear reference to cultural dimensions of Hofstede’s theory (1983), respectively, individualism-collectivism, power distance, uncertainty avoidance, masculinity-femininity, focus on short-term orientation, clearly demonstrated the impact of cultural diversity on organizational behavior. This is how Americans perceive hierarchy as a means of organizing and facilitating problem solving tasks, and relations between bosses and subordinates based on collegiality and collaboration. On the other hand, most Asian respondents see the organizational hierarchy as authority and power of expression. As superiors ability to provide solutions to problems, Europeans and Americans consider that subordinates should be allowed to find the right answers (encouraging, thus, creativity and participation), while such behavior would be labeled as incompetent by Asians. In another study that focused on behavioral differences in negotiations, Lin and Miller (2003) focused on China and the U.S. Also leaving from Hofstede’s model, the authors confirmed that individualistic Americans belong to a culture that cherishes freedom, competition and defense interests. The Chinese, on the other hand, have a collectivist culture, centered on the needs of the group and maintaining harmony within it. Consequently, the behavior of the exponents of the two cultures in negotiations will be different: the Chinese will avoid direct confrontation and try to reach a compromise acceptable to both parties, while Americans will focus on tackling off the problems and use of legality or forcing. Matveev and Milter (2004) examined how U.S. firms can improve their working points in Russia, the state that provides an attractive market with 150 million consumers and rich natural resources. Cultural differences between the two countries are significant in economic, political, ideological, religious and social fields. Unlike American culture, the Russian one is collectivist and moderate male and Russian employees tend to depend emotionally by colleagues, are more traditional and prefer decisions through the hierarchic chain or by majority vote. Consequently, organizational behavior, attitudes and values at work (rectum, organizational culture) is different for employees from the two cultures. While the purpose of Vallaster’s analysis (2004) is more about marketing (product brand development to have an impact on consumers in different cultures),
intercultural implications of this are obvious. Thus was formed a study group (the authors called it “cultural hybrid”) consisting of two Austrians, one Turkish, one French and one Swedish, whose role was to identify the brand with the highest potential to attract consumers of these cultures. The author’s findings were striking the decisive role of leader on the harmonization of cultural diversity: in the initial stage team members were allowed to reach a solution on an equal footing, the stage was later appointed by a leader who had experience and training required of working in a multicultural environment. In the first phase, participants failed to solve the problem, while the presence of leader led to interaction, cohesion, open communication and honest expression of feelings, wishes and personal opinions. Another factor is related to international business expatriates - employees who leave their country to work in different cultural environments. As shown Haslberger (2005), they should go through three steps as adaptations: general adjustment, interaction with the new culture and adapting the working environment. Emotions, uncertainty, away from home and / or family are some of the difficulties which have to face expatriates. We know the case of a manager of OMV, transnational energy company. He was born and educated in Hungary, Central-Eastern European country with democratic traditions and Catholic religion, despite that Hungary was under Soviet domination for 45 years. He joined the Austrian company OMV and after an internship in his country was called to Vienna for a further period of training. It was a great challenge for the young manager. But after OMV bought Petrom, he was sent to work as marketing manager in Romania, a former communist country as his own country, but with dominant Orthodox population, with other concepts, different behavior and different religious calendar of events. A restructuring of the company has booked the manager to explore underwater oil fields in Turkey. A new business area, new people, customs and traditions (Turkey is an Islamic country). How many changes will be blowing the manager in the coming years and how could he devote energies with the company? Will he go ahead or withdraw (especially because his two children are at the age to go to school)? Are his efforts rewarded in financial terms? Here’s what to be an “expat” means: changes in activity, in location, in the team, in social and cultural background, still keeping in touch with own family and country. It is not easy. It is imperative therefore that these difficulties are mitigated by the acquisition of intercultural skills that transition shock is not felt so acutely. Large corporations are serious about this and even develops management programs for expatriates, but the authors believe that there is much to do in this regard. Finally, Kameda (2005) turned to how the use of English affects Japanese business firms in other Asian countries. Although this knowledge could reduce cultural
challenges and facilitate communication, the study proves otherwise. The reason is that communication style (non-verbal communication etc.) differ from culture to culture, therefore, “is totally erroneous to think that speaking English well is a way to communicate effectively” (p. 171). Therefore, it is not surprising that major Japanese corporations treat intercultural skills as a strategic priority.

Conclusions

The conclusion of these approaches illustrates how difficult is for companies today to reach intercultural problems and do not only increase the usefulness of intercultural management in today's business environment. Starting from the idea that these challenges can be solved only by using techniques and methods offered, bring back to the fore the relevance of motivation and professional ethics in valuing cultural differences in organizations, regardless of their business and their specificity. Globalization requires new spheres of public transnational communities willing to transcend nationality and regional borders. In this category fall businessmen, artists, Latino communities, youth cultures. Equally noticeable is the tendency to fragment the national communities, during which fewer people in close proximity share the same cultural inventory. Phenomenon is proper for the former communist countries. Many groups have rediscovered cultural identity - the question was whether the majority or minority - a condition in which they fought (fight) for own values using the same language. Local participation in economic and political world will make all features of national cultures derived from French, German, Russian, Thai, etc. cannot be understood outside the context of global. As an individual - despite the differences that separate it from another, despite the views of the world fed their culture and language - he has the opportunity to cultivate dialogue and reap it's fruit. It seems that this is a tremendous opportunity for self-achievement and enrichment of society. Hence, we believe, the new paradigm is being born: Intercultural Dialogue a desirable, achievable step and a real opportunity and a chance to enrich society.

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Economy of Terra and Extraterrestrial Civilizations

Author: Emilian M. Dobrescu, Scientific Secretary on Economic, Law and Sociology Section of Romanian Academy, dobrescu@acad.ro

Along time meetings have surely taken place between the terrestrial people and the extraterrestrials, maybe even our origin is extraterrestrial (according to cosmic panspermia theory). Asked in 1960 why this information wasn’t communicated to people, the astronaut Hugh P. Wilkins answered: “Neither public opinion, nor the scientists have yet intended to give up in considering themselves the only intelligent creatures in the Universe” ¹.

These meetings admitted by the American government and by the Vatican for their authenticity are based, among other, on the transfer of technology to us, the terrestrials, in order to make our civilization perfect. Thus the theory was considered that the main technological discoveries on Terra were in fact suggested by the aliens; these discoveries have influenced the economy and human society.

Keywords: economy of Terra, extraterrestrial civilization, resources of Terra

The history of the phenomenon

The assertions about the existence of the extraterrestrials have resided even from Ancient times. In his book entitled “Works and Days”, Hesiod wrote about a human happy society protected by some generous gods that had at their disposal the destiny of the whole world. Even if the ancient Greeks debated the possibility that the extraterrestrial creatures might have existed more than two millennia ago, such a theory was developed only the moment the scientists understood that the planets of our solar system move round the Sun.

The idea was launched in the XVIIth century, when the theory of the plurality of worlds was presented, one of the most opinionated supporters being

¹ Apostol Dan, Deocamdată... enigme, ediția a II-a, București, Editura Sport-Turism, 1986, p. 222
Bernard Bovier de Fontenelle, the author of the study entitled “Conversation about the plurality of worlds”, published in 1686.

It was Herbert George Wells and his work entitled “The War of the Worlds” published in 1898 that marked the moment we imagined the first extraterrestrial invasion on Terra – here it is H. G. Wells’s description of the Eve of the War, the first chapter of his book: “no one would have ever believed in the last years of the XIXth century that creatures more intelligent than humans, but mortals as well, searched with attention our world and while people were concerned with their chores they were watched and examined perhaps the same meticulously the way a man examines under the microscope the short-lived creatures that swarm and multiply in a drop of water...No one would think of the other planets in the outer space as sources of danger for the humans and in case in which people had ever thought of them it was only for excluding the idea of life in there, either impossible or improbable. Recalling them, the current ideas of those distant times would seem strange to us. People on Earth would imagine that if at best on Mars had lived other creatures, probably inferior to humans, they would have been engaged to a missionary expedition. However, beyond the gorge of the space, minds referred to our minds the same way as ours are referred to those of the insignificant creatures, that is harsh and cruel intelligence, looked at the Earth with cruel eyes and planned slowly but efficiently against us” 3. The book The War of the Worlds has a motto belonging to the astronomer J. Keppler that measures up to it’s fame earned especially in 1939 when Radio New York broadcast a dramatic fragment from the beginning of Wells’s novel perceived by the Americans as reality: “Who inhabit’s these worlds if they are inhabited? ...It is us or them the masters of the world? And how does the man understand the nature of things?” You will see, as follows, the advice that another famous astrophysicist namely Stephen Hawking gives us referring to the extraterrestrials.

In 1901 Nikola Tesla announced the receiving of a mysterious signal possibly sent from Mars and 19 years later Guglielmo Marconi declared in front of the reporters that he detected a radio signal that came from the space. The year 1947 brought into public debate the possibility of such visit’s, more specifically on Wednesday, 25 June in the north-west part of the Pacific Ocean; that day the pilot of a private airplane, Kenneth Arnold, saw nine objects of a strange form that he called flying disks that escorted him in his flight near the Mount Rainier. The next weeks and months, hundred of other notices were reported; it was the first great popular

craze of the unidentified flying objects called after a few years UFOs in English or OVNIs in French. The same period mentioned the fact that the truth about the flying objects was secret for the public. The official discourse places the phenomenon to a popular belief and several voices make a connection between the UFOs and top secrets.

The thousands of cases in which the UFOs left evidences of their existence are known as "close encounters of the second level". Nowadays we can distinguish three main types of effects as result of these meetings: a) traces left when landing on the ground (together with the aerial calcinations of the vegetation, infestation and pollution of the waters, in some cases radioactive); b) interference with the electrical circuit's in the area, observation and recovery of objects and even alien creatures (at Rockwell, the USA); c) physical and mental disorders of the people who took part in such “encounters”.

The encounters of the third level between humans and extraterrestrials had been planned long before launching the movie with the same title: in 1974, by using the huge telescope in Arecibo, Costa Rica, the first terrestrial message was sent to a possible extraterrestrial world.

We have been visited by aliens

As if meant to stop the speculations or evidences about UFOs, scientists reconfirmed the extraterrestrial origin of life on Terra, based on some primitive genetic materials discovered in pieces of meteorites fallen on Terra. The discovery of the researchers indicates that the raw material that composed the first DNA and RNA molecules comes from the extraterrestrial space; they succeeded to identify uracil and xantine molecules, the so called nucleobases, in the remains of the Murchison meteorite, crushed in Australia in 1969. According to scientists, such kinds of molecules are the forerunners of the DNA and RNA molecules. Mark Septhon, one of the authors of the study, makes the assertion that 4.5 billions of years ago a rain of meteorites similar with Murchison fell on Terra leaving huge quantities of components vital to life in the biotic terrestrial environment. The researchers proved that the nucleobases discovered in the meteorites due to their impact with the surface of the Earth contain a form of carbon existent only in the extraterrestrial space thus they could only have come from outer space. Duncan Forgan, one of the members of the team that made researches under the auspices of the University of Edinburgh thinks that a galaxy similar to ours can develop it's own solar systems based on the existence of the exoplanets around the galaxies. According
to this hypothesis the possibility of discovering other extraterrestrial civilizations
is highly increased. The first scenario considers that any form of life can appear
relatively easily on other planets, but it is more difficult to reach a reasonable level
of intelligence.

Some of the enthusiastic people think that any extraterrestrial civilization
capable of reaching us could have survived just as long as to develop the technology
necessary to solve social and economic problems of major importance such as war,
poverty and discrimination. After the small town of Roswell (in the USA) the UFOs
invaded Osaka (Japan), China and even the Baciului wood near Cluj-Napoca. It
seems that aliens don’t visit us with hostile intentions, because they would have
revealed them until now, but to guide us economically, socially, to control our living
standard, perhaps in order to improve the problems of our whole planet, within the
experiment called “developing a humanoid civilization on Terra”.

All these scientific discoveries allowed the Russian scientist N. Kardasev to propose
classifying the potential cosmic civilizations from the energetic point of view as follows: a)
civilizations of the first rank, Terra type, which make use of all energetic resources of their
planet; b) civilizations of the second rank, Dyson type, existent at the level of the solar system,
as some parts of the Pegasus and Arietis constellations are supposed to be. Prof. Freeman
Dyson from Princetown University, USA, claims that after the complete exhaustion of the
natural energetic resources (referred to the whole planet) such a civilization would be
able to reorganize the surrounding and planetary material in such a way that it makes
possible the creation of an impenetrable spherical coat of the whole solar system (the
Dyson sphere); this sphere would produce infrared radiations of a great caloric intensity
thus allowing for the quasi-integral use of the energy radiated from the respective sun;
c) civilizations of the third rank, Super Dyson type composed of galactic societies that
cooperate (by means of a sphere similar to that of the second rank) in order to use all the
stellar energy radiated in the centre of their galaxy, probably exceeding the quantity of
energy consumed on Terra about over $10^{25}$

After they had exhausted the natural resources of their own planet, the
aliens set extra-planetary journeys meant to discover other celestial bodies they could
take advantage from, in terms of economy: “These creatures can submit and colonize
planets at the board of space-ships. It is enough to look at ourselves in order to realize
how intelligent life turned into something we know”, the British astrophysicist Stephen
Hawking⁵ claims, and continues: “Aliens exist for sure, but scientists should make any

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⁴ apud Apostol Dan, Op.cit., p. 31
⁵ 69 years old, the mathematician and physicist endowed with an IQ of 160, famous for his non-conformist
theories. Hawking suffers of amyotrophic lateral sclerosis, being confined to live in a wheelchair and
communicate through a speech generating device. His mind is brilliant though. Hawking is motor disabled,
possible effort to avoid the contact with other forms of life. It is perfectly reasonable to think that there is intelligent life somewhere else, too...Aliens could simply visit the Earth for resources and then go to somewhere else. If aliens visit us, the result could be somehow similar with Columbus reaching America, that didn’t end quite well for the Native Americans...

A mysterious episode was reported by the media in July 2011: an airport in China was closed by emergency after a spaceship of an unknown origin was detected by the radars of the traffic controllers. The officials of the airport in Xiaoshan detected the UFO on the screens of the devices in the control tower and were forced to put off all the flights and order to divert the flights that had the town in the east of the Hangzhou province as their destination or that had to pass through it’s airspace. The mysterious object began to shine both on the monitoring machines and the China’s sky, late in the night of 7 to 8 July, being filmed by a local that happened to notice it. Many people in the area announced that they identified in the air a fire ball looking like a comet. The ship finally disappeared from the screens of the radars but the officials of the airport in Xiaoshan sent immediately an airplane to follow it. A bus driver that witnessed the appearance of the strange object declared: “It suddenly started to fly in great speed to the west as if it had tried to get rid of something”.

Relations with extraterrestrial civilizations

We live in a universe of intelligent origin. There is evidence that there are civilizations more advanced than ours participating in our development process. There are statements by U.S. government employees stating that they participated in various secret networking programs with some alien civilizations. This means that aliens have already been contacted. According to these witnesses, the U.S. government is working with them in secret since the 50’s of last century.

cannot hear, cannot speak normally and cannot move his hands. At the age of 21 he was diagnosed with a motor neuron disease called amyotrophic lateral sclerosis. In spite of this situation, Professor Hawking is father of three children and has won numerous prizes in international competitions, being considered the greatest physicist in the world. Stephen Hawking can communicate by means of a special computer attached to his wheelchair, which is operated by Hawking through an infrared device attached to his glasses and triggered by movements of his eyelids. Considered the author of the Large Hadron Collider (LHC) Experiment, conducted in CERN Geneva, Hawking received countless death threats from organizations worldwide; the location of his home is kept secret by the British Police.

6 * * *, Un OZN a închis spațiu aerian chinez, on www.descopera.ro , last visited on 12 July 2010
7 ideas processed from an interview with Alfred Lambremont Webre, the Director of the Institute for Cooperation in Space (ICIS) in Canada. The interviewee was born in 1944 in a naval base in Florida during the Second World War and lives in Vancouver, Canada. He is a doctor in Law and a judge for the Kuala Lumpur War Crimes Tribunal. He is married and has a son and two stepdaughters.
Buzz Aldrin, who traveled with the Apollo XI, said that upon their arrival on the Moon in June 1969, two big alien ships awaited, which had already landed on the edge of a large crater. Andrew Basiago, the son of a CIA official, was enrolled at age 7 in a super-secret program for gifted children, trained to become ambassadors of the Earth in the cosmos. A meeting with three aliens has already been held on Mars. In January 2009, Virginia Olds, an employee of the CIA, confirmed that her institution knows that there is a humanoid civilization living on the surface of Mars: “We believe that in 9500 BC fragments of the Vela supernova entered the perimeter of our solar system, destroying animals and plants on Mars. Martians are about 1,500 years more advanced than us technologically and ethically and took refuge in the undergrounds of this planet”. In December 2008, NASA published a report that included photographs taken by the robot Rover Spirit, which identified certain species of humanoids, animals and structures on the surface of Mars. These photos can be viewed on the website Exopolitics.

Dr. Steven Greer, director of the Disclosure Project, gathered more than 500 testimonies from specialists in the Army and the government or from other persons with higher order intellects who have witnessed alien presence, and this evidence has been made public in May 2009 at the National Press Club in Washington. Mexico, Chile, Brazil and Peru have also made public their archives on UFOs. France, Sweden, Denmark and Britain have uncovered about 7,200 UFO files compiled by secret intelligence unit’s of the Ministries of Defense in those countries.

At the European Exopolitics Summit in 2009, astronauts from NASA and the Russian Space Agency said they had contact with extraterrestrial civilizations. The organizer of the summit, Alfred Lambremont Webre, the creator of exopolitics, is Attorney General of the Environmental Protection Agency in New York and the Ford Foundation consultant, former professor of economics at Yale University and the University of Texas, delegate to the Texas Democratic Party Convention in 1996, which has led to the second term of the U.S. President Bill Clinton, seconded by Vice President Al Gore.

Paul Krugman, Nobel Prize laureate for Economics in 2008 indicated a “temporary solution to balance the trade balance and that is to find a planet in outer space where we can export our Terrestrial products that are more difficult to sell elsewhere”.

The existence of life on Mars has not been revealed for political reasons. Probably Martians are not present on Earth because our planet is an inferior one and seems to have been placed under some sort of quarantine imposed by aliens,

8 Andronic, Stelian Octavian, Raport (desecretizat) privind aspecte ale viitorului, București, Editura Vremea, 2009, p. 16
a quarantine that must end sometime... Alien civilizations, superior to ours, have visited Earth in their extraterrestrial ships that we call UFOs, to make us get used to their existence, and between 2010 and 2020 there are “expected” even some contacts, open relationships with these civilizations. The contact with Martians could bring us many mutual advantages: they offer advanced technologies and knowledge, and they can even “migrate” to Earth themselves.

In his memoirs, on March 29, 2012 Fidel Castro noted: When Pope John Paul II visited our country in 1998, I had already discussed several times before on various topics with his envoys. I especially remember that once during dinner we sat in a small room of the Revolution Palace and Joaquin Navarro Valls, the Pope's spokesman, was sitting in front of me. To the right sat a kind and intelligent priest who came with the spokesperson and accompanied John Paul II at the services. Curious to know details, I asked Navarro Valls: “Do you think that the huge sky with millions of stars was made for the pleasure of Earth's inhabitants whenever we deign to look up some night? Absolutely,” he replied and continued, “Earth is the only inhabited planet in the universe”.

Then I turned to the priest and asked “What do you think about this, father?” And he replied: “In my opinion there’s a 99.9 percent chance to find intelligent life forms on another planet”. The answer did not infringe any religious principle. I remembered the mentioned percentage... It's the kind of answer I consider fair and serious. Later on that priest was always friendly with our country. To share friendship one should not necessarily share religious faith as well.

Today, Thursday (March 29, 2012 – A/N) - Fidel Castro continued - a European entity knowledgeable in the subject wrote verbatim: “There could be thousands of millions of planets not much larger than Earth, orbiting around other debilitated stars in our galaxy, according to an international team of astronomers. The estimated number of “super-Earths” - planets with up to ten times the mass of Earth - is based on the detections already carried out and then extrapolated not to include the population of the so-called “dwarf stars” of the Milky Way. Our new observations made with the HAARP device show that about 40 percent of the red dwarf stars have one “super-Earth” orbiting in the so-called “habitable zone” where liquid water can exist on the surface of the planet in question” said Xabier Bonfills, head of a team of researchers from the Observatory of Sciences of the Universe of Grenoble, France. Because red dwarf stars are so common - there are about 160,000 million in the Milky Way – the research takes us to surprising results, namely that there are tens of millions of such planets in our galaxy alone. Studies suggest that there are “super-Earths” in residential areas in 41 percent of cases, with a percentage between 28 and
95 of the cases. Therefore, about 40 percent of red dwarf stars have a “super-Earth” orbiting in the so-called habitable zone where water can exist in liquid form. This leads to the obvious question, whether any of these planets is not only habitable but whether it shelters life forms detectable with our terrestrial instruments...

“We know how to find signs of life on these planets”, said Stephane Udry, a researcher at the Observatory of Genoa (Italy), who continued: “If we can see elementary signs of life in the oxygen of our measurements, then we could get clues whether there’s life on that planet”.

Simply reading this news shows the possibility and the necessity to enrich and classify the nowadays fragmented and dispersed information and knowledge about terrestrial and extraterrestrial life and about the economic determinations of these entities. Perhaps these things, once classified as “top secret” will lead us towards more critical positions against the superficiality with which we approach the issues of alien civilizations with whom we came in contact and who profoundly influence our economic, social, scientific lives, etc.

Conclusions

There are dimensions and realities that are parallel to our terrestrial one. Some alien civilizations can populate another dimension, another universe parallel to our own, so we do not “know” where do the UFOs that ignite our imagination appear from and then disappear so fast. We earthlings, we live in our own universe, located on Earth, and civilizations with higher ethics managed to dominate the Time dimension and perhaps these civilizations were, are and will be those who further develop the “Terra experiment” of populating our planet with humanoids, of achieving and developing a global economy and society on Earth.

According to some theories, insufficiently publicized and, therefore, less familiar, we evolve into an economic manner that acceleratedly faces globalization in this period of earthly life, to abandon the current economy and local wars and to transform the Earth economy in a sustainable one. The consciousness of the most advanced humans on Earth, sometimes called initiates, develops strongly to enter more deeply into the so-called “secrets of the universe” and to relate openly with other civilizations.

Extraterrestrial civilizations ought to apply a primary ethical norm in relation to our terrestrial civilization: never interfere in the evolution of a civilization on another planet. In very little time, measured at Universal scale, Man will learn
to use quantum teleportation and extract energy from space. We earthlings, we are in an era of transition, when we need to decide quickly whether we go towards self-destruction, or towards a higher evolution of the current human civilization.

Here’s how H.G. Wells concludes the matter in the Epilogue of his novel “War of the Worlds”: “At any rate, whether we expect another invasion or not, our views of the human future must be greatly modified by these events. We have learned now that we cannot regard this planet as being fenced in and a secure abiding place for Man; we can never anticipate the unseen good or evil that may come upon us suddenly out of space...”

References

[3] * * *, Brazilia porneste in urmarirea extraterestrilor, pe site-ul www.descopera.ro, vizitat pe 16 august 2010
[4] * * * Churchill si Eisenhower, vinovati de secretizarea dosarelor OZN, pe site-ul www.descopera.ro, vizitat pe 9 august 2010
[9] * * *, Un OZN a inchis spatul aerian chinez, on www.descopera.ro, last visited on 12 July 2010
Comparative Analysis of Polycentric Structures of Romania and other Countries. The Role Poles of Development

Author: Edith Mihaela Dobre, INCE „Costin C. Kiriteșcu” Romanian Academy, Bucharest, Romania

Research and analysis in the last decades reveals more and more the role cities in promoting development. Cities are regarded as the most dynamic economic growth and development models, centers of technological innovation and incubators of economic multipliers. Connections international, i.e. the network of the larger towns and cities, are playing an increasingly important role, and develop national economies depends on the junction of major urban centers in the world and the creation of national systems strong.

Cities that operate as opposite poles of development should cooperate in the framework of a polycentric pattern, so that this cooperation should be a value added for other cities to rural areas and computer peripherals. It is therefore very important European cooperation between metropolitan regions, as well as between cities of small and medium size, both at the internal borders, as well as beyond the external borders of the EU.

Keywords: regional development, poles of growth, polycentric development, economic growth

Introduction

The interest in developing policentric is supplied to the evidence according to which systems polycentric urban stimulates economic growth, are more sustainable in terms of protection of the environment, and supports territorial cohesion is better than monocentric urban systems. Main policentric hypothesis is that operational and economic integration can be achieved without creating the structural imbalances to territories. Identification of possible conflicts between most from ride zone individually for each actor economic on the one hand, and
most from ride zone general for the society, on the other hand, is thus an essential prerequisite for the development of public policies for the support of policentrism. From the point of view programmatically, it can be said that territorial policentrism represents the size of European policy convergence: urban structure shall be so organized as to stimulate competitiveness and growth.

Companies must have access to the services. Labor market must be sufficiently diversified, so that people find jobs suitable qualifications and her aspirations. In all regions of Europe, citizens should benefit from services that allow them a satisfactory quality of life, opportunities for recreation and cultural development. The most well-integrated territorial levels at the European level are the countries, which is why national level is used as the starting point for identification of the level of policentrism.

Many comparative studies on networks of cities, and various cities in Europe have indicated that there is a powerful system polycentric and more and integrated cities in Europe, highlighted the existence of a higher degree of interdependence between higher levels of urban hierarchies of the Member States.

Establishment of regional development should be based not only on a single or urban center in Europe, but a number of centers with the potential to promote a more balanced process of urbanization and territorial development across the European Union. For this to be effective polycentric development is necessary to identify those cities that have the best chance to become forces. Achieving this goal requires assessing the ability to generate and disperse urban development opportunities. This ability is strongly influenced: the size of the city, often related to the level and spatial extent of infrastructure and services, the activity profile, the degree to which it is oriented towards innovative activities, sources of revenue and jobs.

The European Union is considered the most urbanized region of the globe. Once estimates and definitions United Nations in 1992, 79% of the population lived in urban areas, compared to 77% in Japan, 76% in U.S., 67% in Central and Eastern Europe and 35% in developing countries.

Urbanization occurs in all countries of the Community, with a slower pace in the north, already heavily urbanized 60s and faster in the South: Greece (64%), Italy (69%) and Spain (79%) urbanization rate reached close to the EU average, while Ireland (58%) and Portugal (36%), as defined in the United Nations still have a much lower rate. The EU has 169 cities with more than 200,000 inhabitants, 32 with over one million representing 56% of the urban population.

London and Paris are the only EU megalopolises that can be compared
with cities like New York, Tokyo, Mexico, Cairo or Bombay and major cities with over 500,000 inhabitants are distributed in a relatively equal manner across the Community.

**Description of the methodology used to achieve the objective**

Were determined categories set of studies relevant to the issue of polycentric development. To this end, we tried to distinguish between levels of influence (global, European, regional and infra-regional) and the position of cities and their degree of international openness. Within each level, to take into account the degree of specialization of the profile activity and profiles were identified activities that are more or less diversified or specialized. It was also considered current qualitative change depending on conditions more or less favorable development of both existing and future.

Types of indicators used

1. POPULATION: (population, migration of population, average annual population change)

2. COMMUNICATIONS (inter-regional transport infrastructure and international rail transport, road transport, air transport, road transport accessibility: the average shortest path access, international connections: the number of direct services per week with each other both poles by rail and by air)

3. UNEMPLOYMENT (defined for each pole separately and urban area) default rate, youth unemployment rate, the unemployment rate for those with higher education.

4. ECONOMIC ACTIVITY (defined for each pole separately and urban region) in the pole number of jobs, number of jobs in the rest of the city.

5. ACTIVITY AND INNOVATION: number of businesses, changes in the number of business, technology, medium, high, business services, financial activities, international research, research and development.

6. HOSTING CAPACITY OF EVENTS: number of hosted events, changes in the number, exhibitions: including international events, conferences and congresses: including international events.

7. INTERNATIONALIZATION ECONOMIC: headquarters of international organizations, international company headquarters, the headquarters of large companies.

8. RICH (defined for each pole separately and urban region) income, GDP.

Below present urban setting for integrated regional development using
existing typologies consider each pole above indicators established urban area in the main study.

Among these studies are those by R. Brunet\(^1\), that makes two classifications: one by number of inhabitants distinguishing 6 classes: over 6.4 million place - London and Paris, between 3.2 and 6.4 million – Madrid and Milan, between 1.2 and 3.2 million - 12 cities, between 0.8 and 1.2 million other 6, then the following classes with a population between 0.2 and 0.8 million inhabitants.

Parallel and classification is complex, hierarchical levels. The first hierarchical level is placed London and Paris, Milan next level (first sublevel) and Madrid, Frankfurt, Munich, Rome, Barcelona, Brussels and Amsterdam (second sublevel) etc. It is noted that a very important role in this classification have been the place they occupy in their respective cities and international flows (Frakfurt, Amsterdam, for example).

Kunzmann and Wegener\(^2\) distinguish four hierarchical levels, namely: global cities (London and Paris), conurbations of European importance (Liverpool, Manchester, Leeds, Randstad, Ruhr, Rhine, Rhine-Main, Copenhagen-Malmö) European cities (Madrid, Barcelona, Lyon, Birmingham, Brussels, etc.) and important cities in Europe (Lisbon, Zurich, Glasgow, Thessaloniki, etc). This classification, as far as I can see, is very questionable, Milan or Madrid were posted by Liverpool, whose European influence is extremely low.

Finally, a third classification is made by a group of authors from Equipe P.A.R.I.S\(^3\), offering the following hierarchy levels for top European cities: international cities (London and Paris), specialized international cities (Amsterdam, Hamburg, Geneva, Strasbourg, Brussels, Berlin, Vienna, etc.), regional cities with strong international links (Manchester, Milan, Madrid, Lyon, Barcelona, Basel, Rome, etc.), peripheral regional cities with limited international connections (Lisbon, Athens, Venice, Nantes, Southampton etc.) and international connections of regional metropolises limited and highly specialized (Cardiff, Kiel, Bari, Saint-Etienne, Murcia, etc.).

In terms of settlement systems, regional morphological distinguish 5 types of systems.

Monocentric excessive settlement systems, which are based on a posting so obvious, that levels towns missing following the link without realizing large

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\(^1\) Brunet R. et al., Les villes européennes, La Documentation française, 1989, p 125- 140


\(^3\) Cattan, N., Pumain, D., Rozenblat, C., Saint-Julien, T. (1994), Le système des villes européennes, Anthropos, Economica, Paris
differences directly, although urban centers. Appropriate small states where capital is in top urban hierarchies.

At the regional level in Romania, such hierarchies are found in some systems settlements county, such as Braila or Arad. In both cases, the posting is so clear that small towns of the same size, practical, and under-represented (if Braila county) is on the same level as most common residences.

**Monocentric settlement system** with clear imposition of primacy, but where are the other hierarchical levels. Capital, where national systems of settlements exceeds several times the next-ranking city in some cases approaching excessive features monocentric systems (Hungary, Paraguay, Austria). The most common examples of this group are found in Europe (France, UK, Greece, Romania, Bulgaria, Ukraine, Denmark, Ireland, etc. At the regional level, Romania has the most counties in the ratio of the first and the second city is between 4 and 8 (County, Timis, Prahova Brasov, for example).

**Balanced monocentric settlement system**, characterized by imposing on the first rung of the hierarchy, but with very wide representation of cities in the next levels. Appropriate reunified Germany, Spain, Belgium, Russia, Egypt, Israel, Algeria, etc., in which stands the capital, but the whole system is balanced urban packed with subsystems centers are required to turn in structures region. Such subsystems are found in the counties Mures in Romania, Suceava, Bacau, Constanta, Cluj, the following hierarchical levels are relatively well represented.

**Two-centered settlement system**, it is found that there are two permanent centers compete for first place in the national or regional hierarchy. If national, such cases were very rare and usually difficult to individualized situations are more common at regional level. Thus nationwide deployment we could find some great centers of two functions separate national urban system of China. Despite the fact that there are dozens of cities millionaire, though competition of Beijing, which holds political power and cultural life of the country and Shanghai which is the economic engine there is a struggle for supremacy in the urban hierarchy. In Romania such examples occur in Neamt county level (between Piatra Neamț and Romanian), Olt (competition between Stellenbosch and Caracal), Harghita (between Ciuc and Odorhei), where cities ranked next in the hierarchy county previously held positions territorial important.

**Multipolar or polycentric** settlement system, which is probably the most efficient settlement system, because centers located near the top of the hierarchy, agree on a division of functions are integrated in highly urbanized areas (megalopolises) or are situated at sufficient large. In these cases, the competition is
very strong function of the national capital was located, in agreement or in a smaller city, situated at convenient distances, either in a completely new city or be divided between the two cities (between legislative and executive). Such national systems usually states that are characterized by a large number of people, but also by a huge area (USA, Brazil, Australia, Canada, India, South Africa, even Nigeria). Some exceptions include small country with a very old urban history with a tradition of multipolar development, such as Switzerland and the Netherlands. At county level, in Romania such systems have Teleorman settlements, there is a competition for power between the towns of Alexandria, Turnu Magurele and red Vedas, and Vaslui, where stands the same phenomenon from other three cities: Vaslui, Barlad and Husi. If the first case is to keep fighting polycentric nature of the system, but to obtain credentials central place in the second case it is centrifugal force that attempts to fragment the system of settlements, turning it into three systems monocentric excessive.

*Analysis of Romania at large regions* reveals significant differences in overall morphology settlement systems, at least at the top level of the hierarchy. Thus, the Transylvanian settlements will deploy it’s polycentric character, because with Cluj, who exercised the basic cultural functions for this space, meanwhile have other centers such as Brasov, Sibiu Targu Mures even. Moldovan settlements system has a two-centered character with imposing city of Iasi and Galati clear, the first dominating the central and northern Moldavia, the second it’s southern part.

Other regional settlement systems have a single center character obviously, but with very different hierarchical configurations. At different scales, Wallachia and Dobrogea settlement system resembles overly monocentric. In the first case it is necessary Bucharest city which is the capital of the country, but clearly dominate the whole system of settlements, and in the second case Constanta. The type Banat single center is built almost linearly with represented all levels, but the first five levels have only one urban center. Given that each of these centers have their areas of centrality, we could say that Banat settlement system is unbalanced single center. Finally, the settlement is oltean single center, but balanced with well represented all levels.

Romania is the polycentric degree in environmental registry, similar to Italy and Switzerland.

*In terms of competitiveness* between cities of analysis has three key features of competitiveness identified in the literature and surveys the makers - innovation, connectivity and skilled workforce.

As a measure of competitiveness is taken into account GDP / capita. As
an innovative use of innovations EU regions score. For external connectivity was measured traffic through airports and internet access. To measure social cohesion were gathered data on the unemployment rate and the population living below the poverty line. The table below presents performance mainland cities. A number of features are obvious: capital cities tend to be on top.

Table 1: GDP / capita in 23 European cities in 2010

<table>
<thead>
<tr>
<th>Loc Ocupat</th>
<th>Oras</th>
<th>Euro Pe Locuitor</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Frankfurt</td>
<td>74.465</td>
</tr>
<tr>
<td>2</td>
<td>Paris</td>
<td>67.200</td>
</tr>
<tr>
<td>3</td>
<td>Munchen</td>
<td>61.360</td>
</tr>
<tr>
<td>4</td>
<td>Dusseldorf</td>
<td>54.053</td>
</tr>
<tr>
<td>5</td>
<td>Stuttgart</td>
<td>53.570</td>
</tr>
<tr>
<td>6</td>
<td>Bruxelles</td>
<td>51.106</td>
</tr>
<tr>
<td>7</td>
<td>Copenhaga</td>
<td>50.775</td>
</tr>
<tr>
<td>8</td>
<td>Hanovra</td>
<td>47.223</td>
</tr>
<tr>
<td>9</td>
<td>Hamburg</td>
<td>43.098</td>
</tr>
<tr>
<td>10</td>
<td>Nuremberg</td>
<td>41.456</td>
</tr>
<tr>
<td>11</td>
<td>Augsburg (Germany)</td>
<td>39.360</td>
</tr>
<tr>
<td>12</td>
<td>Cologne</td>
<td>39.108</td>
</tr>
<tr>
<td>13</td>
<td>Amsterdam</td>
<td>38.203</td>
</tr>
<tr>
<td>14</td>
<td>Dublin</td>
<td>36.591</td>
</tr>
<tr>
<td>15</td>
<td>Viena</td>
<td>36.572</td>
</tr>
<tr>
<td>16</td>
<td>Stockholm</td>
<td>35.733</td>
</tr>
<tr>
<td>17</td>
<td>Helsinki</td>
<td>35.322</td>
</tr>
<tr>
<td>18</td>
<td>Londra</td>
<td>35.072</td>
</tr>
<tr>
<td>19</td>
<td>Bremen</td>
<td>35.022</td>
</tr>
<tr>
<td>20</td>
<td>Edinburgh</td>
<td>35.018</td>
</tr>
<tr>
<td>21</td>
<td>Bonn</td>
<td>34.112</td>
</tr>
<tr>
<td>22</td>
<td>Antwerp (Belgium)</td>
<td>33.090</td>
</tr>
<tr>
<td>23</td>
<td>Milano</td>
<td>32.122</td>
</tr>
</tbody>
</table>
To compare GDP, unemployment rate and productivity data were included in the analysis Business Strategic Limited.

The report uses three measures of regional prosperity:
• GDP / capita adult and able to work (as amended by those who commute);
• Unemployment rates (grade of employment divided by the working age population of major and modified by those who commute);
• Productivity - GDP / capita adult and able to work, as those who commute, divided by the rate of employment.

**Table 2:** regional cities with high levels of productivity have a higher GDP

<table>
<thead>
<tr>
<th>Regiunea</th>
<th>Orașul</th>
<th>PIB/locuitor</th>
<th>Rata de angajare</th>
<th>Productivitatea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Luxemburg</td>
<td>Luxemburg</td>
<td>57,4</td>
<td>58,5</td>
<td>98,2</td>
</tr>
<tr>
<td>Oberbayern</td>
<td>Munchen</td>
<td>49,6</td>
<td>65,6</td>
<td>75,6</td>
</tr>
<tr>
<td>Hamburg</td>
<td>Hamburg</td>
<td>49,1</td>
<td>63,6</td>
<td>77,1</td>
</tr>
<tr>
<td>Darmstadt</td>
<td>Frankfurt</td>
<td>47,1</td>
<td>61,0</td>
<td>77,2</td>
</tr>
<tr>
<td>Bruxelles</td>
<td>Bruxelles</td>
<td>45,3</td>
<td>83,1</td>
<td>54,6</td>
</tr>
<tr>
<td>Ile de France</td>
<td>Paris</td>
<td>45,1</td>
<td>58,6</td>
<td>76,9</td>
</tr>
<tr>
<td>Uusimaa</td>
<td>Helsinki</td>
<td>41,5</td>
<td>68,6</td>
<td>60,5</td>
</tr>
<tr>
<td>Stockholm</td>
<td>Stockholm</td>
<td>40,4</td>
<td>69,8</td>
<td>57,9</td>
</tr>
<tr>
<td>Lombardia</td>
<td>Milano</td>
<td>38,4</td>
<td>58,6</td>
<td>65,5</td>
</tr>
<tr>
<td>Denmark</td>
<td>Copenhaga</td>
<td>36,7</td>
<td>68,1</td>
<td>54,0</td>
</tr>
<tr>
<td>Zuid-Holland</td>
<td>Rotterdam</td>
<td>36,7</td>
<td>60,4</td>
<td>60,8</td>
</tr>
<tr>
<td>Noord-Holland</td>
<td>Amsterdam</td>
<td>34,3</td>
<td>49,1</td>
<td>69,9</td>
</tr>
<tr>
<td>Piemonte</td>
<td>Turin</td>
<td>33,2</td>
<td>56,8</td>
<td>58,5</td>
</tr>
<tr>
<td>Catalonia</td>
<td>Barcelona</td>
<td>32,1</td>
<td>58,3</td>
<td>55,0</td>
</tr>
<tr>
<td>Rhone-Alps</td>
<td>Lyon</td>
<td>30,2</td>
<td>52,4</td>
<td>57,7</td>
</tr>
<tr>
<td>Derbyshire&amp;Nottinghamshire</td>
<td>Nottingham</td>
<td>30,0</td>
<td>62,4</td>
<td>48,2</td>
</tr>
<tr>
<td>Glours. Wiltshire, N. Soerset</td>
<td>Bristol</td>
<td>29,8</td>
<td>68,0</td>
<td>43,8</td>
</tr>
<tr>
<td>Nord-pas-de-Calais</td>
<td>Lille</td>
<td>28,9</td>
<td>49,3</td>
<td>58,7</td>
</tr>
<tr>
<td>Midi Pyrenees</td>
<td>Toulouse</td>
<td>27,9</td>
<td>54,3</td>
<td>51,4</td>
</tr>
<tr>
<td>Greater Manchester</td>
<td>Manchester</td>
<td>25,5</td>
<td>58,0</td>
<td>43,9</td>
</tr>
<tr>
<td>West Midlands</td>
<td>Birmingham</td>
<td>25,1</td>
<td>55,9</td>
<td>45,0</td>
</tr>
<tr>
<td>Merseyside</td>
<td>Liverpool</td>
<td>22,2</td>
<td>48,7</td>
<td>43,4</td>
</tr>
</tbody>
</table>

Flag of the European Committee for Innovations uses seven indicators to classify regions:
• tertiary education;
• participation in continuing education programs;
• engaging in high-tech industries;

---

ensure in technology services;
• Public expenditures for research and development
• Business expenses for research and development;
• Patented technology.

These are combined to create a Regional Innovation Index that compares each region to the European average.

**Table 3:** reveals the top 25 regions in innovation\(^5\)

<table>
<thead>
<tr>
<th>Regiunea</th>
<th>Orașul</th>
<th>Țara</th>
<th>Locul</th>
<th>Scorul</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stockholm</td>
<td>Stockholm</td>
<td>Suedia</td>
<td>1.</td>
<td>225</td>
</tr>
<tr>
<td>Uusinnaa</td>
<td>Helsinki</td>
<td>Finlanda</td>
<td>2.</td>
<td>208</td>
</tr>
<tr>
<td>Nord Brabant</td>
<td>Olanda</td>
<td>Finlanda</td>
<td>3.</td>
<td>191</td>
</tr>
<tr>
<td>Pohjois Suomi</td>
<td>Finlanda</td>
<td></td>
<td>4.</td>
<td>161</td>
</tr>
<tr>
<td>Eastern</td>
<td>Regatul Unit</td>
<td></td>
<td>5.</td>
<td>161</td>
</tr>
<tr>
<td>Île de France</td>
<td>Paris</td>
<td>Franța</td>
<td>6.</td>
<td>160</td>
</tr>
<tr>
<td>Bayern</td>
<td>Munchen</td>
<td>Germania</td>
<td>7.</td>
<td>151</td>
</tr>
<tr>
<td>South East</td>
<td>Regatul Unit</td>
<td></td>
<td>8.</td>
<td>150</td>
</tr>
<tr>
<td>Comunidad de Madrid</td>
<td>Madrid</td>
<td>Spania</td>
<td>9.</td>
<td>149</td>
</tr>
<tr>
<td>Baden-Wüttemberg</td>
<td>Stuttgart</td>
<td>Germania</td>
<td>10.</td>
<td>146</td>
</tr>
<tr>
<td>Berlin</td>
<td>Berlin</td>
<td>Germania</td>
<td>11.</td>
<td>140</td>
</tr>
<tr>
<td>Ostra Mellansverige</td>
<td>Suedia</td>
<td></td>
<td>12.</td>
<td>140</td>
</tr>
<tr>
<td>South West</td>
<td>Bristol</td>
<td>Regatul Unit</td>
<td>13.</td>
<td>147</td>
</tr>
<tr>
<td>Midi Pyrenees</td>
<td>Toulouse</td>
<td>Franța</td>
<td>14.</td>
<td>141</td>
</tr>
<tr>
<td>Wien</td>
<td>Viena</td>
<td>Austria</td>
<td>15.</td>
<td>126</td>
</tr>
<tr>
<td>Lombardia</td>
<td>Milano</td>
<td>Italia</td>
<td>16.</td>
<td>112</td>
</tr>
<tr>
<td>Rhone-Alpes</td>
<td>Lyon</td>
<td>Franța</td>
<td>17.</td>
<td>111</td>
</tr>
<tr>
<td>Lazio</td>
<td></td>
<td>Italia</td>
<td>18.</td>
<td>110</td>
</tr>
<tr>
<td>Piemonte</td>
<td>Turin</td>
<td>Italia</td>
<td>19.</td>
<td>109</td>
</tr>
<tr>
<td>Zuid-Holland</td>
<td>Rotterdam</td>
<td>Olanda</td>
<td>20.</td>
<td>109</td>
</tr>
<tr>
<td>West Midlands</td>
<td>Birmingham</td>
<td>Regatul Unit</td>
<td>21.</td>
<td>108</td>
</tr>
<tr>
<td>Groningen</td>
<td>Olanda</td>
<td></td>
<td>22.</td>
<td>107</td>
</tr>
<tr>
<td>Hamburg</td>
<td>Hamburg</td>
<td>Germania</td>
<td>23.</td>
<td>103</td>
</tr>
<tr>
<td>Cataluna</td>
<td>Barcelona</td>
<td>Spania</td>
<td>24.</td>
<td>101</td>
</tr>
<tr>
<td>Londra</td>
<td>Londra</td>
<td>Regatul Unit</td>
<td>25.</td>
<td>100</td>
</tr>
</tbody>
</table>

It is noted that cities and countries in northern Europe are performing well: Sweden, Finland, the Netherlands. Some southern European cities perform well, except Madrid. German cities generally have good results. UK only London and the south were able to get in the top ten.

Cities that respond best economic changes are the least dependent on a single sector. Cities that depend on a single sector - be it old sector (eg mining, metallurgy, transport) or sector new, modern (eg, service, mobile and computer culture) are vulnerable to global economic forces. This rule applies to all European cities (eg, Helsinki, Frankfurt, London or Liverpool).

Munich is the most significant example of this: power is global and local companies, large and small, manufacturing and services as part of new and old economy at the same time. The city has consistently sought to diversify it's economic base driving activity in various sectors, but without discrimination.

Skilled labor is a critical feature of competitive cities. Modern economies are becoming increasingly dependent on knowledge intensive sectors, even when it comes to the manufacturing sector. However, very significant feature is not simply the presence of a skilled workforce, but the relationship between providers and beneficiaries of the labor force in universities, research institutes, government and private sectors. Commercialization of intellectual knowledge is the key to innovation. Therefore, not only linked to the number of students enrolled at the university, but also the attitudes, roles and relations at universities and sector-specific intellectual activity.

Competitiveness grows where there is adequate working relationships between researchers and decision makers, where universities encourages employees through incentives and support to explore the economic potential of research they do.

This is very often a matter of attitude.

An essential feature of the success enjoyed by cities Munich and Stuttgart was given special employment relationship with the university and those engaged in the process of economic development. Munich's case demonstrates that these attitudes can change. Twenty years ago, the university was somewhat distant from the local economy. A clear driving but started from the top, these attitudes changed.

Similarly, Dortmund was able to develop a successful university technology park, the initiative failed in similar cities in the region. University which was founded in the late 1960 became involved in the local economy and included many teachers and students who remained faithful region and remained there after graduation to become private entrepreneurs.

Regarding external connectivity, it was measured in two ways: number of passengers passing through the airport and connections to the Internet.

Table no. 4 shows the data obtained at airports. And here there is a common pattern: Capitals have the best rezultate.Frankfurt, Amsterdam, Manchester and
Milan have good results. Table can not distinguish between those who travel as tourists and those who are on business (and this is an important aspect) because there is insufficient data.

**Table 4:** first 35 airports in 2009

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Londra Heathrow</td>
<td>60.431.930</td>
<td>-5</td>
<td>19</td>
<td>Iași</td>
<td>12.601.431</td>
<td>-14</td>
</tr>
<tr>
<td>2</td>
<td>Frankfurt</td>
<td>48.292.879</td>
<td>-1.5</td>
<td>20</td>
<td>Dublin</td>
<td>14.204.139</td>
<td>3.7</td>
</tr>
<tr>
<td>3</td>
<td>Paris CDG</td>
<td>47.940.187</td>
<td>-0.4</td>
<td>21</td>
<td>Oslo</td>
<td>13.930.774</td>
<td>-1.9</td>
</tr>
<tr>
<td>4</td>
<td>Amsterdam</td>
<td>39.309.441</td>
<td>0.1</td>
<td>22</td>
<td>Londra Stanstead</td>
<td>13.650.239</td>
<td>15.2</td>
</tr>
<tr>
<td>5</td>
<td>Madrid</td>
<td>33.855.667</td>
<td>3.5</td>
<td>23</td>
<td>Viena</td>
<td>11.768.781</td>
<td>-0.3</td>
</tr>
<tr>
<td>6</td>
<td>Londra Gatwick</td>
<td>31.098.403</td>
<td>-2.7</td>
<td>24</td>
<td>Moscova</td>
<td>11.513.739</td>
<td>7</td>
</tr>
<tr>
<td>7</td>
<td>Roma</td>
<td>25.139.582</td>
<td>-2.9</td>
<td>25</td>
<td>Helsinski</td>
<td>10.027.752</td>
<td>0.2</td>
</tr>
<tr>
<td>8</td>
<td>Munchen</td>
<td>23.439.409</td>
<td>7.4</td>
<td>26</td>
<td>Malaga</td>
<td>9.823.586</td>
<td>5</td>
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<tr>
<td>10</td>
<td>Zurich</td>
<td>20.813.537</td>
<td>-7.3</td>
<td>28</td>
<td>Hamburg</td>
<td>9.411.512</td>
<td>-4.6</td>
</tr>
<tr>
<td>11</td>
<td>Barcelona</td>
<td>20.543.721</td>
<td>5.4</td>
<td>29</td>
<td>Lisabona</td>
<td>9.212.339</td>
<td>0</td>
</tr>
<tr>
<td>12</td>
<td>Bruxelles</td>
<td>19.575.948</td>
<td>-9</td>
<td>30</td>
<td>Gran Canaria</td>
<td>9.087.036</td>
<td>-0.2</td>
</tr>
<tr>
<td>13</td>
<td>Manchester</td>
<td>19.109.015</td>
<td>4</td>
<td>31</td>
<td>Antalya</td>
<td>9.170.469</td>
<td>2.3</td>
</tr>
<tr>
<td>14</td>
<td>Palma de Mallorca</td>
<td>19.132.436</td>
<td>-0.9</td>
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<td>Tenerife SUR</td>
<td>8.946.674</td>
<td>2.8</td>
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<tr>
<td>15</td>
<td>Milano</td>
<td>18.461.030</td>
<td>-10.1</td>
<td>33</td>
<td>Nisa</td>
<td>8.973.973</td>
<td>-4.2</td>
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<tr>
<td>16</td>
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<td>-0.9</td>
<td>34</td>
<td>Birmingham</td>
<td>7.720.763</td>
<td>2.9</td>
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<tr>
<td>17</td>
<td>Copenhaga</td>
<td>17.933.120</td>
<td>-1.2</td>
<td>35</td>
<td>Stuttgart</td>
<td>7.558.319</td>
<td>-6</td>
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<tr>
<td>18</td>
<td>Dusseldorf</td>
<td>15.326.247</td>
<td>-4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Table 5:** shows the patterns of Internet connections. Recognizable pattern appears again: global-sized cities such as London and Paris are best connected.7

<table>
<thead>
<tr>
<th>Oraș</th>
<th>Capacitate Internet (Mdps)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Londra</td>
<td>319,475</td>
</tr>
<tr>
<td>Paris</td>
<td>227,803</td>
</tr>
<tr>
<td>Frankfurt</td>
<td>194,902</td>
</tr>
<tr>
<td>Amsterdam</td>
<td>163,942</td>
</tr>
<tr>
<td>Copenhaga</td>
<td>109,204</td>
</tr>
<tr>
<td>Stockholm</td>
<td>94,741</td>
</tr>
<tr>
<td>Bruxelles</td>
<td>81,536</td>
</tr>
<tr>
<td>Milano</td>
<td>66,424</td>
</tr>
<tr>
<td>Zurich</td>
<td>51,488</td>
</tr>
</tbody>
</table>

7 Sursa: TeleGeography Inc.
Most successful cities have a physical and electronic infrastructure able to “move” goods, services and people quickly and efficiently. External connections are important because exports remain critical to success. Therefore airports are particularly important. They facilitate communication face to face, which was supplemented and not replaced by communications technology.

For example, a significant feature of successful European cities is the importance they attach to internationalization and administrative policies that have tested abroad. Munich, Rotterdam, Lyon, Barcelona, Stuttgart, in their different ways, have invested a significant amount of time and effort into international networks to enhance their profile in order to win new allies to expand the importance of the local market, influence factors decision, to learn new strategies and practices.

There are different opinions on the impact of population on economic performance. It is perfectly possible that some medium-sized cities or even small economic success. There are reasons for large, complex cities have economic advantages.

Many studies have demonstrated that the most competitive regions and most competitive cities. Not found examples of successful regions have no achievements based cities. Many stakeholders consider that cities actually lead the region’s economic performance. There is a conflict of interests between cities and regions and there should be one between urban and regional policies. Other experts argued that although the regions are important, they are often too high in some areas that can address economic competitiveness. Sub-regional approaches are increasingly adopted even in Germany where regions of 16-18 million people are considered too far from the economic realities on the ground only to be involved. In all cities and European countries there is a growing concern for creating more correct relationship between regions and cities.

Appropriate relationship between cities and economic regions belonging is an issue of growing importance. Experts have shown that there are a number of regional-urban difficulties that we find in various European cities fragmentation of local governance, economic competition between neighboring local authorities, issues of environmental impact of decentralization residential and employment, fiscal exploitation of central suburban service consumers, segregation excluded communities as a contest between authorities to attract the rich and luxurious homes with poor housing and rejecting their concern that the central city is too small to matter as important European and global market. This effort led to increasingly higher to create sub-regional working relationships between municipalities. These have taken various forms with varying degrees of success in different places.
For example in France, the 36,000 small municipal fragmentation has led to common urban communities to encourage collaboration. However, partnerships have been established most often between public sector agencies. And also becoming increasingly attempting, for example in Lyon where urban communities are too small to act as efficient economic unit’s, moving to larger unit’s, such as urban areas. There is a remarkable political Availability operation at sub-regional, but achievements are still modest:

- Barcelona recently managed to extend its economic and spatial planning beyond the city itself to the wider metropolitan area, producing a new strategic plan for the entire metropolitan region;
- Munich created a sub-regional organization in three areas in an attempt to achieve an efficient marketing.

However, the general picture is that few urban areas have achieved a satisfactory set of arrangements to capture the entire economic territory. There are a number of regional tensions. Smaller municipalities are not willing to be “swallowed” by the vaster city. Often, national governments are unwilling to strengthen the position of the already powerful cities. Therefore, we get a mixed picture with some areas unable to develop large metropolitan arrangements. Some agencies have separate ad hoc sub restricting functions, especially those related to transportation, waste disposal and environment. But in most cities there is the view that the central city is not large enough to serve as a basis for economic development.

All attempts to create strategic alliances informal, often led by strong mayors as in Lyons, Barcelona and Helsinki.

Also, there have been recent examples of formal regional structures created to take over the full range of economic development functions. In Stuttgart, 10 years ago, at the height of an economic crisis (declining car industry and the loss of 200,000 jobs), 179 local authorities voted to transfer power and resources of a formal development organizations (Stuttgart regional Agency) to promote economic development in the region. This approach significantly improved the region’s ability to cope with economic change and bring about regional economic development strategy more flexible and comprehensive.

There is considerable interest in European cities regarding ways to resolve the apparent tension between strategies that focus on economic growth and those that focus on equity and social welfare. Recent studies have shown that it is not necessary to have a fair company to have a competitive urban economy.

Example of London, Edinborough, Leeds and Bristol shows that substantial percentages are common social exclusion in rapidly growing economies.
Long-term success of the city of Stuttgart and Rotterdam economically created a labor market boom and secured to some extent can economic exclusion. If Stuttgart, economic success has ensured reduction of ethnic exclusion, since the Turkish community available to the labor market is well integrated.

Success at Rotterdam registered in absorbing large numbers of immigrants and to avoid areas and extreme groups regarding exclusion is explained less by it's economic performance and it's system still more generous national welfare. Although still subject to revisions, it still means that unemployment did not necessarily lead to social exclusion. Thus, whether there is a development strategy that avoids the problem by creating economic opportunities for all, can be solved by alternative strategies.

Knowledge-based industries are key to innovation and the development of worldwide standards of living. Innovation is defined as the introduction of a new or modified process, a service or a form of market organization. OECD estimates that between 1970 and 1995 more than half of the total growth in the developed world accounted product innovation effect. And considering the fact that most economic activity is concentrated in urban areas, knowledge and innovation are two of the most significant contributions to the growth and competitiveness of cities. The European Commission has estimated that over 40% of the variation in regional income per capita can be explained by differences in innovative performance.

