

# RTE



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# **RTE**

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**(The Young Economists Journal)**

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# REVISTA TINERILOR ECONOMIȘTI

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## EDITORIAL

### *Doing the right thing and not the easy one...*

*Any researcher knows that a research begins always with a documentation stage. Unlike other past periods of time, today's research benefits from a series of advantages regarding on the documentation possibilities (Internet, on-line library, database dedicated to research, etc..), which leads to a decrease of time used for documenting and also to the decrease of time allocated to research in general. In the same time the multitude of possibilities for information leads to the increased volume of material which can be accessed.*

*It is required a selection of references used for documentation in order to meet deadlines that usually accompany the research.*

*Covered in a hurry, the documentation stage does not provide a solid starting point in research. The articles written, the research projects started without a solid documentation suffer at least because of superficiality and this often leads to plagiarism.*

*This phenomenon with extremely damaging consequences must be eliminated every time when it appears.*

*It erodes confidence in research, does not contribute to expanding knowledge in the field, producing frustration among researchers and at least financial losses.*

*Prevention of it is much better than just punish it and this can be achieved by meeting certain minimum rules by researchers.*

*Crystallized over time, this rules looks like this:*

- 1. Don't be superficial, do a solid documentation about the subject of your research and build a list of references used with all details you need in order to do later a correct citation of them.*

- 2. Make sure that the references you use are original. If you are not sure of that, extend your study to the references of references you used and try to make a history of the subject.*

3. *Cite every time you write and in this way respect others work and ideas.*

4. *Check your works with antiplagiarism software to avoid possible unintentional violations of the rules 2 and 3.*

*It maybe not always easy thing to do but it is always right...*

*Assoc. Prof. Costel Ionascu PhD.*

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## Retraction Statement

of article: "*Impact of service encounters customer participation on perceived service quality*" Revista Tinerilor Economisti (Young Economists Journal), April 2010, Special Issues, Volume 8, page 69-74.

To the editors of Young Economists Journal,  
Pitesti, Romania, 2011

Dear Sirs,

My name is Dan Micudă and I'm writing you about an article I've published in the 14s issue of your journal, which appeared in April 2010, Volume 8, pp. 14-24. The article names is: "*Impact of service encounters customer participation on perceived service quality*" and it contained a literature review regarding the presented theme. The main source of the article was a document that I've found on internet ([www.scribd.com](http://www.scribd.com)) which contained no data regarding the author.

In 2011, after submitting the article and receiving a letter from Ms. Jeannie Denise John regarding the article I've mentioned before, I've found that my article was similar to some parts of her doctoral dissertation: "*The Effects of Employee Service Quality Provision and Customer Personality Traits on Customer Participation, Satisfaction, and Repurchase Intentions*", from 2004

Therefore, in the light of the new information, I've send an apologies letter to Ms. John, explaining the situation. Also, I want to **fully retract** my article "*Impact of service encounters customer participation on perceived service quality*" from the Volume 8, April 2010 Special Issue, (page. 69-74) of the Young Economists Journal Journal's.

All further references for this article will point to Ms. John original work:

John, Jeannie Denise (2004), *The Effects of Employee Service Quality Provision and Customer Personality Traits on Customer Participation, Satisfaction, and Repurchase Intentions*, doctoral dissertation, Louisiana State University. Ann Arbor: UMI(2004), 65, (07),2684. 3139300 which can also be found at: <http://etd.lsu.edu/docs/available/etd-1110103-090904/>.

Thank you for your cooperation,

Date:  
31.10.2011

Sincerely,  
Assist. PhD.  
Dan Micudă







**HEALTHCARE FINANCING IN RECESSION\***

PhD Student Bianca Mihart  
 Faculty of Economics and Business Administration  
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**Abstract:** The current, unfolding, financial recession has greatly affected almost all countries regardless of the level of economic development. Unlike prior situations, the economic crisis that broke out in the late 2008 began in developed countries later spreading to the rest of the world. Its effects are still being felt, and any upward worldwide trend is not expected in the near future, regardless of various optimistic economic projections.

**JEL classification:** I1, I11, I18

**Key words:** global recession, health systems, health system financing, health reforms

## 1. INTRODUCTION

The upward economic trend came to a sudden stop at the end of 2008 because most countries were, by then, entering the global economic recession. The financial and economic crisis has had - and will probably continue to have - serious implications for public funds, as government revenues have, without delay, been affected by the economic slowdown and the downfall of prices. Under these circumstances, notable efforts have been made in order to support the financial sector (through capital contributions, purchases of assets, lines of credit for financial institutions, as well as warranties for the debts of the financial sector), but the broad utilization of tax incentives has eventually led to serious consequences that continue to plague emerging countries, bringing about the deterioration of fiscal balances and major government debts.

For example, by mid 2009, Italy ranked highest in Europe with a public debt of more than 100% of GDP<sup>1</sup>, while Greece, France, Belgium, Norway and Hungary reached public debts of over 60% of GDP<sup>2</sup> each. By the beginning of 2010, Iceland's public debt had also doubled. Between the fourth quarter of 2007 and the second quarter of 2009, the U.S. GDP contracted by 4.1%<sup>3</sup> marking 'the deepest decline since the Great Depression of 1929-1933'<sup>4</sup>. In essence, the global gross domestic product

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\* **Acknowledgement.** This work was partially supported by the strategic grant POSDRU/88/1.5/S/49516 Project ID 49561 (2009), co-financed by the European Social Fund – Investing in People, within the Sectoral Operational Programme Human Resources Development 2007-2013.

<sup>1</sup> WHO – „The financial crisis and global Health”, Geneva, Switzerland, 2009

<sup>2</sup> McKee M., Nolte E. „Assuring the quality of healthcare in the European Union”, Observatory Study Series 12/2009

<sup>3</sup> „The Employment Situation: June 2009”, United States Department of Labor, Bureau of Labor Statistics, July 2, 2009

<sup>4</sup> <http://www.tradingeconomics.com/united-states/out-of-pocket-health-expenditure-percent-of-private-expenditure-on-health-wb-data.html>

shrank by 1.7%<sup>5</sup> in 2009, giving rise to the largest decline of the contemporary global economy.

## **2. GLOBAL HEALTHCARE IN A CRISIS**

With regard to the effects of the current downturn on health systems, the World Bank estimated sizable repercussions, caused by lower employment rate, individual income and GDP. The most important effects are being felt in countries with an economic decline over 10%. General reforms, intended to maintain the level of public spending on health care, have not been able yet to warrant universal access to healthcare. This aspect is critical, as learnt from previous economic recessions, suggesting that healthcare budgets in developing countries are vulnerable to economic downturns, thus creating the need for an increased financial effort of the insured under the form of additional co-payments. In light of these concerns, the World Bank recently encouraged governments of developed countries to donate 0.7% of their own funds - as agreed in the Monterrey Consensus during the International Conference on Financing for Development - in order to support vulnerable populations who have been severely affected by the global financial crisis.

This objective is, to my opinion, difficult to achieve given the particular situation of each country and individual strategies. In the United States for example, despite the level of economic development, health expenditure amounted to 17.6%<sup>6</sup>, representing one sixth of the total available resources. Assessed in relation to total federal income, health expenditure increased from 38% in 2008 to 54% in 2009<sup>7</sup>. Even without the economic crisis, increasing health care costs and default insurance policies led employers to seek new ways to restructure insurance benefits. Insurance costs have recorded a higher growth rate than wages and inflation, ultimately leading to 5.8 million uninsured<sup>8</sup>.

For the period 2016-2019, based on the aging of the population, an increasing number of people are expected to move from private health insurance to federal funded programs thus boosting federal spending for health care, from 6.3% to 7.6% in 2015 in 2019<sup>9</sup>.

Given the need to manage their own problems, it is unlikely that a country like the United States will actively contribute to improve global access to health care services neglecting, in a way, their own, national needs.

On the other hand, the European situation is not far from different, with countries like Austria, Portugal, Czech Republic, Estonia, Latvia, Lithuania, Hungary and Slovakia operating budgetary adjustments since 2009. Even developed Western European countries (Sweden and Italy) have been forced to diminish funds allocated to health care while Germany increased mandatory contributions from 14.9% to 15.5%<sup>10</sup>.

<sup>5</sup> „The Employment Situation: June 2009”, United States Department of Labor, Bureau of Labor Statistics, July 2, 2009

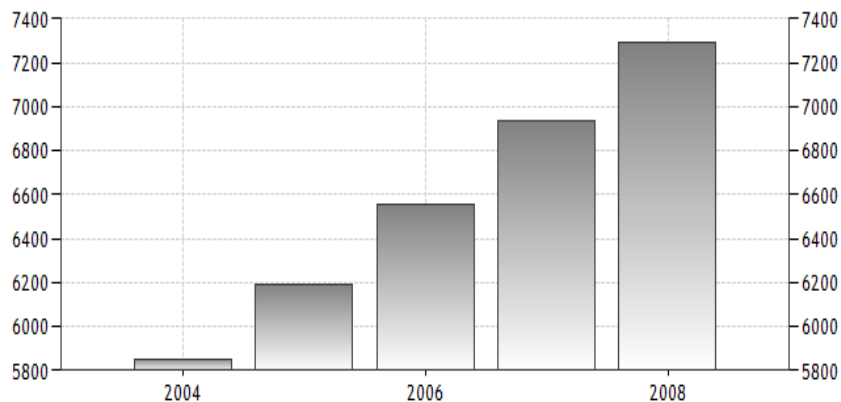
<sup>6</sup> „The Economic Crisis: The Toll on the Patients and Communities Hospitals Serve”, American Hospital Association, April 27, 2009

<sup>7</sup> U.S. Department of Human Services, Centeres for Medicare and Medicaid, <http://www.cms.gov/>

<sup>8</sup> U.S. Department of Human Services, Centeres for Medicare and Medicaid, <http://www.cms.gov/>

<sup>9</sup> Truffer J.C., Keehan S., Smith S., Cylus J – „Health Spending Projections Through 2019: The Recession’s Impact Continues”, *Helaht Affairs* 29, no. 3/2010, Project Hope—The People-to-People Health Foundation, Inc.

<sup>10</sup> [www.bundesgesundheitsministerium.de/service/publikationen](http://www.bundesgesundheitsministerium.de/service/publikationen)



Source: Tradingeconomics.com/USA

**Figure 1. Total health expenditure in the US between the years 2004-2008 (US Dollars)**

At the same time, other countries have implemented structural reforms and cost control measures, using the recession as an opportunity to promote unpopular decisions such as expenditure rationalization and restructuring of the hospital sector. Increasing efficiency and effectiveness is now accompanied by the need to cap spending growth, while maintaining universal access and non-discriminatory health care services.

In Austria, the main consequence of the financial crisis on the health insurance system has resulted in a reduction of the overall financial resources available, due to lower tax levies and lower contributions to health insurance. Moreover, the adoption of a med-term strategy aimed to stabilize public deficit within 3.0% of GDP reference value, brought into question a decrease of 1.7 billion Euros in the health sector spending during the 2010-2013 period, which is to aggregate savings of approximately 0.6% of GDP<sup>11</sup>.

The budget of the National Health Insurance System (NHS) in Britain has been, during the economic recession, protected by additional allocations of funds. Despite this, the settlements required by the population, the cost of new technologies and increasing expectations of policyholders have generated an annual rate of increase in spending of 4%-5%<sup>12</sup>. Thus, the NHS has to generate savings of around 20 billion Euros over the next four years, in order to ensure sustainability of the system, while maintaining the same coverage and quality.

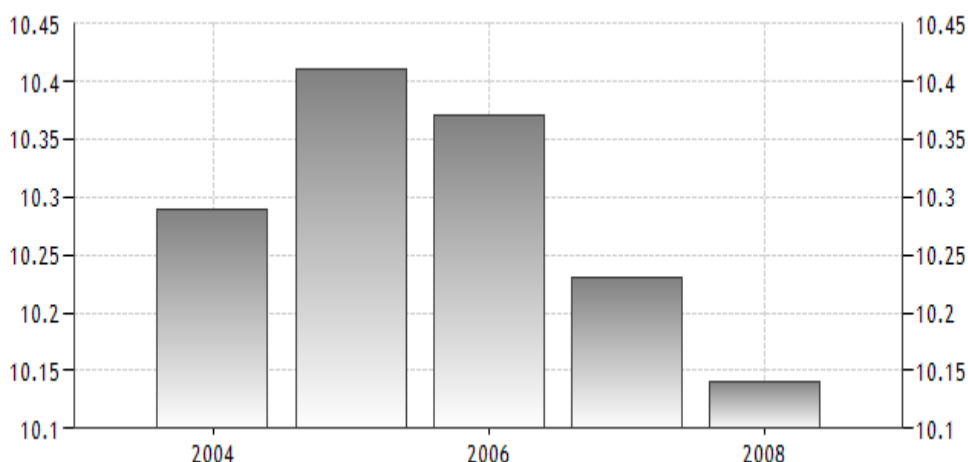
Current estimates predict an increase in NHS spending from 121.7 billion Euros in 2010 to 133.7 billion in 2015<sup>13</sup>. However, the rates paid to medical providers have been camped at the 2007 level and hospitals were required 5% savings per year, with an expected decrease of allocated resources of 25% by 2015<sup>14</sup>.

<sup>11</sup> OECD – „Economic Survey of Austria 2009: Facing the financial crisis”

<sup>12</sup> OECD - „Recession hits demand for private medical cover”, July 2010

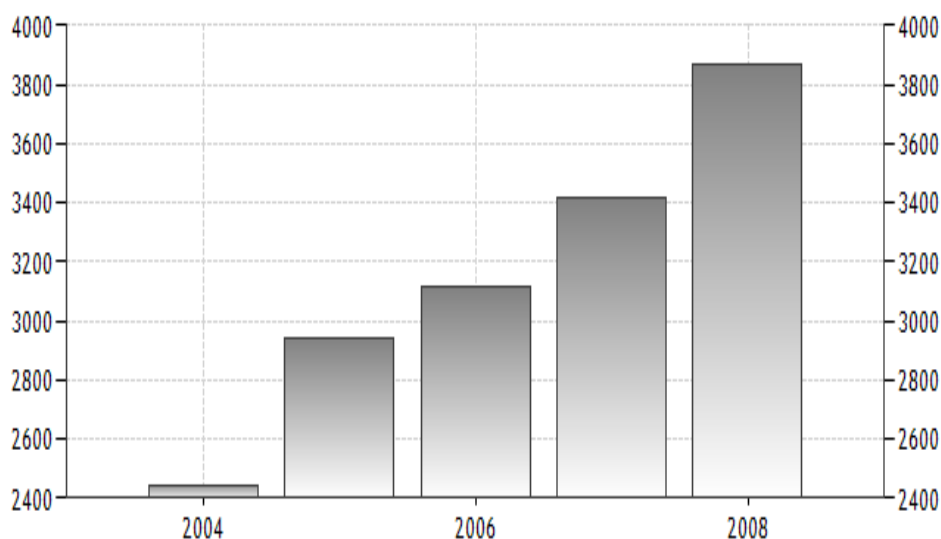
<sup>13</sup> Smith P.C. – „Resource allocation and purchasing in the health sector: the english experience”, Bulletin of the World Health Organization 2008

<sup>14</sup> Smith P.C. – „Resource allocation and purchasing in the health sector: the english experience”, Bulletin of the World Health Organization 2008



Source: [Tradingeconomics.com/Austria](http://Tradingeconomics.com/Austria)

**Figure 2. Total health expenditure in Austria between the years 2004-2008 (US Dollars)**



Source: [Tradingeconomics.com/United Kingdom](http://Tradingeconomics.com/United Kingdom)

**Figure 3. Total health expenditure in UK between the years 2004-2008 (US Dollars)**

As shown in the previous examples, each country has had its healthcare system influenced by the economic downturn and has been forced to implement various reforms in order to ensure sustainability.

Some relied on capping health spending by setting maximum growth limits, while others have diminished operating costs, prices paid to suppliers for services provided on behalf of health insurance, spending on pharmaceuticals and procurement of goods, services and tangible assets for medical institutions.

Certain effects were felt in the field of employment, meaning that governments have promoted policies aimed at dismissing or replacing retired staff. An additional package of measures was to reduce wages, a common trend for the entire public sector. Decreased wages, in some countries up to 25%, generated a veritable exodus of health

professionals. Also, the reforms imposed by the economic and financial crisis affected the insured as a whole. Thus, some states have rethought the entire health insurance system, changing procedures for services provided, the amount of services that can be accessed in a period of time and the amount of contributions to health insurance. As a result, hospital costs increased significantly, which triggered additional co-payments.

Under these circumstances, the World Bank resolution is, at least, a utopia as long as health insurance systems throughout the world are, with or without the recession, facing numerous threats. For the time being, as long as health systems continue to inefficiently use resources, the only two solutions at hand are either to reduce coverage by health insurance or diminish the basic health services package.

## **5. CONCLUSIONS**

As stated beforehand, the financial crisis has reached global dimensions, and countries are now seeking appropriate ways to ensure long-term sustainability of their health insurance systems. Preceding recessions have underlined the fact that health sectors are rapidly affected by the overall economic situation which always causes predicaments related to funding. Moreover, constraints have often initiated outcomes that led to budget cuts, increases or introductions of taxes, co-payments or certain other forms of additional private funding. While the downturn progressed, new concerns have emerged and some uncovered long ignored systematic problems.

The dependence between health care funds and state budgets require further action, including:

- promoting of open competition in health insurance;
- facilitating public-private partnerships;
- removing constraints for private insurers;
- a better differentiation of health insurance models. When the proposed regulatory measures affect private health insurance market, it is necessary to take into account the diversity of national healthcare systems;
- improving quality of care through the use of interventions and appropriate medical services and eliminate unnecessary or ineffective procedures, old or obsolete technologies;
- to limit and eliminate fraudulent practices in health insurance. Fight against fraud could be improved by promoting the best practices.

In the end, even though worldwide health system effectiveness is the ultimate goal, improvements will seize to appear as long as countries are not able to ensure an optimum at national level.

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## EFFICIENT CAPITAL MARKET\*

PhD Student Ramona Birău  
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**Abstract:** A market in which prices always “fully reflect” available information is called efficient. The most important issue regarding efficient market theory is that it is not possible to outperform the market over the long-term. An efficient capital market is characterized by the fact that any information is available to all investors or market participants, so stock prices always incorporate and reflect all relevant information. Due to this issue, the price of a stock should reflect the knowledge and expectations of all investors or market participants. Strictly speaking, the efficient market theory seems a utopian and unrealistic theoretical composition, but beyond its critics, efficient market theory reaches profound meanings and revolutionized the field of investing.

**JEL Classifications:** G1, G11, G14

**Key words:** efficient market theory, capital market, random walk, available information, modeling

### 1. INTRODUCTION

One of the most controversial issues in the recent past is probably whether the capital market can be predicted in a satisfactory manner or not. Capital markets are very complex and unpredictable. Capital markets’ chaotic behavior and non-linearity, complication and uncertainty, unexpected booms and crashes are some of the most challenging problems. Some researchers are suggesting that such complexity is an intrinsic characteristic of such system. Despite all these considerations, an efficient capital market it is assumed that is a market where the stock prices reflect new information accurately and in real time.

Efficient market theory was a revolutionary concept which had become very important and widely accepted since the early 1970s. However, the concept of efficient capital market is sometimes perceived as a utopia. This is a consequence of the fact that the current reality reflects a different and globalized world, which is constantly changing and progressing.

### 2. A THEORETICAL APPROACH

Efficient market theory was formulated by Eugene Fama in his article "Efficient Capital Markets: a review of theory and empirical work" published in 1970, in which he made a synthesis of previous research regarding the predictability of capital

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\* **Acknowledgement** - This work was supported by the strategic grant POSDRU/CPP107 /DMI1.5/S/78421, Project ID 78421 (2010), co-financed by the European Social Fund – Investing in People, within the Sectoral Operational Programme Human Resources Development 2007 – 2013



markets. He also presented very clear the notions of fair game and random walk. According to this theory, the efficient market is the market that has the ability to adapt quickly under the impact of the latest information available. In other words, financial securities price shall be adjusted rapidly as new information becomes available on the market.

Eugene Fama said : “The ideal is a market in which firms can make production-investment decisions and investors can choose among the securities that represent ownership of firms’ activities under the assumption that security prices at any time “fully reflect” all available information. A market in which prices always “fully reflect” available information is called efficient” (Fama, E., 1970).

Fama argued that, since everyone has access to the same information, it is impossible to regularly beat the market, because that stock prices are, in fact, efficient, reflecting everything we know as investors.

The concept of efficient market was anticipated long time before through the work of researchers such as G. Cardano (1564), R. Brown (1828), J. Regnault (1863), Rayleigh (1880), John Venn (1888), L. Bachelier (1900), Einstein (1905), F.W.Taussing (1921), J.M. Keynes (1923), A. Cowles (1933), M. Friedman (1953), M.G. Kendall (1953) and P.A. Samuelson (1965). Interestingly, in most cases, the subject of the research not targeted financial market or stock exchanges.

For example, the italian mathematician Girolamo Cardano claimed, in his paper "Liber de Ludo Aleae" published in 1564 that : “The most fundamental principle of all in gambling is simply equal conditions, e.g. of opponents, of bystanders, of money, of situation, of the dice box, and of the die itself”.

The Scottish botanist Robert Brown, observed during a laboratory experiment that grains of pollen suspended in water registered a rapid, oscillatory and disordered motion which changes very fast its trajectory. This kind of behavior is specific to the capital markets and is known in the literature as Brownian motion. Based on this concept, in the year 1863 the french broker, Jules Regnault identifies a fundamental property, namely that the price deviation is directly proportional to the square root of time.

A significant contribution in the development process of modeling and prediction of phenomena on the financial market had the french mathematician Louis Bachelier by publishing his PhD thesis "Théorie de la speculation" in the 1900. In the introductory paragraph of his PhD thesis, he wrote that: “past, present and even discounted future events are reflected in market price, but often show no apparent relation to price changes”. Using statistical methods, Bachelier deduced that the mathematical expectation of the speculator is zero. He also made a very important notice: “if the market, in effect, does not predict its fluctuations, it does assess them as being more or less likely, and this likelihood can be evaluated mathematically”.

Similar considerations had another researcher Paul Samuelson, who wrote in his paper called “Proof That Properly Anticipated Prices Fluctuate Randomly” that: “in competitive markets there is a buyer for every seller. If one could be sure that a price would rise, it would have already risen. Arguments like this are used to deduce that competitive prices must display price changes over time,  $X_t - X_{t+1}$ , that perform a random walk with no predictable bias.”

I have compiled this brief foray into the area of research that preceded the formulation of efficient markets theory to capture the evolution of the main notions and concepts that will mark the effort of the capital market modeling. On the other hand,

capital market modeling is directly tied to the efficient market hypothesis, a concept also found in conjunction with the rationality of the market participants behavior.

The central idea of the efficient market theory is that any information is available to all investors or market participants, so stock prices always incorporate and reflect all relevant information. Due to this issue, the price of a stock should reflect the knowledge and expectations of all investors or market participants. Because of that, except for long-term investment trends, future stock prices are difficult, if not impossible, to predict. In other words, an investment strategy based on past stock prices cannot preview future prices, no matter how complex and deep would be.

Eugene Fama defined market efficiency in a very accessible manner: "In an efficient market, competition among the many intelligent participants leads to a situation where, at any point in time, actual prices of individual securities already reflect the effects of information based both on events that have already occurred and on events which, as of now, the market expects to take place in the future. In other words, in an efficient market at any point in time the actual price of a security will be a good estimate of its intrinsic value."

The essence of the efficient market concept was reflected in a very plastic manner by Malkiel in his book "A Random Walk Down Wall Street": "the market prices stocks so efficiently that a blindfolded chimpanzee throwing darts at the Wall Street Journal could select a portfolio that would do as well as those managed by experts".

A market is efficient with respect to information set  $\Omega_t$  if it is impossible to make economic profits by trading on the basis of information set  $\Omega_t$  (Jensen, M. 1978).

The idea mentioned above is sustained by the following definition. Malkiel said that a capital market is said to be efficient if it fully and correctly reflects all relevant information in determining security prices. Formally, the market is said to be efficient with respect to some information set,  $\Omega_t$ , if security prices would be unaffected by revealing that information to all participants. Moreover, efficiency with respect to an information set,  $\Omega_t$ , implies that it is impossible to make economic profits by trading on the basis of  $\Omega_t$  (Malkiel, B, 1992).

The concept of market efficiency is divided into three categories:

- allocational efficiency
- operational efficiency
- informational efficiency

Allocational efficiency implies the optimum allocation of resources according to the concept of Pareto optimality and it is established so that it is equivalent to the marginal rates of return, adjusted for risk, with respect to all market participants. In other words, a market is organizational efficient if it is not possible to change the allocation of resources in such a way as to make some participants better off without making others worse off.

Operational efficiency is reached when the transfer cost of financial funds is reasonable, being determined by a high number of participants on the market and by the mechanism which contributes to the assurance of equilibrium prices.

Informational efficiency is represented by the situation in which prices fully reflect all available information concerning financial assets and characteristics of the market in question. The degree to which market prices reflect information in a quick and adequate manner and thus the true value of an underlying asset. In a less

sophisticated vision, the informational efficiency is defined as the speed and accuracy with which prices reflect new information.

Houthakker and Williamson specify the importance to distinguish between “an informationally efficient market” and “an operationally efficient market”. In accordance with the efficient market theory, an informationally efficient market is characterized by the fact that all information available at any time is fully reflected in current prices. On the other hand, an operationally efficient market is a market where trades are executed at the lowest possible cost and transaction costs are minimal.

In an informationally efficient market, price changes must be unforecastable if they fully incorporate the expectations and information of all market participants. In other words, if stocks were predictable and not uncertain, it would therefore be possible to take action in order to generate systematic gains. But exactly these issues made the stocks uncertain and unpredictable. The prices depend on a summation of so many small and relatively independent sources of variation that the result is like a random walk (Samuelson, P., 1965).

Eugene Fama classified information efficiency in three categories:

- Weak Form Efficiency
- Semi-strong Form Efficiency
- Strong Form Efficiency

The weak form efficiency is characterized by the fact that the current price of a financial asset reflects the historical financial information available on the market, which includes the following categories: quotations from the past, financial assets return or the typology of the market. In this case, all past prices of a financial asset are reflected in present stock price. The weak form efficiency implies that no profits can be made based on the values obtained in the past. In weak-form efficiency, future prices cannot be predicted by analyzing prices from the past and is defined as the case where the information set includes only the history of prices or returns themselves. However, in this case technical analysis is useless and it cannot be used to predict stock prices.

The semi-strong form efficiency includes the weak form efficiency because both public information and historical information are already reflected in current market prices. So, this form suggests that prices reflect all relevant information that is publicly available. The semi-strong form efficiency emphasizes that an investor cannot achieve excess returns by trading on any available information due to the fact that all public information is very quick reflected in prices after it has become available. Compared to the weak form efficiency, this form has the particularity that neither fundamental nor technical analysis can be used to achieve superior profits.

The strong form efficiency includes both semi-strong form efficiency and weak form efficiency. This form suggests that prices already reflect public information, historical information and private information. Because of that not even insider information could give an investor an advantage to achieve superior gains. These are the main features, without mentioning the fact that both technical analysis and fundamental analysis are useless in the case of strong-form efficiency.

### **3. CONCLUSIONS**

The most important issue regarding efficient market theory is that it is not possible to outperform the market over the long-term. An efficient capital market is characterized by the fact that any information is available to all investors or market participants, so stock prices always incorporate and reflect all relevant information. Due

to this issue, the price of a stock should reflect the knowledge and expectations of all investors or market participants.

The question is if the efficient markets theory can be complied in the current financial and economic conditions? Or for each capital market typology, and here I am referring to the Financial Times Stock Exchange (F.T.S.E) evaluation criteria which proposes four categories of national capital markets: developed markets, advanced emerging markets, secondary emerging markets and frontier emerging markets?

Strictly speaking, the efficient market theory, and especially strong form efficiency, seems a utopian and unrealistic theoretical composition, just like Marxism principles or Black Hole Theory. Common sense has in fact somewhat understood that utopia does not quite agree with knowledge.

Beyond Its critics, efficient market theory reaches profound meanings and revolutionized the field of investing.

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## **THE IMPACT OF THE ECONOMIC AND FINANCIAL CRISIS ON PENSION SYSTEMS IN THE EUROPEAN UNION\***

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**Abstract:** This article aims to highlight the impact of the financial crisis on national pension systems in the European Union and to identify the necessary measures for the reform of pension systems in order to ensure their financial sustainability on long term. The financial crisis has affected all pension systems worldwide and the ongoing global recession is affecting the anti-crisis measures taken by governments to limit the negative effects of the impact of this crisis on the national pension systems. Having to face these two events which follow each other rapidly, most of the world's governments react erratically and in different ways.

**JEL classification:** G01, G23

**Key words:** economic and financial crisis, pension system reform, pension costs, anti-crisis policies

### **1. INTRODUCTION**

Due to the intensification of the global economic and financial crisis covering pension expenditures is a real challenge both now and in the future. In order to maintain the pension system at an adequate level most countries in the EU support costs of over 10% of GDP. Through worldwide studies, World Bank warns policymakers not to take short-term tax changes because they will have to face a negative and long term impact on the financial sustainability of pension systems.

Among the objectives that policy makers should consider to ensure the financial sustainability of pension systems are: protecting the purchasing power of pensioners, gradually increasing the retirement age and the conviction of employed persons to contribute to private pension systems which is actually the key for the moment and for the long-term sustainability of pension systems.

On a general approach to the pension systems, currently existing in the world, there can be identified two main systems: a system that ensures a minimum pension through PAYG system and another representing an additional minimum pension consisting of a private pension contribution of the insured. An important characteristic of the system PAYG is the pension indexation, which allows the pension system to take account of inflation, the second feature is why the PAYG system allows a transfer of resources from the rich to the poor, meaning a horizontal redistribution of resources.

Among the disadvantages of the PAYG system, are: its vulnerability to the aging process of population world widely, the reduction of the active population and the

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macroeconomic issues that countries with economies in transition mainly confront.

The financial crisis has deeply unbalanced the pension systems leading to a reduction in revenue and to an increase or maintenance in spending. Besides the effects of this crisis if we take into account the impact of the demographic crisis, we will face amplification on long term. Therefore, even slight differences in the operation of pension schemes in the European Union, coupled with an increasing aging population will inevitably increase the financial flows between Member States and will bring changes in terms of fixed capital formation. Thus the nature of the financial environment will play a crucial role for the economic adaptation to this phenomenon and for the implementation of the reform measures<sup>15</sup>.

For the PAYG public pension systems, the slowing of the real economy has worsened the fiscal pressures on finances and contributions. The crisis highlighted the need to strike a balance between PAYG systems and the fully funded systems.

There are relevant differences in the evolution of public pension expenditure among the EU member states which range from a decline of -2.8 percentage points of GDP (Poland), to a growth of 15.2 percentage points of GDP (Luxembourg).

We will see a major increase in spending on pensions in countries such as Belgium, Greece, Estonia, Cyprus, Luxembourg, Malta, Romania, Slovenia and Ireland with a level of about 5 percentage points or more (over 10 p.p in Greece, Luxembourg and Cyprus, although in most countries they started from a low level due to the maturity of pension systems. In countries such as Bulgaria, the Czech Republic, Germany, Lithuania, Netherlands, Slovakia, Finland and the UK will see an increase of 2 percentage points and 5 percentage points of GDP. Estonia, France, Italy, Latvia, Austria, Poland and Hungary will register a moderate growth due to reforms that have been implemented in their pension systems<sup>16</sup>. The chart below outlines in a comprehensive manner the scale of the challenges for the pension systems among the Member States of the EU. It shows the projected evolution of pension expenditure as a measure of sustainability and the changes in the benefit ratio, as a measure of adequacy in the future.

Further efforts are thus required to indicate the relative merits of different pension models. In these circumstances, the Member States of the European Union chose to accept an increase in deficits for pension systems in order to allow them to play the role of automatic stabilizer. To meet these rising costs it is also necessary to reform the Stability and Growth Pact which should include in the analysis of public finances at the EU level also the costs of private pension systems, pillar II type.

The orientation of the pact towards objectives and criteria in the short term, has led some states to go back to some of their reforms on pension systems and to affect the development of private pension systems<sup>17</sup>.

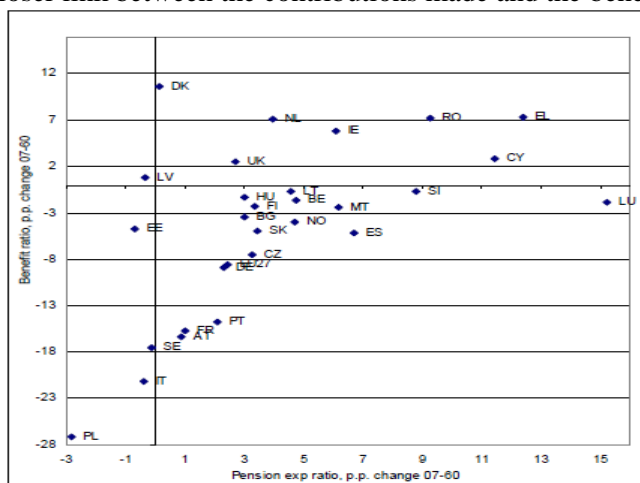
In Romania, the current situation of the pension fund is dramatic. Over a long period of time this mechanism has worsened the economic decline and the social disaster. The pension system in Romania has undergone several reforms over time in order to improve its sustainability.

<sup>15</sup> Xavier Chojnicki & Riccardo Magnani - Vieillesse, retraites et ouverture financière en Europe: des réformes encore insuffisantes, *Économie internationale* 113 (2008), p. 66, 2008.

<sup>16</sup> Progress and key challenges in the delivery of adequate and sustainable pensions in Europe – European Economy, Occasional Papers 71/ November 2010, p.55.

<sup>17</sup> Roel Beetsma and Heikki Oksanen - Pension Systems, Ageing and the Stability and Growth Pact, *European Economy, Economic Papers*, Number 289, October 2007.

Out of 10 million people, active population, only 5.8 million contribute to the pension system, the reform having as purpose the creation of an equitable redistribution and creating a closer link between the contributions made and the benefits received.



Source: Commission services, 2009 Ageing Report.

**Figure 1. Pension policy challenges - pension expenditure and benefit ratio**

It is also necessary to consider two important global trends: the decreasing rates of fertility and the medical developments which are leading to a prolongation of life.

Therefore increasingly fewer workers support more and more retirees. Thus the public pension system failure will occur as a result of the increase of the retirement age and of the taxes on wages. The effects of the demographic decline on the public pension system in Romania are very large. This system works as a redistributive PAYG: the social contributions are collected from employees and are immediately paid as pensions. In the context of the current demographic problems, fewer employees, more retirees, this system cannot work for too long.

It is though recommended to pass from systems that generally include a single level to multi-level systems<sup>18</sup>.

A solution to this problem is the development of private pension systems and their connection to the free market. There are two directions which can be followed in order to achieve this goal: either by a sudden and complete renunciation to the public pension system, either through a gradual transition, keeping the system as a pillar. The method proposed by the World Bank, aims to reform the public pension PAYG, by transforming it into a major private one and by the formation of the three pillars. But to do this we need: a good capacity of implementation, an adequate financial sector and good macroeconomic policies.

The observed trend at the European level is to give greater importance to private complementary prefinanced schemes, which are often defined contribution schemes. Our country has adopted a system of pillars according to the model proposed by the World Bank.

According to Law 411/2004 as amended, the contributions to the private pension system (pillar 2) should increase by 0.5% per year from 2% in 2008 to 6% of gross income of participants in 2016, the remaining 3,5% continuing to fund state

<sup>18</sup><http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:52010DC0365:EN:NOT>

pensions. But as a result of the measures taken by the Government of Romania, this increase did not take place. As other social reforms, the reforming of the pension system in Romania takes place in agreement with the IMF and World Bank. In the last three years we have seen a doubling of spending on pensions, and an increase in GDP with only 28%.

After the unleash of the economic-crisis, countries with PAYG pension systems returned to their previous contributions and gave up reducing the contributions to pension funds. These projects of reducing contributions to pension funds were considered in order to encourage the increase in number of the employees by reducing the cost of labor. Other anti-crisis measures took into account the reduction of the contributions to Pillar 2 and their increase in the first pillar, this is the case of Romania, Hungary and Slovakia, the latter allowing citizens to opt for a single pillar.

Although the effects of the financial crisis are strongly felt in pension systems, the real crisis will occur as a result of the aging process and demographic movements. It is therefore necessary to establish a plan in order to combat the effects of these long-term phenomena.