Until recently relatively little attention was given to the local characteristics of the innovation system to national characteristics. But the administration of local systems of innovation can make a difference in terms of economic performance of urban areas and increase the prospect that good practice can be transferred to places less competitive. Experience cities Toulouse, Stuttgart and from the United Kingdom suggests that there are three possible models of local innovation:

- **The innovation in the UK** is a diffuse pattern driven by market fluctuations and the private companies have adopted various decisions. External coordination is reduced because the State was very centrally, provided very little incentive or funding to local authorities to enable them to engage in economic activities other than as an insignificant part of their activities. Lack of long-term government strategy has contributed to the relatively low performance of many British cities.

- **Model type network (Germany)** seeks agreements between firms, banks, educational institutions and different levels of government. In Stuttgart, there is a rich mix of institutions, including public and private research institutes, laboratories, companies and regional government for many years tried to promote innovation in the local economy.
This power long as the system of local government innovation has become one of the most important collective attributes of leading to success.

- **The model of “control” (France)** innovation is initiated at least in part by the central government. Toulouse has benefited from national government decisions to decentralize activities there, including Air France, customs, France-Telecom. They were later followed by decisions of large companies like Thompson to place research and development facilities in Toulouse. Locally developed a system designed to attract those opportunities and use them to get more public funds from the European Union, central government, local and regional communities.

Relevance analysis of regional competitiveness increase if it occurs in the context of Romania’s positioning within the regional policy of the European Union. Called and cohesion policy, it is targeted to support poorer regions of the EU, to reduce development gaps to more developed areas. This policy of financial solidarity towards poorer focuses primarily on regional development since the differences are more pronounced here than at national level. In other words, within countries and poor regions coexist more developed regions. For Romania, it can be said that regional policy is the most important political, because throughout funded by EU funds.

Drive regional development policy implementation at the local level is represented by development region, such a region is formed by a voluntary association of neighboring counties without the administrative unit and without legal personality. Were thus established the following eight development regions:

1. North - East: Bacau, Botosani, Iasi, Neamt, Suceava, Vaslui;
2. South - East: Portland, Buzau, Constanta, Galati, Tulcea, Vrancea;
3. South Muntenia: Arges, Calarasi, Dambovita, Giurgiu, Ialomita, California, Virginia;
4. South - West - Oltenia: County, Florida, Mehedinti, Olt, Valcea;
5. West: Arad, Caras-Severin, Hunedoara, Timis;
6. North - West: Bihor Bistrita-Nasaud, Cluj, Maramures, Satu - Mare, Salaj;
7. Center Alba, Brasov, Covasna, Harghita and Mures, Sibiu
8. Bucharest-Ilfov: Bucharest, Ilfov;

Romania entered the transition process with a relatively low level of regional disparities compared with other Member States or candidate countries.

These disparities have grown rapidly, however, especially between Bucharest and the rest of the country. Disparities exist not only across regions but within regions where predominantly agricultural counties coexist with the most developed. This phenomenon has gained momentum due to the impact of economic
Restructuring, particularly in mono-industrial areas, whose population has been affected by unemployment due to the closure of unprofitable state enterprises. Thus, we can mention border regions with Moldova and Ukraine, and less developed regions along the Danube. A feature of regional development in Romania is the mosaic structure of economic development at sub-regional level. Virtually all regions are relatively developed areas, which coexist with underdeveloped.

**Conclusions**

Cities and regions in Europe have achieved success by following different paths. It is clear that the decision can not simply move items from one town or region and to implement them in another. However, if the critical variables are innovation, skills, diversity, connectivity, strategic capacity and quality of life, it is obvious that the best thing would be to achieve those goals that maximize the features. Some of the necessary resources - financial, human capital, regulatory authority and empowerment capacity will be in the power of local actors. Will have to be responsible for the other levels: national and regional. Some institutions charge will be public, private other. The combination varies from one country to another. Map routes followed for different cities and regions vary greatly.

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The Value Added Tax at the Invoice Collection - Tax and Accounting Implications

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Anca Ciumag, Ec., Dr., D.G.F.P. Ilfov, Romania

The business and tax authorities in Romania are preparing the measure application concerning the VAT payment at the invoice collection, starting with the 1st of January 2013. This measure solves the liquidity problem and reduces the tax evasion. It will also limit the number of fictitious invoices as it is mandatory to pay bills through the bank in order to implement this measure. Although it is applied to entities with a turnover under 2.25 million Lei annually, the measure also determines other entities which are supplied from them in order to pay their obligations to suppliers and to exercise the right to deduct the VAT.

The VAT collected becomes demandable upon the invoice collection or in the 90th calendar day from the invoice date. If the invoice has not been issued within the period prescribed by law, the tax liability on the unpaid value occurs in the 90th calendar day of this term.

Introduction

People who conduct activities as a manufacturer, trader or service provider in an independent manner and in all places are considered to be taxable persons in terms of value added. These persons are required to pay the tax to the state budget when it becomes demandable.

Under the general rule, the taxable persons registered for the VAT must pay the tax payment to tax authorities until they are required to submit the VAT return (monthly or quarterly). The payment amount is determined as the difference between the collected VAT (higher) and the deductible VAT (less). Although the entities issue the invoice with the VAT collected, generally the bill collection fee and, therefore, of the VAT is accomplished later than the date of issuing this document.
For companies with an annual turnover under € 500,000 (or 2.25 million Lei) the VAT payment measure of the invoice collection will be applied from January the 1st 2013, the reference for the calculating turnover being October the 1st 2011 - September the 30th 2012.

The taxable persons who are registered for VAT purposes during the year will apply the VAT collection system from the date of registration with the tax authorities. The turnover is determined annually by adding the following:

- the total value of goods and taxable services supplies;
- the total value of goods supplies and the services ones provided free with credit;

If a taxpayer makes during the year a turnover higher than 2.25 million Lei, he may apply the VAT collection system by the end of the fiscal period following that in which the financial ceiling has been exceeded. Thus, if the taxpayer has recorded a financial ceiling of 2.5 million lei on the 30th of June, when submitting the VAT return monthly he also applies this system for July. Stating with August the 1st he pays the VAT under the general rule.

The VAT collection system cannot be applied for:

- goods or services supplies where the customer is liable for the tax payment;
- goods or services supplies which are exempt from VAT;
- travel agency operations, the supply of second-hand goods, works of art, collectors’ pieces and antiques including the gold investment for taxpayers with special arrangements, as required by law;
- deliveries to an affiliate supplier;
- purchases or intra-community supplies.

Moreover the VAT collection system is not applicable for the goods or service supplies whose value is collected partly or wholly in cash.

To apply the VAT collection system the provider is required to mention on the bill “the VAT on the invoice receipt.”

The VAT rates which are applicable to transactions subjected to the VAT collection system are those in force on the date when the event occurs, as a general rule or the date of issuing the invoice when this is done before delivery (supply), or the date of the advance receipt.

S.C. „A”, a VAT payer, which last year recorded a turnover of 1.9 million Lei, delivered goods to S.C. „B”, on 10.01., amounting to 80,000 lei and 24% VAT:

- At delivery, on 10.01. it is recorded:
According to the date of claim receipt and the way of collection we can have the following situations:

a. S.C. „B” pays with payment order, on 04.04. the whole due amount.

- At collection:

\[
5121 = 411 \\
\text{Bank Accounts in lei} \quad \text{Clients}
\]

\[
4428 = 4427 \\
\text{Undemandable VAT} \quad \text{VAT collected}
\]

In this situation S.C. „A” will pay a VAT of 19.200 lei until 25.05., instead of 25.02 according to the general rules.

b. S.C. „B” pays with payment order thus:

**b1** – on 30.03. the amount of 60.000 lei

\[
5121 = 411 \\
\text{Bank accounts in lei} \quad \text{Clients}
\]

\[
4428 = 4427 \\
\text{Undemandable VAT} \quad \text{VAT collected}
\]

Note: The VAT collected is calculated by applying the increased hundred methods, as follows:
The Value Added Tax at the Invoice Collection - Tax and Accounting Implications

\[
\frac{24}{60.000} \times \frac{x}{100 \times 24} = 11.613 \text{ lei}
\]

b2 - on 04.04. the amount difference of 39.200 lei:

\[
\begin{align*}
5121 & = 411 & \text{39.200 lei} \\
\text{Bank accounts in lei} & \text{Clients} & \\
\text{and} & \\
4428 & = 4427 & \text{7.587 lei} \\
\text{Undemandable VAT} & \text{VAT collected} & \\
\end{align*}
\]

Thus, S.C. „A” will pay the VAT amount of 11.613 lei until 25.04. and the amount of 7.587 lei until 25.05.

c. S.C. „B” pays with payment order on 15.05. the whole due amount of money

\[
\begin{align*}
5121 & = 411 & \text{99.200 lei} \\
\text{Bank accounts in lei} & \text{Clients} & \\
\end{align*}
\]

After 91 days from delivery (10.04.) the following recording is made:

\[
\begin{align*}
4428 & = 4427 & \text{19.200 lei} \\
\text{Undemandable VAT} & \text{VAT collected} & \\
\end{align*}
\]

Thus S.C. „A” owes a VAT of 19.200 lei on 25.05.

d. S.C. „B” pays in cash on 25.03. the amount of 5.000 lei and the payment difference with a payment order

\[
\begin{align*}
5311 & = 411 & \text{5.000 lei} \\
\text{House in lei} & \text{Clients} & \\
5121 & = 411 & \text{94.200 lei} \\
\text{Bank accounts in lei} & \text{Clients} & \\
\text{and} & \\
\end{align*}
\]
Note: Since S.C. „B” did not pay the full amount with the payment order, the implied VAT (19,200 lei) was to be paid by S.C. „A” until 25.02., inclusively, as the condition of the counter value delivery receipt was infringed. As a result, the general rules concerning the chargeability of VAT are to be applied and interest and penalties are also due starting with 26.02.

Outstanding issues also appear to deduct the VAT connected to purchases made by a taxable person to a taxable person who applies the VAT system or to purchases made by taxable persons who apply the system.

a. The VAT connected to the purchases made by a taxable person („B”) to a taxable person applying the VAT collection system („A”) is inferred when the tax on goods and services delivered to him was paid to his provider.

S.C. „B” has stocked with goods worth 40.000 lei and 24% VAT, from S.C. „A”, on 10.01. :

• At S.C. „B” it is registered:

\[
\begin{align*}
\text{\%} & = 401 \\
371 & \quad \text{Suppliers} \\
\text{Goods} & \quad 40.000 \text{ lei} \\
4428 & \quad 9.600 \text{ lei} \\
\text{Undemandable VAT}
\end{align*}
\]

• On 03.04. it is paid the invoice of 49.600 lei:

\[
\begin{align*}
401 & = 5121 \\
\text{Suppliers} & \quad \text{Bank accounts in lei} \\
\text{4426} & \quad \text{4428} \quad 9.600 \text{ lei} \\
\text{Deductible VAT} & \quad \text{Undemandable VAT}
\end{align*}
\]

Note: S.C. „B” deducts the VAT in April statement, which is submitted until 25.05., contrary to the general rules when the deduction was made in January
b. The VAT connected to the purchases made by a taxable person applying the VAT collection system, (S.C. „A”) is deducted when tax on goods and services which has been delivered to him was paid to the supplier (provider). Exceptions are the intra-community acquisitions of goods, imports, purchases for which the reverse charge applies.

S.C. „A” purchases from a commercial taxable company goods worth 10,000 lei and 24% VAT on 15.01. The payment obligation is on 30.04.

• The registration of the supply at S.C. „A”:

<table>
<thead>
<tr>
<th>%</th>
<th>=</th>
<th>401</th>
<th>12,400 lei</th>
</tr>
</thead>
<tbody>
<tr>
<td>371</td>
<td>Suppliers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Goods</td>
<td>10,000 lei</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4428</td>
<td>2,400 lei</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Undemandable VAT

• The payment obligation on 30.04.

| 401 | = | 5121 | 12,400 lei |
| Suppliers | Bank accounts in lei |

and

| 4426 | = | 4428 | 2,400 lei |
| Deductible VAT | Undemandable VAT |

Note: from a fiscal standpoint, S.C. „A” deducts the VAT in amount of 2,400 lei in April statement, which is submitted until 25.05.

According to general rules, the deduction shall be made in January statement, which is submitted until 25.02.

In order to deduct the value added tax related to acquisitions, the mixed regime taxable persons must determine the pro rata. This is calculated as the ratio between the total amount, free of charge, for operations consisting of supplies of goods and services which allow the right to deduct, at the numerator, and the total amount without tax for operations representing the supplies of goods and services.

The taxable persons applying the VAT collection system determines the pro-rata according to general rules, which means that the numerator and denominator
amounts shall be determined by the date on which the chargeability to tax occurred, if this system is applied.

After the 1\textsuperscript{st} of January 2013 the VAT payment collection system will be applied mandatory as follows:

- The taxable persons registered for the VAT purposes who registered in the previous year a turnover under the financial ceiling of 2.25 million lei are required to submit a notification to the tax authorities showing the accomplished turnover until January the 25\textsuperscript{th} inclusively. This notification is not filed by taxpayers who applied the VAT collection system last year and who will continue to apply this system, at least this year. The taxable persons submit the Register of Taxable Persons who apply the VAT system and they apply the system starting with the first day of the second fiscal period (February or the second quarter).

If the taxable person who has achieved a turnover of less than 2.25 million Lei filed no notice, this will be registered ex officio by the tax authorities in the Register of Taxable Persons applying the VAT collection system, starting with the date stated in the recording decision.

Regarding the period from the date on which the taxpayer was required to apply the VAT collection system and the date of registration, ex officio, in the Register of Taxable Persons applying the VAT system, it will do the following:

- It will be deducted the VAT on purchases when the deductible tax on the goods or services was paid by the supplier.

- It will be collected the VAT on supplies of goods or services under the general rule of chargeability of the VAT.

In this case, the taxpayer is penalized for failure to file notification by delaying the VAT deduction until the payment to the supplier.

The taxable person who applies the VAT collection system and exceeds the threshold of 2.25 million lei is required to submit a notification to the competent tax authority by the 25\textsuperscript{th} of the month following the tax period in which it exceeds the threshold.

Thus, the VAT collection system will be applied until the end of the fiscal period following that in which the threshold was exceeded.

We believe that S.C. „A” which applies the VAT collection system starting with January the 1\textsuperscript{st} 2013 made a turnover of 2.65 million lei on 30.06.2013, the fiscal period for the VAT being the month. Therefore, S.C. „A” must submit a notification with the accomplished turnover until 25.07.2013 and they will apply the general rules regarding the VAT starting with 08.01.2013, as required by the law. The taxpayers who file the VAT return quarterly will apply the same way. For our example, if S.C.
„A” exceeds the scale in the second quarter of 2013 it submit’s the notification until 07.25.2013 and it will apply the general rules on VAT starting with the fourth quarter 2013, namely with October the 1st.

The taxpayers who do not file the notification regarding the turnover exceeding within the period will be removed, ex officio, by the tax authorities from the Register of Taxable Persons who apply the VAT collection system, starting with the date stated in the cancellation decision and, therefore, after that date they will apply the general rules on VAT.

For the period between the date on which the taxpayer was required not to apply the VAT collection system and the date they will be removed from the Register, it shall proceed as follows:

• It will deduct the VAT connected to purchases only after his payment to the supplier of the goods and services supplied.

• Instead, it will collect the VAT on supplies made according to the general rules concerning the VAT.

Thus, the taxable person who fails to comply with local notification concerning the exceeding of the financial ceiling (2.25 million Lei) is penalized in terms of the tax deduction.

Conclusions

The introduction of the VAT collection system will determine additional liquidity for the entities with an annual turnover less than 2.25 Lei for the current activity. This happens especially in the situations where their clients pay the invoices with a delay. Thus, small entities are not required to pay into the state budget the VAT which was not charged to customers, unlocking their financial resources and ensuring the financial survival.

At the same time, the implementation of such a system to pay the VAT on receipt will imply some difficulties for the taxpayers who apply this system but also for those who obtain their supplies from them. Thus, the taxpayers must keep separate detailed records regarding the receipt of the invoices, the collection method, namely the date and the method of paying the obligations to suppliers. This way the additional costs regarding the accounting records will be recorded.

The economic agents who are “affected” by the application of the VAT collection system should invest in qualified accounting and tax services. By applying this measure the accounting activity will be increased and, therefore, amounts for these services will be paid additionally. Otherwise, inconsistencies may occur
between the accounting records, the VAT journals, the VAT returns and the tax payer sheet.

Furthermore, the tax evasion will be reduced by introducing the VAT collection, particularly by eliminating the illegal VAT refunds.

Even if it involves costs and administrative measures, we believe that the introduction of this measure is a step forward on the line of modernization of the tax system and it determines the increase of the liquidities available to the economic entities.

References:

Microsoft Excel 2010 allows you to analyze, manage and share information in more forms than ever before, so that the user can make better decisions. Visualization tools and data analysis enables us to track and highlight important trends in a timely manner. Most common problems are those related to optimization. They consist of an objective function that must reach an optimum (minimum or maximum) and of some restrictions (limitations of the existing natural resources). In order to solve them, Solver Excel provides a strong element analysis using more variables and restrictions in order to find the best solution for solving a problem.

**Keywords:** solver, Microsoft Office, Excel 2010

**General considerations**

Excel as part of Microsoft Office System provides the ability to create and format workbooks to analyze data and make effective decisions, being better informed.

Among ordinary purposes for using Excel include:

- **Accounting:** the possibility to use powerful computing features in Excel in many financial and accounting documents, such as the cash flow statement, income statements and statements of profit and loss.

- **Budgets:** whether user needs are personal or business, it is possible to create any type of budget in Excel, such as a marketing plan budget, a budget for an event or a retirement budget.

- **Invoices and Sales:** Excel is also useful for data management concerning sales and invoices and you can easily create necessary forms, such as sales invoices, delivery notes or purchase orders.

- **Planning:** Excel is a great tool for creating professional plans or useful
planners such as school scheduler for the week, a marketing research plan, a plan to pay taxes at the end of the year or planner to help you organize dinners, weekly parties and holidays.

- **Tracking**: Excel can be used to track data in a spreadsheet or list timekeeping, such as a work sheet for tracking timesheets or an inventory list that keeps track equipment.

- **Reports**: provides ability to create various types of reports in Excel that reflects analyzes data or summarizes these, such as reports measuring the performance of a project that shows the difference between projected results and actual results or reports who use to make predictions about data.

### New features for excel 2010

a) The new enhanced Ribbon is an advanced feature which gives the opportunity to access the favorite commands quickly run back and save, share, print and publish by executing a few clicks.

![Figure 2.1](image1)

b) Conditional formatting provides more control over styles and icons, improved data bars, and the ability to highlight specific items in a few clicks, thus creating more sophisticated presentation.

![Figure 2.2](image2)

c) The Slicer offers a rich PivotTable view so you can filter the data to see exactly what you need.
Figure 2.3

d) Diagrams Sparklines are a quick and easy way to identify and highlight important data trends so you can hear your message - quickly.

Figure 2.4

e) Microsoft Excel Web App (Web application Microsoft Excel) provides the ability to edit the same spreadsheet with others simultaneously from Web browsers from many places.
f) **Pivotcharts** are more interactive and more dynamic, which means that they can acquire more prospects faster and can display different views of data in a PivotChart, independent of PivotTable views.
Excel optimization tool

Solver or “problem solver” is an optimization tool which generalizes technical end value, offering more opportunities for simulation of parameters that give rise to optimal situation.

For solver can be more complex simulations on information contained in the cells and may consider more restrictions imposed on a optimization model.

In principle, an optimization problem aimed at Excel treated the automatization as an application of linear programming (SIMPLEX algorithm), namely to arrive at an optimal solution in terms of maximizing results, minimizing efforts and achieving an end value considered as reference. Achieving optimal situation is through automatic adjustment of parameters leading to the fulfillment of it’s purpose, specifying the restrictions imposed under the model so that the optimal situation to take into account these constraints or restrictions.

To transpose a problem into a linear programming model able to be resolved through Excel’s solver technique, it is necessary:

• determining what information is to be optimized;
• establishing the type of optimal (maximize, minimize, reaching a value);
• establishing the modifiable parameters, which by their variation to produce optimum;
• establishing some restrictions applied to modifiable parameters or any information related to generating optimal state.

To understand how to solve problems using Solver’s, presumably following application:

“A professional training institute wants to optimize their overall profitability in terms of maximizing it. Institute manages the budgets of three classes, namely: “Business Management” “Accounting” and “Financial Management”. Each course has it’s own budget, estimating revenues, expenses, profit and gross margin potential result of the outcome (rate of return) in parallel, prospective data are centralized institute level, calculating total return. “

Economic model to be optimized by maximizing the results shown in the following figure, 3.1
By modifying certain parameters (“Number of students”, “hourly wage for teachers”, “price of course support tab” and “Number of pages of support material”) via formulas (shown in the figure below) is can generate different results for both cost of each course and the overall profitability of the Institute.

The optimization of the model involves at first the establish it’s objective. In the presented case it is the cell that contains the formula of overall
profitability (target cell), or E15 (total global profitability = total gross margin rate / turnover).

To solve the optimization problem in terms of maximizing profitability (gross margin rate) positions the cursor on the cell containing the target (E15) and activate command Tools - Solver.

On dialog box Solver Parameters set the following items: cell that contains target or goal (E15), meaning of optimization (Max), modifiable cells or adjustable (shown in the previous figure: B3: D6) and restrictions on the model.

The restrictions of the optimization model may influence the modifiable cells and other cells containing formulas bearing on the purpose or objective.

![Figure 3.3](image)

Declaration of restrictions involves so, comparing cells that influence the outcome with constant parameters or formulas.

![Figure 3.4](image)
If you do not specify a coherent restrictions, the solver calculates the optimal algorithm first maximization “to infinity” values additive model (resources) and minimizing “to the infinite” values Subtractive (consumption). Significance headings and buttons Solver Parameters dialog box is as follows:

- **Set target cell**: cell address containing specific purpose or objective of optimization. Cell containing the goal must necessarily be a formula;
- **Equal to**: establish the purpose of optimization as intended, namely: maximization (Max), minimization (Min) or to reach a value (value :);
- **By changing cells**: proposing all cells which not contain formulas and related to optimization. In other words, with this option the user selects all cells that contain numerical parameters in the formula defining field goal (target cell) refers;
- **Guess**: propose as modifiable cells all the cells that not contain formulas and place their references in the area of variable cells (By changing cell);
- **Subject to restrictions**: include the restrictions imposed to the optimization model;
- **Add button**: allows you to add restrictions;
- **Change button**: allows you to change restrictions;
- **Delete button**: allows you to delete restrictions;
- **Solution button**: launches the solving process of optimization problem;
- **Options Button**: displays a dialog box in which you can control advanced features of the process of solving and changing or registration of specifications for a particular problem;
- **Reset All**: cancels assigned parameters and restores the defaults.

After completing the **Solver Parameters** dialog boxes and pushbutton **Solution**, is triggered iterative the optimization procedure. Finally, the problem has been found (or not found) solution in the dialog box appears the results of optimization (**Solver results**).
Figure 3.5

The result of optimization involves either replacing old with new parameters, located in the default optimization process and converting the existing end value in one optimized (Keep Solver Solution) or restore the original parameters and keeping the old result (baseline Redo).

The solution can be saved in a script (along with existing ones) by pressing the Save script button...

Figure 3.6
Conclusions

Optimization results are given in the following figure:

![Figure 4.1](image)

Optimal values solver’s income can be synthesized, choosing a special report Solver Results dialog box, section Reports as follows:

1. Report type “Reply”: displays the defined target cell, cells with values varying their initial and final, optimized model restrictions, and information about these restrictions.

2. Report type “Sensitivity”: provides information on the sensitivity or elasticity optimization model, is the variation of the solution to small changes in the By changing cell formula (as the solution changes to a unit change of the parameters that lead to target).

3. Report type “Range”: displays upper and lower limit’s of the model.

Excel 2010 is used to track data, to generate models, to analyze data, write formulas to perform calculations with the data, to arrange data in different ways and to present data in different types of professional-looking diagrams.

References

Bucharest, 2011;
Building a Model of Analysing Bank Loan Applications on a Statistical Basis

Author: Tudor Alexandru Ganea, ”Titu Maiorescu” University, Bucharest, Romania, doruganea@yahoo.com

I consider that in order to deal with the financial-banking crisis, the banks from Romania will have to be prepared to take and effectively manage higher risks, both on their own behalf, and on the behalf of their clients, since the negative macroeconomical developments are bound to determine the artificial decrease of the solvency indicator.

The conception of this article was triggered by two significant phenomenons. Firstly, the banks from Romania have become increasingly interested in creating and enhancing methods and procedures of credit risk assessment. Secondly, The Basel Committee on Banking Supervision, followed by the European Commission has imposed a series of standards regarding the estimation of some crucial indicators on a banking level.

Keywords: credit risk, rating, statistical model

JEL Classification Codes: C14, C15, G24, G32

The credit application assessment is more complex for legal people (productive enterprises, services provider companies, etc.) than natural people. However, judging by this criterion, the credit award method is different.

At the moment, ”bounds between the assessment based on the financial rates and statistical techniques”¹ are attempted to be found.

The score method is an original approach of the loans assessment which consists in evaluating the credit's based on the score.

Taking into account the analysed aspects, it can be recorded another classification of methods based on:

• Economical-financial analysis
• Non-financial analysis

Regarding the time determination of the analysed period from the activity

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of the credit-soliciting companies, we distinguish two distinct situations:

- The complex analysis of the solicitor’s activity, prior to the application submission moment;
- The future evolution, through possible scenarios, after receiving the requested credit.

The actual granting of the credit involves an accurate and multilateral assessment of the banking risks through an informational system and proper analytical techniques, in order to ensure the identification of any predictable concentration of risks.

Allowing for the fact that the risk assessment has to take into account multiple parameters, only the special and modern IT programs (software) allow the banks to have a multilateral determination of the risk proportions and intensity, in a very short time and at a maximum efficiency. These complex studies are based on modern statistical techniques.

Starting from the information they possess, the credit inspectors use complex query techniques in filling in certain questionnaires in order to verify and supplement their data.

Even though the methodology used is similar and intended for the same category of clients, sometimes the methods have different names. Thus, the S.W.O.T. analysis methods, as well as the 5 M’s method are very known in the specialized works, in fact procedures using multiple criteria as the financial and non-financial analysis, associated with the scores and the query techniques methods.

The statistical methods propose themselves to check the hypothesis by means of statistical procedures applied to the existent databases.

In case of credit risk assessment, suitable for the approach based on internal models of rating\(^2\) and the use of a statistical model, the credit institution must:

- Prove to the NBR that the model used has a good foreseeable power;
- Use entry variables to encompass a reasonable and efficient basis for predictions;
- Provide a forecast of the results which don’t present significant variations from the actual ones;
- Dispose of a trying out process of the entry variables used in the model;
- Prove to the NBR that the data used for creating the model is representative for the effective population of debtors or exposures of the credit institution;
- Associate the statistical model with the professional reasoning and human

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\(^2\) Regulation of the National Bank of Romania no. 15/20/14.12.2006 concerning the treatment of credit risk by the credit institutions and investment companies following the Internal Rating-Based Approach, Chapter V, Section 1.1.5, Art. 142-146
supervision in order to verify the allocations based on the model and to ensure that the model is appropriately used.

The building of the credit assessment procedure begins with laying down the hypothesis regarding the potential criteria of solvency settlement. Each one of these has to be evaluated in order to establish to what extent the solvent debtors show higher values than the insolvent ones. Because the current situation of the analysed clients is known from the bank portfolio, these hypotheses may be confirmed or rejected as unsuitable.

The statistical procedures may be used in order to obtain an objective selection of the criteria as well as a proper classification based on the information from the bank’s databases. The criteria selection and classification will determine the improvement of the ranging solvents – non-solvents method. The statistical methods results do depend on the quality of the data set used. This has to be broad enough and also, relevant for the analysed area.

In the editing phase, the statistical models need a broad data set, especially the one concerning the clients who proved to be insolvents. Therefore, it’s almost impossible to build statistical models for credit areas. For instance, data regarding the bankruptcy of some state institutions, financial banking companies, as well as several societies listed on the stock market are rarely sufficient, in order to develop genuine models on a statistical basis.

Another important factor is the representative data taken into account. Comparing to the heuristic models, the statistical ones prove a higher discriminatory power, which highlights the fact that the heuristic models should be pursued by statistical components, if there is enough available information.

The most usual statistical methods in practice refer to the discriminating analysis and to the regression models.

**The discriminating analysis**

This analysis main objective, used within the assessment procedures, resides in making a distinction between the solvent and insolvent debtors, by means of a function formed from several criteria THE LEAST associated possible.

The discriminating analysis will be presented as a linear function, the most common form. The result of this criteria correlation will be configured as a discriminating score, marked with the ”D” letter:

\[ D = a_0 + a_1K_1 + a_2K_2 + \ldots + a_nK_n \]
Within this equation, “n” refers to the number of the criteria used in the score function, $k_i$ includes the indicator’s value, and $a_i$ represents the coefficient of the classification indicator.

The D score is described as a linear function of various variables (rates), defined by average coefficients determined through the smallest squares method, based on the observations made on the exponential enterprises and grouped from the very beginning, in normal and abnormal$^{3}$. The classification coefficients represent the marginal variability of the D score at one unit variation of the $k_i$ rate.

In the following graph there are highlighted the principles behind of the discriminatory analysis, using just two criteria. The optimal line of separation represents a linear combination of the two criteria. This linear function was determined in order to separate the solvents clients from the insolvent ones; with the best accuracy possible (the shortest number of mistaken ratings).

The discriminating linear analysis needs a normal distribution (in a mathematical sense) for all the analysed indicators.

The normal distribution of the values taken by each indicator is a very important chapter in Statistics and Economics. One can not be considered a real economist if he didn’t tackle with the normal distribution.$^{4}$

In our situation, we are discussing about the probabilities distribution as a certain financial indicator is to take values around a certain average. This has to be tested for the data introduced in the analysis. If the normal distribution is not confirmed, therefore the analysis results will be compromised.

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Another important aspect refers to the qualitative criteria, accompanied with ordinal values and as a consequence, the criteria are not well distributed. Nevertheless, the studies have shown that a recalibration of the qualitative criteria of solvency in a proper manner may conduct to fulfilling the above mentioned condition.  

In practice, the discriminating linear analysis is frequently utilised in view of the credit application assessment.

The following example presents the information obtained regarding 15 companies random picked from the credit portfolio of a bank. The status of these 15 companies is different, being known: 9 of them are solvents and 6 insolvents.

For each one, we will consider one of the financial–accountant situations and will calculate 5 types of indicators: X1, X2, X3, X4, X5 .

<table>
<thead>
<tr>
<th>Category</th>
<th>X1</th>
<th>X2</th>
<th>X3</th>
<th>X4</th>
<th>X5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0,2</td>
<td>2,15</td>
<td>0,02</td>
<td>0,01</td>
<td>0,2</td>
</tr>
<tr>
<td>2</td>
<td>0,1</td>
<td>1,2</td>
<td>0,01</td>
<td>0,02</td>
<td>0,1</td>
</tr>
<tr>
<td>3</td>
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</tr>
<tr>
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<td>0,05</td>
<td>0,1</td>
<td>0,03</td>
</tr>
<tr>
<td>6</td>
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<td>3,4</td>
<td>0,8</td>
<td>0,02</td>
<td>0,1</td>
</tr>
<tr>
<td>7</td>
<td>0,1</td>
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<tr>
<td>8</td>
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<td>0,01</td>
</tr>
<tr>
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<td>0,8</td>
<td>1,5</td>
<td>0,51</td>
<td>0,44</td>
</tr>
</tbody>
</table>

5 Blochwitz, Stefan/Eigermann, Judith, Effiziente Kreditrisikobeurteilung durch Discriminanzanalyse mit qualitativen Merkmalen, in: Handbuch Kreditrisikomodelle und Kreditderivate, Eller;R./Gruber; W/ Reif,Stuttgart 2000
Category refers to the company status (1 = solvent, 2 = insolvent).

Then we calculate two average vectors, one for the 9 solvent clients and one for the 6 insolvents clients.

<table>
<thead>
<tr>
<th>Table 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y1</td>
</tr>
<tr>
<td>Y2</td>
</tr>
<tr>
<td>(Y1 – Y2)</td>
</tr>
</tbody>
</table>

The discriminant function will be presented as:

\[ Z = a_1X_1 + a_2X_2 + a_3X_3 + a_4X_4 + a_5X_5, \]

where:

- \( Z \) represents the discriminant value calculated for each company
- \( a_k \) represents the discriminant coefficient
- \( X_k \) represents the indicator calculated being based on the financial-accountant situation

The algorithm of coefficients is not very complex. The coefficient vector can be obtained as it follows:

where:

- \( Y_1 \) is the vector of the 5 indicators average for the solvents companies
- \( Y_2 \) is the vector of the 5 indicators average for the insolvent companies.
- \( S^{-1} \) is the the variances and covariances matrix inverse

In order to find the total variances and covariances matrix, firstly we should analyse the variances and covariances matrix for the solvents companies and also the one for the insolvent companies.

The variances and covariances matrix for the solvent companies group (\( S_1 \))

\[
S_1 = \sum_{n=1}^{N_1} \frac{(X_{1n} - \bar{X}_1)(X_{1n} - \bar{X}_1)'}{N_1} = \begin{pmatrix}
0.00 & -0.02 & -0.01 & 0.00 & 0.00 \\
-0.02 & 0.91 & -0.04 & -0.03 & -0.02 \\
-0.01 & -0.04 & 0.19 & 0.02 & 0.02 \\
0.00 & -0.03 & 0.02 & 0.01 & 0.00 \\
0.00 & -0.02 & 0.02 & 0.00 & 0.01
\end{pmatrix}
\]

6 Andrea Resti, Misurare e gestire il rischio di credito nelle banche, Alpha Test, 2001, page 47
The variances and covariances matrix for the insolvent companies group (S2)

\[ S_1 = \frac{N_2}{N_2} \sum_{n=1}^{N_2} (X_{2n} - \bar{X}_2) (X_{2n} - \bar{X}_2)' \]

\[ S_2 = \begin{pmatrix}
0,02 & 0,03 & -0,06 & 0,00 & 0,00 \\
0,03 & 0,09 & -0,05 & 0,03 & 0,01 \\
-0,06 & -0,05 & 0,22 & 0,01 & 0,02 \\
0,00 & 0,03 & 0,01 & 0,03 & 0,02 \\
0,00 & 0,01 & 0,02 & 0,02 & 0,03
\end{pmatrix} \]

The total variances and covariances matrix (S)

\[ S = \frac{S_1 \cdot N_1 + S_2 \cdot N_2}{N - 2} \]

\[ S = \begin{pmatrix}
0,010 & 0,001 & -0,031 & 0,000 & -0,002 \\
0,001 & 0,670 & -0,050 & -0,009 & -0,008 \\
-0,031 & -0,050 & 0,233 & 0,020 & 0,026 \\
0,000 & -0,009 & 0,020 & 0,018 & 0,012 \\
-0,002 & -0,008 & 0,026 & 0,012 & 0,016
\end{pmatrix} \]

The variances and covariances matrix inverse (S-1)

\[ S^{-1} = \begin{pmatrix}
192,70 & 1,40 & 28,71 & -25,47 & -5,83 \\
1,40 & 1,53 & 0,51 & 0,38 & -0,19 \\
28,71 & 0,51 & 9,58 & -4,25 & -8,96 \\
-25,47 & 0,38 & -4,25 & 108,49 & -73,73 \\
-5,83 & -0,19 & -8,96 & -73,73 & 127,98
\end{pmatrix} \]

We have all the information we need in order to calculate the coefficient vector of the Z function score:

\[ a = (Y_1 - Y_2) S^{-1} = (36,23 \ 1,99 \ 4,04 \ -14,40 \ -9,43) \]

The discriminant function results in the following manner:

\[ Z = 36,23 X_1 + 1,99 X_2 + 4,04 X_3 - 14,40 X_4 - 9,43 X_5 \]

For every company it can be calculated a new variable, as a linear combination of the initial indicators, value which will represent a risk level at which the company is exposed.

<table>
<thead>
<tr>
<th></th>
<th>Z</th>
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<th>Z</th>
<th></th>
<th>Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>9,57</td>
<td>6</td>
<td>11,66</td>
<td>11</td>
<td>-10,78</td>
</tr>
<tr>
<td>2</td>
<td>4,82</td>
<td>7</td>
<td>4,07</td>
<td>12</td>
<td>-10,99</td>
</tr>
<tr>
<td>3</td>
<td>9,21</td>
<td>8</td>
<td>10,99</td>
<td>13</td>
<td>-9,82</td>
</tr>
</tbody>
</table>
At this point, it is necessarily to calculate a value in order to separate the solvents from the insolvents companies.

\[ Z_1 = 8.42 \]
\[ Z_2 = -7.38 \]
\[ Z_c = 0.52 \]

\[ \overline{Z_c} = \frac{8.42 - (-7.38)}{2} = 0.52 \]

Referring to this value, we will define again the companies in solvents and insolvents:

| Classification | Initial group | Assigned group | z    | P(1|X) |
|----------------|---------------|----------------|------|-------|
| 1              | 1             | 1              | 9.57 | 0.01% |
| 2              | 1             | 1              | 4.82 | 0.80% |
| 3              | 1             | 1              | 9.21 | 0.01% |
| 4              | 1             | 1              | 6.22 | 0.20% |
| 5              | 1             | 1              | 8.40 | 0.02% |
| 6              | 1             | 1              | 11.66| 0.00% |
| 7              | 1             | 1              | 4.07 | 1.67% |
| 8              | 1             | 1              | 10.99| 0.00% |
| 9              | 1             | 1              | 10.78| 0.00% |
| 10             | 2             | 1              | 3.22 | 3.85% |
| 11             | 2             | 2              | -10.78| 100.00% |
| 12             | 2             | 2              | -10.99| 100.00% |
| 13             | 2             | 2              | -9.82| 99.99% |
We observe that a company was incorrect situated (the 10th position), an error of 6%.

**Conclusions**

We managed to form a scor function \(Z = 36,23 \times X_1 + 1,99 \times X_2 + 4,04 \times X_3 - 14,40 \times X_4 - 9,43 \times X_5\), based on the financial-accountant information obtained from 15 companies (companies about we knew from the begging that 9 are solvents and 6 insolvents), by means of calculating 5 indicators, for each one of those (\(X_1, X_2, X_3, X_4, X_5\)). This function permit us to categorise a company (for which we can calculate the 5 indicators) in solvent or insolvent, by comparing the value found with 0.52.

All in all, we ascertain that this score function we obtained is offering a new company division in the two categories above mentioned, with an approximative error of 6%, as a result of one incorrect framing from the 15 companies presented.

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Competition between companies favours innovation, reduces production costs, leads to a growth of economic efficiency and, consequently, increases the competition level of the economy. Stimulated by the competitive environment, companies are in a permanent struggle to trade high quality products and services, at a price lower than the price offered by competition.

Along with the permanent and rapid changes at the general technological level, a company’s blind spot has shifted from the products or services to information which allows the preservation of the competitiveness of a product/services offered.

In the private domain, the intelligence activity has succeeded in penetrating in various domains, the business environment being the most avid for information so that the risk of decision-making is reduced. A company that does not examine and monitor rigorously it’s main competitors cannot formulate or implement a solid competitive strategy. Competitive intelligence supports leadership decisions concerning the position of a business in order to maximize the value of it’s capacities which distinguishes it from it’s competitors. Active information is the means by which the objectives pursued by economic competition are reached.

Introduction

The economy, a vital domain for surviving in the global competition of nations, constitutes “the battlefield” on which contemporary wars are waged. The access to resources, technological progress, the control of the volume of products needed by markets or market domination are objectives - not rarely national objectives - which, as soon as they are reached, they secure a competitive advantage and make nations, that understand the realities of the present and the probable perspectives of the future, wealthier.
The Watson Institute for International Studies concludes in an interactive security matrix\textsuperscript{1} that the maximum level of risk for a state is not war, terrorism, pandemics, the conflict for resources of weapons of mass destruction, but the possibility that the respective state fails. To be placed in this category, the authors list a series of conditions such as the lack of economic stability, the incapacity to provide social assistance or individual security, the proliferation of organized crime, the de-legitimization of the state (weakening the state's capacity to implement the rules, to collect taxes and to have monopoly over violence control), political and religious extremism, etc. A state whose economy cannot sustain the prosperity of its population and institutions meant to ensure the harmonization of social interests (defence, order, health, education, pensions etc.) loses its reason to exist. Actually, the citizens of a democratic state give up a part of their income - by taxes and fees - and a part of their freedom - by subjecting themselves to the law - to benefit from better state services. This is possible only in the conditions of a strong economy which allows the deduction of taxes and fees at a sufficient level.

The majority of standard macroeconomic analyses and prognoses did not significantly help in the early approach of the recent financial crisis, although relevant signals were issued in certain environments, especially in the academic field. Unfortunately, information about loans and expenses of the private sector are less accessible than those about the circulation of capital in the public sector, and in a world in which private capital flows are increasingly important, the monitoring and surveillance of these flows is expensive and has uncertain results. I mention here that an important characteristic of market economy is that which implies that dispersed information is aggregated through prices and that information creates a certain predictability which allows the encouragement of planning economic activities.

Furthermore, we should not deceive ourselves that the improvement of the information flow is enough for financial, raw materials markets or other markets to function well. In the period leading up to the crisis in East Asia\textsuperscript{2} there was a large part of the information available but it was not assessed, interpreted and integrated in order to build a protection shield for what was to come. Although information about capital flows were identified, processed and integrated with the help of strong

\textsuperscript{1} interactive matrix available at: http://www.watsoninstitute.org/gs/Security_Matrix/ (accessed on October 6, 2012).
\textsuperscript{2} On July 2, 1997, the stock market crashed in Thailand. At the same time the Central Bank of Thailand deregulates the national currency of Thailand, baht - which until then was strongly coupled by the dollar exchange rate. As an immediate reaction, the value of the national currency of Thailand lost 25\% in only one day. The crisis in Thailand had a domino effect and practically spread in all countries of South-East Asia.
information-supported systems, in the end it was proven that it is less probable that the entire complexity of interactions that can affect, at a certain time, the entire system, can be grasped. Nevertheless, a multiple-source and multiple-level analysis followed by a concerted action seems the most important improvement that can be brought to the architecture of economic protection and competitiveness enhancement structures.

**Competition and competitiveness**

Competition presupposes the existence of two or several companies that operate on the same market in order to attract a higher number of customers. Therefore, competition makes economic agents focus on consumers, namely on their needs, by trying to satisfy their requirements to the highest extent possible by offering differentiated products or services compared to those of other competitors. This presupposes the adoption of a certain competitive behaviour, a behaviour manifested in the existing competitive relationships in a domain of activity or on a market. Furthermore, a condition for taking part in the market game is to know your competitors, their current actions and, to the extent possible, their future actions.

Competition represents a defining part of the market, along with the demand, offer and price. An engine for commercial relationships from ancient times, it is apprehended as such in the period of development of capitalist economies, mainly as a result of progressive implication in regional economic relations and, subsequently, in global economic relations. Competition is an open confrontation between economic agents with the aim of obtaining a more favourable position on the market, according to their needs\(^3\). Competition between companies favours innovation, reduces production costs, increases economic efficiency and, consequently, raises the competitive level of the economy. Stimulated by the competitive environment, companies supply competitive products and services from the point of view of their price and quality, the main beneficiary being the consumer.

Economic competition manifests itself at a national, regional and international level, being defined and regulated by the Organization for Economic Cooperation and Development (O.E.C.D.), an international body militating for the creation of an optimal economic and business climate for the member states, as follows: “competition expresses the situation on a market on which companies and sellers struggle independently to win customers with the aim of reaching an

economic objective, for example, profit’s, sales and/or market division. In this context, competition is often a synonym of rivalry. This rivalry may refer to prices, quality, services or combinations between these or other factors that customers cherish”.

Economic competition has become a field to the attention of regional or international organizations along with the acceleration of processes that contribute to globalization. Therefore, a characteristic of the contemporary world is the emergence and development of integration system of certain national economies at a regional scale, a process by which two or several national markets unite into a form of common market, a new social-economic entity. The fulfilment of this objective requires a period of transition that allows the execution of the necessary adjustments for an efficient functioning of the future integrated space. At this stage, parts of the national sovereignty are transferred to some of the common institutions (e.g. European Union), which obtain in this way a supranational character which may have implications and in other fields of social life (assumed values, legislation, political practices, etc.).

The structures of different economies with participants in the competitive process which become global at an accelerated rhythm are not identical, an important role in their evolution having the available resources, the technological level and, not to neglect, history. Furthermore, economic policies and state intervention means, as well as the economies’ capacity to self-adjust are factors that contribute to market success or failure.

In order for the “invisible hand” of the market to act correctly, the rules of free competition must be equal for all, and the relatively similar contextual conditions, conditions fulfilled only for a market with a perfect competition. Although it is almost impossible to find in practice, at least four conditions must be fulfilled to ensure a perfect competition:

a. atomicity - a significant number of the sellers and buyers, so that isolated exchanges are insignificant in the volume of total exchanges;

b. free entry - allows the appearance of new producers who can enter and exit from the market as they please;

c. the homogeneity of goods from the same branch - so that the customer does not care from what seller he/she buys;

d. complete information - the companies and buyers know all the products and market prices at the same time.

From the analysed perspective, the problem appears in the fourth criterion, which presupposes that all economic agents (buyers and sellers) have all the information regarding the price and quality of the products available at a certain time on the market. In the ideal situation in which this condition can be met, a unique price would rapidly emerge, and sellers would instantaneously align to this unique price. This condition is practically impossible to meet since not all market players have the necessary resources to obtain, process and exploit the same information. Therefore, those who are correctly and timely informed have a competitive advantage and, in principle, succeed in winning over the ones uninformed or misinformed. The problem of informational asymmetry, as it was called, brought about the interest of researchers, and, in order to emphasize it's implications, George Akerlof, Michael Spence and Joseph Stiglitz received the Nobel prize for economy in 2001.\(^6\)

With the new information and communication technologies, a company's blind spot has shifted from the product or services to information which allows the preservation of the competitiveness of such product/service. Often, competition can be won by knowing and preparing the ground from the point of view of the human factor before receiving the commercial proposal, the capacity to determine and set strategic targets, to stimulate evolution, to call into play all the possible means to make them take a decision in the sense desired”\(^7\). Uninfluenced economic does not exist anymore. The influence of private and public factors. The states need information to maintain their position on the international checkerboard and to help their companies.

“\(^{In an age when the offer of information has grown extensively, the power belongs to the one who succeeds at due time to collect, analyse and synthetize as fast as possible the information available from the competitive environment. Almost 90% of this stock can be accessed by means of data banks, the press, specialized publications, colloquy or the internet. 10% remain which are considered very important and sensitive which are generally obtained from closed and dishonest (grey information) or illegal (black information) sources. The fiercest battles between international actors are waged on these 10%”\(^8\).

Economic competitiveness by intake of information starts from the principle according to which companies can develop valid competitive strategies on the support of knowledge/information obtained by the internal development

\(^7\) Jean Gabszewicz, \textit{La concurrence imparfaite}, La Decouverte, Paris, 1994, pag.78.
of specific capacities (analyses, estimates and multiple evaluation on alternative scenarios). From this point of view, the platform sustained by the adequate information platform can provide a new form of understanding and approach of the challenge of competitiveness, an affirmation sustained by the context in which 80% of European companies still carry out such programmes, and over 55% are supported by the use of competitive software intelligence applications, integrated with business intelligence and knowledge management systems.

**Information and competitive intelligence**

From ancient times, man has been avid for information in order to adapt to the natural environment and, subsequent, to change it. By continuous search and development, man has become “dependent” of information, and without it it’s existence and activity lose it’s sense and finality. Information is a fundamental element of reality and human existence.

The value, as social relation, has known a dynamic evolution deeply dependent on information to which it gives social sense, in other words the recognition of it’s high status and important role in groups and human society. The threat, as a danger to someone or to something, acquires sense if it contains information or carries value. Nowadays, the world is confronted with a plethora or economic, military, social, informational threats, etc.

The analysis of the assessments made sequentially to the relations between: information and value; information and threats; information and the safety environment; values and threats; values and the safety environment; threats and the safety environment proves that there is a strong relation between these components. The essential bonding element is information. This is present as a fundamental part of each component of the relation. Without it, it would not be possible to assess the state of any of the members and, therefore, neither it's knowledge as entity. Similar to all systems capable to adjust and self-adjust, the human body maintains a permanent exchange of information with the environment in which it lives. Information, along with air, water, food, clothing, dwelling, is part of the fundamental needs of the human being.

Human kind has entered in the 3rd millennium, in the so-called “information society”, but we live “the paradox of not succeeding to give an exact definition of information”\(^9\). The majority of individuals claim that they know what a piece of

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information is, but no unanimous delimitation, determination or specification of the conceptual content of information was reached.

Until now, a plethora of definitions have been proposed (after certain appreciations, over 150), each of these definitions being generally scientifically grounded and justified or proven by the game of the mind, respectively by mathematical formulas. The fact that these definitions are not mutually exclusive and, more often than not, they are not contradictory. On the contrary, each definition points to a side less known until then or simply gives another vision.

Moreover, as the years passed by, “information” has become a challenge brought against specialists who have tried to clarify the notion in the context of their fields of activity. By attempting to make a correlation of perspectives, “information” generated a science that deals with the study of information. Whether it is called Information Science or Theory of Information, the aspects of information are analysed according to different domains: mathematics, physics, biology, telecommunications, military, economy etc.

It is apparent that “information” is more than a simple word with a rich polysemy, with a high degree of organization which points to a superior form of generalization and abstraction. Furthermore, it exceeds the notion’s limitations - the fundamental logical form of human thinking which reflects the general, essential and necessary characters of a class of objects.

Some specialists claim that “the initial sense of the notion of information is the degree of novelty that a message carries to a comprehensive social environment”11.

First and foremost, the term intelligence was shaped by it’s association with secrete activities. Shulsky and Schmitt consider that he security grading is necessary in intelligence organizations and represents the essential element of informative activity: “the relationship between intelligence and security grading is the fundamental element that distinguishes intelligence in relation to other intellectual activities”12.

The competitive intelligence activity is defined as the sum of operations whereby data and information are collected and analysed and, in the end, intelligence is produced which is disseminated to beneficiaries. Georg Roukis examines competitive intelligence in quite familiar terms to those who are familiar with government intelligence: collection, analysis, espionage, counter-information

11 Ştefan Buzunărecu, Sociologia opiniei publice, Bucureşti, Editura Enciclopedică Română, 1996, p.49;
and security of information systems\textsuperscript{13}.

Arthur S. Hulnik also finds similarities between the two domains. He presents three aspects of government intelligence which can be easily transferred to the business sector: data collection, data analysis and operation and information security\textsuperscript{14}.

In the private domain, the intelligence activity has succeeding in penetrating various fields, the business environment being the most avid for information that help reduce risk in decision-making. Although intelligence activities in the field of economy are probably achieved from the first exchange between people, after 1982 the private intelligence activity in the economic field received the name of competitive intelligence. In this field, information analysis is considered “the process whereby information, which often have no apparent connection, are transformed into specific methods of intelligence (the author rates intelligence as a category between information and knowledge)”\textsuperscript{15}.

One of the main objectives of the competitive intelligence activity is to be aware of the role of early warning and of prevention of surprises that might have a major impact on the market quota, reputation, turnover or medium and long-term profitability of a company. Irrespective of the strategic approach or the framework that the company chooses for business management purpose, no singular element is fundamental for the competitive strategy as information is to competition. Information about competition has a clear objective - the development of the necessary tactics and strategies for the transfer of advantages and consistency of the common market, from competitors to their own company.

A company that does not analyse and does not monitor rigorously the main competitors cannot formulate or implement a solid competition strategy. The competitive intelligence activity supports management decisions regarding the business position in order to maximize the value of capacities that make her stand out from it’s competitors.

Active information is the means by which the objectives pursued by economic competition are reached. To be the best, it is not enough to produce the best products at the best price, you must know the market and competitors very well, by protecting at the same time strategic information. World competition is ruthless and becomes more and more apparent that in the current geo-economic system, only creative and versatile companies have chances to win. Winners are always chosen

\textsuperscript{13} George Roukis, Bruce H. Charnov, Hugh Conway, \textit{Global Corporate Intelligence}, ABC-CLIO, 1990, pag.95.
\textsuperscript{14} Arthur S. Hulnik, \textit{Private Sector Intelligence in the United States}, Harward International Review, may 2006.
among the most industrious, those who succeed to obtain information before others.

By analysing the relationship between economy and security, Professor Daniel Daianu draws attention to the high vulnerability of economies in transition. In a limited sense, vulnerability refers to its economic sizes, to the incapacity to handle internal and external shocks. In a larger sense, vulnerability marks the state’s incapacity to ensure an adequate living standard to its citizens and proves the existence of major internal conflicts, a division and centrifugal tendency of its force, which can be regarded as real threats to national security. Daniel Daianu thinks that these phenomena boost the temptation to impose authoritarian political solutions, as substituents for weak state structures16.

**Information analysis and intelligence production**

In a functional-operational approach, the concept of intelligence corresponds to the “intelligence process”, with the aim of knowing, preventing and setting off the vulnerabilities and threats brought to the protected entities which, in the economic fields, might be a company, a group of companies, an economic branch or an economy as a whole.

Every intelligence processes involves a certain cyclicity. The classical model of the competitive intelligence cycle requires the transition of the following stages:

a. to identify the information needed – by analysing the information available in the organization regarding the objectives to be sustained by the intelligence activity;

b. planning – in order to identify the environments and places where the necessary data and information can be collected;

c. obtaining data and information - necessary and available by ethical and legal means and methods;

d. processing the data and information obtained – in order to assess the source and trustworthiness of the content;

e. information analysis and intelligence production – using analysis techniques specific for the type of data and information available and completing the table of the analysed situation;

f. drawing up the information product – using the results from the analysis and formalizing them in an agreement with the purpose pursued and the beneficiary’s access level;

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g. dissemination and feedback - the transmission of the final information products to consumers and receiving reactions from them.

Information analysis is a stage of the informative process, definitions being multiple and diverse. The definitions available in the doctrines of some states more experienced in the field of intelligence, in the public and private domains, offers a clearer image of what information analysis means.

Therefore:

• “information analysis is the process of data separation in more parts and examining them separately or jointly, in order to establish the essential parameters and the nature of the relations. The term analysis is often used in the sense of evaluation, the difference being that analysis is made on something that exists and the evaluation on something that might exist”17;

• “process of intelligence production in which information is subject to a systematic process for the identification of the major deeds and for the formulation of conclusions”18;

• “the intelligence analyst selects and filters information; they interpret evidence, place them in a context and formulate conclusions to satisfy the beneficiary's need for information”19;

• “information analysis means applying individual or collective cognitive methods to evaluate the data and test the hypotheses in a given socio-cultural context”20.

By correlating the above definitions, in our opinion it emerges that information analysis represents the activity whereby techniques of analysis are applied to an existing set of information depending on the nature of the information and the purpose set.

The analyst, as producer of information, receives unprocessed or low processed data (raw intelligence) which it transforms, by adding value and adjusting it to the beneficiary’s requirements, in information products.

Data may derive from a series of disparate and uncoordinated measurements or observations, while information is based on coordinated, organized and coherent data which usually have a certain sense. There is also the opinion according to which data is considered to represent what components of information systems

19 David T. Moore, Species of Competencies for Intelligence, American Intelligence Journal, Washington, 2005
20 Rob Johnston, Analytic Culture in the U.S. Intelligence Community, Central Intelligence Agency, Washington, 2005
create, store and supply\textsuperscript{21}. The data processing by adding or creating new meanings or useful knowledge become information.

The production of intelligence, although it has a marked operational specificity - characterized by the rapid treatment thereof, since operations are facilitated by the inflow of databases, of expert programmes of computer performance, with positive effects in the process of decision-making, efficiency and costs - is formed, on the substance, in the analytical component or side of information activities.

The production of information is the analytical process carried out by specialized analytical structures based on the corroboration, integration, analysis and evaluation of data with an operative significance. To be used in the decision-making process, information are subject to specific operations with the purpose of identifying their characteristic indicators and elements:

- \textit{the processing} is the stage of the analytical process characterized by operations, procedures and techniques applied to data in order to make them useful, such as annotations, references, summaries, indexations, codifications, thematic classifications, format assignment, preparation for electronic processing etc. with the help of material means and/or specific equipments;
- \textit{correlation/collaboration} is the specific process of confirmation/invalidation of the content of a piece of information, of completion of such information, by analytical operations of integration and comparison of information in relation to knowledge existing at that time about the field and problem which it refers to, in order to highlight the connections and tendencies and to generate or formulate conclusions;
- \textit{integration} consists of reuniting disparate data, subsequently obtained in the process of collection and reuniting them according to pre-established criteria and rules, harmonizing and summarizing it's components, estimating their trustworthiness and usefulness and incorporating them in an autonomous information or in an information product;
- \textit{the actual analysis};
- \textit{the evaluation} is the stage of information production when the usefulness and destination of the information is established.

The result of the information production activity is materialized in information products for decision-makers.