## **5. CONCLUSIONS**

In the last decade, there has been a considerable progress regarding the pension reform at the EU level. Despite the significant differences between these systems, the Member States take measures in order to adapt to the changes in demographics, which tend to increase over the next decade. But to counter these phenomena is a real challenge. According to the latest Eurostat estimates, the size of the active population will decrease from 2012. A potential growth will be based less on an increase in labor supply and more on measures to increase labor productivity. This will have economic and budgetary consequences on long-term.

In addition to these perspectives, the economic and financial crisis led to a deterioration of public finances and to a sharp increase in public deficits and debt levels, which clearly affects the public spending programs on social protection. In addition, we are witnessing a reduction of investments in private pension funds and an increased uncertainty regarding the extent to which they will be recovered.

Therefore we need a careful review of pension policies in order to provide a sustainable and adequate retirement income. This is a call to implement policies based on interconnections between employment, social protection systems, financial market policies and labor migration policies if we want to ensure sustainable pensions.

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## **SELF-FINANCING CAPACITY ANALYSIS OF ROMANIAN COMPANIES. CASE STUDY: THE AUTOMOTIVE INDUSTRY\***

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**Abstract:** This paper is a study on the self-financing capacity of the Romanian companies. We selected four companies operating in automotive industry, for which self-financing capacity and several relevant financial ratios were calculated. The study covered the period 2007 - 2010, a period that included two years of growth for Romanian economy and two years of downturn. The results were quite surprising. The level and the structure of self-financing capacity are very volatile in time, as they are subject to the influence of factors such as return on sales, financial policy (the level and the cost of bank loans), depreciation policy, provision policy. Another finding relates that the self-financing capacity is generally correlated with the level of financial debts. Instead, surprisingly, its value does not correlate with the gross operating surplus, although the operational activity should have a big contribution on generating monetary financial resources through the gross operating surplus.

**JEL classification:** G32, G39

**Key words:** self-financing capacity, net profit, financial debts, gross operating surplus, economic crisis, automotive industry

### **1. INTRODUCTION**

Self-financing capacity is one of the indicators used to assess the business performance. It measures the ability of firms to generate resources for financing the activity. These resources are required to provide the company's contribution to cover the investment expenses.

Self-financing capacity (SFC) can be considered as an indicator for assessing the profitability and is of great importance for managers. It is even more important than the traditional indicators such as profit, as it expresses the total potential resources that can be used to finance the business.

Given the multiple destinations of self-financing capacity, knowing its level is important both during the boom of the economy (to reflect the extent to which a company can finance the development with own resources) but also in times of economic crisis (to reflect the resources released for repayment of loans or for financing the current activity, in case of restricted access to credit).

## **2. OBJECTIVES**

In this article, we conducted a study on the self-financing capacity for four Romanian companies listed on the Bucharest Stock Exchange, from the automotive industry, covering the period 2007 - 2010. The period studied includes both a phase of growth and one of decline for the Romanian economy. Thus, the influences of crisis on an industry hardly affected in last years can be captured.

## **3. METHODOLOGY**

To determine the self-financing capacity, the following formula was used:

Self-financing capacity = Net profit + Depreciations, amortizations and provisions.

The second element in the formula above includes depreciations, amortizations and provisions affecting both the operational and the financial activity.

In addition, several financial ratios that allow a more accurate assessment of the level of SFC were calculated:

- Share of net profit in SFC = Net profit / SFC;
- Share of Depreciations, amortizations and provisions in SFC = Depreciations, amortizations and provisions / SFC;
- Rate of reimbursement the financial debts = Financial debts / SFC;
- Rate of financing the investments = SFC / Investments;
- Rate of gross operating surplus = SFC / Gross operating surplus.

Investments were determined as net variation between tangible assets from current year and tangible assets in previous year (values taken from the balance sheet). Due to lack of data the gross variation of tangible assets could not be used. Also, due to the calculation method, it could not be established the variation of the investments for the first year (2007).

Gross operating surplus (GOS), also named gross operating result, reflects the monetary result a firm gains from the operating activities. This was calculated with the relationship:

$GOS = \text{Value added} + \text{Operating subsidies} - \text{Wages} - \text{Taxes}.$

Taxes include taxes on payroll and other taxes paid by the company, excluding VAT and income tax.

These indicators were calculated for all the four companies, namely UM Timisoara, Electroargeş, MAT Craiova and Mecanica Ceahlău.

## **4. LITERATURE REVIEW**

In literature, self-financing capacity is discussed in detail.

Stancu I. believes that SFC "reflects the financial potential of the company's financial growth, i.e. the financial resources generated by the industrial and commercial activity of the company and after deducting all the expenses payable to a certain maturity". [11]

Niculescu M. talks about the characteristics of SFC, considering "it is a global net monetary surplus. The net feature is explained by deducting the income tax, while the global nature is due to the fact that is generated by the entire business of the company. Therefore, unlike the gross operating result, which refers only to operating activities, SFC takes into account all sides of the business activity (operational, financial, extraordinary). [...] By its size and structure, the self-financing capacity helps on maintaining the enterprise value (through its component, depreciations and provisions) and it is at the same time, a growth factor (via the component net income)." The author

also identifies the factors that influence SFC respectively the depreciation policy, the tax policy and the measures adopted by the company for increase profitability. [7]

Georgescu N. identifies the destinations of self-financing capacity: "financing the current needs, growing the working capital, total or partial financing of new investments, repayment of loans, remuneration of capital invested." The author studies as well the connection between SFC and cash flow, suggesting that the potential resources involved by SFC should be covered as well by cash resources. [4]

Petrescu S. believes that "self-financing capacity or self-financing gross margin is a significant residual balance flow obtained as difference between inflows and outflows arising from current operations leaving to the company own resources available to finance various necessities: the net income and the expenses which didn't involve payments (depreciations, provisions)." Further, the author outlines the characteristics of SFC and its destinations, as resources to finance various needs. [8]

According to Ștefea P., "self-financing capacity measures all the potential financial resources a company can use, after a financial year." [12]

Lezeu D.N. defines the self-financing capacity as "the potential cash generated by the business during the year, which can be used for self-financing, being an indicator that expresses the company's financial independence." [6]

Dragotă V. and collaborators analyzes the limits of SFC, considering that this indicator "can not reveal the situation of real collections and payments with the same clarity as a cash flow statement, but in the absence of other sources of information, it may be regarded as a possible approximation of their situation". [3]

## 5. RESULTS AND DISCUSSIONS

The indicators presented above were calculated for the four companies studied.

For **UM Timisoara**, the data are presented in Table 1.

**Table 1**

INDICATORS	2007	2008	2009	2010
Net profit	170,598	-1,750,681	-810,529	-2,603,142
Depreciations, amortizations and provisions	808,269	992,856	1,434,109	1,894,172
SFC	978,867	-757,825	623,580	-708,970
Share of net profit	17.43%	231.01%	-129.98%	367.17%
Share of depreciations, amortizations and provisions	82.57%	-131.01%	229.98%	-267.17%
Financial debts	30,666,011	22,307,335	25,368,000	26,484,738
Rate of reimbursement the financial debts (years)	31.33	-29.44	40.68	-37.36
Investments	-	3,007,405	3,637,245	-510,448
Rate of financing the investments	-	-25.20%	17.14%	138.89%
GOS	3,429,707	5,619,552	374,915	-5,029,726
Rate of gross operating surplus	28.54%	-13.49%	166.33%	14.10%

\* data are expressed in national currency, lei (RON)

Self-financing capacity fluctuated for this company, as the positive results alternate with the negative ones in period studied. In 2007, SFC was 978,867 RON. Net income was 170,598 RON (17.43% share in SFC) and depreciations and provisions were 808,269 RON (82.57% share in SFC). In 2009, the company posts net loss, a negative aspect, and the share ratios have no economic significance. The same situation is found

in 2009, but this time the depreciations increase and fully cover the net loss, so SFC becomes positive. In 2010, SFC turned negative.

In 2007, the rate of reimbursement the financial debts are 31.33 years, a level appreciated as very high. Not only the company does not generate large financial resources, but it also has high debts. The situation remains similar in the next period, when although the financial debts decrease slightly against 2007, the self-financing capacity does not allow repayment of these debts.

Rate of financing the investments has significance in 2009 only, when it has a value of 17.14%. But if we consider the capital borrowed, we see that the company manages to cover only very little of its funding needs of the resources released. In 2008, the tangible assets have a positive balance of 3,007,405 lei, for which the company must find funding resources other than self-financing capacity, which is negative.

The ratio of gross operating surplus partially shows the reason of a low or negative self-financing capacity. In the first two years, GOS is positive and quite big, but the high financial loss (due to large debts) cuts the positive surplus generated by the operating activities so that SFC is either very small or negative. In 2009, the collapse of the auto market has reduced the turnover of this company by almost 50% which did not happen for the operational expenses so that GOS decreased greatly. The rate of GOS, although higher than one (166.33%), doesn't mean a positive situation, given the small value of GOS. In 2010, the situation worsens further, as GOS becomes negative, and the depreciations, although increase, fail to entirely cover the negative level of GOS.

From above, it appears that problems for UM Timisoara arise both from operating activities (especially in the last two years analyzed), and from financial activities. The bank loans generate high interests which drastically reduce the self-financing capacity and further this doesn't allow reimbursement of debts. Thus a vicious cycle is obtained generated by the company's bank loans. More, the issues related to economic crisis are added, affecting the sales and the operating results of the company.

To analyze SFC for **Electroargeş**, data from Table 2 is used.

**Table 2**

INDICATORS	2007	2008	2009	2010
Net profit	5,865,063	2,044,910	2,687,105	7,653,307
Depreciations, amortizations and provisions	922,261	822,353	967,760	915,575
SFC	6,787,324	2,867,263	3,654,865	8,568,882
Share of net profit	86.41%	71.32%	73.52%	89.32%
Share of depreciations, amortizations and provisions	13.59%	28.68%	26.48%	10.68%
Financial debts	8,611,759	5,785,640	2,271,092	988,882
Rate of reimbursement the financial debts (years)	1.27	2.02	0.62	0.12
Investments	-	-556,057	-600,797	-511,644
Rate of financing the investments	-	-515.64%	-608.34%	-1674.77%
GOS	2,694,338	4,275,072	5,662,878	10,347,570
Rate of gross operating surplus	251.91%	67.07%	64.54%	82.81%

*\* data are expressed in national currency, lei (RON)*

The size of self-financing capacity fluctuated over the period studied, decreasing very much in 2008, after that growing by 43% in 2009 and by 107% in 2010. Comparing the net profit with the level of depreciations and provisions we find that the company has a good return (even if it falls pretty much in 2008). In the first year, the share of net profit in SFC accounts for 86.41%, then it drops to 71.32% in 2008 and

then gradually increases to 73.52% in 2009 and to 89.32% in 2010. It is a favorable situation, as the net result has an overwhelming share in SFC each year analyzed, which is a favorable situation. The value of depreciation is relatively stable in the period, which is also a positive issue.

The financial debts are falling on, as they decrease from 8.6 million in 2007 to 0.9 million in 2010. The reduction is probably due to the use of self-financing capacity for repayment of bank loans. Under these circumstances, the rate of reimbursement the financial debts increases from 1.27 years in 2007 to 2.02 years in 2008, then it decreases to 0.62 years in 2009 and to 0.12 years in 2010. Even if in the first two years the ratio is higher, this is not a problem unless the loan duration is greater than the rate of reimbursement the financial debts and if the company does not take measures to increase SFC. Also, we must take into consideration that other sources to pay the debts can be used, such as equity increase or sale of assets. In our case, subsequent developments confirm that Electroarges has no problem in repaying the bank loans.

Tangible assets decrease in the period studied, so the company doesn't have to use the resources released to make investments. It is appreciated that the company managed to increase the net profit, although the tangible assets slightly diminish. In the following period, the company must pursue a growth of these assets to ensure a future development.

Gross operating surplus is high and rising in all years analyzed. The rate of GOS has a value of 252.91% in 2007, then decreased to 67.07% in 2008 and to 64.54% in 2009 and grew in 2010 up to the level of 82.13%. In 2007 the level is higher than 1 and is due to the positive value of the financial result, which increases SFC over the monetary resources released by the operational activity. In the next period, the financial result becomes negative, so it should be covered by the gross operating surplus, leading to a rate of GOS below 1. Even under these circumstances, the values obtained are found to be quite high.

For **MAT Craiova**, the data needed to analyze SFC are shown in table 3.

Self-financing capacity has a very high level in 2007 due to the sale of assets, but this operation does not have an as much influence in the coming years. For this reason, in 2008 SFC decreases to the value of 2.2 million lei. In 2009, SFC drops by 60% then increases to 1.5 million. Compared to the sales, self-financing capacity is quite small, which indicates the existence of some problems related to return.

Analyzing the structure of SFC, we see that in 2008 the net profit has a very small share, of 3.11% only, then grows to 9.91% in 2009, then decreases to 3.07% in last year. The depreciations fluctuate during the survey period, increasing by 20% in 2008 and then decrease by 60% in 2009 and increased by 75% in 2010. The oscillations of depreciations cause, in most part, the oscillations of self-financing capacity.

The low level of net profit is primarily due to reduced profitability of operating activity. Excluding the asset sales operation (that appears in all four years), the company has a low return on sales (in 2010) or negative (in 2007-2009). Moreover, the financial loss occurring each year must be covered by the operating result. We affirm that MAT Craiova has serious problems regarding the profitability of the operating activity, which affects the ability to generate financial resources for financing the business in the future.

Rate of reimbursement the financial debts is less than 1 in 2007 only, after that it becomes pretty high (over 4), even reaching the value of 9 in 2009. These levels are probably above the period of bank loans, so we can say that the company has problems

to generate cash to pay the creditors. However, debts drop in 2009 and 2010, probably by using the self-financing capacity.

**Table 3**

INDICATORS	2007	2008	2009	2010
Net profit	10,911,231	68,496	89,164	48,401
Depreciations, amortizations and provisions	1,779,605	2,137,185	810,764	1,526,155
SFC	12,690,836	2,205,681	899,928	1,574,556
Share of net profit	85.98%	3.11%	9.91%	3.07%
Share of depreciations, amortizations and provisions	14.02%	96.89%	90.09%	96.93%
Financial debts	9,877,854	10,779,429	8,235,274	6,370,855
Rate of reimbursement the financial debts (years)	0.78	4.89	9.15	4.05
Investments	-	-530,384	-696,737	-36,071,235
Rate of financing the investments	-	-415.86%	-129.16%	-4.37%
GOS	847,707	1,565,801	316,735	2,382,593
Rate of gross operating surplus	1497.08%	140.87%	284.13%	66.09%

*\* data are expressed in national currency, lei (RON)*

The net variation of tangible assets is negative each year, so it is not the question to use SFC to finance the investments. Moreover, in 2010, the tangibles decrease greatly due to the reduction in value of freehold land and constructions. We note that the company makes disinvestments in this period, which allows posting better results in the financial statements. But use of such operations cannot be seen as a long-term measure for generating profit.

The rate of gross operating surplus has a very high value in 2007 (almost 1500%) caused by the sale of assets. High levels are achieved in 2008 and 2009 (140.87% and 284.13%) caused also by the sale of assets. Instead, in 2010, the rate drops to 66.09%, which is a more realistic level for this company.

The data used to analyze the self-financing capacity for the company **Mecanica Ceahlău** are listed in table 4.

Self-financing capacity has the maximum value in 2007 (4.39 million RON), then decreases by 18% in 2008. Although the decrease is not large, the changes occurring in the structure are quite important. In the first year the net profit accounts for 51.60% share, a level considered to be quite small. In 2008, the net result is negative, but the depreciations and provisions increased from 2.1 to 8.7 million RON. Net loss is due both to operating activities (operating result turns negative) and to financial activities (financial loss increases).

In 2009, the decline in operating activity is increasing, resulting in decreased sales and increased operating loss. At the same time, the financial loss slightly reduces, but the net loss increases by 52.81% against previous year. The depreciations and provisions slightly drop and SFC fall down to 18,192 RON.

In 2010, turnover increases, operating result turns positive, while financial loss reduces. All these led to a positive net result. Meanwhile, the depreciations and provisions significantly diminished so that SFC became 3.6 million (61.70% share of net profit). Regarding the structure, the company has reasonable values only in 2007 and 2010, while in 2008 and 2009 the situation is quite risky.

Financial debts reach 9.8 million in 2007, which resulted in the rate of reimbursement the debts of 2.25 years, which is not a very high level. In 2008, this rate

increases to 3.4 years, while SFC decreases and financial debts increase. In 2010, the rate drops to 2.31 years. Except 2009 (when the value is atypical), we can say that this ratio remains within reasonable limits.

**Table 4**

INDICATORS	2007	2008	2009	2010
Net profit	2,267,031	-5,143,735	-7,859,981	2,222,540
Depreciations, amortizations and provisions	2,126,087	8,758,435	7,878,173	1,379,845
SFC	4,393,118	3,614,700	18,192	3,602,385
Share of net profit	51.60%	-142.30%	-43205.70%	61.70%
Share of depreciations, amortizations and provisions	48.40%	242.30%	43305.70%	38.30%
Financial debts	9,866,791	12,303,427	11,895,058	8,304,942
Rate of reimbursement the financial debts (years)	2.25	3.40	653.86	2.31
Investments	-	-4,070,421	-6,326,875	-417,357
Rate of financing the investments	-	-88.80%	-0.29%	-863.14%
GOS	4,504,446	8,450,235	2,925,281	5,166,722
Rate of gross operating surplus	97.53%	42.78%	0.62%	69.72%

\* data are expressed in national currency, lei (RON)

The net variation of tangible assets is negative in each year so the company doesn't have to use the monetary resources generated to finance the investments.

Gross operating surplus fluctuates quite a lot, especially on account of depreciations and provisions. In 2007 it is 4.5 million, after that it grows by 87% (to 8.4 million), falls by 66% in 2009 (to 2.9 million) and increases in the last year to 5.1 million (+76%).

GOS and SFC evolved differently which resulted in a big fluctuation of the rate of GOS. In 2007, the rate was 97.53%, which means that a large proportion of the monetary resources generated by the operating activities were finally found within SFC. In 2008, the rate dropped to 42.78% and in 2009 to 0.62%. The last level is atypical and is due to circumstantial factors as the rate should be well above 50%. In 2010, the rate of gross operating surplus becomes 69.72%, a level considered as quite realistic.

## 5. CONCLUSIONS

Self-financing capacity is one of the key indicators for assessing the potential of a firm to generate monetary resources for the development of the business. Its level is very volatile, as it is influenced by many factors, belonging both to operational and financial activities. The level and the dynamics of self-financing capacity are important to be known by the company's management, in order to draw the investment strategy and the financial policy of the company and to optimize the cost of funding.

In this article, an analysis of self-financing capacity and of related financial ratios for four Romanian companies running in automotive industry was carried out. All the four companies are listed on the Bucharest Stock Exchange. The automotive industry was selected as this industry was among the most affected by the economic crisis occurred in the last years.

After carrying out the study, the following conclusions could be drawn:

- Self-financing capacity is quite volatile over time, being subjected to a multitude of factors of influence, each with more or less impact;

- The structure of self-financing capacity, established depending on sources of origin (i.e. the net income and the depreciations and provisions), is very different both from one year to another and from one firm to another;
- The factors with the biggest influence on the level and evolution of SFC are: return on sales, financial policy (level and cost of bank loans), depreciation policy, provision policy;
- A multitude of correlations between indicators from Profit and Loss Account must be taken into consideration when appreciating the level and the dynamics of SFC;
- Generally, the rate of reimbursement the financial debts don't go beyond 3-4 years. This value is not always a problem, even if it exceeds the duration of bank loans;
- The rate of reimbursement the financial debts signalizes to the managers the discordances occurred between the loan period and the financial resources generated by the business. Thus, managers can adopt appropriate measures either to increase the financial resources released from the activity, or to search additional funding;
- The net variation of tangible assets was generally negative for the companies, so these firms did not need monetary resources to finance the investment activity but most of the times this was the source of generating financial resources to increase SFC;
- Although, in theory, gross operating result correlates with the evolution of self-financing capacity, we could not find such a direct correlation in the case of the four companies studied. The values obtained were often either very large (more than 100%) or very small, which is an unusual situation in practice;
- We could not establish a direct correlation between the economic crisis and the indicators of performance.

We appreciate that, given the difficulties the auto industry was facing during the economic crisis, this study may be useful to identify the resources and the opportunities of the companies in this area to recover once the economy will start growing.

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## TRANSPORTATION. POLLUTION. FISCALITY

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**Abstract:** According to a report of the European Environment Agency (EEA) gas emissions with greenhouse effect, from the transport remains a major obstacle in order to fulfill the EU's Kyoto targets on climate changes. In this respect it has been demonstrated that the emissions are responsible for 21% of total emissions in Europe. Therefore, Romania as a member of the EU has the mission to adopt its own strategy to fight with the negative impacts of emissions on the environment. Taking into account the strategy of Romania's development on medium and short-term, which aims to adapt the road infrastructure in relation to the evolution of National Car Park (influenced by two important goals of the local automobile industry Automobile Group Dacia Renault Mioveni and Ford Craiova) state intervention is done obviously through fiscal measures to combat pollution.

**JEL classification:** H21, H23

**Key words:** the national strategy, the tax on first matriculation, the tax on pollution

### 1. INTRODUCTION

The means of transport play a major role on the national economy both because of their direct impact on the Gross Domestic Product (GDP) and their contribution to the circulation of goods, therefore providing for the added value of some other economic fields.

According to the Sector Operator Program of Transport elaborated by Romania for 2007 to 2013<sup>19</sup>, transport, besides their positive impact on the developing of economy and the welfare of civilians, because of its increasing number, has become one of the major sources of pollution, both because of the noise, but mostly because of the gas emissions with greenhouse effect being responsible for the global warmth, mankind health damage, the expansion of poverty due to the gradual extinction of species and extreme natural phenomena.

It has been proved by a recent report of EEA (European Environment Agency) that transport represents around 1/3 of the total final energy consumption and more than 1/5 of the total gas emissions with greenhouse effect<sup>20</sup>.

In the beginning of this millennium mankind has focused on taking some national and global measures in order to reduce the pollution produced by vehicles. Thus it has been agreed on cutting off the level of noxa and developing the green areas (as it is a fact that oxygen is necessary to maintain life on Earth)<sup>21</sup>.

<sup>19</sup> Guvernul României - Programul operațional sectorial de transport 2009 – 2013

<sup>20</sup> [www.europa.eu/ro.transport](http://www.europa.eu/ro.transport)

<sup>21</sup> Pătrașcu, R. - Producția energiei și impactul asupra mediului în condițiile durabile, Editura Politehnica Press, București, 2007

Romania takes part in this complex process of reducing pollution in general and mostly in diminishing the exhaust gas pollution effect by:

- ✓ Consenting to conventions and international agreements on environment protection
- ✓ Adopting a national strategy suitable for every step of economic and social uprising
- ✓ The establishment of the Ministry of Environment and Long-lasting Development
- ✓ Adopting by law some technical and environment friendly conditions in order to restrict the circulation of very old vehicles
- ✓ Adapting the national legislation to the European Union standards concerning the norms on pollution produced by vehicles
- ✓ Taking into account some concrete measurements in this respect according to the Government Program<sup>22</sup> such as:
  - stimulating the use of vehicles with low gas emissions
  - introducing fiscal stimulus for the renewal of the national fleet

## **2. THE NATIONAL PARK OF VEHICLES AND ITS IMPACT ON THE ENVIRONMENT**

Taking into account the adherence of Romania (by the Law no.3/2001) to Kyoto's targets on climate changes (that took place on 11<sup>th</sup> of dec.1997 and whose aim was to reduce exhaust gas emissions), as well as the targets of Bruxelles presented on February 2007, (according to which new vehicles that will circulate in Europe from 2012 on shall not have more than 120 g of carbon comparing to 160 g that have in present), the Government of our country has decided to adopt a national strategy concerning exhaust gas emissions and reduce it up to 120 g also<sup>23</sup>.

Therefore, because of the inadequate structure of the vehicles in the National Park before 1990, Romanian authorities have taken action in order to reduce pollution.

Despite all this, the Romanian park of vehicles, estimated on 31<sup>st</sup> of December 2010 at about 5.418.989<sup>24</sup> vehicles remains a major source of pollution because of the emissions of monoxide and dioxide carbon, oxides of nitrogen, combinations of lead and sulphur, aldehydes, etc). According to the Annex of Kyoto's Protocol, the dioxide of carbon is considered a gas with greenhouse effect and transport is held responsible for it. According to statistical analysis<sup>25</sup>, out of the total of 5.418.989 vehicles existing in the national park (fig.1):

- 17,20% are fabricated before 1989 and emanate gas with a concentration of 3,5% from its volume,
- 26,72% are fabricated between 1990 – 2000, are within the limits of pollution of Euro 1 – Euro 2 and have an admitted concentration of gas emissions of 0,5% and 0,3% from their volume,
- 23,80 % are fabricated between 2001 – 2005 are within the limits of pollution of Euro 3 – Euro 4 and therefore emanate gas emissions with a concentration of 2% of their volume

<sup>22</sup> Guvernul României - Programul de guvernare 2009 – 2013

<sup>23</sup> Acordul de la Kyoto

<sup>24</sup> MAI, Direcția Regimul Permise de conducere și înmatriculare autovehicule – Situații statistice 2008 - 2010

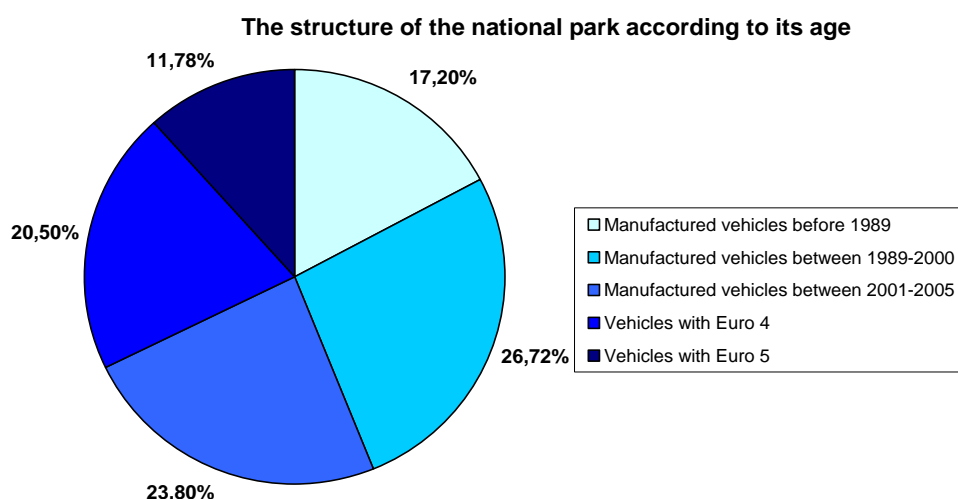
<sup>25</sup> [www.taxapoluare.com](http://www.taxapoluare.com)

- 12,50% with 3-5 years old are within the limits of Euro 4, that is they emanate 0,16 g/ km,
- 11,78% have less than 2 years old and within the limits of Euro 5.

On 31<sup>st</sup> of Dec. 2010 the national park had the following structure (fig.2 and tab.1):

**Table 1**

Cars	4.307.290	representing	79,48%
Buses and minibuses	39.140	representing	0,72%
Utility vans	486.373	representing	8,97%
Motor tractors	31.140	representing	0,57%
Scavenging machines	79.999	representing	1,47%
Motorcycles	79.092	representing	1,46%
Trailers	239.360	representing	4,42%
Tractors	43.202	representing	0,81%
Vans	68.843	representing	1,27%
Others	44.550	representing	0,83%



**Figure 1**

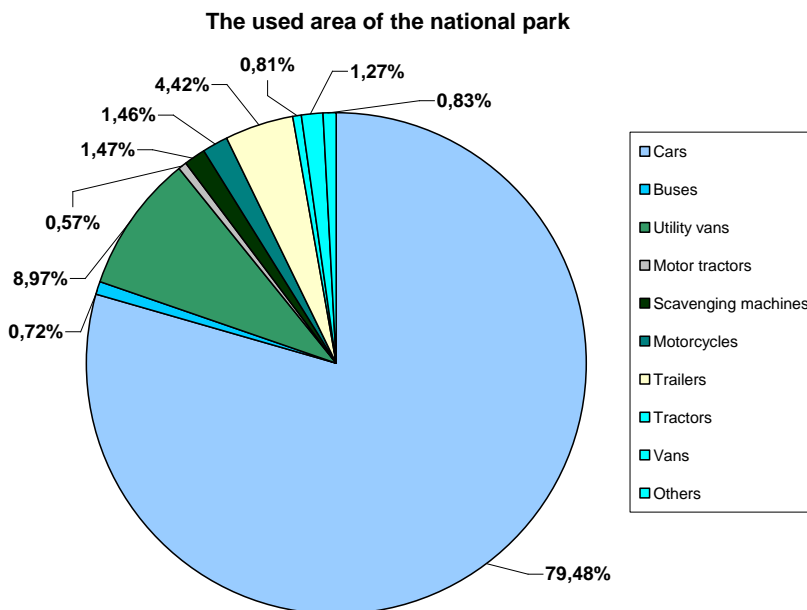
It is to be noted that cars (as vehicles transporting people) are predominant and their number is gradually increasing, closely followed by trailers (vehicles transporting goods).

### **3. CONSIDERATION REGARDING THE LEGISLATIVE MEASURES UNDERTAKEN**

On one hand taking into account the importance of vehicles in Romania as well as its developing trend (the arrival of FORD in Craiova), the implications of this sector in the progress of our economy, which triggers a high rate of employment and on the other hand considering its pollution effect and the commitment of our country to fight against it, in all respects it is compulsory to adopt a coherent and efficient strategy in order to make a balance between the two aspects.

Besides the efforts of our vehicle producers to promote and make use of special techniques in order to reduce fuel consumption and consequently restrict gas emissions,

our government has to take action and make economic and fiscal adjustments which stipulates and promotes the use of reliable vehicles with a reduced fuel consumption and less gas emissions instead of the old ones which are cheaper but very polluting.



**Figure 2**

The adjustments taken so far by the government have proven inefficient as they have changed for so many times the legislation (have made four changes in the legislation) without any result.

1. In the author's opinion, all these changes do not respect the principle according to which **the polluter pays (the generator of industrial pollution should bear the costs of avoiding pollution or remedying its effects).**

Therefore, all lawful changes refer only to the vehicles which have been matriculated for the first time beginning with 01.01.2007 not taking into account the fact that all the owners of the 5.418.989 vehicles cause damage to the environment proportionally to their corresponding pollution norm and according to the fuel quantity consumed.

From a macroeconomic point of view, legislative changes imposed the pollution tax payment only for 1.494.064 polluters (5.418.989 vehicles registered on 31.12.2010 – 3.924.925 registered on 31.12.2006) which represents only 27,57% from the total polluters in Romania registered on 31.12.2010.

From the same reason, by respecting the principle “the polluter pays” all these legislative changes are discriminating for the 1.494.064 polluters forced to the payment of some taxes that vary from one regulation to the other, as opposed to the polluters registered on 31.12.2006 that are exempt from any kind of payment, in spite of their obvious contribution to the damages of the environment in Romania.

2. Romanian regulations do not stipulate a differentiated excise on fuel to stimulate the use of those less polluting.

It's a fact that pollution resulted from exhaust gas depends on the quality and

quantity of the fuel used. A differentiated excise on fuel (more excise for fuel with higher polluting effect) triggers a limitation of those with higher polluting effect. This is the solution to cut off gas emissions specially made by old cars. Although this is a very efficient and easy measure to take it has not been used yet.

3. The special tax on cars and vehicles which proved to be contrary to the norms and principles established by the Treaty of adherence to European Union<sup>26</sup>.

A special tax on cars and vehicles has been introduced in the Fiscal Code beginning with 1<sup>st</sup> of July 2007.

This **special tax** also called **tax on first matriculation** was introduced especially to restrict second hand cars matriculation in Romania after the liberalism of goods- free market economy as a result of the adherence of our country to the European Union. Before the adherence, vehicles from import non euro and Euro 1 were forbidden to be matriculated and beginning with 1<sup>st</sup> of Jan. 2002 the interdiction was applied to vehicles Euro 2 also.

The adjustment did not last as it proved to be contrary to the stipulations of Art. 90 from the Treaty of adherence of Romania to EU according to which “a member state shall not directly or indirectly impose an intern tax on the products of other member states, regardless of their nature, superior to those applied directly to similar national products”.

The issue has been thoroughly debated because of the second hand vehicles purchased from member states were gradually taxed according to their age and level of pollution, while national second hand vehicles, as a result of stipulations to change the owner presented in the disposition 195/2002<sup>27</sup> concerning the traffic on public roads, supplemented by the law 6/2007 and by the disposition 69/2007, not first erased and then rematriculated and consequently the special tax could not be applied as in that case the operation did not impose a new matriculation.

EU has introduced the refrigerment procedure for Romania invoking the way tax was calculated and the stipulations in the Treaty of adherence.

4. The change of the fiscal adjustment as a result of EU recommendations has proved inefficient and had major negative consequences on the environment, safety traffic and budget.

In order to avoid penalty form as well as to preserve the taxation on vehicles, the Government Tariceanu has issued another adjustment, this time lending it the connotation of a **tax on pollution** which was made valid on the 1<sup>st</sup> of July 2008. According to this new adjustment, taxation is made the other way round, that is tax is being reduced up to 0% for new vehicles, and up to 95% for vehicles older than 15 years.

This new adjustment had serious negative consequences. The number of new vehicles matriculated in Romania in 2008 has diminished up to 8.6% in comparison to 2007 (285,504 as opposed to 312,535), and the number of vehicles that run on a network of roads has increased with 151.4% reaching the record number of 310,885<sup>28</sup> in December 2008 the matriculation of new cars has diminished with 21.9% and new cars matriculated have increased in number of almost six times more, the score being 3

<sup>26</sup> Tratatul de aderare a României la UE

<sup>27</sup> OUG 195/2002 modificată și completată

<sup>28</sup> MAI, Direcția Regimul Permise de conducere și înmatriculare autovehicule – Situații statistice 2008 - 2010

already running cars to a single one new matriculated, while for instance in Germany the score is vice versa.

5. Despite the principles that govern the fiscal measures, on the 15<sup>th</sup> of Dec.2008 the law issued six months ago was modified again<sup>29</sup>.

Facing this unprecedented situation, influenced also by the economical and financial crises, on Dec. 14<sup>th</sup> 2008, the Government modified the 50/2008 disposition with the disposition 208/2008, that is it exempted from tax payment the Euro 4 cars with a 2000 cm<sup>3</sup> cylinder capacity, and tripled the tax for the others.

Taking into account the fact that the 50/2008<sup>30</sup> is a normative act having a profound fiscal trait, and contrary to the norms of the 4<sup>th</sup> Article of the 571/2003 Law concerning the Fiscal Code, (according to which the disposition is modified only by the law that is valid beginning with the first day of the following year), the disposition was nevertheless modified after only six months after appliance<sup>31</sup>.

Thus, the legislative fiscal changes made by the government Boc, were not able to produce a reliable law system, which could not be infringed by the European legislation or EU Constitution. Considering this new formula, E.C demanded the Romanian officials to change the motor car tax, as it discriminated on purpose the two types of vehicles.

6. In February 2010, Romania complied with this request and adopted the tax on excepted cars, and on November 2010 it was extended for Euro 5 cars also (this becoming operative on 1st of January 2011). This last form of legislation was combated by a ruling of the European Union Court of Justice which settled down the fact that, in the case of the algorithm established by the Government, there are situations in which the pollution tax on cars exceeds the residual value of the car itself, which disheartens the import of the second hand cars from UE).

7. Minister Borbely's new versions that imply the fact that the payment of tax on cars is compulsory for all the owners of the cars matriculated before the 1st of January 2007, are in contradiction with the stipulations of the Constitution concerning the law principle of non-retroactivity.

#### **4. SUGGESTIONS AS FAR AS CAR POLLUTION TAX IS CONCERNED**

The solution, in a certain extent, to all the problems above mentioned, might be the inclusion of the car pollution tax into the toll collected by the local budgets every year. Therefore the following principles should be taken into account: the level of noxious fumes, cylinder capacity, the vehicle's age, -an average of 11 years instead of 13, as well as the differentiated excise on fuel.

This settlement has, in the author's opinion, the following advantages:

1. The growth of the taxation field from 2000 - 3000 cars per year to 4.5 – 5 million per year, and therefore the increase of incomes due to the state budget.

2. A unique toll collected by the local budgets is within the principle of annuity of the state budget and it abides by the rules of the execution budget period and the frequency of the control made by the legislative to the financial activities of the executive.

3. The principle "the polluter pays" is taken into account. Thus discrimination

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<sup>29</sup> OUG 203/2008 Taxe de poluare

<sup>30</sup> OG 50/2008 Taxe de poluare

<sup>31</sup> Crișu, C. - Codul fiscal. Norme de aplicare. Procedura fiscală 2009, Editura Juris Argessis, 2009

no longer exists as all polluters pay, double taxation is avoided as two similar taxes are no longer based on the same object, even if the pollution toll is collected only once, it is considered that it covers the whole period of the car use.

4. By using a differentiated toll according to the cylinder capacity corresponding to the level of fuel consume, the European norm and the vehicle's age, one lays stress on the inhibitory measure trait which consequently triggers:

- ✓ A decrease in the number of old cars ---which are not so good and cause damages on the environment---due to the large amount of money paid on the toll;
- ✓ The renewal of the national car fleet, which has a positive impact on the environment, increase the safe traffic conditions and stimulates the production of the national car industry;

5. Collecting this toll by the local budgets triggers as well as the demands of decentralization, as it follows:

- ✓ Local communities may take measures in order to protect the environment such as: afforestation, creating green sites, collecting and depositing industrial wastes and junks, draining streams of water, thermal rehabilitation of houses, the adoption of norms for the use of unconventional energy;
- ✓ Subjectivity and discriminatory criteria are eliminated in the process of redistribution of money transfers to local communities;
- ✓ One lays stress on the principle of decentralization and financial autonomy of local administration.

6. The measure cannot be rejected by the E.U. as it is also used by other European countries, does not infringe to the Adherence Treaty and it is the only solution to stop the transfer of old cars in our country;

7. The measure stops the practice of car matriculation in Bulgaria where this tax is lower than ours were afterwards used in Romania by avoiding taxation, even if they used public roads, eliminated noxious fumes and endangered the traffic conditions in Romania;

8. The settlement eliminates the paradox of the situation created by the legal character of the papers used to collect the pollution tax, the institution which makes the respective operation of collecting and the final destination of the amount of money, that is the National Environment Fund.

## **5. CONCLUSIONS**

1. Taking into account the importance of national and international transport activities, Romania cannot escape the international policy of transport development and modernization;

2. The impact of this activity on the environment triggers coherent measures in this respect according to the national policy of long term development promoted by the government;

3. The financial and economic support of the measures taken in order to reduce negative effects of gas pollution on the environment as a direct consequence of cars and old Romanian car fleet, makes the executive administration to react and to produce an appropriate fiscal system;

4. As a result of E.U. member country, and thoroughly connected to global policy by concluding international environment treaties and conventions, Romania has to harmonize its national legislation in this respect with those of other Union member



states in order to avoid penalty and negative consequence.

5. A unitary application of the tax on pollution for all the national car park is compulsory. Also it has to be differentiated according to the degree of pollution. This measure is supposed to provide a budgetary equilibrium imposed to Romania by E.B. and I.M.F.

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## **ACCOUNTING TREATMENTS RELATED TO ACCOMMODATION AND COMPLEMENTARY SERVICES PROVIDED BY A HOTEL UNIT IN ROMANIA**

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**Abstract:** These The main goal of the economic activity in the hotel industry is the provision of services to meet customer needs in the best conditions and at a high level of service quality. The paper contains a series of case studies that highlight the accounting treatment of the main operations related to the accommodation activity in various situations: the price of breakfast included in room rates; collecting the mountain rescue tax and the resort tax from tourists staying in tourist areas, etc. Our approach aims to outline the complexity of the accommodation activity and of complementary services in a hotel.

**JEL classification:** M41, M21

**Key words:** accommodation; accounting treatment; complementary services; revenue; hotel

### **1. INTRODUCTION**

Through their content, accommodation services aim to create conditions and comfort for housing and resting travelers.

The National Institute of Statistics defines the concept of **tourist reception unit with tourist accommodation functions** as being any construction or establishment that provides permanent or seasonal accommodation and other specific services for tourists<sup>32</sup>. Accommodation is the main function of hotel units, regardless of size, type, comfort level and endowment level. It implies the existence of an area and of the necessary equipment to ensure rest and hygiene conditions for the traveler.

The content of this service is determined by the fact that the accommodation objective fulfils the role of temporary home for the tourist, therefore having a complex functionality.

Among the category of **complementary hotel services**, which round the accommodation function, can be mentioned: mail services (telephone, telex, telegraph, etc.), currency exchange services, storage of valuables, washing and ironing laundry, cleaning clothes and footwear, repair services, baggage handling, parking, providing rooms with extra inventory on demand.

Fiscally speaking, the following specifications should be made about accommodation activities:

Accommodation in the hotel sector or in sector with similar functions is subject to the **reduced VAT rate of 9%**;

<sup>32</sup> [http://www.insse.ro/cms/files/Anuar%20statistic/20/20%20Turism\\_ro.pdf](http://www.insse.ro/cms/files/Anuar%20statistic/20/20%20Turism_ro.pdf), November 2011.

Hotel units collect from tourists “**the mountain rescue tax**” and “**the hotel tax**” (“**resort tax**”) which are transferred to the local budget.

Taxpayers and state authorities should manifest a keen interest for housing and complementary services.

## **2. OBJECTIVES**

The purpose of this paper is to highlight the different accounting treatments for accommodation activities when breakfast is included in room rates, as well as when it isn't included. It also aims the accounting treatment of the resort and mountain rescue taxes, which are owed by tourists and collected by hotel units in order to be transferred to the local budget.

## **3. METHODOLOGY**

The methodological approach used in this paper was carried out by turning to different methods, techniques, procedures for investigating the accommodation activity and the complementary services provided by a hotel unit.

Specifically, in this paper, the research methodology may be summarized as follows: bibliographic documentation (specialized literature, legislation, articles indexed in various databases), direct documentation (we studied the data of practical reality, namely specific documents, such as: services and settlements statements, mountain rescue tax accounts, etc.), documentation obtained through contacts with experts (we conducted discussions and we requested information from a number of experts, such as: professors who specialized and conducted internships in this area, hotel managers, economists working in hotels in various resorts).

## **4. BASIC ACCOUNTING TREATMENTS RELATED TO ACCOMMODATION**

Specifically, we'll present a few examples of accounting reflection for accommodation activities, breakfast, as well as other complementary services provided by S.C. Hotel S.A.

Given the various ways to provide services, namely accommodation, services complementary to accommodation, catering (kitchen, serving meals, bar, butchery), complementary services, S.C. Hotel S.A. uses analytical accounts for a better management of resources.

Thus, for the accommodation activity, S.C. Hotel S.A. uses the following analytical accounts: 704.1 “Net turnover from services rendered” – 9%; 707.1 “Sales of goods purchased for resale” (breakfast) – 9%; 707.2 “Sales of goods purchased for resale” – 24%; 4427.1 “Output VAT” for revenue with a rate of 9%; 4427.2 “Output VAT” for revenue with a rate of 24%.

### **a) The accounting treatment of accommodation when the price of breakfast is included in room rates:**

On 02.04.N, S.C. Hotel S.A. issued invoice no. 65456 for hotel services provided to S.C. Client S.R.L. The invoice included: the accommodation fee in the amount of 1.200 lei (VAT included); breakfast is included in the accommodation fee and amounts to 120 lei (the price of one breakfast = 20 lei, VAT included – 9%). The goods purchased for resale as breakfast were bought at the price of 80 lei.

<b>4111</b> „Customers”	=	%	<u>1.200,00</u>
		<b>704.1</b> „Net turnover from services rendered”	990,83
		<b>707.1</b> „Sales of goods purchased for resale”	110,09 <sup>33</sup>
		<b>4427.1</b> „Output VAT 9%	99,08 <sup>34</sup>

The income from breakfast is reflected separately, because the discharge operation must also be conducted:

<b>607</b> „Expenses with goods for resale”	=	<b>371</b> „Goods purchased for resale”	80
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Theoretically speaking, the value of breakfast is subjected to a 24% VAT rate, but in practice, we apply a VAT rate of 9%.

**b) The accounting treatment of accommodation when the price of breakfast isn't included in room rates:**

In certain situations, the hotel provides accommodation services without including the price of breakfast in room rates. Thus, using the same example from above, the invoice issued for accommodation services will be registered in accounting as follows:

<b>4111</b> „Customers”	=	%	<u>1.200,00</u>
		<b>704.1</b> „Net turnover from services rendered”	1.100,92
		<b>4427.1</b> „Output VAT” 9%	99,08 <sup>35</sup>

**c) The accounting treatment of accommodation when customers (natural persons and/or legal persons) use services complementary to accommodation:**

On 12.04.N, S.C. Hotel S.A. issued an invoice for hotel services to Popescu Dan, the delegate of S.C. Client S.R.L., which includes the following:

The accommodation fee for one day in the amount of 300 lei;  
Minibar products worth of 19 lei;  
Telephone calls worth of 7,5 lei.

The accounting recording of the accommodation bill and of the minibar products:

<b>4111</b> „Customers”	=	%	<u>319,00</u>
		<b>704.1</b> „Net turnover from services rendered”	275,23
		<b>707.2</b> „Sales of goods purchased for resale”	15,33
		<b>4427.1</b> „Output VAT 9 %	24,77 <sup>36</sup>
		<b>4427.2</b> „Output VAT” 24%	3,67 <sup>37</sup>

<sup>33</sup> 120 – 9,91 = 110,09 lei

<sup>34</sup> 120 x 9/109 = 99,08 lei

<sup>35</sup> 1.200 x 9/109 = 99,08 lei

<sup>36</sup> 300 x 9/109 = 24,77 lei

<sup>37</sup> 19 x 24/124 = 3,67 lei

Cash receipts of the previous bill, as well as the encashment of the value of telephone calls made from the hotel room:

<b>5311</b> „Petty cash in lei”	=	%	<u>326,50</u>
		<b>4111</b> „Customers”	319,00
		<b>708</b> „Revenues from sundry activities”	6,05
		<b>4427.2</b> „Output VAT” 24 %	1,45 <sup>38</sup>

**d) The accounting treatment of accommodation when customers use complementary services, as well as additional services of the hotel:**

S.C. Hotel S.A. issued invoice no. 45252 to S.C. Client S.R.L. on 19.04.N which included:

- Accommodation fee in the total amount of 5.000 lei;
- Landry and cleaning services are included in the room rate;
- Conference room rental for 3 hours (1 h = 100 lei);
- Access to the leisure complex (the price is included in the room rate).

<b>4111</b> „Customers”	=	%	<u>5.300,00</u> <sup>39</sup>
		<b>704.1</b> „Net turnover from services rendered”	4.587,16 <sup>40</sup>
		<b>706</b> „Rental and royalty income”	241,94 <sup>41</sup>
		<b>4427.1</b> „Output VAT 9 %	412,84 <sup>42</sup>
		<b>4427.2</b> „Output VAT” 24%	58,06 <sup>43</sup>

**e) The accounting treatment of additional services used by people who are not accommodated at the hotel:**

On 22.04.N, a pool subscription is issued for Popescu Ion according to invoice no. 34756, based on the rates practiced by the hotel for access to the leisure complex (340 lei, VAT included):

<b>4111</b> „Customers”	=	%	<u>340,00</u>
		<b>708</b> „Revenues from sundry activities”	274,19
		<b>4427.2</b> „Output VAT” 24 %	65,81

**f) The accounting treatment of the mountain rescue and resort taxes:**

On, 24.12.N, the hotel collects from Lupsan Ion, a tourist staying at S.C. Hotel S.A., room 226, the mountain rescue tax in the amount of 6 lei and the resort tax in the amount of 7 lei. The required operations are: recording the encashment of the mountain

<sup>38</sup>  $7,5 \times 24/124 = 1,45$  lei

<sup>39</sup>  $5.000 + 300 = 5.300$  lei

<sup>40</sup>  $5.000 - 412,84 = 4.587,16$  lei

<sup>41</sup>  $300 - 58,06 = 241,94$  lei

<sup>42</sup>  $5.000 \times 9/109 = 412,84$  lei

<sup>43</sup>  $300 \times 24/124 = 58,06$  lei

rescue and resort taxes; transferring the mountain rescue and resort taxes to the local budget.

Recording in the day-book the amount of 13 lei, which represents the mountain rescue and resort taxes:

<b>5311</b> „Petty cash in lei”	=	<b>446</b> „Other taxes and similar liabilities”	<u>13</u>
		<b>446.1</b> „ Other taxes and similar liabilities”. Mountain rescue	6
		<b>446.2</b> „ Other taxes and similar liabilities”. Resort	7
<hr/>			
Paying the mountain rescue and resort taxes:			
<b>446</b> „ Other taxes and similar liabilities”	=	<b>5311</b> „Petty cash in lei”	<u>13</u>
<b>446.1</b> „ Other taxes and similar liabilities”. Mountain rescue			6
<b>446.2</b> „ Other taxes and similar liabilities”. Resort			7
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## 5. CONCLUSIONS

Tourism involves several activities, namely: transport, accommodation, catering and other complementary activities that require different accounting treatments. Besides the actual activity of travelling, tourism also includes the tourism industry represented by all entities and endowments meant to produce tourism services, such as: accommodation means and services, catering units and services, transport, tourist information offices, travel agencies, vehicles and sports equipment rental, etc.

In statistical terms, the activity of hotels and restaurants account for 1.6% of the Gross Domestic Product, which represents a small share compared to the tourism potential of Romania. This is why we believe this percentage should increase significantly through auditing measures taken by the government for the amounts cashed in by the entities that provide accommodation services and complementary services.

From an accounting perspective, the accommodation activity is reflected differently when breakfast is included in the room rate or when it isn't included. In case the breakfast is included in the accommodation fee, we suggest that hotel units comply with Law 571/2003 regarding the Fiscal Code, meaning to collect VAT for breakfast at a rate of 24% and not 9% as it is done in practice.

Also, complementary services are reflected differently in accounting, depending on the needs of tourists. Regarding the mountain rescue tax and the resort tax, they are reflected in accounting as an encashment, as well as a liability to the local budget.

For simplicity, we propose to the Romanian regulator a unitary VAT rate of 9% for all the services provided in the hotel industry, thus collecting more revenue to the state budget (and the provisions of the Fiscal Code are not violated by using the 9% rate instead of the 24% rate). Fiscal relief, particularly in the area of the value-added tax, lead only to positive medium and long-term effects, because part of the gray economy

will become legal and the consumption of accommodation and complementary services will be stimulated.

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## **INTERVALUE – INITIATIVE FOR VALORIZATION OF RDI RESULTS**

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**Abstract:** Technology transfer is an important instrument for promoting the economic growth and new jobs creation. The efforts to improve technology transfer can only succeed through an approach that combines public-private partnership at a national level with EU-level actions. The structural funds projects such as Inter-regional cooperation for valorization of research results (INTERVALUE) can support the inter-regional collaboration regarding valorization of academic research.

**JEL classification:** G20, O32

**Key words:** technology transfer, RDI results, financing, valorization, INTERVALUE

### **INTRODUCTION**

The research – development and innovation (RDI) activity is a strategic component and it can become decisive for the economic development and social progress in any society. Closely related to this, the technology transfer refers to the process of trading research, development and innovation results of universities or other research institutes. Technology transfer occurs in many settings: within organizations, between organizations and across international boundaries (Spann and Adams, 1997).

In recent years technology transfer has received a lot of attention and it is considered an important vehicle to promote economic growth and job creation. Europe has a strong science and technology base but there is a failure to exploit this potential. The inadequate provision of seed capital is a major contributing factor in this respect (EC, 2006).

Besides the lack of financing resources, there are numerous structural, economic and legal barriers that hinder spin-out initiatives. On the one side, academic institutions often lack management skills linked to business creation; on the other side, they also need to cope with the complex issues of patents and intellectual property rights (IPR).

Therefore, numerous actions and strategies should be adopted at national and international level in order to support the RDI initiatives, IPR and also the financing instruments for this strategic sector.

In that sense, the INTERVALUE project (Inter-regional cooperation for valorization of research results) try to design an organizational framework and a methodology toolkit that regards valorization of research performed in the region's universities and research centers.

### **INFLUENCE FACTORS AND STRATEGIES FOR TECHNOLOGY TRANSFER**

Technology transfer is generally the process of trading research results of universities or other research institutes. More and more, the technology transfer is



considered an important tool to stimulate the economic development.

Successful technology transfer depends on a close academic-business relationship. However, at the same time, the roles of these different partners should not be confused. Ideally, universities should not be directly involved in spin-out activities beyond the R&D phase and once a product is licensed.

From a university's perspective, it is also important not to jeopardize academic principles and autonomy in the pursuit of technology transfer. Furthermore, business should be more closely involved in the decision over which R&D projects are worth patenting.

There is also a need to bridge the funding gap between the proof of concept stage in a project's development and the establishment of a company. This funding gap partly exists because of the separation between academia and business.

In the early stages of spin-out creation the access to finance is crucial. In fact, a key factor in explaining difficulties of academic spin-out initiatives in Europe is the lack of proper funding resources, especially the seed capital (finance provided for research, assess and develop an initial concept before a business has reached the start-up phase). The lack of seed capital can be attributed to the high risk associated with early stage financing coupled with relatively low rates of return.

Therefore, the involvement of potential private sector investors at an early stage in the process of commercializing an R&D project is likely to contribute to its success by bringing in business expertise for a spin-offs development.

Business angels are an important potential source of seed capital funding that can help to fill the early stage financing gap. In that sense, there is a need to increase the pool of business angel finance in Europe which is less developed than in the US. In particular, consideration should be given to introducing tax incentives to encourage business angel investment.

There are many factors that determine which strategy is the most appropriate for promoting the technology transfer. The decision on whether to pursue a spin-out or licensing route depends partly on the legal framework within which universities operate.

In general, the intellectual property was owned by the academic responsible for the R&D, and the only way a university could commercialize a project was through a spin-out company. The ending of this system means that universities now have a greater range of options with regard to commercialization methods.

In fact, both licensing and spin-out options need to be available as a way of promoting technology transfer. Although universities may consider the creation of a spin-out preferable, in many circumstances, the licensing route may be more appropriate.

To some extent, the choice also depends on the type of technology a project is based on. The nature of the local economy is also an important consideration – in some regions and countries, there are not enough medium-sized or larger companies to make licensing a feasible option.

Promoting an entrepreneurial culture amongst researchers is necessary to stimulate an interest in seeking to commercialize R&D. One way of helping to achieve this is to encourage academics to adopt a more commercial approach to their activities by providing potentially large financial incentives to all involved.

**INTERVALUE – PREEMIES FOR VALORIZATION THE RDI RESULTS**

Under the framework of the South East Europe Transnational Cooperation Program, the project INTERVALUE, coordinated by Aristotle University of Thessaloniki, aims to design a framework for valorization of research results from the academic and research institutions in the South East Europe region.

The INTERVALUE objectives are based on the fact that SEE region is lagging behind in terms of innovation even though it includes many active research centers and university labs, producing results that cannot find their way to the market.

At present the support actions for strengthening the interaction between enterprises and R&D centers are limited by:

- low-level accessibility of R&D results by enterprises;
- weak knowledge transfer mechanisms;
- communication barriers between academia and industry;
- failure to meet a critical mass of R&D results due to isolation and lack of cooperation.

Fundamental concept of INTERVALUE is collaborative innovation and R&D valorization. The model of collaborative innovation relies on networks composed of four types of actors:

- inventors, conducting research and designing new products and services;
- transformers, converting inputs from inventors into new products;
- financiers, funding inventors that seek to own IPR for inventions;
- brokers, opening and creating new markets.

The project INTERVALUE uses the concepts of trans-national cooperation and networking in order to overcome the regions' innovation deficit by valorizing the existing academic potential. It also aims to improve the capacity of researchers into promoting their R&D effort so as to better stimulate research cooperation and/or funding opportunities.

In that sense, the project created a R&D results repository with results from more than 50 academic institutions from 7 countries covering a major part of the SEE Area. Research teams and technology providers from universities and research and technological institutions submit research outcomes that can lead to new products, production processes and services.

Also, there was developed a mechanism for preparation the valorization plans which analyze aspects of technical and scientific feasibility as well as the market and funding potential for R&D results.

As information support was created a learning web space which includes online learning roadmaps regarding the process of IPR Management in 7 languages and the stages for a New Product Development process.

INTERVALUE aims to bridge the gap between R&D creators, producers, financiers and marketers by creating a trans-national mechanism that facilitates the valorization of research results. This can be fulfilled through brokerage events which are major communication activities aimed to create a common platform for co-operation between the local factors (incubators, venture capital funds, business angels, academic research institutes, etc.) providing technologies and organizations interested in valorization the R&D results.

Through promotion of valorization plans in brokerage events and support in achievement of valorization agreements for selected R&D results, the project can contribute to the valorization of the valuable R&D results. Moreover, trans-nationality

is emphasized since the various stakeholders of R&D valorization (researchers, financiers, producers and marketers) from different countries can interact and transfer their experience.

The project partners support valorization agreements for R&D results, already collected and assessed. Based on this assessment an Exploitation Plan will be developed for the most promising of these R&D results. Then valorization of R&D will start with the creation of exploitation networks, drafting of IPR agreements defining the terms of exploitation, and further improvement of R&D results to facilitate their implementation.

## **CONCLUSIONS**

The EU and national authorities play a key role in helping to develop appropriate financial instruments to support technology transfer. Therefore, at EU level, there should be a continued emphasis on developing new financial instruments to promote technology transfer: new seed capital funds, co-investment schemes, business angels, venture capital, etc.

At the EU level, should be also supported the development of European networks that bring together those involved in technology transfer: business angels, venture capitals, and other support organizations such as professional advisers, incubators and consulting organizations.

The possibility to support the valorization of the R&D results can be done through accession of structural funds. One example is the project INTERVALUE (Inter-regional Cooperation for Valorization of Research Results), under the programme South East Europe Transnational Cooperation. The main objective of the project is to set up a mechanism covering most of the SEE area, which allows dissemination of key technologies and establish supply chains between the R&D institutions and the business sector.

The project adopts a bottom-up approach that allows interesting research to reach its market potential through a process of selection and promotion. Also, the INTERVALUE project can improve the potential of inter-regional collaboration regarding valorization of academic research.

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## SEQUENCE OF SALES RECORDS WORKFLOW

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**Abstract:** The paper is aiming at presenting, in moral terms, a logical and chronological range of the transactions developed within the sales area of a company. On this basis, the paper underlines the mechanisms specific to a potential subsystem of internal accounting control which may be integrated within the organization so that the management and the ownership could achieve the guaranty for providing the application of good practices in business development. It describes potential ways of auditing which may be used for detecting possible irregularities.

**JEL classification:** M41, M42.

**Key words:** control, accountancy, records, sales, rigor, audit.

### 1. INTRODUCTION

If, on international level, there are major concerns for making available useful information for expert accountants, in order to support them in providing high quality services, generally, meant for the public, employers and customers, why such an approach would not be useful in our country?

Considering this point of view, certainly, there are many things that may be unfolded, therefore, we submit to the study a simple, but constructive issue – minimal specification of internal accounting control applied on revenues deriving from sales, by means of different proprieties, documents and connections. Due to the fact that the subject is influenced by the national and organizational culture, its development is the main concern, and our comments and opinions are governed by the national and regional distinctive characteristics.

Our concerns indicate a serious preoccupation for the aspects of the profession which determine a major impact on the public and imply faith in accountants' and auditors' knowledge and reasoning in public practice.

### 2. GENERAL PARAMETERS SPECIFIC TO THE SUBSYSTEM

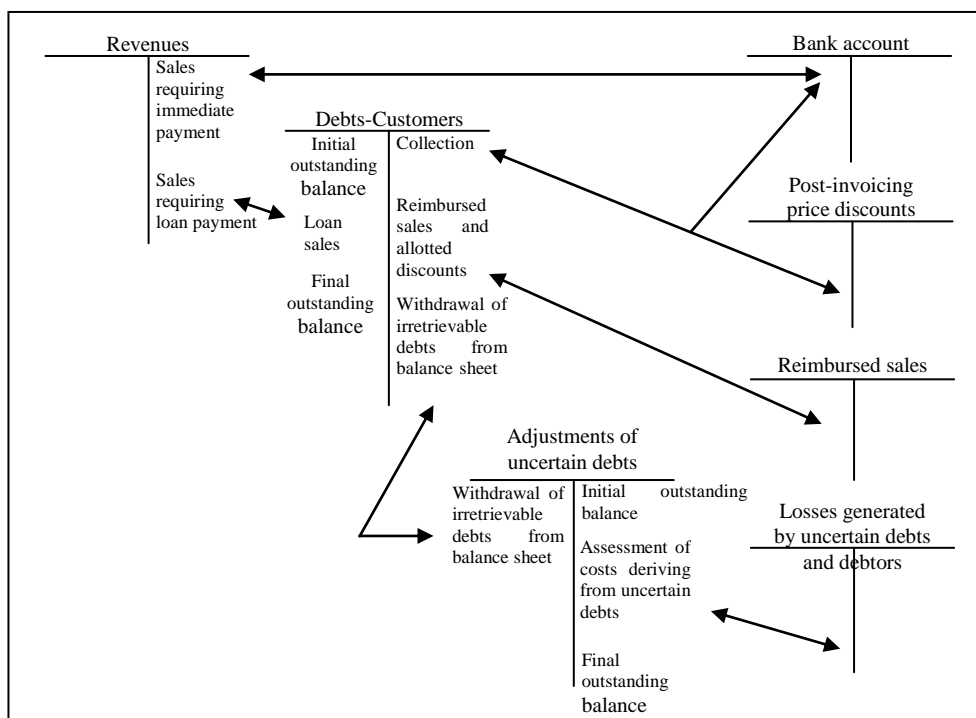
For a precise positioning, a good knowledge of all kinds of operations, accounts and information included by any of the parts of the accounting and financial statement system, becomes essential. Thus, through this paragraph, we intend to represent the main part of sales-collection subsystem, within an entity, which is assigned to accounting records. Taking into account these aspects, we consider that it is essential for the reader to understand worksheets, accountancy records and typical correlations which are integrated within this micro-universe approached. For a first general approach, we should mention that the nature and designation of accounts may vary, of

course, according to the economic branch and to other specific organizational aspects, but, in order to create a reference background, we will orient our analysis towards a loan wholesale trading company for a better insight.

The figure below illustrates the way in which the accountancy information circulates through different accounts integrated in the sales-collection cycle. This approach reveals the fact that, mainly, there five **business transaction categories** included in the sales-collection subsystem, namely:

- sales requiring immediate and loan payment;
- collection;
- allotted discounts and reimbursed sales;
- alteration of customers' value and assessment of potential losses determined by uncertain receipts;
- withdrawal of irretrievable debts from accountancy records.

The figure also suggests that any business transaction and figure is eventually retrieved in one of the following accounts: concerned – in “debts-customers”, ideal – in “bank account”, devaluated – in “adjustments of uncertain debts” and avoidable – in “losses from debts”. Probably, it is obvious that the positions indicating revenues from sales and reimbursed sales are rather considered cumulatively by the experts, but for bringing out synoptically certain aspects, we recommend the disjunction. From several points of view, we may identify arguments meant to sustain the dissociation etc.



**Figure 1. Review of accounts of sales-collection subsystem**

The subsystem sales-collection consists of decisions and processes necessary for the transfer of property law over goods, works and services towards customers, after they become available for sale. It begins with a request set forth by a buyer and ends with the transformation of the sold asset into a current trading debt and, finally, into financial resources. If there is a durable relation between the two business partners, or

for a high degree of rigor, the sale-purchase agreement is used to establish the parameters of the cooperation.

### 3. ACTIVITIES, CORRELATIONS AND DEBATES

Generally, within an entity highly structured, we may count nine activities, as they are illustrated in the third column of Table 1. These activities are developed during the registration of the five categories of business transactions belonging to the selling and collecting process. All accountancy worksheets and records required are presented in the forth column of the table.

*i.* Reception and processing of customers' orders. The point of initiating a transaction is given by the customer's request for goods. Considering the legal outlook, this situation represents a bid of purchasing certain goods under specified circumstances. The reception of such a signal from the part of a customer, generally, leads to the acceptance (refusal) of the request and to the arrangement of everything is needed to solve the issue, as long as it presents interest. The information may be received on the telephone, through the post, in printed form previously sent to potential customers and to customers already existing in the portfolio, by the company trading representatives or through electronic positioning of an impulse determined by the customer via the Internet, or through other connections between the supplier and the buyer.

**Table 1. Business transactions, accounts, activities, worksheets and records associated to sales and collection**

<b>Business transaction categories</b>	<b>Accounts</b>	<b>Activities</b>	<b>Accountancy worksheets and records</b>
1. Sales	Revenues from sales Debts- Customers	I. Reception and processing of customers' orders II. Granting trade loan III. Goods delivery IV. Customers' invoicing and sales recording	Sale-purchase contract Customer's order Forwarding agent's notice Delivery bill Advice of delivery, covering letter Invoice of sale, sales log Synthetic statement of sales Systematic file of debts Customer trial balance Monthly review statements
2. Collection	Treasury Debts- customers	V. Collection processing and recording	Payment notification, receipt bill Preliminary list of receipts Receipts log
3. Reimbursed sales and allotted allowances	Discounts Reimbursed sales Debts- customers	VI. Approval and reasoning upon allotted discounts VII. Processing and recording reimbursed goods	Invoice, accounting credit note Log of reimbursed sales and allotted discounts Reception, correspondence note, stock motion worksheets etc.
4. Debt monitoring and remediation of uncertain debts	Expenses generated by uncertain debts Adjustments of uncertain debts	VIII. Assessment of losses from uncertain debts, and maybe, their resuming or revision	Reports Notifications, decisions and other business letters Verifications lists and records of proceedings Inventory book

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<b>Business transaction categories</b>	<b>Accounts</b>	<b>Activities</b>	<b>Accountancy worksheets and records</b>
5. Withdrawal of irretrievable debts from the balance sheet	Debts- customers Adjustments of uncertain debts Losses from debts	IX. Adjustment cancellation and withdrawal from quarantine of irretrievable debts	Injunction Certification form of irretrievable debts General log

ii. Granting trade loan. Preceding goods delivery, it is important that an authorized person approves crediting the customer, when dealing with sales registering future payment terms. It often happens that inappropriate practices in approving loans may generate an excess of uncertain debts or may lead to the occurrence of debts which, eventually, may become irretrievable. One single mention of granting the loan on the order form may, often, serve as an approval of goods delivery. There are different units involved in solving these aspects by means of the sale order, the delivery note or the forwarding agent's notice signed for this purpose by the corresponding management. Inside certain companies, the computers automatically confirm credit sales, their confirmation being restricted by crediting limits previously established.

The delivery note is an internal worksheet which communicates the description, quantity and other details specific to goods and services ordered by the customer. This worksheet is frequently used for indicating credit approval and authorizing goods delivery.

iii. Goods forwarding is extremely important as it represents the first moment when the entity assets are conceded. Most of the companies recognize the moment of sale when forwarding goods. According to the national legislation, invoicing is undertaken within a reasonable interval of time, post-forwarding. When forwarding goods, a consignment and/or forwarding note, which may be automatically issued by the computer, considering the information provided in the received note. The delivery note made out in several copies is essential for an appropriate invoicing of deliveries to the customers. The entities applying the method of the constant inventory also update stock records taking into account the information concerning the delivered goods. The original is handed over to the customer, and one or several copies are kept inside the company. Sometimes, the asset motion worksheet between locations is represented by the covering letter or the bill of lading, which stands for a written agreement between the transporter and the seller and registers the delivery, as well as the reception of goods. For deliveries abroad, the reference worksheet remains the international covering letter confirmed by the real consignee when receiving the goods. By registering a code, the computer operators inform the system about forwarding goods which are described according to the delivery note and by activating a certain symbol of identification, the growth of the amount to be cashed from the customer involved is tied up.

The delivery note is often transmitted in electronic format and automatically generates the corresponding sale invoice, as well as its registration in the sales log. In addition, stock items, generally, are notched with bar codes, which may be scanned when leaving the storehouses. Therefore, information are introduced, checked out and/or transmitted to all related files, including the constant record of stocks.

*iv.* Invoicing the goods for customers and revenue registration. Due to the fact that the invoice represents the instrument by which the customer is informed about the sum owing for the delivered goods, it is recommended that it should be correctly elaborated and in due time. The most important aspects of invoicing consist in making sure that all the completed deliveries have been invoiced, that no delivery has been invoiced twice and that each delivery has been invoiced to the adequate nominal value. Invoicing the right amount depends on the calculation of the customer's debt considering the quantities of delivered goods, applying certified prices according to the field policy. The right price includes legal specifications concerning transport expenditure and payment, as well as insurances against all risks etc.

In most of the cases, invoicing the customer implies the elaboration of the worksheet in several copies, simultaneously with updating the file including sale transactions, the systemic file storing trading debts and the synthetic account card in order to check out sales and debts-customers. The information obtained is used to generate the sales log and, together with collection and different credit transactions, allows the elaboration of trade debt trial balance.

Sale invoice includes goods description and quantities, their price, transport costs, insurance against risks which may manifest during the transfer, payment conditions and other relevant data. Sometimes these elements are not explicitly revealed in the invoice, particularly, when dealing with a contract and/or an order, but the effect of the elements mentioned above is omnipresent, influencing the prices and the total amount. The sale invoice represents the instrument indicating the value of the sale transaction and the deadline for the payment. The original is handed over to the customer and one or two copies are kept by the emitter. Usually, the sale invoice is automatically made out by the computer after introducing in the system all necessary data determining the customer's identification, the quantity and the specification of delivered goods, as well as the sale terms etc. considering these details, the computer calculates the total amount and transmits the information needed for correlating and/or updating the files.

The sales log includes all business transactions undertaken for this purpose. As a rule, it indicates gross sales in terms of different categories, such as the production lines, the due sums charged in the customer's account and different due and credit sums. The sales log may also include transactions related to reimbursed goods and allotted discounts. Dealing with a computerized environment, the log is automatically updated while developing forwarding sale transactions. Sometimes, by including additional information, or by simply changing the presentation form, we may achieve the log concerning the value added tax collected by the entity during the reference period.

The synthetic case of sales is provided according to a worksheet generated by the computer, which resumes all the sale transactions developed during a certain period of time. As a rule, this situation includes information classified on key-components, such as the seller, the product and the territory, representing data bases for initiating financial, management and marketing analyses, in a word, economic analyses.

The systemic file of debts is used for registering sale transactions in analytical accounts, as well as turnovers and customer's outstanding balance. All these records are updated considering the data contained by files, which indicate sales, reimbursed sales, allotted discounts and collection performed. The total of individual outstanding balances on (analytical) accounts registered by the systemic file is equivalent to the



total outstanding balance given by the synthetic customer's account. As an additional control measure, we may implement this correlation in an automatic mechanism meant to assess the account turnovers. A printed version of the debt systemic file reveals, for each business partner, the initial outstanding balance, sale transactions – as a total amount, as well as on components, reimbursed sales and allotted discounts, the collection and the final outstanding balance. Sometimes, according to the organizational culture, it is designated as an “analytical register of customers” or a “systemic register of trade debts”.

The customer trial balance may be represented as a list of sums due by each customer at a given moment of time. This list is elaborated directly from the systemic file. Mostly, this balance indicates a chronological range and reveals: the age of each debt at the date of elaborating the synthesis statement; how long since its maturity; whether its deadline for payment has been exceeded etc. As a synthesis worksheet, it may also include other elements, such as: initial outstanding balances, turnovers, in term or in quarantine, the way how this kind of issue may be optimized, updated costs of granted loans etc.

The monthly review statement represents a worksheet sent to each customer, indicating the initial outstanding balance for his debt, the total amount and date for each sale transaction, cashed transactions, credit accountancy notes elaborated and the final outstanding balance to be cashed. Pointedly, it determines a part afferent to the customer's case issued by the systemic file and may be inserted in the invoice structure.

As we may observe, the four activities mentioned above are essential for transferring goods property to the business partner, for their appropriate invoicing and for reflecting adequate information in different accountancy records. The result of these activities defines the sale transactions. The following five activities concern: collection and registration of financial means, reimbursed sales processing, designation of allotted discounts, adjustment of uncertain debts and withdrawal of irretrievable debts from the accountancy balance sheet.

v. the processing and registration of money collection include the reception, deposit and registration of financial resources. The most important aspect of collection management is that all payment instruments and cash payments received should enter the bank<sup>44</sup> in due time and in total amount and should be properly recorded in the file indicating collection transactions. This aspect is used for drafting a collection log and for updating all files dealing with customers included within the integrated system, as well as the synthetic records. Payment notices play an important role in this case.