The analysis requires competition and experience in the operation of

proper instruments and techniques, the structuring of information according to
the fields of fulfilment of the national security and their relevance, the removal
of uncertainties and the analysis of their information according to the situational
logics, which requires the concentration of the analysis on the cause-effect and
means-end relations. Information products must be compliant with the entire
relevant legislation, codes of good practice, standards, protocols, procedures and
guidelines of the organization.

The analysis implies the selection, separation comparison with other data
and integration which determines the transformation of the primary form of data
and information in an employable intelligence product. The analysis is a component
of intelligence that expresses added value.

Connections are highlighted throughout the analytical process as well
as missing information, weak points and what are the actions for remedying the
deficiencies. The task of analysis is to integrate singular data/information in a unitary
product, to assess information according to a certain context and to achieve the
final product that contains appreciations of events or development or judgements
regarding possible implications.

Richards J. Heuer, Jr.22, one of the most renowned theorists of information
analysis, presents in his work entitled „Taxonomy of Structured Analytic
Techniques“, four general methods of information analysis: quantitative methods
that use empirical data, quantitative methods that use data generated by experts, the
method of un-assisted decisions and the method of structured analysis23.

- **Quantitative methods using empirical data**– are based on exact data
collected from the reference domain or resulting from the activities of certain
systems (social, economic etc.). In order to make this kind of analyses, the analyst
must have thorough knowledge in the field of study.

- **Quantitative methods that use data generated by experts** – are based on
opinions and judgments formulated by field experts. The take-over and application
of such data are subject to clear rules regarding the author and context in which
the author has expressed it’s opinion. Furthermore, there is a possibility to consult
experts so that they formulate opinions/judgments, mainly with a quantitative
content, in relation to the analysed subject. This method includes the dynamic
formation, simulation etc. The training of analysts for this type of analysis is made
in the domain of exact sciences, of operational, business studies etc.

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22 Author of *Information Analysis Psychology*, has an experience of over 40 years in the field of information
analysis. The work mentioned introduced terms and concepts previously used in specialized works.
Annual Convention, San Francisco, 2008, p.2
• *Methods of unassisted decisions* – or intuitive analysis (the phrase disavowed by Heuer for the lack of rationality from the definition of the intuitive) – includes rationalities based on: tests; critical thinking; historical (prior) experiences; case study; analogy. Usually this method involves an individual effort, and ideas remain in the mind of the analyst until the time of performance of the analysis. Practically this represents the distinctive characteristic of the method. The preparation for this type of analysis is made by humanistic sciences, mainly in social sciences.

• *Structured analysis* – uses structured techniques to alleviate the negative impact determined by the cognitive limitations and traps known in the process of analysis. The distinctive characteristic is that the structured techniques externalizes and decompose mental processes in a manner that allows the revision and evaluation by other analysts. The preparation for this type of analysis is obtained only by exercising the information community. Usually, these techniques are used by the analyst who does not have studies in mathematical statistics or exact sciences.

**Conclusions**

Performing organizations know that to be competitive they must be able to foresee the changes inside their field of activity or in the general context in which the economy operates. Furthermore, they also know that in order to obtain this competitive advantage, a plan of transformation of information and data into actionable information (intelligence products) - analyses, syntheses, evaluations - on the basis of which decisions are taken under low uncertainty conditions, is required.

The stake for each player is to anticipate/know the actions of the competition so that it is permanently one step ahead. Therefore, the competitor needs to know as early as possible what is the strategy of the other competitors in terms of research, production and sales. If an economic agent wants to produce more and cheaper, then the competition must be prepared to rapidly counter-act this movement.

Information is the means for reaching the objectives in international economic competitions. In order to survive, each player must protect it’s own informational patrimony and, at the same time, to strive to know the competition. By facilitating the surprise avoidance process by early warning and management of risks and opportunities generated by the business environment dynamics, the practices and instruments allow them to act on the market, instead of reacting as a player familiar with the rules of the game, of it’s own capabilities and those of it’s competitors. Practically, through a better and more systematic understanding of what is happening on the market and through a proper evaluation of the strategic/
tactical impact of these actions, the system supports the continuous calibration of competitive strategies and tactics for companies and economic branches.

The project of transformation of the economy in an economy based on information and knowledge does not consist only on adopting these new instruments and concepts, but also on creating/using an enriched institutional framework for the use thereof, activities that can be materialized in structures such as the virtual community of experts, informational decision-making infrastructures and a virtual community of information.

As I have already said, the information is the means by which the objectives set in the economic competition are reached. To be the best, it is not enough to produce the best products at the best price, you must also be very familiar with the market and with the competition, by protecting at the same time your strategic information. World competition is ruthless and it becomes more and more clear that in the current geographical-economic system, only Orwellian companies have chances of winning. Winners are always chosen among the most industrious, those who succeed in obtaining the information ahead of the others.

The extension of the market on a national level to a European level is sure to lead to the intensification of competition, which is determined by the multitude of producers for a category of goods. Romanian economy, for years out of touch with the technological level of economically developed countries, cannot handle, for now, the difficulties created by such a competitive environment. The process of restructuring of the Romanian economy can be sustained by assuming at a private and public level the advantages that can be obtained as a result of adopting competitive intelligence practices, thus ensuring the avoidance of strategic errors and offering the technological level for the future and not for the past.

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The Impact of Open Market Variables on FDI. Case of Romania

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Danut Chilarez, Constantin Brancoveanu University, Pitesti, Romania

This scientific approach intends to make an impact analysis which, using the quantitative methods, quantifies the effects generated by the elements that constitute open markets (trade freedom, investment freedom and financial freedom) on FDI. Knowing these effects allows to subsequently adopt the specific strategies and to develop multiple scenarios that can make the Romanian economy more attractive for foreign direct investment in terms of sustainability. To highlight the impact of the analyzed elements of FDI we have used specific quantitative analysis and statistical techniques that lead to the quantitative quantification as well as a number of causal explanations designed to better describe the phenomenon.

Introduction

Financing the economic activities, the source of funds needed in finance, is an old problem, constant within each economy regardless of level of development, an aspect that is emphasized particularly in crisis situations. The relations and the influence factors regarding the implications of FDI on national economies have been studied since the early ’50s, when the transfer of funds from the developed countries to the developing ones began to be accentuated, and transnational companies began to manifest themselves more and more intensely at worldwide level.

Many economists have analyzed the development stages of transnational corporations (Vernon 1966, Hymer 1976, Porter 1980, Dunning 2008) or the motivations underlying the realization of FDI in a particular economy (Dunning 1980, 2008, Lall 1997). They developed trends, theories and schools that define the main issues related to the finance of multinational companies and to the international finance. Presently, more than ever we deal with the problem of analyzing the effects
that certain national policies and strategies have on foreign direct investment. It is known that FDI can produce positive or negative effects on the economy (Ene 2012), the governmental policies, the negotiation of the way in which these financial flows enter or leave a country decisively influences all capital movements. There are countries that negotiate their access conditions, particularly regarding the resources, in a way that generates the maximization of positive effects, while in other countries entering or relocating FDI mostly creates negative effects.

From the analyses and the studies made at global level, an economy differs in attractiveness to another economy through a series of determinants (Dunning 1980, 2008, Lall 1997). Numerous financial institutions or foundations analyze the factors which contribute to the attractiveness of an economy. The elements vary from one institution to another according to their importance. For investors, these analyses represent true landmarks in adopting the financial decision.

**Model and empirical research**

The determinants of FDI or the factors influencing these investments are analyzed by category or individually by various organizations. One of the most striking analysis is performed by the Heritage Foundation which calculates that annual index of economic freedom in a country (http://www.heritage.org/index/ranking). The analysis uses ten variables that contribute to the determination of the ranking by country: property rights, freedom from corruption, fiscal freedom, government spending, business freedom, labor freedom, monetary freedom, trade freedom, investment freedom and financial freedom. The last three indicators are part of the category of indicators that evidence the opening of the market in the respective country.

According to the Heritage Foundation, trade freedom expresses: “*trade freedom reflects an economy's openness to the import of goods and services from around the world and the citizen's ability to interact freely as buyer or seller in the international marketplace. Trade restrictions can manifest themselves in the form of tariffs, export taxes, trade quotas, or outright trade bans. However, trade restrictions also appear in more subtle ways, particularly in the form of regulatory barriers. The degree to which government hinders the free flow of foreign commerce has a direct bearing on the ability of individuals to pursue their economic goals and maximize their productivity and well-being* (http://www.heritage.org/index/book/chapter-1).

In terms of investment freedom we must consider that: “*a free and open investment environment provides maximum entrepreneurial opportunities and
incentives for expanded economic activity, greater productivity, and job creation. The benefits of such an environment flow not only to the individual companies that take the entrepreneurial risk in expectation of greater return, but also to society as a whole. An effective investment framework will be characterized by transparency and equity, supporting all types of firms rather than just large or strategically important companies, and will encourage rather than discourage innovation and competition. (http://www.heritage.org/index/book/chapter-1).

Financial freedom implies “a transparent and open financial system ensures fairness in access to financing and promotes entrepreneurship. An open banking environment encourages competition to provide the most efficient financial intermediation between households and firms and between investors and entrepreneurs” (http://www.heritage.org/index/book/chapter-1).

Based on these considerations, we can quantify the impact that the open market (trade freedom, investment freedom and financial market) has on foreign direct investment. In this sense the model is based on a multiple regression equation:

\[ Y_t = a_0 + a_1X_{1t} + a_2X_{2t} + \ldots + a_kX_{kt} + e_t, \quad t = 1, 2, \ldots, n \quad (1) \]

where: \( a_0 \) – is the constant value, \( a_1-ak \) are equation parameters, and \( x_{1t}-x_{kt} \) are variables of the function, \( e_t \) – standard error.

In this context, the equation becomes:

\[ \text{FDI} = a_0 + a_1(\text{TF}) + a_2(\text{IF}) + a_3(\text{FF}) + e_t \quad (2) \]

where: TF represents trade freedom; IF – investment freedom, and FF – financial freedom.

The statistical data of these indicators are presented in Table no. 1.

<table>
<thead>
<tr>
<th>YEAR</th>
<th>FDI LOG</th>
<th>TF</th>
<th>IF</th>
<th>FF</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>3,059563</td>
<td>87.1</td>
<td>80.0</td>
<td>50.0</td>
</tr>
<tr>
<td>2011</td>
<td>3,111934</td>
<td>87.6</td>
<td>80.0</td>
<td>50.0</td>
</tr>
<tr>
<td>2010</td>
<td>3,083503</td>
<td>87.5</td>
<td>75.0</td>
<td>50.0</td>
</tr>
<tr>
<td>2009</td>
<td>3,289143</td>
<td>85.8</td>
<td>60.0</td>
<td>50.0</td>
</tr>
<tr>
<td>2008</td>
<td>3,714581</td>
<td>86.0</td>
<td>60.0</td>
<td>50.0</td>
</tr>
<tr>
<td>2007</td>
<td>3,717088</td>
<td>84.0</td>
<td>50.0</td>
<td>60.0</td>
</tr>
</tbody>
</table>
With regard to foreign direct investment, their values were logarithmically analyzed in order not to produce significant redundancies generated by the different sizes between the analyzed phenomenon and the variables that characterize it.

### Table 2: Statistical Analysis

<table>
<thead>
<tr>
<th></th>
<th>FDI_LOG</th>
<th>TF</th>
<th>IF</th>
<th>FF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>3.495194</td>
<td>76.86667</td>
<td>55.41667</td>
<td>46.66667</td>
</tr>
<tr>
<td>Median</td>
<td>3.444465</td>
<td>79.20000</td>
<td>50.00000</td>
<td>50.00000</td>
</tr>
<tr>
<td>Maximum</td>
<td>3.977541</td>
<td>87.60000</td>
<td>80.00000</td>
<td>50.00000</td>
</tr>
<tr>
<td>Minimum</td>
<td>3.059563</td>
<td>57.60000</td>
<td>30.00000</td>
<td>30.00000</td>
</tr>
<tr>
<td>Std. Dev.</td>
<td>0.343099</td>
<td>10.98630</td>
<td>16.71395</td>
<td>7.784989</td>
</tr>
<tr>
<td>Skewness</td>
<td>0.119055</td>
<td>-0.527539</td>
<td>0.076931</td>
<td>-1.788854</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>1.523089</td>
<td>1.871811</td>
<td>2.182445</td>
<td>4.200000</td>
</tr>
<tr>
<td>Jarque-Bera</td>
<td>1.118981</td>
<td>1.193001</td>
<td>0.346035</td>
<td>7.120000</td>
</tr>
<tr>
<td>Probability</td>
<td>0.571500</td>
<td>0.550736</td>
<td>0.841123</td>
<td>0.028439</td>
</tr>
<tr>
<td>Sum</td>
<td>41.94232</td>
<td>922.40000</td>
<td>665.0000</td>
<td>560.0000</td>
</tr>
<tr>
<td>Sum Sq. Dev.</td>
<td>1.294889</td>
<td>1327.687</td>
<td>3072.917</td>
<td>666.6667</td>
</tr>
<tr>
<td>Observations</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>12</td>
</tr>
</tbody>
</table>

*Source: data processed by the authors in the software Eviews 7*

The statistical analysis outlines a relatively low standard deviation for
FDI, their average value being 3.44 unit’s. On the other hand, for the variables that characterize the phenomenon we can observe that the standard deviation is high, which highlights the major differences between the values of the statistical series of the variables. In the case of trade freedom, the deviation is 10.98 unit’s, the variation of investment freedom is 16.71 unit’s, and the variation of financial freedom is 7.78. It should be appreciated that in the last three years the values have increased for the first two variables while in the case of the third variable the values have remained stable. Regarding the analysis of the distribution of the data series we can observe that there is a difference of the deviation in relation to the symmetrical distribution around the average (skewness). So in the case of foreign direct investment and the variable of investment freedom there are positive values indicating a bias to the left with extreme values to the right, while the negative values recorded for trade freedom and financial freedom indicate an inclination to the right with extreme values to the left. The degree of flatness (kurtosis) indicates a platikurtic distribution for foreign direct investment, trade freedom and investment freedom, while for financial freedom the distribution is leptokurtic.

Table 3: Matrix correlation

<table>
<thead>
<tr>
<th></th>
<th>FDI_LOG</th>
<th>TF</th>
<th>IF</th>
<th>FF</th>
</tr>
</thead>
<tbody>
<tr>
<td>FDI_LOG</td>
<td>1.000000</td>
<td>-0.638014</td>
<td>-0.819204</td>
<td>0.246015</td>
</tr>
<tr>
<td>TF</td>
<td>-0.638014</td>
<td>1.000000</td>
<td>0.787262</td>
<td>0.126132</td>
</tr>
<tr>
<td>IF</td>
<td>-0.819204</td>
<td>0.787262</td>
<td>1.000000</td>
<td>0.151378</td>
</tr>
<tr>
<td>FF</td>
<td>0.246015</td>
<td>0.126132</td>
<td>0.151378</td>
<td>1.000000</td>
</tr>
</tbody>
</table>

Source: data processed by the authors in the software Ewiews 7

The analysis of the correlations existing between the analyzed phenomenon (FDI) and the variables that characterize it (TF, IF and FF) shows a strong link between FDI and IF, a link of medium intensity between FDI and TF and a weak connection between FDI and FF. In this context, we consider that the influence of the financial freedom variable on FDI is small, while the other two variables have a greater influence highlighted also by the intensity of correlations.

The regression equation is highlighted below:

\[
\text{FDI\_LOG} = 0.0003515823731*TF - 0.01817489147*IF + 0.01668661854*FF + 3.696651624
\]
The coefficients of the variables show how the phenomenon is changed in the situation in which the value of the variables changes with one unit. It appears that for the variables of trade freedom and financial freedom the positive modification with one unit leads to a favorable modification of the phenomenon. It is not the same thing that happens in the case of investment freedom whose favorable change leads to an adverse change of the phenomenon.

R-squared has the value 0.81 (Appendix 1), while adjusted R-squared has the value 0.74, indicating that the variables explain the influence of the phenomenon in 81%, the difference being explained by other factors not included in the model. F-prob is below 5%, so the model is statistically valid.

Conclusions

As a result of the conducted research, we have found that FDI is influenced by the conditions generally named open market. The explanatory variables differently affect the phenomenon from a quantitative perspective. Although the correlation analysis shows that there is a correlation between the analyzed phenomenon and trade freedom, the coefficient attached to the variable produces a much smaller change than for financial freedom variable whose intensity of correlation is small but its influence is much greater. The investment freedom variable with which the phenomenon is most highly correlated, presents a negative influence whether the variable is positively changed.

Acknowledgement

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References

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APENDIX NO.1

Dependent Variable: FDI_LOG
Method: Least Squares
Sample: 1 12
Included observations: 12

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>TF</td>
<td>0.000352</td>
<td>0.007780</td>
<td>0.045193</td>
<td>0.9651</td>
</tr>
<tr>
<td>IF</td>
<td>-0.018175</td>
<td>0.005132</td>
<td>-3.541570</td>
<td>0.0076</td>
</tr>
<tr>
<td>FF</td>
<td>0.016687</td>
<td>0.006849</td>
<td>2.436534</td>
<td>0.0408</td>
</tr>
<tr>
<td>C</td>
<td>3.696652</td>
<td>0.506819</td>
<td>7.293824</td>
<td>0.0001</td>
</tr>
</tbody>
</table>

R-squared        0.811273  Mean dependent var  3.495194
Adjusted R-squared 0.740501  S.D. dependent var  0.343099
S.E. of regression 0.174779  Akaike info criterion -0.389393
Sum squared resid   0.244380  Schwarz criterion -0.227757
Log likelihood     6.336357  F-statistic 11.46311
Durbin-Watson stat 2.244564  Prob(F-statistic) 0.002876
Forecast: FDI_LOGF
Actual: FDI_LOG
Forecast sample: 1 12
Included observations: 12

Root Mean Squared Error 0.142705
Mean Absolute Error 0.109900
Mean Abs. Percent Error 3.041263
Theil Inequality Coefficient 0.020333
Bias Proportion 0.000000
Variance Proportion 0.052240
Covariance Proportion 0.947760
Life Insurance Versus Private Pension

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The concept of private pension arises in order to identify the need for financial planning in order to ensure a decent living beyond retirement age. The main reason for implementing this was the completely unfavorable economic, social and demographic present context.

Initially, in our country, the absence of a private pension system, created the conditions for life insurance products with an investment or saving component to be most often purchased as a way to establish an additional income during retirement.

Naturally, insurers have benefited from the opportunity to highlight the role of their products, calling them suggestively as to highlight their role, in fact, as pensions. Therefore, when setting up the private pension system in May 2007, through the voluntary pension (pillar III), on the Romanian market already existed a “parallel offer” quite often perceived by the public as a quasi pillar III.

The terminological confusion between the two products arose a new controversy. However, it is clear that both versions are, for those who are a part of these systems, viable alternatives designed to facilitate their chance at a decent life beyond the age when they are preparing to once again become “consumers”.

Keywords: private pension, life insurance, financial sustainability, pension reform, deductibility, financial protection, insured risk, solvability, guarantee fund.

Introduction

It is a known fact that that a country’s economic strength lays in banking and insurance. That's why it is not accidental that the most stable economies, where population’s prosperity is remarkable, are found in countries where the insurance system is well represented within the economic life. This activity plays an important role, due to it's contribution to financial stability, by promoting an effective control of various risk categories and mobilizing people’s savings.
Moreover, companies that provide life insurance facilitate long-term investments, thereby financial stability, encouraging the accumulation of new capital and ensuring both individuals and companies against various risks that may affect their work in different ways.

The demand for life insurance grew constantly in recent decades, due to socio-economic changes, extension of life expectancy and improvement of financial education. Also, the limit’s of social welfare and the pressure of taxing are good enough reasons to stimulate the life insurance consumption, as the public institutions will cover less and less of the financial needs of the population.

Furthermore, the development of private pensions (as a result of the increasing pressure of the public pensions’ budget), of financial savings for retirement age, became more and more necessary resulting in a constant increase of these type of products.

The specificity of life insurance products

Life insurance is a form of protection of the dependants or of other people designated as beneficiaries in the event of the insured person’s death (the person whose death risk is insured), that gives financial security to the family so that after the insured person dies the family can be able to manage itself financially.

From the point of view of the insurance company, life insurance is a way to transfer the financial risk attached to the loss of life or health of an individual to a group of individuals, exposed to the same risk.

In terms of the individual, life insurance can be defined as an agreement through which the insured pays a certain amount of money – the insurance premium – and in exchange to that the insurer will pay a certain amount of money – the insured sum – in the event of death or compensation.

Life insurance is a way of financial protection of an individual and his family. As a way of individual protection, life insurance generates an extra income for a certain moment in life by ensuring a capital or a pension.

Today, life insurance is practiced in many forms, most of which occurred in recent decades, and are based on the increasingly varied needs of people.

The main life insurance products may include or not, next to a component of insurance, which is an insured guaranteed sum in the event of the insured person’s death, a component of “cash”, which can be a savings plan or an investment one. The latter presumes an insurance premium (the amount paid to the insurer in exchange for protection and savings that they offer to the insured) considerably
higher.

Consequently, what distinguishes the insurance product with a savings component of other products, such as private pension, is precisely this insurance component, called the insured amount in case of death, making the product more costly in financial terms, but more complete and complex.

When referring to what should happen in the market during this period, measures should be taken to promote security and development of the insurance sector, support business growth, increase market confidence in the insurance system, promoting greater transparency, introducing or increasing the deductibility for certain insurance categories that help clients (life insurance, health insurance, private pension, housing insurance - with limit's higher than the existing ones), more emphasis on financial education and, more importantly, increase professionalism, discipline and ethics on the insurance market.

The greatest strength of this industry is financial stability, ensured by the presence of strong shareholders with international reputation, which is reinforced by regulations in conformity with European legislation.

The current context, the role and necessity of private pensions

Most of the world is facing very serious demographic problems, such as declining birthrates and not least increasing population aging in the context of increasing life expectancy.

All these issues pose a growing pressure on the shoulders of the social protection system, who should support a growing number of large beneficiaries, fewer and fewer contributors, which would lead in the immediate prospect to a situation of collapse, unless a sustained campaign to educate the active population is initiated, guiding it towards alternative systems of financial planning.

In this respect, globally, more and more countries resort to private solutions to public pension system reform. Thus far, over 30 countries worldwide, including 11 in the Central and Eastern Europe\(^1\), including Romania, have adopted multi-pillar private pension systems.

These new pension systems are more robust, more diverse and somewhat immune to political shocks, allowing adequacy, respectively a replacement rate of over 50%, if we refer to the second pillar (mandatory private pension for persons up to 35 years and optional for those aged between 35 and 45 years) or 60-70% as the

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\(^1\) Eurostat study (statistic department of European Union), www.pensiileprivate.ro/Nr-136-22-iunie-2011-xprimm-newsletter-articol-135s
 voluntary participation schemes extend, third pillar (optional pension).

This private system\(^2\) of financial planning of the retirement age shows many advantages over the public one. Among these, we particularly mention the ownership over the created personal account, in which one accumulates the related contributions and the increases obtained as a result of their long-term reinvestment and the creation of a competitive environment, due to the existence of a fairly high number of pension administrators, which ensures a high performance of this system and greater efficiency for the investments made with the participants’ money.

Despite this expansion, also present in our country, the basis of the income achieved after retirement, is still provided by Pillar I (compulsory state pension), making it more obvious that the living standard at this age it is unsatisfactory. Consequently, the public pension system must exist, and it will certainly continue to exist, but it definitely reached it’s limit’s. Clearly, the principles by which any redistributive pension system works, anywhere in the world, cannot provide satisfactory results unless the number of those who contribute to supply the system is significantly higher than the current beneficiaries. However this is not possible, and even if there are currently quite a few countries where a balance is maintained at an acceptable level, in the next two or three decades they too will not be able to fulfill the conditions for the collected money to cover the need for a decent pension. The solution to compensate this unfavorable trend consists in establishing private pensions, funded through the savings made by each individual in a personal account, through professional managers.

Unfortunately, things are different. The predominant tendency of the individual, especially if there are no financial resources, is to cover the immediate needs, ignoring and postponing the “pension issue” for another and perhaps more prosperous time. This ignorance may also derive from not knowing the real situation of the public pension system, which creates unrealistic expectations and lack of personal education in the spirit of saving for old age. Romanian citizens are not the only ones who have this attitude towards pension, retirement saving instruments proving to be totally inadequate even in countries with a long tradition of financial services. But what distinguishes us is our financial situation, which makes the concern for financial planning for retirement all the more necessary. I can say, in this context, that only an educated person can take the right decisions at the right time. Unfortunately, a direct result of this situation is that most of the citizens are

at a high risk of being caught completely unprepared for financing the latter part of their lives.

Otherwise, no matter how well the components of the private pensions system work, legally and operationally, their social efficiency would remain at least limited. “A forwarned, is forearmed “, says popular wisdom. Regarding pensions, we can say that “a forwarned has the best chances to become a happired retired person”, while the lack of knowledge could be coming with an impoverished old age.

The safety and sustainability of the private pensions’ system

Enrolling in a private pension system is possible only for people who have at least 25-30 years of active life and that makes mature generations, already at the time of reform onset, around the age of 50, to only have a partial solution, the voluntary pensions (Pillar III). Under these circumstances, it becomes increasingly important the optimization, security and guarantee of investment in these forms of accumulation, the quality of life after retirement age depending largely on this

In order to ensure the highest possible safety conditions, especially in terms of Pillar II, the international legislative organizations have adopted stricter prudential provisions, thus the activity of more than 300 pension funds in countries that have adopted this system is strictly supervised by specialized entities.

In Romania, this entity is the Supervisory Commission of the Private Pension System and, also in this direction, the Chamber of Deputies adopted in December 2011 the Law on the establishment, organization and functioning of the Guarantee Fund in the private pension system as a last resort failsafe of the specialized market. It’s main purpose is to guarantee the rights of the participants and beneficiaries of the private pension funds and to compensate for any loss of the participants derived from any payment incapacity situation of the administrators and private pension providers.

Also in this direction, the European Parliament adopted budget concessions for countries developing the mandatory private pension pillar II, including Romania, by excluding contributions paid to pension funds when calculating the budget deficit and public debt.

Consequently, these measures are a clear signal of support from the European Union, thus contributing to the reduction of the influence of national policies on the future of this system and showing the fact that the pension reform is beneficial in the medium and long term, solid, desirable and it is supported by the

3 Xprim informative newsletter, published in January 2010
European community.

In Romania, the private pension system is “hybrid” because it comes with an absolute guarantee, meaning that the value of the paid contributions is diminished by the transfer penalties and legal fees.

Also, the Tax Code changing, established in January 2012 total tax deductibility for contributions paid by companies for the benefit of employees in voluntary private pension funds, third pillar. Tax deductibility targets both the income tax and all the mandatory social security contributions, to a maximum of 400 euros per year (about 144 lei per month). For strictly individual contributions, made by each individual from its own account into its optional pension fund, partial tax deductibility respectively income tax deductibility is still valid.

According to the Association for Privately Administered Pensions in Romania (APAPR) rather than offering a cash bonus or salary rises, a contribution paid by a company to a pension fund for the benefit of an employee is 6.4% more efficient in terms of additional payment obligations of the company. Specifically, providing a benefit in the form of a pension, compared to offering a bonus or a salary rise, reduces by 1.4% total personnel costs and may increase the profit of the company by 7-8%, according to calculations APAPR⁴. At the same time, the employee adds 2.7% to his net income (net salary plus benefit’s) if he accepts the optional pension instead of a cash bonus.

**Private pension or life insurance in the form of private pension**

The first dilemma would be about the competent authority to decide, as well as the law under which falls the issue of using the name of private pensions by life insurers, for annuity type products.

If we talk about the optional pension law, then it’s provisions apply only to the activity of pension administrators and not to the one performed by the insurance companies. It could possibly remain in question the case of life insurance companies that offer such products and are also authorized to manage the optional pension funds.

If discuss the insurance law, then the supervisory authority of the private pension system has no competence in this area nor power to propose legislation changes aiming the activity of companies in this field.

Beyond these considerations, claiming that the use of the word in pension

the title of life insurance products is abusive leaves room for counter-arguments worthy of being taken into account.

Here are some reasons:

First of all, because life insurance and optional pensions relate conceptually to the same investment typology, we can call them collective systems of long-term savings. Both products have the same goal. To provide the participants at retirement age, an additional income besides the one coming from the state. Last but not least, the mechanisms by which the two systems operate, unit-linked in the insurance system and defined contribution in pensions, are essentially the same: individual accounts, private equity investments, minimum guarantees provided by the administrator or insurer.

Then why optional pensions would be entitled to be called so and the annuity type insurance products, would not? It’s a difficult answer. Strictly terminological, a pension involves the transformation of an amount into annuity. Do private pension administrators offer such a service at this moment? The question is obviously rhetorical, as long as the law of annuities has not yet been established.

It is difficult to predict at this moment how many administrators will decide to offer their customers annuities. Until the emergence of such a law, the so-called pension fund administrators today are only undertakings for collective investments.

By contrast, the insurance companies offer their customers, at the maturity of the policies, the possibility of transforming the accumulated amount in annuity. Therefore, to consider these products as being pension products is perfectly justified.

Secondly, the confusion of terms has it’s origins in a time when the voluntary pension law was only in draft form, discussed by the Ministry of Labour with the players of the insurance market. The insurers then proposed including annuity type insurance products in the category of voluntary pensions and creating a wider Pillar III, which included several types of private investments. If the formula would have been accepted by the initiators of the law, as was done in other countries, today the issue of abusive use of the word pension would not exist. Instead it would have been a more modern and comprehensive private pension system, based on three pillars.

In the light of those considerations, to ban the use of the word pension for insurance products it is an approach which aims more a matter of form than of substance. Currently, these products represent over 30% of the total premium subscriptions to life insurance. The number of policies is also important.

On the other hand, a growing number of Romanians currently have private pension insurance. In this context, a message such as you bought products that are called pension, but are something else entirely, could create more confusion than
the product name itself. Moreover, such an approach is not suitable for the pension administrators either, many of these insurance companies.

For an insurer, both businesses are equally important because they are the result of substantial capital investment after which it is expected to make a good profit.

For the owners of life annuity type insurances, with a period of contributions exceeding 10 years, optional pensions can not be an alternative investment, the policy being closer to maturity than the start of the contributing period. Those with a stage of contribution of less than 5 years may lose, because of higher penalties, an important part of the funds accumulated by then if they cancel the insurance policy in favor of forming a voluntary private pension. Moreover, protection needs are different for each individual.

People who want to get a higher pension without associating a personal protective component during the period of contribution, opt for voluntary pension pillar. However if personal and family safety is the first priority for a taxpayer, the option of an insurance policy with a life annuity component is the right one.

**Conclusions**

The income level of customers makes all the difference between a successful financial planning product and another. With the introduction of private pensions it was expected an increase in polarization of customer preferences. The unit-linked products are chosen by the high-income customer segment. By introducing optional pensions, people with less financial possibilities, benefit from the opportunity to secure a decent income at retirement age.

The two products are therefore complementary and not substitutive. Each of them covers more or less a gap left by the other in the preferences of the customers. The contribution to optional pensions, for example, is limited to a percentage of the gross income (15%), while for an annuity type insurance policy there is no such restriction.

On the other hand, private pensions benefit from a deductibility of 400 €/ year facility that does not apply, at least for now, to life insurances. As a result of the deductibility, optional pensions, besides practical benefit’s, offer both employers and employees a tax advantage greater than a wage growth, being a tool for employee loyalty and, most importantly, providing them an additional income upon retirement. The state also will benefit as a result of the direct taxing of pensions (a higher base will be taxed) and indirectly from increased consumption. Additionally,
the amounts collected will be used in the real economy through their continuous investment.

Compared to other forms of savings, the fiscal treatment of optional pensions is more favorable than the conventional systems of saving (deposit’s, certificates of deposit, etc.) and than other forms of investments (stocks, bonds and so on). For optional pensions the result of the investments is not taxed, the savings are long term and the destination of the money upon retirement age it is at the choice of the participants.

There are also differences in terms of fees and redemption fees, much higher in pensions than in life insurance. In addition, while migrating from one pension fund to another one that has a better performance is allowed, with few restrictions, in life insurance this is not possible. However, unit-linked products are, in some ways, more flexible and more tailored to customer needs. They allow them to participate, alongside the company, in placing assets in various investment funds and provide an additional protection component together with the investment one.

In all OECD statistics, pension fund assets are considered together with those of the life insurances with annuities component. In the dictionary of specific terms for private pensions, the same international organization defines annuity as a form of financial contract, mostly sold by life insurance companies, that guarantees a fixed or variable payment of monthly, quarterly, half-yearly or annually income, throughout the life of a person or a certain predefined period and mentions as a synonym for this notion the term annuities for retirement.

As for the practical application in countries of Central and Eastern Europe, some examples are, we believe, self-evident.

In Poland, an employer has the possibility to establish an alternative occupational pension fund for their employees or to offer them life insurance policies, group placements in investment funds or other contributions to Pillar III pension funds.

In Slovenia, the calculation of the number of pension schemes on the market is made taking into account all the companies that provide this type of service, whether it is insurance companies or pension companies.

Last but not least, in Estonia, there are two types of Pillar III pensions: life insurance policies offered by insurance companies (traditional or unit-linked) and private pension type investment funds.

In fact, there are enough many cases where similarity between the two products not only is not questioned but, on the contrary, it is used to provide more options for those interested.
In all these countries, including Romania, the low level of “financial literacy” limits the support from the public for private pension systems and life insurances with a saving or investment component and the competition between pension funds, insurance products and specialized companies.

Therefore, financial education is the condition for the individuals to be able to appreciate correctly the needs, opportunities and risks and understand the concepts and private pension and insurance products. Unfortunately, studies and surveys conducted by famous institutions of the world highlight repeatedly a worrying level of financial “illiteracy”, a critical deficiency when the modern world is forced to pass, ever more, the concern for their financial future upon retirement in the responsibility of the individual.

Future pensioners can no longer afford financial “illiteracy”, a direct consequence of this situation being that most of the citizens are at high risk of being caught completely unprepared about financing the latter part of their lives. Not understanding the functioning of the pension system, they won’t be able to realize the need to save for retirement. Even if they do, most are not qualified to choose the correct ways to save and rate their savings. Under these circumstances, the first and most important step to ensure financial security of future generations of retirees is to financially educate the population.

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Benchmarking on some Critical Variables of Organizational Behavior of Knowledge Intensive at the Level of Companies from European Union Members

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The purpose of this scientific approach is to identify the essential variables of organizational behavior of those companies that adopt a strategy that integrates knowledge management and which develop an organizational culture based on the development of intellectual capital. Therefore purpose of the work is subordinated to the requirements of scientific knowledge development in the society, based on knowledge, and more recently, into the society based on creativity, which are imperatives of sustainable development even imposed by EU strategies: Lisbon and Europe 2020. To answer this approach we used as research techniques: the analysis of relevant literature in the field of intellectual capital, of knowledge management, of the measurement and assessment of intangible assets, on the one part, and, on the other part, we initiated an analysis of the main reports and also we initiated studies of international organizations such as: World Bank, World Economic Forum, Eurostat and UNCTAD statistics and publications, euro barometers and EU reports. The applicative research, which is subordinated to purpose of the work, is to develop a benchmarking on the variables that have resulted from theoretical research which are essential variables of organizational behavior knowledge intensive at the level of the European Union companies. Therefore, we used the statistical methods of analysis: descriptive statistics and correlations.
Introduction

The Knowledge and the knowledge management are essential areas of most organizations, today, especially those that are knowledge intensive. In this respect, the implementation of knowledge management involves more than implementation of some IT tools, it requires changes in the organizational structure, culture and processes, and the first step in the transformation of a company into a knowledge intensive company is to become aware of the knowledge it has materialized in intellectual capital. Montequin (2006, pp. 525-538), explain Bixler (2002): vision and leadership: KM strategic plan, organizational and communication training, business performance measurement, KM mission interface alignment, KM architectures and infrastructure, KM integration and resourcing, governance: policies and procedures, and Skyrme (1997): clear and explicit links to business strategy, knowledgeable about knowledge, a compelling vision and architecture, knowledge leadership and champions, systematic knowledge processes, a well – developed knowledge infrastructure, appropriate bottom – line measures, they suggest a new evaluation model on non monetary, with a tree structure on three levels: blocks, clusters and indicators. Thus, based on intellectual capital formula, as the sum of human capital, structural and relational, they suggest for measuring the quality the following indicators: on human capital - people's competence, competence improvement, staff stability, improvement of capacity of persons and groups; on structural capital: ITC penetration, product technology, process and business philosophy, organization structure, intellectual property, and on relational capital: : customer base, customer loyalty, market proximity, sales effectiveness, suppliers, interrelation with other actors.

In this context, the objectives of this work are the following:

O1: identification of the essential variables of organizational behavior of intensive knowledge companies and which to answer in the same time for those imperatives of the sustainable development;

O2: Conduct analysis of correlations between variables to sense the kind of links established between these variables. Therefore, will be tested the hypothesis: There is a positive association between the variables previously identified. The correlation will show how strong is the link between variables, respectively will identify the variables with the strongest link, as well as those from weaker correlations are established. To test this hypothesis will be used Pearson correlation coefficient,
R = \frac{COV(X,Y)}{S_x \times S_y} \quad (1),

Where \( S_x \) and \( S_y \) are the standard deviations for the \( X \), or \( Y \).

O3: An analysis of the correlation type between the GDP / and the essential variables and values of knowledge intensive organizational behavior; in other words we aim to find out the answer to the question: What type of determination or connection or correlation exists between knowledge intensive organizational behavior and the GDP /level?

O4: creating a benchmarking at the companies from EU member countries, based on identified variables.

Literature review

After an analysis of the most important conceptualizations of intellectual capital and of the three components of IC variables, Martin-de-Castro et al. (2011, pp. 649-662) identify other dimensions and variables. Therefore, Human Capital has three dimensions: Knowledge (formal education, specific training, experience and personal development), Abilities (individual learning, collaboration-team work, communication exchange of individual knowledge and know-how and leadership) and Behaviors (models, paradigms, beliefs refer to feeling of belonging and commitment, self-motivation, job satisfaction, friendship, flexibility and creativity). Capital Structure is developed on the following dimensions and variables: Technological capital (Efforts in research and development, Technological infrastructure, Intellectual and industrial property), Organizational capital (organizational culture, values and attitudes, information and telecommunications capability, organizational design). Speaking about intangible assets, intellectual capital measurement is a rather controversial subject. Thus, any assessment methodology could be disputed, in some ways. However, the practitioners, the international organizations are looking constantly for new ways for improvements. After a review of various methods and valuation models we consider that the most important are: the Intangible Assets Monitor that assesses internal structure, external structure of the company and skills of employees (Sveby, 1997), the Balanced Scorecard which assesses financial perspective, customer relationship (customer) business process, learning and growth (Kaplan and Norton, 1996), the Edvinsson and Malone intellectual capital approach (1997) – the business navigator of Scandia which integrate financial aspects, renewal and development, customer, process and human resources, the IC – Index (Roos et al, 1997), the Performance Prism (Neely, Adams and Kennerley, 2003), Meritum guidelines
Concerning IC measurement, Guthrie, Ricceri & Dumay (2012, pp. 68-82) considers that the reporting and counting (account and report) may refer to: the size and the development of the following knowledge resources: employee competencies, customer and financial relationship, communication and information technologies. The specialty literature highlights numerous papers which stresses that the difference between the market value and the value of corporate assets could be explained in terms of intellectual capital. Han & Han (2004, pp. 519 - 527) having done an analysis of IC indicators specified in previous research, specifies that the leading indicators and evaluation dimensions concern: customers, processes, innovation and human capital but that previous models did not include specific weight of the indicators used in decision making process. The authors chose the following indicators: for customer capital– customer increasing rate, satisfied customer index, customer retention rate, average revenue per unit; for human capital– motivation index, leadership index, quality of training program, IT literacy; for structural capital - investment on IT, partner satisfaction index, business from new product, corporate quality performance.

It is estimated that the companies must integrate into a unified strategy knowledge management (KM) (Nonaka and Takeuchi, 1995) that they must to create preconditions for the development of an organizational culture focused on knowledge, organizational culture being a key factor in behavior change, to stimulate the development of knowledge through the organization, processes and infrastructure (European Committee for Standardization, 2004). Measurement of intellectual capital and knowledge management is not reflected in most of the cases the monetary records, financial - accounting firms, the reporting being voluntary rather than mandatory. Therefore, there is a big difference between the reporting modalities used by company in reporting indicators.

**Methodology of scientific research**

Because, we proposed to achieve a benchmarking at the companies level of EU member countries, so achieving macroeconomic analysis in each EU countries, the data collection was conducted from reports and studies of the World Economic Forum, the World Bank and Eurostat.

Consequently, we propose the following variables to be made operational, for which data are available in all EU countries:

**V1: The ethical behavior of company**. Ethical values shared by employees such as trust, transparency, solidarity and others are found in many studies that
analyzes human capital, intellectual and knowledge management. However, ethical aspects of behavior of companies were analyzed less correlated with knowledge management and intellectual capital (Mc. Phail, 2009, pp. 804-822). The studies developed in this direction highlights the importance and the necessity to develop intellectual capital and knowledge management consonant with ethical behavior of the organization. The data for this variable were collected from the World Economic Forum, The Global Competitiveness Report. Thus, on a scale values from 1, the worst in the world at 7 among the best in the world, are quantified ethical behavior of firms in interactions with public Officials, politicians and other enterprises of firms.

V2: Firm-level new technology absorption. Necessity of using and integration of new technologies by companies aiming at a developing knowledge intensive is shown in numerous studies (Ping, 2008, pp. 377-381; Durrani and Forbes, 2003, pp. 151-155; Tovstiga, Birchall and Tulugurova, 2007, pp.550-553). Technological capital is a variable that appears frequently to models and reporting on intellectual capital (Martin-de-Castro et al. (2011, pp. 649-662), Ricceri &Dumay (2012, pp. 68-82), Montequin et al. (2006, pp. 525 – 538). As such, we will hold a variable for our analysis for which there are qualitative data at international level namely - Firm-level new technology absorption. This indicator measures the extent to which companies absorb new technologies, on a value scale from 1, not at all and 7, aggressively absorbed (WEF, 2012).

V3: Production process knowledge intensive. Concerns regarding integration product technology process and business philosophy and of other variables that refer to production processes, to systematic knowledge processes, to a well – developed knowledge infrastructure have been the focus of concerns of researchers who approached the development of companies’ intellectual capital (Han & Han, 2004, pp. 519 – 527; Montequin., 2006, pp. 525 – 538) and many others. Consequently, we selected this variable for our analysis. Also Data were collected from the World Economic Forum. Thus, it presents how sophisticated are production processes on a scale values from 1- – not at all labor intensive methods or previous generations of process technology prevail, to 7 – highly – the world’s best and most efficient process technology prevails.

V4: Capacity for innovation. Innovation is also perceived and described in various studies on knowledge management and intellectual capital as being a fundamental feature of the company’s capital structure (Han and Han, 2004, pp. 519-527, Sveiby, 1997). It is estimated that knowledge has a more significant role when innovation, change and growth are sought in a competitive and complex field. We held for our analysis the variable Capacity for innovation of the company. The
data for this variable were collected also from WEF reports. This variable, which reflects how companies obtain technology, is reflected on a scale from 1 to express exclusively from licensing or imitating foreign companies, to 7 which means by conducting formal research and pioneering their own new products and processes.

**V5: Company spending on R&D.** Research - development activity of companies is a fundamental variable of knowledge management and of intensive development of companies. Several studies emphasize the idea of the positive impact of R & D on improving work companies. Data collected from the World Economic Forum, Executive Opinion Survey, assessed on a scale values from 11 – do not spend on R&D, to 7– spend heavily on R&D, extent that companies invest in research development.

**V6: Corporate Social Responsibility (CSR).** We appreciate that for sustainable development of the company that adopts an intensive knowledge behavior is the integration in organizational strategy of specific social responsibility (CSR). Although, for this variable there are no data which reflects all actions specific to CSR in the EU countries, though, we will hold our analysis of the data collected Eurostat which expresses organizations and sites with EMAS registration- number where EMAS is a voluntary environmental management system implemented by companies to assess and report their environmental performance companies that have integrated international environmental management standard ISO 14001.

From methodological point of view, to achieve the objectives O2 and O3, we applied statistical methods of analysis: descriptive statistics and correlations. For statistical analysis of data collected we used Excel computer software, the module Data Analysis. Moreover, to analyze the correlation between the GDP and the values of essential variables of organizational behavior knowledge intensive GDP values collected from the Eurostat, due to high levels, were appropriate logarithmic. Data collected from the World Economic Forum - The Global Competitiveness Report allowed us to achieve a benchmarking, at the level of EU member countries, helping us to achieve the 4 - the goal of the paper: O4. From methodological point of view, we would identify the countries that achieved the highest values (Vimax) of the essential variables of knowledge intensive organizational behavior and we have made comparisons.

**Research results and conclusions**

The research of correlations of the five variables identified at organizational behavior knowledge intensive, at the level of EU countries companies, as well as
between logarithmic value of GDP and these essential variables is presented below:

<table>
<thead>
<tr>
<th></th>
<th>Logarithmic value of GDP/capita</th>
<th>Ethical behaviors of firms</th>
<th>Firm-level technology absorption</th>
<th>Production process sophistication</th>
<th>Capacity for innovation</th>
<th>Company spending on R&amp;D</th>
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</thead>
<tbody>
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<td></td>
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</tr>
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<td>Ethical behaviors of firms</td>
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<td></td>
<td></td>
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<tr>
<td>Firm-level technology absorption</td>
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<td>Production process sophistication</td>
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<td>0.8858482</td>
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<td></td>
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<tr>
<td>Capacity for innovation</td>
<td>0.734212</td>
<td>0.8670505</td>
<td>0.7697905</td>
<td>0.9151302</td>
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<tr>
<td>Company spending on R&amp;D</td>
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<td>0.9753067</td>
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</tbody>
</table>

Source: data processed by authors

Analyzing these results, we can draw the following important conclusions:

- Since we obtained positive coefficients, it follows that an increase in the essential variables of organizational behavior knowledge intensive will cause an increase in GDP / capita;

- Pearson correlation coefficient is a number between -1 and +1 values. The more the linear relationship between variables is stronger. In our case, all coefficients take values> 0.5 which expresses a good correlation between variables However, the highest correlations are recorded between capacity for innovation and company spending on R&D \(r=0.97\), followed in descending order of correlation between production process sophistication and company spending on R&D \(r=0.94\) and production process sophistication and capacity for innovation \(r=0.91\). Follows that all variables are positively associated. But the strongest association is between innovation capacity of the company and investment in research - development.

- Regarding the type of relationship established between GDP / capita and
the five variables of organizational knowledge intensive behavior of companies from EU countries, we also noted strong positive correlations, all coefficients recorded values > 0.73. As can be seen, there is the strongest link between production process sophistication and GDP/capita (r=0.85).

• A very interesting conclusion of work that stands out on the basis of these results, is the positive relation intensity between logarithmic value of GDP/capita and ethical behaviors of firms (r=0.79). So, not only the issues related to investment in research and development, contribute to increasing GDP / capita, but, even ethical behavior of companies can support this.

The research results, performed to achieve the objective O4, respectively achievement of a benchmarking, at the level of the companies from EU countries, on the basis of essential variables of organizational behavior knowledge intensive are presented in the following table (Table 1). We mention that the maximum value that could be obtained is 7.

**Table 1: The values of organizational knowledge of the intensive behavior variables at the companies level from EU countries**

<table>
<thead>
<tr>
<th></th>
<th>Ethical behaviors Of firms</th>
<th>Firm-level Technology absorption</th>
<th>Production Process sophistication</th>
<th>Capacity For innovation</th>
<th>Company Spending On R&amp;D</th>
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<tr>
<td>United Kingdom</td>
<td>5.9</td>
<td>5.7</td>
<td>5.5</td>
<td>4.8</td>
<td>4.7</td>
</tr>
</tbody>
</table>

Source: data processed by the authors after World Competitiveness Global Report 2011 - 2012

Benchmarking achieved based on these values, highlights the following conclusions:

- Concerning to Ethical Behaviors of firms, the highest value recorded is 6.7 and it was obtained by Denmark, then follows Finland and Sweden with a value of 6.6, followed by Netherlands with 6.4 and Luxembourg 6.2. On the opposite side, with the lowest values obtained are situated Greece 3.1, Czech Republic and Slovak Republic 3.3, Hungary, Bulgaria and Romania with the same value of 3.4.

- Concerning to Firm-level technology absorption, we also noted, Nordic supremacy, respectively Sweden 6.5, Denmark and Finland 6, followed by Austria and Germany with a value of 5.9. The last three places in the rankings are to Bulgaria 3.9, Romania 4.1 and Poland 4.3.

- The following variable, respectively, Production process sophistication places, this time, in the top Germany and Sweden with 6.3, followed by Finland 6.2 and Netherlands 6. Romania, along with Bulgaria lies, this time, the last in the rankings with a value of only 3.3.

- Concerning to Companies Capacity for innovation, the first two positions
are occupied by Germany and Sweden with 5.7, followed by Finland 5.6. The weak capacity of innovation for companies is to Greece 2.7, Slovak Republic 2.8, and Romania and Bulgaria 2.9.

• The variable Company spending on R & D, put on first and second places the Nordic countries: Sweden 5.8, Finland 5.7, followed by Germany 5.5, Denmark 5.1. There is a very good position to Germany on knowledge intensive organizational behavior variables. At this variable, Ranking last three positions are recorded by Greece 2.4, Bulgaria 2.7 and Slovak Republic 2.8. Romania has also a rather low value of this variable, together with Poland and Hungary, respectively 2.9. For a complete and concise image of achieved benchmarking we present further, in the graphics below, all values obtained by companies from EU countries, at each of the five variables analyzed, from which it can perform analyzes and comparisons.

**Graphic 1:** The values of organizational knowledge of the intensive behavior variables at the companies level from EU countries

• Concerning to Variable on Corporate Social Responsibility, although there are no data in all EU countries that would integrates all specific actions CSR, however we retained the number of organizations with EMAS registration, for our analysis - data collected from EUROSTAT. The result of quantitative analysis reflects the fact that there are significant differences at the level of EU countries, in the sense that there are countries such as Germany recording a number of 1402, Spain with 1228, Italy with 1035, while some countries with no organization that would be integrated into this criteria of evaluation such as Bulgaria and Lithuania. In Romania there are only 4 organizations that comply with the standards and requirements of EMAS registration. Therefore, using variables and methodology of the research presented in this paper, can be performed analysis and at other categories of countries for
which the development of knowledge-intensive companies should become a priority so that they can successfully meet the requirements of the severe competitive international market.

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The Electronic Document Management, the Key Solution to Operational Efficiency in the 21st Century Organization

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Dismantling the so-called myths of the paperless office, of the resistance to change and progress in office operations, which hinder the adoption of a System for Document Management, the article presents the advantages of a Document Management System. Several solutions are exemplified. The last part shows the necessity and the impact of an electronic management application on accounting documents within an organization.

Keywords: document management system, workflow, accounting documents

JEL Classification: M15

Introduction

The contemporary human activity is among other things an enormous source for generating patterns, be they either legal documents or messages among people.

This is not about the efficient managing of documents by means of information technology. The managerial solutions of information technology by document management will demonstrate the viability and the advantages of adopting them in order to ease and make economic activities related to documents more efficient. The quick integration of information and communication technology to our professional and private life is about to turn society into an “informational one” in which the amount of information and knowledge becomes a basic economic resource. This way new economic and social developments appear, leading to new challenges. The best service of the public interest is one of the challenges which the accounting profession has to face at the present moment1.

In order to ensure success in the competitive world of business, companies

1 Argentina Gramadă, The challenges of the Accounting Profession in the global informational society, The Economic Tribune in no. 2-2006-suplement firm Management and it’s accounting, pag 46-50
must accommodate the needs of their clients, partners, employees and capital owners. Companies that pay attention to the way their documents and information are administrated are more prepared to face cost reduction and can respond much faster to the changes occurred. Basically, everything is about information and controlling it and thus the response time is minimum to any inquiries or demands that come from inside the informational system of the company\(^2\). Software solutions that come to your aid, in order to optimize this process are the Electronic Document Management System.

**Paperless office myths, standing in the way of adopting a Document Management System\(^3\)**

**Myth no. 1: dedicated IT staff is necessary to uphold EDMS\(^4\).** Actually, modern software applications are easily installable and low maintenance. Nowadays the document management software is conceived on a task based model and software developers will provide assistance as necessary.

**Myth no. 2: employees will resist the migration to electronic documents.** Reality shows for a fact that employees are cautious at first. They have worked with paper for years and quite comfortably in the traditional system. However, the first time they will find a document within seconds, they will start appreciating the new system. Moreover, EDMS make business processes more structured, which causes the staff to become more efficient than before.

**Myth no. 3: EDMS is less safe than paper processes.** Actually, the control of the access to paper documents is possible only through files blockage and limitation of access to archival rooms. The document management software replaces this rather difficult and imperfect process with a document based controlled access, through passwords, document encryption, role attributing through user permission etc. This way of operating almost ensures that documents, folders and the entire system for document management will be secure against unauthorised access and use.

**Myth no. 4: The amortization of the investment is a long-term process.** Actually, as the transition from paper based to digital processes occurs, the returns on investment in time and efficiency can be immediately quantified. Moreover,


\(^4\) (Electronic Document Management System)
the need for paper and other office supplies and furniture, storage space etc will significantly decrease. The investment in document scanning and in an EDMS will break even in several months.

**Myth no. 5: Paper use must be completely eliminated to reach the paperless office stage.** In real practice, the transition from one stage to the next is gradual. Doubtlessly, paper consumption reduction is one of the stages on the way to the paperless office, but the larger gains are ensured through EDMS and process automatisation. There will always be documents that need exist on paper as part of law abiding.

Most people see EDMS as a simple storage of information, electronically, but the concept is more complex. **Document management** implies technologies, means and methods through which organisations create, manage, store, find and transmit or upon expiry, archive documents, offering control over their life span.

**Document management system (DMS).** A **document management system** is a computer system (or set of computer programs) used to track and store electronic documents and/or images of paper documents. It is usually also capable of keeping track of the different versions modified by different users (history tracking). The term has some overlap with the concepts of content management systems. It is often viewed as a component of enterprise content management (ECM) systems and related to digital asset management, document imaging, workflow systems and records management systems. Document management systems commonly provide storage, versioning, metadata, security, as well as indexing and retrieval capabilities. These systems provide the staff with the possibility of accessing necessary information – based on authorizing protocols - make transparent the relationships between documents (for instance through systematic records of contracts and invoices, e-mail records etc.) and facilitate fast and efficient communication among colleagues from various departments (e.g. finance, HR, administrative etc.) and branches, contributing to a more transparent workflow.

**Document management** is an informatic system which enables the circulation, storage and finding of document in any electronic format, easily connecting to other systems or electronic appliances. **Workflows** are used to manage common business within an organization. Work fluxes ease cost and the time necessary to co-ordinate the common business processes, such as, the approval and examination of documents, managing and monitoring the human

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6 What does the concept of document management hide? - http://dmsone.ro/Professional-articles/Ce-ascunde-no-iunea-de-managementul-documentelor
activities implicated in these processes. The management of work fluxes is a
document management information technology or a module of an electronic system
of document management used to describe and monitor the activities taking place
within the organization.

Functionally there are two components:
1. statistics - which includes applications used to model the work flux area
   for each type of activity which takes place within the organization; it is made up of
   graphic interfaces easy to use by the personnel.
2. dynamics - which includes applications software used to effective
   monitoring of work fluxes within the organization.

Workflow is the computerised facilitation or automation of a business
process, in whole or part. Workflow Management System is a system that completely
defines, manages and executes “workflows” through the execution of software
whose order of execution is driven by a computer representation of the workflow
logic. A document and Workflow management system does the following: rapidly
implements document fluxes, it is flexible to any organizational structure, it is
adaptable to any type document, it may be connected to other applications, it may
be used easily, it is scalable to further developments.

This kind of system is monitoring the document flows and the circuit’s the
documents go through during the life span (from generation to archives).

Figure 1: Questionnaire regarding lost time with document routines

7 Argentina Grămadă, Negrutiu Magdalena - „The Use Of Microsoft Products in The Management Of
Documents”-Education And Creativity For A Knowledge Society-nov-Titu Maiorescu University Bucuresti-
2009-p124-128
Figure 2: Phases in creating an electronic document – Gantt Diagram and Graphs

Generally a document management system (DMS) is made up the following modules:

- **Registry** – that is the electronic library of document and the transformation of classical registry in a virtual library, of processing them in the system. The documents may be made either manually or automatically by processing on paper, files, etc., by means of entrance equipments (scanner, fax etc.)

Figure 3: Registry – Document Management Solution - InfraSoft9

9 http://infrasoft.ro/resurse/registratura.JPG
• The **Workflow module (of Workflows)** – in which the documents which circulate in an institution are generated, altered and distributed based on an information already established. The workflow is defined as the automatic movement of the documents or of the elements in a sequence of actions or tasks process connected to this business process. The workflows help the organizations to manage business documents which are more efficiently connected because automatically the identification and administration of the human tasks which are implicated into these processes.