The payment notice is a worksheet which may accompany the sale invoice rendered to the customer and, as a general rule it may be returned to the seller together with the cash payment or the payment by check. It is used to designate the customer's identity, the number of the sale invoice and the invoice amount when receiving the equivalent value for the delivered goods. If the debtor (buyer) does not attach the payment notice when paying the invoice or when performing cash payment, then the person opening the mail, respectively, another independent person should draft such a payment notice when receiving settlement means or before cash collection. The payment notice and the cash collection receipt or order are drafted according to the own informational system and used for improving the control over the management of assets-cash flows: cash, checks, credit note, bills of exchange etc.

<sup>44</sup> As long as there is no way of acquiring another efficient destination, following a shorter trajectory.

If needed, the preliminary list of payments is drafted in the moment of receiving cash payments or checks, by an individual who, normally, is free from responsibilities deriving from the accountancy recording of sales, debts or financial means, therefore, this person has no access for altering and/or processing the records. This list is used for checking out whether the financial means received by mail or in cash have been recorded and deposited in due time and at their real value.

Money collection log is used for registering the reception of financial means in the account of settled invoices, of sale transactions requiring immediate payment and of all the other payments.

Regardless of its designation, the worksheet represents a basis for the internal verification exhaustively indicating money collection level. It provides a precise situation of received payments, credit sums recorded in the debt accounts at the level of the gross value of the initial sale transaction, of different price discounts allotted in the account or in cash, and of other debits and credits. The daily records in the collection log are justified by payment notices (stand-off situation). The log may be drafted for any period of time, starting from the collection transactions included in the computer files.

*vi.* Approval and reasoning upon allotted discounts revealed by the accountancy records. When a customer complains about the delivered goods or when there appear other problems and/or opportunities, the seller may grant different compensations. It is essential that all economic decreases applied to debts meant to come out in favor of the debtors, either trade or financial compensations, to be rightfully and promptly recorded in the debtors' systemic file, as well as in all the accounts influencing the result.

*vii.* Processing and registration of reimbursed goods. If, on many accounts, much more profound, unpredictable and undesired, the customer is highly dissatisfied with the delivered goods, and the compensatory policy applied by the supplier is not suitable, then the sold goods will be reimbursed. For this case the undertaken records and correspondence determine a complex and demanding procedure, but we do not intend to develop this situation. If this kind of situation cannot be avoided, eventually, the essential aspect is that the seller regains the property of goods. Regularly, the company elaborates an entry-taking delivery note for the reimbursed goods, simultaneously with the transfer of goods to the warehouses. In other companies this procedure for reimbursed goods and allotted discounts consists in the elaboration of credit accountancy notes meant to determine a better accountancy control over these transactions. We consider that it represents an internal worksheet generating a serious cultural impact. It indicates a discount of the sum due by the customer, determined by means of reimbursing goods or granting price allowances approved by the hierarchically authorized staff. When dealing with trade allowances, it is important to observe if this unilateral document is also sufficient for discounting and/or transferring values or materials between business partners. Considering the fact that we are confronting with processes which affect the resources and the sources belonging to the entities involved, generating expenses and/or revenues<sup>45</sup>, results, this worksheet assumes the general format of a discount invoice which justifies a diminution of the customers' account, and not its enhancement. According to the national legal provisions, the issuance of an invoice rather by the initial supplier than by the buyer becomes compulsory.

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<sup>45</sup> Generally belonging to the area of application of the value added tax.

The log recording reimbursed sales and allotted discounts represents a worksheet used for following all the transactions concerned with the reimbursement of sold goods and the allotment of compensations favorable to the customers. It fulfills the same functions as the sales log. Numerous companies register these transactions in the sales log rather than in a separate log.

viii. Value adjustments applied to uncertain debts. The level of debts resulting from sales with weak chances for payments needs to be reduced to a sufficient quantum, in order to compensate the sales of the current financial exercise, whose value is improbable to be collected in the near future, according to the company's assessments. The value of depreciation constitutes a loss and not a remuneration of customers' efforts, resulting from the regulation processed at the end of the financial exercise consisting in value adjustments of uncertain debts. The difference, calculated for the debtors introduced in the quarantine, is given by the comparison between the nominal value, which is more important, and the value potentially to be collected, which is more reduced.

ix. Withdrawal of irretrievable debts from the balance sheet. Regardless of the rigor proved by the credit, action and defraying departments, it is not surprising the fact that customers avoid paying the invoices. When the management reaches the conclusion that a certain sum cannot be recovered, it should be withdrawn from the balance sheet. This situation usually occurs when a customer goes bankrupt or when that respective debt is rendered, conceded to a debt recovery company. The precise accountancy recording of sums declared as irretrievable implies an adjustment transaction substantially investigated, analyzed and approved.

To this respect, the certification form of irretrievable debts may be implemented. This form is used within the entity for withdrawing debts considered as being irretrievable from the balance sheets. This form provides the processing in a special account designated as "Debtors removed from the assets and still monitored" the amount values with extremely reduced chances to be recovered. It happens that certain sums, parts of these amount values, after reaching this stage, to be recovered, but, they are completely removed from the accountancy when all possibilities of collecting them become irrevocably null after a certain interval of time.

#### **4. INSTEAD OF CONCLUSIONS**

As a conclusion, we may explain why we have referred to sales-collection and not simply to sales. Our explanation is very simple, besides the fact that the collection stage is far from revealing a completely developed form; we assume that the image proposed for the reader is almost complete. The sales defraying process itself may generate other revenues and costs, additional benefits or losses etc. We consider that the environment we have presented was able to induce a comprehensive overview, as well as the desired focus.

The concerned reader or the young auditor may easily observe in our representation: task separation, power centers inside an organization and their functioning, barriers placed to block the risk of failing and other security elements of the control accounting subsystem of sales. All these measures represent, in our opinion, points of interest for anyone willing to efficiently diagnose such a management.

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## **FINANCIAL ACCOUNTING AND BUSINESS MANAGEMENT SYSTEM IN PROCESS OF CONVERGE UNIQUE EUROPEAN CURRENCY**

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**Abstract:** Most national changeover plans foresee a period during which the mandatory dual display of prices (both in national currency and in euro), it is a requirement of national legislation. Dual display is an essential method in order to familiarize the staff with clients and the value of goods in euro.

**JEL classification:** G32, M41

**Key words:** financial accounting, convert prices, relations with suppliers, national changeover

### **1. INTRODUCTION**

The dual display can be used on labels on shelves with price tags on products, price lists or the total shown on receipts. To avoid confusion and possible additional costs is extremely important that the dual display of prices could begin only after the official conversion rate was irrevocably fixed. The conversion rate is set by the EU Council once a State has fulfilled the convergence criteria.

### **2. FINANCIAL ACCOUNTING AND BUSINESS MANAGEMENT SYSTEM**

There may be national standards or recommendations on data conversion on previous transactions, financial reporting purposes (such as items forming the debtor and creditor balances, historical acquisition costs of individual items of inventory, et.).

Budget for the year in which the euro will be introduced, enterprises would make all calculations directly in euro and have taken decision on the timing and the approach of historical budget converting data in euro.

National laws shall determine both the starting date reporting or reporting period and documentation for which tax returns, and financial statements must be made in Euros (for example, income tax documents, VAT, payroll taxes, social security contributions).

Year-end financial reports that will prepare using all the national currency, the explanatory notes section will be conversions using the fixed conversion rate, so that the information is known in both currencies, the national and the European single currency and the information can become comparable financial data for users who need them. At the end of the conversion will be published financial statements in the national currency this year after the financial statements will be published only using European single currency. If subsequent to the preparation and approval of financial statements in national currency it is found that there are mistakes, they will be corrected using the single currency euro at the time of discovery. From the date of euro introduction, the

general rule requires that all balance sheet items to be converted using the conversion rate. So after all this time accounting items must be recorded and managed in a single currency.

There are special rules used in the processing undergone conversion by: equity, shares, derivatives, payments in advance and positions expressed in a foreign currency other than euro. Some rules for the conversion of these items were included in the amended Act Law and complete accounting.

The latter will establish procedures for assets and conversion debt so as to prevent undue differences raised from conversion procedures. Rounding capital and private equity could be imposed by national legislation or advisable for reasons of transparency, applying the conversion rate and conversion rules in the case of capital society and to the capital denominated in national currency leads in euro could be necessary to increase (or decrease) company to obtain capital amounts rounded. Conversion of shares with nominal value in shares without nominal value, if national law provides this possibility. National legislation would impose a general extraordinary meeting of the shareholders for any decision on the increase (or decrease) of the capital in this aspect would be necessary to review the statute and other regulations society. Companies established in the previous year of the euro should express its capital directly into euro to avoid conversion, but this must be provided by romanian legislation. Shareholders should be informed as soon as possible of any holdings change due to the introduction of the euro (for example, on the number shares, their nominal value, paid capital and profit sharing).

## **2.1. PROCESS OF CONVERT PRICES**

We speak about the implementation of pricing strategies conversion. This strategy was developed following a market analysis reflecting the impact of the changeover to the euro on the participants and relationships within the market analysis. In setting prices in euro would be taken into account the following aspects: the cost structure, sensitivity to prices, consumer's desire compare prices, a high degree of transparency of conversion process. Customers will have an important psychological impact that will cause them to be extremely sensitive to changes in products. They will supervise very carefully how the conversion is performed by the companies. To avoid misunderstandings between customers and companies is recommended to companies conduct to environmental training actions to consumers. Such action may be providing lists, catalogs and brochures with prices in euro, to be and last conversion rule applied to examples. The aim should be to ensure that the impact of conversion on prices is neutral overall. In principle, the changeover should not affect the price or value.

Authorities in the European Union believe that three factors will help avoid rising prices:

- 1) strict compliance with the conversion and rounding rules
- 2) competition between retailers and
- 3) consumer vigilance. Euro zone governments also ensured the public that prices and tariffs conversion operation in the public sector will be neutral or in favor the consumers, merchants and several federations that have made commitments in terms of price stability during this period of transition to new european currency. Therefore, it is anticipated influence on no prices in our country.

## **2.2. RELATIONS WITH SUPPLIERS**

The companies must manage the impact on relationships with the providers in this regard would be sought from suppliers and price lists single currency bills. Introduction of the euro may also represent an opportunity for enterprises to get more favorable supply conditions. For example, the decisive factor in choosing a higher transparency of price and exchange rate risks associated elimination instead, generated by the euro offers the possibility of finding new alternative and less expensive. Contracts are also affected by changes caused by the changeover. The principle that they will work is that of continuity, as existing contracts will remain valid (already completed) that owning their content amounts expressed in national currency. The validity of these contracts will not be modified, but the monetary values will be contracted converted using the conversion ratios application formally. In the process of euro conversion all legal status documentation of a company must be checked for conversion compliance requirements. In terms of new contracts with recurring payments and provisions valid after the changeover date, values should be set directly in euro to avoid uneven prices determined by subsequent conversions. If contracts are signed with partners outside the euro area could be useful to introduce a euro clause stating that if will continue the contract after the official date of introduction of the euro, it's monetary unit remains mandatory.

## **3. CONCLUSIONS**

With the introduction of the euro, customers in the retail sector may have a sense of insecurity and, in some cases, they may feel concerned about possible negative consequences of this change such as rising prices. Measures designed to increase customer confidence, based on concrete information and counter negative attitudes can facilitate acceptance of the euro. For instance, customers can provide information about the rate of conversion by examples (e.g., customers can receive leaflets tables commodity prices).

This is a simple way to show that prices have been converted correctly uncertainty audit reduces. Also, business customers must be informed properly. They need to know when the company plans to start using the euro (for example, orders, invoices, etc.). Society needs to verify if this plan could create problems for major clients.

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## **PRAGMATIC APPROACH OF THE MANAGEMENT IN THE NATIONAL SECURITY SYSTEM**

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**Abstract:** The Romanian public policy have in the past 20 years, important changes, confined to the transition to a democratic society where the rule of law, citizen rights and freedoms are guaranteed. Moreover, international processes, such as financial and political institutionalization of the European Union, the movement favored globalization, unprecedented human, financial flows, trade and information, causing, in addition to the huge benefits and the emergence and development of numerous threats conventional or asymmetric at the national and international legal order and to peace, stability and universal human rights.

**JEL classification:** D73, H56, J50, J53, J88, M12, M54, Z13

**Key words:** critical; change management; public administration; public organization; national security system

### **1. TRANSFORMATIONS AND REQUIREMENTS IMPOSED ON ROMANIA AS MEMBER OF NATO AND EU**

Once Romania joins the EU on January 1, 2007, Romania has entered a new stage, which involves the preparation and adoption of necessary measures to eliminate internal border controls, to join the Schengen Area. Abolition of checks at internal borders of the European Union is the most visible and important effect of European integration. Promoting effective measures of social responsibility, implementation of Business Principles, are effective measures to prevent and combat corruption. In Romania, like in all modern democracies, national security management institutions are at the same time, a necessity and a priority. The activity manager must be based on a careful and thorough analysis of both the objectives and the needs of the institution. Integration into NATO and the EU impose special requirements in the management of national security institutions, insisting on increasing efficiency and quality management processes.

To act, the manager must be familiar problem situation involving change. Classical Administration, governed by a set of specific regulations is not adequate for this purpose. The operation of modern public administration, flexible and efficient is a prerequisite for the structural transformation of Romanian society to achieve a profound reform in all spheres of socio-economic growth of the citizen's role in decision-making. In addition, to achieve these changes had to be placed on the details required by the EU integration process, which involves achieving - the deadlines - the typical operating standards Member States. Thus, when the information explosion, the continuing education and efforts to continuously update the general and specialized knowledge, management of national security institutions and improving their overall management process that must be a key area of their business.



Creation of the Schengen area, a unique historical achievement, solidarity cannot function without the 25 Member States in the management of external borders, while assuming responsibility for the fulfillment of a set of common measures of these states. Time taken by the Romanian authorities to achieve this goal is March 2011. As organizational measures, the Romanian Government Schengen Action Plan was developed in order to transpose and implement Community provisions, supported by the National Strategy for Integrated Border State for 2010-2012.

Civil society is the heterogeneous entity operating in unoccupied space between the state (with all its political and administrative institutions) and market (which is the essential element of profit). In this area, disinterested political (civil society, by definition, aims to capture political power at the local or central) and financial, would be impossible to discern the values and principles that guide a society. This is the area of the middle, forming indirectly controlling at least parts and (moral and value) the proper functioning of socio-political institutions. In countries with long democratic tradition, civil society is an element of balance and civic education of citizens. Therefore, joining the Schengen area requires successful completion of the evaluation process of Romania by experts delegated by Member States, the EU Council and the European Commission, by meeting certain technical benchmarks, according to a predetermined schedule. In order to support Romania and Bulgaria in the period between the date of accession and the end of 2009, the Schengen Facility financial instrument was created to finance actions at the new frontiers of the EU to implement the Schengen laws on border control (in accordance with Art . 32, Treaty of Accession).

Implementing an effective management in the areas of defense policy, integrated defense planning, legislative work, legal, human resources, financial accounting, internal audit, religious assistance, health care, scientific research, public information is a particular direction. Defense policy promote the interests, objectives, and strategic political-military national cohesion and to ensure coordination of sartorial strategies in defense and defense diplomacy. Concept of human resource management is implemented through a package of projects including the proposed measures to modernize human resources management system in its essential components: items, and motivation for career military personnel. The Romanian Armed Forces, military career is managed under this new system, designed in relation to current and future needs and consistent with the armies of NATO member states. In the operation of this system are military career guide, a tool that ensures transparency, equal opportunities and fair, based on performance and experience in promoting the military hierarchy.

Civilian personnel management policy in the military seeks to ensure a career path for those with higher education leaders for the recruitment station-expert structures in areas that do not require specialized military training by improving training, employment and civilian positions management expertise and support in the areas of military action does not require military expertise. Career planning and forecasting medium to long-term human resources management is based on computerized defense of staff, ensuring the competence of language, especially English.

Defense intelligence services must have a good capacity to adapt to internal and international challenges and opportunities are the first structures to anticipate changes and trends in the security environment. Defense information system development support is part of the defense policy of Romania, setting major dimensions of diplomacy and defense assistance to assess the politico-military structures of the dimensions of transformation of regional and global security environment. The purpose

of intelligence determinant of defense is and will always achieve information superiority through the acquisition, processing and delivery of finished products of information (intelligence), the national decision-making authorities, allied and partner countries.

## **2. ORGANIZATIONAL STRATEGIES IN PUBLIC POLICY**

Globalization requires a new vision of knowledge on how to approach collaboration inside and outside the organization. It is therefore interesting to study how to complete the transition from theory to explain the processes of organizational change in public policy, theoretical models of the effective date thereof. Structural changes are normal items that have their roots in the new strategic direction and transformation of the Alliance. They allow a wider range of objectives and processes including design and preparation for participation in collective defense forces and capabilities needed to improve multinational crisis management operations and combating terrorism.

In public policy at the institutional level, security policy takes into account how policy is formulated and executed at the operational level. At operational level, security policy is to take immediate measures to prevent the security threat. Security strategies are built on a rigorous analysis of the security environment, national interests set of political power arising from the policy objectives of security, available resources and take appropriate ways to respond to challenges and threats to safety. In our approach we adopt the meaning given greater generality through the derivation of the concept of organizational theory, means that the security state of dynamic equilibrium macro-structural intra-and inter-social-organization of the same level (state-state structure supra supra-structure ) and different areas of coverage achieved by correlating organized and unorganized and change management in such a way as to not be affected objectives (values) of their basic generally accepted their existence as entities and their reproductive opportunities.

Training managers in a specialized national security structure is achieved both through specialized courses and other activities, such as specialized seminars, documentation, problem solving, meetings, exchanges of views etc. From the point of view of their activities within it, each structure can be considered a training institution. Each structure must be given its preference to training managers and training teams then coordinated by them. It appears evident need for training of specialists and professionals for all levels of management within the national security structures. Since Academies of forces (including the Technical Academy, Police Academy and National Academy of Intelligence) and continuing with further training forms (bachelor, master and doctoral studies) conducted in the Carol I National Defense University, specialized staff has the possibility of theoretical training and continuing training, including scientific research that will help develop their qualities and managerial skills.

The new generation of managers of national security is and should continue to be trained in an increased responsiveness and sensitivity to quantitative decision support. Success in managing national security structures specialized combination translates into the professional competence and emotional intelligence necessary to understand how an organization. Different role played by training managers function within each of the national security structures strongly influence its effectiveness. From the perspective of organizational theory, security means state of dynamic equilibrium macrostructure, intra- and inter-social-organization of the same level (state-state, supra-structure) and different areas of coverage achieved by correlating organized and

disorganized and change management in such a way as to not be affected values (goals) of their basic generally accepted their existence as entities and their reproductive ability.

In the field of public order or national security, scaring us with the idea of change management as a professional practice area, appears a new definition of change management: change management content or subject matter. It consists of models, methods and techniques, tools, skills and any other form of expertise that underpins all activities. The content or subject matter of change management is drawn from psychology, sociology, business management, economics, industrial engineering, systems engineering and the study of human and organizational behavior.

To see how we can protect the power of innovation in achieving maximum performance is most often takes an interdisciplinary approach. An important focus attention it has focused primarily on the areas and environments that develop the most effective practices in the design and development of competitive strategies and tactical planning, resource allocation, implementation, monitoring, evaluation and project organizational processes. It would be the first time in history that the methodology of approach, treating and solving the problems of national security is extracted from, and related practices and trends in the competitive economic environment, particularly from the corporate business. These systems enable the development and application specific analysis and personal work processes such as benchmarking, competitive intelligence software, strategic and risk management, re-engineering etc.

Organizational development is the process of improving the effectiveness of the organization and the welfare (well-being) to its members through planned interventions. This means increased efficiency by achieving goals and objectives of the organization, the welfare of members - workers with job satisfaction and work environment and planned interventions by sets of structured activities in which selected groups are engaged in tasks that are related directly or indirectly by improving organizational. At the most general purpose is to achieve successful organizational development to organizational change. It may derive from different specific objectives, such as developing plans to improve organizational redesign of organization structure, achieving cultural change, increasing the effectiveness of internal communication, clarifying roles and responsibilities, encouraging creativity and innovation, increasing the effectiveness of decision processes etc.

Management development programs usually tries, through a variety of methods, to persuade managers to consider a position point between top and bottom and then try to get as close to the ideal. The pyramidal organizational structures that operate vertically reduce management uncertainty showing clearly and unambiguously who has authority over whom. Organizations in public policy are generally highly specialized systems and established several criteria are used for grouping and grading. No two organizations are identical. Each has its peculiarities. Many of the known theories or models of managerial behavior include the disparity in the conditions statement. All models of the disparity are based on the assumption that a strategy for change must recognize the difference between the targets and create an individual's ideal and what is, or thinks he actually performed. When a model is in an ideal or a management style that is explicitly or implicitly presented objectively examining the model will compare their own state or style with this ideal. If current performance is perceived to be lower compared to this ideal, is therefore a condition of disparity that inspires improvement.

Romania's strategic objectives defined as priorities for action set by the National Public Order Strategy 2010 - 2013, are the main coordinates for the structures responsible focus efforts and expertise in public policy and is based on the following objectives: improve citizen's safety; ensuring a climate of legal business; reducing the impact of organized crime, terrorism and border; strengthen the integrated management of public policy crises and emergency situations; improving the quality of public services in the field; border security, especially outside the EU in Romania. Change issue is an almost obsessive concern in the sociology of public policy organizations, perhaps because of emphasis and also proved bureaucratic rigidity, or the concrete problems facing incessantly, both business leaders and managers of administrative reforms. Change can be viewed as a dynamic equilibrium of forces on the one hand, pushing to change, and on the other hand, causes a resistance to change.

Clear and deep perception of the need for change by the managers of the change process is essential. Perception of change is important but not sufficient and should therefore be supported by a mix of actual activities of the managers. Consequently, one of the most important aspects is the understanding of the organization's staff, managers and subordinates, need for change. The staff organization should be helped to understand that the current organizational structure should be adapted to new requirements posed by the transition to a market economy, the current information system should be changed and transformed into an effective tool to reach managers and their decisions need a background participatory methods and using modern management techniques.

This stage, which is essential for it involves actually creating human resources in the organization belief that the current political system and the current management staff are not compatible with market requirements. Understanding the need for change assume, moreover, that further knowledge management processes and execution with older structures in the new conditions lead inevitably, sooner or later, in situations critical to the organization. The process of change within the organization must go through the opening stages and thawing, which is trying to change the balance between the desired situation for change and actual change or transformation, for which the transformations that allow the passage of the desired situation and the closure or freezing step in seeking to achieve new balance in the system. This may be done by resorting to legislation, the organizational culture, organizational structure.

Planned change involves going through a complex process involving several stages, which makes the diagnostic analysis, action plan is being implemented under which the change project, because, finally, an evaluation of the results. Managing change in public policy processes requires a systematic succession accompanied by a permanent feedback. Implementation of change management involves the definition of the factors that generate change, recognizing and understanding the needs of changing problems that involve change of diagnosis, identify the methods by which to make the switch, determining ways to implement change, overcoming resistance to change, implementing change and evaluating the implementation results change.

During the social and organizational change, there is a need for communication strategies and techniques for adaptation. Then, during post changing, management and communications prodevelopment stability become more important. Organizational transformation involves changes in public policy at three levels. A first level is the change of attitudes and behaviors of employees. The second level refers to the change management system as a whole, while the latter aims at deeper layers of the

organization's value systems and beliefs, community affectivity employees. Note that the last level is the first two. Another feature of transformation is that organizational change is not confined to mere maintenance organization officials, but they aim at renewing the organization as a whole. By comparison with the military's business strategy is noted that both business organizations and the military try to use its forces to exploit enemy weaknesses. The fundamental difference between the two strategies is that business strategy is formulated, implemented and evaluated under the assumption of competition, while the military strategy assumes conflict.

Operationalizing organizational transformation in public policy is conditional upon the existence of a set of preconditions:

- Management of the organization must be committed to change;
- Each employee should be able to see what a good organization and what values are based;
- There are certain exogenous conditions in the environment that the organization-faced problems cannot be addressed and solved using the previous arrangements;
- Key people in your organization to support achievement of organizational changes;
- Managers and professionals who made the change to be prepared and committed to a long process;
- Change makers are aware from the outset that they will be confronted with the opposition to change;
- During the change must be willing to learn from a wide range of people;
- Most of the staff organization to be convinced of the need to carry out the proposed changes;
- Organization is ready to any assistance / contribution available / useful change;
- Provide access to information involved in all phases of organizational change.

Organizational transformation in public policy change is so profound that consider simultaneously harmonization, organizational adjustments and reorientations. Frequently, organizational transformation involves redesigning the organization as a whole, as if the community police into local police transformation, which is also directly subordinate to the mayor.

Strategic Objective no. 1, to improve citizen security, public safety states that measures citizen or legal action shall consist of all preventive-reactive public or private institutions or individuals have taken to enhance the security of individuals, communities and property. The main intervention areas are subsumed under this strategic objective safer street and on public transport, road safety and safety in rural areas. Results expected from this objective are to increase the performance of public order and safety devices in an integrated system, reduce street crime, increased firmness in law enforcement and increased public confidence in the institutions of the Ministry of Administration and Interior.

Strategic Objective no. 2, ensuring a business climate of legality, based on the premise that economic security is one of the structural elements of national security. The main intervention areas are subsumed under this strategic objective the protection of the state budget, combating tax evasion and customs fraud, combating crime in public procurement and intellectual property rights and industrial property. Results are expected to achieve this objective by reducing activities that contribute to the economy and their transfer into the real economy, law enforcement purposes taxes, increase the amount of damages for the economic and financial crime cases increase resolved and finalized convictions in economic and financial crime.

Strategic Objective no. 3, reducing the impact of organized crime, terrorism, border and has received numerous institutional development and activity is coordinated, sequential, sectorial strategies, to enter into ongoing monitoring and improvement cycles. The expected results consist in increasing the number of cases handled by legal finality - convictions and confiscations, in organized crime, increase the amount of funds obtained through the sale of goods identified and unavailable for forfeiture resulting from illicit activities, and in an increased capacity for knowledge and organized crime and border control, particularly immigration.

Strategic Objective no. 4, consolidation of integrated public policy crises and emergency situations is based on the fact that the Ministry of Interior operates the National Center for Public Order Leading Actions, inter-institutional structure of decision support for management actions crisis in public order. To achieve its objectives and providing support functions for the Ministry of Administration and Interior, the National Center cooperates with the National Operational Centre of the General Inspectorate for Emergency Situations, the Situation Centre of the Government, the Coordination Centre for anti-terrorist operation, the Component situations Operational Management Centre of the General Staff and other intelligence centers established in the public institutions represented. The main areas of intervention, subsumed this objective are to improve the integrated management of crises in public policy, improved response mechanisms and management of emergencies and providing support functions to the structures with responsibilities in public policy and adopting policies the state of emergency management. The expected results are given by the 42 operational command and coordination centers, 42 centers that coordination and leadership of emergency intervention - and the county centers of Bucharest, as well as reducing average response time in crisis situations public policy and / or emergency situations.

Strategic Objective no. 5, to improve the quality of public services, one of the most important objective, because of its direct impact on citizens, improve public services, induces joint action on two main areas of intervention, is to increase transparency and speed in providing public services of police, as well as institutional resource optimization, to decentralization, reducing the risk of corruption and improving the socio-professional employees. Results expected to achieve this are improving the image and prestige of the Ministry of Interior and its personnel, the Ministry of Interior to improve relations with civil society, by increasing confidence in police institutions and increase confidence in the institutions with responsibilities in public policy.

Strategic Objective no. 6, border security, especially outside the European Union in Romania, an area considered a priority for Romania's future, the prospect of joining the Schengen area, are mainly protection of citizens in Europe, in a ' global society. Considering the important role that integrated management of border security plays in Europe, Romania needs to make its contribution to the strengthening of integrated border management mechanism, starting from the very European concept of border security. Thus, under the EU Schengen Catalogue updated on external border control, readmission and return, ensuring a high level of surveillance and border control to community standards, the responsibility to implement an integrated border management, with the participation of all state institutions responsible the do-menu and apply a set of complementary measures, namely border control (check-books and surveillance), as defined in the Schengen Borders Code, including relevant risk analysis

and crime intelligence, crime detection and investigation of cross-border coordination with all law enforcement authorities, to apply the model to the four filters, set at European level, cooperation between border management agencies (border police, customs, police, immigration, national security and other authorities) and international cooperation and coordination and consistent activities of Member States, institutions and other bodies of the Community and Union. Securing the border is developed and managed nationally by the National Strategy on joining the Schengen Area, and National Strategy for integrated management of the state border of Romania during 2007 - 2010 (which is currently under revision) and the main areas of intervention subsumed under this strategic objective is to create an integrated border security.

Border monitoring results are expected in European standards, rehabilitation of all international border crossings, as required by the Schengen Catalogue - Control of external borders, return and readmission, targeting 85% of the total personnel of the Border Police and total equipment and vehicles owned by the institution related to operational activities and harmonization of conditions of entry of foreigners in the country, with the Schengen laws. In the legislative normative acts must be assessed within the areas of public policy, especially following legislative efforts to clarify the duties and responsibilities in structures, linking-up areas and Euro-compliance relevant Community acts. Legislative initiatives will consider the implementation of normative acts adopted at EU level, according to the algorithm established by the European Commission Work Program for 2010 and European agenda and international cooperation affairs. Legislative initiatives to amend the level of normative acts (laws, ordinances, decisions of the Government) and internal ones (order, instruction of the Minister of Administration and Interior) will be made according to the annual legislative plans, based on new opportunities.

The national strategy of public policy generally involves activities that will be made in annual spending limits adopted by the state budget law, and by making the absorption of EU funds and financial resources necessary for financing the projects undertaken by them. In order to finance actions at the new EU external borders, to implement the Schengen laws and border control, Romania has made available funds of the European Union through the PHARE and Schengen Facility. Organizational framework needed for implementing, monitoring and evaluation strategy involves the collaboration of all involved institutions and stakeholders to implement in an effective, strategic actions and activities foreseen in the objectives and strategic plan will be achieved by the sector "Order public safety and public "2010 - 2013, and plans programs and distinct component structures of the Ministry of Administration and Interior. The changes in public policy and national security requirements arising from the defense policy goals, as established by the Government Program 2009-2012 and the National Defense Strategy are:

a) Continue the process of military transformation. The institution aims to develop its own defense capabilities required for safeguarding national territory, participation in current and future operations and to meet their commitments under international and regional organizations. This transformation process requires a comprehensive and coherent approach to reform needs and is based on implementing the following measures:

- Transforming the force structure to achieve a modern package, professionalized, adequately equipped, deployable, interoperable, with a capacity for self-maintenance;

- Optimization of human resources management;
- Optimization of defense planning;
- Upgrade equipment and strategic infrastructure;
- The transformation and modernization of the military as a whole, to increase institutional effectiveness and support good governance act;
- Developing capabilities needed for interventions in civil emergencies.

b) Strengthening Romania's profile in NATO requires the harmonization of national defense policy developments within NATO with the participation of substance conceptual developments in the Alliance. An active role of Romania in NATO is essential to promote national interests at inter-allied security and the integration of Romania into the NATO decision. This objective requires further operational forces available to NATO and the continued implementation of capability and interoperability requirements employed by the objectives agreed with NATO and the EU, participation in NATO operations and missions, participation in conceptual developments regarding the transformation of NATO, and bringing initiatives on the capabilities of allied contributions.

c) In the struggle for integration into the European Union, Romania has developed participation in the European Security and Defense Policy, aimed at strengthening the commitment of forces and capabilities depending on its developments. Continuation and development process involving forces and capabilities in EU, strengthening participation in crisis management operations, strengthening the commitment of forces and capabilities for Objective Global 2010, to fulfill the EU battle groups and participation in programs conducted by the European Defense Agency.

d) The status of NATO member Romania and EU in the vicinity of three major areas of instability (the former Soviet Union, Middle East and the Balkans) is a key issue for national security and should assume an important role in maintaining stability in these regions, with direct implications on how the defense planning and strategies to promote national interests at regional level.

From this perspective, Romania has taken a pro-active regional policy, based on employment in South-Eastern Europe, particularly in the Balkans, and increasing contribution to the security of the Caucasus and Black Sea region. The military efforts are focused primarily on the following dimensions:

- To strengthen political-military dialogue and military bilateral cooperation with states in the wider Black Sea region, the Balkans and the Middle East;
- Developing programs to assist interested states in the region in the defense sector reform;
- Active participation in bilateral and multinational cooperation initiatives in the region;
- To promote international cooperation and assistance in the region.

e) Romania will continue to be part of efforts to combat international terrorism through active participation in operations conducted by international organizations or coalitions of the will to combat or prevent terrorism, by supporting the fight against proliferation of weapons of mass destruction and support operations stabilization and reconstruction. Lines of action necessary capabilities are targeted for participation in operations to prevent and combat the asymmetric risks and support them in theater, providing support with specific capabilities (intelligence, surveillance, air and



maritime) and increased institutional capacity to interact with other structures of the system national security.

All they need to concentrate resources and administrative capacities throughout navigate in those directions, which requires going through a continuous process of adaptation and institutional reform. Romanian Army transformation is not an end in itself, but appropriate response to changing security environment, NATO transformation and the commitments that Romania has made in the European Union and other international commitments. To be effective, the conversion must be supported by changing attitudes and improving the ability to adapt to new military professionals. Carrying out the transformation process will result in the creation of military capabilities characterized by flexibility, increased speed of response and interoperability, which will provide increased opportunities for political and military decision-makers to achieve those objectives, in line with national interests.

In the field of local and central public administration major changes in the plan notes institutions responsible for national security, the most obvious being the Ministry of Administration and Interior, most of Romania's national security structure. Transforming Community Police in the Local Police and the adoption by all employees of the new institutions of civil servant status is aimed at professionalizing and empowering sub-structures that previously often ignored or slight by some citizens. However, this transformation will remove from among those employees who have not passed the baccalaureate exam at least, this condition being imposed by the legislation concerning the status of civil servants and public order structures.

### **3. CONCLUSIONS**

In today's environmental concerns to create a secure and stable international security, following events that have generated significant political changes, social and economic, both globally and regionally, locally and nationally, it was necessary and Romania to reconsider the concept of security and how it promotes its fundamental interests, under the system evolution of European and Euro-Atlantic security. Study national security perspective of integration and globalization processes, with all the chances and opportunities they bring, but with so many challenges imposed, it is a necessity, which has forced many researchers to give the field a vast investigation.

Knowledge, understanding and accurate assessment of internal processes, degree of social cohesion, the ability to mobilize public is an equally important need for national projects. National security is ensured through their own efforts and through cooperation with allies and partners, in accordance with national programs, the European Union's security strategy and NATO's strategic concepts. It aims to harmonize national efforts with international commitments and to identify ways of working fit appropriate to prevent and counter threats. Efforts are also aimed at promoting democracy, peace, and stability in other areas of strategic interest, reducing the development of national capabilities and profoundly transforming security institutions.

Each country's security, and security of the international community as a whole, relies on not only response and adaptation, but above all, the ability to anticipate and act proactively. In today's complex, dynamic and confrontational, which are in the process of globalization, a deep understanding of major trends of evolution of international security and how each country has a chance to become an active part of this process is a prerequisite for progress and prosperity. To achieve its legitimate

interests, the Romanian state - part of Euro-Atlantic community and an active participant in the new European construction - promote, protect and defend democracy, respects human rights and fundamental freedoms and act in accordance with international law, to accelerate its modernization and economic and social development, ensuring a European living standards and full affirmation of national identity.

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## PERFORMANCE MANAGEMENT – PERFORMANCE EVALUATION

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**Abstract:** The correlation between an employee and their organization is an essential factor in understanding human resource planning, employee performance evaluation, and career plans. Harmonization is needed in the key stages of their careers in order to improve employee and organizational needs in an effective manner. In an organization, employees do not merely work for it, they are the organization, correctly evaluating the employees' performance influences the organization's objectives and stability, no less than organizational culture. The employees and mid-level management should not be regarded as "masses", or usable "tools", but minds that have to be reunited for the organization's benefit.

The literature in Romania<sup>46</sup> highlights the concept of performance; its management addresses an employee's career in general, hence the theoretical concepts, without profoundly studying their career at all levels.

**Keywords:** Performance management, employee performance, job competences, professional attitudes, basic management skills.

### INTRODUCTION

Performance management must have a positive, defining impact on the organization's objectives, ensuring its undeniable success, and highlighting the reasons for the difficulties arising in it, the process of developing its competences / achieving its objectives.

Performance management is based on employee performance assessment through different systems of analysis / evaluation, communication and feedback. Michael Armstrong, in MRU, mentions that, "Performance management is based on the principle of management by agreement or contract, rather than on management by command." Without this type of management the expected / desired results will not be achieved; it is this way that the distinction is made between *efficiency* (doing right) and *effectiveness* (doing what was planned). Performance assessment is used at present, which means looking at past performance in order to attain future aims. It can prove its efficiency through enhancing the employees' motivation, and also the organization's performance. This is in fact a manner of continuously improving the organization's capabilities through the agency of the programmes intended to develop the employees' competences and promote them.

As stressed by Malcolm Martin and Tricia Jackson in "The Personnel Practice"<sup>47</sup>, the goal of assessing performance in an organization is the analysis of performance tests, the potential analyses, and the reward analyses. All the discussions

<sup>46</sup> L. Savga, A. Bârcă, L. Bilas, M. Băiesu, A. Bogus

<sup>47</sup> M Malcolm, T Jackson, Practica de personal, Ed CODECS, 2008, pag.243,

below will focus only on increasing employee performance in order to achieve organizational objectives. From experience, only rarely can a link be established between the employee's, and the organization's objectives (with organizational goals prevailing – as we have not yet reached a level of organizational culture where employee satisfaction is placed on the same level as the organization), while motivational effect remains questionable in many cases.

The fact is known that the “events” do not always occur according to the plan or pre-arranged scenario:

- because of various training deficiencies, managers avoid regular performance appraisal interview, and only conduct it at the “expiration”
- some employees do not want to progress, but just a leisurely job (few tasks / responsibilities, and substantial profit);
- occasionally, theoretical preparation is not sufficient, failing to guarantee an individual's performance, and the risk appears that he / she will not meet the tasks he / she is supposed to achieve;
- some organizations do not have the objective of promoting employees, therefore learning / training them is pointless;
- there is the risk that managers are not good “performers”, and, consequently, the employees are indifferent to the feedback sent.

It is a well-known fact that in Eastern Europe, and especially in Romania, crony management predominates, and achieving performance is very difficult, when a strong managerial culture and appropriate training are lacking.

As the motivational effect of performance evaluation has not been well argued in all cases, the normal stages of performance assessment will be determined / enumerated.

#### **PREPARING THE INTERVIEW**

The individual interview provides an opportunity for individual interaction between the employee and his / her manager. This is the right time to listen and share experience, which should be allowed the necessary time; for the dialogue to be effective, it is indispensable that the individual interview should be arranged before the scheduled meeting.

The individual meeting, once a year, is mandatory for all employees, including employees hired on a fixed term contract.

In the event that the employee failed to take note about the code of ethics, the manager is responsible for providing it.

***Defining the job/ position*** needs to be attached to the meeting documents:

- Defining the main tasks, which allow identifying the main purpose and object of the post of employment. For instance, verbs such as “guarantee”, “ensure”, “contribute”+ end (X pilot project X...);
- Breaking down the actions that allow understanding what is required to achieve the tasks. For example: action verbs such as “control”, “achieve”, “analyze”, “produce”(rather than “monitor”, “deal with”, “ensure”...).

**Obligations of the collaborator:**

- Read the minutes of the previous year's individual interview and the job description. Note, where appropriate, the points to be reviewed;

- Pre-document the levels of indicator achievement (the indicators of the outcomes for the objectives set at the beginning of the year);
- Conduct a first reflection on its strengths and on the ways to improve its activities (another must is to reflect on the points identified during the previous meeting);
- Consult the reference documents (professional attitudes and basic management skills, KPI);
- Reflect on its project professional (pre-meeting with the hierarchy or the Human Resources Officer).

Obligations of the Manager:

- Achieve the objectives declination division / department, at the team / associate level;
- Consult the reference documents (professional attitudes and basic management skills, KPI);
- Re-read the job description the individual officer and the outcome of the meeting on the previous year; note the points to be reviewed;
- List the collaborator's achievements during the year;
- Identify the points where progress should be made.

**ASSESSING THE LEVEL OF TASK ACCOMPLISHMENT**

The manager must make an objective determination of the level of achievement of the objectives.

The level of achievement of the objectives - should express the level reached, both quantitatively and qualitatively, based on the indicator chosen when establishing the goals earlier in the year. It must not be expressed through a global assessment such as "superior to the commitment to education, "in line with ...", "OK".

Ascertaining goal achievement – the estimates should express the overall rating for the achievement of the targets set during the individual meeting. This is an evaluative summary by the manager, which takes into account both the concrete results obtained, and the priority targets. "Assessment of goal achievement" is not an arithmetic mean of the various objective achievement levels. The manager must fill in the information needed to reveal the level of achievement of the objectives (context, circumstances or means), a review of all objectives set at the beginning of the year, and factually establishing their attainment.

In addition to individual meetings at mid-year, regular follow-up of objective achievement is required in order to identify the difficult points and lead to corrective actions.

**ASSESSING THE MANNER IN WHICH THE RESULTS WERE ACHIEVED**

The manager and the collaborator should identify the professional behaviors (job competences, professional attitude, basic management skills) that have been identified and implemented during the year, and also those to be improved. These remarks contribute to enrich the reflections on the development by the Careers Committee or HR. This assessment regards all the tasks conducted by a collaborator during the year.

Job competences – which means emphasizing the skills practiced or acquired during the year, in which process one can have recourse to the referential frameworks for activities available, in given directions. Professional attitudes, basic management skills (for Managers); - to facilitate the assessment, a description is necessary of the fundamental management skills, and of the professional attitudes expected. Built on a set of useful values and practices, which the organization wishes to encourage, they will represent a common referential framework for managers and individual contributors during the meeting, which will remain a fundamental act of company management.

As a global summary of the assessment, the manager comes up with a synthesis which is complemented by an assessment on 6 levels, whose description is contained in an approved form, stating the most significant features of the collaborator's professional conduct, and specifically highlighting the above-mentioned basic attitudes.

Fundamental professional attitudes and managerial skills:

- this is not a “listing” of certain points mentioned strictly, other qualities can possibly be a priority;
- it is not simply grading as “good”, “very good” or “OK”, either.

If an instance of progress is required, it is desirable to specify an example illustrating the employee's attitudes and competences.

**The point(s) to improve** - as a tool of professional development, individual and personal meeting should contribute to identifying the main axes of improvement.

At least one point for improvement should be identified systematically in the balance for each employee, irrespective of the level of performance achieved. These points can reveal the attitudes and skills previously identified.

Discussing the points for improvement identified during the previous year's meeting;

Identifying the points to be improved noticed during the previous year.

Presenting those points under “Objectives for the current year”, and identifying the actions to be taken to this effect.

Do not mistake “The point to improve” for the process of “Individual Progress Plan” (IPP), which aims to restore a performance dynamics. The point to improve is applicable to all collaborators / employees, while the IPP does only apply in specific cases. The manager must assist the employee in understanding the meaning of the improvement process required from him / her, and also in defining the ways to use for the employee to become the active agent of his / her own development.

**The guidelines intended** - as individual meetings are a tool aimed at professional and personal development, the information set out in the “Guidelines” are discussed in the Career or HR Committees. It is therefore important that the quality of the information should be on a par with all the other information.

The anticipation date of mobility is mandatory. The manager is the one who fills this information in a “Balance” form. That mobility date must be estimated as early as the person takes up his / her post, yet it is merely a reference point:

- it is checked every year, and revised near the deadline;
- it can be brought forward or delayed following the guidelines drawn from the career or HR committees.

More options of geographical mobility (e.g., national, national and international, etc.) can be specified by the collaborator.

“International Mobility” occurs over a significant duration, and hence of an international transfer, irrespective of its modality. Availability for missions abroad does not belong here. It may, however, be specified in the column dedicated to the restrictions if the employee is available for specific missions abroad. If an employee considers themselves to be internationally mobile, but later than the mobility date specified, it is important that this information should appear as “notes”.

***The guidelines desired*** – refer to the collaborator’s professional project, based on his / her motivations and aspirations and the progress achieved. Recording it is necessary / obligatory (profession, direction, post...); filling it in is requisite when an employee wishes to remain in his / her post, or has just been appointed in a post.

His / her immediate superior expresses their opinion (favorable, unfavorable, to be discussed in the career or HR committee ...) and their advice regarding the guidelines expressed by the collaborator. That opinion must provide a prior explanation for the Career or HR Committees, and should by no means be considered a commitment of the organization to the employee.

***The HR process of preparation for the mobility*** – during the period prior to the mobility, an interview of the collaborator and his / her HR manager will take place systematically, with a view to prepare the (Career or HR) Committees, and the cross-interview decided on by the latter. It is up to the HR manager to see to the mobility before it is effectively achieved.

As ***comments / needs*** of the development of the process of performance evaluation, the individual meetings should contain at least three signatures: that of the collaborator, that of the N+1 hierarchy, and that of the N+2 hierarchy.

Their order should be as follows:

**The immediate superior** completes the individual interview with his / her remarks on the “*global synthesis of the evaluation*”, and the objectives referring to the “immediate superior’s approval”, and signs the conclusions of the meeting.

**The collaborator**, after taking note of the remarks made by the hierarchy, adds his / her personal comments, signs the minutes of the meeting, and sends it to the hierarchical N +1 superior, which shall convey it, after verification, to the hierarchical N +2 superior.

The hierarchical N +2 superior, after taking note of the conditions of the interview, adds his / her own remarks and comments in the “*N+2 countersignature*” in the balance interview and the objectives. The role played by the N+2 hierarchy consists in the possibility of making comments on the guidelines formulated, and possibly providing further complementary ideas. He / she signs the minute of the meeting, which he / she refers to the N+1 hierarchy for the latter to return the original copy to the collaborator.

The collaborator / permanent employee has an opportunity to request an additional meeting with the N+2 superior to obtain clarifications about the views the



latter has expressed. He / she may also request an interview with the Human Resources Manager.

Depending on the position held by the employee, the personal interview may also include one or more signatures and additional views: the Project Officer, the Functional Manager, the Pilot or Leader of the Transverse Team.

As far as his / her own comments are concerned, the *Collaborator* can express their views both in the “Balance”, and in the “Objectives” section:

- in the “Balance”, the employee can express their views on outstanding events of the year, or with regard to the analysis of the results achieved;

- in the “Objectives”, the employee may bring up his / her remarks on the goals set out, and formulate the conditions that he / she considers necessary.

It is important that the N+2 hierarchy should consistently communicate their views, in case the individual meeting reveals that goal-achievement is inferior to the commitment expressed, and / or the fact that the recording of the manner in which the results have been obtained is faulty or insufficient.

The Project Manager, the Directors, the Pilots or the Leaders of Transverse Team should not underestimate the importance of their views in individual interviews.

#### **THE COHERENCE BETWEEN THE INDIVIDUAL INTERVIEW AND THE PLAN OF INDIVIDUAL WAGE INCREASES**

The salary increase schedule is planned **after** the individual interview.

Individual interviews should be conducted from December to January, before the wage increase plan decisions, which are made between late February and late March, in order to be put into action as from 1 April.

The individual wage increase plan should be established **in accordance with** the individual interview / meeting (the notion of “consistency” should not be understood as a mechanical link between the evaluations and decisions of the meeting and the decisions meant to review the issue), and must be treated in a spirit of **equity**. To ensure fairness between sectors, the final decisions are made together with top-level managers.

**The mid-year interview / meeting**, or the interview of follow-up of the level of objectives achievement. It is recommended for all the members of the organization, especially if the hierarchy changes or significant developments occur in the division / department / service.

The mid-year interview / meeting is mandatory if:

- There is a change of function during the year (unless the mobility date is close to the campaign of individual interviews. In that case, the need to conduct the individual meeting remains to be deemed by the manager);

- An individual progress plan is in progress.

It can be mandatory through decision of the operational departments, and cannot be denied an employee who requests it, representing a point in promotion; as such, it does not require the signature of the N+2 manager.

To do that, the following should be secured:

- A point concerning the objectives achieved, and the reframing of the action schedule, especially if the context evolves;
- A point concerning the improvement actions identified during the setting of the objectives (3 “Objectives”).

It should be specifically added that it is not intended to alter the aims already set. If one or more objectives / targets have been set by a Project Manager, functionally or transversally, it will be possible for the manager to assess and validate the mid-year level of achievement.

The mid-year meeting should not be regarded as the only point relevant as to tracing the achievement of the objectives. A constant follow-up procedure (be it on a quarterly basis, or during the bilateral) is recommended.

### **CONCLUSIONS**

Performance evaluation, identifying the strengths and weaknesses of an employee must aim at, and trace, the manner in which performance can be improved. Many organizations apply systems of evaluating the employees separate from those of evaluating the managers, which results in an overall detriment (from the employee's angle, because they cannot endeavor to get managerial positions, and from the angle of the organization, because it avoids benefiting from using its own employees' experience within the higher structures). Performance evaluation must consider both how objectives are achieved and the behavior of the interviewee.

As M. Malcolm notes in "Personnel Practice", in the evaluation process there must be integration, both vertically and horizontally, between the system of performance assessment and work in the organization. Vertical integration means that there must be a link between the goals of performance evaluation, and the organization's business strategy; horizontal integration means that there must be a congruence relationship between performance appraisal and other personnel and development activities.

Managers are reluctant to highlight the poor performance of some employees, an action accomplished below the set standards, is more often than not overlooked if the employee has good "references". Personnel professionals should be involved to support / promote high standards of performance appraisal, helping the organization in achieving goals and employees in awareness / recognition of their effectiveness.

Managers are reluctant to highlight the poor performance of some employees, an action undertaken under the standards, most often is overlooked if the employee has good "recommendations". Personnel professionals should be involved in supporting / promoting high standards of performance assessment, thus helping the organization to achieving its goals, and the employees in reaching awareness / recognition of their own effectiveness; counseling is a way of "helping people to help themselves".

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## **ASSESSMENT OF SERVICE QUALITY IN APPAREL RETAILING-A STUDY OF THREE SELECT CITIES**

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**Abstract:** The Indian Retail Industry is rapidly transforming and is the fastest growing sector contributing 10 percent of the country's GDP. Indian retail market is estimated to grow from \$427 bn in 2010 and expected to reach \$637 bn by 2015 (Srivastava 2008). Indian apparel retailing is the country's largest opportunity for the organized retailers after food retailing. In today's competitive environment and with the growing importance of services, delivering high quality services has become the basic retailing strategy. The present paper studies the impact of service quality on apparel retail customer satisfaction and also identifies the critical factors of service quality from customer's perspective. The sample consists of 300 respondents from the popular cities with evidence of high Retail Growth in the state Andhra Pradesh in India. A structured questionnaire was administered for data collection. The results will help the Retail service managers to plan and design their service strategies.

**JEL classification:** M31, M39

**Key words:** Indian Apparel Retailing, Service Quality, Customer Satisfaction

### **I. INTRODUCTION**

Indian economy is one of the fastest growing economies in the world; the country's GDP is growing between 7 to 9 percent for the past five years and expected to grow at 12 percent next five years (Prahlad, 2007). Indian retail sector is the second largest employment provider after agriculture. According to AT Kerney, GRDI 2007 (Global Retail Development Index) India ranked top of the most attractive countries for retail development. Retail space increased from 22 million sq ft in 2002 to 101 million sq ft in 2007 and analysts expect it to exceed 300 million sq ft by 2012. The face of the Indian retail industry is rapidly transforming with the increased purchasing power of Indians, favorable demographics, rise in urbanization, increased customer awareness, the Indian retail market is experiencing a revolutionary change. Indians have gone through a dramatic transformation in lifestyle by moving from traditional spending on food, groceries and clothing to lifestyle categories that deliver better quality and taste. Modern retailing satisfies rising demand for such goods and services with many players entering the bandwagon in an attempt to tap greater opportunities. Western-style malls

have begun appearing in metros and second-rung cities introducing the Indian consumer to a shopping experience like never before.

The Apparel retailing which was once strictly a made-to-order market for clothing has changed to a ready-to-wear market. Preference for readymade garments is increasing and this has become inevitable with the rise in urbanization. The apparel market is growing at 10 percent and is expected to reach \$ 40 billion by 2013(Data Monitor report, 2009) and India accounts for 12% of the Asia-Pacific apparel retail industry's value. After China, India is being perceived as the next country with the biggest 'Growth Potential'. The first decades of the 21st century will witness India as the major player in the apparel business. Given the attractiveness of the market India became the prime destination for major MNC's. Retaining customers and maintaining competitive advantage in the face of increasing competition requires many retailers in India to improve service quality. Service quality is being perceived as a tool to increase value for the consumer; as a means of enhanced positioning (Mehta, Lalwani and Han, 2000) and to ensure consumer satisfaction (Sivadas and Baker-Prewitt, 2000), retention and patronage (Yavas, Bilgin and Shemwell, 1997). Service quality has become the retailer's core competitive strategy in order to enhance their shopping experience, so it became necessary for the retailer to measure it effectively. The present study observes the major service gaps in Apparel retail service quality and also assesses service quality on customer satisfaction.

### **1.1 REVIEW OF LITERATURE**

Parasuraman *et al.*, p. 42 (1985) defined service quality as “perceptions result (ing) from a comparison of consumer expectations with actual service performance”. The most popular tool to measure service quality is SERVEQUAL, an instrument developed by Parasuraman *et.al* (1985; 1988). The scale has 22 items for measuring service quality in five dimensions and was initially tested in five service settings like Retail banking, Credit card services, Repair and maintenance of electrical appliances, long distance telephone services, and Title brokerage. Later on the scale has been used to measure service quality in different service settings (Ladhari, 2008)

It is evident from the literature that majority of the SERVQUAL scale applications happened outside India and little research is taking place on service quality measurement in India. The question arises here is the generic scale which was developed by Parasuraman *et.al* (1985; 1988) is applicable in all service settings with in India and all the 22 items were appropriate to measure service quality. Sureshchander *et.al* (2001) conducted a study to identify whether SERVQUAL and SERVPREF addresses the critical aspects of customer perceived service quality in India. To measure service quality in retail banking Aldlaigan and Buttle (2002) developed a scale called 'SYSTRA-SQ' containing 21 items comprising of four dimensions like system quality, behavior quality, machine quality, service transactional accuracy. As stated by Gefen (2002) service quality dimensions comprised into three (tangibles, empathy and a combined dimension of 'responsiveness, reliability and assurance) when applied to online services. Later Parasuran *et.al* (2005) developed 'E-S-QUAL' having 22 items with four dimensions like 'efficiency, system availability, fulfillment, and privacy' for online customers. In the year 2007 Cristobal *et.al* developed a scale consisting 17 items with four dimensions. From the above they concluded that measuring service quality in online service requires special dimensions as it differs from manufacturing service quality.

The SERVQUAL scale was tested in different countries having different cultural contexts. Researchers like Chi Cui et.al (2003) applied SERVQUAL to Korean banking customers and observed that instead of five dimensions three dimensions (empathy, tangibles, and reliability/responsiveness) have good fit for their data. Later the three dimension structure was tested again by Arasli et.al (2005) at Greek banking sector; they found that dimensionality of the scale will vary according to different cultural contexts. It was also observed that selection of the construct, items and method will play a very important role in order to reduce the bias.

As stated by Gagliano and Hathcote (1994) measuring service quality in retailing differs from other service or product environments, with this a scale was developed to measure retail service quality by Dabholakar, Thrope and Rentz (1996) and coined the name ‘Retail Service Quality Scale- RSQS’ which has a five dimensional structure (Physical aspects, Reliability, Personal interaction, Problem solving and Policy) they have also identified in their extended study that all these five dimensions were valid in the USA. Later The RSQS was tested by Mehta, Lalwani and Han (2000) for measuring the service quality perceptions of supermarket consumers in Singapore and found appropriate. Kim and Jin (2001) tested the RSQS across two cultural contexts of USA and South Korea and identified rather than five dimensions four dimensional structure was suitable to measure service quality. Subhashini Kaul, (2005) applied the RSQS in the Indian Retail setting with a sample of 144 apparel retail customers selected in one of India’s fastest growing cities i.e. Bangalore. She observed that rather than five dimensions of Service Quality Four dimensions were appropriate to measure the overall Apparel Retail Service Quality of the store. There is a need to extend the study to other cities with large sample having varied demographics to explore new dimensions of retail service quality scale. So it is evident from the earlier studies that there was no generic scale to measure service quality in Indian Retailing.

### **1.2 OBJECTIVES OF THE STUDY**

1. To identify the important factors of Service Quality in select cities
2. To study the impact of service quality factors on Apparel retail Customer Satisfaction
3. To study the impact of Customer Satisfaction on Customer Attitude

### **1.3 METHODOLOGY**

Three upcoming cities Vijayawada, Vishakhapatnam and Tirupati (Annex I) were selected in the state of Andhra Pradesh, India. Andhra Pradesh State is witnessing rapid growth caused by Software, Manufacturing, Pharmaceutical and Engineering industries. The three cities are the next preferred cities in terms of business investment and have high potential for Retail Growth. Total sample constitutes of 300 respondents from all the cities, using quota sampling 100 respondents were selected systematically from each city. The respondents were chosen from the popular malls situated in respective cities, every fifth customer coming out of the mall was included in the sample. A structured questionnaire (Annex II) was administered for data collection. Secondary data was collected from research databases, report, journal articles etc. SPSS 17.0 was used for statistical analysis.

## 2 RESULTS AND DISCUSSIONS

### 2.1 IMPORTANT FACTORS OF SERVICE QUALITY

**Table 1. KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.902
Bartlett's Test of Sphericity	4183.535
df	351
Sig.	.000

**Table 2. Item to Dimension correlation Rotated Component Matrix<sup>a</sup>**

	Component				
	1	2	3	4	5
q 1	.246	.117	.090	<b>.819</b>	.115
q 2	<b>.704</b>	.074	.140	.365	.174
q 3	.322	.162	.223	<b>.666</b>	.231
q 4	<b>.754</b>	.039	.046	.379	-.009
q 5	.341	.145	.109	<b>.674</b>	.168
q6	<b>.685</b>	.184	.163	.181	.049
q7	.137	.173	.206	<b>.539</b>	.562
q8	.160	.039	.265	.333	<b>.648</b>
q9	<b>.541</b>	-.028	.182	.125	.470
q10	<b>.542</b>	.121	.234	.181	.480
q11	<b>.503</b>	.183	.430	.215	.243
q12	.403	.265	<b>.405</b>	.237	.222
q13	.320	.055	<b>.640</b>	.154	.248
q14	<b>.475</b>	.257	.449	.089	.213
q15	.346	.207	<b>.460</b>	.239	.057
q16	<b>.568</b>	.360	.233	.048	.240
q17	<b>.473</b>	.439	.153	.116	.384
q18	.275	.398	.185	.094	<b>.598</b>
q19	.073	.425	<b>.453</b>	.167	.305
q20	.110	<b>.480</b>	.228	.369	.397
q21	.336	<b>.558</b>	.162	.369	-.021
q22	.108	<b>.695</b>	.077	.185	.122
q23	.087	<b>.614</b>	.375	.115	.052
q24	.144	<b>.577</b>	.379	.066	-.160
q25	.077	<b>.621</b>	-.236	-.075	.301
q26	.063	.330	<b>.575</b>	-.048	.272

*Extraction Method: Principal Component Analysis*

*Rotation Method: Varimax with Kaiser Normalization.*

*Rotation converged in 11 iterations.*

Table 2 indicates the values of item correlation to the service quality dimensions, there are five dimensions of service quality are extracted, in each dimension the items from q1 to q26 are grouped according to highest correlated value with that dimension. Item having highest correlation was highlighted.

To determine the critical factors of service quality, factor analysis was conducted. Kaiser-Meyer-Olkin Measure of Sampling Adequacy was 0.902 (Table 1) and Bartlett's Test of Sphericity value was (sig.000) proving the test was efficient and valid. Five important dimensions were extracted namely Reliability and Courtesy, Policy, Personal Interaction, Physical facilities and performance whose initial Eigen values are more than one.

## **2.2 IMPACT OF SERVICE QUALITY ON APPAREL RETAIL CUSTOMER SATISFACTION**

The following research hypothesis were developed and tested

H1: The effect of Service Quality factors on Customer Satisfaction will vary according To City.

Multiple Linear Regression test was performed, customer satisfaction as dependent variable and service quality factors (Reliability and Courtesy, Policy, Personal Interaction, Physical facilities and performance) as independent variables. The results indicated that in the city Vijayawada, Policy (p-0.000) and personal interaction (p-0.018) dimensions were significant with customer satisfaction. In the city Vishakhapatnam the service quality dimensions, Policy (p-0.004), Personal Interaction (p-0.000), Physical facilities (p-0.035) and performance (p-0.000) are significant and in the city Tirupati, the service quality dimensions Reliability (p-0.001) and Courtesy, Policy (p-0.002), Personal Interaction (p-0.000), Physical facilities (p-0.012) were significant. This indicates that the effect of Service Quality factors on customer satisfaction will vary according to place. This shows that at Vijayawada, Personal interaction and Policy of the store are very important service dimensions, at Vishakhapatnam, Personal interaction, Policy, Physical facilities and performance are important service dimensions, whereas at Tirupati Reliability & Courtesy, Policy, Physical facilities and performance are important service quality dimensions. According to place of the city the importance of service quality dimensions will change, hence the hypothesis H1 is accepted.

**Table 3. Regression Coefficients**

City Name	Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
Vijayawada	1 (Constant)	8.577	.166		51.702	.000
	Reliability and Courtesy	-.027	.120	-.021	-.226	.822
	Policy	.769	.159	.447	4.838	.000
	Personal Interaction	.338	.141	.216	2.403	.018
	Physical facilities	-.018	.124	-.013	-.148	.882
	performance	.191	.143	.124	1.335	.185
Vishakapattanam	1 (Constant)	9.347	.076		122.883	.000
	Reliability and Courtesy	.127	.096	.129	1.314	.192



City Name	Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
	Policy	.227	.078	.287	2.913	.004
	Personal Interaction	.311	.078	.419	4.004	.000
	Physical facilities	.180	.084	.206	2.134	.035
	performance	.316	.078	.425	4.069	.000
Tirupati	1 (Constant)	9.540	.083		115.066	.000
	Reliability and Courtesy	.451	.134	.322	3.366	.001
	Policy	.262	.084	.322	3.131	.002
	Personal Interaction	.639	.113	.489	5.674	.000
	Physical facilities	.314	.123	.234	2.551	.012
	performance	.085	.112	.074	.755	.452

*a. Dependent Variable: Customer Satisfaction*

### 2.3 IMPACT OF CUSTOMER SATISFACTION ON CUSTOMER ATTITUDE

H2: Customer Satisfaction has a positive effect on Customer Attitude

The regression model was showing a good fit (R square value 0.519) between customer satisfaction and customer attitude as the significant value (sig.000) is less than 0.05. This indicates that there is a strong relationship between apparel retail customers on customer attitude. The higher the satisfaction the higher will be the customer attitude towards apparel retail stores. It is inferred that Customer Satisfaction affects Customer Attitude, so the hypothesis H2 is accepted.

**Table 4. Regression Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.721 <sup>a</sup>	.519	.518	2.70219

*a. Predictors: (Constant), test*

**Table 5. ANOVA<sup>b</sup>**

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	2350.975	1	2350.975	321.971	.000 <sup>a</sup>
Residual	2175.941	298	7.302		
Total	4526.917	299			

*a. Predictors: (Constant), test*

*b. Dependent Variable: tat*

### 2.4 CUSTOMER SATISFACTION ON CUSTOMER ATTITUDE WILL VARY ACCORDING TO PLACE

H3: The affect of Customer Satisfaction on Customer Attitude will vary according to place

To know whether affect of customer satisfaction on customer attitude will vary with respect to place or not, Analysis of Variance (ANOVA) was performed, the results revealed that in all the three cities customer satisfaction is significantly affecting

customer attitude. It is inferred that customer satisfaction effects customer attitude irrespective of place. Hence the hypothesis H3 was rejected.

**Table 6. ANOVA<sup>b</sup>**

City Name		Model	Sum of Squares	df	Mean Square	F	Sig.
Vijayawada	1	Regression	1636.559	1	1636.559	169.998	.000 <sup>a</sup>
		Residual	943.441	98	9.627		
		Total	2580.000	99			
Vishakapattanam	1	Regression	406.083	1	406.083	46.508	.000 <sup>a</sup>
		Residual	855.677	98	8.731		
		Total	1261.760	99			
Tirupati	1	Regression	109.752	1	109.752	50.176	.000 <sup>a</sup>
		Residual	214.358	98	2.187		
		Total	324.110	99			

*a. Predictors: (Constant), Customer Satisfaction*

City Name		Model	Sum of Squares	df	Mean Square	F	Sig.
Vijayawada	1	Regression	1636.559	1	1636.559	169.998	.000 <sup>a</sup>
		Residual	943.441	98	9.627		
		Total	2580.000	99			
Vishakapattanam	1	Regression	406.083	1	406.083	46.508	.000 <sup>a</sup>
		Residual	855.677	98	8.731		
		Total	1261.760	99			
Tirupati	1	Regression	109.752	1	109.752	50.176	.000 <sup>a</sup>
		Residual	214.358	98	2.187		
		Total	324.110	99			

*b. Dependent Variable: Customer Attitude*

## 2.5 RECOMMENDATIONS

The study recommends that Reliability of the store and Courtesy of the employees is crucial dimensions of service quality which needs continuous performance monitoring. To improve service quality in the city Vijayawada, Reliability and Courtesy, Policy, and performance of the store has to be improved, for the city Tirupati only Reliability and courtesy has to be improved, for the city Vishakhapatnam only performance of the store has to be improved. The results of the study help to identify where to increase service levels and where to maintain service levels.

## 3. CONCLUSION

Service quality has become the differentiating strategy to any business organization. To deliver and design better services it is important on part of the marketer to measure it. The present study focused on measuring service quality in three upcoming cities and identified the impact of the service quality on customer satisfaction

and the impact of service quality on customer attitude. The results proved that Reliability and Courtesy, Policy, Personal Interaction, Physical facilities and performance are the critical dimensions of service quality in the upcoming cities and these dimensions will significantly affect customer satisfaction. The study proved that all service dimensions are not equally important at all the places so it is important to understand which dimensions are very important at what places, so that the marketer can develop service strategies accordingly. The study also proved that the effect of customer satisfaction on customer attitude remains same in all the three cities. In India as the organized Retail is expanding to Tier II cities it is so important for Retailers to devise city specific service strategies to remain competitive.

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**ANNEX I: BRIEF PROFILE ABOUT THE SELECT THREE CITIES**

Vijayawada, being the third largest city and Business Center, It attracts customers from various places of Andhra Pradesh. The city is having good transportation facilities connected by Road, Rail and Air transportation. The city is popular for Automobiles, Footwear, Textiles, Apparels, Education, jewellery, and Furniture businesses. After Hyderabad it is the preferred business location for majority of the business firms. The city was located on the bank of Krishna River.

Vishakhapatnam has flourishing industrial sector. From being a traditional fishing town to a prime industrial town at present, the city has covered a long distance, and has emerged as a major industrial hub of southern India. In addition to Rail, Road and Air Transportation the city has also International port. Vishakhapatnam is now in the expansion mode with rise of software industries and other manufacturing industries setting up their corporate offices. The city consist prestigious companies like Steel Plant, Bharat Heavy Plate and Vessels Limited, Coramandel Fertilizers Limited, Rashtriya Ispat Nigam Limited Hindustan Petroleum Corporation Limited Hindustan Shipyard Limited

Tirupati is a very popular pilgrimage center not only in Andhra Pradesh but all over the world; the sacred Lord Venkateswara temple is situated on the top of the Tirumala Hills. It is a popular tourist and business destination in India and lakhs of pilgrims visit Tirupati daily. There available ample of business opportunities in industries like Retail, Hotel, Tourism, Education etc...

All the above three cities have huge business growth potential, as the Competition, Cost of real estate in Metropolitan cities is very high, now top MNC's and Indian Retail firms are looking to set up their new ventures in second rung cities.

**ANNEX II- ITEMS USED FOR MEASURING SERVICE QUALITY (MODIFIED RSQS SCALE)**

- Q1: The store has modern-looking equipment and fixtures (Lighting, Furniture, Displays)
- Q2: Materials associated with this store's service (such as shopping bags, loyalty cards And Catalogs) are visually appealing
- Q3: The store has clean, attractive and convenient physical facilities (restrooms, fitting Rooms)
- Q4: The store layout at this store makes it easier for customers to find what they need
- Q5: The store layout at this store makes it easier for customers to move around in the Store
- Q6: When this store promises to do something (such as repairs, alterations) by certain Time, it will do So
- Q7: This store provides its services at the time it promises to do so
- Q8: This store performs the service right the first time
- Q9: This store has merchandise available when the customers want it
- Q10: This store insists on error-free sales transactions and records
- Q11: Employees in the store have the knowledge to answer customers' questions
- Q12: The behavior of employees in this store instills confidence in customers
- Q13: Customers feel safe in their transactions with this store
- Q14: The employees in this store give prompt service to customers
- Q15: Employees in this store tell customers exactly when services will be performed
- Q16: Employees in this store are never too busy to respond to customer's requests
- Q17: This store gives customers individual attention

- Q18: Employees in this store are consistently courteous with customers  
Q19: Employees in this store treat customers courteously on the telephone  
Q20: This store willingly handles returns and exchanges.  
Q21: When a customer has a problem, this store shows a sincere interest in solving it  
Q22: Employees of this store are able to handle customer complaints directly and  
Immediately  
Q23: This store offers high quality merchandise  
Q24: This store provides plenty of convenient parking for customers  
Q25: This store has operating hours convenient to all their customers  
Q26: The Store accepts all major credit cards

### **ANNEX III ITEMS USED FOR MEASURING CUSTOMER SATISFACTION**

- Q1: How satisfied were you with the price paid relative to the value of the service  
Q2: This shopping trip at this store was truly a joy and highly satisfied  
Q3: Compared to other things that I could have done, the time spent at this store was truly enjoyable.  
Q4: I enjoyed the shopping at this store for its own sake, not just for the items I have purchased.  
Q5: Shopping at this store was a complete waste of time.  
Q6: Overall, I am satisfied with the decision to choose this store  
Q7: While shopping at this store, I found just the item(s) I was looking for.  
Q8: I spent more time in this store than I originally planned  
Q9: This is my choice of store in which I regularly come to shop  
Q10: The amount of time that I spent on looking around was fairly high  
Q11: I bought more things than I expected at this store.  
Q12: I paid most of my attention on items I plan to buy on this trip  
Q13: It is very likely that I will purchase a product from this store in the future

### **ANNEX IV ITEMS USED FOR MEASURING CUSTOMER ATTITUDE**

- Q1: I used to say positive things about this store to other people  
Q2: I will recommend this store if someone asks my advice  
Q3: I encourage my friends and relatives to buy from this store  
Q4: I will consider this store as my first choice to buy  
Q5: I will visit the store again in the coming days  
Q6: I will search and buy at lowest prices from other stores  
Q7: I will switch to a competitor when I experience a problem with this store

## **MURFATLAR BRAND PERSONALITY**

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**Abstract:** This paper aims at observing the issue of brand evaluation and at conducting a case study at Murfatlar S.A. The brand evaluation is a problem in the context of competition between brands to have their market share, recognition and reputation. Brands are fighting for a more privileged place in the consumer's mind. In this way, they can be sure that they will be chosen in the moment of buying. The objective of this research is to answer the question how customers rate the brands, and in particular to determine the coordinates of brand personality. Reviewing the literature I found that, often, between customers and brands closed relationships are established based on respect, trust, emotions, and resonance with the brand. The customers want to interact with the brands on the basis of the identified affinities. In this way, the brands have come to borrow from the human personality. To achieve the objective of the proposed research I have conducted a case study on a sample of 100 respondents, wine consumers, to assess the Murfatlar brand personality. I chose this brand because Murfatlar is the largest vineyard in Romania as cultivated area and also ranks first in wine consumption in our country, according to the market share. Murfatlar has a diverse portfolio that blends traditional brands with the new launched brands. The research results show that the new launched brands introduced in the company's portfolio have a more youthful, more exuberant personality being adapted to the young consumers segment, which focus on brand, fashion and quality when they buy a product. The Murfatlar traditional brands enjoy a more quiet and conservative personality. The practical implications of the study demonstrate the need to launch new brands and their proper positioning, to ensure the congruence with the changing needs of customers. The main achievements of the study refer to brand personality practical testing and to the need to incorporate this method of evaluation in the measurement analyses of the brand potential.