![Figure 4: Characteristics of all the documents (fragment)](image)

• Having in view the automatisation of the assessment of documentes to ussers, these document management electronic systems include applications of flux, which determine the exact moment when a document is sent, the number of copies and the addressees.

![Figure 5: Workflow Snapshots – Document Management Solution - Infrasoft](image)

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10 [www.knowledgetree.com/products/checklist](http://www.knowledgetree.com/products/checklist)
- The **Integration and Management of Electronic Documents** encompasses:
  
a) Centralised and unit based storage of documents  
b) Electronic archival of documents  
c) Back-up / SAE electronic copies of all documents  
d) Version control – check-in / check-out (up to 100 versions)  
e) Management of document folders  
f) Access rights on folders and documents through groups, users and attributes  
g) Easy usage, console menu, contextual menu, shortcut toolbar  
h) Document preview  
i) Indexing documents on specific metadata  
j) Advanced searches for documents; fast retrieval through use of ORACLE indexes – retrieval time is minimised. Search criteria: created by, created at, modified by, modified at, name of document, extension, document type, metadata indexed search (e.g.: supplier, client, number, date, article, CNP, CUI).

![Document Management Console](http://infrasoft.ro/resurse/Consola%20DMS.PNG)

**Figure 6:** Document Management Console

- **Ordered storage of documents** is an equally important aspect as security. According to a research made by Canon, one fifth of the European workers become frustrated if they search in the company's network for a specific document for a longer time. Other 24% of the workers state that having a simpler and quicker access to documents would make their work more efficient. With an appropriate document management system, files from Excel or Word to pictures and e-mails can be saved in the same way. Therefore, with the help of **indexing method** we can access all informations related to a document. To better understand

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12 [http://infrasoft.ro/resurse/Consola%20DMS.PNG](http://infrasoft.ro/resurse/Consola%20DMS.PNG)
The Electronic Document Management, the Key Solution to Operational Efficiency in the 21st Century Organization

the importance of storage and indexation method, a recent study showed that 1 GB has a price of 2000 euro, whereas storage costs only 0,2 euro cents\textsuperscript{13}.

- Full-Text Search - search based on document's content; search of scanned document using OCR (Optical Character Recognition) - use indexing CLOB (Character Large Object).
- Access to documents audit-who(user) and when(timestam) for the following actions: create, modify, delete, view of each document
- Automatic synchronization with the directories from the user's local hard-disk
- On-line and off-line work, System log
- Physical locations for documents - defining physical locations for documents storage
- Related documents (ex: contracts and annexes);
- Document templates - management of document templates available for users, ISO Support;
- Direct transmission of documents by e-mail – E-mail Templates;
- Printing documents from the system, Scanning integration, Fax Integration;
- MART Scan Multipages - smart scanning of documents with a variable number of pages.

Modern accounting practice uses various types of software, which include: audit management software, Practices of management software of invoicing, debt, fiscal and secretarial services. The electronic management becomes a key. Moreover document management becomes an element of contemporary accounting practices, which include:

a. The rigorous management of recordings;
b. Storage and recuperation of the documents on paper becomes a problematic issue;
c. The client's continually increasing exigency to get answers quickly;
d. The improvement of document security;
e. The autoimmunization document processing by Workflow;
f. Storage of data, the processing power, and more accessible request cost;
g. Improvement of computer knowledge and awareness of the benefit's of information technology among the next generation of accountants.

Document management solution from SIVECO Romania, has 10 important advantages\textsuperscript{14}:

\textsuperscript{13} Patru argumente pentru managementul documentelor în formă electronică –http://dmsone.ro/Professional-articles/Patru-argumente-pentru-managementul-documentelor--n-form-electronic-
\textsuperscript{14} Smile Media- „10 avantaje pe care le ofera managementul informatizat al documentelor “–12 APRILIE
1. It allows centralizing and insures access for the entire organization to all documents, irrespective of their entering into the system or their type (text documents, electronic messages, faxes, scanned documents, images);

2. It represents a flexible way of document management on an arborescent structure, similar to a system of standard files-drawer, folders and documents;

3. Generates documents in standardized format-based on documents templates;

4. Adapting simple search mechanism or advanced search to any level of computer usage skills and to the necessity of filtering the information based on criteria of different complexity;

5. For printed documents it provides mechanisms for scanning and extracting Optical Character Recognition (OPR) informations and for electronic documents are used mechanisms of integration with messaging systems, management of fax messages, as well as facilities for automatic loading documents saved in specific folders;

6. Ensure integration with Microsoft Office applications and Outlook / Lotus Notes, and integration into the Microsoft Windows work environment;

7. Allows secure access to any level of the document repository, be it a drawer, file or document;

8. Ensure reduction of the storage space by transposing the documents from the archives fund into electronic format - scans documents, generate barcode labels, storage distributed across multiple locations / databases;

9. Safely maintains the documents from the archive without the risk of damage them;

10. Through all the facilities of administration it genuine reflects the way of structure and the activity deployed, also ensuring the protection of information inside and outside the organization.

**Benefit’s and potential drawbacks in the use of information technology in accounting and audit.**

**Benefit’s of using information technology in accounting and audit.**

The implementation of document management in the field of accounting and audit may lead to numerous benefit’s such as:

- *a highly efficient process.* The document management solutions may
decrease the amount of time the employees need to accomplish the plan of activity and accounting and audit works,

- **the distribution of expertise.** As there are not many experts, the introduction of management solutions of document management makes possible the use of knowledge contained in the document in many places while there is no need for the experts to be there.

- **the quality of control.** Management solutions of document management support consistency and professionalism. They do not lead only to the accomplishment of tasks but also offer information regarding the performance of tasks; this ensures the quality of control, education and training. A very important investment of time and money destined to professional of auditors and accountants. The solutions of document management supplies information used to prepare, improve performance and capacities substantially reducing the necessary investments in this respect.

**Drawbacks regarding the use of document management solutions in accounting and audit**

Auditors and accountants ask themselves if the solution of document management is going to replace a certain number of specialists in the field. The answer is a negative one. Their part is to support their work and not to replace them entirely. Auditors and accountants will always be needed to develop knowledge and interact with the system in order to develop information. Information will be necessary in decision-making. Unlike people, computers cannot be creative. They need instructions step by step, which they follow mechanically. By contrast, people reason abstractly and intuitively recognize the relationships and connections among variables. InfoRouter is an Electronic Document Management Software that includes Digital Asset Management, Document Imaging, Document Scanning, Workflow, Records Management, Document Archiving, Document Storage, Electronic Forms, ISO Document Control and Paperless Office modules under one integrated EDMS software suite.\(^{15}\)

The implementation of an electronic management application on accounting documents depends on three key elements: electronic signature, electronic archiving and national electronic system.

**Electronic signature** (law no. 455 of July 18, 2001) offers the following facilities:\(^{16}\):

- Managing electronic signature (internal certification server or external certification server);

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15 Document Management Software- www.inforouter.com/?gclid=CJKWqee1hrMCFcRV3godXkJAQ
• Validate a person’s public keys hosted on third servers in fiscal transactions based on electronic signatures;
• Electronic Key – simple, safe and efficient internal resource of validation of fiscal transactions during approval flow;
• Retrieving information about a fiscal document signers and about the position occupied at the time of signing the document and also retrieving the functional route;
• Admission as a judicial proof of a document signed electronically;
• Is more difficult to forge and to assume a false identity by using a fiscal document electronically signed.

Accounting documents can be divided into two main categories17:
• Documents attesting the change of ownership of the goods or services;
• Documents attesting the movement of money between legal entities.

Generally, most documents have two parts: first descriptive which contains poorly structured data like invoice number, date of purchase, suppliers and the second which contains structured data like material code, material description, unit price and quantity. The second category of data is recorded in a database and processed by a computer system.

The electronic management flow of accounting documents is exemplified in generating accounting note (Figure 7).

![Gantt Project](image)

**Figure 7:** The electronic management flow of accounting documents in generating accounting note with Gantt Project

Conclusions

The field of document management solutions is interesting both from the point of view of important practical applications and especially as a result of a change of the point of view of people’s activities. Accounting and audit are two very challenging fields for the research and development of document management solutions. Due to the various advantages of using these solutions in accounting and audit, that is, a quicker planning and accomplishing the audit, the distribution of expertise to less qualified persons, their use in the training of new auditors etc. These solutions will be a more and more important in the field of accounting and audit in every firm, thus leading to an increased competitively in the environment of competition. Romania is very backwards in this field as well.

Research must be given greater importance, to extend the teaching of subjects concerned with accounting and audit at university level, to emphasize the professor’s part and to prepare specialists in document management solutions, to be at the level of western countries.

The Romanian organizations should be in line with the international tendencies, which promote efficient document management, both with implications in environment protection and economic effects. This leads to the more efficient and less congested of organizational processes. All over the world, in the virtual world document management is the key word of efficiency. Even though virtual document management is still impotent when compared to paper, it remains a science, which tames information.

Software applications are still looked upon reticently. This reticence is justified up to a point by expertise and the information we have. Life is a succession of paradigms which one builds beforehand and in time one builds new ones to believe in.

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Utilization of Multivariate Statistical Methods in the Construction of Composite Indicators of Quality of Life

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Measuring quality of life must take into account the complexity of this concept, which takes multiple socio-economic aspects. The paper aims to show how multivariate statistical methods can help to construct a synthetic indicator for quality of life assessment that would summarize the various dimensions of the concept. The article reviews and discusses several composite measures developed in the international literature for the assessment of quality of life or related concepts, such as well-being, human development, living standards etc. The findings emphasize Principal Components Analysis, Multiple Correspondence Analysis and Multiple Regression as being the most used multivariate statistical methods in building composite indicators of quality of life.

Keywords: composite indicators, multivariate statistical methods, quality of life

Introduction

Quality of life (QOL) is approached in the literature from a holistic perspective on life, being characterized by referring to the dimensions of individuals’ life: family, job, health, education, income and social life, and being filtered by individuals’ experience, values and expectations. Moreover, quality of social environment completes the picture of individuals’ objective living conditions and subjective well-being. Different situations in the different societies influence people’s life strategies and their quality of life (EFILWC, 2004; Marginean et al., 2006).

Given the multidimensional nature of QOL, the traditional measure of well-being and economic development, per capita gross domestic product (GDP), or related measures of income are substantially insufficient measures of the concept as
they cannot alone explain the broader quality of life in a country. There is increasing interest in the identification of alternative measures that would be able to capture additional dimensions of life, such as: social aspects, basic needs, environmental issues.

One strand of the literature has tried to adjust GDP by quantifying social facets that are omitted by the GDP measure, but the approach has faced difficulties in assigning monetary values to the various social factors. Some researchers have invoked the UN's Universal Declaration of Human Rights to identify the factors that need to be included in a quality-of-life measure, but it does not point to precise indicators or how they are to be weighted. Numerous attempts to construct alternative, non-monetary indices of social and economic wellbeing by combining in a single statistic a variety of different factors that are thought to influence quality of life (for instance, Physical Quality of Life Index (PQLI) [Morris, 1979], Human Development Index (HDI) [UNDP, since 1990 to date], a composite measure of QOL [Dasgupta and Weale, 1992], Index of Economic Well-Being (IEWB) [Osberg and Sharpe, 1998, 1999, and 2000]) are recognized improvements in terms of capturing various dimensions of QOL (life expectancy, infant mortality rate, literacy rate, indices of political rights and civil liberties, consumption flows, inequality in the distribution of income etc.). Hence, according to Rahman et al. (2003) they are still substantially limited by their inability to capture diverse domains of QOL, arbitrary weights, data used not being subjected to empirical testing and arbitrary selection of variables. For example, HDI ignores the domains of relationship with family and friends, emotional well-being, work and productivity, personal safety, and the quality of environment.

Multivariate statistical methods can help to construct a synthetic indicator for quality of life assessment that would summarize the various dimensions of the concept. The utility of such a composite indicator is motivated by the fact that it allows ranking the administrative-territorial unit’s or the households according to their quality of life level and it facilitates identification and focusing of areas or groups with a poor quality of life.

The property of multivariate statistical methods of doing simultaneous analysis of multiple variables allows them to be used to construct composite indicators that summarize in a single measure various facets of multidimensional concepts, such as quality of life is. The advantage of using multivariate techniques is the fact that they represent an empirical and relatively more objective option for weight selection.

The construction of a composite indicator of quality of life aims to define
a unique numerical indicator \( C \) as a composite of the \( K \) primary indicators \( I_k \), computable for each elementary population unit \( U_i \), and significant as generating a complete ordering of the population \( U \) unit's (households, counties, countries etc.) according to their quality of life level. A composite indicator of quality of life \( C \) takes the value \( C_i (I_{ik}, k = 1, K) \) for a given elementary population unit \( U_i \).

The literature about composite indicators construction identifies basically two trends in the use of multivariate methods in the construction of composite indicators (the term of composite index is also largely used): the first approach is based on the employment of exploratory multivariate techniques and especially factor analysis with its particular cases: principal components analysis (when using numerical indicators to describe the multidimensionality of the analyzed phenomenon or concept) and multivariate correspondence analysis (applied when working with categorical indicators); the second approach refers to the construction of composite indicators using multivariate regression, this type of analysis allowing both the utilization of numerical variables and of nominal variables in modeling of a phenomenon.

To illustrate these two approaches, there are presented below several examples of composite indicators constructed with multivariate methods to assess various aspects of quality of life in different countries. The paper presents three possible mechanisms for designing and obtaining synthetic indicators of quality of life: Principal Components Analysis, Multiple Correspondence Analysis and Multiple/Multivariate Regression.

**Principal Components Analysis**

Principal Components Analysis (PCA) is a technique that consists of transforming a set of original variables into another set of uncorrelated principal components. Principal components are then used to uncover and interpret the dependencies existent among variables and to study the possible relationships among individuals (Timm, 2002, p. 446). The amount of information incorporated into a component depends on the variability in the data.

The method of principal components has been used by several authors as a tool for constructing synthetic indicators of quality of life (Ram, 1982; Slottje et al., 1991; Gwatkin et al. 2000; Hirschowitz et al., 2000; Manthalu et al., 2010, among others). For instance, Ram (1982) suggested the principal components of basic needs and physical quality-of-life attributes data. Slottje (1991) employed many economic and social variables to study alternative indexing techniques based on hedonic
regressions, principal components and “ranked attributes” (Chakravarty, 2000).

In the synthetic indicator by principal components the weights of the variables are the factorial loads in the first principal component, which we can consider equivalent to welfare. Thus, the composite index that describes the level of quality of life is assumed to be the first principal component that is the first linear combination. This technique has the advantage of determining that set of weights which explains the largest variation in the original variables (Ram, 1982, pp. 230-232). Component scores can also be weighted by their coefficients of correlation or regression with some selected variable not included in the index. Slottje (1991, pp. 686-688) calls this hedonic weighting.

Compared with other statistical alternatives, the main advantages of this method are that it is computationally easier, has excellent mathematical properties and avoids duplicity of information. In addition, it can be used in comparisons between countries, settings and time, provided that the separate indices are calculated using the same variables. The main criticisms against this methodology as an instrument for constructing synthetic indicators are the following (Pena, 1977; Ram, 1982; Zarzosa, 1996; Mishra, 2007 cited in Somarriba and Pena, 2009): the synthetic indicator derived from this procedure is exclusively an ordinal type indicator, and the weights of partial indicators lack socio-economic interpretation; the procedure does not take into account all the non-redundant information as it only explains the variance in the first component and can therefore remove useful information in the synthetic indicator; PCA presents some difficulties if one wishes to construct a single index of the variables that are not very highly correlated, the method has a tendency to pick up the subset of highly correlated variables to make the first component and assign marginal weights to relatively poor correlated subsets of variables; PCA does not allow making inter-spatial or inter-temporary comparisons, except in ordinal comparisons.

Examples of composite indicators developed using PCA:

1. **Composite Basic Needs Indices** [Ram, 1982] involved 5 variables covering 82 countries and used PCA as weighting method. The aggregate format was the additive one. The dimensions of development distinguished here are: demographic dynamics; education, training and knowledge; health, food and nutrition; human settlement, infrastructure and communication; income and economic growth (Booysen, 2002).

2. **Quality of Life Rankings** [Slottje, 1991] comprised 20 economic and social variables on 126 countries and used a mix of hedonic regressions and PCA as weighting method and the functional form for the aggregate format (Chakravarty,
Comparing to the dimensions of Ram’s indicator, this one comprises 3 additional aspects: political and social stability; political and civil institutions; unemployment and labour utilization.

3. A wealth index in the United Republic of Tanzania – Gwatkin et al. (2000) illustrate the PCA methodology for determining wealth quintiles in the United Republic of Tanzania, using a set of mixed asset based variables and health-related.

4. A marginality index in Mexico – The Mexican Government has created a marginality index for policy-planning purposes and then as part of the targeting mechanism of the PROGRESA anti-poverty program. The marginality index was developed using the method of principal components, based on seven community level variables regarding dwellings, quality of housing, education and occupation, and was then divided into five groups based on the degree of marginality.

5. A development index in South Africa, using factor analysis – The South African government has created development indices based on factor analysis applied to 1996 population-census data in South Africa by Hirschowitz et al. (2000, pp. 53-81), with the aim of providing information for allocation of public development funds. The first component, interpreted as a household infrastructure index, explained 57% of the variance; the second component, interpreted as the household circumstances index, explained 17% of the variance.

6. An indicator composite indicator of health care need in Malawi – PCA was used to calculate asset indices for all districts from variables that capture living standards using data from the Malawian Multiple Indicator Cluster Survey (MICS) 2006. These were normalized and used to weight district populations. In this study, variables which have positive factor scores are associated with high socioeconomic status whilst the converse is true for those with negative values. Using the results of PCA, Manthalu et al. (2010) showed that households that use other sources of water other than piped are more likely to have low socioeconomic status, all other factors constant. Among types of toilet facility, pit latrine with no slab, composting toilet, hanging latrine and no toilet are associated with low socioeconomic status. Having a sand floor and having a thatched roof are also associated with low socioeconomic status.

Multiple Correspondence Analysis

Multiple Correspondence Analysis (MCA), also named homogeneity analysis, represents a non-arbitrary technique that is adequate for the computation of a composite indicator, based on categorical (qualitative) indicators. If consider
a set of $K$ primary indicators, that are categorical ordinal, the indicator $I_k$ has $J_k$ categories. Within a multiple correspondence analysis, each primary indicator $I_k$ presents a set of $J_k$ associated binary variables 0/1, each of them corresponding to a category of the indicator. Treating each category as a dichotomous variable solve the standardization problem, too, as all the variables included now in the analysis are binary ones (Asselin, 2002, pp. 12-13).

Typically, the analysis is focused on the first factorial axis, which describes quality of life. The value of the composite indicator for a given population unit is the arithmetic mean of the categories weights on this axis (Asselin, 2002, p. 22). Thus, for a given case (household/ administrative-territorial unit/ region/ country), the value of the composite indicator of QOL is calculated as a linear combination of binary indicators describing the concept, with weights resulting from MCA (Asselin, 2002, p.30).

Example of developing composite indicators using MCA:

1. A composite indicator of multidimensional poverty in Vietnam. The research was conducted by Louise-Marie Asselin, in June 2002, and was based on an initial set of 39 primary indicators referring to economy and infrastructure, education, health and agriculture. The indicators were recorded for 120 rural communes, on the basis of data collected in 1992-1993, within the Vietnam Living Standard Survey.

Multiple/Multivariate Regression Analysis

Multiple Regression Analysis is a multivariate technique whose general purpose is to study the relationships between a single numerical dependent or criterion variable and two or more numerical independent or predictor variables. Multiple regression is often used as a tool for prognosis. In multivariate regression, there are multiple dependent variables, and any number of predictors. Using this naming convention, some people further distinguish multivariate multiple regression, a term which makes explicit that there are two or more dependent variables as well as two or more independent variables.

Examples of composite indicators developed using multiple regression analysis:

1. Modeling consumption expenditure to construct a proxy index for income – An approach for modeling consumption expenditure as a proxy for income has been developed by Henstchel and others (2000, pp. 147 – 165) and Elbers, Lanjouw and Lanjouw (2001). It involves using data from a detailed household budget survey to identify variables indicative of poverty. This is done by using consumption
expenditure as the dependent variable in a multiple linear regression model and a series of household-level variable (for example, assets owned by the household, quality of housing, access to facilities etc.) as potential explanatory (predictor) variables in model. The best small subset of the explanatory variables that explains maximum variation in the response (dependent) variable is used to predict consumption expenditure. These can then be used to construct poverty maps on a national scale.

2. A marginality index in Nicaragua, using OLS (Ordinary Least Squares) – The Nicaraguan RPS (Red de Protección Social) anti-poverty program used poverty mapping to target census segments for intervention, being similar to PROGRESA: in exchange for sending their children to school, being given health examinations and participating in public-health presentations, the woman heading a household receives a maximum of US$336 per year in cash transfers (Government of Nicaragua, 2000). The program used population census data to construct a marginality index to rank census segments for targeting purposes. The index was composed of four variables - household size, percentage of households without potable water, percentage of households without latrines and percentage of illiterate adults - which were weighted by the coefficients derived from ordinary least squares regression analysis of the determinants of extreme poverty, using household data and a larger group of variables (Arcia, 1999).

3. A quality of life index developed by The Economist Intelligence Unit using multivariate regression – The Economist Intelligence Unit (EIU) has developed, in 2005, a “quality of life” index based on a methodology that links the results of subjective life-satisfaction surveys to the objective determinants of quality of life across 111 countries (EIU, 2006, p. 1). EIU use the life-satisfaction surveys results as a starting point, and a means for deriving weights for the various determinants of quality of life across countries, in order to calculate an objective index. The average scores from comparable life-satisfaction surveys (on a scale of one to ten) can be assembled for 1999 or 2000 for 74 countries. These scores are then related in a multivariate regression to various factors that have been shown to be associated with life satisfaction in many studies. The final estimated equation includes 9 factors corresponding to nine groups of indicators, as it follows: health, material wellbeing, and political stability and security, family relations, community life, climate, job security, political freedom and finally gender equality. Together these variables explain more than 80% of the inter-country variation in life-satisfaction scores. According to the values of so-called Beta coefficients from the regression used to derive the weights of the various factors, the most important are the first
three factors (EIU, 2006, p. 2). The estimated equation based on 1999/2000 data can be used to calculate index values for other years or even to forecast an index, thus making it up-to-date and facilitating comparison over time.

**Composite indicators for quality of life assessment developed in Romania using multivariate statistical methods**

In Romania, the researches on quality of life have been intensified starting with the ’90s, with the support of some important international organizations (World Bank, ONU, UNICEF, European Foundation for the Improvement of Living and Working Conditions etc.), and also as a consequence of the foundation of specific national institutions for quality of life assessment and monitoring (ICCV, CASPIS).

Within this country, the quality of life research with composite indicators constructed using multivariate statistical methods has known two major moments in the last decades. These moments are referring especially to the assessment of poverty, as it is mentioned below.

The first official multidimensional statistical evaluation of poverty was developed within the Project of Preventing and Combating Poverty within the United Nations Development Program in 1997; the results were published in July 1998 (PNUD, PPCS, 1998, pp. 48 – 51). Romanian specialists applied a method proposed by Professor Achile Lemmi from Siena – Italia, together with a group of researchers (Lemmi et al., 1997). The technical support of the method consists of theory of the fuzzy masses that gave the name of TFR Method (Totally Fuzzy and Relative). The method is based on a set of indicators considered to have an influence on the population poverty, called risk indicators that can be divided in two major categories: effect indicators (quality of housing, possession of long term assets, total consumption expenditure, subjective appreciation) and cause indicators (the risk of becoming poor or potential poverty).

The second utilization of the multivariate statistical methods in the study of quality of life in Romania refers to the construction of an index of consumption expenditure on adult equivalent as an expression of well-being level of a household. In CASPIS report, *Romania Poverty Map*, elaborated by the University of Bucharest and the National Institute of Statistics, the wellbeing level of a household is measured through consumption expenditure on adult equivalent, according to the methodology elaborated by World Bank and Anti-Poverty and Social Inclusion Commission (CASPIS) in 2003. The general form of the equations used to predict the indicator of well-being was: Ln (Y) = 1X + 2Z + 3W + 4U + uch, where: Y – consumption on adult
equivalent; X – demographical variables (household size, composition by gender, age etc.); Z – characteristics of household members such as education and/or occupation; W – data on the quality of housing (structure, surface etc.) and access to public utilities (current water, sewerage etc.); U – territorial characteristics (locality size, demographical and economic characteristics etc.); 1, 2, 3, 4 – estimated coefficients in the regression models; uch – error of the model.

In the context of several studies on population living standard within The Research Institute for the Quality of Life, composite indicators were constructed using PCA to synthetically express various aspects of living conditions. Likewise, in the modeling of different socio-economic phenomena, multiple regression analysis was applied to obtain aggregated measures synthesizing the information comprised in sets of several indicators of these phenomena. As regards the use of MCA in the construction of composite indicators, it is relatively limited in the Romanian literature, the method being not frequently used on this purpose in our country.

A. M. Ionescu (2008, 2009) has illustrated within her papers the utilization of MCA methodology in the construction of a composite indicator of poverty using data on 2035 Romanian households both from rural and urban areas. The research aimed to identify a profile of Romanian individual poverty, by finding the characteristics of the most affected groups of households. The data used in the study are drawn from the Public Opinion Barometer survey conducted in October 2003 by The Gallup Organization Romania. From this survey questionnaire a first subset of 41 indicators was extracted, covering the following dimensions of poverty: means of subsistence; health; education and access to information and communication; infrastructure; living condition; elements of comfort; possibilities/sources, alternative to income, to satisfy consumption needs. Following several criteria for variables selection, including the property named First Axis Ordinal Consistency (FAOC), the final number of indicators was reduced to 34. The composite indicator of poverty was constructed with a final MCA applied to the 34 indicators retained. The joint plot of category points corresponding to modalities’ scores on the first factorial plane showed that the modalities with positive scores increase welfare, while those with negative scores reduce it. The largest positive scores were observed to be associated with ownership of goods and comfort elements, such as: a computer, access to Internet, an automatic washing machine, access to basic utilities (drinking water, heating, sewerage) inside the house. At the same time, positive high scores are specific to a very high level of education (graduate or postgraduate studies). Larger negative scores are on the first axis lesser the households possess such goods and their access to education and information is limited. This is the case of households that lack refrigerator, color
TV, cable TV or phone, that live far away from a town, in very small spaces, which are not connected to basic utilities (electricity, sewerage, drinking water), and that lack minimum conditions of comfort (toilet, bathroom/shower, kitchen inside the house). In addition, low scores are specific to not or less educated persons, that have low access to information and that can’t afford the minimum nutritional necessary in nourishment. According to discrimination measures, variables that have contributed the most to the construction of the composite indicator (assumed to be the first MCA factorial axis) were: *Does your house have a bathroom, shower?*, *Does your house have a toilet (WC)?*, *Is your house connected to sewerage?*, *Which type of water supply do you have in your house?* (Ionescu, 2008; Ionescu, 2009).

**Conclusions**

Within European Union organisms, the research of quality of life has the role of providing the necessary information to decision factors at European and national levels in order to elaborate social politics for the reduction of inequalities.

The need of constructing composite indicators for QOL assessment is justified by the multidimensional nature of this concept, which comprises multiple socio-economical facets. On the other hand, it is necessary to find a measure of quality of life which would respect the important property of generating a complete ordering of the households, administrative-territorial unit's or areas according to their level of quality of life. This property is fundamental for data aggregation and in conducting of complex analyses of quality of life, which are required in the process of targeting within the politics and programs elaborated for the improvement of quality of life.

One of the major problems of constructing quality of life indicators is determining an appropriate aggregation method for incorporating multi-dimensional quality of life variables into an overall index. In this paper three possible methods for construction of composite synthetic indicators were presented, emphasizing their advantages and disadvantages: PCA, MCA and multiple/ multivariate regression analysis.

To illustrate the utilization of these methods on the mentioned purpose, several examples of composite indicators for the area of wellbeing and quality of life were reviewed and discussed for each method.

While PCA and multiple/ multivariate regression are largely applied in our country, too, the utilization of MCA in the construction of composite indicators is quite limited in the study of quality of life. As it is a method that allows the non-
arbitrary choice of weights and functional forms used in the aggregation of primary indicators of phenomena, MCA represents a valuable technique in the construction of a composite indicator for the assessment of socio-economical concepts, in general, and of quality of life, in particular.

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Utilization of Multivariate Statistical Methods in the Construction of Composite Indicators of Quality of Life

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Ensuring work-life balance is a concern of academics, governments and companies, which is targeted mainly on the latter’s employees. In research literature, there are few papers addressing to particular aspect of work-life balance for entrepreneurs and an even smaller number of works that explore work-life relationship issues for women entrepreneurs. The purpose of the article is to outline a starting point in the discourse about assumptions and perceptions underlying the debate of work-life relationship in the particular case of women entrepreneurs. The article reviews a range of papers from international literature focused on and related to the work-life relationship debate and it’s specific issues in the context of female entrepreneurship. The main source of scientific papers was the Emerald database. The paper contributes to the literature on work-life relationship, due to the scarcity of publications about the way this phenomenon is experienced by women entrepreneurs.

Keywords: work-life relationship, work-life balance, women entrepreneurs.

Introduction

One aspect unexplored in the scientific literature about work-life relationship and about factors influencing the balance between the two dimensions of human existence is that referring to how this balance is experienced by women entrepreneurs.

This situation is explained by the fact that the scientific debate about work-life balance generally concerns people who have the status of employees and not those who own and run a business (referred to in this paper with the term entrepreneur). Additionally, interest in female entrepreneurship is relatively recent and has manifested itself more prominent in the last two decades. Approached from
various perspectives, female entrepreneurship has attracted increasing attention in recent years in the light of concrete evidence of the importance of new business creation for economic growth and development (Acs et al., 2005; Langowitz and Minniti, 2007). Female entrepreneurship not only contribute to economic growth and employment creation, but it is increasingly recognized that women’s business ventures enhance diversity of entrepreneurship in any economic system (Verheul et al., 2006, cited in Jamali, 2009) and provide avenues for female expression and potential fulfilment (Eddleston and Powell, 2008, cited in Jamali, 2009).

Exploring work-life relationship for women entrepreneur presents interest considering that previous researches (Terkel, 1972, p. xiii; Pecock, 2003, cited in Eikhof et al., 2007) emphasizes that work has a negative impact on life, but one major reason identified in the literature for carrying out an entrepreneurial activity by women (Lundstrom, 1999; Buttner and Moore, 1997; Marlow and Strange, 1994; Birley, 1989; Noble, 1986, cited in McKay, 2001, p. 151; Ahmad, 2011) is precisely their desire to achieve work-life balance.

In order to describe work-life relationship for women entrepreneurs, the paper is structured in three sections, as follows: (1) a short literature review on work-life relationship; (2) characteristics of women entrepreneurs; and (3) particularities of work-life relationship at women entrepreneurs.

The articles reviews a range of papers from international literature focused on and related to the work-life relationship debate and it’s specific issues in the context of female entrepreneurship. The main source of scientific papers was the Emerald database.

**A short literature review on work-life relationship**

The articulation of work and life, cast as work-life balance, has become a key feature of much current government, practitioner and academic debate (Eikhof et. al, 2007, p. 325).

Murphy and Doherty (2011, p. 253) provide a discussion of the terminology associated with work-life balance, showing that the literature utilises a range of terms, which are broadly applicable to the relationship between work and life. The most common of these include *family friendly, work-life balance and flexibility*, and may be used to refer both to policies or work practices.

As stated by IDS (2000, p. 1, cited in Eikhof et al., 2007, p. 328), the foundations of work-life balance debate were set with employers that perceived recruitment and retention problems identifying the increase in the number of “parents ... who have
to fit their working lives around their childcare responsibilities”.

The expression *family friendly* was originally used to describe those organizations that tried to support work-personal life balance (Rogers and Rogers, 1989, cited in Murphy and Doherty, 2011, p. 253). Many of these organizational efforts involved the creation of workplace policies, primarily intended to help employees reconcile work and family responsibilities. These policies were mostly driven by national legislation (in turn driven by European directives) and included arrangements such as maternity, paternity and adoptive leave. In short, work-life balance can be described as the term used to refer to policies that “strive to achieve greater balance between work and home responsibilities” (Redmond et al., 2006, p. 15). Some initiatives are in addition to employees’ statutory entitlements under protective legislation, for example, part-time working arrangements, job sharing and flexitime (Murphy and Doherty, 2011, p. 253).

Many of the early texts use the expression *family friendly*, as the policies were initially targeted for carers and those employees with family responsibilities. More recent texts tend to utilise the more evolved term of *work-life balance*, as this is considered a more inclusive term for these policies, applicable to all employees, not just those with caring responsibilities (Murphy and Doherty, 2011, p. 253).

Kossek et al. (2010, cited in Murphy and Doherty, 2011, p. 253) provide a recent definition of work-life initiatives by categorising them as offering structural and/or cultural support. Structural support includes mechanisms like job redesign, teleworking and virtual arrangements, reduced workloads or other non-traditional arrangements and formal policies on absenteeism, leave and childcare assistance. Cultural support is defined as informal workplace social and relational support such as supportive supervisors and organisational climate. The authors argue that both structural and cultural support mechanisms need to be combined to be effective but acknowledge that integration is not easy to realize.

Earlier debates about work-life relationship and about the balance between the two dimensions of human experience are generally focused on the following assumptions and perceptions:

1. Work is experienced as having a negative impact on life, as it causes scars, psychic as well as physical (Terkel, 1972, p. xiii, cited in Eikhof et al., 2007, p. 326), it brings moodiness at home and the guilt that the too busy parents feel for not attending their children’s “significant events” at school, it excludes individuals from community life (Pecock, 2003, p 153, cited in Eikhof et al., 2007, p.326), it rules and ruins people’s lives (Bunting, 2004, cited in Eikhof et al., 2007, p. 326).

2. The long working hours represent the main obstacle in achieving the
work-life balance. Eikhof et al. (2007) even emphasize that this culture of debilitating long working hours is omnipresent, occurring in papers from Italy\(^1\), US\(^2\), Great Britain\(^3\) and France\(^4\).

(3) Life is often perceived as being equivalent with caring responsibilities (most particularly, childcare) and with domestic responsibilities.

(4) Women are the primary target of work-life balance provisions.

(5) Employees are the main professional category considered in the work-life balance debate.

In recent years, the preoccupations for a broader addressing of work-life relationship have been intensified as a consequence of adopting a holistic understanding of life. The following research directions could be identified in recent studies:

(1) Addressing work-life relationship as being a mutual one.

(2) Highlighting the work positive consequences on life, such as: work is a place of intellectual expression and personal fulfilment (Behr, 2007), can represent escape and self-expression, may be experienced as a means of escaping family stress (Cowling, 2005, p. 30; Hochschild, 1997; Trinca and Fox, 2004), or can be a source of satisfaction and self-fulfilment (Isles, 2004, p. 23, Eikhof et al., 2007, p. 327).

(3) Extending the research of work-life relationship so as to include the case of non-parent individuals who still have non-work obligations such as part-time education or community activities or individuals caring for the elderly.

(4) Inclusion in the work-life debate of gender category represented by men, because men also experience different forms and work-life conflict. It has been argued that the expression work-life balance, which is now habitually used in official and organizational discourse, is deliberately gender-neutral in order to indicate that work-life issues are relevant to men as well as women (Smithson and Stokoe, 2005, cited in Murphy and Doherty, 2011, p. 253).

(5) The long working hours are not always an obstacle in achieving work-life balance and may have various other reasons, such as: earning more money (Cowling, 2005, p. 35), opportunity for affirmation, rising consumptive aspirations (Hamilton and Denniss, 2005, cited in Eikhof et al., 2007, p. 331).

(6) Work-life relationship is seen as being extremely complex, going beyond the issue of too long working hours, as it may be influenced by various other factors:

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1 Basso (2003), Modern Times, Ancient Hours
2 Schor (1991), The Overworked American
3 Bunting (2004), Willing Slaves
4 În Franța, campaniile pentru reducerea timpului de lucru s-au raliat în jurul frazei “muncim mai puțin, trăim mai bine” (citat în Fagnani și Letablier, 2004)
individual’s life cycle stage (Murphy and Doherty, 2011), individual’s personality (Guest, 2001), the arrangements regarding the allocation of domestic work by gender (Eikhof et al., 2007, p. 332; Murphy and Doherty, 2011, p. 252; Booth and van Ours, 2005).

(7) It is questionable whether work and life do constitute separated spheres. For many workers, work and life are intertwined, even amalgamated, so they cannot or do not want to distinguish between them (Eikhof et Haunschild, 2006; Warhurst, 1996; Warhurst et al., 2008; Nippert-Eng, 1996; Salaman, 1974; Sennett, 2004; Westwood, 1984, cited in Eikhof et al., 2007).

(8) Work-life balance is a matter of personal choices, only the individual themselves can decide what their desirable balance is (Murphy and Doherty, 2011, p. 258; Guest, 2001; Eikhof et al., 2007).

**Characteristics of women entrepreneurs**

Until the late 1970s, women remained almost invisible as managers and entrepreneurs. Systematic investigation of women’s progress in management is relatively new. As indicated by Kim and Ling (2001, p. 204), it began in North America, primarily in the USA, in the 1970s, in Western Europe in the early 1980s, and in Asia toward the mid-1980s.

According to Hisrich and Lerner (1997), female entrepreneurs can play a significant role in fostering economic and social development, particularly in the small business sector. Women entrepreneurs have been identified as contributors to social improvement, promoting economic renewal and development, technological innovation and employment creation (Bosman et al., 2008; Lerner et al., 1997; OECD, 1997, cited in Ahmad, 2011, p. 125; Acs et al., 2005; Langowitz and Minniti, 2007, cited in Jamali, 2009).

According to Green and Cohen (1995), women entrepreneurs are a diverse and complex group with varied backgrounds, circumstances and worldviews.

A central focus of literature on female entrepreneurs is women motivation to develop their own business. There are various factors that influence a woman to become an entrepreneur and circumstances are unique to each person. Primary reasons identified are (McKay, 2001, p. 151; Ahmad, 2011): balancing family responsibilities (Lundstrom, 1999; Caputp and Dolinsky, 1998; Buttner and Moore, 1997; Marlow and Strange, 1994; Birley, 1989; Noble, 1986), independence (Alstete, 2003; Orhan and Scott, 2001; Sacirbey, 1998, Buttner, 1993), autonomy (Kleiman, 1998; Buttner and Moore, 1997), overcoming job dissatisfaction (Journal of Business
Strategy, 1998; Babaeva and Chirikova, 1997; Gray and Finley-Hervey, 2005) and job loss (Omar, 1998; Sacirbey, 1998; Babaeva and Chirikova, 1997).

Buttner (1993, p. 60, cited in McKay, 2001, p. 149) highlights that an important difference between men and women in their motivation to initiate a business is that “men often cite economic reasons, whereas women often cite family needs. Whereas men generally see entrepreneurship as a business decision, many women view it as a life choice – a way of integrating family needs and career needs.”

The literature on women entrepreneurs also identifies their strengths, compared to their male counterparts. According to Babaeva and Chirikova (1997, p. 84), these are: communicability, emotional engagement with their clients, ability to establish trustworthy relationships, and aversion to victory at any price.

As regards the identification of particular categories of women entrepreneurs, Goffee and Scase (1985) developed a typology based on two criteria: attachment to entrepreneurial ideals and acceptance of conventional gender roles, while Carter and Cannon (1992) and Cannon et al. (1988) consider factors of age, employment, education, family responsibility and family background in categorising women entrepreneurs (cited in McKay, 2001, p. 152).

Organizational structure of women-owned and operated businesses tends to be micro, small and medium in terms of enterprise size. As stated by Bruni et al. (2008), women do not regard entrepreneurship as a career and, therefore, do not intend turning their firms in big enterprises. They tend to work on their own or only hire only a few employees.

Many women-owned enterprises are family-based business where family members, relatives and close friends are part of the work team. Therefore, relying on a network of family and close friends, women are sub-consciously minimizing the risk of their new business venture. Overall, scholars agree that as female-led businesses tend to be smaller in size, they are “cheaper” to finance than those led by their male counterparts (Hill et al., 2006). The general personal characteristics identified through survey research of so-called successful women entrepreneurs include autonomy, persistence, hard work, competitiveness, orientation to personal achievement and higher income, belief in one’s own vision, goal setting, risk taking and natural leadership qualities native (Buttner, 1993; Fagenson and Marcus, 1991, cited in Ahmad, 2011).

Women confront a variety of challenges in developing and running a business, some of them greater for women than men, which include (McKay, 2001, p. 153): obtaining capital (Buttner and Moore, 1997; Loscocco and Robinson, 1991; Hisrich and Brush, 1984), acquiring appropriate training (Walker and Joyner, 1999;
Scherer and Brodzinski, 1990; Hisrich and Brush, 1984) resistance from relatives, friends and family (Babaeva and Chirikova, 1997), overcoming cultural conditioning (Scherer and Brodzinski, 1990) and discrimination (Kleiman, 1998; Buttner and Moore, 1997; Oeltjen, 1992).

**Particularities of work-life relationship at women entrepreneurs**

A key aspect of work-life balance for women entrepreneurs is the work-family relationship.

The dilemma work-family can be serious for women entrepreneurs as they are responsible for the success of their own business venture and the welfare of their employees. Therefore, their commitment to their work is much greater than that of married women employees (Hisrich, 1989; Carter and Cannon, 1992, cited in Kim and Ling, 2001, p. 204).

As working mothers and wives, married women entrepreneurs have to assume multiple roles both in the family and in their career. Domestic responsibilities such as household chores and childcare have made the process of setting up and running a business more difficult for women entrepreneurs (Goffee and Scase, 1983; Collerette and Aubry, 1990, cited in Kim and Ling, 2001, p. 205).

Bakkar (2000) cited by Drew et al. (2003) describes what he calls “Double life perspective between career and children” where women have to deal with “or-or” situation (career or children) and men have the “and-and” situation who can combine both careers and children while their female partners are responsible for the family (Murphy and Doherty, 2011, p. 259).

According to Kim and Ling (2001, p. 205), work-family conflict arises between work characteristics (number of hours worked, work schedule inflexibility, work stressors) and family characteristics (number of children, age of children, family support). As married couples usually play multiple roles in family, work-family conflict could be separated into three sub-categories: job-spouse conflict, job-parent conflict and job-homemaker conflict. Research studies on women entrepreneurs have reported that married women entrepreneurs do face work and family conflict, which has a negative effect on their job satisfaction, marital satisfaction and life satisfaction (Arora et al., 1990, cited in Kim and Ling, 2001, p. 204).

Time pressure as one work characteristic that leads to work-family conflict means that time devoted to one role makes it difficult to meet the requirements of another role (Greenhaus and Beutell, 1985). As time is a limited resource, the more time a woman entrepreneur spends on her business, the less time she will have with
her family. Research studies have shown that entrepreneurs work longer hours than employees (Jamal, 1997; Chay, 1993; Lewin-Epstein and Yuchtman-Yaar, 1991, cited in Kim and Ling, 2001, p. 205).

Work stressors, like financial problems of business start-up and management, can produce strain symptoms such as, cum anxiety, frustration, tension and irritability (Greenhaus and Beutell, 1985, cited in Kim and Ling, 2001, p. 206). These negative emotions can spill over from work to family contributing to la work-family conflict (Bartolome and Evans, 1980; Jones and Fletcher, 1996).

Parental demand can affect work-family conflict. Parents tend to experience more work-family conflict than non-parents entrepreneurs as they need to spend greater amount of time at home, taking care of their children. Parental demand can be measured by the number of children and their age. Younger children will demand more of their parents’ time. Large families are likely to be more time demanding than small families (Greenhaus and Beutell, 1985).

The supportive behavior of family members can help to buffer work-family conflict experienced by working women. It can be attitude, emotional or instrumental support (Kim and Ling, 2001, p. 207; Adams et al., 1996; Holahan and Gibert, 1979). The spouse/partner is an important part of the female entrepreneurs’ support network, and spouse support is a major asset of these women (Hisrich, 1989; Carter and Cannon, 1992; Teo, 1996; Buttnen and Moore, 1997, cited in Kim and Ling, 2001, p. 207). In addition to support from the spouse, support from other people such as housekeepers and nannies, which share the responsibility for household chores and childcare, can also help to relieve work-family conflict.

Although it can be argued that men are also increasingly responsible for caring activities, Plantenga and Hansen (1999) as cited in Straub (2007) found that women on average spend about four times as much time as men on caring tasks (Murphy and Doherty, 2011, p. 258).

Work-family conflict prevents a person from fulfilling both work role and family role well. When the job makes it difficult to meet one’s family commitment, that person will be less satisfied with the job. In their study on women entrepreneurs, Arora et al. (1990) found a negative relationship between work-family conflict and job/business satisfaction, stressing that when work-family conflict occurs, women entrepreneurs experience less job satisfaction.
Conclusions

Usually, in the relationship between work and life, work is seen as a negative factor, which “rules and ruins” lives. It runs lives when everything people do gravitates around work and it ruins lives through the fact that it does not leave room for other aspects of people’s lives. Indeed, sometimes persons feel like their work simply invades and monopolizes their lives, leading to insufficient time and energy for their children and partners, for favourite activities, to socialize and to get involved in community life.

However the relationship between work and life does not occur in one way, being one of inter-conditionality. Practically, the work represents a part of people’s life. Moreover, certain features of individuals’ work (field of employment, form of employment, working hours etc.) are in fact issues that depend on the choices they make in their lives.

Mutual relationship between work and life generates both positive and negative effects in both directions. On the one hand, life can have positive influence on work: for example, a healthy environment at home doubled by the support of loved ones, transmit’s positive energy to professional life, too. However, certain aspects of private life can have negative consequences in the plane of work. For instance, stress, pressure, responsibilities outside work may prevent individuals to adequately concentrate and properly carry out their duties at work.

On the other hand, work is the one which sustains quality of life, in that it provides the necessary financial resources to meet needs (subsistence needs, needs associated with a decent living, needs related to desire for knowledge, needs associated with the hobbies and passions, needs related to desire for entertainment, needs associated with the desire to satisfy the needs of family members and of those one feels attached to). At the same time, work enables us to ensure a certain status in society, to create a positive image of us, to earn the respect of the community in which we live (“I am somebody”). Work can give individuals a certain dose of fulfilment as makes them feel they are important because of doing something (a doctor who saves a life, a craftsman which creates things, a teacher who forms students, a writer which writes a book, a researcher who makes a discovery etc.). However, for some workers work can be a refuge from the problems they meet at home and one or only way of socialization.

In conclusion, work-life balance differs from one person to another, being influenced by each person’s system of values and aspirations, as well as by attitudes that individuals have toward their life (family, leisure, hobbies etc.) and towards
work and work results. Therefore, work-life debate has to progress to a more holistic understanding of life.

 Particularly for entrepreneurs, there are additional factors that intervene in the relationship between work and life: they need a higher working time than that of employees, bear the responsibility of those they employed, but also experience positive effects such as independence, autonomy, and flexibility.

 In the specific case of women entrepreneurs, an important aspect of work-life relationship is the work-family conflict, more pronounced than for men entrepreneurs, because of the roles assumed by most of women that are deeply rooted in social consciousness, i.e. assuming major responsibilities on childcare and housework.

 Competing demands on time are an important recurring constraint that women seeking to engage in entrepreneurship have to cope with. Because women are responsible for many different domestic tasks and the raising of children, they do not have sufficient time to develop their entrepreneurial knowledge or skills to start a new business or to develop an existing one. Furthermore, this lack of free time limit’s women’s availability to travel to certain institutions, such as banks and other financial organisations for advice and information on credit, to attend training programmes to acquire skills, or to seek out better customers or suppliers (Ahmad, 2011).

 Despite time-related constraints, work-life balance acquires new valences in the particular case of female entrepreneurs as women see in entrepreneurship a way to integrate family needs and career.

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Study on Tax Treatment of Income Resulted from the Exploitation of Royalties

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Taxation specialists, as well as practitioners are increasingly aware of the impact of taxation of income earned by individuals. This category also includes income obtained following the exploitation of royalties.

Applicable tax treatment varies depending on:

(i) method of income taxation upon tax withholding - partially 10% during the year, with adjustment at the end of the year or final 16%, without adjustment;

(ii) depending on the status and actual situation of the individual (is retired or not, he/she also earn salary income and so on).

For example, in case an individual obtain both income from exploitation of royalty and salary income, the payer of royalty income will be taxed only 10% or 16%, as applicable, without withholding individual social contributions (social security contributions and health insurance contributions).

If obtaining only income from exploitation of royalties the income payer will deduct both individual social securities and income tax.

Keywords: independent activities, royalty income, social contributions, income tax, tax treatment.

Introduction

In this article are analyzed, through case studies, taxation of royalty income. Frequent amendments to tax legislation made us research the provisions on compulsory social securities applicable to the royalty, valid as from July the 1st, 2012.

Royalty on a literary, artistic or scientific work, as well as on other
intellectual creation works is recognized and guaranteed pursuant to Law no. 8/1996 on royalty and related rights, as further amended and supplemented.

(I) Tax treatment for social contributions in case of payment by income taxpayers

According to art. 29621 first paragraph, letter f) of the Tax Code, individuals obtaining income as a withholding tax of the income tax, from activities such as those mentioned in art. Article 52, first paragraph, letter a) of the Tax Code (royalty income) have the capacity of taxpayer to the public pension system and to the health insurance system, in compliance with the international legal instruments to which Romania is part (REGULATION (EC) NO. 883 / 2004 of April the 29th, 2004 on the coordination of social security systems; (EC) REGULATION NO. 987/2009 of September the 16th, 2009 for establishing the procedure for implementing (EC) Regulation no. 883/2004 on the coordination of social security systems).

Taxpayers with income tax withholding, owe, under art. 29626 second paragraph of the Tax Code, the individual social security contribution, provided in art. . 29618, third paragraph. According to art. 29624, fifth paragraph of the Tax Code, these taxpayers owe individual social contributions during the year, as advance payments and the income taxpayers have the obligation to calculate, withhold and transfer such amounts in accordance with Art. 52.

Taxpayers with income tax withholding, owe, under art. 29626 first paragraph, letter b) of the Tax Code, in conjunction with Article 29618, third paragraph, letter b¹) of the Tax Code, the individual health insurance contribution.

Thus, persons who earn such income owe INDIVIDUAL SOCIAL SECURITY CONTRIBUTIONS (CAS), AS WELL AS INDIVIDUAL HEALTH INSURANCE CONTRIBUTIONS (CASS). (Share due: CAS = 10,5%; CASS =5,5%).

As regards the Social Security Contributions

Share due by the Social Security Contributions is 10,5% (art. 29626 second paragraph of the Tax Code, in conjunction with art.. 29618 third paragraph, letter a1) of the Tax Code).

According to art. 29621 second paragraph of the Tax Code, individuals who are insured within the public pension system, according to art. 6 first paragraph, Section I - III and V of Law no. 263/2010 (i.e. such persons are also employed), as well as those who benefit from one of the categories of pensions granted in the public pension system DO NOT OWE social security contribution for income obtained as a
result of being classified in one or more of the situations provided in art. 29621 first paragraph of the Tax Code.

**Monthly computation basis for Social Security Contributions** (art. 29622 forth paragraph of the Tax Code):

If the income payer withholds the tax at the rate 16% - pursuant to art. 52¹ of the Tax Code, as well as if the income payer withholds the tax at a rate of 10%, according to art. 52 of the Tax Code, the computation basis is the difference between:

- gross income and
- deductible expense, provided in art. 50.

(Thus, the deductible expense is: 20% from the gross income, pursuant to art. 50 first paragraph letter a) or, if applicable, 25% from the gross income, pursuant to art. 50 second paragraph letter a) of the Tax Code).

According to art. 29622 seventh paragraph of the Tax Code, for persons referred to in Art. 52 first paragraph, letter a), the monthly computation basis for the social security contribution can not be higher than the equivalent of 5 times the average gross earnings used for the substantiation of state social insurance budget.

**Declaration of the Social Security Contributions:** Starting with the duties corresponding to January 2011, payers of such income are required to submit Form 112 “Statement regarding the payment liabilities of social contributions, income tax and nominal record of insured persons” until the 25th of the month following the month in which income has been paid, respectively of the month following the quarter in which the income was paid, depending on the tax period chosen by the income payer.

**Term for declaration/payment of social security contributions:** Contributions withheld by the income payers are paid by the 25th of the month following the one in which the income was paid, as well as the month following the quarter in which the income was paid, depending on the tax period chosen by the income payer (art. 29624 sixth paragraph of the Tax Code).

For taxpayers referred to in art. Article 52 first paragraph letter a), liabilities representing individual social security contributions calculated, withheld and paid during the tax year by the income payers are final pay obligations under Art. 29624 seventh paragraph of the Tax Code.

**Payment of social security contributions** (CAS): it is paid into the single account 55.02 “Cash of social insurance budgets and special funds under distribution” (Annex no. 2 of Order 1294/2007).
As regards the Health Insurance Contributions

**Share of the Health Insurance Contributions**: 5,5 % (art. 29626 first paragraph letter b) of the Tax Code *in conjunction with* art. 29618 third paragraph (3) letter b1) of the Tax Code.

Pursuant to art. 29623 second paragraph of the Tax Code, persons obtaining income from royalties **DO NOT OWE health insurance contributions** for such income, if they obtain:

- income similar to those mentioned in chapter I (salary income, similar salary income and pension income, as well as the persons being under state protection or in it’s custody);
- income under the form of unemployment benefit’s;
- Pension income less than 740 LEI;
- as well as income similar to those mentioned in art. 29621 first paragraph letter a) - d), g) and h), art. 52 first paragraph letter b) - d) and from the partnerships without legal personality provided in art. 13 letter e).

**Computation basis for the health insurance contributions**: (art. 29622 fourth paragraph of the Tax Code):

*If the income payer withholds the tax at the rate 16%* - pursuant to art. 52¹ of the Tax Code, as well as *if the income payer withholds the tax at a rate of 10%*, according to art. 52 of the Tax Code, the computation basis is the difference between:

- **gross income** and
- **deductible expense**, provided in art. 50 (in flat-rate of 20, as well as 25%).

According to art. 29622 fifth paragraph of the Tax Code, for taxpayers who derive such income, the monthly computation basis of the health insurance contribution can not be less than the minimum gross basic salary in the country, if such income is the only one upon which contribution is calculated.

**Individuals obtaining earnings under art. 257 second paragraph letter f) of Law 95/2006, must conclude an insurance contract in the health insurance system** (art. 215 third paragraph of Law 95/2006).

**Declaration of the Health Insurance Contributions**: Starting with the duties corresponding to January 2011, payers of such income are required to submit Form 112 “Statement regarding the payment liabilities of social contributions, income tax and nominal record of insured persons” until the 25th of the month following the month in which income has been paid, respectively of the month following the quarter in which the income was paid, depending on the tax period chosen by the income payer.
Term for declaration/payment of health insurance contributions: Contributions withheld by the income payers are paid by the 25th of the month following the one in which the income was paid, as well as the month following the quarter in which the income was paid, depending on the tax period chosen by the income payer (art. 29624 sixth paragraph of the Tax Code).

For taxpayers referred to in art. Article 52 first paragraph letter a), liabilities representing health insurance contributions calculated, *withheld and paid during the tax year* by the income payers are *final pay obligations* under Art. 29624 eighth paragraph of the Tax Code.

Payment of health insurance contributions (CASS): it is paid into the single account 55.02 “Cash of social insurance budgets and special funds under distribution” (Annex no. 2 of Order 1294/2007).

As regards unemployment

People who derive income from royalties, given that this activity performed by an individual does not meet the dependence requirements stipulated in art. Article 7 first paragraph, section 2, subsection 2.1 of the Tax Code *are not compulsory insured persons* in the unemployment insurance system, according to art. 19 of Law 76/2002.

However, *according to art. 20 in conjunction with Art. 22 of Law 76/2002* these individuals, if they are at least age 18 and are insured in the public pension system and in the health insurance system can be insured against unemployment, by concluding an unemployment insurance contract with the employment agency in whose jurisdiction they domicile or, if appropriate, they reside.

As regards the contributions for work injuries and occupational diseases

People who derive income from royalties, given that this activity performed by that individual, does not meet the dependence requirements stipulated in art. 7 first paragraph, section 2, subsection 2.1 of the Tax Code, are not compulsory insured persons under *Article 5 first paragraph of Law 346/2002*.

However, *according to art. 6 first paragraph of Law 346/2002* these people may effect an insurance for themselves.
As regards the contributions for leaves and allowances

People who derive income from royalties, given that this activity performed by the individual, does not meet the dependence requirements stipulated in art. 7 first paragraph, section 2, subsection 2.1 of the Tax Code, are not compulsory insured persons under Article 1 of the Government Emergency Ordinance 158/2005.

Case studies

A legal entity, a monthly payer of salary tax, concluded on 15.07.2012 contracts with five individuals for activities carried out independently, under the law, which generates income from royalties and related rights defined according to Law 8 / 1996, as further amended and supplemented.