**JEL classification: M31, M37**

**Keywords: brand evaluation, brand personality, consumer-brand relationship**

### **BRAND EVALUATION: LITERATURE REVIEW**

The brand evaluation is crucial in an effective brand management. This process allows marketers to gain a clearer idea of how powerful is the name of a brand. In turn, this will help marketers to decide on the future marketing strategy. Some of the more common metrics used in measuring a brand are brand perception, brand financial value and brand performance. Metrics used for evaluation may differ from company to company but generally, these performance measures are mainly sensitive to consumer perception and consumer attitude.

The proliferation of brands has led to an effervescence of brands evaluation

methods. The most capitalized brands are valuable both for the legal owner but also for clients and customers. One of the most important things to understand about a brand is that its value is highly individualized (Budică and Barbu 2010: 177).

Keller appreciates that brand evaluation can be done at four levels: marketing program investment, customer-mindset, market performance, shareholder value (Keller 2088: 318-322). Also the value of the brand can be multiplied by a series of factors such as: the quality of the marketing mix, the marketplace conditions and the investor sentiment.

Five dimensions are measuring the customer mind-set: brand awareness, brand associations, brand attitudes, brand attachment, brand activity. In order to capture the customer mindset qualitative methods are being used among which is the brand personality. Brand personality is the human characteristics or traits that consumers can attribute to a brand (Keller 2088: 369). The most known brand personality model consists in five dimensions: sincerity, excitement, competence, sophistication and ruggedness (Aaaker 1997: 347-356).

Brands are often conceived as entities around which consumers organize their knowledge, attitudes, and affect. Further, past research has shown that individuals imbue objects and brands with personalities (Fournier 1998: 343-373). It is therefore reasonable to expect that people use their lay theories of person perception when appraising brands.

In her seminal article, Fournier (1998: 343-373) introduced relationship theory to consumer research and demonstrated its usefulness for understanding the roles brands have in the life of the consumer. The article has already been characterized as a modern classic, and subsequent research on consumers and brands that builds on the relationship idea is emerging. While brand relationship is a promising new way of thinking about consumer brand behavior, there has been a lack of reflection regarding its feasibility to accurately represent the way consumers interact with brands. With regard to Fournier's brand relationship framework, however, there is an extensive discussion that seeks to qualify brands as a relationship partner. But although consumers may attribute anthropomorphous characteristics to brands, this does not necessarily imply that socio-psychological theories of interpersonal relationships are adequate to represent consumers' relation to their brands (Bengtsson 2003: 154-158).

## **RESEARCH METHOD**

To write this paper I have interviewed a sample of 100 respondents, from Craiova municipality, who drank wine with a frequency of at least once a week in the last three months, mainly consuming wine in bottles of 0.75 L (in at least 5 out of 10 cases) and who have an important role in deciding which wine they want to drink (in at least 7 out of 10 cases). The study was conducted between 15 February and 20 March 2011. The objective of this study was to identify the Murfatlar brand positioning on the market and to track how consumers evaluate the Murfatlar brand.

## **MURFATLAR VINEYARD: BETWEEN TRADITION AND MODERNITY**

"The Murfatlar Wine" is the wine market leader in Romania. It is the producer who best combines tradition with modernity and innovation.

Here, the tradition and experience are valued by using the most modern winemaking technologies. The used technology is adapted to each variety of wine. The grapes harvest period is established scientifically depending on the type of wine which

is wanted to be obtained, and the harvest period allows the naturally production of the full range of wines, from white to red ones, from dry to sweet ones. All these aimed at achieving a genuine product: the Murfatlar wine, with its unmistakable characteristics and qualities.

The Murfatlar vineyard continued the tradition of its grape-growers` ancestors, accumulating experience in the nearly 100 years of activity conducted in the modern era. From generation to generation, the love and passion for the production of the Murfatlar wine can be found permanently in its quality. Thus, the passion makes the difference at Murfatlar, the quality of the obtained wine being passion related.

The quality of the Murfatlar wines is confirmed by more than 130 awards obtained in national and international professional competitions held in Barcelona, Ljubljana, Montpellier, Budapest, Brussels, Montreal, Sofia, Tbilisi, Bucharest, etc.

Murfatlar, to define a wide variety of products, is using the marking of family - a brand name, a combination of the company name and the product brand names (e.g. Sec de Murfatlar). The company name is used in this case to name the entire company's products portfolio to support and develop their "personality" (in which case the risk of an unfavorable image increases, if the new product proves to be a failure).

The products varieties offered by the Murfatlar vineyard contain 70% white wines (Chardonnay, Pinot Gris, Sauvignon Blanc, Italian Riesling, Traminer, and Muscat Ottonel) and 30% red varieties (Cabernet Sauvignon, Merlot, Pinot Noir and Black Fetească). In addition to the young wines, Murfatlar Romania holds an impressive collection of very old wines, from the 50s-60s harvests. From these varieties, Murfatlar launched on the market over 30 brands of wine, most of them in bottles of 0.75 L (excepting Babanu which is the only wine on the market in bottles of 3 l), all with a design appropriate to the range from which they form part, obtained from the best wines.

The freshness and delicious flavor of the Stephen Bennett Selection, Sec de Murfatlar, Rai de Murfatlar, Trei Hectare, Ferma Nouă and Premiat ranges are completed by the mature refinement of traditional wines.

Murfatlar has a range of traditional wines which includes both white varieties, such as Chardonnay, Pinot Gris and Muscat Ottonel and red varieties such as Merlot, Cabernet Sauvignon or Pinot Noir. Pinot Gris is the fairly representative of the natural sweet wines, holding the record for sugar accumulations. The straw yellow and amber colors, due to the accelerated aging, the specific taste, the whole harmony of the parts which gives smooth and velvety shades make Pinot Gris, the Murfatlar sweet wines champion, to compete with the best wines of the world (Tokay, Sauternes). Chardonnay is a basic variety in the Murfatlar vineyard, obtained from the accelerated over- ripening. It holds the record for international awards being considered their champion. Muscat Ottonel is a wine famous for the specific floral aroma and for the overall qualities that make it an excellent dessert. Obtained from a specific technology, which focuses on the accurate conservation of flavor, it is a full wine, of golden yellow color, very fine, with a perfect balance and an unsurpassed flavor that develops greatly during the aging stage.

Pinot Noir is a red wine, smooth and elegant, harmonious, light and friendly. It has a bright red color during the young phase, degrading to red brick at maturity. Through aging it gains a special softness. Cabernet Sauvignon is a male wine, impressive by its fruity character, evolving excellently after maturation in oak barrels, which give it an original bouquet, a complex tasty harmony. It is of ruby red color



during the young stage, with brownish tints after aging. The Merlot is a bright, lively, and vivacious wine, with a specific floral bouquet, harmonic, with a good evolution in aging, particularly when it is associated with the oak barrel. It has a specific organoleptic composition, with weighted tannin content and it evolves well after maturation, getting a fruity taste of gooseberries.

Premiat contains a number of young, white, semi-dry wines, with a distinct aroma, elegant and with great freshness and fruitiness. The collection includes six white wines, namely Sauvignon Blanc, Dry Riesling, Dry Muscat, Pinot Grigio, Chardonnay and Dry Riesling (black label).

Sauvignon Blanc is an elegant and distinguished wine from the family of semi-flavored varieties. Obtained through a specific technology, in order to raise the flavor, it is notable by freshness and fruitiness, and by the balance of its components. It is a delicate, round and broad wine. Pinot Grigio is a rich, harmonic wine, with a perfectly balanced structure due to the beneficial effects of the vineyard microclimate. The color is golden yellow with bright green reflections. Dry Riesling is an elegant wine, well balanced, with a delicate aroma, expressive and pleasant. Dry Muscat: the skeletal soils on limestone and the arid climate conditions near the Black Sea provide an optimal storage of flavors for this variety. The obtained international awards confirm the quality of the flavored wines produced by Murfatlar. Chardonnay is a basic variety in the Murfatlar vineyard, with a distinct floral aroma and perfect harmony between components. It holds the record in the international awards, being considered their champion. It is a wine with a distinct floral aroma and perfect harmony between components. Dry Riesling (black label) is a semi-dry wine, elegant, well balanced with a delicate, expressive and enjoyable bouquet.

The Stephen Bennett Selection is a series that bears the name of its creator, the Australian Oenologist Stephen Bennett, who consider these wines as being the best produced by him in a career of over 20 years, consisting of wines awarded with medals at two international competitions. The two wines, the white one, Sauvignon Blanc, and the red one, Cabernet Sauvignon, both dry, are matured in new oak barrels, of low capacity, which provides them that "Boise" note specific to the great wines. Trei Hectare is a range formed of two types of dry, white and red wine, of high-quality, Chardonnay and Black Fetească, both being obtained from certain areas of the vineyard, which gives them unique properties and qualities.

Sec de Murfatlar - are wines obtained from the "top of harvests", which until recently were destined exclusively for export. The collection includes a white wine (Sauvignon Blanc) and a red one (Cabernet Sauvignon), both dry, bearing the signature of the famous Australian expert Stephen Bennett.

Rai de Murfatlar includes a series of three young wines, i.e. one white, one red and one rose, sweet that keep the savory freshness of the well ripened grapes. The white wine is a bright yellow colored one, clean and fresh with a pleasant taste, sweet and fragrant, obtained by blending the Pinot Gris, Italian Riesling and Muscat Ottonel varieties. The Rose one is a young wine, which abounds in tropical spices, of ripened fruits of wild berries, has a delicate flavor of fresh fruits, sweet and red grapes, defining for a classic Murfatlar.

Ferma nouă. As every place has a legend, everyone has a story, everything has a history, Ferma nouă is a place where man's story is identical with that of the wine. The story of the Ferma nouă is represented by the passion and talent that have been put into service to obtain a unique wine. A wine that awakens, in its turn, passions, creating

stories that you will live only by enjoying it. Sauvignon Blanc. Any wine from Ferma nouă bears, through shape and flavor, the signature of its creator. Rich in aromas of exotic fruits, filled with peach and elder flavors, well-balanced, Sauvignon Blanc keeps its sprightly acidity that it always gives it freshness. Chardonnay, with a straw-yellow color that delights your eyes, with an elegant bouquet with floral notes and well ripened tropical fruits flavors, disturbs your senses.

Conu' Alecu. Conu 'Alecu comes at meetings with love and jocundity. He arranges his hat slowly, sets his watch, smiles just as for warm up and he is gone. He is excited all the time, because he meets his friends. And as we know it is a long-haul semi-dry wine, and he goes to visit them thousands of miles away.

Babanu is a young wine, semi- dry, fresh, with a specific fruitiness. Sauvignon Blanc is a semi-flavored variety, with a great freshness, which blends with the Chardonnay flavor and Pinot Gris balanced consistency. It has a great package, being the only one on the market of 3 L.

Lacrima lui Ovidiu is a special range of wines, a liquors wine, with an age of 5 to 12 years, produced after a traditional recipe inspired by the technology of the famous wines of Porto, Malaga, Madeira or Xeres. These unique wines on the Romanian market have won over the time many national and international competitions and the great gold medal at Brussels in 2010.

Vinars - after two distillations, Zaraza retains the essence of special chosen wines without wasting the grape aroma and flavor. The natural aging in small oak barrels gives to Vinars the amber color, softening and rounding also the taste.

#### **MURFATLAR PERSONALITY VS. SEC DE MURFATLAR**

Those surveyed were asked to imagine that two wine brands (classic Murfatlar and Sec de Murfatlar) are some persons and to give a mark from 1 to 6 for a few features that might be associated with these persons. The grading scale was: 1 = totally agree with the statement on the left, 2 = agree with the statement on the left, 3 = partially agree with the statement on the left, 4 = partially agree with the statement on the right, 5 = agree with the statement on the right, 6 = totally agree with the statement on the right (Fig. 1). I chose Sec de Murfatlar because it is a wine for people especially from the urban areas, with above average incomes, good connoisseurs of wine varieties, and who focus on quality. In addition, Sec de Murfatlar had enjoyed lately some sustained advertising campaigns.

In comparison to the Murfatlar vineyard, Sec de Murfatlar is a rather innovative, young, exuberant, playful, modern, non-conformist and talkative person. Murfatlar is a rather friendly, warm, older, quiet, serious, traditionalist, and mature person (Table 1).

There is noted that the new brand Sec de Murfatlar is assessed as a modern brand, for the non-conformist, educated persons, who want to be always trendy. In this way the Murfatlar vineyard manages to combine the traditionalism and modernity by launching new product range, addressed to the young consumers segment.

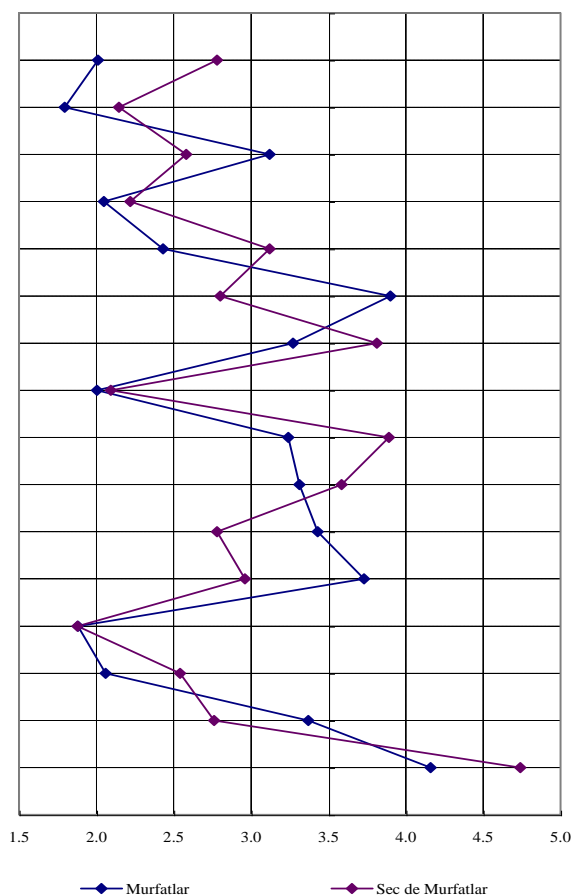


Figure 2. The Murfatlar Personality Chart

Table 1. Murfatlar Personality vs. Sec de Murfatlar

	Murfatlar	Sec de Murfatlar	
	Average		
Friendly	2.01	2.78	Arrogant
Refined	1.80	2.14	Rude
Innovative	3.12	2.58	Conservative
Beatiful	2.05	2.22	Dull
Warm	2.43	3.12	Cold
Young	3.90	2.80	Older
Relaxed	3.27	3.81	Dynamic
Optimistic	2.00	2.09	Pessimistic
Quiet	3.24	3.89	Exuberant
Responsible	3.31	3.59	Independent
Playful	3.43	2.78	Serious
Modern	3.73	2.96	Traditionalist
Sociable	1.88	1.88	Unsociable
Mature	2.06	2.54	Growing
Nonconformist	3.37	2.76	Conformist
Silent	4.16	4.74	Talkative

**CONCLUSIONS**

In this study, I conducted a theoretical and practical approach of the brand evaluation, doing a case study on the Murfatlar brand. The brand evaluation is required to certify the reputation and acceptability of the brand on the market, also to check the success of the advertising campaigns. An evaluation mechanism of the brand refers to the brand personality testing. Murfatlar sought to the repositioning on the market, offering a range of products which meet the customers' evolving needs.

It is hard to say whether Murfatlar is a market leader because of this revival or because of the older name or whether the former harms the latter (or rather they complement each other). But it is easy to see that the "new fashion" is taken also by other major Romanian wines, but not as aggressive and impressive as the one done by Murfatlar.

We think that the researches on the brand personality must become a habit within the evaluation processes of the Romanian brands to ensure their competitiveness in front of the foreign brands.

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## **CAUSALITY BETWEEN TOURISM EXPORTS AND TRADE OPENNESS: EMPIRICAL ANALYSIS FOR ROMANIAN TOURISM\***

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**Abstract:** This study investigates the causal relationships between tourism exports and trade openness, using the case of Romania. The study applies the unit root test, cointegration procedure and Granger causality test in vector error correction model (VECM), in the attempt to study the direction of the causalities. The results indicate one-way Granger causality, running from trade openness to tourism exports in the case of Romania.

**JEL classification:** L83, R15

**Key words:** tourism, cointegration, VECM, trade openness, exports

### **1. INTRODUCTION**

Tourism is one of the most dynamic sectors of the world economy which helps various destinations in sustaining economic development and diversification of social communities. The academic literature mainly focused on the tourism demand modeling, in the attempt to forecast the tourist flows, including income, prices, exchange rates, population, distance as determinants of tourism. In the recent years, trade relationships are included, explaining the evolution of tourism demand, as it reduced the transaction costs between home and host country (Leitão, 2010). On the other hand, tourism activities may also support trade, generating various commercial opportunities. Consequently, the question raised relates to the causality relationships between tourism and trade, if international tourism sustains international trade or vice-versa international trade promotes international tourism.

The empirical investigations of the relationship tourism-trade indicated that international trade has a significant role in the evolution of foreign tourism demand. Keum (2010) defines tourism flows as a transnational movement of humans, while international trade represents the transnational flow of merchandise.

Shan and Wilson (2001) investigated the causal relationships between international tourism and international trade flows and the results indicated two-way Granger causality, implying that trade flows link tourism in the case of China. The findings of Aradhyula and Tronstad (2003) suggest that tourists visits have impact on trade if associated with various firms attributes such as ages, perceived need for

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geographic diversity, foreign language fluency, firm size. Muhammad and Andrews (2008) underlined that the exports of a country positively influence the foreign tourist arrivals, while Phakdisoth and Kim (2007) concluded that bilateral trade positively correlates with tourist arrivals.

Other authors investigated the relationship between trade openness, and the results showed that it has a positive impact on international tourist flows (Habibi et al, 2009; Surugiu et al, 2011). On the other hand, Eilat and Einav (2004) suggest that international tourism is driven by unique factors of production and should not be understood in a general equilibrium trade model.

The inverse relationship, running from tourism to trade was also investigated. Tourism promotes cross-border exports, stimulating entrepreneurial activities (Gil-Alana and Fischer, 2007). Sinclair and Tsegaye (1990) emphasized that tourism did not bring about a significant decrease in the instability of export earnings of most of the developing and industrialized countries.

The question raising is there is a causality relationship between international tourism and trade openness. Considering the previous empirical results, investigating the relationship between tourism and trade, the previous paper aims to test the export-led growth hypothesis (ELGH) addressed to Romania case study. The rest of the paper is organized as follows. The second section presents the analytical research methods in tourism sector. The third section presents the methodology and data used to investigate the relationship between tourism and trade openness. The forth section analyses the long-run relationship between tourism export and trade openness. The last section concludes the paper.

## **2. ANALYTICAL RESEARCH METHODS IN TOURISM SECTOR AND HYPOTHESES FORMULATION**

Leonardo da Vinci once said that *experience does not err, only your judgments err by expecting from her what is not in her power*. Sometimes, it is difficult to interpret figures, especially the experience is missing and the researcher tends to judge a phenomenon without taking into consideration local specificity or he is not familiar with the field.

In the recent years, the instruments measuring tourism impact became more sophisticated, Hara (2008) arguing that in tourism analysis, the statistical or stochastic methodologies are predominant. Sinclair et al (2003) underline that more recent papers developed advanced econometric methods, and included the estimation of system of equations models. Hara (2008) classifies the analytical research methods for hospitality and tourism as follows:

- 1) Quantitative methods
  - (a) Stochastic methods:
    - (i) statistical methods group,
    - (ii) time-series (extrapolative),
    - (iii) regression (causal and others),
    - (iv) econometrics (causal)
  - (b) Nonstochastic (deterministic) methods:
    - (i) gravity models;
    - (ii) Input-Output Analysis (IOA): IO structure remains the core of other models such as SAM and CGE or even TSA framework;
    - (iii) Social Accounting Matrix (SAM);

- (iv) Computable General Equilibrium (CGE);
- (v) Tourism Satellite Account (TSA) - is not exactly the method rather an applied technique to capture tourism as an industry.

2) Qualitative methods (Delphi and others).

Econometric and statistical models caught a great deal of attention from the academia. Especially the econometric models became more used by the economists and consequently by tourism experts. Econometric is similar to regression and statistical models, but the difference come from the fact that econometricians tend to face more problems with violations of various assumptions used in the statistical environment (Hara, 2008).

In order to avoid the so-called ‘spurious regressions’, the researchers used the cointegration analysis which offer the advantage of using a large volume of information and offering results regarding the short-run and long-run causalities (Lee and Chang, 2008).

In the case of tourism, the expenditures of foreign tourists are significantly important in terms of revenues for both economic agents and government. Moreover, tourism has an indirect contribution generated by the commercial flows and it straightens the bilateral trade relationships between countries and diversification of exports. On the other hand, tourism expansion may be sustained by the previous commercial relationships between countries, the exports positively contributing to tourism growth through different means. International tourism is considered an uncommon type of export, because of the place of consumption, the consumer being the one who moves instead of the product (Cortes-Jimenez and Pulina, 2010).

International tourism is an invisible export, having a stabilizing effect on total exports of a country (Vanhove, 2005), and creating a flow of foreign currency (Archer et al., 2005). Ennew (2003) argues that tourism development reduces a country’s dependence on primary commodities (i.e. rubber, minerals), particularly exported abroad.

The present paper aims to test the export-led growth hypothesis (ELGH) addressed to Romania case study. In order to develop the specific empirical analysis, a set of hypotheses were formulated, as follows:

- Hypothesis 1: There is a long-run relationship between tourism exports and trade openness;
- Hypothesis 2: Tourism exports sustain trade openness;
- Hypothesis 3: Trade openness sustains tourism exports;
- Hypothesis 4: There is a bidirectional relationship between tourism exports and trade openness.

These hypotheses remain unverified for the case of Romanian tourism, the question of whether tourism exports increase sustains trade openness or vice versa, trade openness boost tourism exports.

### **3. METHODOLOGY AND DATA DESCRIPTION**

In this paper the non-stationarity of the time series is tested, and the unit root tests are employed, respectively the Augmented Dickey-Fuller (ADF), Dickey-Fuller (DF) (1979, 1981) and Phillips and Perron (PP) (1988) tests, which can be performed on the levels and/or on the first differences of the used variables, in the analysis an autoregressive model being used. The null hypothesis for these tests is related to the existence of a unit root.

The possible existence of the cointegration must be also analyzed when testing hypotheses related to the relationship between variables, and this can be done by conducting the Johansen cointegration test (1988). Two or more non-stationary series may be stationary, and if such a stationary linear combination exists, the non-stationary time series are said to be cointegrated (Engle and Granger, 1987).

The analysis from this paper is based on Vector Error Correction Model (VECM), which can help to understand the nature of the non-stationarity among the different component series, this method adding to the multi-factor model features of error correction. The VECM characterize the short-run dynamics (Schubert et al, 2011), and shows how the variables come back to the equilibrium after a shock (Brida et al, 2008, 2010), and the VECM equation is written as follows:

$$\Delta y_{1,t} = \alpha_1(y_{2,t-1} - \beta y_{1,t-1}) + \varepsilon_{1,t} \quad (1)$$

A VECM approach is adopted in the investigation, the VECM being a restricted vector autoregressive (VAR) designed for the use with non-stationary series which are cointegrated. Finally, the impact of various shocks on endogenous variable through the orthogonalized and the accumulated impulse-response of the output to Cholesky one S.D. exogenous variable innovation were displayed.

The variables used in the econometric analysis were visitor exports and trade openness over the period 1990-2009, which are further described in Table 1.

**Table 1.** Description of the selected variables

Variables	Description of the variable	Period	Source
LEXP_2011US	Logarithm of Visitor Exports (US\$ bn),	1990-2009	World Travel & Tourism Council
I	Imports of goods and services, US constant prices	1990-2009	World Bank
E	Exports of goods and services, US constant prices	1990-2009	World Bank
LTO	Logarithm of Trade openness, where:	1990-2009	World Bank
	$TradeOpenness = \frac{I + E}{GDP}$		

**Note:**

\*Calculated from nominal exchange rates and CPIs;

\*\* Internal tourism consumption = Visitor exports + Domestic expenditure + Government individual spending (according to WTTC methodology); L –Natural logarithm

Source: authors' estimations

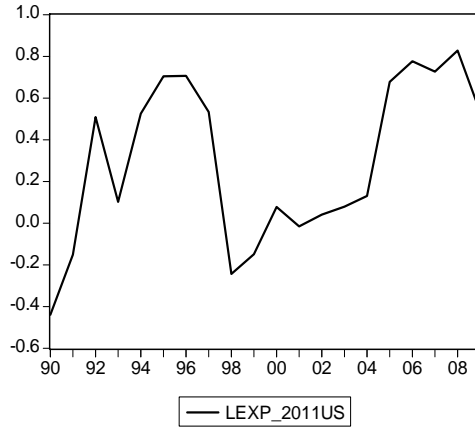
Visitor exports are a key component of the direct contribution of Travel and Tourism. Over the analyzed period, the visitor exports registered an oscillatory evolution, with growth and decrease rates, respectively during 1995-1998 period. Romania is expected to generate in 2009 USD 1.701 bn in visitor exports (foreign visitor spending, including spending on transportation), decreasing from USD 2.288 bn in 2008, by 25.6% (see Figure 1). The trade openness registered a positive evolution during the period 1990-2009, which is expected to positively influence the tourism sector (see Figure 2).

The model developed in this paper uses the hypotheses of previous researches (i.e. Shan and Wilson, 2001; Aradhyula and Tronstad, 2003; Leitão, 2010; Surugiu et al, 2011) further tested using cointegration techniques. As stated, the data and visitor exports, trade openness, over the period 1990-2009. Because of limited



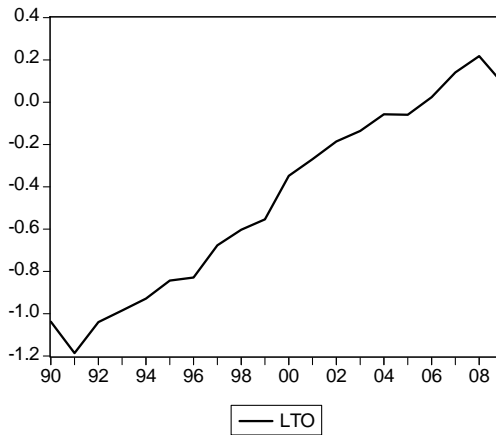
availability of the data on imports and exports, tourism openness was estimated starting with 1990. These variables used in the empirical analysis are expressed in natural logarithm for the interpretation of the coefficients as elasticity.

$$y_t = (LEXP\_2011US_t, LTO_t) \quad (2)$$



Source: authors' representation using WTTC data

**Figure 1. The evolution of the Visitor Exports, 1990-2009 period**



Source: authors' representation using WB data

**Figure 2. The evolution of the trade openness, 1990-2009 period**

Consider a bivariate VECM among EXP\_2011US and LTO, which in its most general form can be written as follows:

$$\begin{bmatrix} \Delta EXP\_2011US \\ \Delta LTO \end{bmatrix} = \begin{bmatrix} \phi_{10,t} \\ \phi_{20,t} \end{bmatrix} + \begin{bmatrix} \gamma_{1,t} \\ \gamma_{2,t} \end{bmatrix} ECT_{t-1} + \sum_{j=1}^p \begin{bmatrix} \phi_{11,t}^{(j)} & \phi_{12,t}^{(j)} \\ \phi_{21,t}^{(j)} & \phi_{22,t}^{(j)} \end{bmatrix} \begin{bmatrix} \Delta EXP\_2011US_{t-j} \\ \Delta LTO_{t-j} \end{bmatrix} + \begin{bmatrix} \varepsilon_{1t} \\ \varepsilon_{2t} \end{bmatrix} \quad (3)$$

where the error correction coefficients  $\gamma_{1,t}$ ,  $\gamma_{2,t}$  and  $\gamma_{3,t}$  are also time varying,  $\Delta$  is the first difference operator,  $ECT_{t-1}$  is the one period error correction term derived from the long-run cointegration equation,  $\varepsilon_{it}$  are the residual.

#### 4. ANALYSES OF THE LONG – RUN RELATIONSHIP BETWEEN TOURISM EXPORT AND TRADE OPENNESS

This section aims to analyze the long-run relationship between tourism exports and trade openness applying unit roots tests and cointegration procedure. The second step is to apply VECM in the case of a cointegration vector between variables.

The null hypothesis of one unit root cannot be rejected in levels of variables LTO and LEXP\_2011US, but is rejected in their first differences, both analyzed variables being integrated of order one, I(1). The results of the ADF, AD and PP tests are displayed in Table 2.

**Table 2.** Tests of hypotheses of nonstationarity of selected variables

Variables	Augmented Dickey–Fuller (ADF)	Dickey–Fuller GLS (AD)	Phillips-Perron (PP)
LTO	-0.476 (3)	-1.144 (3)	-0.428
LEXP_2011US	-2.515 (3)	-2.128 (3)	-2.535
First difference			
Δ LTO	-5.685 (3)***	-3.200 (3)***	-5.815***
Δ LEXP_2011US	-4.193 (3)***	-4.299 (3)***	-4.192 ***

**Note:**

Δ indicates the first differencing of the variable;

\*\*\* - the null hypothesis can be rejected at the 1% level; The ADF, AD and PP test equations include an intercept. The optimal lags selected for the ADF and AD tests based on the Schwarzs information criterion are in parentheses.

*Source: authors' estimations*

Given that integration of the two series is of the same order, we continued to test whether the two series are cointegrated over the sample period. The Johansen cointegration test indicated one cointegration equation between LTO and LEXP\_2011US at 5% level, for both Trace statistic and Max-Eigen value statistic, respectively, confirming the hypothesis 5 of the study (see Table 3).

**Table 3. Unrestricted Cointegration Rank Test**

Trend assumption: Linear deterministic trend		
Hypothesized No. of CE(s)	Trace Statistic	Max-Eigen value Statistic
Selected variables : LTO, LEXP_2011US		
Lags interval (in first differences): 1 to 3		
$r = 0$	16.946*	15.110*
$r \leq 1$	1.837	1.837

**Note:**

r is the number of cointegrating relations; the symbol \* indicate that the null can be rejected at the 5% level.

*Source: authors' estimations*

The results in Table 4 of the Granger Causality testing for weak exogeneity of the variables indicate that the causality runs from trade openness to visitor exports, confirming the hypothesis 3 and rejecting the hypotheses 2 and 4. The test of weak exogeneity indicates that we can consider LTO as weakly exogenous variables at the 5% significance level. This feedback effect is not unexpected as the largest number of foreign tourists came from the trade-partner countries (i.e. Germany, Italy, France). This is in line with the previous findings of Turner and Witt (2001), Eilat and Einav (2004), Phakdisoth and Kim (2007), Habibi et al (2009), Leitão (2010).

The long-run estimated equation between LTO and LEXP\_2011US is displayed below. The elasticity of visitor exports with respect to trade openness is 0.083. It means that increasing trade openness by 100% produces an increase of more than 8.3% of the Romanian visitor exports.

$$LEXP\_2011US = 0.388 + 0.083 * LTO \quad (4)$$

**Table 4. VEC Granger Causality/Block Exogeneity Wald Tests**

Dependent variable	$\Delta LTO$	$\Delta LEXP\_2011US$	All
$\Delta LTO$	-	0.122	0.122
$\Delta LEXP\_2011US$	6.021**	-	6.021**

*Note:*

\*\* indicate the significance of the relevant variable considering 5% probability value against the null hypothesis, where p-values correspond to the Chi-square distribution with 3 degree of freedom

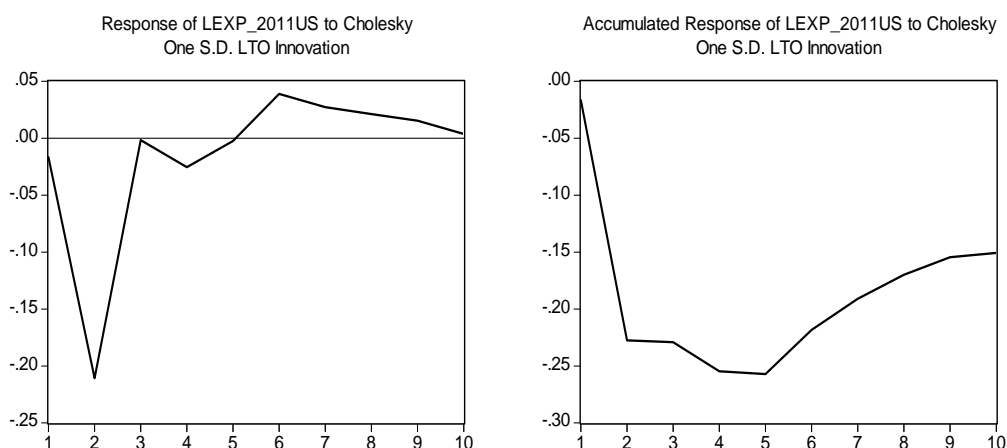
*Source: authors' estimations*

VECM estimations are given by the equation below, where the coefficient for speed of adjustment of visitor exports is -0.504.

$$\begin{aligned} \Delta LEXP\_2011US = & -0.504 * (LEXP\_2011US_{t-1} - 0.083 * LTO_{t-1} - 0.388) + \\ & 0.261 * \Delta LEXP\_2011US_{t-1} + 0.212 * \Delta LEXP\_2011US_{t-2} \\ & - 2.655 * \Delta LTO_{t-1} + 0.864 * \Delta LTO_{t-2} + 0.131 \end{aligned} \quad (5)$$

$$R^2 = 0.486$$

In addition, we study the impulse response functions of visitor exports to a shock in trade openness. We examine the effects of LTO on LEXP\_2011US using both the orthogonalised impulse-response functions and accumulated responses. Figure 3 show that the tourism exports respond negatively to a shock in trade openness, but after year five, the response became positive (see Figure 3).



**Figure 3. Impulse Response Functions of LEXP\_2011US**

Previous results are important for the decision-makers and policy-makers in tourism to consider developing new basin of tourism demand in those countries with which Romania has strong commercial relationships. In order to attract foreign tourists

and to become a competitive destination on the international tourism market, it is important to promote Romanian tourism offer on Germany, Italy, Hungary, United States of America etc. and to sustain Romanian tourism brand particularly on these markets.

## **5. CONCLUSIONS**

This paper empirically investigated the long-run co-movements and the causal relationships between tourism exports and trade openness, measured as the ratio between import plus exports and gross domestic product. The results indicated that the selected series of data are non-stationary and Johansen cointegration test identified one cointegration equation at 5% level of significance. Consequently, we continued the investigation and the Granger Causality testing for weak exogeneity of the variables indicate that the causality runs from trade openness to visitor exports. The results of the paper confirm export-led growth hypothesis for the case of Romania.

We also study how tourism exports respond over time to shocks in trade openness. A positive shock to the trade openness, however, has a positive effect on tourism exports, after a 'stabilization period'.

In theory, trade openness can facilitate the use of cheaper and good quality local products (especially traditional agriculture products) instead the imported products with lower quality, thus supporting the local tourism sector from Romania, and thereby augmenting competitiveness. Nevertheless, trade openness can improve or harm tourism competitiveness, and that is why it is important to develop first an empirical analysis, before concluding on this issue. In our study the results of the investigation show first a negative influence on tourism sector, which is changing into a positive one after a certain period of time (in our case, five years). Thus, on long run, trade openness appears to be beneficial to tourism sector, improving the competitiveness and turning the tourism sector from Romania into a stronger one, capable to satisfy the increasing demands of tourists which are searching unique and nature-related experiences, and various eco-products and services.

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## **ENSURING COMPETITIVE ADVANTAGE IN SMEs IN THE CONSTRUCTION INDUSTRY IN ROMANIA THROUGH TECHNOLOGICAL INNOVATION**

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**Abstract:** During the current construction firms operating in a competitive environment internally and externally powerful. Confrontation between markets is particularly harsh, and that competition should be seen in its actual size, since only in this way will be able to take all necessary measures to ensure security and development of firms. To remain competitive in a globalized economy, it is essential for firms to invest in research, development and innovation. This is the best strategy to overcome the crisis. This paper describes some important links between the competitive advantage and technological innovation. I will focus not on specific technologies or how to drive research and development, but the means to recognize and exploit the competitive significance that involves technological innovation.

**JEL classification:** M10, M21, O32

**Keywords:** competitiveness, innovation, construction industries, strategy, competitive advantage, SMEs.

### **1. INTRODUCTION**

Competitive advantage is central point to the performance of a firm on competitive markets. But after several decades of vigorous expansion and prosperity, many companies have lost sight of competitive advantage in their struggle for growth and diversification. Today, the importance of competitive advantage can hardly be underestimated.

By assign achieve competitive advantage by a firm of superior products or services from a consumer point of view significantly compared to similar offerings of most competitors (Nicolescu, Verboncu, 1999).

SMEs in the construction industry in Romania is facing slower growth and competitive pressure forces them to seek permanent solutions that allow a better market position, a policy that is the essential condition for the existence of the company.

Beginning with the second half of 2008, on background of crisis, the construction industry was also strongly affected by changes. Managers in construction and real estate market players look with prudence and concern the future also, they are have revised growth forecasts for the coming years.

It is clear to everyone that has slowed the growth of construction sector and the continuing downturn in 2011.

Therefore, to survive in the marketplace and resist to competing firms, construction companies must have at one stage to another more strategic action, improve or adapt their strategy to start.

Consider that technological innovation is one of the main driving forces of competition. It is also a great equalizing factor, eroding the competitive advantage of firms even better fortified and propelling them to others. Many large companies today have developed through technological innovations that have been able to exploit them. Of all the things that can change the rules of competition, technological innovation are among the most prominent.

Innovation can be achieved by converting new knowledge into economic and social benefits as a result of complex interactions between multiple actors within a system consisting of an environment (local, national, regional) that contains companies, institutes research funders, and networks that they all come into contact.

Any business requires a large number of technologies. Everything that a business requires a certain type of technology, even if it seemed that one or more of the dominant technologies or production process. A technology is important for competition only if significantly affect the advantage of firm or sector structure.

## **2. ANALYSIS OF THE COMPETITIVE ADVANTAGES OF SMEs IN THE CONSTRUCTION INDUSTRY**

Given that the competitive advantage that firms and create it for the market makes a decisive performance and their functionality is particularly important in highlighting the main competitive advantages that the makers of SMEs have to believe that their competition. According to survey results (Nicolescu, 2010), 51.45% of entrepreneurs indicated as competitive advantage-value ratio, 49.09% - Quality of products / services; 31.78% - the lower price of products / services; 17.10% - quality employees, 9.76% - company reputation, 6.67% - the distribution channels used, 5.45% - after-sales services to customers; 3.43% - the quality management practices; 2.36% - relations with the political environment and economically, and only 1.82% indicated that the main competitive advantage in innovation.

It appears that most SMEs are oriented differentiation through quality of products / services provided and / or to their marketing at prices more affordable for customers. But lately, have appeared more and more external factors that require innovation like: the urgent need to develop or even maintain market position of the firm, market demand to diversify production, competition, the obligation to align at regulations required by government, legislation, social demands. Therefore we must pay special attention innovation, most notably technology, which has an important role in developing the productive forces of society and gain competitive advantage.

Analyzing SMEs, on activity sector shows the following (see Table 1):

- regarding the relationship between price and quality of products / services provided, the highest percentage is recorded for transport companies (62.34%) and lowest by construction enterprises (43.96%);

- competitiveness, generated by distribution channels used, was recorded in highest proportion of firms operating in the construction industry (8.79%);

- the highest percentage on the competitive advantage of after-sales service is registered in construction businesses (6.59%) and lowest by transport companies (1.30%);

- quality of employees has been shown in higher proportion in the service companies (22.54%) and lower in construction companies (6.59%);

- relationships with political and economic environment represent a competitive advantage in a bigger measure for construction companies (4.40%) and lowest for those in transport (1.30%);



- if we consider the company's reputation, is observed a higher percentage for companies in the construction sector (12.09%) and smaller for firms in carriers sector (5.19%).

**Table 1. Differentiation of competitive advantage of SMEs by field of activity**

Competitive Advantage	SME-s by activity sectors (%)					
	Industry	Constructions	Trade	Tourism	Transport	Services
<b>The low price of products/ services</b>	30.27	26.37	35.01	42.02	32.47	24.76
<b>Quality of products/ services</b>	48.66	51.65	48.85	37.82	61.04	51.75
<b>Price-quality ratio</b>	49.04	43.96	51.78	52.94	62.34	49.21
<b>Distribution channels used</b>	6.51	8.79	5.87	7.56	1.30	4.76
<b>Post-sales customer services</b>	6.13	6.59	6.50	2.52	1.30	5.08
<b>Quality of employees</b>	8.81	6.59	15.51	20.17	12.99	22.54
Relationship with political and economic environment	1.53	4.40	1.47	1.68	1.30	2.54
Quality of applied management	6.51	3.30	2.31	3.36	3.90	3.81
Company reputation	10.34	12.09	8.18	5.88	5.19	9.52
<b>Innovation capacity</b>	2.68	1.10	1.26	0.00	0.00	3.81

*Source: White Book on SMEs in Romania 2010*

As shown in Table 1, the lowest percentage in terms of competitive advantage to companies in the construction sector it is innovation that represents a rate of 1.10%. But, I consider that in this difficult period, having a competitive advantage based on technological innovation by firms in the constructions sector is an important trump.

### **3. MOTIVATION OF TECHNOLOGICAL INNOVATION IN CONSTRUCTION INDUSTRIES**

SMEs in the construction industry in Romania are facing competition from increasingly powerful and are therefore forced to try all possible alternatives in order to surpass the competition and gain a market advantage.

In my opinion, the main source for obtaining competitive advantage is technological innovation. This is the way to reduce labor costs, energy costs and raw materials. Do not forget that the differentiation strategy is based, practically always, by an element of innovation.

In the construction sector the main motivations of innovation in this field are of great importance, as follows:

- *introduce new technical regulations* (Leonardo Da Vinci-Proiect pilot RO/98/2/06169/PI/11C/FPC, 2000) and product requirements in November referred to, which translates into an urgent requirement to improve performance products aimed at that the level of stringency required.

Harmonization of regulations is done mainly through two ways: European standards and European technical approvals respectively.

Their application brings that work to improve performance of products for the new requirements will be met.

Between technical regulations followed by technological innovations can be listed those on energy conservation, pollution, fire protection, security facilities etc.

- *Computer technology* offers a huge potential to deal effectively and timely to the large amount of information that is used to deal effectively and timely to the large amount of information is used and is produced in a construction project, the planning and design stage to the construction and maintenance during use, and the resultant structure. The organization, format and presentation of such material are changing along with the widespread use and further development of digital information quickly replacing the traditional method of collecting records, plans and documentation on paper.

Thus, software packages offer the possibility to increase the speed, efficiency and accuracy of work. Applications in modern electronics and information technology have progressed and expanded continuously in all sectors of the construction industry. International tests aimed at developing ways to improve the circulation of information in the construction and to make proposals for the organization, management and use of all relevant information in this area.

- *The attitude of manufacturers of materials and technical means.* Their objective is to increase or even to preserve their share of a market and, if possible, to "conquer" new markets. To meet this requirement the manufacturer needs to increase productivity while reducing the cost and improve performance. In this context, technological innovation is a consequence of their struggle for survival in the field of competition and not to create a competitive advantage in the death of the entire construction sector. Manufacturers are oriented primarily on internal resources for technology development.

- *Application of new technologies in construction.* Among the major objectives of European construction in the area include research and development through work-development a foundation to encourage scientific and technological: transnational coordination and cooperation, creating a system to share complementary skills, the application of technological innovations leading to division technological risk.

Robotic construction has other characteristics than the industry primarily because it introduces predominant improving of working conditions and then only to increase productivity.

Intelligent building provides an environment sensitive, efficient and friendly with the organization can achieve business goals. Space and technology company are building tools that contribute to it. Intelligent buildings market is growing by passing through three stages of integration and from a collection of innovative technologies:

- building automation as is the integration of communications systems and automation of business administration;
- integrated communication with the computer, in which all communication systems and automation of business administration;
- building integrated with the computer, where all systems are fully integrated into a unified whole;
- complex architectural requirements. The concept of innovation for an architect has a different meaning than an engineer or a construction products

manufacturer. He takes on the relationship between old and new buildings as well as the conversion of existing buildings by optimizing the junction assemblies (Leonardo Da Vinci-Proiect pilot RO/98/2/06169/PI/11C/FPC, 2000).

A feature arising from imposing historical and ecological criteria, the latter having implications for inter alia the type of construction materials to be used. This creates the ban on some materials: aluminum, plastics are not biodegradable, some timber, etc.

Architects must take into account their creative design, inter alia, by:

- integrating the planning, volumetric, typology;
- construction qualities: durability, performance, price / quality ratio;
- quality of space (environment, costs, maintenance, volumes, aesthetics).

#### **4. TECHNOLOGICAL INNOVATION – THE SOURCE OF COMPETITIVE ADVANTAGE**

The eternal struggle competitive activity in any sector or industry is a competition for the benefits. Firms aim to create and maintain strategic advantage is achieved. For this, the strategy of SMEs in the construction industry should move towards creating new advantages, leading to increased customer satisfaction and the asymmetry of competitors. Doing so, may extend the advantage, simultaneous with reducing or eliminating the benefits for competitors.

The investigations carried out, I found that the success of SMEs in the global economy today is due to their innovative capacity and the flexibility they exhibit permanently.

Although investment in innovation is risky SMEs in the construction industry in Romania are willing to risk much dreaming to get a higher rate of profitability. So many businessmen and managers have increasingly begun to apply the concept of "risk and reward". Risks materialize later in the development of markets by introducing new products or improved products, improved organizational processes and business-specific technology. Obviously most advantaged firms are at the forefront of technical progress, which have become a technological advance that allows them to obtain as price or who fail to make products demanded by the market, but competition is unable to realize. Technical progress is one of the main drivers of competition. And the company uses technical progress to increase its competitiveness.

Construction companies in Romania are facing competition from increasingly powerful and are therefore forced to engage in an effort to adapt, restructure or innovation to improve especially the cost and quality.

Initiated by a firm technological innovation will lead to sustainable competitive advantage in the following conditions (Porter, 2001):

- technological innovation itself reduces cost or enhances differentiation, and the company's technological leadership is sustainable. A technological change increases the competitive advantage if it leads to lower costs or differentiation and may be protected against imitation.

- technological change driving forces moving cost or uniqueness in favor of the company. Change the value a business technology, product or change in ways that affect the value of an activity can influence the forces driving the cost or uniqueness of the activity. Therefore, even if technological change is imitated, it will lead to a competitive advantage for the company if the driving forces pushing the cost to operate the company's favor. For example, a new assembly process is more sensitive to scale

effects than the previous process will be beneficial to companies with large market share which places it first, even if competitors eventually come to adopt the technology.

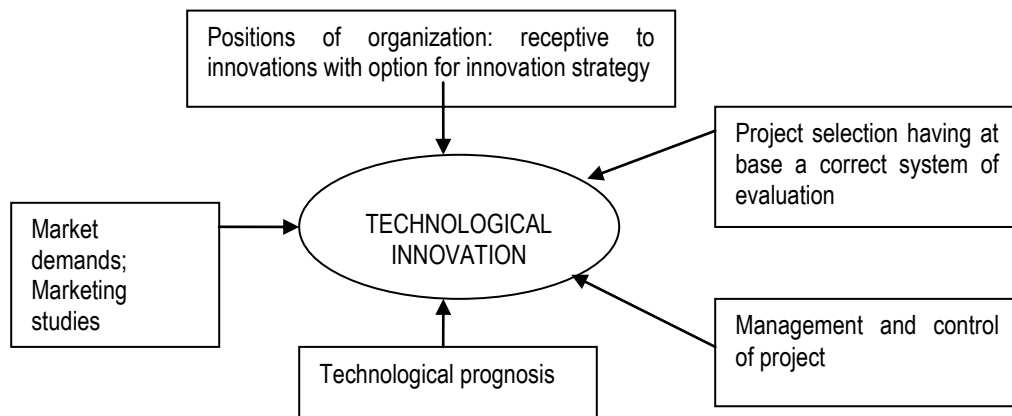
- Introduce as a developer of technological change translates into valuable and innovative First, in addition to those inherent in the technology introduced. Even if an innovation is imitated, as originator introduction may lead to a variety of innovative first possible specific advantages in terms of cost or differentiation, which remain after the technological advance of the initiator disappeared.

- Technological change improves overall industry structure. A technological change likely to improve overall industry structure is appropriate even when it can be easily copied.

Technological innovation can be: the effect of destroying radical accumulation of experience and improvement (without complete change of technology).

When asked whether it is better to seek an emerging technology or to improve a mature technology is not easily answered. Emerging technologies are most promising and research productivity is very high in their case. The major risk is the uncertainty as to their actual performance. Psychologically, it is hard to break up a technology that is well known that for years in a row, you got good results. Sometimes, the technology "old" back dramatically. To be fully involved in the acquisition of technology and competitive advantage, a company must first know exactly what technology is and especially how they respond to the objectives which it has proposed.

Technological innovation must take into account a number of factors considered successful Figure 1 each have their importance.



**Figure 1. The success factors for technological innovation**

*Source: Leonardo Da Vinci Pilot Project RO/98/2/06169/PI/11C/FPC, 2000*

I consider necessary to develop two of these factors that often are not given due attention: "Marine Technology" deals with the evolution of technologies and products.

Such technological forecasting: detecting requirements, pressures, capacities, results, integrating them in terms of need, indicating the likely level of financial support for certain research and development programs, made possible innovations forecast the shape and time scale.

Technological forecasting techniques can be technical "operation" based on an extension of the past through the present into the future. They start at the present moment, taking into account the dynamics of progress that brought us the current

position and look forward. Another technique is the "standardization" that starts from the future.

The degree of detail, time horizon, nature of the decision, the cost are some of the factors affecting the choice survey forecasting.

"Project selection" requires using a valuation technique that usually involves either a checklist of assessment criteria to be developed on: strategic objectives, political and corporate values, criteria related to marketing, research and development criteria, criteria financial criteria of production, or a system based on performance indices in which each factor is given a share - according to its importance, and each level of assessment is given a value.

I think that an enterprise to cope with very rapid changes facing must follow everything that could interest or affect it. Currently, the amount of information facing the firm is enormous, both in size in absolute terms and as diversity or number of points where it can and should be harvested.

It is a interest list for several actions to overcome any obstacles in the way of innovation: technological development perspective, the research priority orientation towards innovation, development of initial and continuous training, fostering student and research, facilitating awareness of the beneficial effects of innovation, improve innovation financing, installation of favorable taxation policy innovation, intellectual property and industrial promotion, simplification of administration in a legal and regulatory environment favorable.

## **5. CONCLUSIONS**

It is important to identifying opportunities generated by the current period of crisis: rethinking management system, business development or shift to more profitable areas of activity, gaining advantages as a result of weaker competition and lower prices of equipment or raw materials, access funding programs, preferably with external funds, so to be achieved that infusion much needed of capital so necessary today.

These are some of the existing real ways in which the Romanian society even in a slower rhythm can effectively mitigate the impact of the current economic crisis.

It should be noted that ensuring competitive advantage for SMEs in the construction industry in Romania through technological innovation is useful, only if have affect on competitors. Not every innovation is strategically beneficial, sometimes innovation worsening the competitive position of business. High technology does not guarantee profitability. Indeed, many high-tech industries are less profitable than some branches „with inferior technology" because of their unfavorable structure.

Any company may be able to anticipate change and innovate at time to qualify for competitive advantage. However, there will always be uncertainty when we have in sight the technology. The uncertainty about future technological developments is one of the main reasons that cause a company to use evolution scenarios at sartorial level, when they consider strategic options.

Do not forget that an innovation that enhances a competitive advantage of a company, can reach, eventually, to undermine the structure of sector, when innovation is imitated by other competitors.

Sitting technological innovation to the rank of main resource in construction firm, which is adopting as strategy, it will succeed in creating an overall advantage over competitors by increasing the competence, requires implicitly to increased cooperation

between universities, research centers and companies because this is one of the main ways of access to new technology.

The conclusion is that good economic results are obtained only if the activities related to new technology are launched at opportune moment.

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## **FORMS OF YOUTH TRAVEL**

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**Abstract:** Taking into account the suite of motivation that youth has when practicing tourism, it can be said that the youth travel takes highly diverse forms. These forms are educational tourism, volunteer programs and “work and travel”, cultural exchanges or sports tourism and adventure travel. In this article, we identified and analyzed in detail the main forms of youth travel both internationally and in Romania. We also illustrated for each form of tourism the specific tourism products targeting young people and their preferred destinations.

**JEL classification:** L80, L83

**Key words:** youth travel, forms of tourism, educational tourism, adventure travel.

In general, just like tourism, youth travel takes many forms determined by the extremely varied motivations of young people. The following forms are among the most known: educational tourism, volunteer programs, “work and travel” programs, cultural exchanges, sports tourism and adventure travel.

### **SPECIFIC FORMS OF YOUTH TRAVEL**

**Educational tourism** aims to improve the education process, to enrich the educational experiences by offering scholarships abroad, travel packages that include camps, trips, foreign language courses for any knowledge level, including training in any field (medical, legal, tourism, management, etc.) or any category of interest (fashion, design, arts, theatre, dance, etc.). Educational tourism also includes *summer schools* organized at pre-university and university levels, and theme camps organized at national and international levels.

The offer of travel packages is extremely varied and includes programs for children and youth, as well as for their parents and grandparents, for pupils, students, postgraduate students, PhD candidates, young employees, and provides academic studies and preparation programs for admission to prestigious universities all over the world, as well as integration within an interactive, highly qualified environment and international recognition of completed courses. Furthermore, the programs allow options to spend leisure time, to take part in diversely cultural and fun activities with the group of colleagues of other nationalities in attractive locations.

This form of tourism is increasingly developing in Romania also, considering the need imposed by society to know at least two foreign languages and to become familiar with various cultures.

The current form of educational tourism has evolved at the same time with the development of civilizations, the emergence of new technologies and the need to assimilate them. Afterwards, the desire for self-education outside of the school and university environment has created the premises of a new form of tourism – creative

tourism – defined as being related with participative activities in the culture of the host country through interactive workshops and informal learning experiences.

International camps are the best schools for children and youth because new information is assimilated like in a game, facilitating the learning process through similarity, imitation and repetition. The participants of these programs can be accommodated in university campuses, at families selected by the school, in student apartments or hostels and hotels, depending on age, preference and type of program. The programs include educational, social, cultural activities, sports and trips, and may be achieved through intercultural exchanges, meaning the host country will organize these programs in the country of origin of young people also.

The demand for language-learning tourism is growing (over 2% of young tourists are mainly motivated to travel to learn a foreign language and spend for these types of holidays approximately 3.300\$) and the average age of young people who travel for this purpose is declining. The average length of stay for language-learning travels is 5-6 weeks, and the trend is heading towards even longer stays. Great Britain is the most important destination for language-learning tourism, highlighting the dominance of English on the market, but new destinations have started to emerge, such as: USA, Spain, Australia, Japan, Germany, France or Brazil. The suppliers of such type of tourism services signal the existence of convergence points between the products provided by them and other sectors of youth travel, such as providing work experiences, adventure travels, cultural experiences and volunteer work.

In some countries of the world, more rigorous statistics are kept for a certain form of youth travel, namely student tourism, either because the reason of travel is to study in the country of destination or because universities keep records about the number of foreign students. Therefore, in New Zealand, the number of travels for educational purposes grew by 60% between the years 2000 and 2005, reaching over 50.000 arrivals per year<sup>48</sup>. The number of young people who travel for work during the holidays registered an increase in recent years also. The United States Department of Commerce collects statistical data about the tourism practiced by students through the “I-94 traveler” program, a program that identifies travelers, which monitors all types of visas. In 2004, the number of visas for students who came from abroad was 492.000, higher by 3.5% than in 2003 (this figure excludes students from Canada and Mexico, because they don’t need a visa to enter the United States of America).

**Volunteer programs** represent another important form of youth travel. The activity period as volunteers may vary from a few weeks to a year, during which the participant is provided with accommodation, meals, transport and pocket money. These programs don’t include work permits in the host country, because it is a voluntary activity. Young people will also benefit of language courses, health insurance, a few day off each month, etc. A recent study<sup>49</sup> shows that the volume of the volunteer global market is 1.6 million people per year, with a value between 1.7 and 2.6 billion dollars.

Youth volunteering is an important market for some countries, and the areas where it can be practiced are varied: environmental protection, arts and culture, activities with children, young people or elderly, sports and recreation.

<sup>48</sup> Jarvis, J. and Peel, V.M., Study backpackers: Australia’s short-stay international student travellers. Paper presented at the ATLAS Backpacker Research Group Meeting, Bangkok, September 2005.

<sup>49</sup> Richards, G., WYSE Work Abroad Member - Volunteer Programmes 2008, Publisher WYSE Travel Confederation, 2008.



In Romania, due to the fact that not all young people have access to an adequate education, various volunteer organizations are getting involved in organizing classes on different subjects (foreign languages, IT, environment, etc.). Thus, the Youth Action for Peace Romania association organizes with the help of its volunteers a series of free classes for disadvantaged youth that aim for young people to acquire new knowledge about languages and IT.

Volunteer camps represent opportunities to explore the potential offered by an international group of young people who work together to implement a project, to develop dialogue, to have fun and to interact with local communities.

In order to consolidate and promote politics which stimulate volunteering, the European Union declared 2001 the European Year of Volunteering.

Tourism practiced by young people with the purpose of gaining work experience, namely **“work and travel” programs**, represents a market niche that is growing continuously at global level. It is the type of tourism with the most emphasized dynamic within independent travels on the youth travel market. Most “work and travel” programs originate from youth exchanges organized in the countries that have signed partnerships of this kind, being popular in regions like North America, Western Europe and Australasia. By far, the most known destination of this type of programs is the United States of America, followed by Australia, Canada, Great Britain, France, Spain, Greece, etc. According to studies, over 7% of the global youth travel market is related, in one way or another, to working abroad, and these tourists spend an average of 3.200 \$/trip<sup>50</sup>, but over 40% of the total cost is gained by working at the destination. Most young people who participate in work & travel programs take the decision to travel and work abroad based on the information gathered from friends who have experienced such programs, and the average length of such trips is approximately 6 months. The main advantages gained by young people who participated in such programs are:

- Gaining work experience in a different cultural environment;
- Improving a foreign language;
- Establishing contacts with people from all over the world;
- Visiting other places;
- The opportunity to express freely and to have fun with other young people;
- The opportunity to earn a significant amount of money.

“Work and travel” programs are mainly aimed at young students, but also at young graduates who take “a year off” between high school and university. It is estimated that tourism practiced by youth who have a “sabbatical year” is quantified around 1-1.5 million travels per year, and most travels of this type are independently organized.

**Cultural exchanges**, as a form of youth travel, have considerable impact over the attitude of young people, inducing them the spirit of cultural tolerance and understanding, the feeling of interpersonal trust and identification with global problems. In other words, the direct benefits achieved by young people from participating in such exchanges are materialized in: the development of the ability to better understand the culture of other people, their own personality and identity, as well as the feeling of belonging to the common destiny of humanity.

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<sup>50</sup> WYSE Travel Confederation, *Work Abroad Market Barometer*, March 2009, <http://www.wyseworkabroad.org/portal/page/portal/MenuSecSiteWYSEWA/MenuResearch#WYSE%20Work%20Abroad%20Market%20Barometer%202009>

As stated, cultural exchanges among youth have started to develop immediately after the Second World War when the first organizations whose main goal was to facilitate meetings among youth of different nationalities in order to avoid future conflicts started to emerge. The factors with the biggest influence over the development of the intercultural tolerance spirit are the direct contact with young people for the local population and with other youth and the positive practical experience.

Of course, exchanges of this type are directly influenced by the objectives of the youth policies adopted by the government.

Another form of youth travel is **sports tourism and adventure travel**. These types of vacations are an important way of meeting the needs of young people to spend leisure time in an active manner, in the heart of nature. We should emphasize the importance that sports and adventure travels have in terms of shaping youth's personality, the opportunity to discover new regions, new cultures or ways of life or, simply, to achieve a rich life experience.

Adventure travel means more than moving outdoors, it means a little history, culture or contact with local communities, more so than in traditional tourism.

Adventure and sports tourism is increasingly more demanded by youth, gaining new "fashionable" destinations, but especially new activities with a high level of risk. For young people today, who seek thrills, extreme sports (at least they were extreme once) like bungee jumping, snowboarding or surfing in the ocean are not enough anymore. The most "trendy" amusements are much more dangerous, and a top of them would include on the first positions: *volcano boarding* – a type of snowboarding on an active volcano, and not on a snowy slope, *cliff jumping*, *AirKick* – young people are thrown in a pool filled with water by using a catapult, *Zorbing ball* – young people enter a giant ball and roll, etc.

The activities suggested for sports and adventure stays take into account the development of team spirit, of communication and adapting abilities by considering the specific skills of each participant.

Currently, there is a growing importance of leisure-orientated tourism activities aimed at young people with an active lifestyle, who are the partisans of original and authentic products focused, among others, on discovering nature (flora and fauna observation – bird watching, contemplating landscapes – road trips, etc.)<sup>51</sup>. Because of vast beaches, sacred mountains and eco-friendly road-trips, Southeast Asia is and will remain the number one destination for youth seeking adventure.

In addition to these forms of youth travel, there are certainly others with a bigger or lesser importance within the area of tourism.

## CONCLUSIONS

The youth travel sector has been through a rapid transformation during the last decade in terms of a series of phenomena taking place, such as: increased supply and demand, the emergence of new market segments, diversification, professionalism and greater acknowledgement of this form of tourism by the governments of various countries. The youth travel market has certain specific features, and the most important is complexity and heterogeneity in terms of the motivations of young people, which are reflected in the practice of various forms of tourism, and in terms of the supply, which is extremely diversified.

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<sup>51</sup> YTI Magazine, July 2010, [http://issuu.com/yti-magazine/docs/yti\\_june\\_2010](http://issuu.com/yti-magazine/docs/yti_june_2010)

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## EDUCATION – RESEARCH PROCESS FROM QUALITY MANAGEMENT MODELS' PERSPECTIVE

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**Abstract:** The paper focused on building a quality management model able to bring together the two main axes of higher education – education and research, and to ensure the quality continuous improvement from the perspective of the main two actors directly involved in these processes: students and professors. Based on a thorough analysis and critical views of quality management models applied in university education, the paper will develop potential steps for building a new quality model. The steps will go through analysis of universities internal and external environment using strategic management models and aiming to develop a set of strategies and strategic objectives focused on quality.

**JEL classification:** A23, M19, O15

**Key words:** academic education, quality management, quality model, strategic management, quality strategies

### 1. INTRODUCTION

Special attention was paid to the **quality or the quality movement** starting with the '70-'80. The main reason was represented by the competition among large companies. Many companies have started to search for solutions to survive by shifting their orientation from quantity to quality and customer satisfaction. A similar situation is encountered at the level of university education, from the '90, *due to continuous and rapid technological changes, the increase of costs, legislation, ways and forms of subsidy, the increasingly number of stakeholders and growing international competition in terms of students' recruitment, faculties staff abilities and competences, scientific research and its results. Once the customers of academic education are identified, it can be shown that the main objective of quality management and its models is to obtain profit as a result of satisfying the customer based on using continuous improvement strategy.*

European higher education is no longer stranger to change: for the last two decades, this sector has undergone reforms both in Western and Eastern Europe. However, starting with the early 90s, the rate of change was unprecedented, relying especially on three key aspects: the Sorbonne and Bologna Declarations (1998, 1999), their aim being to make compatible the European curricula as well as the entire European educational systems, and the Lisbon Strategy (2000), which aims at reform the still fragmented educational systems of the European states into a knowledge-based structure, more powerful and integrated. Subsequent reports have emphasized that the academic system is crucial for the welfare of Europe and, in fact, it acts as a true mean of support that brings together these key processes and strategies. Thus, the Bologna Process aimed to define the European Higher Education Area until 2010. While each

signatory country has interpreted the declaration in its own way and style, the process has registered a high growth, oriented toward a purpose and a much broader scope. Turning towards the reform of curricular programs on a structure with three cycles "license-master-doctoral degree", the Bologna process has generated concerns about comparability that led to the necessity of ensuring quality, accreditation and a certain degree of recognition, as certified by the Berlin Communiqué (2003).

The data of Bologna Process was later supplemented by explicit mention of *the importance of research as basis for the academic education that is involved in economic and cultural development of society and social cohesion*.

From these perspectives, quality management and quality continuous improvement must be assessed using models that are based on internationally accepted frames of work, such as ISO 9000, EFQM Excellence Model, Malcolm Baldrige Award, etc. While writing the paper, the study of literature and the referential assumptions, built the argument that distinction can be also made between national models of quality assessment and the ones chosen by each university separately.

## **2. OBJECTIVES**

Often, an academic institution adopts a certain frame of reference for better matching the requirements imposed by the national approved bodies: Ministries of Education, accreditation institutions, etc. This is the situation in the case of Romanian universities, although there have been initiatives on introducing specific models of quality-oriented education – Programs' Assessment Model). Over the time, a large number of universities applied quality management models designed and developed for industry, generating both benefits in quality management as well as some disadvantages related to the application and the relevance of these models from the higher education's point of view.

The quality management models universally accepted and implemented by universities are:

1. The most frequently used model is **Total Quality Management (TQM)** defined as *an organization's managerial approach, focused on quality, based on the participation of all its members and pursuing long-term success through customer's satisfaction and obtaining of benefits by all members of the organization and society*. As this definition implies, TQM has the potential to include the perspectives of different stakeholders in an integrated manner, thus a comprehensive approach directed towards continuous improvement of quality management being constituted;
2. **EFQM Excellence Model** is a non-prescriptive instrument which establishes the criteria that any organization in pursuit of excellence can implement, requiring the identification of those who make performance possible;
3. **Balanced Scorecard** represents a strategic management and performance system built on four dimensions (finance, customer, internal process, learning), which requires the identification of performance indicators;
4. **Malcolm Baldrige Award** was designed and created as a structure that seeks the achievement of excellence through improved performance in terms of seven criteria (leadership; strategic planning; orientation towards market and customer; knowledge management; evaluation and analysis; human resource orientation; process's management; results);

5. **ISO 9000 standards** is a set of international standards for quality systems, targeting the continuous improvement through preventive actions;
6. **Business Process Reengineering** is a program that redesigns processes, systems and structures to achieve performance;
7. **SERVQUAL** was envisioned as a tool to evaluate customer requirements in terms of services' quality based on five dimensions (reliability, clarity, commitment, trust, identification of losses).

The EFQM, Balanced Scorecard, ISO 9000 models have entered into competition with TQM, and are focused on the systematic development of processes necessary to achieve measurable quality outcomes. All models presented are applicable either at the institutional level or at the level of faculty / department and were tested on at least two or three global environments. Despite their differences, a key feature of all these models is the necessity to evaluate their own contents compared with the predefined criteria. Testing these models has identified both the advantages and disadvantages of their application at the level of academic institutions.

The common advantages of the above models consists in the adoption by institutions or departments of a strategic approach to evaluation and quality management as well as in facilitating the identification of priorities for the quality's improvement. Also, these models include the perspective of students, seen as the clients, as an important element considering the current competitive market environment. As specific advantages we can mention:

1. TQM model is associated with the improvement of services offered to clients;
2. Balanced Scorecard aims to improve the financial activities, the allocation of resources and the bonus system;
3. ISO 9000 has brought improvements at the level of working conditions between departments and students' registration.

However, these advantages must be reconciled with a number of disadvantages related largely to the controversy generated by implementing the business models in the academic:

1. the bureaucratic structures within higher education institutions and a lack of effective leadership undermines the application of these models that relies on a team approach, providing a questionable character to the traditional independent role of professors.
2. inherent difficulties in quantifying the outputs of academic education process in order to self-evaluate;
3. lower applicability in the evaluation of research, teaching or learning processes' quality than in the assessment of services and management functions within higher education institutions.

Based on current controversies about the role of student as client or as a co-partner in the university education system, the only industrial-based model that treats the student as primary client and beneficiary of qualitative education is SERVQUAL, being focused on providing quality from a consumer's perspective. This represents the transition to a higher level, with a particular emphasis on evaluation and management of quality university education. Subsequently, efforts were made to create models of quality management that reflect the unique characteristics of university education and the importance of students learning ability. New models of university education quality management are: The Quality Management in higher education, Excellence Model, Academic Award Model, The Quality Assessment of student's degree of knowledge

and learning outcomes, Multiple models of Quality in Education, Performance Indicators for university departments, Internal Audit, The Dimensions of Quality Framework, Programs Evaluation Model, Subject Quality Assurance System, ISO-based TQM Model, Model in five phases the implementation of TQM.

While some of these models recognize the importance of the student's learning ability as the main indicator in quality management programs, others contain a different set of quality criteria (organizational capacity, management culture, a systemic vision of university education). *However, none of the models of quality management in university education brings in a whole the two dimensions: the educational process and the research process, and this are actually the premises of this paper.* Since university education sector should be designed and managed in close liaison with managerial and economic reasons, through the paper was considered that only by maintaining and continuously improving the quality of student's learning will be achieved the society's imperatives. This raises the issue of re-evaluation of current approaches to quality management of university education, since the purpose of higher education institutions must be to determine how to provide quality education. Thus, through the paper and the potential model that will be developed following the steps tracks the aim will be to turn the quality management into a management for quality, and the quality of educational and research processes will be the central point of any management program for quality.

### **3. METHODOLOGY**

The research methodology used for designing and developing the model will be based on a multidisciplinary approach, along with the scientific study based on national and international literature and empirical data. The phasing of the model development was made taking into consideration, on one hand, the correct dosage of effort and the guarantee of the information flow for the proper conduct of activities, and on the other hand, the correlation of activities with the specific foresight methodologies needed for achieving specific objectives. The stages of the scientific research methodology that must be followed within the model approach are structured as follows: 1. choosing the research topic, 2. scientific documentation, 3. explaining the phenomenon; 4. capitalization of research.

While choosing the research topic, its importance and timeliness must continuously be kept on mind, since it is targeting the quality management and continuous improvement in academic education. The research topic is the analysis and evaluation of quality management models currently applied in universities and the quality management techniques and instruments used in university education as the basis for quality strategies. The principles for choosing this topic were based on a set of criteria, such as: degree of knowledge on the field, ensuring the use of the researchers' creative potential; theoretical and practical timeliness of the research; the necessity of meeting the deadline.

In the stage of scientific documentation, there will be gathered information and considered the main concepts, theories, models and trends manifested in higher education's quality management nationally and internationally in order to establish the viability of current quality strategies.

*The scientific and theoretical support* must be complex and comprehensive, including papers on strategic management, quality management, quality models, etc.

To explain the economic phenomenon will undergo through two sub-stages: the hypothesis formulation (constructive creative moment); verification of the scientific findings and hypothesis (critical moment). In this approach, hypotheses on the impact of the factors of influence – internal and external - on higher education institutions' quality must be formulated in order to correlate them with quality strategies. As logical processes for the analysis and formulation of hypotheses, there will be used the combined process of consistency and difference (to make a correlation between international developments in university education in the field of quality management and the prospects of its adaptation nationwide – later labeled objective OS1) as well as the process of interferences by analogy (by determining the correlation between strategic objectives and the possibilities of model's implementation - later labeled objective OS3). The research methodology used will be based on two types of research: quantitative research and qualitative research. The qualitative research will analyze the causes and the functional mechanisms of the discussed phenomena.

The methodology of investigation involves the general approaches of notion, content, classification in order to determine the specific characteristics of different models of quality management and selection of a group of models with a high degree of compliance and adaptation to the evolution of academic education in Romania.

For researches conducting, several methods, techniques and instruments will be used such as: typology, grouping, analysis, synthesis, extrapolation, allocation, deduction, and direct observation, interviews with representatives of universities within the objectives OS1, OSC1, OS2, OSC2 and OSC3.

Quantitative research will highlight the size of causes' influences and will be based on an analysis of internal and external environment of universities built using strategic management matrix (objective OSC2). Quantitative measurement methods used will be: correlation and regression methods (objective OS1); operational research (OS2 and OS4); management and decision problems (OS3 and OSC3). Starting from the two-dimensional coordinates: education-research, the objective will be the development of a model of quality management and continuous improvement for academic education.

The design of an IT platform will enable collaborative work, documentation, communication, carrying out specific activities (Delphi survey, virtual panels) including management activities (planning, decision making and implementation, monitoring, reporting). The platform adopted will provide the interface for communication with the external environment and will be an essential research tool. In implementing the model, specific instruments will be adopted in analyzing the current situations, in the establishment of visions, in the elaboration of scenarios and proposals of action plans. These techniques of structured consultation will be used: Brainstorming, SWOT analysis, STEEPV, expert panels, Delphi surveys, Road mapping at the level of the following objectives (OS3, OS4, OSC3, OSC4 and OSC5).