Romanian individuals who derive income from the exploitation of royalties and royalty related rights sent a copy of Form 020 “Tax Registration Statement / Amendments statement for Romanian individuals” by proving it’s submission in due time to the tax authority. Also, individuals state that they are not registered for VAT purposes.

Negotiated gross income is 10,000 lei / individual and payment date occurs only once in August 2012. The concluded contract provided the income withholding tax.

We’ll further review the tax treatment for royalty income obtained from those five individuals, taking into account the particularities of each contract, as follows:

Case I: Individual exercises in writing his/her option for establishing income tax, as a final tax at the rate of 16%. Also, individual declare on his/her own responsibility that he/she get monthly salary income from another entity.

- Gross income............................................ 10,000 lei
  (-) Income tax 16%........................ 1,600 lei
  = Net amount paid...................... 8,400 lei

We note that no social security contributions at the rate of 10.5% are due according to art. 29621 second paragraph of the Tax Code, as the individual is an employee to another entity and is therefore insured in the public pension system, according to art. 6 first paragraph, Section I of Law no. 263/2010.

Neither health insurance contributions are due at the rate of 5.5%, according to art. 29623 second paragraph of the Tax Code, as the individual derive wage income from another entity (for which compulsory social security contributions are
due under Chapter I of the title IX of the Tax Code).

Therefore, the income tax was withheld at a rate of 16% applied to the gross income contracted under Art. 52 of the Tax Code.

In this case, the legal entity is required to declare the withheld tax in Form 100 and to transfer it to the state budget until 25.09.2012.

According to section 1.1 of the Guidelines for completing the Form 100 (provided in Annex 8 to Order 101/2008), in Form 100, it shall be declared on a monthly basis, by the 25th of the following month, royalty income tax and related rights for which the obligation to declare, calculate and withhold social security contributions payment is not incumbent on the income payer.

Also, the legal person shall submit the Form 205 by February the 28th, 2013. Individual who obtain such income does not submit Form 200 “Statement of earned income “, according to art. Article 83 third paragraph, letter b) of the Tax Code.

Case II: Individual exercises in writing his/her option for establishing income tax, as a final tax at the rate of 16%.

Also, individual declares on his/her own responsibility that he/she does not get income from any other source.

In this case, the provisions of Art. 29624 fifth paragraph of the Tax Code apply: Taxpayers stipulated in Art. 29621 first paragraph, letters f) and h) owe individual social security contributions during the year as advance payments, income payers having the obligation to calculate, withhold and transfer such amounts in accordance with Art. 52 and art. Article 74, fourth paragraph, as applicable:

- Gross income.................................................................................................................................10.000 lei
- (-) Social Security Contributions 10,5% * (10.000 lei – 2.000 lei)............. 840 lei
- (-) Health Insurance Contributions 5,5% * 8.000 lei............................... 440 lei
- (-) Income tax 16% * 10.000 lei.................................................................1.600 lei
= Net amount paid..................................................................................................................7.120 lei

Therefore, the income payer is required to tax withhold the following:
- Individual social security contributions at a rate of 10.5% applied to gross income diminished by the flat rate of 20%, according to art. 29622 fourth paragraph, in conjunction with art. 29626 second paragraph of the Tax Code, as the individual does not fall within any of the exceptions provided for by Art. 29621 second paragraph of the Tax Code.
• Individual health insurance contributions at a rate of 5.5% applied to gross income diminished by the flat rate of 20%, according to art. 29622 fourth paragraph, in conjunction with art. 29626 first paragraph, letter b) of the Tax Code, as the individual does not fall within any of the exceptions provided for by Art. 29623 second paragraph of the Tax Code.

• income tax at a rate of 16% applied to gross income contracted under Art. 52¹ of the Tax Code.

In this case, the legal person declares income tax and withhold individual contributions in Form 112 and transfers it to the state budget until 25.09.2012. The legal person shall also submit Form 205 until February the 28th, 2013.

Individual who obtains such income is not required to submit Form 200 “Statement of earned income “, according to art. Article 83 third paragraph letter b) of the Tax Code.

Also, for individuals who obtain royalty income, liabilities representing individual social security contributions and individual health insurance contributions calculated, withheld and paid during the tax year by the income payers are final pay obligations under Art. 29624 seventh and eighth paragraphs of the Tax Code.

Case III: Individual does not exercise in writing his/her option for establishing income tax, as a final tax at the rate of 16% and this means that the royalty income payers are required to calculate, withhold and pay withholding tax, at a rate of 10% applied upon gross income from which withholding tax compulsory social security contributions are deducted, under Title IX², representing advance payments pursuant to Article 52 first paragraph letter a) in conjunction with the second paragraph of the Tax Code.

Also, individual declares on his/her own responsibility that he/she gets monthly salary income from another entity.

• Gross income...........................................10.000 lei
  (-) Income tax 16%...................... 1.000 lei
  = Net amount paid....................... 9.000 lei

We note that no social security contributions at the rate of 10.5% are due according to art. 29621 second paragraph of the Tax Code, as the individual is an employee to another entity and is therefore insured in the public pension system, according to art. 6 first paragraph, Section I of Law no. 263/2010.
Neither health insurance contributions are due at the rate of 5.5%, according to art. 29623 second paragraph of the Tax Code, as the individual derive wage income from another entity (for which compulsory social security contributions are due under Chapter I of the title IX of the Tax Code).

Therefore, the income tax was withheld at a rate of 10% applied to the gross income contracted under Art. 52 first paragraph, letter a), in conjunction with the second paragraph of the Tax Code, due to the fact that such individual did not previously incurred individual social security contributions and individual health insurance contributions.

In this case, the legal entity is required to declare the withheld tax in Form 100 and to transfer it to the state budget until 25.09.2012. The legal person shall also submit Form 205 until February the 28th, 2013.

According to section 1.1 of the Guidelines for completing the Form 100 (provided in Annex 8 to Order 101/2008), in Form 100, it shall be declared on a monthly basis, by the 25th of the following month, intellectual property rights income tax for which the obligation of declaration, calculation, withholding and payment of social security contributions is not incumbent on the income payer.

Individual who obtain such income for which tax is deducted through withholding tax by income payers is not obliged to submit Form 220 “Statement of estimated income / freelance income”.

However, in this case, the individual taxpayer is required to submit Form 200 “Statement of earned income” until May the 25th, 2013, according to art. Article 83 first paragraph of the Tax Code, in conjunction with Annex 2, Part 1, section 1.1 of the Order 233/2011.

Annual tax due is determined by the competent tax authority based on Form 200, by applying the rate of 16% on annual net taxable income, according to art. 84 first paragraph letter a) of the Tax Code.

The general rule for establishing the annual net taxable income (underlying the tax calculation) resulted from royalties and other related rights is regulated in Art. 50 of the Tax Code, which provides: annual net taxable income is established by deducting from the gross income of a lump sum expense from the gross income and social security contributions paid.

Based on statements of earned income ((Form 200), the tax body sets the annual tax due and issues the taxation notice (Form 250 “Annual taxation notice for income earned in Romania by individuals” or Form 251 “ Annual taxation notice for income earned abroad by individuals “).

Differences of outstanding tax, according to annual taxation notice are to be
paid no later than 60 days from the date of communication of taxation notice (Form 250 or Form 251) to the tax body where the individual is registered, for which period no delayed payment penalties shall be calculated.

Case IV: Individual does not exercise in writing his/her option for establishing income tax as a final tax at the rate of 16% and this means that the intellectual property income payers are required to calculate, withhold and pay withholding tax, at a rate of 10% applied upon gross income from which withholding tax compulsory social security contributions are deducted, under Title IX², representing advance payments pursuant to Article 52 first paragraph letter a) in conjunction with the second paragraph of the Tax Code.

Also, the individual declares on his/her own responsibility that he/she gets other income from any other source.

In this case, the provisions of Art. 29624 fifth paragraph of the Tax Code apply: Taxpayers stipulated in Art. 29621 first paragraph, letters f) and h) owe individual social security contributions during the year as advance payments and the income payers have the obligation to calculate, withhold and transfer such amounts in accordance with Art. 52 and art. Article 74, fourth paragraph, as applicable:

- Gross income.................................................................10.000 lei
  (-) Social Security Contributions 10,5% * 80.000 lei............... 840 lei
  (-) Health Insurance Contributions 5,5% * 8.000 lei.............440 lei
  (-) Income tax 10% * (10.000- 840- 440)............................872 lei
  = Net amount paid.......................................................7.848 lei

Therefore, the income payer is required to tax withhold the following:
- Individual social security contributions at a rate of 10.5% applied to the difference between gross income and deductible expense of 20% (we considered that the conditions provided in art. 50 first paragraph, letter a) of the Tax Code are met), according to art. 29622 fourth paragraph, in conjunction with Art. 29626 second paragraph of the Tax Code, as the individual does not fall within any of the exceptions provided for by Art. 29621 second paragraph of the Tax Code.
- Individual health insurance contributions at a rate of 5.5% applied to the difference between gross income and deductible expense of 20% (we considered that the conditions provided in art. 50 first paragraph, letter a) of the Tax Code are met), according to art. 29622 fourth paragraph, in conjunction with Art. 29626 first paragraph, letter b) of the Tax Code, as the individual does not fall within any of the
exceptions provided for by Art. 29623 second paragraph of the Tax Code.

• income tax at a of 10% applied to gross income contracted minus social security and health insurance individual contributions, under art. 52 first paragraph, in conjunction with the second paragraph of the Tax Code.

In this case, the legal person declares income tax and withhold individual contributions in Form 112 and transfers it to the state budget until 25.09.2012. The legal person shall also submit Form 205 until February the 28th, 2013.

Also, for individuals who obtain royalty income, liabilities representing individual social security contributions and individual health insurance contributions calculated, withheld and paid during the tax year by the income payers are **final pay obligations** under **Art. 29624 seventh and eighth paragraphs of the Tax Code**.

Individual who obtain such income for which tax is deducted through withholding tax by income payers is not obliged to submit Form 220 “Statement of estimated income / freelance income”. However, in this case, the individual taxpayer is required to submit Form 200 “Statement of earned income” until May the 25th, 2013, according to art. Article 83 first paragraph of the Tax Code, in conjunction with Annex 2, Part 1, section 1.1 of the Order 233/2011.

Adjustment of annual tax due by the individual is made similarly as in the case III.

Case V: Individual exercises in writing his/her option for establishing income tax as a final tax at a rate of 16%. Also, the individual declare on his/her own responsibility that he/she earns a monthly income of 600 lei from the public pension system.

In this case, the tax treatment for royalty income earned by the retired person is similar to the tax treatment given in case I.

**Conclusions**

From the study performed, we conclude that the tax treatment existing until 01.07.2012 led to difficulties of taxation for royalty income in that there was a distinction between the nature of work - temporary or permanent - income generator. This provision caused for several times the impossibility to classify a certain situation in a category or another, because there is no clear definition for temporary or permanent work.

Amendments to the Tax Code as from July the 1st, 2012 no longer take into account the work nature, because are considered the status of individual and the nature of income obtained by him/her during a tax year. In conclusion, the rules are
clearer and easier to apply.

There is, however, a gap in the legal provisions that can lead to joint liability of the income payer and the individual who makes such income. To avoid this gap, we have proposed that the individual should submit to the income payer an affidavit stating whether he/she is an employee / pensioner or not, whether he/she gets salary income or not etc.

To improve the quality of legislation in the field and for the facilitation of understanding and application process, we propose the inclusion of tax issues only in the tax legislation, irrespective of the nature of income that is subject to the taxation of compulsory social security contributions.

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The European Union Between a Real Union and Dissolution

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The European Union is at a crossroad where it needs to take some important decisions for the future. Such decisions may either create a “real union” that will be able to become a strong player in the global economy or, by the contrary, may send the union down the tube, to dissolution. In this paper we will try to identify the real roots and causes of the economic turmoil that the European Union faces for the last four years and suggest what could be the most important steps to preserve the union and regain competitiveness within a sustainable economic system.

Introduction

Four years after the sovereign debt crisis started in the European Union, the economic downfall is far for being over. The way that the so called Troika (the European Commission, the European Central Bank and the IMF) has addressed the issue in various troubled European nations, proved wrong.

None of the programs imposed by the Troika in heavily indebted countries proved valid. „Throughout the European Union, austerity programs have failed both politically and economically” (Epstein, 2012)¹ Despite the calls of the European bodies, that failure of the programs were due to wrongdoings at the end of national governments involved, one could see that austerity programs, backed up by no other reforms and no stimulus to economic growth are due to fail. „European nations that have followed this supposedly vicious austerity program are struggling with non-existent growth and slipping back into recession...Austerity critics call for additional debt-fuelled stimulus spending, despite the fact that trillions have already been spent to kick-start the European economy, to little effect.” (Brooks,

2012)²

"There is growing awareness that an approach based narrowly on fiscal austerity will affect employment, while also failing to cut fiscal deficit's significantly. Economies with a more growth-oriented policy strategy show better performance in terms of jobs, investment and financial stability. More fundamentally, the conditions under which fiscal austerity might have worked have simply not been met. Fiscal austerity has encompassed sharp cuts in public investment and in pro-employment programmes, thereby affecting domestic demand directly". (International Labour Organization -International Institute for Labour, 2012)³

The real causes of the European crisis

Like in all sicknesses, to prescribe the best treatment, one must have known the real causes of the disease. Was sovereign debt the real problem or just a cause of it? Was fiscal indiscipline the real issue or one should look deeper into the real economy of the troubled European countries to find the real causes of the economic turmoil? These are questions to be addressed to reach a real diagnosis of the European problem, before at least the European nations together may find a solution to the existing crisis.

First of all, the real issue has shown to be much deeper that the sovereign debts crisis in it'self. The foundation of the European Monetary System it'self might be the real problem. Built at times of economic prosperity and high growth rates, the Eurozone was meant by it’s founders to boost trade among the member countries to sustain a high rate of economic growth and to strengthen the economic power of the European Union inside the global economy.

However, enthusiasm of it’s founders, have omitted some essential weaknesses of the system created, such as:

a) highly incompatible national economic and social systems among the member countries;

b) high discrepancies in economic productivity.

These were exacerbated by the fact that the monetary union was never backed up by a fiscal union and by a coherent and single core of rules to regulate the banking system at the European Union level. In such an economic and social environment, the world financial crisis that emerged in 2007 has been just the trigger

to show the Eurozone weaknesses. Moreover, the approach of the issue, indicating the sovereign debt to be the real problem, while in reality it was just a cause of the system weaknesses, was also due to an approach that proved to have more political reasons behind it, than real economic thinking.

What really caused the huge level of government indebtedness in countries like Greece, Italy or Spain? Were the reasons similar? Was that only due to the existence of unsustainable huge public sectors in those economies?

If that would have been the only answer to the problem, then those were known for decades. They were known when the present troubled countries were considered to be fit to join the Eurozone. They were known when the most important European banks have heavily lent money to those countries, at levels at which they would have never even thought of supporting even the strongest private organization ever.

When the Eurozone was created, the weaker European economies, the ones with lower competitiveness have suddenly found themselves without the monetary tool they have used so often in the old system to boost their economies. In the multicurrency Europe, each time countries like Greece or Italy experienced a slowdown of their economies, they have referred to currency devaluation in order to boost exports and feed a new expansion of the economic growth. With the Eurozone in place, those economies have completely lost this monetary tool. When that happened, the real economy reacted in two ways: the public sector started to experience growing losses (that from political reasons were immediately covered by governments by increasing public expenditure) and the private sector found itself a way out, through fiscal indiscipline, either by delaying payment of taxes or even worse, through fiscal evasion.

Allocation of structural funds by Brussels to weaker economies in the system proved finally to be ineffective as it was not backed by national strategies to identify pillars of real economic growth and increase of competitiveness.

At a different level, before even the world economic crisis of 2007 started, the European economies have already started to show significant weaknesses in comparison, let’s say, with the U.S. economy, experiencing lower growth rates and higher unemployment in an era of economic growth. In fig.1 one can see that from 1999 until 2011, only in 2001 and during 2006-2008 the actual Eurozone had a better economic evolution than the USA.
By comparing the very essence of the U.S. and the European economies, the real difference goes to the social welfare. While the U.S. economy based itself for centuries on private initiative, a reduced public sector and social protection only for those in impossibility to support themselves, the European model was based on a huge and complicated social security system, an important role of the public sector in the real economy and a huge state bureaucracy. Thus, as soon as the crisis started, the most flexible economy found ways out in a lesser time, while the more rigid one, didn’t. It was actually, what Europe experienced since the crisis started: the failure of the social state.

One can argue that this is not true since countries with an extensive welfare like Germany or the Nordic states did not experience same troubles like Greece, Italy or Spain. Of course, it is true that paternalistic political systems in Southern Europe have supported corruption, fiscal evasion and an inefficient public sector. But this is not enough and it is simplistic to explain the real issues like this. Nordic and Continental European states have a more disciplined society and a more efficient government, but the real difference resides again in the organization of the economy. The McKinsey study „European growth and renewal: The path from crisis to recovery“, shows an important gap in productivity between Nordic (Sweden, Norway, Denmark, Finland) and Continental Europe countries (Germany, France, Netherlands, Belgium, Austria, Switzerland, Luxembourg) on the one side and Southern Europe countries (Italy, Spain, Greece, Portugal) on the other side(fig.2).

---

This difference in productivity allows the Nordic and Continental countries to allocate more funds to social security systems. But even in these countries, one can see lately some efforts to decrease the burden of the social security systems.

![Geographical clusters exhibit different productivity and employment trends](image)

**Figure 2:** Productivity and employment levels in different regions and countries (McKinsey & Company, 2011) ⁵

But if one looks closer even to the Northern and Continental European economies, they are far from being healthy. Sovereign debt is high even there (tab.1) and in many countries this exceeds the benchmark set up through the Maastricht Treaty regarding the level of government debt. Government expenses were mostly directed to social welfare and not to support growth, taxes represent a burden to the private sector. If the social path of the European economy will continue like this, the future doesn’t look good for none of the European economies.

<table>
<thead>
<tr>
<th></th>
<th>Government EDP debt in the euro area countries as percentage of GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1999</strong></td>
<td><strong>2007</strong></td>
</tr>
<tr>
<td>Greece</td>
<td>100.3</td>
</tr>
<tr>
<td>Italy</td>
<td>113.7</td>
</tr>
</tbody>
</table>

Another issue to be addressed in order to have a better diagnosis of the sickness, is the European banking system. When the world financial crisis started in 2007, European leaders put blame on the U.S. banking system. One can hear public statements of the most important political figures in Europe claiming for a tougher regulatory system in the U.S., avoiding in the future banks to overexpose themselves to various economic sectors and instead of supporting sustainable economic growth, to create financial bubbles in the global market. That was essentially true. But was really the European banking system that far from making the same mistakes? Were the European banking regulatory rules strong enough to avoid bubbles and generate crisis? Funny enough, if one will compare the U.S. economy with the European one, banks have done the same basic wrongdoings during the economic boom of the late 90's and the early 2000's, both in the U.S. and in Europe.

Leaving apart financial speculation, while in the U.S., with a large private corporate system, banks have lent money to the private sector beyond economic reason, just to keep growth levels up, in the social Europe, banks were lending...
heavily to governments, just to keep income levels growing and, therefore support consumption and growth.

Were European banks that guilty of lending such enormous funds to governments, beyond sustainable levels? Up to a certain extent, which has to do with sound economic judgement, they were. But the existing prudential rules in the banking system were at least that much guilty for the sovereign debt crisis. When banks lend money to private entities, based on risk generated by borrowers balance sheets and liquidity they base their decision, among other things, on provisions they have to build in connection with the risk implied by the borrower. When banks, on the other hand, lend money to governments, sovereign debt is considered risk free. So, no provisions are built. Why is that? Because so are the banking prudential rules. Was that directing banks towards funding sovereign debt almost without limit? Of course it did.

Under the circumstances, most of the action taken at the European Union institutions level, to contain the damage and to solve the problem, looked like the activity of a fire department. Issues were addressed only when various member countries experienced liquidity problems. And the solution found, to reduce public deficit’s by addressing only public expenditure and increasing taxes in order to reduce deficit’s, were not addressing the real causes of the regional problem. Austerity in it’self, without a real restructuring of the economy, reducing the size of the public sector and adjust the social security systems to sustainable levels, gave no positive results, with the economic turmoil deepening after four years of austerity programs. Troubled economies in Europe are still far from seeing the light at the end of the tunnel. In Greece, for instance, four years of austerity programs brought an increasing unemployment, economy experienced downfalls of more than 6% per year and under such conditions, public deficit’s were not reduced at the expected pace. Despite even the haircut offered by the European Union to Greek public debt, the size of this debt increased in 2012 comparing to 2008 when the crisis started. Same problems have occurred in Italy or Spain. Moreover, the way European institutions have addressed problems in troubled member countries have created problems in other member countries. The sovereign debt haircut offered to Greece, with no relevant plan to back up the assets of the lending banks, have produced heavy losses to the Cyprus banks, thus cornering the government of the Mediterranean island and putting it in the position to ask for a bailout.

Attempts at the European Union level, to come up with a coherent plan to introduce fiscal integration and with unitary bank regulations and prudential rules were not bringing any results, since documents agreed by the member countries
were not put in practice yet and anyhow they do not address all the problems and do not form a coherent package.

A minimal coherent plan to regain sustainable growth is needed

At the end of 2012, the European Union itself has to accept, that it will need to unveil the real problems of its regional economy and that it has to come up with a real and coherent plan to address these problems and to put back the economy on a course towards sustainable growth and European political leaders have to come together for this and look at the real interest of the region. Troubled countries leaders will have to put aside their attempts to delay necessary reforms, just to protect corrupt political systems they have created. The leaders of the rich countries in the region will have to put aside their plans to take advantage of other countries problems in order to strengthen their political leadership in the region. The European Union will have to look for its interest as a whole and will have to remain a club of equal members if it doesn't want to put itself on the path to dissolution.

A real plan to address the economic problem in Europe will have therefore to consider the real economic weaknesses of the region:

a) an exacerbated welfare system, that does not have anything related to the economy capacity to sustain it;

b) a bureaucratic and oversized administration both at national levels and at the European institutions level;

c) a large and inefficient public sector in the economy;

d) huge differences between member countries in the capacity of the private sector to produce innovation and generate increase in productivity.

Added to this, if European leaders wish to preserve both the Union at large and the Eurozone, they will have to come up with an integration of policies to include (and this will have to happen before it is too late):

a) a real fiscal integration, meant not only to contain public deficit's and introduce fiscal discipline. If the EU desires to become a real player in the global economy it will need to reform its public finances, based on a federative model, with member countries being, fiscally speaking, members of this federation; and it will need to lower tax burden in order to boost a sound economic growth;

b) a banking union at the European level and the enacting of the European Central Bank as the regulator of the European banking system, with the national central banks exercising supervision. As an individual issue, if European institutions will desire to include non-Euro member countries into this “banking union”, they will have to find a way to give them limited membership at the European Central
Bank. Such a move will anyhow become necessary since all the still non-Euro member countries are on the path to join Eurozone and are highly integrated with the economies of the Eurozone member countries;

c) recognition of the fact that existing sovereign debt represents just an artificial burden to restart economic growth and the application of a “Brady Plan” for the existing sovereign debt simultaneously with the issue of European bonds by the European Central Bank to cover the existing balance of the sovereign debt. Such an action will relieve burden from using resources for a real restructuring of the economy and in connection with a united banking regulatory system will put European banks on a solid ground while not affecting their liquidity due to wrong judgement in the past. We have to remind that the Brady Plan helped Mexico, Argentina, Brazil, Bulgaria, Costa Rica, the Dominican Republic, Ecuador, Ivory Coast (Cote d’Ivoire), Jordan, Nigeria, Panama, Peru, the Philippines, Poland, Russia, Uruguay, Venezuela and Vietnam to contain the international debt crisis generated in the late 80’s in the developing countries, through an „exchange of loans for either Par Bonds or Discount Bonds. Par Bonds resulted from an exchange of loans for bonds of equal face amount, with a fixed, below-market rate of interest, allowing for long-term debt service reduction by means of concessionary interest terms. Discount Bonds resulted from an exchange of loans for a lesser amount of face value in bonds (generally a 30-50% discount), allowing for immediate debt reduction, with a market-based floating rate of interest. The principal of both Par and Discount Bonds was secured at final maturity by a pledge of zero-coupon instruments which, in the case of Par and Discount Bonds denominated in U.S. dollars, were U.S. Treasury securities. A portion of the interest payable on Par and Discount Bonds (generally from 12 to 24 months coverage) was also secured by the pledge of high-grade investment securities.” (EMTA, 2009)

The total amount of Brady bonds issued by these countries exceeded 160 billion US$;

d) creating at the Union level of funds to support development in member countries, directed especially to support innovation and competitiveness of the private sector; create decision flexibility of such funds allocation, by hiring private investment banking institutions to manage such funds;

e) creating an economic plan to address reform of the welfare system, reducing of the public sector (by extensive privatization and/or enhancing structural reforms to increase the performance in the public sector) and administrative bureaucracy. Such a plan will have to be adopted at the Union level and become obligatory for each member country for it’s part of it. Such will overpass the social and political oppositions from some European countries.

Conclusions

It is true that last couple of years proved such tough decisions were difficult to be taken, due mostly to different economic and political interest of various member countries and also due to ideological conflicts in some member countries, between preservation of national interest and higher regional integration. But at the end, Europe will have to come up with a coherent plan and create institutions that will be able to react promptly to any events in the global economy. Such a plan is necessary. The problems that undermine the competitiveness of the European economy are real. And it will be better to act quickly and start the new union with those member countries that are willing to adhere to it now, rather than waiting for ages to reach unanimity. Leaving the Eurozone for those countries which might have different strategies to address their economic problems, eventually better fit to their national characteristics, will not be a disaster in it'self. As the European Union of today can function with Eurozone members and non-Eurozone members and monetary wise this works perfectly well, it is not a real issue how member countries join or leave the Eurozone. It is of course a logistic issue, but only that.

The real issue is to have those countries which find themselves to have common values and goals inside the European Union, to address the real problems that are common for all European economies and to regain power to start again economic growth, this time on solid bases.

References

Estimation Techniques Based Flexible Fuzzy Models

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Fuzzy logic modeling is based on the idea that a linear model with unknown functional form can be approximated by more simple mathematical relationships, each valid only in a small region of the domain defined variables. For the application of these relations is not only needed to specify the model structure, to choose a number of fuzzy sets that cover this area (ranked by magnitude, under a scheme of progression) with associated membership functions. The next phase is the integration of these local relationships in a global model, which can then be used for analysis, optimization and prediction process.

Estimation model of fuzzy logic

The definition of each local relation is given in terms of a modified version of the logical structure called “generalized modus ponens”, the premise of each rule is a parametric equation with respect to the input variables of the model. Thus, the implication of rank and we have:

\[ R_i : \text{Daca } f^i(x_1 \text{ este } A_1 \land ... \land x_k \text{ este } A_k) \text{ atunci } y_i = P_i(x_1, ..., x_k) \] where \( A_i \) is a lot associated fuzzy membership function \( v_{A_i}(x_t) \).

For a given input vector, \( x \in \mathbb{R}^K \), can be several relations \( y_i = P_i(x) \), depending on the degree of consistency of composite fuzzy rule premise and input vector. In order to incorporate these local solutions into a global solution, we use a scheme defuzzyficare. Thus, using defuzzyficarea based on a weighted average, expected output fuzzy system becomes:

\[
\hat{y} = \frac{\sum w_i \cdot y^i}{\sum w_i} = \frac{\sum op[u^i_1(x_1), ..., u^i_k(x_k)] \cdot P^i(x_1, ..., x_k)}{\sum op[u^1_1(x_1), ..., u^k_k(x_k)]}
\]
where “op” denotes a fuzzy operation (usually the operator “minimum” or operator “product”) and

$$\text{minSSE} = \sum (y_i - \hat{y})^2$$

using a parametric optimization procedure. Algorithms with the best performance are geared to that number Levenberg-Marquardt, Gauss-Newton respectively.

Identification of model structure is essential for accurate representation of the process analyzed. An exhaustive search, consisting of evaluating all possible structures for a given model to determine which one is better, of course not realistic. The appropriate procedure for identifying structure seems to consist then gradually increased after a predefined rule, the complexity of the structure until increasing complexity of models, not induce further improvement of the accuracy estimate.

It is useful to partition the sample, dividing the available data into two sub-samples: a sample of work (learning), used to identify the parameters of local relations and a control sample (sample) used for testing the model accuracy at points different from those used to estimate model parameters. The model that best adjusts both sets of data is considered to have the best structure.

Once partitioned sample, you can proceed to estimate the simplest possible model (the one with the structure described by $1 \times 1 \times \ldots \times 1$), based on sample data from it. Estimated parameters are then used to calculate the coefficient of determination $R^2$ for both data sets ($R_{\text{lucru}}$ and $R_{\text{proba}}$). Thereafter, increase complexity in relation to initial structure and a new level of structure will be generated.

For a model with $k$ input variables obtain new structures $k \ldots \times 1 \times 2 \times 1 \times x$, $1 \times 2 \times x \times 1 \times \ldots \times 1$. With the estimated parameters $k$ models (using only the sample of work) is calculated coefficients of determination and $R_{\text{lucru}}$ and $R_{\text{proba}}$ was then used to rank in descending order structures. Structure / structures with minimum $R_{\text{proba}}$ will be selected to continue generating a new structure, with a greater degree of complexity, improve the coefficient of determination until no longer posibila. În final model parameters are estimated using optimal structure and all available data.

**Optimization based on fuzzy logic mode**

The estimated fuzzy logic can be used to optimize the economic process nonlinear considered.

Be a function

$$f: [-2, \ 2] \times [-2, \ 2] \rightarrow \mathbb{R},$$
\[ f(x_1, x_2) = e^{x_1^2 \cdot x_2^2} \cdot \sin(x_1 - 2 \cdot x_2) \]

providing an example of a complex surface. A three-dimensional representation of this function is given on the left side of Figure 1.

For a 4x4 structure, the estimated parameters of the 16 local relationship type

\[ y_i = a_{i0} + a_{i1} \cdot x_1 + a_{i2} \cdot x_2, \quad i=1,\ldots,16 \]

the fuzzy logic model are:

<table>
<thead>
<tr>
<th>(a_{i0})</th>
<th>(a_{i1})</th>
<th>(a_{i2})</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.2384</td>
<td>0.3155</td>
<td>0.3077</td>
</tr>
<tr>
<td>0.6494</td>
<td>0.2227</td>
<td>0.2910</td>
</tr>
<tr>
<td>0.2356</td>
<td>0.2207</td>
<td>0.3297</td>
</tr>
<tr>
<td>-0.0030</td>
<td>0.3155</td>
<td>0.3130</td>
</tr>
<tr>
<td>0.8753</td>
<td>0.2793</td>
<td>0.3429</td>
</tr>
<tr>
<td>0.9400</td>
<td>0.4056</td>
<td>0.5441</td>
</tr>
<tr>
<td>0.5262</td>
<td>0.4056</td>
<td>0.5441</td>
</tr>
<tr>
<td>-0.3660</td>
<td>0.2793</td>
<td>0.2777</td>
</tr>
<tr>
<td>0.3660</td>
<td>0.2793</td>
<td>0.2777</td>
</tr>
<tr>
<td>-0.5262</td>
<td>0.4056</td>
<td>0.0766</td>
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<tr>
<td>-0.9400</td>
<td>0.4056</td>
<td>0.5441</td>
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<tr>
<td>-0.8753</td>
<td>0.2793</td>
<td>0.3429</td>
</tr>
<tr>
<td>0.0030</td>
<td>0.3155</td>
<td>0.3130</td>
</tr>
</tbody>
</table>

Quality adjustment is given by the coefficient of determination

\[ R^2 = 0.9385539 \]

Graphical representation of fuzzy logic model is shown in the right figure.
**Figure 2: Adjustment accuracy by linear model in fuzzy logic**

Consider the following two nonlinear optimization problems

\[
\min FLM (x_1, x_2)
\]

restrictions:

\[
\max FLM (x_1, x_2)
\]

with restrictions:

Using a nonlinear optimization procedure, we find:

\[
x_{mn} = (0.6667, 0),\quad x_{mn} = (-0.6667, 0)
\]

Graphical solutions are illustrated in Figure 3

Contour lines. extreme points \(x_{\min}=(0.6667, 0); x_{\max}=(-0.6667, 0)\)
References

The Indirect Taxes in Romania - Actuality and Perspectives

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With regard to the national economy, the state intervention headed to a system based on direct or indirect taxes, represents a very important factor with major influences in the companies activity, underlain by some taxes as it follows: the internal economical environment, the population incomes and its stucture, the augmentation of the labour force and the capital mobility, as well as the trends of market globalization. The indirect taxes have a dominant weight in the financial burden shaping and remain the main income of the national budget. The financial burden is also very important in order to establish the competitiveness level of the national industrial companies. The extremely important taxes role and the assurance of the optimum financial pressure in carrying out the economic circuit adjustment within the company, leads to the necessity of studying and reformation of this sector.

Keywords: direct taxes, indirect taxes, tax system, consumption taxes, customs

JEL Classification: H25, P11

Introduction

Taxes are being used as an economic political lever and this is proved by their actual perception and arrangement. Henceforth, the taxes are presented as accelerating or decelerating instruments of the economic activities, and some merchandise/services consumption.

According to the most important criterion of taxes classification – regarding their configuration and content- they are divided in direct and indirect taxes.

Direct taxes represent the most common form of enforcement. The direct
taxes, as they are defined by the laws in force, are presented as it follows: the profit tax, tax on microenterprise income, tax on salaries, tax on dividends, tax on natural person incomes. It may also be included here the social contributions (social insurance, health insurance, unemployment, etc.). The direct taxes affect the nominal incomes, while the indirect ones affect the purchasing power of contributors, so their real earnings. The direct taxes are obvious and induce quick reactions from the contributors when it becomes hard to bare, whereas the indirect ones are disguised.

The indirect taxes regarding the merchandises selling, imports and services are established by the state, and the rates used are not differentially calculated depending on the income, opulence, personal situation of the potential purchasers of the goods/services - services which lead to the indirect taxes. Therefore, they are calculated for all the consumers, and as a result, apparently the indirect taxes seem to affect equally all the social categories, and to be the most equitable choice. The indirect taxes are perceived on the occasion of the measurement of some goods, services and performances and the tax quality is assigned to a natural or juridical person, other than it’s endurer. The indirect taxes have an essential role in the rapid obtaining of important resources for the estate disposal.

Aspects regarding the indirect taxes in Romania

The indirect taxes can be classified by their object as:1

a) Consumption taxes – it represents the main form of the indirect taxes. After they coverage grade, they are divided in special consumption taxes (excise) and general consumption taxes.

“The special consumption taxes” were arranged above some goods/services, especially of current consumption, eventhough the coverage sphere have increased to goods with higher values, adding harmful goods, unique and luxurious products. Starting from the consumption taxes object, a new state-contributor controversy is created:2

• The state prefers the goods of current consumption, without a potential substitute. With a inelastic consumption request, because their financial yield is higher and may provide safe and stable incomes to the state.

• The citizens would prefer the absence of these taxes, but if it was to exist, then they souls be arranged above some merchandises, other than the vital

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ones, at which the physiological coercion for the consumption don’t operate.

Solving the controversy, the compromise, meant excluding the vital goods from the consumption taxes area, and “random casting” of some important taxes for the luxurious and harmful goods in an abusive manner, in order to compensate the budget income decreasing.

The special consumption taxes, also known as excises, may be used by the state as financial levers in order to control consumption, in a decreasing direction, thus, on the behalf of some social interests, the state endeavour to cut down the usage of those harmful goods. At the moment, the excises are being calculated either in fixedly sum related to the unit of measure, or based on some rates applied to the selling price. In normal conditions the imported products must be treated with the same rates as the indigenous ones, while the exported products are exempted from excises.

The juridical background for the excises is represented by The 7th Title from the Tax Code of Romania, with the modifications added subsequently, the Government Decreee no.30 August 2011 as an annex or changing to the Law no. 571/2003.

In these latter days, the excises are applied to harmful or luxurious products and hydrocarbons; for example in France: the wine, the cidre, the beer, the mineral waters, in Great Britain: beer, wine, alcohol, tabacco, mineral oil, in Germany cigarettes, coffee, sugar, tea, mineral oil, in India: petroleum products, tabacco, vegetal oil, chimical, textile, juta industrial products, in Thailand: alcohol, soft drinks, petroleum products, cement.

In Romania, at the moment, excises are paid to the state budget for the following three categories:
   a) Alcoholic drinks
   b) Processed tabacco
   c) Energetic products and electricity

In addition to this, are some products specified at Article no. 207 from the Tax Code of Romania:
   a) Green coffee, with NC 0901 11 00 and 0901 12 00 codes;
   b) Toasted coffee, including substitutes, with NC 0901 21 00, 0901 22 00 and

5 Law no.571 from 22 December 2003 – Fiscal Code of Romania with the modifications and following addings;
6 idem
0901 90 90 codes

c) Soluble coffee, including mixtures with soluble coffee, with NC 2101 11 and 2101 12 codes

The general consumption taxes are met as turnover tax, which was included after the World War I, being placed above the industrial and commercial enterprises, totalising all the influx of an economic agent regardless it’s activity, in order to quantify the volume and the evolution of its activity.7

The general consumption taxes differ from the special consumption taxes regarding the enforcement base, which is larger regarding the coverage as payers of all the economic agents and merchandises. Taking into account that the tax base is high, the state incomes derived from that will be higher, therefore this tax type will be preferred by the state.

The multiple-phase tax

The multiple-phase tax was named after the fact that the enforcement is done for each link is roaming from its first producer to the final producer. The basis for a calculation is represented by the selling price of the merchandises, in each phase and includes the cost, the profit and taxes previously paid, upstream. Being placed above all the goods and services and having this kind of calculating basis, the multiple-phase tax has a very high yield. While the calculating basis offers the advantage of a financial yield, it also comes with two disadvantages8:

• The lack of neutrality – the multiple-phase tax gives odds to the economic agents who are integrated on the vertical; in practice, in a modern economy, the specialization tendency should be encouraged

• The lack of transparency – adding to the calculating basis the taxes paid upstream, an awkward fact, reaches the impossibility to set the total volume of the taxes, related to the final price of the consumer

• The multiple-phase tax is an cumulative tax, perceived in a cascade, at each phase of the goods marketing, acting as the snowball technique, adding each time at the delivery price of the merchandise; thus, it appears the unnatural situation to apply the tax on the taxes from the previous phases. It is necessary for the tax to be at an average level, in case of repeatedly taxation, in order to be tolerable. Nevertheless, the multiple-phase tax presents some advantages9, too:

• It doesn’t particularly incite to (being kept at an average level);

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9 Niculeasa M.I., op.cit., p. 712.
• The constancy quality of the producer doesn’t represent a problem anymore, because all the transactions made consecutively with the same product are in the scope of the tax.

**The single-phase tax**

The single-phase tax (unique) is characterised by the fact that is perceived only once, either from the producer who sells its ware to the final consumer (the most appealing solution, preferred by the Fisc, because the placement and perception costs are extremely numerous) – and it’s called tax on production - , or from the seller and it is called tax on circulation.

Despite its simplicity, the unique tax on the production is facing two major difficulties:

• Because it is taken over only once, it has to be at a high level, in order to be productive; but the excessive financial pressure incite at financial fraud, and the most usual option is appealing to underground activities

• There are goods which pass through multiple phases regarding their processing and marketing on their process to the final consumer, therefore it appears a problem about when the tax should be perceived. The most common example refers to the textile products (strings, confections, tissues). The rule is to pretend taxes from the final producer, without any other alternatives modifications. The solution is advantageous to the Fisc, because the final product has also the highest value, therefore it represents the most abundant taxable matter.

**The unique tax fractionally collected (Value Added Tax)**

The unique tax fractionally collected (Value Added Tax) represents 24% from the product/service price. The V.A.T. appeared from the combination of two previous versions and is based on the added value of each economic agent who is involved in the economic cycle of producing the goods which are subjected to this tax. This tax type eliminates the disadvantages found at the multiple-phase tax, being a neutral tax at the economic agents specialisation and total transparent, being known at any moment the tax quantum in the goods price, in every phase of the economic cycle.

The V.A.T. can be used as a financial lever in order to obligate the economic agents to shorten their economic cycle and to recover the tax on the paid added value.

Regarding the usage of the general taxes on consumption as financial levers,

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10 Dascălu D., Alexandru C., op.cit., p. 234.
we must take into account the following considerations:\(^{11}\):

- In view of the disadvantages of the first two general taxes of consumption forms (the lack of neutrality and transparency) it is preferable to use the value added tax.

- The value added tax were introduced circumscriptions; some of the most important were: the augmentation of the budget incomes – a financial function, the necessity of replacing the anachronistic formula of the tax on the ware circulation and the need to compatibility with the financial systems of Europe. In other terms, the main aim of the V.A.T. introduction was not to be used as a financial lever.

- The aplatization of the V.A.T. rates leads to unwanted economical effects, especially regarding the vital goods/services producers for the population, effects generated firstly by increasing the prices of those goods and services.

Using the V.A.T. as a financial lever involves also organisation and good management\(^{12}\). For example, it would be normal and necessary, that in case that the economic agent registers V.A.T. to recover, he should obtain those sums as fast as possible, and to even bonify some rates, for the interval when it was not refunded - a situation similar to major delay perceptions of paying the V.A.T. owed.

In conclusion, the V.A.T. fulfills, firstly, financial reasons, there upon eventually, the role of financial lever. The most advantages of this tax don't refer to it usage as a financial lever, but to deleting some deficiencies of the old forms of the general tax on consumption\(^{13}\). The V.A.T. doesn't significantly influence the consumption of some ware/services. Instead of it can reduce the consumption of some goods/services if there are applied some overtaxes - an increased rate of V.A.T., an effect similar to the excises application. The V.A.T. reduces, globally and indirectly the purchasing power of the citizens incomes, by increasing the prices with this tax, as well as, the indirect taxes reduce directly the earnings. Some authors\(^{14}\) consider that, whereas the tax on the natural persons incomes and the V.A.T. have the same effect- the first one realises this directly, while the second indirectly-, both should be correlated through their effects, preferred as a lever, the tax on income through it's direct action.

b) Duties – presented as a rate applied on the value in custom (taxe ad valorem), or as a fixed sum applied to the value in custom (specific taxes). Taking into account their perceiving moments, these can be divided in:

- **Import duties** - represent an important lever of the economic

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11 Niculeasa M.I., op.cit., p. 715.
12 Vacarel and others, Publics Finances, A+ publishing House, p. 172.
13 Dascălu D., Alexandru C., op.cit., p. 236
perfectionism, where the protection of the national economic interests is desired. This can be possible because the import duties will increase the prices of the imported ware, and therefore the indigenous purchasers will be “forced” to buy the indigenous products, when the differences regarding the quality are not significant, or when the price difference doesn’t justify the qualitative differences. In this case, besides the economic motivations, some political connotations of the customs politics pregnantly interfere. Nevertheless, today, taking into account the specific of the worldwide economy, the duties become more and more anachronic. The import duties represent a compromise between the advantages and the disadvantages of a national economy protected by the foreign competition and the version of a free open economy. In order to understand this compromise, it must be taken into account the worldwide pressure, with clear advantages for all the consumers, as well as, the liberalisation possibilities existent or absent, depending on the grade of development the national economy in discussion.

The import duties must pay great attention to the imports which sustain the development of the national economy.

- **Export duties** – have economical reasons just in some particular conditions: the existence of some material or technological resources on which a certain monopoly situation is held, those resources are being threatened to be used up, or their remaking needs long time, while their resources are considered to be strategic. However, as a general rule, it is desired the export stimulation, not its inhibition, because the export is the main source to obtain “strong currency”. In other words, in majority of cases it is hard to find economic arguments in favour of these duties.16

- **Transit duties** – don’t have real economic targets to justify their usage as financial levers, because that ware, neither come in, nor come out from the national territory – it just passes through it. In other words, the goods which transit don’t affect the national economy. The transit activities, using the means of transport, the storing facilities, transboarding, reencasing, conditioning existent on the national territory should be encouraged.

In conclusion the duties should not be neglected in some cases, but their activating as financial levers is quite difficult in our contemporary economy conditions. Not even a country can discount the planetary interdependencies; nobody can continue to live isolated in a camp – political or not - , a more than obviously fact in duties politics17.

15 Dascălu D., Alexandru C., op.cit., p. 245
16 Niculeasa M.I., op.cit., p. 725
17 Niculeasa M.I., op.cit., p. 728
Things should be attentively analysed, taking into account the development level of that national economy. Therefore, in a "dizzy" transit with economy, low developed, some measures specific for the customs protectionism, with the condition to come back to normal, to liberalism, as soon as the economy allows it.

- **Financial monopolies** – each state reserves the right to produce exclusively some goods. At the beginning it was a monopoly on salt mines, producing and commercialising matches, gathering and valorising tobacco, tobacco special paper, explosives, alcohol. The direct tax included in the products price, submitted to the monopoly politics is settled in a different quantum from each good to other, suited for the state interest, being called as financial monopolies.

  In our country, the financial monopolies take part in the following spheres: weaponry, munition, explosives, medicines which contain some kind of drugs, postmarks, stamps, producing and commercialising, the exploitation of games systems, stakes, producing and importing alcohol, sports forecasts, tobacco. The exploitation of this activity can be done only by the economic agent who obtain legal licences from the Ministry of Finance.

- **Stamp and registering duties** – represents the payments done by different natural or juridical persons, for the services for them by some institutions of public law.

Judging from their nature, the taxes may classified in:
- Juridical taxes;
- Notarized taxes;
- Consulting taxes;
- Administration taxes;

In order to the best analysis of the indirect taxes, it is necessary their studies related to the direct taxes, in order to a fair assesment regarding their content and features.  

**The direct-indirect taxes controversy**

Generally, in the fiscal area, a state option involves choosing either direct, or indirect taxes after several criteria:

1. The controversy regarding the administrative criteria – used commonly, but less rigorously – it appears related to the character of the two categories: the direct taxes are nominatives (the contributors appear in the financial evidences, each one of them having opened some "financial roles"), while at the indirect ones, the payer remain unknown until the first moment.

2. The controversy regarding the economic criteria – it appears related to
the incidence of the two type of taxes: direct incidence in the direct taxes case, and indirect incidence in the indirect ones.

3. The controverse regarding the financial criteria – the separation is done depending on the persistance of the enforced matter: the indirect taxes reffer to transit operations regarding production, trade, import –gouverned by the verb ”to do”-, and the direct ones work with stable incomes- gounverned by the verb ”to have”.

By comparing the two tax types (direct and indirect ) it can be observed the inequity of the indirect taxes:

- The indirect taxes are proportional
- The indirect taxes can not be avoided, when are arranged above some current consumption goods
- The indirect taxes can not be stable, when are arrange dabove some current consumption goods

Regarding their usage as financial levers and comaping to the direct taxes, we may affirm that:

- The indirect taxes appeared from financial reasons
- The indirect taxes are proportional taxes, or even regressive
- The indirect taxes copy the economy evolution
- There are taxes on consumption and therefore, at least at first sight, the state may use them to correct the input and influence the economic cycle

Throughout the years, there were different opinions about the report between the direct and indirect taxes, within the financial budget incomes. Nevertheless, the following general points of view are important:

a) ”the desirable balance”- it considers that it shoul exist a certain balanced status

Between the direct and indirect taxes, judging that in this way two major aims are fulfilled: efficiency and high equity. Within the balance, the direct taxes are considered elements which would increase the equity, because of their feature to take into account the contributive of the people to whom is addresed, while the indirect taxes assure the efficiency by taking into account the idea that they can be avoided just by unpurchasing the goods – in whose price this type of tax exists – and by physiological constraints.

b) ”the direct taxes superiority” – idea sustained by numerous contemporary financial and political member as a continution of the opinions voiced, throughout

the years. This idea supporters\textsuperscript{20} are basing on qualitative criteria, efficiency and administrative costs, which may be upgraded to a really high level, regarding the popularity of direct taxes.

c) The unique tax - either the direct, or the indirect one – would reduce a lot the administrative procedures and would come to help the contributors unacquainted with the problems of managing a system with various taxes. Thus, the necessity perception of the tax payment would be practically solved and it wouldn’t exist anymore problems regarding the unique tax collection. Some authors\textsuperscript{21} consider there remained some supporters even nowadays, Iulian Silviu Alb, for example, a Romanian economist, who launched the idea of all taxes abolition, except the V.A.T., in 1998. In this way, the state budget would be fill in only by this source and the advantage is, as the author says, encouraging investments, labour, profit increase, financial system simplification, relaunching the capital market and spectacular growing of direct portfolio investments. There would be arguments, starting from refusing this type of system for the developed countries – where their economy could support this – to negatives effects of this system. Furthermore, claim the opponents of this idea, more taxes can comprise better the enforced matter: the income, the opulence, the products involved in the exchange, services, and can influence the economic processes, and also the individual and economic agents behaviour; this determine a number of different taxes from a country to another.

d) The indirect taxes supporters claim that the main advantages are that the effects are wider spread within the financial community, promoting social responsibility and many times the tax is paid without the payer awareness, because it appears in the ware/service purchasing price. The indirect taxes don’t mean to discourage the effort, but even to increase if it is applied to desirable goods and services. Moreover, the indirect taxes can be used to promote some financial desirable politics: great excises for tabacco can reduce the cancer danger, for alcohol can reduce the abusive consumption of drinks, for gambling can reduce the unfair enrichment. This idea supporters\textsuperscript{22} consider that this taxes would the most equitable, assuring a perfect equality for all the consumers – everybody who buys the same product/service must pay the same taxes. In fact (the opponents claim) the indirect taxes are the most inequitable, because of their regressive character and impossibility for a dutiable minimum.\textsuperscript{23}

In practice, in order to have concludent results, a state financial politics

\begin{itemize}
\item \textsuperscript{20} Niculeasa M.I., op.cit., p. 694
\item \textsuperscript{21} Bălan E., Drept financiar, ed.a 3-a, Editura All Beck, Bucureşti, 2004, p. 308.
\item \textsuperscript{23} Niculeasa M.I., op.cit., p. 696.
\end{itemize}
must have a clear strategy, interdependent with the budget cost and currency policy.

If the majority of the direct taxes contributes to a part absorption from the excessive currency, reducing the inflation or maintaining it at certain rates, introducing or increasing the indirect taxes have most of the times inflationist effects, fact noticed after the V.A.T introduction or augmentation, so the higher budget incomes could be possible or after the new increased duties, if it is impossible for the import to obtain a reduction of the import price from the exporter.

“Going even further, the shift of paradigm needs to be done from the public consumption to the investment in know-how, based on the self-evident truths that education contributes to the personal development, to the social cohesion, to the productivity; it exerts a significant influence on the economic growth and reduces the social costs”24.

Conclusions

The main advantages of the indirect taxes are that the effects are wider spread within the financial community, promoting social responsibility and many times the tax is paid without the payer awareness, because it appears in the ware/service purchasing price. The indirect taxes don’t mean to discourage the effort, but even to increase if it is applied to desirable goods and services. Moreover, the indirect taxes can be used to promote some financial desirable politics: great excises for tobacco can reduce the cancer danger, for alcohol can reduce the abusive consumption of drinks, for gambling can reduce the unfair enrichment.

Besides the obvious advantages, there are some shortcomings specific for the indirect taxes. Firstly, the regressiveness related to the consumer incomes, making it hard to stand for the poor or numerous families. It was partially corrected by abolishing or reducing the taxes on the vital products and increasing the ones for the luxurious consumption.

On the other hand, the indirect taxes can exert an inflationist pressure if the wages are indexed regard the prices evolution.

Despite the complexity of these tax methods, the advantages of the unique tax fractionally collected are egregious; because of these the French tax model of the added value was generalised in other European States – at the present it is applied in over 70 states.

Romania was forced to increase the V.A.T. by 5% in 2010, within the global

24 Ion Pargaru & Rodica Gherghina, 2009. “The Role Of Education In The Knowledge-Based Society During The Economic Crisis,” Annales Universitatis Apulensis Series Oeconomica, Faculty of Sciences, “1 Decembrie 1918” University, Alba Iulia, vol. 2(11), pages 4
economic crisis. This lead to the purchasing power decreasing and quite serious social effects.

The direct taxes weight in Romania’s financial income was diminished from approximatively 50% in the ’90 to 20 % in 2011). At the moment, the indirect taxes represent the main source of the budget incomes, (almost 65% from the total budget incomes came from the V.A.T.), fact determined by the economy evolution, but also the financial policy measures leads to strategy financial budget adopted at the national level.

Thus, we can notice that in the countries on thei way to developpement, the higher weight belongs to the indirect taxes, because their collection is simpler, and the perception basis of the direct taxes is reduced due to the poverty and financial evasion.

The existance of a strong middle class, with incomes which creates a large basis of raxes applianec as de social policy of proection the poor individuals, through indirect taxes, reduced for the products at large consumption, determines in the occidental countries a higher weight of the direct taxes in the total of teh budget incomes, compared to with the weight of the indirects taxes.

References

[18] Vacarel and others, Publics Finances, A+ publishing House

*** Law no.571 from 22 December 2003 – Fiscal Code of Romania with the modifications and following addings;

*** Law no.174/2004 to approve the Gouvernment Ordonance no. 92/2003 - Fiscal Procedure Code with the modifications and following addings;
Entrepreneurial Skills in Romanian SME’s: Demands and Facts

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The development of entrepreneurial skills becomes increasingly more a subject of educational programs, a process facilitated in Romania especially through the implementation of the Sector Operational Program Human Resources Development. For a training program in this field, few basic questions must be asked: what are the skills of an entrepreneur - those he or she must have and those that should be developed? This article tries to find answers through the results of a study on managers and management staff of over 2000 small and middle enterprises in 2011. These result show relatively homogeneous perceptions regarding the level of mastery of entrepreneurial skills and training needs, but reveals differences determined by the respondents’ position in the companies where they work.

The first part of the article presents the research methodology, the second main results, and in the final conclusions and some future ideas for further similar or related research.

Keywords: entrepreneurial skills, development training needs survey, SMEs

Introduction

This article describes the approach and results of a study designed to identify on one hand, the training needs in entrepreneurship and, on the other hand, the entrepreneurial opportunities for staff management in Small and Medium Enterprises (SMEs) in five development regions of Romania, centered in 11 counties and in Bucharest. This study was conducted in 2011 within the project “Development of entrepreneurship and increase of business competitiveness”, financed by Operational Program Human Resources Development (PO-SDRU/92/3.1/S/61820). Based on these results, the project beneficiary has spanned the training programs
for better targeting the expectations of the SMEs’ economic environment in terms of entrepreneurial skills.

The arguments to complete this study lie, obviously, in the national and European context to find the best ways to stimulate economic development, especially in these times of economic and financial crisis. EU places at the heart of its policies the development of SMEs. More than 23 million SMEs in Europe account for 99% of the total number of enterprises and they are considered as a main driving force for economic growth and employment, to stimulate innovation and social inclusion (Audretsch, D., et al, 2009).

Entrepreneurship is not a natural gift (Junior Achievement Young Enterprise Europe, 2006) and therefore it is considered necessary to train and stimulate the mindset to target entrepreneurial action. This process has pre-dominantly an educational, where mainly young people should be attracted to create and develop entrepreneurial skills and behaviors. Numerous studies show a direct link with a positive impact of education, of higher education, upon the attitude of young graduates to start their own business (European Commission, 2012). In other cases, less numerous, the impact of following an educational program dedicated to the formation and development of entrepreneurial skills and culture seems to be insignificant (Hessel Oosterbeek, Mirjam van Praag, Auke Ijsselstein, 2010).

Developing the skills of entrepreneurs, managers and workers is essential to improve the performance of SMEs, as they must be able to adapt quickly to market developments, to social environment and legislative changes. In Romania, crossing a tortuous process of economic growth and recession, the development of private sector is a necessity to ensure sustainable prosperity. In the context where the establishment of a SME is not only a path to success, but a matter of survival, the development of the entrepreneurial spirit through appropriate educational programs is one of the main ways, if only, to create a stable foundation of the Romanian economy.

Measuring the level of entrepreneurial skills and their development needs is not an easy endeavor because entrepreneurship is a complex phenomenon with many facets that joins psychological and sociological aspects, not just economic (Audretsch, 2003). In the past 30 years, we are witnessing an explosion of academic contributions to the investigation of factors that influence entrepreneurship, although these concerns were initiated in the early twentieth century. For example, in 1911 Schumpeter creates in his “Theory of Economic Development” the first portrait of the entrepreneur, who is both an innovator and an agent of change. The literature on this subject is extremely wide. A comprehensive overview is provided by David
B. Audretsch (Audretsch, 2003), by selecting criteria considered to be essential to characterize entrepreneurship in space and time. In addition to the required theoretical framework, he investigates the relationship between entrepreneurship and the functional, legal and business tax framework. He also analyzes the individual factors that determine an individual’s decision to start a business on their own.

Entrepreneurship is the key to economic performance. This spirit, however, is given by entwining specific individual skills and their manifestation at the right time and in the right context is crucial for success in business. In a report by the OECD on the required skills for success in life, it is stated that competence is more than knowledge and skills. It involves the ability to meet complex requirements in a particular context, attracting and mobilizing psychological resources, including the skills and attitudes (OECD, 2005).

The knowledge and the development of entrepreneurial skills has expanded in recent years mainly due to the influence of business and academic environments from North America, Japan, Australia and Europe. However, the approaches in defining the entrepreneurial skills are similar, based on a set of fundamental axes that combines personal trait’s of character with those specific to general management and with those that include knowledge and skills to manage business processes, integrating financial and accounting, tax or legal aspects.

The study presented below aims to assess the current status and the needs to develop the entrepreneurial skills within an instrumental framework based on four main factors associated with business success: human, psychological, sociological and financial. Without claiming an exhaustive approach, the survey tools were based on the results of similar studies conducted in Europe (EU SME Project Albania, 2010; Caroline Dominguez [...], 2010) and United States (Lichtenstein and Lyons GA TS, 1996, Leslie P. Roberts, 2010).

Survey methodology

*The target population and the sample*

According to the project objectives, the quantitative survey aimed at the realization of 2000 interviews in SMEs located in 5 development regions (target regions). Based on the situation of active companies on 1 January 2011, the counties included in the target regions accounted 105,817 registered companies, whose distribution is shown in the table below. The table also presents the distribution of the 2000 sampled companies by county.
Table 1: The distribution of active SMEs on 1 January 2011 by target counties and size classes

<table>
<thead>
<tr>
<th>County</th>
<th>SMEs by number of employees</th>
<th>Sample size</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Under 8</td>
<td>Between 10 and 49</td>
</tr>
<tr>
<td>Arad</td>
<td>84,0</td>
<td>14,0</td>
</tr>
<tr>
<td>Argeș</td>
<td>81,5</td>
<td>15,8</td>
</tr>
<tr>
<td>Brașov</td>
<td>83,0</td>
<td>14,5</td>
</tr>
<tr>
<td>Calarași</td>
<td>79,9</td>
<td>17,6</td>
</tr>
<tr>
<td>Iasi</td>
<td>83,5</td>
<td>14,3</td>
</tr>
<tr>
<td>Ilfov</td>
<td>87,8</td>
<td>9,3</td>
</tr>
<tr>
<td>Neamţ</td>
<td>83,6</td>
<td>13,8</td>
</tr>
<tr>
<td>Prahova</td>
<td>82,8</td>
<td>14,6</td>
</tr>
<tr>
<td>Sibiu</td>
<td>84,3</td>
<td>13,2</td>
</tr>
<tr>
<td>Suceava</td>
<td>83,8</td>
<td>14,0</td>
</tr>
<tr>
<td>Timiș</td>
<td>84,0</td>
<td>13,7</td>
</tr>
<tr>
<td>Municipiul București</td>
<td>85,3</td>
<td>12,6</td>
</tr>
<tr>
<td>Total</td>
<td>84,5</td>
<td>13,3</td>
</tr>
</tbody>
</table>
Total sample was distributed proportional to the reference population in each county, rounding some samples to establishing a reasonable work load. If the case of Bucharest, the sample was reduced to provide more consistent sampling rates for small counties (Calarasi, Ilfov, Neamt, Suceava). The sample was of companies was selected randomly without replacement. At company level, to perform the interviews, we proceeded to select the company head (administrator, general manager) and the managers (heads of departments within them) through snowball selection method. In total, 2,171 interviews were conducted.

The survey plan

The survey observation plan was built upon a set of skills inspired by the works of recognized specialists in training and development of entrepreneurial skills.

One of the first widely cited paper is “Incubating New Enterprises: A Guide to Successful Practice”, signed by Gregg A. Lichtenstein and Thomas S. Lyons (Lichtenstein GA and TS Lyons, 1996). According to them, the critical skills of an entrepreneur can be classified as follows:

1) Technical Skills
   a) Operational - skills needed to produce the good or service
   b) Material / Raw Materials - ability to obtain them as necessary
   c) Office or production space - the ability to meet the needs and availability
   d) Equipment / Plant / Technology - ability to identify and to obtain them
2) Managerial Skills
   a) Management - Planning, organizing, supervising, directing, networking
   b) Marketing / Sales - identifying customers, distribution channels, supply chain
   c) Financial - financial resource management, accounting, budgeting
   d) Legal - form of organization, risk management, privacy and security
   e) Administrative - relationships with others, relationships with the shareholders / board of directors
   f) High level - learning, problem solving
3) Business Management Skills
   a) Business concept - business plan, presentation skills;
   b) Assessment of the business environment - market niche recognition, exploiting market opportunities
   c) Consultation and networking - the balance between independence and
need for assistance

4) **Mature personality abilities**
   a) Self-awareness - the ability to reflect and be introspective
   b) Responsibility - the ability to take responsibility for solving a problem
   c) Self-control - to cope emotionally with a problem
   d) Creativity - ability to produce a creative solution to a problem

A second work that can be considered as a relevant reference is “SME managers’ required entrepreneurship and business competences” (Velegrakis, 2010), where the skills required for a successful entrepreneur can be grouped into the following classes:

   a) **Personal skills**
   b) Team leading skills
   c) Business management skills
   d) Non-financial technical skills

Personal skills are those skills referring the personality of the entrepreneurs, vital to manage the company effectively.

Team leading skills are those skills that are necessary to lead a team and use the full capabilities of team members.

Business management skills are those skills that allow entrepreneurs to meet basic financial and administrative tasks of the enterprise.

Non-financial technical skills are those skills that help the entrepreneur to fulfill everyday tasks and functions of an enterprise.

Based on these approaches to define and investigate the degree of mastery of entrepreneurial skills, four main themes were defined, with several sub-themes of the study, to which the socio-demographic characteristics of respondents were added:

1) Personal skills
   a) Mature attitude
   b) Communication and relationship skills
   c) Team management skills
   d) Personal performance skills

2) **Functional and financial business management skills**

3) **Forms of training**
   a) Training preferences by skills areas
   b) Preferred duration of training programs
   c) Preferred forms of training
4) **Entrepreneurial opportunities development needs**
   a) Support forms and barriers to start a business
   b) Intention to start a (new) business
   c) Development tendencies in the economic field of intended business

1) **Socio-demographic data** (age, gender, education, position in the firm)

A more detailed description of the research themes and their associated survey dimensions is presented in Table 2.

**Survey questionnaire**

The first section of the questionnaire, focusing the project objectives to assess the current level of mastery of entrepreneurial skills and their development needs in the future, included questions about the relevance / level of personal entrepreneurial skills at present and the extent to which respondents consider that skills must be relevant or to be developed in the future as their business or their work as entrepreneurs and managers to be really successful. Assessing the gap between current and desired future level provides a picture of the training and development needs related to personal skills.

The second section of the questionnaire, in order to assess the development training needs of the skills related to the functional and financial management of the business, only one question has been asked about the extent to which the respondent believes is strong or weak in relation to these skills on a 4-point ordinal scale (1 - very weak, 2 - weak, 3 - strong, 4 - very strong), and if considers that a particular skill is not necessary, the respondent had to provide a distinct answer: 0 - Do not know / not applicable. The number of responses noted other than 0 (zero) indicates the awareness of the need to possess the ability, the marks close to 4 the possession of high degree to master the ability and marks close to 1 a low level, which can be translated into a low need and, respectively, a high need to train and develop the studied skill.

In addition to the self-assessment of the training and development needs of entrepreneurial skills, the third chapter of the questionnaire included a question about the preferences in 13 areas of skills training ordered by three levels of priorities. These preferences, in principle, must strengthen the needs identified in the first two chapters, namely those relating to personal and operational and financial management of the business skills. Accounting the frequencies referred to the first, second and third priority indicates the preference of the main areas of skills training, namely the skills regarding:
1. Leadership
2. Time management & self organization
3. Problem solving
4. Decision making
5. Effective leading of meetings
6. Marketing and sales
7. Financial & control activities
8. Production management
9. Quality Management Systems
10. Innovation & technologies
11. Information technology & Internet
12. Legal framework and taxation
13. Human resources and organization

Two other topics covered in the third chapter were the preferences for the duration of the training programs and forms of training delivery.

The durations tested were: Up to 1 day (0-1 day) Between 1 and 2 days, between 3 and 5 days More than 5 days.

The training forms tested were:
• Conferences;
• Seminar (2 days);
• Short-term modules (3 to 5 days);
• Courses (more than one module);
• E-learning;
• Exchange groups.
**Table 2**: Survey themes and skills associated to

<table>
<thead>
<tr>
<th>Personal skills</th>
<th>Communication and relationship skills</th>
<th>Team management skills</th>
<th>Personal performance skills</th>
<th>Functional and financial business management skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mature attitude skills</td>
<td>Face to face communication</td>
<td>Team motivation</td>
<td>Decision making</td>
<td>Capacity to create and implement business plans</td>
</tr>
<tr>
<td>Innovative and creative spirit;</td>
<td>Telephone communication</td>
<td>Team time management</td>
<td>Lead working meetings</td>
<td>Knowledge and application of the administrative process for setting up a company</td>
</tr>
<tr>
<td>Self-motivation;</td>
<td>Written communication</td>
<td>Full usage of team skills and knowledge</td>
<td>effectively</td>
<td>Knowledge of legal requirements for company’s activity</td>
</tr>
<tr>
<td>Self-confidence;</td>
<td>Public presentations</td>
<td>Promote mutual trust</td>
<td>Organize own time</td>
<td>Project Management</td>
</tr>
<tr>
<td>Determination and perseverance;</td>
<td>Individual instruction</td>
<td>Develop group autonomy</td>
<td>Organize own work</td>
<td>Financial management of the company</td>
</tr>
<tr>
<td>Ability to discover new market opportunities;</td>
<td>Training group</td>
<td>Delegate tasks and responsibilities</td>
<td>Deliver tasks and objectives</td>
<td>Marketing activity</td>
</tr>
<tr>
<td>Self-control;</td>
<td>Coaching</td>
<td>Leadership</td>
<td>Deliver feedback and criticism from team</td>
<td>The activity of selling products / services Knowledge and application of quality management systems (ISO, HACCP)</td>
</tr>
<tr>
<td>Responsibility</td>
<td>Influencing others (team, business partners, etc.).</td>
<td>Establish and communicate clear team performance objectives</td>
<td>Find an effective solution to the problems encountered</td>
<td>Human Resources Management</td>
</tr>
<tr>
<td>Negotiation skills</td>
<td>Stress management</td>
<td>Manage change</td>
<td>Analytical thinking and action</td>
<td></td>
</tr>
<tr>
<td>Assertiveness</td>
<td>Identify training needs of team members</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Applying disciplinary measures</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>
The fourth section of the questionnaire referred to the needs for developing entrepreneurial opportunities, which included:

a) *The forms of support* deemed necessary for business development;

b) *Barriers* – internal, related to entrepreneur’s skills, or external – related to business and administrative environment, which respondents believe that they face in the opening or development phase of a business.

Answers to these questions can provide a basis for evaluating the measures that the Government or associations of entrepreneurs can be considered for developing entrepreneurial opportunities.

The last two themes of the fourth chapter were related, on the one hand, to the intentions that a respondent may have to develop a new business or the present one and, if so, on the other hand, to the area activity and trends in that area in terms of investment, turnover, number of employees and prices. The answers to these issues are indicative for the vitality of entrepreneurial spirit, distinguished for entrepreneurs and managers of the company, under the assumption that respondents are willing to provide such information, although in general.

Finally, the fifth chapter deals with some basic information on respondents, on age, gender, position within the firm, the organizational level and education. This information is useful to identify attitudinal patterns on formation and development needs and, respectively, the needs of developing the entrepreneurial opportunities.

**Results**

**Personal skills**

For each personal skills, respondents were asked to indicate on a four points ordinal scale which is their importance at present, in terms of their current responsibilities and in future, from the perspective of the responsibilities they will have as entrepreneurs and managers. If any of the skills is not relevant for respondent, he or she selected the option “not applicable / no answer”.

Entrepreneurs and managers interviewed are aware of the importance of a mature attitude in business and in their work in the company. Over 94% of them believe that manifestation of skills specific to mature attitude is important or very important at present. Regarding the future, the percentage rises to over 96%, but the proportion of those who consider that they will be very important is by 12 percentage points superior to those currently considering very important.

Among the 8 dimensions of mature attitudes, respondents believe that in the future the following skills will be the most relevant (rated as important or
very important):
  • Responsibility;
  • Self-confidence;
  • Determination and perseverance.

**Regarding the need to improve the skills characteristic of a mature attitude**, the proportions determined by the scores given to the perception about the present and future are quite close, being only a difference of 1-2 percentage points, indicating a fairly reduced need to improve these skills. However, the three skills that need improvement are:
  • Ability to discover new market opportunities;
  • Innovative and creative spirit;
  • Self-motivation.

**Among mature attitude skills considered unimportant**, respondents noted the lowest scores the attitude toward uncertainty and risk, self-motivation and the ability to discover new market opportunities. We note also that self-control, responsibility and ability to find new opportunities on the market are considered mostly irrelevant to respondents. The proportions of these responses are insignificant compared to the others.

Regarding the communication skills, compared with the mature attitude, all entrepreneurs and managers interviewed consider them to a lesser extent as very important. Overall, however, 83% of them are aware of the importance of having in future good communication skills, while the proportion of those who have this perception for the present amounts to almost 80%. It is worth noting that the proportion of those who consider communication skills as very important in the future is significantly higher - at about 10 percentage points away – than the proportion of those who have the same perception for the present.

Of the 11 dimensions of communication skills, respondents consider that **in future three skills will be the most relevant** (rated as important or very important):
  • Communicate face to face;
  • Telephone communication;
  • Written communication.

Although being among the skills with predominantly high scores, in relative terms, the ability to influence others, the application of disciplinary measures or public presentation skills are considered among the less important. Negative perceptions, with amounts exceeding 20%, were the group training or coaching skills, and those involving negotiation skills and assertiveness.
Regarding the need to improve communication skills, in the order indicated by the respondents, they include:

• Delivering public presentations;
• Training in groups, influencing others, negotiating skills and applying disciplinary measures, on an equal footing;
• Assertiveness and individualized training (coaching), on an equal footing.

Regarding the team management skills, across the interviewed entrepreneurs and managers, nearly 95% of them presume these skills to be important and very important for their future. Despite the fact that the percentage of those who believe that these skills are not needed or are unimportant for their work is low - about 8% from today’s perspective and about 5% in terms of the future - their presence in this category raises questions about the extent to which they understand their role as managers or entrepreneurs.

Among the 11 dimensions of team management skills, respondents consider that in future the following skills will be the most relevant (rated as important or very important):

• Capability to fully use team skills and knowledge;
• Leadership and stress management;
• Capability to establish and communicate clear team performance objectives and identification of training needs of team members.

In Bucharest, among the team management skills considered the least important by respondents include: the ability to develop group autonomy and, at large distance, the ability to delegate tasks and responsibilities and the ability to manage change.

Regarding the need to improve the team management skills, they regard the ability to develop group autonomy, the ability to delegate tasks and responsibilities and the ability to manage change, due to the higher proportion of those which they consider important or very important for the future.

The entrepreneurs and the managers interviewed during the survey are extremely aware of the importance of the skills that boost personal performance in the business activity in general, and as an entrepreneur, in particular. Over 93% of respondents consider as important or very important personal performance skills for their future work. Although this percentage is significantly closer to the perception of the importance of these skills for the present, it is noted that, for the future, the difference between the proportion of people who appreciate personal performance skills as “very important” and those who appreciate them as “important” is greater than the same difference for the present timeframe: 24 percentage points for the
future, to approx. 5 points for the present.

One can notice a significant percentage of those who consider personal performance skills as partially or totally unimportant, plus those who state that they do not require these skills. Their share of over 6% come, on the one hand, from the views of respondents on low importance or futility of effective lead of meetings, provision or receiving regular feedback to and from team and, on the other hand, those regarding the ability to think and act analytically. The causes formulating these opinions are those of SMEs culture in Romania where a sense of team or habit to organize working meetings and provide and receive feedback in a systematic way is less present. Also, one can note that the ability to think and act analytically concept is common in recent years, but very few really understand it’s content and meaning, and perhaps even fewer may realize the extent to which they have this ability and the extend they need development.

Of the nine dimensions of personal performance skills, respondents believe that in the future, the following skills will be the most relevant (rated as important or very important):

- Ability to fulfill tasks and objectives;
- Ability to take a decision and
- Ability to find an effective solution to problems.

Among personal performance skills considered the least important by survey participants can be found, in descending order:

- Ability to work effectively lead meetings and Ability to receive feedback and criticism from team;
- Ability to provide regular feedback to the team on it’s performance and ability to think and act analyti-cally.
- Ability to organize own work time and activities (at large distance compared to the above mentioned skills).

Regarding the need to improve personal performance skills, they include:

- Ability to provide regular feedback to the team on it’s performance and ability to think and act analyti-cally tied;
- Ability to effectively lead working meetings and
- Ability to receive feedback and criticism from the team.

**Functional and financial business management skills**
Throughout the research, respondents considered the utmost that they need to improve their knowledge and application of quality management systems,
as well as those involving project management, marketing and human resource management. Knowledge of administrative process of establishing a company is listed among the skills that are less mastered by respondents, but, in correlation with training priorities, they are not among the improvement needs, as entrepreneurs usually outsource the legal services.

On the whole surveyed sample, the least relevant operational and financial management skills are: the ability to create and implement business plans, knowledge and application of the administrative process for setting up a business and project management. These skills are among those shown to be less controlled by respondents, along with marketing activities and human resources management.

**Training priorities and preferences**

In addition to investigating self-perceptions of the current and future entrepreneurial skills, respondents indicated the training areas they consider as priorities. Entrepreneurs and managers believe that priorities should be focused on: the decision-making skills, problem solving, leadership, marketing and sales, and financial and control activity.

Regarding the preferred duration of training programs, they are quite different, especially in terms of territorial profile or position within the company. In general, however, company management prefer either programs lasting a day, either those with durations greater than 5 days. Preferences of the managers, including heads of departments or sections, goes to programs lasting between 3 and 5 days.

As training forms, also, there are quite diverse preferences. Among forms of training, most preferred are seminars, short modules and group exchanges.

**Entrepreneurial opportunities development needs and business barriers**

Almost without exception, entrepreneurs and managers believe that the main support they need to conduct business lies in the information on markets and identification of business opportunities. Further, respondents need support to design and implement marketing plans and obtaining financing. No less important is the need to support the development of financial management and the creation and implementation of business plans.

The main barriers to business growth, according to opinions of all respondents, are complicated tax system, the administrative burden imposed by public authorities and their lack of support to businesses. Other barriers are
subjective and refers, for example, the inherent risks involved in a business and the fear that a business - especially of the kind undertaken by SMEs - may indebt entrepreneurial beyond measure.

These needs of support to develop entrepreneurial opportunities and the perceptions of barriers may be found, on the one hand, in training programs focusing on topics such as creating business or marketing plans or in risk management and, on the other hand, in services to access the information about markets or business opportunities and in consulting services for obtaining financing.

In terms of economic sectors that could present a development opportunity in the near future, respondents were quite reluctant in their opinions. Only 10% expressed their intention to develop a new business or to expand the present one, and the areas focus on technologies to produce renewable energy, on information technologies and, of course, on services and trade.

These options are determined by the current economic environment in which SMEs need to find resources for survival and development, and by the entrepreneurial culture environment present in micro-enterprises and small businesses, particularly in Romania, where decisions and management are concentrated around business owner. It is obvious, however, the shift of entrepreneurs and managers interest from technical and operational skills to those related to interpersonal abilities, for valuing human resources.

Conclusions

Overall, the findings indicate that interviewed entrepreneurs and managers appreciate to great extend the importance of all sets of examined skills, both at present and in the future. Of the self-assessment process, one should note that responses indicate a very high level of control, in other words, the mastery at present of the examined skills, as most scores are 3 or 4, as it was noted both for all skills covered in the first chapter of the questionnaire, and those of the second chapter. In the future perspective, the answers bear the same relevance and only in relatively few cases is, as a consequence, a very obvious need to develop some skills. Therefore, even paradoxically, by aggregating the responses, the results show that some skills are given a somewhat low importance and, at the same time, it appears in the second section of the questionnaire the need to develop in the future the same skills.

Explanation is given by investigating the occupational profile of respondents. Thus, in the case of some skills that are considered less relevant - both now and for
the future – the answers come from those who hold positions of managers, heads of departments or services. The same respondents, in a few cases, placed themselves in instances difficult to explain: for the present they consider that certain skills are extremely important and they believe that they master them at the maximum level, but they unrate them for future, that is either they no longer consider them as equally important, either they consider that the level of competence determined by those abilities will decline in the future. Such situations were more common in Bucharest. The development needs come particularly from owners, administrators or those who occupy top management positions in companies.

Perceptions are strongly influenced by the position in the company and, therefore, by the responsibilities assigned or self-assumed. It is quite evident, on the one hand, that a manager or a department head does not share the same problems, difficulties or concerns with the owner or manager of the company. On the other hand, the owner fails - if he tried - to realize the demand to place the needs to develop the entrepreneurial and managerial skills to the whole scale of the company and not just to it's position within the company.

Such studies are designed to substantiate the training programs for entrepreneurial skill formation and development. However, very few visibly include adjustments according to the conclusions of these studies. One same useful direction would be to assess the competences after programs implementation, to objectively evaluate their effectiveness.

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Economic and Psychological Implications of Romanian Youth of Unmet Training in the Actual Global Context

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This paper is intended to emphasize the possibilities to grow up the Romanian economy within teenagers in spite of all problems related to education, poverty, economic crisis, unemployment, migration, unmet training etc.

On the one hand, it identifies and proposes the approach of a new research regarding the decrease of the following phenomena: the migration of young Romanian people and youth unemployment.

On the other hand, the paper reflects the role of vocational training development during the current economic crisis. We investigate how the Romanian labour market and the educational system may contribute to the decrease of the option for emigration as the only saving opportunity for more and more young people. The Romanian economic crisis is a decisive factor that determines young people either to migrate from Romania or to find new solutions in research and development area. The objectives refer to the assessment of the tendencies of Romanian youth migration and reflect the analysis of the impact on the educational system. The results of the research draw attention to the potential loss of our knowledge society.

The paper highlights the new trend influencing the youth labour market and the changes in the interactions between the educational services market and the labour market.

Keywords: unmet training, driving forces, vocational school, globalization, migration,
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brain migration, economic crisis, labour market, unemployment, competences, knowledge society.

Objectives

1. An appreciation of the role of vocational Romanian school as a driver of technological change in economic development, past, present and future;
2. Awareness of key models of the education, research and innovation process, their strengths and weaknesses and their implication on the labour market of young people;
3. An appreciation of policy and regulatory educational challenges for youth in relation to technological change and innovation

Prior work

From the perspective of unmet training, we examined the new trend influencing the youth labour market and the changes in the interactions between the educational services market and the labour market.

We also discussed the main strategic choices available for the Romanian education in order to successfully integrate in the European area of education and research.

Education and training are crucial to economical and social change. The flexibility and security needed to achieve more and better jobs depend on ensuring that all citizens acquire key competences and update their skills throughout their lives.

Design/Methodology

This report presents a study of past, present and future changes to education and training of youth, versus low Romanian standard of life.

Results

There are the follow results:
• to contribute to this vision-building process on ways of addressing emerging competence needs,
• to contribute to the development of imaginative visions and scenarios of the youth’s future of learning and working in order to support priority setting for education, training and skilling policies;
• to decrease young people’s migration and unemployment.

Implications:
New technology in education and labour market; tools and services enhancing learning; open education and resources; assessment, accreditation
and qualifications; globalization of education; roles of institutions; individual and profession-driven education; life-long learning; formal education goes informal; individual and social nature of learning, the epistemological and ontological bases of pedagogical methods.

**Introduction**

The paradox of the twenty-first century may be that our ability to use technology to our advantage is going to be linked to the quality of our human social networks. The quality of our social networks between students and all actors involved in educational process depends on how well we use technological changes and quality assurance in education and work by improving the communications between them. We are optimistic that is entirely possible to improve our futures in this way [20].

Scenario planning is the application of visual dialogue. It is a way to structure and facilitate strategic thinking in educational teams and multi-organizational projects where there is increasing uncertainty in the educational and business environment [20]. The beauty of scenario thinking is that it allows us to tell each other stories about how the world might study and work. The key element is not whether we are right or wrong, but rather, that we dig deep down to understand that it is our assumptions and perceptions that underpin the imaginations in each scenario, and evaluate their plausibility. Scenarios are not linear or mechanistic; they are displays of exponential connections.

The process of building scenarios starts with looking for driving forces, forces that influence the outcome of events. Driving forces are the elements that move the plot of a scenario, and determine the story's outcome. The problem is that they may seem quite obvious to one person but hidden to another, and without driving forces, there is no way to begin thinking through a scenario [20].

When we approached this subject about economic and psychological implications of Romanian youth of unmet training in the actual global context we started from the researches in this field, and we made the imaginative visions and scenarios of the youth's future of learning and working in order to support priority setting for education, training and skilling policies.

According to follows: Petronela Daniela Feraru’s study of the PhD. (Thesis *Religion and Migration in Contemporary Romania. Case Study: Romanians Living Italy* [19]), the reports of United Nation [23], UE [24], and own studies [20], [21], [22] we establish the following aspects.
Explaining differences in youths’ transition into employment needs to take into account, first, demographic developments and economic growth, or decrease, and second, the interplay between these dynamics and long-standing institutional patterns, in particular regulatory provisions influencing the supply of flexible or permanent jobs as well as education and training policies. Both general education at schools as well as different forms of vocational training, either at schools or on the job or combining both elements in a ‘dual apprenticeship’ are necessary preconditions for the employability and productivity of young people. Vocational training is a crucial element as it can link young people’s competences with employers’ needs. Bringing vocational training closer to the needs of dynamically changing and evolving labor markets and economies can help young people move into more productive and sustainable jobs. Taking the perspective of young people, a ‘good job’ is a job that initiates a long-term investment in and attachment to the labor market. A job combined with formal training is by definition a good job. This paper is about the creation of good jobs for the young.

![Figure 1: Youth Unemployment rates, 1999 and 2009, in %, Source: World Bank [23]](image_url)

To explain differences in the integration of young people across time and space one has to take into account the interaction of economic and demographic factors on the one hand and labor market institutions on the other:

1. the demographic structure, in particular the size of younger cohorts, determining young people’s labor supply,
2. labor demand patterns given by the structure of the economy and economic growth,

3. labor market flexibility as determined by minimum wages and employment protection for permanent and temporary jobs,

4. education and training preparing young people for the world of work, distinguishing between general education, vocational training and learning on-the-job,

5. active labor market policy programs designed to further the labor market attachment of disadvantaged youths, in particular those who failed to enter and complete general education and vocational training.

All these factors interact with each other and provide particular patterns of youth employment or unemployment in different countries or world regions.

Regarding the evidence on demographic factors first, empirical research has shown that demographic factors, in particular cohort size, and economic demand matter in determining youth employment (Korenman and Neumark 2000; Blanchflower and Freeman 2000; Garcia and Fares 2008c). Figure 4 shows that there is a large variation in the demographic composition of major world regions. Young cohorts at the age of entering the labor market are particularly large in 13 Northern and Sub-Saharan Africa while demographic ageing is a major phenomenon in most high-income countries in Europe, North America and Eastern Asia.

![Figure 2: Share of 15-24 in all 15-64 year olds](source: UN World Population Prospects 2010 Revision [23])

Both growth and demographic features cannot explain cross-country and
intertemporal variation of youths’ integration into employment alone. They interact with labor market institutions in determining youth unemployment or employment and the easiness of a transition from school to work. Institutional framework conditions play a role in structuring the transition of young people into employment, in particular minimum wages and employment protection (Gomez-Salvador and Leiner-Killinger 2008), but also education and training as well as active labor market policy schemes.

Turning to the role of minimum wages first, there is quite consistent evidence that high minimum wages tend to have negative effects on young labor market entrants – this is why young workers are often covered by a specific, somewhat lower minimum wage (Neumark and Wascher 2007; Abowd et al. 2000; Gomez-Salvador and Leiner-Killinger 2008).

This report provides an overview of the labor market situation of young people in major world regions covering developed countries as well as the developing world. The paper highlights the role of demographic factors, economic growth and labor market institutions in explaining young people’s transition into work. A major focus lies on vocational training and education as the paper assesses the contribution of different types of vocational training on subsequent labor market outcomes. It argues in favor of vocational training systems combining work experience and general education and gives some policy recommendations to implement training systems adapted to a country’s economic and institutional context.

**Forces for change of labour market and educational system**

Every schools and enterprise, personal or commercial, are propelled by particular key factors, such as the human force and goals. Others, such as governmental regulations, are external. Identifying and assessing these fundamental factors is both the starting point and one of the objectives of the scenario methodology [20].

Underlying driving forces can include social dynamics, educational issues, technological issues, economic issues, political issues, environmental realities, technological change, government economic and social policy, demographics, international environmental institutions, and world commodity markets [20]. Is control of driving forces a possibility?

Change is the human experience consists of matching our capabilities against the challenges we face [20]. There are three possibilities:

- Challenge = Capability
That means:
Ability / Willingness = Design / Opportunity
We seek this kind of balance because it makes us feel that things are predictable and thus is easier to manage.
Real change occurs when the balance is disrupted. There are two ways the status quo can be disrupted, Positive Change or Negative Change.

• Challenge < Capability

There is a Positive Change.
When people believe their capabilities exceed a challenge, they generally feel positive because the outcome is not only desirable but expected (for example, the birth of a child).

• Challenge > Capability
When the reverse is true, people feel negative not only because the outcome is undesirable, but also because such situations lack predictability.

Two opposing forces influence change of labour market
One that drives for change and one that resist[20].
Which of the following forces affect your organization? Check the ones which apply to your group.

**Driving forces** initiate change and keep it going. **Resisting forces** act against the driving forces for change.

They may be:

- Your source of founding is being reduced or increased.
- The interest and needs of people involved in educational process in your organization are changing.
- Government support is increased or diminished.
- There is pressure to use modern technology.
- Some of your actors involved in educational process could have a charming reflection of the power of intelligence and critical thinking[20].
- Membership is increasing or dropping.
- Some of your actors involved in educational process could have accelerated thinking syndrome[4].
- Your group fears new ideas and prefers to do things the way they have always been done.
- Your group function the same way it do twenty years ago, out of habit.
- Your group performs activities just for the sake of keeping busy.
- Your group’s executive has very few changes or low turnover.
- Some of your actors involved in educational or process could have accelerated thinking syndrome[4].
- * There aren’t still a lot of things well done in order to reach a high quality level for the educational system and to reduce the present disparities existent between rural and urban space.
- According to the statistics, in the rural area, in the Land of Severin, only 83% of the total number of persons (9,721) with an age between 6 and 19 years old attend a school[20].
- Members have different views of the group's purpose.
- Revolutionary teachers show that all of us have the ability to increase children the brilliant and fascinating students.
- When projects or programs are evaluated a need to change is identify

A correlation between poverty and the degree of participation to education
The lack of stability of family incomes has a strong effect upon the students and their future

There are reasons for school abandonment, noticed especially in the case of children from the isolated rural communities, or young students which work to help their family, but also in the communities of Gypsies.

The weak motivation regarding the economic profit due to education.

We have little control over driving forces, and the only way we can leverage them is to recognize them for what they are, understand their effects, and contribute to creating new driving forces if we do not like the ones we find. In addition, it is very important to identify and understand the underlying forces, so that there is a framework in which to relate the deeper, more fundamental forces acting behind the scenes. The opportunities lie in understanding the arc of change and moving in that direction.

Scientific discoveries are key drivers of economic growth, driving and fueling the economy [20].

Leading economists have identified technological progress as the single most important determining factor in sustained economic growth. While some technologies can be anticipated, especially those that are improvements or new uses of old technologies, there is such rapid change in fundamentally new areas that it is hard to fully understand the implications [20].
Examples are the human genome project, the explosive changes taking place in information technology, the growth of nanotechnology, and biotechnology, which has the potential to transform areas as different as farming and computer technology [durbaca].

**Background**

All members of our team are actors of educational process as teachers, managers or parents and we try to understand and to grow up the potential of our youth students and children. This paper is first step but not the last.

Our group takes a look at Group Concept Mapping (GCM) [10] and we applies a structured participative approach to facilitate groups of experts to arrive at a consensus about a particular issue, characteristics of Quality Assurance of Education in the future, regarding to it’s interdependence with Change, Technological Changes, Innovation and Competitiveness, R& D and revival of Romanian economy [20].

As GCM model, this analysis depicts, in the form of thematic clusters, the experts’ common understanding of the issue under consideration. We use a structured facilitative multi-step approach including a number of simple and intuitive activities such as idea generation, and sorting and rating of ideas. The research method, by it’s “hybrid” nature, can easily integrate any qualitative method for data collection and analysis, such as individual interviews, surveys, focus groups or Delphi method.
That means [21]:

- All educational systems in Europe will be connected in a central system to identify the best students in order to support them no matter their country of origin.
- In Europe (EU) many students will learn with and from each other in international collaborations.
- We will cease to rely on experts as the source of knowledge and curriculum and move towards quality based on use and endorsement through internet systems.

Figure 8 [20]

Data and method

The study was carried out by using the statistical data collected from the Institute of Statistics from Drobeta Turnu Severin, Princeton and Bucharest, and the Reports of World Bank, UN, or UE Commission. We examined to underline the aspects regarding the quality of educational sector from the studied area, both by outlining the major problems and also by finding adequate solutions for a long-term quality improvement of interdependence within another sectors of activity.
For a better understanding of the above-mentioned phenomena, the data and the results required a graphic representation in order to emphasize the spatial distribution of the studied elements, as well as the size of the actual phenomenon. In this respect, we used some column graphics and maps using the ArcGis 9.3 software, made by Tudora D. [12], the research of Feraru P.D [7] and the statistics made by experts from World Bank, United Nation[23] or UE Commision[24].

The relevant final stage for the study was the analysis and the interpretation of the results obtained, which completed the general image over the quality assurance of educational system, as first step to improve the acces of youth to Romanian Labour Market marking the positive and negative aspects with the problems that determine a defective system influenced by factors that are internal and external to the respective region.

Using the statistical data available, we have indicated the index of accessibility to Education [20] (calculated by Tudora D.), the values being represented on accessibility maps to different types of educational services, starting with the ones that are compulsory, primary and secondary, up to the facultative ones, college and higher education (academic and post academic). Besides the accessibility of the population to educational services, we have indicated other basic indicators to emphasize the major disparities existent, at regional level, between the two spaces. One is the gross rate of school inclusion or indicators based on Tudora’s research [20] when she made comparative analysis regarding the human resources (the average number of pupils/teacher) and the material resources (the number of schools from the pre-academic education).

By using the descriptive analysis of the data, we presented the distribution of the values for the indicators calculated in relation to the standards or the reference objectives established by the National System of Indicators for Education. In addition, by processing the statistical data regarding quality of education, we obtained the necessary information to describe the functionality and the level of performance of the educational system and to examine the evolution in quality assurance of education in time and space [20].

Results and discussions

On the one hand, the scope of this paper is to present low results of quality educational sector, with implications for jobs of youth in the rural area from the Land of Severin, and to apprehend the way in which the spatial distribution, mainly deficient, of some general social services, leads to the occurrence of territorial
disparities aimed to keep different chances of human development for the social categories considered equal from the political point of view (Tudora, D., 2009) [20]. On the other hand, we present high results of quality educational sector in two educational unit’s where Romanian students are brilliant. That means good jobs for our young people [20].

The synthetic index of accessibility to education has the advantage to estimate the accumulation of social capital (Flores M., Rello F., 2003; Putman R., 1993; Coleman J., 1988), being calculated using the following formula:

\[ A_{ed} = A_{ep} + A_{ep} \times A_{eg} + A_{eg} \times A_{es} + A_{es} \times A_{eu}, \]

where: \( A_{ed} \) represents the accessibility to education; \( A_{ep} \) is the accessibility of the population to primary educational services; \( A_{eg} \) represents the accessibility to secondary education; \( A_{es} \) represents the accessibility to high school education; and \( A_{eu} \) represents the general accessibility index to services of higher education. Each of these partial indicators was calculated using specific formula regarding the accessibility of population to different levels of education and the local and regional polarizing centres.

![Figure 9](image)

The gross rate of school inclusion for all education levels, expressed in percentages, represents the total number of kindergarten children, pupils and students included in all levels of education, irrespective of their age.

The rate is calculated as ratio between the total of registered pupils and the population having the official age corresponding to all levels of education (3-23 years old)[20].

It is calculated using the following formula:
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Where: $RBC_t = \frac{E_t}{Ptv} \times 100$

Where: $RBC_t$ – the gross rate of school inclusion in all levels of education in the academic year $t$; $E_t$ – the total number of pupils and students included in all levels of education, irrespective of their age, in the academic year $t$; $Ptv$ – the total population having the official age corresponding to all levels of education (3-23 years old), in the academic year $t$.

Figure 10

The human capital is of great importance for development, and the development and the diversification of the economy in the Land of Severin, especially in rural areas, depend on the level of education, skills, and qualification [20]. Although the improvement and the maintenance of an adequate level for the basic infrastructure is an important element in the social-economic development, the professional formation is the basic pillar for a healthy development [20].
When we talk about quality assurance of education at “Virgil Madgearu” Economic College from Bucharest we can see very good results [20].

### Figure 11 [20]

When we talk about quality assurance of education at “Virgil Madgearu” Economic College from Bucharest we can see very good results [20].

### Figure 12 [20]
Youth unemployment and vocational training

There are some general points to be made which are relevant for most medium- and low-income countries [7].

- **Promoting general education** medium- and low-income countries [7].
- **Stimulate the creation of formal and sustainable jobs** medium- and low-income countries [7].
- **Modernize vocational school** medium- and low-income countries [7].
- **Bring academic education closer to the private sector** medium- and low-income countries [7].
- **Starting from regional or sectoral clusters** medium- and low-income countries [7].
- **Upgrading vocational training in the informal sector**

**Challenges of the German dual vocational training system**

Germany and many neighboring countries are characterized by ‘dual’ vocational training combining work experience, learning on-the-job and classroom education as the dominant pathway from school to work. Apprenticeship graduates generally have a smooth transition into employment [23].

Five features lying at the core of Germany’s quite successful dual vocational training system have been identified. They are partly being implemented by the above mentioned organizations and their partners abroad. However, one should note that it is impossible to merely copy the system as a whole due to differing institutional and economic structures.

First, a close cooperation between government and economy (mainly the private sector) is indispensable if functioning vocational education structures are to be established.

Second, ‘learning while working’ in workplace training conveys practical skills to the trainees and enhances their future employability. It also secures that the skills learnt match current labor market needs efficiently. At the same time, young people as well as trade unions should be willing to accept lower temporary earnings in exchange for quality skill acquisition.

Third, society should accept common standards that both employees and employers have to meet in order to provide for comparable outcomes at the end of the vocational training phase so that job movements between companies become feasible.

Fourth, qualified teachers contribute to a successful procurement of general
skills in the school-based training.

“Curricula for general education at vocational schools are essentially developed by the individual Länder. The Federal Agency for Employment (BA) is responsible for consultancy on and provision and promotion of vocational education and training for young people and companies, on the basis of the Sozi-algesetzbuch III (SGB III)” (Hippach-Schneider, Krause and Woll 2007, p. 19-20). Employer and employee representatives contribute to facilitating examinations and ensuring that training venues fulfill all required criteria for vocational training [23].

![Figure 13](image-url)

**Figure 13** [23] Responsibilities in the field of vocational training


**Transition Countries: Russia and Eastern Europe**

1. In the aftermath of the transition, young people in Eastern Europe were among the losers of the transition to a market economy. Despite some improvement the situation remains difficult. Among those young people who work, many do so in second-best jobs (with lower wages and high turnover) or in the informal labor market. Since the early 1990s, the returns to education have risen rapidly. Similarly, the employment prospects have improved with education, leading to an increase in secondary and tertiary education enrollment (especially in the EU new member states).

2. With the industrial restructuring, the communist vocational training system came to an end, and the dual apprenticeship system of the socialist era was
replaced by school-based training. The lack of on-the-job training or coordination of employers and training providers led to an increase in skill obsolescence and mismatch as well as increasing skills shortages.

3. The poor labor market prospects combined with the increased returns to education and the inadequacies of the vocational training system set in place during the transition are factors explaining the increase in the relative demand of general secondary education granting access to tertiary education. Creaming the most socially advantaged students towards the academic track is exacerbating social inequalities [23].

Youth unemployment is a relatively recent phenomenon in the countries of Central and Eastern Europe. And similarly to the dynamics of the overall unemployment rate, there was a downward trend in youth unemployment during the first decade of the century, interrupted by the 2008 financial crisis. The crisis drove a considerable rise in youth unemployment in Central and Eastern Europe, from 21% in 2007 to 27% in 2009 (unweighted data) (Koettl, Oral and Santos 2011).

While the virtual collapse in the demand for labor explains the surge of youth unemployment in the transition region in the 1990s, it’s dynamics in the later periods was more and more closely determined by the institutional aspects of the labor market as well as of the education system. Recent analyses suggest that institutions, such as employment protection and ALMP indeed play a role in defining youth unemployment in the region. In particular, stricter employment protection is associated with higher youth unemployment, and larger spending on ALMP is associated with lower youth unemployment (Lehmann and Muravyev 2012). Overall, however, the countries of the region have a rather modest level of the rigidity of labor market institutions. For example, employment protection in most transition countries is less stringent than in the old EU member states and much less stringent than in the countries of Southern Europe. This is often coupled with poor enforcement of labor laws in Central and Eastern Europe and similarly to the dynamics of the overall unemployment rate, there was a downward trend in youth unemployment during the first decade of the century, interrupted by the 2008 financial crisis. The crisis drove a considerable rise in youth unemployment in Central and Eastern Europe, from 21% in 2007 to 27% in 2009 (unweighted data) (Koettl, Oral and Santos 2011).

Overall, however, the countries of the region have a rather modest level of the rigidity of labor market institutions. For example, employment protection in most transition countries is less stringent than in the old EU member states and much less stringent than in the countries of Southern Europe. This is often coupled
with poor enforcement of labor laws in Central and Eastern Europe (Eamets and Masso 2005) [23].

The migration of the human capital increased all over the world [7]. The international mobility of the human capital follows the pattern of “brain circulation”, which implies to a great extent immigrants temporarily qualified. In the developing countries, including the ones specific to the area in the South-East of Europe, mobility is, for the most part, in the form of “brain drain”, which is an international transfer of unidirectionally highly educated professionals. This second category of the people educated on a permanent basis is the object of the present study. Starting from the form of migration called brain drain, we gradually reached the form of migration of young men for study, which we generically call “intelligence migration”. The migration of young Romanians is nowadays one of the crisis social solutions for critical life situations with short-term advantages [7].

The study argues in favor of promoting vocational education and training tailored to labor market needs, but taking into account peculiar starting conditions found in a given national or local context. While good education and training can contribute to economic productivity and social cohesion, vocational education and on-the-job-training with young workers and companies also need to involve governments, social partners or other societal actors to be stable and effective.

Challenges, but also capacities to act vary across countries and world region, depending on economic, institutional and societal context. Yet, there are some general points to be made which are relevant for most medium and low-income countries [7].

**Young people, migration and social change in Romania**

The external migration from Romania is a phenomenon that started after December 1989, and for the past years Romania has become one of the most important origin countries of the East-European migrants [7].

Most Romanians who choose to emigrate are young men with a high degree of education and only a small part come from ethnic minorities. According to the data supplied by Caritas Romania and Caritas Italy, half of the Romanians who emigrate are between 22 and 44 years old, of which three quarters are high school graduates and a quarter are university graduates (Pittau, Ricci and Timsa, 2010, p. 14).

The characteristics of the Romanian emigration include the characteristics of the “brain drain”, thus those of a selected emigration, including mainly highly
qualified workers rather than less specialized workers. The flow of professionals and highly qualified workers from the past years has become a notable phenomenon. According to the National Institute of Statistics, the percentage of emigrating university graduates increased from 6% in 1990 to 23% in 2002. According to a study of UNESCO Higher Education Statistics, the number of the Romanian young men studying abroad increased by 56% during the last decade, becoming over 22,000 in 2009. Until the beginning of the global economic crisis, their number increased by 52%. According to the representatives of the educational fair Romanian International University Fair (RIUF) and the years 2010 and 2011 follow the same ascending route regarding the young Romanians’ desire of studying abroad (Murgu, 2011). In an estimation of the qualification rate of the stock of immigrants, or the proportion of qualified migrants from the total number of migrants and the comparison to the autochthonous resident proportion, the result is a surprisingly significant difference between groups in favour of the Eastern countries: in Germany, the qualification rate is 13%, while in the former U.S.S.R. is doubled to 27%, in Hungary it is 22%, in Romania and the former Czechoslovakia 21%, in Poland 19%, in Bulgaria 17%. It is noticeable that this rate is high in Romania (21%) (Figure 13).

![Figure 14](http://www.econtext.ro/eveniment--2/social/numarul-tinerilor-romani-plecati-la-studiu-in-strainatate-a-urcat-cu-52-in-ultimii-zece-ani.htm)

**Figure 14** [20] Qualification rate (or the proportion of qualified migrants in the total number of migrants and the comparison to the autochthonous resident population) Source: According to the data on http://www.econtext.ro/eveniment--2/social/numarul-tinerilor-romani-plecati-la-studiu-in-strainatate-a-urcat-cu-52-in-ultimii-zece-ani.htm
What is interesting is the quantification of the consequences of the intelligence migrations on the economies of the origin countries especially as in most cases of these migrations people have no choice but to work in fields under their professional formation level[7]. This phenomenon is called “brain waste”. As we will ascertain from the outcomes of the study achieved in Italy, most (42%) students state that they do not want to return to their origin country, while actually the highly qualified want to remain in their own country in certain life and labour conditions. This happened starting with 2008, along the beginning of the economic crisis, while 23% of the Romanian population was running the risk of poverty, namely having incomes below the threshold of poverty (Eurostat, 2009)[7].

The analysis of the migration phenomenon among Romanian young men, namely among the young men that go to Italy to study started from the interview done in the summer of 2010 in Bologna, Italy, with Ioan Eugen Popitiu, the coordinator of the Italian Branch of the League of Romanian Students Abroad. The purpose of the research was to analyze of the reasons for which this special segment of the Romanian immigration does not want to return to Romania after CES Working Papers 330 The descriptive character of the overview of some studies in the field illustrates the main national changes regarding the situation of the Romanian young people and the values that dominate this young segment of Romania nowadays. A series of data is presented from studies achieved between 2005 and 2011 in Romania and Italy, for the age category 18 – 35 years [7]. Romanian young men go abroad to work and study, as in their origin country their true value is not appreciated. The study “Romanians and the Migration of the Manpower to the European Union”*, discusses by Stoian in a national newspaper, shows that the main reason of the Romanians' departure is the need of esteem (Stoian, 2005). The top of the favourite destinations of the Romanians who emigrate is, according to the quoted source, made of countries such as Italy, Spain or Germany. The young men between 19 and 35 years old and high school graduates have the most acute feeling of lack of value appreciation. Hence, according to the study, 85% of the respondents said that they knew personally someone who worked in a country of the European Union, of whom 29.5% asserted that they knew someone in Italy, 22.4% in Spain, and 13.5% in Germany [7].

The study was achieved between September 20th and November 1st 2005, on 884 persons, mostly young men between 19 and 35 years old (49.43%), who responded to questionnaires in the counseling offices for citizens all over the country [7].

Germany is included in the top of the favourite work destinations, first of
all due to the Romanians’ impression regarding Germans as a nation: we know that they are responsible people, who pay correctly; a country where you do not expect any unpleasant surprises (Stoian, 2005)[7].

Romanians (75%) want to leave to the countries of the European Union for reasons such as: a higher wage, a better life. Most reasons invoked by most questioned people as regards departing fall into the category “need of esteem”: our people leave abroad to have their value appreciated, to earn the respect they do not get in Romania. The people who felt the need of esteem most frequently as an emigration reason were young people between 19 and 35 years old (77%) and high school graduates (76%). The second place is occupied, quite far from the first place, by the reasons that fall in the category need of safety, indicated by 13% of the respondents. What is interesting is the standard answer falling into this type of need, namely the search for a work place: people leave because they cannot find a job and cannot live decently in Romania. Romanian young men expressed in 2005 certain fears regarding what the integration of Romania in the European Union would bring in 2007. According to the same study previously quoted, of the total number of people that in 2005 expressed indirectly their fears regarding the integration, most are persons highly educated (48.7%) and young men (44.6%). The conclusion of the study is that people who emigrate are not necessarily the poor people from a former communist country, but professionally qualified young people, prepared to receive all the advantages of this opportunity [7].

The situation from 2008, according to the barometer created by the National Authority for Youth*, is different, meaning that young people do not want to leave the country any more. Therefore, continuing to study in the origin country and finding a well paid job prove to be the main targets of young people between 14 and 35 years old (Bardas, 2010). Only 9% of the Romanian young men want to leave the country, while one year before the percentage was 38%. In exchange, 11% stated that their main purpose was to continue their studies and 50% stated that they wanted to emigrate as tourists, and 29% stated that they wanted to work temporarily in the host country. School is not seen by young men as having a determining role in their formation for life: 55% of the young men between 14 and 35 years old consider that the subjects taught to them in school help them only partly to find a work place. The main values important to the Romanian young men nowadays are family, personal accomplishment and faith in God, though only 1% of them value tolerance and 1% value responsibility [7].

* The research included 1.205 persons between 14 and 35 years old.. He poll was done between May 6th and 10th 2009, on 2,004 persons.
Another interesting study is the national poll “Young people and their Preoccupations” done by the Ministry of Youth and Sports in which the adult population feels to a larger extent than young men – 41% in comparison to 38% - the lack of jobs and unemployment (Hainarosie, 2009) (Figure 2). At the same time, 28% of the young people identified corruption as one of the most serious problems that Romania is facing, while 17% of the adult population considers corruption a true problem [7].

**Figure 15** [7]. The problems of young men in comparison to adults in Romania  

**Figure 16** [7]. The needs of Romanian young people  
Measuring child deprivation in the european context

The availability of EU-SILC data for 32 European countries of child specific indicators alongside household variables, and our experiences with monetary poverty and deprivation analyses, have inspired us to construct a child specific deprivation analysis[24]. The obvious start for such an analysis is the work of the Indicators Subgroup of the EU Social Protection Committee and the work of Guio (2009) who explored the deprivation indicators in EU SILC 2005. The results of the analysis for children based on the EU SILC data for 2009 are given in next figure.

The table shows the distribution of the number of items lacking in each country. Over all countries 78 per cent of the children lacked no items ranging from 97.3 per cent in Sweden to 19.3 per cent in Romania [24].

In general the countries fell into four groups: in the Scandinavian countries and the Netherlands less than 10 per cent of children lack one of the items on the deprivation scale (Denmark, Finland, Iceland, the Netherlands, Norway and Sweden); the large economies of “old Europe” (Germany, France, Spain and the UK) plus smaller countries like Austria, Belgium, Cyprus, Czech Republic, Ireland, Luxemburg, Malta and Slovenia show a score between 80 and 89 per cent of children who do not suffer from deprivations measured by the scale indicators. Approximately a quarter of children in Estonia, Greece, Italy, Lithuania, Poland and Slovakia suffer from deprivation in at least one indicator compared to 40 per cent of children in Portugal, while only one fifth of children in Romania and slightly more than one third in Bulgaria do not suffer from any deprivation. Table 5 indicates the depth of child deprivation in each country and reveals the pattern of grouped countries; figures in all 14 columns indicate deprivation of all 14 items. In Bulgaria and Romania for example, respectively 1.6 and 2.2 per cent of children lack all 14 items; in Iceland 4.3 per cent lack just one item while the Scandinavian countries do not exceed four, and so on. All values of one per cent or less are omitted in the Table 1 [24].
Table 1: Proportion of children lacking each item by country [24]

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<th>fruit</th>
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<th>clothes</th>
<th>shoes</th>
<th>internet</th>
<th>books</th>
<th>home work</th>
<th>fest.</th>
<th>cr.</th>
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<td>2.1</td>
<td>4.7</td>
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<td>14.8</td>
<td>12.0</td>
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<td>0.1</td>
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<td>0.2</td>
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<td>2.7</td>
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<td>0.5</td>
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<tr>
<td>SK</td>
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<td>13.5</td>
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<td>6.5</td>
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</tbody>
</table>

This table provides the basis for the European Child Deprivation Index. The table shows the distribution of the number of items lacking in each country. Over all countries 78 per cent of the children lacked no items ranging from 97.3 per cent in Sweden to 19.3 per cent in Romania.
A general problem with the items available relates to the degree of variance in the items for the richer countries (this also explain why the scale performs worse for these countries). This may reflect a technical measurement problem (we have no items that allow to identify the deprived children in richer countries) or the fact that there simply are few deprived children in richer countries.

**Conclusions**

Innovation and competitiveness of education can contribute to overcoming socio-economic disadvantage of youth. But it may also perpetuate it. Inequity in education and training brings huge costs. These are often hidden, but are no less real. Ensuring equity of access, participation, treatment and outcomes must therefore remain a priority [20].

Brilliant children, fascinating students [20]- here it is a charming reflection of the power of intelligence and critical thinking. We talk about a real story, with revolutionary teachers. They show that all of us have the ability to increase the brilliant and fascinating students.

It is a first step of a new education which aims to develop the highest characteristics of each person: critical consciousness, responsibility, decision-making capacity and tolerance and, especially, the ability to dream and to action [22].

Our Intelligence Educational Unit’s prepare executives, educators, doctors, psychologists, lawyers, academics and anyone interested to broaden the horizons of
the mind, the emotional reactions to educate and improve quality of life [20].

The economic integration of Romania into European Union is important for the sustainable development of our country not only under the circumstances of traditional models of economic growth, but in the light of the increasing role of knowledge-based society and digital economy, the core of which are the increasing contribution of intellectual property represented by large variety of intangible assets [21].

The narrowing of digital divide, technological gaps and R&D discrepancies between Romania and the developed member states of the EU is depending to a greater extent of promoting in our country the increase of the quality and the contribution that could be obtained by an increasing amount of intangible assets [21].

Teachers need better professional preparation and continuing development. This will improve education and training outcomes. Involving teachers and trainers in innovation and reform is also very important.

The way to follow is:
- More education to raise the qualifications of young workers;
- On-going training to upgrade skills to keep pace with changing needs;
- Extension of the retirement age and removal of disincentives to work beyond the retirement age;
- Policies and incentives to facilitate part-time work so that those who are unable or unwilling to work full-time can still participate in the work force.

Implementing lifelong learning to achieve efficiency and equity;
- Near innovation and creativity, education is a key element of the knowledge triangle [22];
- Education is fundamental to the knowledge triangle, to boosting jobs and to growth the economy.

Pre-Universities are the heart of the triangle. Centers of excellence which focus on teaching, research and knowledge transfer is vital. Much more needs to be done to enable higher education and business to work in partnership [22]. In the youth labour market; research and innovation need a new broad skill. The key competences, particularly those relating to entrepreneurship, creativity and learning-to-learn, must be developed in all systems and levels of education and training [20]. Reflections on an updated strategic framework for European cooperation in education and training should therefore start now. Give the crucial role of education and training to the Strategy for Jobs and Economical Growth.
References


http://www.presa-zilei.ro/stire/293/tinerii-calificati.html


QUALITY ASSURANCE OF EDUCATION AS A DRIVER FOR TECHNOLOGICAL CHANGES


***http://www.ziare.com/articole/programe+tineri+romani, 3 noiembrie 2010

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Hierarchy of administrative unit's using an index of development is particularly important in measuring the economic disparities between the Romanian regions. Knowing regional disparities, we can determine for accurate regional development policy priorities and provide supports for achievement of regional development strategies. For achieve this hierarchy, we used a set of four indicators relevant to express the population participation in labour force at regional level and we realized a hierarchy using two methods: ranks method and relative distances method.

Introduction

Since it’s establishment, the European Community has set as a priority for development throughout the Community a harmonious, balanced and sustainable development of economic activities, a high level of employment and social protection, growth of living standards, solidarity and economic and social cohesion for European countries. Thus, regional policy aims to reduce social disparities and solidarity with disadvantaged social groups (vertical cohesion) and reducing regional disparities and solidarity with people in declining areas (horizontal cohesion). Through this policy, financially supported by structural funds, the European Union helps regions whose development is lagging behind and supports the conversion of industrial areas in difficulty, diversification of economic activities in rural and urban regeneration of cities (Constantin, 2010, pp. 138).

Disparities in levels of development of different regions are the result of “equipping” their natural resources and human differentiated, and the teaching of evolution relatively specific (economic, technological, demographic, social, political and cultural) that shaped his development throughout history (Biriescu, Butuza,
2011, pp. 21).

All the time, the human factor was the main factor of production. Without this, economic and social life is not possible, without the direct or indirect intervention of human factor, it cannot occur production and other economic activities, it cannot be harness capital goods and it is not possible people’s needs satisfaction. World experience shows us that the main force for change is represented by human factor. Even if the equipments and technologies are modern, economic activities cannot be performed in efficient conditions and cannot be improved without active participation of human factor.

The labour resources employment, dimension and employment quality were and continue to be one of the most important economic and social problems. In this field, a special place is occupied by the occupational structure.

Labour market is an important element of the market economy. The changes that occur in the evolution of phenomena in the labour market, such as occupation or unemployment, have a special impact both on regional and national levels. Between labour market imbalances and regional disparities exists a bi-univocal relationship, both manifested in a complex external environment, dominated by variable factors and uncertainty.

Role of statistics in spatial analysis

Regionalization is an important objective for harmonization and European integration, because it allows a zonal monitoring of socio-economic development. Europe is in a continuous change, economic and social development evolution requires a statistical system adaptable to change that can keep up with the development of European policy. The priorities at European level in the field of statistics refer to (Stefanescu, Dumitrescu, Wagner, 2003, pp. 69):

- development of relevant indicators to describe the situation of the environment, in support of sustainable development policies;
- development of quality indicators, ask for the problems required by strategic spatial planning at European level;
- particularization of statistical data concerning to labor market trends at the regional level, in accordance with continuous changes of economic activity, in occupational and spatial terms.

Statistics provides the conceptual and methodological framework for analysis in spatial terms (regional). Existence of regional imbalances is a reality, due to differential allocation of natural and human resources and different conditions of
development (economic, technological, demographic, social, political and cultural).

Regional statistical system must have an interactive relationship with users, so that, by its attributes, to inform all members of society on its evolution.

To quantify the level of economic development of a region, an important instrument is \textit{global development index}, with an important role in the hierarchy of administrative unit’s. Elaboration of global development requires several steps (Tacu, 1998, pp. 29-38):

- \textit{identifying indicators and their structure} in blocks or groups of indicators. This phase is particularly important, with the objective of establishing the system of indicators that reflect better reality and comprise the most significant aspects of the socio-economic development process. In this phase should be considered to ensure the comparability of indicators and availability of statistical data in present and near future;

- \textit{determination of criteria and calculation methods} according to logical evolution of phases completed to obtain the global development index, as a generalizing index;

- \textit{sensitivity analysis} of this index variation at other indices or indicators variations, that global index depends naturally. This analysis can be approached both in terms of dynamic and spatial or territorial aspect.

This index can be adjusted at the sector or activities level of the national economy. We can use an index to make a hierarchy of participation population in labour force at regional level.

Rigorously evaluating of regional development is part of the requirements of modern statistics, designed to give those who use it opportunity to know exactly what happened and to outline general trends. Based on these requirements, we propose to present the main methods of multifactorial statistical hierarchy of administrative unit’s and using this methods to make a classification of Romanian development regions. Multifactorial hierarchy of regions is particular importance to measure gaps and prepare development strategies.

The hierarchy starts with identifying and selecting those statistic indicators who provide complex characterization of each territorial unit, using for this purpose a set of indicators. First, can be made provisional classifications by each chosen indicator and then can be used an aggregated method in a single indicator through which is achieved proper hierarchy. (Popescu, 2004, pp. 203).

To make this hierarchy, we chose a set of indicators that we consider relevant to characterize population participation in labour force at regional level. Thus, the knowledge hierarchy of development regions allows to accurately determine the regional development policy priorities regarding the employment policy of labour resources. Thus, we can allocate resources to lagging behind regions in terms of
population participation in labour force at regional level. The selected indicators are:

- Activity rate;
- Employment rate;
- ILO unemployment rate;
- Average number of employes at 1000 inhabitants.

To emphasize the changes over time and effects of regional policy in Romania, we decide to make a double hierarchy: one for 1998 (year of publication of Law no. 151 concerning regional development) and one for 2011.

The model what we propose aims to easy hierarchy of development regions in terms of population participation in labour force, starting from the premise that ease of use was one of the causes of success it had Human Development Index. For this, we proposed a set of indicators whose values are available and easily accessible to national and regional statistical system.

Further are presented datas for indicators who will contribute at Romanian development regions hierarchy in terms of population participation in labour force.

**Table 1**: Indicators used for Romanian development regions hierarchy in terms of population participation in labour force, in 1998 and 2011

<table>
<thead>
<tr>
<th>Region</th>
<th>Activity Rate (%)</th>
<th>Employment rate (%)</th>
<th>ILO Unemployment rate (%)</th>
<th>Average number of employes at 1000 inhabitants</th>
</tr>
</thead>
<tbody>
<tr>
<td>North-West</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1998</td>
<td>65,8</td>
<td>62,2</td>
<td>5,4</td>
<td>239,46</td>
</tr>
<tr>
<td>2011</td>
<td>53,6</td>
<td>50,8</td>
<td>5,2</td>
<td>226,39</td>
</tr>
<tr>
<td>Center</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1998</td>
<td>58,5</td>
<td>55,0</td>
<td>5,9</td>
<td>265,89</td>
</tr>
<tr>
<td>2011</td>
<td>49,6</td>
<td>44,1</td>
<td>11,1</td>
<td>232,22</td>
</tr>
<tr>
<td>North-East</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1998</td>
<td>69,4</td>
<td>64,1</td>
<td>7,6</td>
<td>191,36</td>
</tr>
<tr>
<td>2011</td>
<td>59,4</td>
<td>56,6</td>
<td>7,8</td>
<td>150,23</td>
</tr>
<tr>
<td>South-East</td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>1998</td>
<td>61,1</td>
<td>57,3</td>
<td>6,3</td>
<td>225,94</td>
</tr>
<tr>
<td>2011</td>
<td>51,5</td>
<td>46,3</td>
<td>10,1</td>
<td>198,48</td>
</tr>
<tr>
<td>South Muntenia</td>
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</tbody>
</table>
The labour market evolution is the result of reorganization process in Romanian economy and employment opportunities offered by small and medium enterprises and foreign direct investments attracting in different regions. Activity rate and employment rate decreased in mentioned period (except Bucharest Ilfov region). This decrease of two indicators is correlated with diminishing of available jobs and temporary migration phenomenon in foreign countries for works.

High activity and employment rates in less developed regions (North-East, South-West Oltenia, South Muntenia) can be explained by the high employment rate in agriculture. Bucharest Ilfov region is sole region when the two mentioned indicators increased in period 1998 – 2011. Bucharest Ilfov attracted over 60 percent of foreign direct investments in Romania, that’s mean more jobs, more opportunities for this region population.

**Ranks method**

It presents a classification of territorial unit's, successively, according to each indicator included in the analysis. Rank one is assigned to the unit with the highest quality performance and highest rank, equal to the number of territorial unit’s investigated, is assigned to the unit with minimum quality level. For each territorial unit, it calculates the ranks assigned to each indicator and it obtains the total score depending on which is determined the final rank.
Table 2: Romanian development regions hierarchy using rank method, in terms of population participation in labour force, in 1998 and 2011

<table>
<thead>
<tr>
<th>Region</th>
<th>Activity Rate (%)</th>
<th>Employment rate (%)</th>
<th>ILO Unemployment rate (%)</th>
<th>Average number of employes at 1000 inhabitants</th>
<th>Final score</th>
<th>Final rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>North-West</td>
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<td>1998</td>
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<td>8</td>
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<td>27</td>
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<td>North-East</td>
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<tr>
<td>1998</td>
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<td>1</td>
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<td>8</td>
<td>15</td>
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<tr>
<td>South-East</td>
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<tr>
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<td>6</td>
<td>7</td>
<td>5</td>
<td>24</td>
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<tr>
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<td>7</td>
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<td>5</td>
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<td></td>
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<tr>
<td>1998</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>6</td>
<td>18</td>
<td>3</td>
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<tr>
<td>2011</td>
<td>6</td>
<td>6</td>
<td>7</td>
<td>7</td>
<td>26</td>
<td>7</td>
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<tr>
<td>1998</td>
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<td>4</td>
<td>1</td>
<td>21</td>
<td>7</td>
</tr>
<tr>
<td>2011</td>
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<td>2</td>
<td>1</td>
<td>7</td>
<td>1</td>
</tr>
<tr>
<td>South-West Oltenia</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>1998</td>
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<td>10</td>
<td>1</td>
</tr>
<tr>
<td>2011</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>6</td>
<td>16</td>
<td>5</td>
</tr>
<tr>
<td>West</td>
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<td>1998</td>
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<td>2011</td>
<td>5</td>
<td>5</td>
<td>3</td>
<td>2</td>
<td>15</td>
<td>3</td>
</tr>
</tbody>
</table>

Source: calculated by Tempo Online Database.

Using ranks method, first position in 1998 is held by South-West region, followed by North-West and Centre regions. In 2011, the Bucharest-Ilfov region
occupies first position, North-West, West and North-East regions being on next positions.

Relative distances method

Deficiency of ranks method depend on the double smoothing of variable size of differences between regions, in this case by replacing them with an arithmetic progression with ratio one. To remove this method deficiencies, we shall use for hierarchy a much more efficient method: relative distances method. The method involves, first, the establishment of a ideal unit whose characteristics present maximum quality performance in analyzed colectivity, then, selection of a procedure for measuring the distance between the real unit and this ideal unit, for every studied feature under and determination, finally, of a aggregation procedure of information obtained from each real unit.

Expression of observed distance for every studied characteristics was made as a coordination relativ size, calculated for each element of community and compared with the unit with maximum quality performance. Basis of comparison, being maximum variation for each characteristic, the comparisons between unit’s were limited from 0 and 100 percent.

Table 3: Romanian development regions hierarchy in terms of population participation in labour force using relative distances method, in 1998 and 2011

<table>
<thead>
<tr>
<th>Region</th>
<th>Relative distances (%) according to</th>
<th>Average number of employes at 1000 inhabitants</th>
<th>Average synthetic Index* (%)</th>
<th>Final rank</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Activity Rate (%)</td>
<td>Employment rate (%)</td>
<td>ILO Unemployment rate (%)</td>
<td></td>
</tr>
<tr>
<td>North-West</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1998</td>
<td>93,73</td>
<td>92,83</td>
<td>91,30</td>
<td>70,38</td>
</tr>
<tr>
<td>2011</td>
<td>90,23</td>
<td>89,75</td>
<td>100,0</td>
<td>51,60</td>
</tr>
<tr>
<td>Center</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1998</td>
<td>83,33</td>
<td>82,08</td>
<td>85,86</td>
<td>78,15</td>
</tr>
<tr>
<td>2011</td>
<td>83,50</td>
<td>77,91</td>
<td>52,34</td>
<td>52,92</td>
</tr>
<tr>
<td>North-East</td>
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<td></td>
</tr>
</tbody>
</table>
As can be observed from the data presented for period 1998 – 2011, there were changes in the development regions hierarchy in terms of population participation in the labour force. Bucharest-Ilfov region occupies in 2011 first position, unlike 2012 when this region occupied third position. Second in 2011 is the West region, in comparison with fourth position in 1998.

Also, the South Muntenia region is in 2009 the last in this hierarchy, position held in 1998 by the North-East region. In 2009, the Western region is second, in comparison with sixth place held in 1998. There were a lot of changes in the analyzed period (1998 – 2011) in regions like South-West Oltenia (from first place to fifth place) or North-East (from eighth place to fourth place).

**Conclusions**

As other Eastern European countries, Romania started the transition
process with a relatively low level of regional disparities compared to countries with traditional market economy. These disparities have grown rapidly, especially between Bucharest-Ilfov region (including the capital of Romania) and other regions. Most foreign investors were attracted to the region, which offers many advantages. Potential investors are not attracted by the poverty of the region. As a consequence, they are reticent on setting up new businesses here. This situation has been extended to the labour market.

Analyzing regional dimension, we can understand the development trends across the country, these being mainly influenced by the urban dimension, where growth is concentrated in major cities, Bucharest being the most visible example of this phenomenon, and market access (especially the west) - attracting foreign direct investment and economic growth are positively influenced by easy access to western markets. In contrast, natural barriers proximity for trade (Danube) or undeveloped markets in Eastern Europe (Ukraine and Moldova), usually hindered development.

From this analysis, we can see two very important aspects: studying average synthetic index values, we can observe that the value decreased in the analyzed period in all regions (except Bucharest Ilfov). This is due to rapid development level of the region Bucharest-Ilfov, the disparities in terms of population participation in labour force between this region and other regions, exacerbating in the mentioned period.

The concentration of economic growth around Bucharest has become a characteristic of the Romanian economy. It is obvious high dependence of growth to FDI volume. Foreign investment in Romania oriented depending on accessibility to the western markets and urban character of the targeted areas, including the availability of adequate facilities and services for expatriates. Thus, differences in terms of population participation in labour force between Bucharest-Ilfov region and other regions increased significantly in the analyzed period.

References

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The Higher Education in Romania after 1989 and the Influence of the Bologna Process

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      Ion Pargaru, Valahia University of Targoviste, pargaruion@yahoo.com

The transition to democracy and the market economy, begun in 1990, the society has changed radically in relation to the requirements of higher education. The number of higher education institutions (including private) schooling and the figures have increased rapidly with a wide diversification of the specializations offered, effect of absence of a favoured legislative framework, which has imposed the need for reforms in higher education.

With the accession to the European Union on 1 January 2007, Romania was forced to participate in a common market, not only of goods, services and capital but also of work. This was a starting point for the development of our country, giving us the opportunity and means to enhance the quality of life for citizens, together with all European citizens. As Romania to meet it’s competitiveness on the labour market would see a growth of labour productivity, as a Member State of the European Union, must be aimed at improving skills, career development and the reduction of discrepancy of professional qualification.

The development of higher education in Romania in line with European policy of higher education

The reform of higher education began in 1993 with the establishment of the legal framework for the accreditation of institutions of higher education and recognition of diplomas (Law No. 88/1993 revised and completed by law No. 144/1999 and repealed by the provisions of GEO No. 75/2005) in order to preserve the quality of certain national standards.

In accordance with the provisions of law No. 88/1993 all institutions of higher education which were opened on 22 December 1989 were considered to be
accredited and have gone even through the process of external evaluation conducted periodically every 5 years, but the institutions of higher education (State and private) established after 1990 have had to seek permission to operate temporarily and then accreditation. All the rules concerning the authorisation, accreditation and periodically applied were equally to all institutions of the State and private education.

Ensuring the quality of the educational process has been undertaken and carried out further assessments conducted by the undergraduate level and/or the level of institutional structures. The process of assessment of higher education institutions was based and is based on the evaluation of internal and external evaluation. Internal evaluation is carried out within each of the institutions of higher education, and the external evaluation is carried out by the National Council for Academic Assessment and Accreditation in 2005 it became, by Law nr. 75/2005, The Romanian Agency of Quality Assurance in Higher Education.

The second fundamental change was made in 1995 by the promulgation of the Law on Education No. 84/1995 republished, with subsequent amendments and additions, the law whose provisions are established the basic principles for the Organization and administration of the national educational system, as well as the structure, contents and the goals of education for all grades. Under this law, the institutions of higher education (universities, academies, national schools) have received autonomy and the right to determine their own development policies and for the allocation of funds from the State budget or other sources, according to law enforcement and personal responsibility. In higher education may be admitted only high school graduates with baccalaureate degree and the figures of educational tuition for all levels are set annually by an order of the Government. Institutions of higher education have the right to accept a number of students exceeds the number of places financed by the State budget, the students agree to pay the equivalent of studies according to the provisions of Law No. 441/2001. The Ministry of education approved the annual number of paid places each higher education institution, based on proposals from the Senate of the University and the academic standards of assessment and accreditation. Tuition shall be determined according to the cost of education of University Senates1.

At the European level, during this period of time it has held a series of very important events and developments which have made it's mark on higher education. The European Union has come to a stage of redefining it's identity and it's internal cohesion, to affirm that the dynamic actor and globally competitive2. To recover the gap with the UNITED STATES, the European Union is the goal of becoming ‘the

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1 After processing the law Education. 84/1995 republished, with subsequent amendments and additions
2 The strategy of accession of Romania to the European Union
most competitive and dynamic knowledge-based economy in the world capable of sustainable economic growth with more jobs and better social cohesion and characterized. To achieve this end, the EU has established reference framework through which European States have proposed to set up, by 2010, a single European Area of higher education.

This framework is represented by the Bologna process and Declaration of Sorbonne, whose goal is to harmonize the architecture of the European higher education system, what purpose can be achieved through the establishment of a common system of higher education based on certain stages of education (Bachelor, Master, Doctorate), as well as by increasing and facilitating the mobility of students, teachers and the recognition of titles and qualifications.

By creating a common European area for higher education shall ensure a common space for the development and continuous cultivation and the opportunity to study or to work in a foreign country. Romania shall participate in the Bologna process since it’s inception in 1999. To ensure that the education system should be aligned with the requirements of the various European initiatives, Romania was forced to adopt a comprehensive legal framework to ensure an increase in the mobility of students, their chance in the labour market and their participation in doctoral programs and masters.

Since 1999, the Ministers of education in Europe have decided to meet every two years to assess progress made and to establish new practical measures. After each meeting they signed a statement that represents the commitment of countries to implement the measures agreed. So, in 2001, the Ministers met in Prague, after which he attended the Berlin meeting in 2003, the Ministers of education have considered it a priority to introduce the third cycle doctorate – to ensure referencing European higher education area and the European research area in a Europe of knowledge. As a result of this meeting, in 2004, it adopted Law No. 288 with regard to the Organization of higher education on 3 cycles (licence, master and doctorate).

As required by law, by the year 2005/2006, Romanian Higher Education was organized as short-term education (3 years) and long term teaching (4-6 years). Short-term education held in colleges that were academic institutions of higher education are long-term and short-term studies graduates for further studies in the same area were forced to resume top-level materials from previous cycle. In the institutions of higher education, with university education and postgraduate education was organized which consist of: academic studies, doctoral, postgraduate, professional studies, postgraduate refresher courses and specific forms of medical postgraduate education. For the profession of teaching, students or graduates themselves were

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3 The European Union’s desire at the spring European Council in Lisbon of 23 and 24 March 2000 (http://www.europarl.europa.eu.htm);
required to absolve the courses organized by Departments for the preparation of teachers (DPPD).

By the adoption of Law No. 288/2004 each cycle Professor is defined the procedures for admission and graduation. During the study, corresponding to the various areas and specialties was approved by Government Decision and established by the Ministry of education, on the basis of proposals from the National Council of Rectors. According to the application in all universities of the European system of transferable study credit’s (ECTS). So, the first cycle (From/Bachelor ‘s) corresponds to a minimum of 180 and a maximum of 240 transferable study credit's European (ECTS) and lasts for three to four years, depending on the area of specialization. The second cycle (Master/Master ‘s) corresponds to a minimum of 90 and a maximum of 120 European credit's (ECTS) study transferrable and lasts two years. The third cycle, doctoral studies, can be organized by institutions of higher education or research on a full-time or part-time. Duration of doctoral studies must be the equivalent of three years of full-time study.

After the meeting in 2005 in Bergen, in Romanian higher education has been given particular attention to the development of fundamental research and advanced by adopting O.M. c. Ed. nr. 3861/2005 on the establishment of postdoctoral research programmes for a period of two years.

Starting with the academic year 2005-2006, due to the regulations of the Law No. 288/2004 and OMER nr. 4868/2006 on the introduction of the supplement to the diploma to certify completion of a course of study, all higher education institutions have issued free supplement to the diploma.

The Law 87/2006 approving Government Emergency Ordinance No. 75/2005 concerning the quality of education is one of the main achievements of higher education in Romania. The Rules of this law shall ensure the quality of the cross-sectoral, covering all organisations providing education that operates on the territory of Romania and the Romanian Agency is established for quality assurance in higher education as an independent institution with the power of academic evaluation, accreditation and quality assurance.

The fact that Romania is a Member State of the European Union with a gross domestic Product per capita far below the European average, stresses the need for effective use of own resources and of Community funds, to stimulate more active domestic and foreign investment in an attempt to reduce the differences that divide us by States which have signed first to be members of the Union.

In the recent years the implementation of the Bologna process was a priority for universities in Romania, which have developed programmes for undergraduate studies, master’s licence for the new model, and organising institutions were created, programs that have been evaluated and accredited by the
Romanian Agency for quality assurance in higher education. It was launched and the process of adopting the national framework of qualifications gained in college. The creation of the National Framework of qualifications in Romania aims at linking national qualifications systems to the European system of qualifications set out in the European Qualifications Framework in order to facilitate the recognition of diplomas in the European Union, in accordance with recommendation 2008/C111/01/EC of the European Parliament and of the Council on the establishment of the European Qualifications Framework, which provides that the year 2010 is the deadline to which countries can determine the corresponding national systems of education and training and CEC and the 2012 deadline to submit for inclusion in the individual qualification certificates of a clear reference to the CEC.

The structure of the three cycles of higher education has been adopted in most institutions of higher education in the countries signatories to the Declaration of Bologna, but some institutions retain the long programs for certain majors of study such as medicine or architecture or software corresponding to certain professions, such as theology, music and the arts. However, with regard to countries such as medicine, Belgium (French Community and Flemish Community), Switzerland and the Netherlands have introduced the structure in three cycles.

In 2007, the meeting in London that was observed in the Area remain issues such as: the scarcity of investment in human resources development, inadequate level of education for graduates of higher secondary education, ageing, insufficient involvement of teachers of adults in lifelong learning which concluded that reforms must ensure progress in two key areas: the social dimension and the global dimension of the European higher education area. The press in London has defined targets so that people in the social dimension of higher education student association covering all walks of life. Bologna countries, differences in access to higher education are related to socio-economic status and education level of the parents status or disabilities, immigration gender (men or women) or by geographic region (urban and rural).

In 2009, the Ministers from 46 countries signatory to the Bologna Process and responsible for higher education, were met at Leuven and Louvain-la-Neuve to assess the performances made in the 10 years of reform and to set priorities for the following period (European higher education Area by 2020). They stressed in particular the importance of lifetime learning, widening access to higher education and mobility. By 2020, at least 20 graduates of the European higher education Area need to study or participate in a training program in the country.

At the meeting of the Ministers in Budapest-Vienna 12 March 2010 showed that 2010 marked the end of the first decade of the Bologna process and the Bologna Declaration of 1999, was made into the European area of higher education (SEIS).
At this meeting, Ministers have decided that for the next period, the objectives laid down in the Communication from Leuven/Louvain-la-Neuve to be implemented in full.

At the beginning of 2011, to continue the reform of higher education and to harmonize Romanian legislation with the existing legislation of the European area, the Government of Romania, since then, has assumed the Law of education. 1/2011 here, at that time still in the parliamentary debate. Disagreeing with some of the measures provided for in this law today, some of them are difficult or even impossible to apply.

Over the course of 2011, in accordance with the requirements of the Bologna process and the commitments undertaken by Ministers of education at Bergen and Leuven, to ensure coherence, compatibility and international qualifications of securities in higher education in Romania, the national authority for Qualifications completed The National Qualifications in higher education (CNCSIS) in Romania, being part of the top 10 countries that have made this commitment.

In April 2012, the eighth edition of the Bologna process Ministerial Conference was held in the Palace of the Parliament of Romania. In accordance with the specific mission of collectors of data and methodology, the report describes the status of implementation of the Bologna process, in 2012, from various perspectives and with varying dates 2010-2011 as well as historical data trends certain digit's containing statistical.

Thus, the report provides statistical data and information that compares life contextualised social and economic student⁴. Although that last Conference Bologna process was conducted in a difficult time of economic crisis, the assessments of progress after nearly a decade of effort shows that the foundations for the realisation of the European Higher Education have been put, they allow a better education with more opportunities for mobility for all.

Higher education ministers in Bucharest have stressed the need for international cooperation in higher education in the development of a sustainable, opened and cohesive society. Within the Conference, aims to follow in the next period were directed on the four directions, namely:

* strengthening public accountability for higher education through the allocation of resources for higher education investment required an equitable and provide adequate opportunities for all citizens from various social backgrounds in higher education;
* the promotion of a system of open and transparent education by reducing obstacles to mobility international academic;

the importance of ensuring the quality of higher education and recognition of the important role of teacher qualifications and quality assurance in facilitating international recognition of qualifications;

• promoting policies to facilitate employability of graduates long-term higher education through the international recognition of studies and qualifications.

In accordance with the objectives laid down in the Europe 2020 Strategy is education, research and innovation are key factors in combating the effects of the crisis and securing a sustainable future so that, in all Member States the European designs and optimizes it's processes so as to lead to a knowledge-based society and to attain the objectives set: sustainable economic growth, better jobs and better economic and social cohesion.

The European Union's initiative in the field of education and training is to develop skills, lifelong citizens with the aim of increasing participation in the labour market in the light of a better correlation of demand and supply in terms of jobs and mobility. In order to achieve the objectives laid down in the Europe 2020 Strategy, the European Union Member States propose the following recommendations: to improve the quality of national education systems; to strengthen the performance of research; to promote innovation and knowledge transfer within the Union; to use information and communications technologies; to ensure the implementation of innovative ideas into new products and services that generate increased job quality.

The objectives of Europe 2020 Strategy in an educational plan and analysis of indicators by which these objectives are measured.

The objectives defined by the Europe 2020 Strategy in the field of education and research have set values of the 3 main indicators for Member States to take into account in the adoption of it's policies.

1. A high level of public and private investment in research and development of 3 of EU GDP which will result in better conditions for research, development and innovation

Table 1: Percent costs for research and development of GDP recorded in the year 2010 in the European Union, Japan and the USA

<table>
<thead>
<tr>
<th>The EU Average</th>
<th>Bulgaria</th>
<th>Czech Republic</th>
<th>Germany</th>
<th>France</th>
<th>Romania</th>
<th>Sweden</th>
<th>United Kingdom</th>
<th>Japan</th>
<th>United States</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,0</td>
<td>0,6</td>
<td>1,56</td>
<td>2,82</td>
<td>2,26</td>
<td>0,47</td>
<td>3,42</td>
<td>1,77</td>
<td>3,36</td>
<td>2,88</td>
</tr>
</tbody>
</table>

Source: http://ec.europa.eu/europe2020/reaching-the-goals/targets/index_ro.htm
In the Table no. 1 Note that in 2010 in Europe costs for C-D is at the level of GDP by 2% in comparison with the USA and Japan, 3.36 2.88 which means that Europe must improve the conditions for investments in C-D, and in Romania in 2010 were below the level of 0.5% below the European average.

2. higher education diploma.

Table 2: The share of the elderly population (%), 30-34 years, who have a tertiary education qualification obtained in (ISCED levels 5 and 6)

<table>
<thead>
<tr>
<th></th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU27</td>
<td>28</td>
<td>28.9</td>
<td>30</td>
<td>31.1</td>
<td>32.3</td>
<td>33.6</td>
</tr>
<tr>
<td>Belgium</td>
<td>39.1</td>
<td>41.4</td>
<td>41.5</td>
<td>42.9</td>
<td>42.0</td>
<td>44.4</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>24.9</td>
<td>25.3</td>
<td>26.0</td>
<td>27.1</td>
<td>27.9</td>
<td>27.7</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>13</td>
<td>13.1</td>
<td>13.3</td>
<td>15.4</td>
<td>17.5</td>
<td>20.4</td>
</tr>
<tr>
<td>Germany</td>
<td>26.1</td>
<td>25.8</td>
<td>26.5</td>
<td>27.7</td>
<td>29.4</td>
<td>29.8</td>
</tr>
<tr>
<td>France</td>
<td>37.7</td>
<td>39.7</td>
<td>41.4</td>
<td>41.2</td>
<td>43.2</td>
<td>43.5</td>
</tr>
<tr>
<td>Italy</td>
<td>17.0</td>
<td>17.7</td>
<td>18.6</td>
<td>19.2</td>
<td>19.0</td>
<td>19.8</td>
</tr>
<tr>
<td>Romania</td>
<td>11.4</td>
<td>12.4</td>
<td>13.9</td>
<td>16.0</td>
<td>16.8</td>
<td>18.1</td>
</tr>
<tr>
<td>Sweden</td>
<td>37.6</td>
<td>39.5</td>
<td>41.0</td>
<td>42.0</td>
<td>43.9</td>
<td>45.8</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>34.6</td>
<td>36.5</td>
<td>38.5</td>
<td>39.7</td>
<td>41.5</td>
<td>43.0</td>
</tr>
</tbody>
</table>

Source: http://ec.europa.eu/europe2020/reaching-the-goals/targets/index_ro.htm

From the data presented in table no. 2 it is observed that in the year 2010, in Europe, the share of the population aged 30-34 years in the work force who have higher education was 33.6, much higher than that of the Romanian 18.1%. This indicator varies considerably between countries, as well as the challenges faced by these countries.

According to studies carried out among high school students shows that high school graduates about 65.7% will to attend courses of faculties from Romania, about 8.4% will to go to school abroad, and the remainder have not been decided what will follow. It is observed that pupils in rural areas are less concerned to attend courses of faculties of the students because 54.9% rural would like to pursue a college education, while among students of 75.6% urban areas wanting to pursue a college education. Depending on the profile of junior high school students that is observed in vocational high schools and that theoretical high schools more than to attend courses of faculties namely those 81.2 86.6% compared to students from high
schools with technology which are less concerned, namely about 65%.  

Romania by the measures it adopts must attract the greatest possible number of young people who finish high school and pursue a degree in education. Achieving this objective is a challenge and is why Romanian policies must include measures to raise the awareness of high school graduates from disadvantaged categories.

3. An employment rate of 75% employment among the population with age between 20 and 64 years old by 2020. So, despite the failure of individual EU countries to achieve the goal of 70% (see table no. 3) concerning the rate of employment, the EU allows Member countries to establish national targets, so that each country to outline the strategy according to it’s specific situation and to reach by 2020 an employment rate of 75%.

Moreover, the data presented in table no. 3, it is noted that another shortcoming of labor market in Romania internally is the low rate of participation of the working population to just below the European average, but well below the established strategy Europe 2020 (75). Short-term perspectives remain negative for the labor market, both internally in terms of generating jobs, but also the evolution of salaries.

**Table 3: Employment rate among the population aged 20-64 years old in the EU member countries in the period 2005-2011**

<table>
<thead>
<tr>
<th></th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EU27</strong></td>
<td>68</td>
<td>69</td>
<td>69,9</td>
<td>70,3</td>
<td>69,0</td>
<td>68,6</td>
<td>68,6</td>
</tr>
<tr>
<td><strong>Belgium</strong></td>
<td>66,5</td>
<td>66,5</td>
<td>67,7</td>
<td>68,0</td>
<td>67,1</td>
<td>67,6</td>
<td>67,3</td>
</tr>
<tr>
<td><strong>Bulgaria</strong></td>
<td>61,9</td>
<td>65,1</td>
<td>68,4</td>
<td>70,7</td>
<td>68,8</td>
<td>65,4</td>
<td>63,9</td>
</tr>
<tr>
<td><strong>Czech Republic</strong></td>
<td>70,7</td>
<td>71,2</td>
<td>72</td>
<td>72,4</td>
<td>70,9</td>
<td>70,4</td>
<td>70,9</td>
</tr>
<tr>
<td><strong>Germany</strong></td>
<td>69,4</td>
<td>71,1</td>
<td>72,9</td>
<td>74</td>
<td>74,2</td>
<td>74,9</td>
<td>76,3</td>
</tr>
<tr>
<td><strong>France</strong></td>
<td>69,4</td>
<td>69,3</td>
<td>69,8</td>
<td>70,4</td>
<td>69,4</td>
<td>69,1</td>
<td>69,1</td>
</tr>
<tr>
<td><strong>Italy</strong></td>
<td>61,6</td>
<td>62,5</td>
<td>62,8</td>
<td>63</td>
<td>61,7</td>
<td>61,1</td>
<td>61,2</td>
</tr>
<tr>
<td><strong>Romania</strong></td>
<td>63,6</td>
<td>64,8</td>
<td>64,4</td>
<td>64,4</td>
<td>63,5</td>
<td>63,3</td>
<td>62,8</td>
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<tr>
<td><strong>Sweden</strong></td>
<td>78,1</td>
<td>78,8</td>
<td>80,1</td>
<td>80,4</td>
<td>78,3</td>
<td>78,7</td>
<td>80</td>
</tr>
<tr>
<td><strong>United Kingdom</strong></td>
<td>75,2</td>
<td>75,2</td>
<td>75,2</td>
<td>75,2</td>
<td>73,9</td>
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<td>73,6</td>
</tr>
</tbody>
</table>

*Source: http://ec.europa.eu/europe2020/reaching-the-goals/targets/index_ro.htm*

5 Processing after Remus Pricopie, Valeriu Frunzaru and access and equity-in higher education in Romania, dialogue with students and students, Communication.
Analyzing the population of Romania occupied by level of education in the period 2010-2011, it is known to increase the share of those with superior instruction, and decreases as the level of education and degree of employment declines. In 2010 there were persons with higher education in the occupied population, 84.7%, those with secondary education and of 63.6% achievers training decreased 45.1% in 2011 must have the following: percentages of the highest share ever occurred among people with higher education, followed by personal 82.1% with secondary education 62.3%, and last place is low level, accommodate with 40.5% education.

As regards the occupied population structure by age group, the share of less than 25% in 2010 was held by the population aged between 15-24 years old in 2011, and that proportion has reached 23.8, the largest share of 74.4% it held in the year 2010, the population of the aged between 25-54 years old in 2011, and the percentage was 74.1%. At the same time, and studies on the characteristics of unemployment shows that the probability of being unemployed is much higher in the case of young persons between 15 and 24 years old.

Table 4: Unemployment rate among young people aged 15-24 years in European Member countries during the period 2005-2011

<table>
<thead>
<tr>
<th></th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU27</td>
<td>18.8</td>
<td>17.5</td>
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<td>21.4</td>
</tr>
<tr>
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<td>20.5</td>
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<td>18.0</td>
<td>21.9</td>
<td>22.4</td>
<td>18.7</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>22.3</td>
<td>19.5</td>
<td>15.1</td>
<td>12.7</td>
<td>16.2</td>
<td>23.2</td>
<td>26.6</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>19.2</td>
<td>17.5</td>
<td>10.7</td>
<td>9.9</td>
<td>16.6</td>
<td>18.3</td>
<td>18</td>
</tr>
<tr>
<td>Germany</td>
<td>15.6</td>
<td>13.8</td>
<td>11.9</td>
<td>10.6</td>
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<td>8.6</td>
</tr>
<tr>
<td>France</td>
<td>21.3</td>
<td>22.4</td>
<td>19.8</td>
<td>19.3</td>
<td>23.9</td>
<td>23.7</td>
<td>22.9</td>
</tr>
<tr>
<td>Italy</td>
<td>24.0</td>
<td>21.6</td>
<td>20.3</td>
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<tr>
<td>Romania</td>
<td>19.7</td>
<td>21.0</td>
<td>20.1</td>
<td>18.6</td>
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</tr>
<tr>
<td>Sweden</td>
<td>22.6</td>
<td>21.5</td>
<td>19.2</td>
<td>20.2</td>
<td>25.0</td>
<td>25.2</td>
<td>22.9</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>12.8</td>
<td>14.0</td>
<td>14.3</td>
<td>15.0</td>
<td>19.1</td>
<td>19.6</td>
<td>21.1</td>
</tr>
</tbody>
</table>

Source: [http://ec.europa.eu/europe2020/reaching-the-goals/targets/index_ro.htm](http://ec.europa.eu/europe2020/reaching-the-goals/targets/index_ro.htm)

If Romania does not find a way to increase the employment rate, particularly among young people, it is questionable whether it will be able to achieve a dynamic employment so high over the next ten years. To do this it is necessary to determine

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the factors that hinder the insertion of young people on the labor market and measures to combat these factors.

The factors that determine the transition from school to work: the context of socio-economic, equity held by young people, knowledge and skills acquired through training, the school and the scarcity of jobs.

Difficult economic climate, unemployment, significant decrease in the number of vacancies have repercussions far worse on young people than on adults. Also, the share capital held by young people is an essential factor in the crossing of this period of transition. The potential of young people to join the labor market is represented by individual characteristics that take the form of knowledge and skills acquired through school and vocational training, as well as their skills and talents.

Access of young people on the labor market and the problematic due to the scarcity of employment or compensation of small jobs available.

Conclusions

In conclusion, it can be said that through the Bologna process, in order to achieve the general objective—the creation of European higher education Area, defined by a series of recommendations and specific measures, which contribute to the achievement of the aim of the proposed creation of more competitive and more dynamic economies in the world. These recommendations were enforced, voluntarily, to all countries that have adopted the Bologna process through specific reforms in six main directions: a system of higher education based on two cycles, namely Professor and the postgraduate, adopting a system of diplomas are easy to understand and compare, implementing a system of transferable credit's, promoting mobility and free movement of students in the European space, promoting European cooperation in the field of quality, promote the European dimension of higher education. Thus, the student is able to choose courses based on their quality, giving it the right to study in a foreign University in the country or in the European Union and to recognise or to equate the courses already completed.

At the same time, professional insertion is to be understood as a result of the interaction between universities, employers and alumni. In Romania it is necessary to step up structural adjustment of the labour force, in line with the restructuring of the economy and the prospects for integration of data within the European Union, which implies correlation offers educational and initial vocational training with labour market needs.

How to attract and maintain more people in the labour market, reducing unemployment and inactivity, by increasing the demand for and supply of work are key objectives of the European strategy, and hence of the strategy adopted by
Romania. This must be undertaken for the following actions:

- prospective studies on regular long-term trends of the labour market and the provision of school pupils and students in recent years about these trends in scholarship programs include the transition from school to work;
- monitoring of the Insert to the professional development of graduates and to identify the key barriers that hinder employment-finding and facilitating corrective actions for programmes of study and specific actions of the transition from school to work;
- the increased involvement of all partners: businesses and education institutions, employers, Government, unions and employers, students and students in the skills needed on the labour market;
- identifying the sectors generating new jobs and stimulate them.

However, to succeed, however, legislation should be consistent with finance and entrepreneurship, with emphasis on the needs of users and on the opportunities in the market.

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Controversial Implications Concerning the Implementation of VAT System at the Moment if It’s Collection

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The applicability of tax regulations concerning VAT in Romania includes a legislative package formed, in principal, by the Tax Code – Title VI, completed with a number of other tax rules present in the Implementing Rules, Government orders and ordinances. The novelty in the VAT system consists of the application, starting with the 1st of January 2013, of the new VAT system at the moment of it’s collection, 90 days since the issuing of the invoice being the term that VAT is due to the state, even if the VAT is not yet collected. Since the appearance of the project of legislative change this topic generated and still generates plenty of controversies, heated discussions, misunderstandings and many questions in the business environment, of the professional accountants and tax experts. The present article aims to summarize the most significant news concerning the VAT system at the moment of it’s collection and to identify few of the controversial aspects challenged by part of the ones involved in the implementation of the new system. The implications for the companies obliged to adhere to such system are extremely extensive and have to be approached with high attention. Many tax consultants are of the opinion that the new regulations concerning the VAT payment at the moment of it’s collection are meant to confuse the business environment rather than to help.

Keywords: VAT payment at the moment of it’s collection, VAT system at the moment of it’s collection, VAT notification at the moment of it’s collection
Legislative regulations concerning the implementation of the new VAT system at the moment of its collection

Government Emergency Ordinance no.15/23 August 2012 regarding the change and completion of Law no.571/2003 concerning the Tax Code

The latest change of the Tax Code came through the Government Emergency Ordinance no.15/23 August 2012 regarding the change and completion of Law no.571/2003 concerning the Tax Code, published in the Official Gazette of Romania no.621 of 29 August 2012, and introduces the chargeability of VAT at the moment of total or partial collection of invoices issued by taxable persons with a turnover not exceeding 2.250.000 lei. As far as the invoices not cashed within 90 calendar days are concerned, the ordinance stipulates that the chargeability of VAT occurs at the 90s day since the issuing of the invoice.

The VAT system at the moment of its collection applies only for delivery of goods and services for which the place of delivery of goods/services is considered to take place in Romania.

The chargeability of VAT represents the date when a taxable person has the obligation to pay VAT to the state budget, respectively the date by which the taxable person has the obligation to file the VAT return.

This system applies to the persons normally registered for VAT purposes, whose turnover in the previous calendar year does not exceed 2.250.000 lei, and to the taxable persons registered for VAT purposes during the current year.

In the little time remaining until the implementation of the system, namely the 1st of January 2013, the taxable persons are forced to understand the system and determine whether it is applicable to them, both from the perspective of the sales but also acquisitions from the suppliers applying such system.

The implications for the companies obliged to adhere to such system are extremely extensive and have to be approached with high attention. The internal invoicing and reporting procedures shall be reconsidered and revised in order to respond to the new monitoring requirements. Moreover, the IT systems will require recalibrations involving efforts and cost probably not planned by the companies for the next period.

Besides the chargeability of VAT at the moment of collecting the invoice, the Government Emergency Ordinance no.15/23 August 2012 also approaches other tax aspects regarding:

• the change of the procedure of issuing the invoice, tax regulation of the electronic invoice,
• the structure of the register of taxable persons applying the VAT system at the moment of its collection and
• the statements regarding the situations when VAT adjustments are required for capital goods and assets other than capital goods.


In order to apply this system starting with 01.01.2013, the taxable person having the headquarter of the economic activity in Romania, of whose turnover during the period between the 1st of October 2011 until and including the 30th of September 2012 does not exceed 2.250.000 lei, has the obligation to register with the competent tax authority, until and including 25th of October 2012, a notification stating that the realized turnover does not exceed the above mentioned amount.

The draft of the notification – the form (097) and the instructions for filling in and registration have been approved by the National Agency of Tax Administration Order no.1529/10.10.2012, published in the Official Gazette no.707/16.10.2012, and it is presented in Annex no.1 of the present article.

The taxable person normally registered for VAT purposes (at the request of the taxable person or by the tax authority because of conditions imposed by law) during the period 1 October 2012 – 31 December 2012, of whose realized turnover until the end of the year 2012 does not exceed 2.250.000 lei, shall apply the VAT system at the moment of its collection starting with the first day of the second tax period of 2013. In such case, the notification shall be registered until and including the 25th of January 2013. In order to exit the system, the companies shall register the Declaration 097 until and including the 25th of the next month following the tax period in which the taxable person exceed the limit (2.250.000 lei).

According to the National Agency of Tax Administration Order no.1529/10.10.2012, the companies not obliged to register the form 097 are:
• taxable persons registering for VAT purposes starting with the 1st of January 2013, such persons being automatically registered by the tax authorities in the Register of taxable persons applying the VAT system at its collection starting with the date of registration for VAT purposes;
• taxable persons of whose turnover, calculated according to the regulations of article 1342 paragraph (3) letter a) of the Tax Code, for the period 1 October 2011 – 30 September 2012, exceed the limit of 2.250.000 lei;
• taxable persons who applied the VAT system at its collection in the previous year and continue to apply the same system due to the fact that their
turnover did not exceed in the previous calendar year the limit of 2,250,000 lei.

**The Draft of Government Decision for modifying the Methodological Rules for the application of Law no.571/2003 regarding the Tax Code, approved by Government Decision no.44/2004**

The draft of Government Decision published in the 26th of October 2012 by the Ministry of Public Finances clarifies the method by which the turnover serving as reference for the calculation of the limit of 2,250,000 lei shall be determined. More accurate, according to the regulations, the turnover shall be determined on basis of the data reported in the VAT returns at the rows corresponding to the taxable operations and/or excepted with the right of deduction, to the operations resulted from economic activities for which the place of delivery of goods/services it is considered as being abroad, as well as at the rows of corresponding regularization, without taking into the calculation of the turnover the value of VAT for taxable operations.

“In the case of the taxable person who applied the exemption regime regulated by article 152 of the Tax Code and who registers for VAT purposes according to the article 153 of the Tax Code, the delivery of goods/services realized during the period within which the taxable person did not have a registration code for VAT purposes, according to the article 153 of the Tax Code, shall not be taken into the calculation of the turnover” - the Methodological Rules are further mentioning.

The draft of Government Decision proposed by the Ministry of Public Finances also brings the necessary explanation for the application of the regulations of the Tax Code referring to operations excluded from the VAT system at the moment of it's collection, to the persons applying the system and particularizing the rules regarding the entering/exit of such system, as well as to the registration/deletion into/from the Register of taxable persons applying the VAT system at the moment of it's collection.

Moreover, the Ministry of Public Finances clarifies by means of this draft the way of establishing the payment/collection date in case the payment is not effected in a regular way, by banking transfer or in cash, but by compensation, use of payment instruments like the check, bill of exchange and promissory note, payment in nature, extinction of debt due to the assignment of receivables.

The draft for changing the Implementation Rules of the Tax Code also establishes:

• a set of rules regarding the adjustment of VAT taxable base for delivery of goods/services for which the VAT system at the moment of it's collection shall apply,
in case of situations like: total or partial refusal concerning the quantity, quality or the price of the goods/services delivered, granting discounts, draws, rebates and other similar price reductions, if the value of goods/services is not paid in full at that particular moment;

• the rules to be applied for determining deductible VAT in case the payment of invoices is partly effected, as well as the rules to be applied when VAT is not deductible;

• the way of applying the regulations regarding the adjustment of deductible VAT in case of acquisitions of goods/services from taxable persons applying the VAT system at the moment of it’s collection, as well as of the persons acquiring goods/services from taxable persons applying the VAT system at the moment of it’s collection, in case of a change of destination of the goods after the acquisition, if the corresponding tax was not paid in full. There were presented detailed examples in order to facilitate the correct understanding of VAT adjustment and the way to determine the deductible proportion at every consecutive payment of an event generating VAT adjustment;

• the new models of journals for sales and acquisitions of the person applying the VAT system at the moment of it’s collection, and the journals of persons acquiring goods/services from persons applying the VAT system at the moment of it’s collection. They have to be adapted in order to allow the companies to follow the non-payable tax differences in each tax period, both for the collected and deductible tax. Therefore, the rules are regulating a set of necessary information for such operations. Such information is also necessary in order to allow the tax authorities to verify the tax payers.

Moreover, the Ministry of Public Finances stated in the explanatory memorandum of the Government Decision’ draft that it shall approve a Guide for the application of the VAT system at the moment of it’s collection.

“The Guide shall unify all legal regulations stipulated by the law and rules regarding the application of the VAT system at the moment of it’s collection in order to offer a comprehensive image on the full regulations occurring in the case of VAT system at the moment of it’s collection. It was intended that the guide shall be a useful tool offered to the tax payers and the tax authorities, who will not be obliged to seek the content of the law and regulations, at different articles, for the provisions applicable when they are in the position to apply VAT at the moment of it’s collection or when making acquisitions from persons applying VAT at the moment of it’s collection” – reports the Ministry of Public Finances in the document.
Pros and cons regarding the necessity of adopting the VAT system at the moment of its collection. Payment of VAT when collecting it – advantages and disadvantages

According to some specialists in the field, the VAT system at the moment of its collection tends to be a legislative measure intended to be positive but, unfortunately, it seems only slightly will help the Romanian economy.

Anca Parvulescu, collaborating attorney at “Olteanu & Asociatii” states in the “Capital” Magazine that the conditional reprieve for VAT payment seems to confuse the companies rather than to help them. 90 days since the issuing of the invoice is the period in which the state collects the VAT, even if the companies did not cash it yet. The postponement of VAT payment operates conditionally until a certain moment. When the period stipulated by law, respectively the 90 calendar days is accomplished, the tax payer is due to pay VAT to the state, even if he did not cash the value of the delivery of goods/services.

The VAT deduction right for the acquisitions made by a taxable person from another taxable person applying the VAT system at the moment of its collection is postponed until the invoice of the supplier is paid in full, unlike previous legislation providing for deduction of tax at the time of issuing the invoice. In order to really help the business environment and the small entrepreneurs, the new regulation should have provided the collection of VAT when cashing the value of the goods/services delivered, irrespectively of the moment of cashing. But, what happens in reality is only granting a postponement for the payment of VAT, this where small entrepreneurs fail to retrieve outstanding debts faster than the 90 days since the issuing of the invoice.

Consequently, although the legislation is different, the practical situations will not get another solution than envisaged under the rule of the old law, and the smaller companies will still face the risk of not cashing the invoices, thus the damage resulting in non-cashing the price of goods/services delivered, on one hand, and in losing the amount meant to credit the state under the form of paying VAT, on the other hand.

The obligation of paying VAT can generate the insolvency of the company, if the beneficiaries and the clients do not pay the outstanding invoices, further relates the attorney Anca Parvulescu in the article above mentioned.

Gabriel Sincu (Mazars) considers the VAT system at the moment of its collection as being for companies rather a bubble of soap than a bubble of oxygen. In fact, it's all about a postponement of VAT payment with 3 months, which currently is
applying for tax payers with a turnover under 100.000 euro annually, representing the largest group of companies benefiting from this system starting with the beginning of the next year.

According to other opinions, it seems that the state would benefit from this system, collecting VAT faster than the taxpayers.

**Conclusions**

How big was the expectation regarding the measure highly publicized, so great was the disappointment of the persons interested, when analysing the transposition into practice of the measure of VAT collection when cashing the invoice, respectively VAT deduction when paying the invoice, according to the last draft of changing the Tax Code.

The approach of VAT will create interpretation difficulties. It can be said that it will substantially and positively change the life of Romanian companies. The new regulations will generate supplementary expenses for the companies which shall adapt correspondingly the IT systems. Two types of accounting – tax records will be necessary: one for the invoices with VAT payable when collecting it and another one for the other invoices. This will generate supplementary expenses related to soft and administration.

One can anticipate a possible new problem: to what extent the large companies, not entering this system, will avoid to cooperate, for different reasons, with the ones applying the VAT system at the moment of collecting it? The experience of other countries introducing such system confirms that the ones applying it are perceived as “paria” of the business, nobody wants them as business partners.

Another potential problem which might occur next year consists of system disorders of currently existing correlations between VAT tax returns (Return 300/301, Statement 390, Statement 394, etc.) that taxpayers, taxable persons, are registering with the tax authorities.

The rules applying for invoices issued by taxable persons before entering the new above detailed system are going into “a puzzle” as such:

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<th>INVOICES ISSUED BEFORE THE IMPLEMENTATION OF THE NEW SYSTEM</th>
<th>VAT CHARGEABILITY</th>
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<td>1. For the total value of the delivery of goods/services</td>
<td>At the invoice date</td>
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<tr>
<td>2. For the partial value of the delivery of goods/services</td>
<td>At the collection date</td>
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To conclude, the VAT system at the moment of its collection is improperly called so, being, in fact, a VAT delayed for up to 90 days.

Another misunderstanding of the business environment, not to be neglected, is the question generated by the legal regulation stipulating the obligation for application by companies with a turnover bellow 500,000 annually. If the new system of VAT payment would be entirely beneficial for companies, would not unconditionally subscribe all companies?

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Study about the Level of Collaborative Technology Adoption within Companies in Romania and his Impact on Performance

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Starting from the main features of the cognitive management, namely emphasizing on intangible resources (informations, knowledge, experience), the substantial freedom of action allowed to employees for fulfilling objectives, adopting an organizational structure of neural type, encouraging and stimulating collaboration between individuals (colleagues, suppliers, customers or members of virtual teams), can make an assessment on variables which determines positive outcomes in organizations. These variables are: the level of training and collaboration of the employees (resource sharing), which in turn may display an influenced behaviour by other factors. The collaboration within organizations is encouraged by using informatic tools which the speciality literature has generically entitled them as collaborative technologies and/or collaborative software. The impact of utilizing/using collaborative technologies to increase the performances of an organization is correlated to a number of factors, endogenous or exogenous. In this context, we consider that is appropriate to conduct a research concerning/regarding the adoption level of the collaborative technologies in Romania and the factors which determines their use. The personal motivation of this study was influenced also by few detailed research on the use of collaborative technologies in Romania and the factors which determines their use.
Introduction

The speciality literature presents vast researches concerning the impact of informatics technologies utilization in productivity and performances growth at the level of an economic entity, especially for the external economic environment (the American continent, in particular).

The most recent studies[15] [20] [19] [18] shows the companies preference of using collaborative working environments, encouraging teleworking and sharing resources. Premises adopting collaborative working environments have emerged more than a decade ago[5], when on the market existed only a few tools that allowed collaboration and were used stand-alone, not offering the possibility to address complex processes by functionality pooling.

In support of this idea, Richard D. Collin, the president of the International Centre for Collective Efficiency [12], presented with the occasion of the global meeting of experts in knowledge management within KM Forum event of 2004 his personal opinion that “collaboration will be the main managerial challenge of the next decade”.

In rhythm of the diversification strategies adopted by companies, the collaborative technology were adapted in turn, in order to allow the integration of more electronic communication elements and additional functions such as telephony, email, videoconference, and afterwards: calendars, wikis or functions for document management in a single software package [27]. In addition to computer-mediated communication such as electronic mail service, the collaborative technologies integrates complex functions such as: project management, content management, workflow and knowledge management functions.

The explosion occurred along with promoting Web 2.0 technologies and, in particular, technologies known under the name of Enterprise 2.0 [7]. Web 2.0 technology enables collaboration between individuals, while Enterprise 2.0 is a technology that integrates collaboration within the organization. In other words, Enterprise 2.0 is a technology Web 2.0 applied strictly to the organization level[19] [27].

The level of adoption and use of collaborative technologies can be considered an analysis indicator because it’s behavior is influenced by some independent factors. In this respect, the most important categories in which the influence factors are grouped are the following ones: human capital, existing technology, the activity market or sector, organizational structure and involved costs [19] [17].

The Influence of some listed factors can represent an advantage or by case, a disadvantage [17]. Starting from the main feature of collaborative technologies,
namely scalability, the collaboration software tends to be a complex one, and some users may not be familiar using the software. In this case, there may be reluctance on the use of technology, which will attract negative influences in their successful adoption process within organizations. In this case, positivist approach, encourages the user to discover that using collaborative software would improve individual performance at work, the satisfaction degree would grow, and through the effect of propagation the users will be willing to adopt collaborative technologies.

In terms of logistics, there may also exist barriers in the process of collaborative technologies adoption. The acquisition of a technology is strongly influenced by the management team knowledges, oftenly losing sight of the fact that the right technology allows the employee to accumulate new knowledge [27].

The problem related to investment costs that a company wants to make in information technology and in particular collaborative technologies, have been covered in analysis reports issued by companies specialized in carrying out market research or soft development companies. Professional associations such as IDG\textsuperscript{1}, AIIM\textsuperscript{2}, Gartner\textsuperscript{3}, Frost & Sullivan, or companies like Oracle, Nuxeo, Talend, ASG Software Solutions, EMC, Ektron, published studies that have shown a strong dependence between the total investment and the volume of investment in information technology and even in collaborative technologies - a reminder that the study/survey does not refer to Romanian market. Another important aspect covered in the speciality literature is strictly related to the benefits of collaborative technologies that are offered to companies but also the degree of depreciation of the investment [22]. The ROI concept (Return of Investment) has been acknowledged along with the handling of this issue to a level of detail [23].

The development of collaborative software with specific functionalities to a type of activity (HRM, CRM, SCM etc.) can provide organizations the perfect tool to improve their processes and business performance.

The role and place of collaborative technologies within organizations

In their daily activity, people have learned to use collaborative technologies

\textsuperscript{1} International Data Corporation is a research and consulting in IT company, established in 1964. The company is a part of the International Data Group (IDG). The company are more than 1,000 analysts employs who provide data about IT opportunities and trends in 110 countries. http://www.idg.com

\textsuperscript{2} Association for Information and Image Management is a community founded in 1943 that encourages education, research and learning best practice for the storage of new information in companies. http://www.aiim.org

\textsuperscript{3} Gartner is a research and consulting in IT company, with an experience of over 12 years working in over 26 countries with a total of over 650 experts subordinated. http://www.gartner.com
in a more or less consciously way, when they are taking part in events held in cyberspace, when they talk to friends on chat channels or when they are sharing resources with other members of teams/virtual communities.

A recent market studies [19] shows that working styles rearranges traditional office work environment. Respecting this principle, the major software developers promotes the concept of “collaborative innovation” to meet the requirements and needs expressed by the users of informatic applications [13]. Collaboration seems to be the key of this experience, which is why today's software applications integrates functionalities that enable users to collaborate. This type of approach is based on the idea that sharing of resources (data, information, knowledge) directly affects the minimum time response to any query came from within the information system of any company [25]. Within many organizations, this principle has been widely promoted, tested and encouraged, also the results revealed a significant increase of the productivity. According to a study accomplished within the University of Melbourne [8], 70% of those who use the Internet at work, provided that it's kept within a limit of 20% of the time, they document on sites that are not related to their job. The same study shows for the same category of users an increased productivity by 9%. On the other hand, there are companies in which the benefit’s of using collaborative technologies are unknown, or known but not encouraged.

From a similar perspective, the speciality literature provides studies in which collaboration is presented as the main determinant which led to virtual organizations. This form of organization represents “structural unit's semi-permanent configuration, interdependent (partly dependent, partly independent), geographically dispersed and which increase their performance in general by the responsiveness to changing market needs and ICT skills, continuously adapting it's organization forms”[11]. In his opinion[11], “the virtual organization presents a set of essential features that give additional value to companies that bound to this behavior: overcoming borders, geographical dispersion, integration skills, sharing skills, dynamic teams, partners equality, electronic communication, flexible work in network”.

Research methodology

The research was based on preponderant deductive methods. The market survey was conducted during the period February - April 2012, on a sample of 120 companies in Romania. The sample was randomly chosen from companies of different sizes (micro, small, medium sized and large), in all fields (IT&HighTech,
Finance, Consulting etc.), with a nationwide geographical spread. The questionary distribution and data collection was performed using the social networking site LinkedIn and specialized http://www.kwiksurveys.com. To easier quantify relationships between various factors of influence, most of the enquiry questions were open response. Data analysis was performed using Excel software, SAS (for preparing data for analysis) and SPSS (for accomplishing distribution and correlation charts).

**Demographic distribution and participants profile**

**Age groups.** From the total of 98 valid questionnaires, 21 belongs to respondents with the age between 18 and 30 years (21.4%), 47 belongs to respondents with the age group 31-40 years (48%), 24 of them were completed by respondents with the age group 41-50 years (24.5%) and (6%) belongs to respondents with the age bigger than 50 years - Figure 1. It is found that almost half of respondents (48%) are aged between 41 and 50 years.

![Figure 1: Questionnaire respondents by age](image)

**Level of education.** From the total of 98 respondents, 26 of them have secondary education (26.5%), while the remaining 72 have higher education (73.5%) - Figure 2. Conclusion: over two thirds of respondents (73.5%) have higher education, fact that has encouraged them to voluntarily participate in the research study, perhaps in an effort to gain new knowledge.
Study about the Level of Collaborative Technology Adoption within Companies in Romania and his Impact on Performance

Figure 2: Questionnaire respondents by level of education

The position within the company. From the total of 98 respondents, most of them are assistant manager (15.3%), IT department managers (14.3%), engineers (14.3%), general managers (1.3%). Surprisingly, the sales department employees participation was the lowest proportion in this study (cumulated only 7.2%). Motivation might be translate into the companies need to be always on the market, the speed with which must switch between clients, sell products and collect cash - Figure 3.

Figure 3: Questionnaire respondents by position within the company

Enterprises typology. In this case, the distribution of respondents is balanced. On the other hand, as expected, the lowest number of respondents came from the micro (10.2%), while the employees of medium-sized companies responded having the largest number (40.8%). An anticipated explanation may include the fact that the enterprise employees have clear outlined tasks, which does not allow them to reserve time for voluntary activities (19.4% of respondents) - Figure 4.
Figure 4: Questionnaire respondents by Enterprises typology

Dispersion by regions. Shown in Figure 5 that, from the total number of 98 respondents, as it was expected, most respondents are from Bucharest and surrounding areas (38.7%). Northern regions (North-West 16.3%, North-East 15.3%) are next on the list of volunteers who participated in the study, while the last is the Central Region (2%) and Region South-West (1%).

Figure 5: Questionnaire respondents by dispersion by regions

Fields of activity. From the total of 98 respondents, nearly half are from the field of Engineering, Construction (44.9%), the rest being found scattered in domains such as Telecommunications (11.2%), IT & High Tech (11.2%) and Consultancy (10.2%) - Figure 6.
The performed study reveals a predominant interest for the types of technology with collaborative features used in virtual social environments (Figure 7). Therefore, 67 of the respondents participating in the survey use within activities at the workplace technologies based on standard 2.0 (Enterprise 2.0). Following categories of applications that allow resource planning (ERP, 43 respondents) and systems-oriented towards document management (DMS, 38 respondents). The least important category of applications concerns asset management (one respondent).
From the perspective of software applications available on the market in Romania (and EU), the study of Romanian companies presents an inclination towards classical collaborative technologies that encourages their use through their free nature (Figure 8). The entire sample of respondents shows a preference for wikis (Wikipedia), in the classification following other consecrated applications such as Microsoft Outlook (90 respondents), Skype (68 respondents) and Google Apps (61 respondents). IBM products are the poorest represented (approximate 10 respondents accumulated), as otherwise neither of the giant Oracle’s Collaborative technologies are not well represented (2 respondents). It can be observed the utilization of the local product Sobis (12 respondents), which makes us appreciate the quality of good developers of collaborative technologies for companies in Romania.

**Figure 8:** Use of applications with collaborative features within companies in Romania

The most important distribution it is offered by the adoption and use of modules which have collaborated features encountered in applications used in Romania. As shown in Figure 9, the distribution is relatively equidistant, the majority of the collaborative functionalities are known and used in generous percentage. The performance of some dedicated modules such as electronic mail (e-mail) and instant messaging (IM) were noticed by all the 98 respondents at the research study. The encouraging fact is that none of the mentioned modules in the questionnaire weren’t considered unnecessary.
The relationship between user satisfaction and the use of collaborative technologies

Using informatic technologies can generate significant performance within an organization, in relation with the degree and their use [27]. The way how these technologies are perceived by the user, the offered satisfaction and easiness with which they can be manipulated, represented the subject of analysis for professionals from developed countries, where the use of advanced technologies and collaborative technologies is no longer an obstacle [29].

Equally, the speciality literature present the methods for quantifying the degree of acceptance and the use of informatic technologies in general, explaining the synthetic reasons for the acceptance or rejection of these instruments. One method that is adopted on a large scale is TAM (Technology Acceptance Model). In a paper published at the of 2010, Grotheer [29] takes this model showing how the user behavior of informatic technologies is influenced by a number of factors, of which the most important are the awareness of the utility (how useful are informatic technology/collaboration) and awareness of the use. The way how these two factors influence user behavior regading the adoption and usage of collaborative
Preparing the questionnaire for the analysis of the two factors influence behavior, awareness of the utility (referred to in this study, GCU) and awareness of the use (hereinafter in this study GCMU) was done by designing two sets of questions common features of influence for the two factors. Survey respondents were asked to express their preferences (to note, almost) in respect of each claim, to measure the perceived performance attitude towards collaborative technologies. Responses were coded on a scale of 1 to 5, where 1 is low affiliation and 5 high membership.

**Awareness of the usefulness of the indicator analysis (GCU)**

To quantify the utility awareness, respondents answered the question: *Express your opinion about the following statements*, with the following answers: a) High frequency; b) Frequency; c) Sometimes; d) Few times; e) Very few times. Statements for which respondents were asked to choose one of the 5 possible answers were the following:

- Using collaborative technologies in my daily activities led to performance growth;
- Using collaborative technologies in my daily activities led to productivity increasing;
- Using collaborative technologies in my daily activities has led to enhanced effectiveness;
- I consider that collaborative technologies are useful in any activity.

In the table 1, it is presented the distribution of responses, both in absolute terms and as a percentage for each of the 4 statements. Initially, it is noted that all respondents indicated one answer for each statement. The tendency of confidence...
in relation with the utility of collaborative technologies, is expressed in a percentage of over 50% for each factor analysis (performance, productivity, efficiency, utility), indicating a high degree of knowledge and use of collaborative technologies. One of the explanations could be the excessive use of the internet and social software.

**Table 1: Respondents’ attitudes about the usefulness of collaborative technologies**

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<tr>
<th></th>
<th>High frequency</th>
<th>Frequency</th>
<th>Sometimes</th>
<th>Few times</th>
<th>Very few times</th>
</tr>
</thead>
<tbody>
<tr>
<td>Using collaborative technologies in my daily activities led to performance growth</td>
<td>57.14%</td>
<td>19.39%</td>
<td>7.14%</td>
<td>12.24%</td>
<td>4.08%</td>
</tr>
<tr>
<td></td>
<td>56</td>
<td>19</td>
<td>7</td>
<td>12</td>
<td>4</td>
</tr>
<tr>
<td>Using collaborative technologies in my daily activities led to productivity increasing</td>
<td>62.24%</td>
<td>20.41%</td>
<td>8.16%</td>
<td>3.06%</td>
<td>6.12%</td>
</tr>
<tr>
<td></td>
<td>61</td>
<td>20</td>
<td>8</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Using collaborative technologies in my daily activities has led to enhanced effectiveness</td>
<td>54.08%</td>
<td>29.59%</td>
<td>11.22%</td>
<td>4.08%</td>
<td>1.02%</td>
</tr>
<tr>
<td></td>
<td>53</td>
<td>29</td>
<td>11</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>I consider consider that collaborative technologies are useful in any activity</td>
<td>56.12%</td>
<td>28.57%</td>
<td>6.12%</td>
<td>8.16%</td>
<td>1.02%</td>
</tr>
<tr>
<td></td>
<td>55</td>
<td>28</td>
<td>6</td>
<td>8</td>
<td>1</td>
</tr>
</tbody>
</table>

$\bar{N}=98$

**Utility awareness of the indicator analysis (GCMU)**

To quantify utility awareness of the easiness use, respondents answered the question: *Express your opinion about the following statements*, with the following answers: a) High frequency; b) Frequency; c) Sometimes; d) Few times; e) Very few times.

Statements for which respondents were asked to choose one of the 5 possible answers were:

- Using collaborative technologies in daily activities are clear and predictable;
- Using collaborative technologies in daily activities the mental effort is significantly reduced;
- I consider collaborative technologies are easy to use;
- I consider it is facile to use collaborative technologies to fulfill my goals.

As with the previous indicator, in Table 2 we present the distribution of responses, both in absolute terms and as a percentage for each affirmation. Approximately 50% of respondents appreciates the easiest to utilizing the collaborative
technologies (‘are intuitive, minimizes the effort, lead to the tasks accomplishment), which shows an appreciation in relation to the features offered. The explanations of this aversion in the positive sense, could be many, but the multiple features which the software offers enables collaborative learning and skills to accumulate new techniques of new knowledge informal environment, which facilitates the training aspect.

Although the datas obtained strongly support the tendency of using the collaborative technologies, there is a risk that some respondents may not had taken into account the validity importance of the questionnaire responses and completed without having to correlate answers to some questions. That is why further analysis is required to determine the correlation between answers to questions concerning the degree of satisfaction with the collaborative technologies.

**Table 2: Respondents’ attitudes about the ease of use of collaborative technologies**

<table>
<thead>
<tr>
<th></th>
<th>Performance</th>
<th>Productivity</th>
<th>Effectiveness</th>
<th>Utility</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Spearman’s rho</strong></td>
<td>Performance</td>
<td>Spearman’s rho</td>
<td>Spearman’s rho</td>
<td>Spearman’s rho</td>
</tr>
<tr>
<td>Performance</td>
<td>1.000</td>
<td>.713**</td>
<td>.509**</td>
<td>.479**</td>
</tr>
<tr>
<td>Correlation Coefficient</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>98</td>
<td>98</td>
<td>98</td>
<td>98</td>
</tr>
<tr>
<td>Productivity</td>
<td>.713**</td>
<td>1.000</td>
<td>.517**</td>
<td>.608**</td>
</tr>
<tr>
<td>Correlation Coefficient</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>98</td>
<td>98</td>
<td>98</td>
<td>98</td>
</tr>
<tr>
<td>Effectiveness</td>
<td>.509**</td>
<td>.517**</td>
<td>1.000</td>
<td>.516**</td>
</tr>
<tr>
<td>Correlation Coefficient</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td>.</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>98</td>
<td>98</td>
<td>98</td>
<td>98</td>
</tr>
<tr>
<td>Utility</td>
<td>.479**</td>
<td>.608**</td>
<td>.516**</td>
<td>1.000</td>
</tr>
<tr>
<td>Correlation Coefficient</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.</td>
</tr>
<tr>
<td>N</td>
<td>98</td>
<td>98</td>
<td>98</td>
<td>98</td>
</tr>
</tbody>
</table>

**Correlation is significant at the 0.01 level (2-tailed).**

*Results interpretation:*

- The absolute magnitude of the coefficient correlation (Spearman) describes
the strength of the relationship that exists between variables, it is considered that the link is weak if the absolute value of the coefficient is not exceeding 0.30; the bond of average strength to a value between 0.30 - 0.50 and we talk about strong ties if the sheer size is greater than 0.50. For the analyzed case, we can see strong links between the variables analyzed mainly, but there are links medium strength;

- The sign of the correlation indicates the nature of the relationship that exists: directly proportional, if the sign is positive or reverse proportional if the sign is negative. Specific case, the sign is positive in all cases, indicating links between all factors directly proportional (performance, productivity, efficiency, utility);

- Threshold significance shows the probability to err when we say that between variables there is a link: if less than 0.05, then we can consider that there is a relationship between the variables studied. So it should be as small as possible in order to make this statement. For the analyzed case, threshold significance is zero, which indicates a relationship between the variables analyzed in perfect harmony. In conclusion, the use of collaborative technologies and benefit’s of their use are positively correlated. Practical implications are related to the fact that the survey respondents consider the performance of collaborative technologies as a benefit in increasing individual performance.

### Correlation analysis between utility awareness and perceived utility of collaborative technology companies in Romania

Similarly to the applied methodology in the previous paragraph, we will examine the statistical relationship between each perceived utility and awareness utility of collaborative technologies - bivariate correlation analysis with non-parametric correlation coefficient (Spearman).

Correlation between variables that define the benefit’s of using collaborative technologies

<table>
<thead>
<tr>
<th>Spearman’s rho</th>
<th>Intuitive character</th>
<th>Minimize the effort</th>
<th>Easy to use</th>
<th>Optimize processes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Correlation Coefficient</td>
<td>1.000</td>
<td>.335**</td>
<td>.420**</td>
<td>.454**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.</td>
<td>.001</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>98</td>
<td>98</td>
<td>98</td>
<td>98</td>
</tr>
</tbody>
</table>
### Results interpretation:

- Absolute magnitude of the correlation coefficient (Spearman) is observed for intermediate links between the variables analyzed, with few exceptions;
- The sign of the correlation indicates the nature of the relationship that exists: the sign is positive in all cases, indicating proportional link between all factors (intuitive character, minimize effort, ease of use, leading to success in solving activities);
- The threshold significance: maximum value is 0.003, which indicates a relationship between the variables analyzed in perfect harmony.

In conclusion, the use and perceived utility of collaborative technologies are positively correlated. Practical implications hold onto the facts that users are often aware of the benefit's of collaborative technologies or training in ICT make them address any possible exploitation of emerging software market.

The final conclusion on users behavior in determining the degree of perception of usefulness and ease of use of collaborative technologies, validating the proposed model.

### The relationship between users satisfaction and the usage of time of collaborative technologies

To find out to what extent the survey respondents replied in a consciously
manner to questions, we establish the relationship between respondents’ satisfaction, previously tested, and time spent at work place where the respondent has used collaborative technology. We will know for sure if this hypothesis checks according to user’s collaborative technologies enthusiast and results measurement.

As a working methodology, we test the significance of differences between groups determined by the form of feedback environments.

For the purpose of this analysis we chose the question no.8 of the questionnaire, whose answers will be correlated with user satisfaction levels calculated in the previous chapter.

Question 8. To what extent do you use of collaborative technologies in the workplace? Response options: a) High frequency, b) Frequency, c) Sometimes, d) Few times, e) Very few times.

How much use collaborative technologies in daily activities?

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very few times</td>
<td>2</td>
<td>2.0</td>
<td>2.0</td>
<td>2.0</td>
</tr>
<tr>
<td>Few times</td>
<td>3</td>
<td>3.1</td>
<td>3.1</td>
<td>5.1</td>
</tr>
<tr>
<td>Sometimes</td>
<td>9</td>
<td>9.2</td>
<td>9.2</td>
<td>14.3</td>
</tr>
<tr>
<td>Frequency</td>
<td>23</td>
<td>23.5</td>
<td>23.5</td>
<td>37.8</td>
</tr>
<tr>
<td>High frequency</td>
<td>61</td>
<td>62.2</td>
<td>62.2</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>98</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

As shown in the tables of statistical analysis below, the threshold significance in both cases is equal to zero, hence we can conclude that the hypothesis presented before the test is confirmed. Therefore we can say that the time spent using collaborative technology in Romanian companies, influences the satisfaction and perceived degree of perception of easy utilization.

Test Statistics

<table>
<thead>
<tr>
<th></th>
<th>Performance</th>
<th>Productivity</th>
<th>Effectiveness</th>
<th>Utility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chi-Square</td>
<td>$91.082^a$</td>
<td>$117.816^a$</td>
<td>$95.265^a$</td>
<td>$101.490^a$</td>
</tr>
<tr>
<td>df</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Asymp. Sig.</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
</tbody>
</table>

a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 19.6.
Test Statistics

<table>
<thead>
<tr>
<th></th>
<th>Intuitive character</th>
<th>Minimize the effort</th>
<th>Easy to use</th>
<th>Optimize processes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chi-Square</td>
<td>99.041&lt;sup&gt;a&lt;/sup&gt;</td>
<td>110.265&lt;sup&gt;a&lt;/sup&gt;</td>
<td>52.204&lt;sup&gt;a&lt;/sup&gt;</td>
<td>73.633&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>df</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Asymp. Sig.</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
</tbody>
</table>

<sup>a</sup> 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 19.6.

Conclusions

The research results reveals a situation somehow anticipated regarding the level of adoption and use of collaborative technology by the Romanian companies, but without having a certainty in this regard. A 62.2% percentage of the survey respondents affirm that they use intensively the collaborative software at work, correlated percent with the number of respondents with higher education (73.5%). Most common occupations within the respondents are, in an approximately equal proportion, directors (general or IT department and assistant managers) and engineers, and the predominant activity is the construction/engineering (44.9%). The collaborative technologies with a higher level of adoption in Romanian companies are those which facilitate the development of activities in the social virtual environments (Enterprise 2.0). A total of 67 respondents out of 98 respondents responded in this way, meaning a percentage of 68.37%. ERP and document management (DMS) applications follows. Concerning the applications used, the survey respondents affirmed unanimously the wikis types of programs importance, for the creation of digital content. Wikipedia level of utilization on this line is 100%. Microsoft Outlook, Skype and Google Apps are applications following among respondents preference. An important aspect to mention is that the modules that offer collaborative features, e-mail and instant messaging are still the favorites consumer applications.

The most important conclusions are related to way that the collaborative technologies are perceived at the individual level and, by extrapolation, the ways that how individual performance affects the collectivity in which it operates. The responses were encouraging in this respect, the tendency of confidence in relation with the usefulness of collaborative technologies, has been expressed in a percentage of 50% for each analyzed factor (performance, productivity, efficiency, utility),
which indicates a high degree of knowledge and use of collaborative technologies. Regarding the analysis the other important indicator, namely the ease of using of collaborative technologies, due to the fact that they are intuitive tools that minimize the effort and lead to the fulfillment of the tasks, an approximate percent of 50% of the respondents expressed their opinion in this regard.

The results obtained from this study are sufficient to conclude an encouraging opinion, namely that, in Romania it is encouraged the use of collaborative technologies at the enterprise level. The risk of invalidating the sample of respondents, as it was shown in some of the analyzed cases was almost null. Respondents showed collaboration, commitment and openness to market research.

This research represents the first step towards the development of statistics regarding the adoption degree of the collaborative technologies in Romanian companies. This study can be extended by improving the market research questionnaire and resuming it, and not least through dissemination within events or within journals.

On the other hand, the amount of the collected data from the 98 questionnaires is sufficient for further analysis to determine the strength of the correlations between the variables studied and how they influenced each other. In this respect, concerning the successful fulfillment of obligations on developing the thesis, we aim to continue the market research, addressing to a branch (construction industry), and the data and information that we will finally obtain, it will allow us to develop a site that meets the needs of all actors in the industry of the chosen activity. Today success in business requires a better interdepartmental coordination, the adoption of new technologies and a new spirit of cooperation. Businesses tends to group people in so-called silos, in which sometimes the operational data due to large volumes which must be consulted, are altered or are not found in time and therefore loses value. Collaborative technologies, especially those based on the interaction of actors in cyberspace (also known as Web 2.0), helps destroying the barriers that hinders access to data, facilitating communication between individuals and encourages them to share information of common interest, to work together to solve problems and come up with new ideas. Collaborative technologies can transform the way the activities are organized (processes) so that it can unblock tacit knowledge and open barriers to collaboration, will make things move faster and more efficiently at the same time.

The measures that companies can take to increase productivity are primarily related to the quality of the human factor, on how managers succeed to implement the company’s organizational structure an organizational culture based
on collaboration and collective participation. Equally, governance may be a factor that determines the implementation of rules and principles to balance flexibility and control.

For businesses, the answer must be based on the margin decision of adopting collaborative technologies, also known as Enterprise 2.0. Starting from these conclusions and taking into account the conclusions reached as a result of market research, expressed in this research report, we encourage the companies and managers to lean towards awareness of the benefit’s that a collaborative software can offer.

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**Using Rates Method in the Structural Analysis of the Balance Sheet**

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Gheorghe Holt, University “Constantin Brancusi” Tg-Jiu, achy1978@yahoo.com

**Balance sheet analysis** is the operation by which the analysts subject data from the balance sheet to processing and restatements that are likely to reveal through systems of indicators, a vision upon the condition, the financial structure, the results, and the potential of the company’s future development whose indicators it reflects.

One of the analyzing forms used in practice is represented by the structural analysis of the balance sheet, and sequentially, depending on the analysis necessity, structural analysis of assets or structural analysis of liabilities. Among the common methods, usually in association or complementary to other methods, is the rates method.

The following will present a vision on using the rates method in the structural analysis of the balance sheet assets.

**Keywords:** balance sheet, financial statement, balance sheet assets, balance sheet analysis, rates method.

**The structure of the balance sheet assets presented under rates form**

Rates method used in balance sheet analysis consists in calculation of ratios between balance sheet items of assets and liabilities and the balance sheet total or between an item or a group and its total.

In particular, for the necessities of this study, the rates method in balance sheet assets analysis consists in finding ratios between asset elements and total assets or between group of elements and total assets, or between asset elements of a specific group and its total.
Through this method the balance sheet, and in this case the balance sheet assets, is presented in relative values determined based on absolute values or in a combined form.

Using the rates method in the analysis of balance sheet assets assume a preparatory stage where data form the balance sheet expressed in absolute values is restate and it’s transformation into financial statement followed, in the second stage, by the determination of the rate related to every item of the balance sheet determined depending on total assets or total liabilities.

**Table 1: Balance sheet assets**

<table>
<thead>
<tr>
<th>Balance sheet items</th>
<th>Year N-1 (thousands lei)</th>
<th>%</th>
<th>Year N (thousands lei)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intangible assets</td>
<td>18.853</td>
<td>2.05</td>
<td>27.372</td>
<td>2.45</td>
</tr>
<tr>
<td>Tangible assets</td>
<td>510.731</td>
<td>55.57</td>
<td>482.305</td>
<td>43.09</td>
</tr>
<tr>
<td>Financial assets</td>
<td>3.077</td>
<td>0.33</td>
<td>3.077</td>
<td>0.27</td>
</tr>
<tr>
<td>Receivables</td>
<td>112.183</td>
<td>12.20</td>
<td>181.540</td>
<td>16.22</td>
</tr>
<tr>
<td>Stocks</td>
<td>242.641</td>
<td>26.40</td>
<td>366.036</td>
<td>32.71</td>
</tr>
<tr>
<td>Other assets</td>
<td>11.426</td>
<td>1.24</td>
<td>33.601</td>
<td>3.00</td>
</tr>
<tr>
<td>Cash and bank account</td>
<td>20.247</td>
<td>2.21</td>
<td>25.264</td>
<td>2.26</td>
</tr>
<tr>
<td>Total assets</td>
<td>919.158</td>
<td>100.00</td>
<td>1119.195</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Depending on the necessities of the analysis, the balance sheet items can be grouped, using liquidity criteria, ordered from the less liquid items to more liquid ones, in this way:

**Table 2: Synthesis of asset elements**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Total assets</td>
<td>At</td>
<td>919.158</td>
<td>1.119.195</td>
</tr>
<tr>
<td>2</td>
<td>Non current assets, from which:</td>
<td>Ai</td>
<td>532.661</td>
<td>512.754</td>
</tr>
<tr>
<td>3</td>
<td>Intangible assets</td>
<td>Ain</td>
<td>18.853</td>
<td>27.372</td>
</tr>
</tbody>
</table>
Determining the structural rates of balance sheet assets

Structural rates of balance sheet assets are constituted based on asset elements through reporting of some elements or group of assets to the total assets or some elements to the group’s total from which it belongs. These rates are called `structural` because it reflects certain states of the balance sheet asset of structural form, at a certain date.

Thereby, depending on the level of detail of the asset elements, a wide range of rates can be made, which, through its kind, have the capacity to reflect certain conditions in which the company in question can be found. From this wide range of rates we will stop to those considered more important and expressive:

Assets rate, express the weight of non current assets in the total assets and can be determined after one of these relationships:

\[ R_i = \frac{A_i}{A_{t}} \times 100 \quad \text{or} \quad R_i = \frac{A_{in} + A_{ic} + A_{if}}{A_{t}} \times 100 \]

In which:
- \( R_i \) = assets rate;
- \( A_i \) = non current assets;
- \( A_{in} \) = net value of intangible assets;
- \( A_{ic} \) = net value of tangible assets;
- \( A_{if} \) = net value of financial assets;
- \( A_{t} \) = total assets.

This rate express the weight of total net non current assets in the balance
sheet asset. Knowing that non current assets are composed of intangible assets, tangible assets and financial assets, three structural rates of non current assets can be determined, as a ration between each of this category of non current assets and the total assets. These rates are presented below:

- **Tangible assets rate**, express the weight of tangible assets in the total assets and it is determined after the relation:

  \[ R_{ic} = \frac{Aic}{At} \times 100 \]

  In which:
  
  \( R_{ic} = \) tangible assets rate.

- **Intangible assets rate**, express the weight of intangible assets in the total assets and it is determined after the relation:

  \[ R_{in} = \frac{Ain}{At} \times 100 \]

  In which:
  
  \( R_{in} = \) intangible assets rate.

- **Financial assets rate**, express the unit orientation towards financial investments and it is determined as a ratio between the value of financial assets and the total assets as:

  \[ R_{if} = \frac{Aif}{At} \times 100 \]

  In which:
  
  \( R_{if} = \) financial assets rate.

In the last three rates and in the first rate, the one of non current assets, there is an interdependence relation which can be put in evidence as follows:

\[ \frac{Ain}{At} \times 100 + \frac{Aic}{At} \times 100 + \frac{Aif}{At} \times 100 = \frac{Ai}{At} \times 100 \]

Meaning:

\[ Rin + Ric + Rif = Ri \]

Based on data from table nr.2, the values of the non current assets structural rates are those presented in table nr.3, as follows:
Table 3: Rates of non current assets

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Non current assets rate Ai/At x 100</td>
<td>57,3</td>
<td>45,8</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Tangible assets rate Aic/At x 100</td>
<td>54,9</td>
<td>43,1</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Intangible assets rate Ain/At x 100</td>
<td>2,0</td>
<td>2,4</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Financial assets rate Aif/At x 100</td>
<td>0,4</td>
<td>0,3</td>
<td></td>
</tr>
</tbody>
</table>

As a conclusion of the analysis of the rates presented above it can be affirmed that in the analyzed company the weight of non current assets in the total assets is lowering from 57,3% in the previous year to 45,8% current year, the biggest drop being at tangible assets, and the rate of intangible assets is slightly increasing in the current year.

Also, based on the three elements of non current assets, can be determined structural rates of non current assets, as a ratio between every class of non current assets and the total of non current assets.

In such way can be determined the structural rate of intangible assets, the structural rate of tangible assets and the structural rate of financial assets, after the following relations:

- **Structural rate of intangible assets** ($R_a$):
  \[ R_a = \frac{A_{in}}{A_i} \times 100 \]

- **Structural rate of tangible assets** ($R_b$):
  \[ R_b = \frac{A_{ic}}{A_i} \times 100 \]

- **Structural rate of financial assets** ($R_c$):
  \[ R_c = \frac{A_{if}}{A_i} \times 100 \]
The size of these rates is given by the characteristics and the specific of the company’s activity. It must be specified that the sum of those three rates is equal with 100 or 1, depending the way of expressing.

Between these rates, the rate of non current assets and the rates of tangible, intangible and financial assets, the following interdependence relations exists. We exemplify the relations only for tangible assets:

\[
R_a = \frac{A_{ic}}{A_t} = \frac{R_{ic}}{R_b}; \quad R_b = \frac{A_{ic}}{A_t} \times \frac{A_t}{A_i} = R_b \times R_i; \quad R_c = \frac{A_{ic}}{A_i} = \frac{R_{ic}}{R_i};
\]

The structural rates of non current assets are presented in table nr.4, from which it results that the biggest weight in their structure is held by tangible assets, 95.9% in the year before and 94.1% in current year.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Structural rate of tangible assets (Ra)</td>
<td>Aic/Ai x 100</td>
<td>95.9</td>
<td>94.1</td>
</tr>
<tr>
<td>2</td>
<td>Structural rate of intangible assets (Rb)</td>
<td>Ain/Ai x 100</td>
<td>3.5</td>
<td>5.3</td>
</tr>
<tr>
<td>3</td>
<td>Structural rate of financial assets (Rc)</td>
<td>Aif/Ai x 100</td>
<td>0.6</td>
<td>0.6</td>
</tr>
</tbody>
</table>

Stocks rate express the weight of raw materials, inventories, third parties stocks, and the production in progress in the total asset. This indicator is determined after the relation:

\[
R_s = \frac{St}{At} \times 100
\]

In which:
- \( R_s \) = stocks rate;
- \( St \) = stocks value.

- **Account receivables rate**, express the weight of account receivables in
the total asset. The computing relation is:

\[ R_{cr} = \frac{Cr}{At} \times 100 \]

In which:
- \( R_{cr} \) = account receivables rate;
- \( Cr \) = account receivables value.

- **Cash rate**, characterize the volume of cash and cash equivalents, respectively it’s weight in the total assets and it is determined after the following relation:

\[ R_d = \frac{D}{At} \times 100 \]

In which:
- \( R_d \) = cash rate;
- \( D \) = cash value.

- **Current assets rate**, reflects the weight of current assets in the total assets and it is determined after the relation:

\[ R_{ac} = \frac{Ac}{At} \times 100 \]

In which:
- \( R_{ac} \) = current assets rate;
- \( Ac \) = current assets.

Current assets rates, determined for the analyzed company are presented in the table below:

**Table 5:** Rate de active circulante

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Current assets rate</td>
<td>( \frac{Ac}{At} \times 100 )</td>
<td>42,7</td>
<td>54,2</td>
</tr>
<tr>
<td>2</td>
<td>Stocks rate</td>
<td>( \frac{St}{At} \times 100 )</td>
<td>27,9</td>
<td>35,7</td>
</tr>
<tr>
<td>3</td>
<td>Account receivables rate</td>
<td>( \frac{Cr}{At} \times 100 )</td>
<td>12,1</td>
<td>16,2</td>
</tr>
</tbody>
</table>
• **Structural rates of current assets.** These rates are determined as a ratio between the value of elements from current assets group (stocks, account receivables, clients, production in progress, cash and cash equivalents, prepaid expense) and the total of current assets.

We exemplify below some structural rate of current assets with its computing relation:

- **Structural rate of stocks:**
  \[
  R_a = \frac{St}{Ac} \times 100
  \]

- **Structural rate of production in progress:**
  \[
  R_b = \frac{Pc}{Ac} \times 100
  \]

- **Structural rate of stocks and production in progress:**
  \[
  R_c = \frac{St + Pc}{Ac} \times 100
  \]

- **Structural rate of account receivables:**
  \[
  R_d = \frac{Cr}{Ac} \times 100
  \]

- **Structural rate of clients:**
  \[
  R_e = \frac{Cl}{Ac} \times 100
  \]

- **Structural rate of cash equivalents:**
  \[
  R_f = \frac{Av}{Ac} \times 100
  \]

- **Structural rate of cash:**
  \[
  R_g = \frac{D}{Ac} \times 100
  \]
Using Rates Method in the Structural Analysis of the Balance Sheet

- Structural rate of cash and cash equivalents:

\[ R_{hi}^c = \frac{D + Av}{Ac} \times 100 \]

In which:
- \( St \) = stocks;
- \( Pc \) = production in progress;
- \( Cr \) = receivables;
- \( Cl \) = clients;
- \( Av \) = cash equivalents;
- \( D \) = cash.

Between these rates and the other rates which regards current assets exists the same interdependence relations as presented before at non current assets rates. Some structural rates of current assets are presented in table nr. 6.

**Table 6: Structural rates of current assets**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Structural rate of account receivables</td>
<td>Cr/Ac x 100</td>
<td>28,3</td>
<td>29,9</td>
</tr>
<tr>
<td>2</td>
<td>Structural rate of stocks</td>
<td>St/Ac x 100</td>
<td>65,4</td>
<td>65,9</td>
</tr>
<tr>
<td>3</td>
<td>Structural rate of cash</td>
<td>D/Ac x 100</td>
<td>5,1</td>
<td>1,8</td>
</tr>
</tbody>
</table>

To remember the fact that the biggest weight in the structure of current assets is held by stocks which is maintaining, in both years, at relatively equal rates, even though in terms of value, it recorded a substantial growth in the last year, which lead to a relative maintain of the weight in the total of current assets with only a slightly increase.

**References:**


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During the period October–November 2010, a survey was conducted to determine the financial behaviour of potential contractors (entrepreneurs) coming from Bucharest–Ilfov, South Muntenia, South–Western Oltenia and North-Eastern Moldavia. The survey, conducted at the spot, focused, besides the theoretical reference material containing data and official pieces of information provided by the central and local authorities of the implementation areas, on actual researching and documenting activities that took place within the transfer of entrepreneurial good practices and during the caravans for promoting the The Operational Sectorial Program for the Human Resources Development (POSDRU) project ID 57836 called „Center for Information, Consulting and Mentoring, in the view of Promoting Entrepreneurial Culture”.

Keywords: entrepreneurs, financial behaviour, saving, OSPHRD

Introduction

In the current international context, dominated by a great political and economic instability, financial education becomes ever more important not only for the investors, but especially for the individuals who have to deal with some decisions to be taken, concerning the management of their own budgets, concerning the purchasing of a lodging, or concerning the financing of education. Obviously, they are mainly responsible for managing their daily financial resources, but the
surveys conducted so far in different developed countries have suggested the great importance of financial education for the families’ welfare.

The higher the degree of complexity of financial markets grows, the more difficult it gets for the consumers to deal with the goods and services provided by the banks. Currently, in Romania, there are not sufficient data or studies of the people’s financial behavior at the micro-economic level, of the people’s savings, indebtedness and accumulation behavior, especially now, when the impact of this behavior on the general welfare is being acutely experienced.

Titu Maiorescu University, in partnership with the Chamber of Commerce and Industry of Bucharest, Turcinești City Hall- Gorj district, Ciofrangeni City Hall-Arges district, “Infomat” Foundation - Piatra Neamț and “Civitas 2005” Association - Turnu Magurele, has implemented the Operational, Sectorial Program for the Human Resources Development (POSDRU) project ID 57836 named: “Center for Information, Consulting and Mentoring, in the view of Promoting Entrepreneurial Culture”. The project’s goal is to raise entrepreneurial potential within the areas of Southern Muntenia, North-Eastern Oltenia, North-Eastern Moldavia and Bucharest-Ilfiov, by developing the entrepreneurial culture and improving competitiveness and adaptability of the current and would-be contractors (entrepreneurs) in the short and long run.

During the period October-November 2010, there took place research and survey activities, regarding the socio-economic analysis of the human resources and business environment within the areas of Bucharest-Ilfiov, Southern Muntenia, South-Western Oltenia and North-Eastern Moldavia, and the surrounding areas where the project was implemented, i.e. Bucharest-Ilfiov, Gorj, Arges and Teleorman. The current survey is meant to assess the ways in which potential contractors (entrepreneurs) are informed, and to offer the necessary support for an accurate assessment of the risks assumed the moment when the indebtedness level rises. The results of the survey showed that the individuals in Romania, who are interested in developing businesses, are aware of the main characteristics of the products, and of the financial-banking services used here.

The research was carried out on several levels:

• The assessment of the financial education level and the distribution of the financial knowledge level on segment groups, proportional to the main demographic and socio-economic characteristics.

• The obtainment of an overall picture of the saving degree and of the would-be contractors’ awareness, regarding the main characteristics of a good budget planner management.
• The analysis of the credit relations at the sample level
• The assessment of the level of use and knowledge of the means of payment of the purchased goods and services.

The distribution of the sample

The key elements of this analysis are the following:
• Drawing up the socio-economic analysis questionnaire
• Collecting the data gathered during the period 25th of October-15th of November, 2010
• The questionnaire comprised 31 questions, the medium timing of filling it in taking 14 minutes.
• The sample comprised the participants of the courses delivered within the project “The Center for Information, Consulting and Mentoring, in the view of Promoting Entrepreneurial Culture”.
• The sample was leveled into historical zones, as shown in chart 1.

<table>
<thead>
<tr>
<th>Place of Residence</th>
<th>Number of Questionnaires</th>
<th>Percentage from the total number of questionnaires</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bucuresti</td>
<td>100</td>
<td>20 %</td>
</tr>
<tr>
<td>Muntenia</td>
<td>201</td>
<td>40 %</td>
</tr>
<tr>
<td>Oltenia</td>
<td>101</td>
<td>20 %</td>
</tr>
<tr>
<td>Moldova</td>
<td>100</td>
<td>20 %</td>
</tr>
<tr>
<td>Total</td>
<td>502</td>
<td>100%</td>
</tr>
</tbody>
</table>

Chart 1: The Distribution of the sample from the geographic point of view

The second chart focuses on the distribution of the participants according to age, sex, rural/urban environment, income level, residence ownership situation:
• Most of the participants at the entrepreneurial training program (63.92%) are between 25-45 years old.
• It was noticed a greater interest coming from the women (54.268%), as they are probably in search for alternative ways of gaining their financial independence.
• Most of the participants are full-time employees (64.40%), but there also was a an important percentage of students (15.42%).
• Most of the participants come from the urban environment, but there
is also a powerful percentage of participants coming from the rural environment (32.68%), this situation accounting for the great interest in accessing European funds.

- The most of the participants have family incomes below 2000 Ron, trying to raise their incomes by starting up small local businesses (Arges, Gorj, Teleorman, Neamț).
- Most of the participants (54.61%) own a place of residence, this fact encouraging them to consider starting up a business.

**Chart 2**: The Distribution of the sample according to age, sex, place of residence, family income, and residence ownership situation.

<table>
<thead>
<tr>
<th>Age</th>
<th>Number of questionnaires</th>
<th>Percentage from the total number of questionnaires</th>
</tr>
</thead>
<tbody>
<tr>
<td>below 15 years</td>
<td>2</td>
<td>0.28 %</td>
</tr>
<tr>
<td>15 - 24 years</td>
<td>100</td>
<td>19.89 %</td>
</tr>
<tr>
<td>25 - 45 years</td>
<td>320</td>
<td>63.92 %</td>
</tr>
<tr>
<td>45 - 54 years</td>
<td>60</td>
<td>12.22 %</td>
</tr>
<tr>
<td>More than 55 years</td>
<td>20</td>
<td>3.69 %</td>
</tr>
<tr>
<td>Total</td>
<td>502</td>
<td>100 %</td>
</tr>
<tr>
<td>Sex</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>227</td>
<td>45.32 %</td>
</tr>
<tr>
<td>Female</td>
<td>275</td>
<td>54.68 %</td>
</tr>
<tr>
<td>Total</td>
<td>502</td>
<td></td>
</tr>
<tr>
<td>Respondents' status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full-time employee</td>
<td>323</td>
<td>64.40 %</td>
</tr>
<tr>
<td>Half-time employee</td>
<td>8</td>
<td>1.59 %</td>
</tr>
<tr>
<td>Unemployed</td>
<td>11</td>
<td>2.27 %</td>
</tr>
<tr>
<td>Pensioner</td>
<td>11</td>
<td>2.27 %</td>
</tr>
<tr>
<td>Student</td>
<td>77</td>
<td>15.42 %</td>
</tr>
<tr>
<td>Free-lancer</td>
<td>14</td>
<td>2.72 %</td>
</tr>
<tr>
<td>Collaborator</td>
<td>4</td>
<td>0.91 %</td>
</tr>
<tr>
<td>Managing Partner</td>
<td>28</td>
<td>5.67 %</td>
</tr>
<tr>
<td>Non-working person</td>
<td>10</td>
<td>2.04 %</td>
</tr>
<tr>
<td>Category</td>
<td>Count</td>
<td>Percentage</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>-------</td>
<td>------------</td>
</tr>
<tr>
<td>Others</td>
<td>16</td>
<td>2.72 %</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>100 %</td>
</tr>
<tr>
<td>Employer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public Institution</td>
<td>245</td>
<td>48.88 %</td>
</tr>
<tr>
<td>Non-profit Organization</td>
<td>15</td>
<td>2.99 %</td>
</tr>
<tr>
<td>Privately traded Company</td>
<td>217</td>
<td>43.28 %</td>
</tr>
<tr>
<td>Publicly traded Company</td>
<td>17</td>
<td>3.36 %</td>
</tr>
<tr>
<td>Partnership company</td>
<td>8</td>
<td>1.49 %</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>100%</td>
</tr>
<tr>
<td>Level of education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary level</td>
<td>0</td>
<td>0.00 %</td>
</tr>
<tr>
<td>Secondary level</td>
<td>3</td>
<td>0.66 %</td>
</tr>
<tr>
<td>High school level</td>
<td>128</td>
<td>25.44 %</td>
</tr>
<tr>
<td>Higher Education</td>
<td>298</td>
<td>59.43 %</td>
</tr>
<tr>
<td>Post university education</td>
<td>73</td>
<td>14.47 %</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>100%</td>
</tr>
<tr>
<td>Place of residence</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urban</td>
<td>338</td>
<td>67.32 %</td>
</tr>
<tr>
<td>Rural</td>
<td>164</td>
<td>32.68 %</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>100%</td>
</tr>
<tr>
<td>Family income</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Under 1000 Ron</td>
<td>93</td>
<td>18.46 %</td>
</tr>
<tr>
<td>1000 – 2000 Ron</td>
<td>208</td>
<td>41.54 %</td>
</tr>
<tr>
<td>2000 – 3000 Ron</td>
<td>116</td>
<td>23.08 %</td>
</tr>
<tr>
<td>3000 – 5000 Ron</td>
<td>54</td>
<td>10.77 %</td>
</tr>
<tr>
<td>More than 5000 Ron</td>
<td>31</td>
<td>6.15 %</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>100%</td>
</tr>
<tr>
<td>Residence Ownership situation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>They own a place of residence</td>
<td>274</td>
<td>54.61 %</td>
</tr>
<tr>
<td>They pay rent</td>
<td>36</td>
<td>7.24 %</td>
</tr>
</tbody>
</table>

362
They pay installments for a place of residence | 23 | 4,61 %
---|---|---
They live with their parents | 155 | 30,92 %
They cannot tell | 14 | 2,63 %
Total | | 100%

Following the first 9 answers given, we can draw several features that make up the profile of the participants in the training courses:

- She is between 25-45 years old
- It is a woman
- She has a urban place of residence
- Her family income is below 2000 Ron
- She owns a place of residence

An important percentage of the participants state that they had the initiative of starting up a business (37,28%), this experience helping them to build up their confidence. They tried, maybe they failed, but they hope, now that they supported by the specialists involved in the project, to do better in the future. Most of the participants admit that they are insufficiently informed when they take financial decisions (27,37%), putting the blame on the lack of time (44,44%).

**The behaviour of the products and banking-services users**

In the third chart several elements of banking financial behavior are revealed. We put forth the informative sources, used by the credit institution clients and the availability of some commission payments towards the specialized credit brokers.

**Chart 3: The behavior of the banking-financial services consumers**

<table>
<thead>
<tr>
<th>The reasons for the lack of information when taking financial decisions</th>
<th>Number of questionnaires</th>
<th>Percentage from the total number of questionnaires</th>
</tr>
</thead>
<tbody>
<tr>
<td>I do not have time</td>
<td>223</td>
<td>44,44 %</td>
</tr>
<tr>
<td>All the offers are identical</td>
<td>38</td>
<td>7,60 %</td>
</tr>
</tbody>
</table>
Very few participants are willing to ask for specialized help when they take financial decisions, even when they consider themselves insufficiently informed. Only 52.03% of the respondents stated that they would agree to pay commissions to different specialists, without wondering whether these payments would be recovered after putting to practice the pieces of advice.

Last, but not least, we welcome this project which provides not only training but also free consultancy and mentoring services to those who carry on different entrepreneurial projects.

Almost 25% of the respondents stated that they did not have an account in the bank, most of them using the services provided by the credit institutions only when the bank transferred their salary on the cards. Most of them have debit cards (55.78%), and almost 80% make the payments in cash.
The analysis of the tendency towards saving, respectively of the crediting decisions

The goal of this analysis was to obtain an overall picture of the saving level and to monitor the participants’ level of understanding, concerning the proper management of savings.

Most of the participants do not save at all (40, 67) or they save very little, below 10% (32,44), which can be accounted for by the low level of incomes, but which also shows a poor understanding of the investment phenomenon. Moreover, an increased number of participants (25,6%) would rather keep their savings at home, which is an worrying aspect if they consider to start up a business. Each and every company works with the bank and must avoid as much as possible the use of cash, in order to prevent different suspicions regarding possible acts of tax evasion.

Most of the respondents consider that the level of interest rate is ultimate in taking a decision of opening a credit and only 14,61% analyze the quantum of the granting, managing and advance repayment commissions.

The application of the main means of payment

The next section is dedicated to the analysis of the understanding level of different methods used for goods and services payment.

Chart 4: The relation between the means of payment used and the level of the financial knowledge

<table>
<thead>
<tr>
<th>Which is the most frequently used means of payment?</th>
<th>Number of questionnaires</th>
<th>Percentage from the total number of questionnaires</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash</td>
<td>396</td>
<td>78,99 %</td>
</tr>
<tr>
<td>Card payment</td>
<td>78</td>
<td>15,69 %</td>
</tr>
<tr>
<td>Internet banking</td>
<td>11</td>
<td>2,13 %</td>
</tr>
<tr>
<td>Payment through cash dispenser</td>
<td>5</td>
<td>1,06 %</td>
</tr>
<tr>
<td>Money order</td>
<td>11</td>
<td>2,13 %</td>
</tr>
<tr>
<td>I do not know</td>
<td>0</td>
<td>0,00 %</td>
</tr>
</tbody>
</table>
Thus, we confirm a phenomenon rather common within the whole Romanian economy: 78.99% of the respondents usually use cash, 40.82% never use the card to make payments in stores, and most of them (78, 43%) do not trust the internet payment system.

**Conclusions**

The analysis of all the answers given in this questionnaire leads us to the following conclusions:

- An important percentage of the participants state that they had the initiative of starting up a business (37.28%), experience that built up their confidence.
- Many participants admit that they do not have sufficient knowledge to take financial decisions (28%), the main reason being the lack of time.
- Only 52.08% of the respondents stated that they would agree to pay different commissions to different specialists, without an a priori enquiry whether these payments could be returned after following the required steps.
- 25% of the respondents admit that they do not have an account in a bank, most of them using the services provided by the credit institutions only when the
bank transferred their salary on the cards. Most of them have debit cards (55.78%), and almost 80% make the payments mostly in cash.

- Most of the participants do not save at all (40.67) or they save very little, below 10% (32.44), which can be accounted for by the low level of incomes, but which also shows a poor understanding of the investment phenomenon.
- Most of the respondents consider that the level of interest rate is ultimate in taking a decision of opening a credit and only 14.61% analyses the quantum of the commissions of granting, managing, advance repayment, etc.
- We confirm a phenomenon rather common within the whole Romanian economy: 78.99% of the respondents usually use cash, 40.82% never use the card to make payments in stores, and most of them (78.43%) do not trust the internet payment system.

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[9] Ioana Panc, Sorin Ivan, ”Comunicarea in afaceri”, suport tiparit in cadrul proiectului POSDRU/92/3.1/S/57836 „CENTRU PENTRU INFORMARE, CONSULTANTANTA SI MENTORAT ÎN VEDERE PROMOVARII CULTURII ANTREPRENORIALE”, Bucuresti, 2010


New Business Paradigm and Characteristics of Successful Entrepreneurs

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Ioana Duca, Economics Faculty ”Titu Maiorescu” University, Bucharest Romania

The focus of this paper has been on identifying the characteristics of globally minded entrepreneurs: their learning styles/teaching, determination, opportunities, resiliency inspiration, and on collective altruism.

In a global economy, exploring new business paradigms that help eliminate archaic divisions (e.g. borders, race) and obstacles (e.g. language, education) is paramount for success and survival. National borders are meaningless in a world where they frequently change or contain people of diverse backgrounds.

Overview

Successful entrepreneurs have been noted to use the following decision making strategies: rationality; formalization; hierarchical decentralization and lateral communication; and be politically active. The main personality characteristic previously identified have been a need for achievement, risk attitude, locus of control, and preference for innovation (Papadakis, Liokas and Chamers 1998, Papadakis and Barwise 2002, Papadakis 2006)

Musso and Francioni researched the decision-maker characteristics in small and medium sized businesses and found that these characteristics were not related to rationality and formalization. Lateral communication, hierarchical decentralization and political behavior were statistically significant. Locus of control and preference for innovation had no significance in relation to successful business

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strategies. The characteristics of risk attitude and hierarchical decentralization were also found to be significant. Men were found to be less likely to use lateral communication. A high rating of femininity, as defined by the BEM gender scale, expressed it's significance in less politically opportunistic relationships. (Musso and Francioni 2012b)

Building upon the research conducted by Musso and Francioni(2012b), this paper explores the belief in lateral communication (that knowledge should be shared) in a larger context of education and teaching; determination; ability to see opportunity; resiliency; and inspiration. The ability to see opportunities includes more than innovation alone and paired with additional factors may provide a different personality characteristic. Resiliency also includes an internal locus of control but locus of control in it'self does not constitute resiliency. With the ability to see opportunities and resiliency incorporating additional factors in their operational definitions, they may prove to be worthy of further study. Examples of uncontrolled variables include; the inherent intelligence, talents and skills of the entrepreneur; their health and personal history; their culture and values, the history of the area; the type of business; crises and lastly large or global paradigm shifts.

**Characteristics of successful entrepreneurs**

Successful people in business or entrepreneurs follow many of the same trait's seen in people who are leaders in other fields such as governance and law, education, and healthcare, while sports and fields of entertainment require talent but not necessarily expertise or knowledge. The successful outliers in business and life are the extraordinary charlatans, swindlers, and frauds whose anti-social personality characteristics allow them to use other people as objects, who are either being used, or are removed. The true Anti-social Personality is unemotional and has a high need for control. The more emotionally labile personality who also has high deviant tendencies is called a Psychopath. Machiavellians are those who are hyper-controlled, unemotional but not necessarily socially deviant and the least pathological group are the Adapted, who have antisocial tendencies but retain a normal range of emotion, and have not committed socially deviant acts. The Adapted group has a tendency for manipulative behavior, lack of scruples and superficial charm. (Biro, Smedervac and Novoic 2008) The successful non-pathological entrepreneur, shares knowledge, is open to learning and teaching others, has a drive of determination, sees opportunities and is able to make strategic decisions based upon data, is resilient to setbacks both personal and professional, and is an inspiration to others.
Knowledge or expertise

The knowledge of the business owner and their employees, (or the teacher and their students) is a reciprocal relationship when practiced successfully. In learning, mandatory learning leads to repetition of facts, compulsory education leads to regurgitation and there is often no long term retention. Reward Systems such as grading were designed to influence the learner, but often it only creates competition or motivation by external expectations. Listening to lectures is a passive form of learning; the expert providing knowledge and influencing the student. Competition has been found to be detrimental to learning just as it has been in Game Theory. (Nash 1950, Hooks 2003) Team learning requires cooperation by all members, or the ability to control who participates. In business, when there is no conceptual understanding of practices there is often failure in production or services. Providing knowledge or expertise either in an academic setting or in an applied setting requires the ability to listen and accommodate practices based upon the population or audience.

Audience

Understanding the targeted audience is essential for success. When the learning style of the audience is homogenous, materials can be provided in a single modality. In settings where the learning styles are unknown, it is best to provide multi-modality learning and to assume that most learners are visually oriented. While providing individualized learning opportunities has not been popular within adult education, altering the presentation of material to the student has been well established in the history of child education.

Determination

Determination is an internal drive independent of aggravating & mitigating factors. Determination manifests itself in purpose, motivation, and relevance. Purpose is the rationale behind a behavior. If my purpose is to make money and I can do so by working or by stealing, I will create a rationale for my behavior. Motivation can be described as the impetus or stimulus to behavior. If I am motivated, I have the will to take action. Relevance can be an internal or external value that is determined by either me, or others to be significant. All of these determinates – purpose, motivation and relevance are also affected by other factors and are not trait based attributes. Determination is an area that is open to influence in education and business.
Opportunity

Any event that provides the ability for change is an opportunity. To be able to see opportunities and provide innovative decisions is a characteristic that assists leaders survive in all types of disciplines. Opportunities may come in the form of a crisis, or it may be planned, but it is a period of uncertainty and unpredictability. In business there are define variables within the field of economics that affect the market equilibrium: from supply and demand, output, inflation and unemployment, growth, capital, aggregate demand and supply. Governmental fiscal policy effects market openness, competition and monopoly, asymmetric information, cooperative and non-cooperative games, efficiency and regulation, productivity, wages, labor markets and unions, government spending and taxation, international trade agreements, tariffs and quotas, recession and market failure. Personal opportunities include: the ability to manipulate economics variables, implicit costs such as knowledge, time to complete tasks and personal crises. An opportunity can be either aggravating or mitigating factor dependent upon the combination of these variables and their aggregate influence. (Wessels 2006)

Inspiration

If inspiration is deemed as the ability to ignite or infuse oneself or another’s muse, it is a factor within the study of entrepreneurship that has been identified but cannot be created or taught. Inspiring people are found in all walks of life: communities, business, politics, education, religion, and healthcare. Not all resilient people are inspiring. Not all inspirational personas are positive (e.g. criminals) and not all inspirational characters are charismatic (e.g. some CEO’s who are experts in their field).

To step where no one has walked before is an act of inspiration. It does not require an audience. It does not require thought about consequences. It does not always end or lead where it was intended. Robert Oppenheimer and his team began with a theory of atomic fusion, an endless source of energy, that has at times it has almost ended the world. (Kelly 2007 (reprinted 2010))

Relational Dynamics, their extremes and examples Adapted from (Bathory, Applied Trauma Theory: Sustainable Engery and Rural Toursim in publication 2012)

<table>
<thead>
<tr>
<th>Concept</th>
<th>Polar Extremes</th>
<th>Examples of Issues</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trust</td>
<td>Trust versus Rejection</td>
<td>Will I (you) give us want we need to be successful? Will I (you) be here when you (we/l) really need me (you)?</td>
</tr>
</tbody>
</table>
### New Business Paradigm and Characteristics of Successful Entrepreneurs

<table>
<thead>
<tr>
<th>Will</th>
<th>Autonomy versus Isolation</th>
<th>Do I (we) really need your help? I (We) will show you that you are not needed.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purpose</td>
<td>Identity versus Confusion</td>
<td>What is it that I (we) do? Why are we here? What business are we in?</td>
</tr>
<tr>
<td>Competence</td>
<td>Skills versus Omission</td>
<td>Do I (we) have the skills to do my (our) job(s) well, or am I (are we) missing something?</td>
</tr>
<tr>
<td>Proof</td>
<td>Evidence versus Commission</td>
<td>I (we) have evidence of my skills and performance. If I (we) do not have these: Can I (we) get by without you noticing? Can I (we) hide what I (we) cannot do or should have done?</td>
</tr>
<tr>
<td>Passion</td>
<td>Commitment versus Indifference</td>
<td>I (we) will argue and fight with you to get you to see my (our) point, or I (we) will just find someone else to work with other than you.</td>
</tr>
<tr>
<td>Share</td>
<td>Transparency versus Deception</td>
<td>I am (We are) open to you exploring and questioning my (our) work and knowledge because I (we) wish for you to learn and share with me (us).</td>
</tr>
<tr>
<td>Altruistic Wisdom</td>
<td>“We versus Me”</td>
<td>I am (We are) more concerned about the good of all and the world than I am (we are) about my (our) own power, fame and fortune.</td>
</tr>
</tbody>
</table>

## Conclusions

Although decision-making has been studied, it focuses on immediate return and is based from an Intrapersonal prospective. The countless research projects completed on decisions and payoff reinforce this Intrapersonal gain and can lead to the development of anti-social trait’s or behavior in those studied. Research Ethics Committees need to pay particular attention to the influence a study may produce on impressionable subjects (e.g. university students) as they revere more advanced students and professors. If the behavior, to gain without regard to others, is deemed as acceptable and reinforced by participating in a study or project, participating in the study may be the conduit to many ethical violations and misbehavior in later life.

The short sightedness of most businesses in looking for immediate and thoughtless profit -regarding the impact of their business practices on the market, results in their eventual failure. If small businesses can join together, not in just cooperative cartels, or oligopolies but work with the intent of all benefiting, this altruistic act ends in an overall larger payoff for everyone. Transparency in this type
of business becomes the norm. The need to campaign for human rights becomes obsolete because it is practiced. Watchdogs are unnecessary, when business operators practice globally applied altruism, because they motivated for a greater good.

Some of the world’s physical resources are limited, but our innovations and ability to overcome the impossible is not. Does it matter if our gross national product is truly greater than the nation next store, if we all die from a viral plague? The survival of humankind becomes more at stake each year as we act in competition and out of greed and lust. The concept of winning by accumulating the most ends in alienation for all. Altruism does not have to be an ideal; it can be the best chance for the survival of the human race.

References

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