#### **4. ANALYSES**

Anchored in the realities of economic, social, technological and political environment, academic education has to define its own space and all connections with everything representing internal and external clients. As has been demonstrated over the last two decades, the academic education must accept the conventional image, made famous by industry, of a quality management applied to the entire institution and led by the enthusiasm and awareness of the higher levels. Given that, originally, the



education's quality systems were not able to guarantee and engage transformative teaching and learning activities, while through the new model and its objectives, the universities will be placed in the position of true practitioners of quality management and of its continuous improvement. Thus, the entire system of higher education will contribute to the practical application of knowledge-based society concept as a specific trend of European scientific and educational development.

The main objective of the research (OP) will be the management and continuous improvement of quality based on a model that aims at achieving quality strategies' goals.

**1. The research of current issues and trends in the quality management of university education at national and international level (OS1).**

The domain of academic quality management is currently characterized by anchoring in the tandem of control and quality assurance. In the context of new approaches used by universities to transfer the center of gravity from the non economic feature to the economic one, the profit maker, the shift of quality management from the orientation towards the quality of a process to *the orientation towards quality of the key stakeholders (internal clients – teaching staff and external clients - students)* is a must be. Also, emphasizing the role Juran Trilogy *quality improvement* must play as a *generating factor* of basic continuous cycle of quality management is a necessity. In Romania, a reassessment of the current situation is required, when quality management makes its presence felt in the institutions of higher education, by creating and implementing quality assurance systems, the development of quality manuals and the accreditation of specializations based on quality standards imposed by ARACIS or, sometimes, on the ISO 9001 standards. From this perspective, a common model must be developed, able to focus on continuous improvement of academic education's quality as basis for the future certifications and accreditations of quality systems.

**2. Analysis and evaluation of quality management models applied in economic education university (OS2).**

The continuous changes of internal and external environment in higher education have turned quality management into one of the main points of connection between the many processes and the stakeholders. Also, both the national and international forces are factors of change for higher education institutions. Despite progress made through research and practice, there is still no consensus on the best quality management model for university education that can be successfully implemented. *None of the quality management models currently applied does emphasize the importance of the two essential coordinates of education process: education and research. This is why the objective OS2 still acts as a logical continuation of the perspective of creating a common model of quality management based on the two dimensions badly needed - education and research.* From this point of view, a set of indicators specific for the quality in education and academic research (professional development and recognition, the internationalization of the institution, research-development and innovation, etc.) must be designed and developed, based on which it will be made a comparative analysis of specific models. Following this analysis, the models will be grouped in categories and classes, given that there is currently no such classification in the theoretical or practical field. By analyzing each category thus created, the advantages and disadvantages will be identified and the main milestones in the construction of the quality management model and continuous improvement in university education will be determined. On the other hand, in the

completion of specific objective OS2, the it will be determined the degree in which the quality management in education and research has been realized and implemented at the level of higher education institutions in Romania. As a result of this objective, it can be noted the *Creation of a knowledge base for the elaboration of a model, its implementation and the operation of its dynamic results (OSC1)*, according to the specificity and characteristics of university education in Romania. In this regard, a database of the main institutions of higher education in Romania and their characteristics from the perspective of quality management will be built. Assessing the possibility of potentially implementing it in the university educational area, the capacity of adaptability of the model in the institutions of higher education in Romania will be determined. Choosing and applying some of the steps of the benchmarking strategy will be part of this goal, providing the interdisciplinary nature of the research by combining quality management with strategic management.

### **3. Definition of the set of strategies and strategic objectives of quality specific for the university education (OS3)**

An increasing competition, the need for accountability and awareness of the importance of university education, compatible with the real needs of global and European economic space, and the growing volume of information change from one day to another the way universities operate in these years. For the university education to adapt to substantial and lasting changes in terms effectiveness, the institutional structures should integrated the new paradigm of quality and its assurance and continuous improvement. Among the basic instruments developed to measure the progress and success of these efforts the focus will particularly be on the following strategies of quality: Customer Orientation, Strategic Planning for Quality, Continuous Improvement, Training in Quality Management, and Partnering. The novelty of this research consists in changing its orientation from the restricted individuality of a single institution of higher education and its specificity to a much wider vision of the entire area of the university education, aiming to determine more completely all the elements that influence the actual results of *The analysis of internal and external environment of institutions of higher education with the help of strategic management models (OSC2)*. On the basis of interdisciplinary character, the SWOT matrix will be used, determining a set of quality strategies characteristic for the education in universities and their specific policy objectives. The Quantitative Strategic Planning Matrix (QSP - Quantitative Strategic Planning) will be used to determine the most viable strategy applied to the whole space of academic education with the generic benchmarking strategy.

As a result of achievement of previous specific research objectives, the proceeding to a further objective, represented by the *Identification of the availability of higher education institutions in Romania to apply the model (OSC3)* through the analysis of environmental factors specific to each institution in order to implement quality management strategy, will take place. In this way, the means by which the new strategy will be adapted to every institution of higher education in Romania, according to its characteristics will be determined

### **4. Development of quality management and continuous improvement (OS4)**

Thus, the model developed comprises two dimensions - education and research - as a whole, following on this basis the growth and continuous improvement of quality at the level of universities. In this context, it will be enhanced the idea of university as a profit center, creating products (students) that are profitable in terms of quality. Thus,

research activities are directed to achieving and improving the quality of key stakeholders: students as the end product (graduates) and teachers seen as providers and beneficiaries (through research) of the knowledge. The management and continuous improvement of quality is designed based on the following coordinates: stakeholders, requirements, processes, education and research results, which ensure continuous improvement. These are interrelated and they also coordinately interact: **stakeholders (students, teachers)** express their **needs** (learning and labor market integration, namely research and training) and they will **be satisfied** by **the processes of education and research**. The route will be designed as a five-phase, corresponding to the position occupied by the institution, and of related key indicators in terms of implementing quality management and quality assurance system:

1. Recognizing the problems quality and lack of measurement and evaluation systems;
2. Delimitation of quality problems in the given context of fragmented or inefficient systems;
3. Implementation of quality system through replacement or adjustment;
4. Improving quality by forming a real culture of quality;
5. Excellence through quality.

Each phase will have allocated processes, tools, methods and techniques with which it is aimed to shift to a higher position in terms of quality. At each level and between these phases, information flows will be provided through which the quality continuously improves. To facilitate the implementation of the model in the institutions of higher education in Romania, their grading scale (OS2 and OSC1) will be correlated with the position (phase) corresponding to the model.

As an additional objective, to implement the model thus established, the *Design and Development of an IT platform of the model (OSC4)* must be envisioned to determine its viability and functionality. Model implementation will bring on the fulfillment of the last research objective, *Measurement of the feedback resulted after the implementation of the project and the consequent upgrade of the model (OSC 5)*.

## **5. CONCLUSIONS**

**The importance for the domain** consists in the translation of the strategic management of faculties from one coordinate – management of university education – to a complex coordinate that combines two components: the management of university education and scientific research management. Also, we designed through the project the management of university education on two dimensions: strategic and operational.

*Strategic dimension* will aim to promote new educational programs and development of quality standards and performance for students and teachers.

*Operational dimension* focuses on rules and procedures aimed at evaluating the quality of the educational process and students' knowledge, rules and procedures for evaluating and promoting teachers manage their educational programs, etc. Management of scientific research should be promoted by university education faculties on three cycles (bachelor, master, and doctorate) and refers to the evaluation criteria of performance in research and major research projects, contracted with various institutions and firms. University faculties which promote the university education management and scientific research management will structure their management on two levels: department and college, on each level being fixed both strategic components (development of new educational programs) and operational (supply of courses).

By the topic and objectives of the project we estimate a social, technological and economic impact. Thus, implementation of this model of management and continuous improvement of quality in higher education will help create an educational and research framework corresponding to the principles in the Declaration of Bologna.

**Results of the research** conducted during the project will be implemented both at the level of faculties' management and the actors directly involved in the educational process (teachers and researchers). It also takes into consideration the preparation and evaluation of students at faculties by establishing a new framework, appropriate to daily realities and requirements of integration into European structures. By creating computer platform of this model and its implementation in the faculties will enable the processing of information from the database using built-specific algorithm, interaction with stakeholders and dissemination of research results

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## **AN ALGORITHM BASED APPROACH FOR ROMANIA'S ROAD TOWARDS THE EURO-AREA MEMBERSHIP STATUS. IN SEARCH OF A SUITABLE EXAMPLE\***

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**Abstract:** Recent developments of the economic and financial crises all-over Europe have created a new, rather frightful perspective of the economic integration process and further-more of monetary integration and the Euro-area. There is an exit case-scenario, but is it considered a disastrous option. Neither Greece, nor Ireland considered this option and it is even less of a case for the founding members of the Euro-zone. As a consequence, actual candidates have been urged to consider even more seriously their convergence process as long as they are under the no-opt-out clause. These are the essential hypothesis of this paper. From this new perspective, the paper envisages pointing out the role of preparation and of the convergence process has had for some of the most recent members of the Euro-Area. Analysis also involves a fuzzy clustering algorithm previously applied by the authors. We try to find similarities, useful examples or *lessons to be learnt* by Romania in this single currency accession process.

**JEL classification:** E50, E52, E58

**Key words:** monetary integration, real convergence, economic crises, fuzzy clustering algorithm

### **1. INTRODUCTION**

*Monetary integration* means foregoing the use of monetary and exchange rate policies for national purposes alone (Angeloni et al. 2005). These authors further state that in signing the Maastricht Treaty – that contains the institutional arrangements for the conduct of monetary policy in the European Economic and Monetary Union (EMU) – these countries agreed to immediately start taking into account the implications of such policies for other EU members; in the longer run, monetary integration means adopting the euro. The new member states, and even still candidate countries, have undergone a very rapid and deep transformation in all economic and institutional areas. Most of them have been able to achieve a high pace of nominal convergence, but that was valid before the debut of the financial and economic crisis. Both then and now, as far as real convergence is concerned, results are mixed and differentiated. There are

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best and less performing areas or criteria. While trade integration with the other 15 EU Member States (EU15) has progressed quickly in recent years, real terms convergence in output specialization or GDP per capita has registered less progress or a slower rate in convergent (and ascending evolution). The monetary policy in respect of choice, implementation and results is also an issue. Looking at central bank statutes, objectives, strategies and instruments, authors have described certain progress and even sound central banking structures. Still, conditions for full monetary integration have not been reached. Even though a case-by-case approach to adopting the euro – based on country-specific conditions – seems natural, we are still looking for the closest example in recent states adopting the single currency.

## **2. OBJECTIVES**

This paper aims to point out monetary evolutions and convergence processes in recent member states of the Euro-area, trying to focus on their role in preventing further economic and financial imbalances. The essential hypothesis is that while convergence and monetary control are undertaken in a serious and sustainable manner, eventual asymmetric shocks, disequilibrium and instability can be at least prevented if not kept away. Early age imprudent behavior, lack of unsustainable real convergence and unsuitable monetary policy measures may represent serious and predictable causes of disruption and crisis. We also aim to look for any models employed by previous candidates which would present as suitable solutions for the Romanian monetary economy aiming the Euro adoption.

## **3. METHODOLOGY AND THEORETICAL BACKGROUND**

In analyzing monetary convergence, we must consider the debate developed in the mid-1990s during the birth period of the EMU. According to the ECB, the real convergence set of indicators used for the quantification of the progress of the candidates is based on growth, productivity and price level convergence. (Arratibel, Furceri si Martin 2008). Also, later on, attention has been directed towards the mix between nominal convergence, real convergence, and the optimal monetary area criterias. (Lipinska, 2008). Also, the composition of the output is taken into account from this perspective – if the output composition differs internationally, sectorial disturbances tend to generate asymmetric country disturbances and asynchronous national cycles, since sectors have different cyclical properties and may even respond differently to monetary policy (Dedola and Lippi (2000)). The composition of output and employment tends to be closely related to the stage of economic development. International comparisons have shown that a higher level of development tends to be associated with a smaller share of agriculture in aggregate output and a larger share of services, whereas the share of industry typically has an inverted U-shaped relationship to per capita output, increasing first and declining later (Chenery and Taylor, 1968). The output shares can then be used to “benchmark” the degree of economic development, as recently done for central European countries by Raiser et al. (2003). Several other studies raised new questions on the convergence matter: Haan et al. (2004), an analysis of business cycle correlation analyses has been conducted by Fidrmuc and Korhonen (2005), Frenkel and Nickel (2002) set up a structural vector auto-regression model to identify and compare demand and supply shocks – as well as the speed with which economies adjust to shocks – between euro area countries and central and eastern European countries etc. Monetary integration process also involves

the issue of the exchange rate regime. The assessment connected to its functioning and efficiency is a fundamental discussion amongst economists. This has also taken the shape of estimating the real equilibrium exchange rate and its deviation from the real effective exchange rate. Lately, transition countries, after the fall of their communist regimes, have had several approaches according to their macroeconomic strategies. According to economic developments, they adapted these approaches so that they would fulfill their targets.

The evaluation of real and nominal convergence according to a certain set of criteria can also be accomplished by means involving a fuzzy clustering analysis. Even if originating in a rather rigorous set of mathematical relations, the fuzzy clustering technique allows an in depth research of relative phenomena and a delimitation involving homogenous groups, beyond some mathematical results. This type of analysis provides the opportunity to process several variables sets providing an overall image of the envisaged evolutions. The advantages apart from classical mathematics reside in a higher degree of finess in the evaluation and a relative positioning (Tanasie et al. 2008). The fuzzy algorithm used in this paper was originally used by Kaufman and Rousseuw (1990).

#### **4. ANALYSIS**

For analysis, we have selected two very recent members of the Euro-Area – Estonia and Slovakia, aiming a brief comparison and the extraction of *lessons to be learnt* by Romania. They are rather small economies subject to high degree of connection with the international environment both by means of external trade or important foreign sector. That seems to also be the case of Romania if we envisage the trade openness degree and the share of trade in GDP.

Just like all the other EU countries, the global financial and economic crisis, triggered a deep recession that started end-2008 in Estonia. Even before, weakening economic activity determined inflation developments. The subsequent rapid adjustment in product and labor markets led to a general decline of prices in 2009. Recent developments indicate that the recession bottomed out in late 2009, but the recovery is likely to remain subdued in the context of the current uncertain global economic outlook. The Commission services' estimates suggest that the output gap of the Estonian economy turned sharply negative in 2009 and that growth will remain significantly below potential in 2010 (EU Commission Convergence Report). The Commission services' Spring 2010 Forecast projects Estonia's economic growth to be close to 1% in 2010, and close to 4% in 2011. The initial positive impact to growth is likely to emerge from strengthening external demand and from a turn in the inventory cycle. Estonia has been operating a currency board arrangement since the reintroduction of the kroon in 1992, with the kroon initially pegged to the Deutsche mark. The peg was switched to the euro as of 1 January 1999. The currency board arrangement has been backed up by generally prudent fiscal policies, open markets and a broadly flexible economy. Since its inception, the currency board arrangement has served as a key policy anchor and enjoyed wide popular support (EU Commission Convergence Report).

Most recent economic and monetary developments in Estonia can be briefly described as following:

- a tightening in monetary conditions since 2009 with an increase in short-term real interest rates and falling inflation.



- substantial fiscal consolidation thus limiting the general government deficit to 1.7% of GDP for 2009,
- minor effects of exchange rate volatility as the kroon remained broadly stable
- historical peaks of unemployment – 15%
- rather limited financial sector mostly owned by Swedish banks, with a precautionary agreement with the central bank of Sweden (Riksbank) aiming to broaden the Bank of Estonia's capabilities to provide liquidity to the financial sector
- The long-term interest rates convergence criterion applicable to Estonia, as no government bonds or other comparable securities are available - reflecting a very low level of gross public debt and prudent fiscal policies
- Public debt remains by far the lowest in the EU while strongest correction took place in the balance of trade in goods, where the deficit declined to less than 5% of GDP in 2009 and the degree of trade openness (almost 80%) was the highest among the small new Member States
- A strict policy discipline determined credibility of its commitment to sustainability in the context of the global financial crisis.

Slovak economy can be described as following:

- very small, less than 1% in terms of both GDP and population
- very important the foreign sector, exports representing 80% of GDP - foreign direct investment (FDI) accounted for much of the growth until 2008.
- budget deficit to rise slightly, to 8.2% of GDP in 2010
- GDP fell nearly 5% in 2009 before gaining back 4% in 2010
- unemployment rose above 12% in 2010, as the global recession impacted many segments of the economy.

As far as Romania is concerned, the following highlights may be depicted:

- Economic situation has degraded ever since 2008 and at the same time, the perspectives of monetary convergence have gone further away.
- Coherence of economic policies has not been adequate from a preventive or anti-cyclical point of view.
- It needs a coherent macro-economic mix
- The real economy must be supported by an impulse of the fiscal policy, opposite of the GDP deviation.
- The economic and monetary reality have continuously been under the inflationary pressure
- Competitiveness has lacked the necessary boost. There has not been an under-unit share between earning increase and productivity dynamics.
- Public debt has risen.

Some clarifying and resuming figures can be depicted below.

**Table 1. Key economic indicators (2010)**

	GDP per capita (% in EU27)	Inflation	Budget deficit (%)	Debt (%of GDP)	Exchange rate fluctuation	Interest rate
Romania	43*	5,5	7,2	30,4	+1,71 /-14,3	7,34
Slovakia	70*	1	8,2	51	-	3,87
Estonia	62*	1,77	3	7,7	0	-

*Source: authors synthesis based on Eurostat and national banks data and estimates*

In order to assess the results in convergence towards the Euro-zone, we use the algorithm of Kaufman and Rousseuw (1990) may be described as following. We have a data set consisting of  $n$  objects (the number of states) with  $p$  variables (the convergence criteria considered). It is noted  $X_{np} = \{x_1, x_2, x_3 \dots x_n\}$  where each  $x_i = \{x_{i1}, x_{i2}, \dots x_{ip}\}$ . Each variable is standardized with zero median and the standard deviation is 1 in order to treat the criteria as having similar share of importance in determining the structure. The dissimilarity coefficient (the difference) between two objects can be defined as the Euclidian distance between two points. (Tanasie et al. 2008)

$$d(i, j) = \sqrt{\sum_{k=1}^p (x_{ki} - x_{kj})^2} \quad (1)$$

The algorithm is employed in order to minimize function  $C$  as following.

$$C = \frac{\sum_{i,j=1}^n u_{iv}^2 u_{jv}^2 d(i, j)}{2 \sum_{j=1}^n u_{jv}^2} \quad (2)$$

where  $u_{iv} \geq 0$  for  $i=1, \dots, n$  ;  $v=1, \dots, n$   $\sum_v u_{iv} = 0$  for  $i=1, \dots, n$ , where  $u_{iv}$  represents the unknown membership coefficient of the object (country)  $i$  to the cluster  $v$ , and  $k$  represents the number of clusters countries are divided into.

This algorithm results in a coefficient array  $Un_{xk}$ , where the sum of elements on the rows is 1, thus showing the degree of membership of the object to a certain cluster. If one of the coefficients is rather high, then, there is a high degree of certitude that the object belongs to a certain cluster. In order to perform an analysis of the degree of accuracy of the data partitioning we use some statistical elements:

- The *Dunn normalized partitioning coefficient* according to Boreiko (2002):

$$F_k = \frac{\frac{k}{n} * \sum_{i=1}^n \sum_{v=1}^k u_{iv}^2 - 1}{k - 1} \quad (3)$$

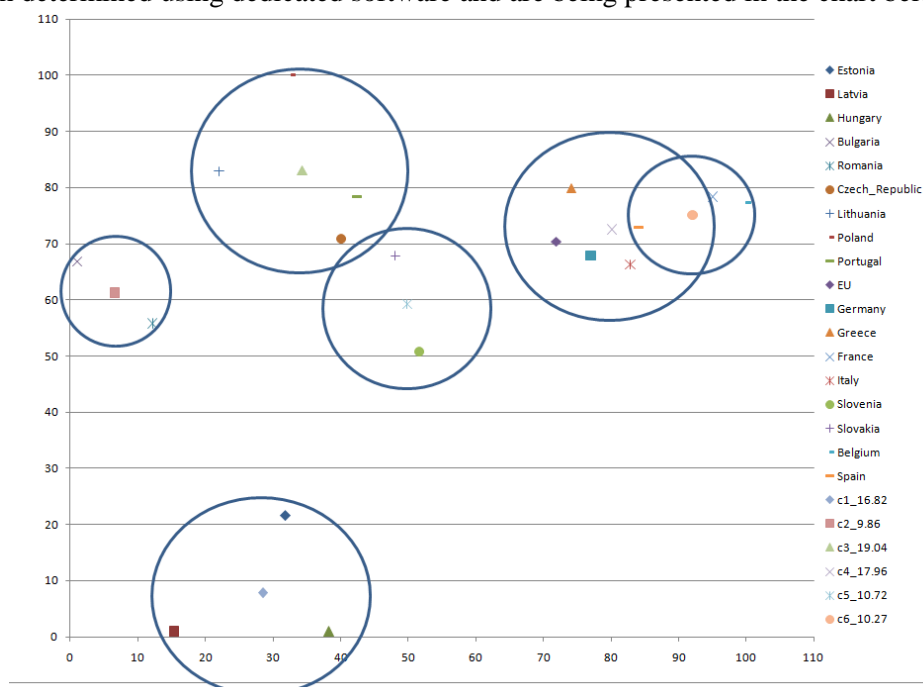
That varies from 1 (indicating a perfect data partitioning into clusters) to 0 (indicating the contrary - a data partitioning). The coefficient is 1 only if for each object there is one coefficient that equals one and the rest are 0. The coefficient is 0 when all membership coefficients  $1/k$ .

- the *silhouette* defined as following:

$$s(i) = \frac{b(i) - a(i)}{\max(a(i), b(i))} \quad (4)$$

where  $a(i)$  is the average of dissimilarities of the objects compared to the objects in the same cluster, and  $b(i)$  is the minimum of the dissimilarities' average of the object  $i$  compared to all the other object in its cluster, for all clusters. When  $s(i)$  is close to 1 it means that the object (country) is correctly classified in the cluster where it can be found. A value closer to 0 indicates the fact that the object is incorrectly classified. The averages corresponding to each cluster and to all the data considered indicate the correctness of data partitioning. (Tanasie 2007).

We have applied this method in order to point out the EU member states' clusters according to real convergence performance. Data used has been provided by the Eurostat database. The aim is to find Romania's place and to find out whether previous examples – Estonia and Slovakia could represent suitable examples. We have stated before their course of action consisting in macroeconomic policies and measures, their monetary and exchange rate regimes and their economic performance in figures, and now, by means of positioning we shall find out *who has done better*. Results have been determined using dedicated software and are being presented in the chart below.



**Figure 1. Countries' cluster partitioning**

*Source: authors' computing*

Romania is, unfortunately part of the last (less performing) cluster. Estonia and Slovakia have definitely performed better. They are part of two different, but superior clusters. The evaluation is based on the GDP per capita indicator, but also assumes other real convergence indicators. Thus, this type of analysis provides the opportunity to combine maximum relevance indicators in determining the clusters. States are being classified according to the distance between a certain object (country) and the center of the cluster. One must not forget in this situation that the share of foreign direct investments is clearly in favor of new member states, and of the candidates to the Euro-zone. For this very reason, for example, Greece seems to perform better than if we would consider nominal convergence indicators seriously affected by the budget deficit or the public debt. c1 to c6 represent the centers of the determined clusters, and the adjacent values represent the radius of the cluster.

## 5. CONCLUSIONS

Analysis pointed out several essential issues in Romania's convergence process influencing the macroeconomic policy mix and the overall economic and monetary

evolution, such as: (1) the need for continuous convergence of income under the pressure of inflation or nominal exchange rates; (2) avoiding further macroeconomic disequilibrium beyond the economic and financial crises; (3) the need to transfer resources towards the tradable sector aiming convergence supported by a sector which already is the main source for that – the exporting sector; (4) the pressures of migration together with labor and wage pressures. The other two former candidates, actual members of the Euro-zone have been confronted with similar issues during the accession period. Patterns are not really compatible due to aspects such as differentiated developments of the associated environment during the specific periods, differently applied economic instruments or difference in structure. Still, the essential lesson to be learnt is that convergence is not in itself, but real convergence envisaging no further disequilibrium, absorption of asymmetric shocks and common development inside the monetary union.

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## THE ROLE OF INNOVATION AND TECHNOLOGY TO SMES DEVELOPMENT (ALBANIA CASE)

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**Abstract:** It is now well known the important role that activities related to innovation and technology play to enterprises growth and development, in particular to SMEs development in transition economies. Since Albanian economy is still developing, it is very important to identify all positive factors that affect enterprises development. The main goal of this paper is to present different ways in which Albanian enterprises undertake innovations and changes in their technology and organizational structures, and provide statistical results related to Innovation Technology Index and Innovation Organizational Index. To achieve this goal, we use data from 204 Albanian enterprises selected by EBRD survey (BEEPS05). The statistical results indicate that 73.2 percent of enterprises had undertaken innovations in technology and only 18.6 percent of them had changed their organizational structures. The overall results of this paper help us better understand the important role that innovation and technology play to enterprises development and more generally to Albanian economy. Finally, this paper provides interesting conclusions and recommendations for Albanian enterprises, new entrepreneurs and other private or public institutions. These will also be very helpful for many researchers of different economics fields.

**JEL:** O32, O12

**Key words:** innovation, technology, transition economies, Albania, SMEs.

### INTRODUCTION

In transition economies, SMEs have already replaced numerous jobs lost during periods of reconstruction and downsizing of former large state-owned enterprises. In addition, by nature SMEs contribute to the democratization and decentralization processes in transition economies. They increase flexibility when providing goods and services, help to increase the competitiveness in national economies and spread risk in the general business environment. The role of SMEs on transition economies has noticeably become much more vital, due to their ability to respond quickly to system changes, as well as their ability to generate jobs and income. During the transition period towards a market economy, a considerable number of enterprises entered the market. These enterprises satisfied the unfulfilled needs for a new range of goods and services, thus putting competitive pressure on big enterprises.

SMEs play an important role in Albania – fuelling the economic growth, providing flexibility, engaging in bridge building between Albania and the European

Union, and promoting employment. SMEs make up 99% of all enterprises operating in Albania generating 64% of GDP and providing 66% of employment in the private sector. Apart from the major role they play in the development of the private sector, these SMEs have the advantage of being highly flexible to absorbing of new technological and organizational innovations (Hashi and Krasniqi, 2008, pp. 3).

The main aim of this paper is to identify the factors influencing the SMEs growth. We are especially focusing on innovation and technology impact on small and medium-sized enterprises development in Albania. Innovation and new technology are viewed as a key to the long-term competitiveness in the region and, because of this, they promise further gains in terms of economic growth, political stability, and private sector performance. The existence of a critical mass of innovative, internationally competitive SMEs that have the ability and willingness to grow will be a critical condition for Albania's future growth.

In the first part of our research study, we try to understand the ways Albanian enterprises have undertaken activities related to innovation and new technologies, based to BEEPS 2005 database and its questionnaire (conducted to 204 Albanian enterprises), we have calculated and given numerous statistical data that show the intensity of these activities in Albania. We try to present by statistical tables the percentage of enterprises that underwent even a little change in their manner of doing business.

In the second part, we calculate the innovation and organization index that is an evidence of changes for all Albanian studied enterprises. In the subsequent stage of our analysis, we make an effort to find expected relationship between Albanian SMEs growth and activities related to innovation and technology. The main contribution of our study is that we found positive relations between SMEs growth and innovation and technology, these is our main finding in this paper.

The structure of the rest of the paper is presented along the following lines. Section 2 presents the factors that influence Albanian SMEs development (bringing together the positive and the negative ones). In Section 3, we describe the data used in our analysis, as well as the statistical results for any innovation and new technology changes of the Albanian surveyed enterprises. In Section 4, we illustrate the relationship between the SMEs growth and innovation and new technology. Section 5 gives some conclusions and recommendations.

## **FACTORS INFLUENCING SME DEVELOPMENT IN ALBANIA**

Small and Medium Sized Enterprises form the backbone of the European economy. They are key to entrepreneurial spirit and innovation in the EU and thus crucial to ensure EU competitiveness. A proper definition of which enterprises are SMEs makes it easier to identify their needs and to develop efficient policies to compensate for the specific problems linked to their small size. This is vital for the competitiveness of an enlarged European Union, its growth and employment. (Erkki Liikanen, former Enterprise Commissioner for the EU, 8 May 2003, Brussels)

Hereafter, one of the greatest problems that we faced in the accomplishment of this study was exactly the identification of the most important factors that affect the SMEs, taking always into consideration the characteristics of our economy. All the factors, which are numerous and various in nature, create the business climate, but not all them affect these enterprises in the same positive or negative level. A business environment climate where the small and the medium-sized enterprises operate is in continuous changes and development. To make a possible selection of the most

important factors, we have referred to the European Chart for SMEs, a document of economic policies, which should be followed by any country in transition, giving a considerable push to SMEs development. In addition to the above-mentioned document, BEEPS05, a study carried out from the EBRD in our country concerning the conditions in which the domestic business was developed and the problems it faced, served as another point of orientation to better identify these factors from the viewpoint of the enterprises and their owners. In our study, we take into consideration both, positive and negative factors that influence Albanian SMEs growth. The negative factors include *external environment factors*, or so called the factors of business climate or doing business barriers as: finances, competition, taxes, etc, and the positive ones involve *innovation and technological factors* and many of the *enterprises characteristics*, which we will explain further.

In the first group of factors, we try to include the most significant barriers of the external environment that affect the Albanian small and medium-sized enterprise growth, especially during the transition period. The barriers of the external environment are numerous and therefore it has been very difficult to select among them.

*Barriers of financing* is one of the factors which negatively affect business in Albanian economy because of limited crediting of private business from the banks and very rigid demands that enterprises must satisfy. This negative factor is emphasized in one of ten dimensions of the European Chart for SMEs too. The minimizing of these barriers is one of the most important challenges that the developing countries where Albania belongs, have to face.

*Taxation* is considered as another barrier on the development of the business, seen from the point of view of the interviewees (BEEPS 2005). This negative factor is also emphasized in one of ten dimensions of the European Chart for SMEs.

*Corruption* is a negative factor, too. We could not leave it aside taking into consideration the conditions of our country. Many of the interviewed persons consider it as a major obstacle faced by them while doing business.

*Lack of electricity – (power cuts)*, is another big obstacle in the development of business in Albania, almost all the enterprises have considered it as one of the biggest problems they are facing in their everyday life.

*Unfair competition* is considered as a very negative factor that affects business development and our economy too. This factor may reduce the activity of an enterprise or can bring them to bankruptcy, leaving space to an increase in the informality level.

In the group of positive factors, we try to include the most specific ones, because our economy is an economy in transition. *The innovation and technology* include the range of activities, improvements of the existing product or production process until the involvement of the new coherent technology, affect the enterprise growth, in the short term but the rate of growth will be far bigger from the enterprise that do not undertake innovation and new technology, this especially in the long term. Another characteristic of the innovative enterprises is the ability to identify new markets even if the branch has dominated by powerful and big enterprises. The small enterprises can produce supplementary products without competing directly the big enterprises but joining their supply (Porter, 1979). The innovative activity always includes the organizational flexibility and the ability to adapt to fast changes of the economic environment, changes in demand, technology, demography, and others. The technologic factor includes the concept of the enterprise abilities to use new production



processes, production of new products, creation of new organizational structures and the involvement in other networks.

*The Human Capital* is also another very important positive factor, which affects the enterprise growth (Cosh, 2000). The quality of the human capital presented in percentage of employees with university degree in an enterprise or percentage of qualified workers in this enterprise. The characteristics of the enterprise as age, human capital, ownership, export orientation can also influence greatly the enterprise growth.

The relationship between the *size*, *age* and the enterprise growth is now a well-known issue related to the factors, which influence positively the enterprise growth. A well-known theory in this framework is the Gibrat Law in 1931, which underlines that the enterprise growth goes proportionally with its size. Another theory, Jovanovic in 1982, gives arguments that the enterprises learn from their worst experiences and try to avoid them in the future.

Being an *exporter enterprise*, it is supposed to have an important role in the enterprise growth, the same for the *foreign owned enterprises*. It is assumed that for many reasons, these enterprises have greater growth rate than the others: 1) because of their orientation towards new markets; 2) the foreign market competition enables them to adapt to the conditions of competition and high technology, etc. (Amelia 2005).

The *network*, which means the participation in business associations, affects positively the enterprise growth by profiting from the other economies and information systems.

As presented in the first section, the main aim of this paper was to identify the factors influencing the SMEs growth, presented in this section, and especially focusing in innovation and technological impact on SMEs development in Albania. This is presented in the next section.

#### **INNOVATION AND TECHNOLOGY IN ALBANIAN ENTERPRISES**

Innovative capacity relates to the firm's capacity to engage in innovation, the introduction of new processes, products, or ideas in the organization. This capacity to innovate is among the most important factors that impact business performance (Hurley and Hult, 1998). Technology alone is rarely the key to unlocking economic value: companies create real wealth when they combine technology with new ways of doing business.

Innovation and new technology are viewed as a key factor to long-term competitiveness in the region – promises further gains in terms of economic growth, political stability, and private sector performance. The existence of a considerable number of innovative, internationally competitive SMEs that have the ability and willingness to grow will be a favorable condition for Albania's future growth. This is the reason of this study and the results given below are very positive. There are different ways and forms that an enterprise can adopt in its activities related to innovation and technology. Based on the BEEPS 2005 survey and its questionnaire conducted to 204 Albanian enterprises, we were able to identify the most practiced ways of innovation and new technology adoption, involving the organizational changes too. Many questions are asked to the enterprises concerning this case. The given answers by the entrepreneurs help us to understand the scale of these changes in their technological or organizational structures. For any types of innovation and technology, we calculated the measures and percentages for the 204 studied enterprises (making use

of SPSS programme), calculating at the same time the Innovation Technology Index and Innovation Organizational one.

As we can see in the Table 1, from 204 interviewed enterprises, only 77 from them have developed successfully a major new product line/service, which makes up 37.7 %. Very significant is their opinion about the role of these changes in their activities. 78.1 % of entrepreneurs consider the development of a new product line or services very important for the growth of their company.

From 204 studied enterprises, only 93 enterprises, which makes up 45.6 percent, have upgraded an existing product line/service and the opinions regarding the importance of these actions for the enterprise growth is very significant (Table 2). The percentage of the entrepreneurs that have made changes into their existing product line is very high, 67 percent, so they consider it as a very important process for the survival of the company.

Table 3 gives us information about firms that have acquired a new production technology. As we can see, 40.2 percent of them have made changes into their technology. Table 4 presents the most important ways in which enterprises acquired new production technology for each of 82 companies. One of the main ways was to embody in new machinery and equipment. The results show that from 82 enterprises that have done changes in their technology, 69 of them embodied in new machinery and equipment, which makes up about 84.1 percent of them. Only 15.9 percent of these enterprises acquired the other seven ways, as shown at Table 4. Organizational changes are important for the enterprise development, but from 204 Albanian enterprises, 38 of them have done major reallocation of resources and responsibilities, or they have had a completely new organizational structure.

Calculating all our above data and results, we were able to transform them and to take the value of two main indexes, Innovation and Technology Index equal to 73.2% and Innovation Organization Index equal to 18.6%. The value of first index is calculated as an average of percentages of 1.00 (express that enterprises have made the proper change) extracts from the Tables 1, 2 and 3. The value of the second index expresses the percentage of enterprises that have done changes in their organizational structure, compared to 204 studied enterprises (Table 5). The values of the indexes above show that most of the Albanian enterprises have undertaken changes in innovation or technology but little changes in organizational structures.

In this section, we have tried to give some evidence from Albanian enterprises and their activities related to innovation and technology. We have also given their opinion (how important they think this change was or will be) about the importance of these changes for their companies' life and growth. In fact, the real relationship between the enterprises growth and innovation and technology will be further analyzed in the next section.

#### **RELATION BETWEEN SMEs GROWTH INNOVATION AND TECHNOLOGY**

SMEs have the opportunity to make changes related to innovation and technologies, which represent a chance for development and growth. More than anything else, firms and individuals around the world need to be able to innovate, that is, develop and implement new commercially viable ideas. As new determinants for economic growth are appearing, increased focus is put on the role of innovation and new technology. In this section, we try to present data, which will verify the real importance and positive effects of innovation and technology activities for the

enterprises growth. Making again use of BEEPS 2005 database and SPSS program, we constructed Tables 6 and 7.

We have considered changes in enterprises' sales of the three previous years (decrease/increase), as an example of the enterprises' growth. We try to present the relation between enterprises' growth and the ways of innovative, technological and organizational changes. From 204 studied enterprises, 118 have declared an increase in their sales, or 57.8 percent of them. As we can see, the group of enterprises that have undertaken even one of changes mentioned above present 40.2 percent in total, which makes up 82 in 135 enterprises. These results are very significant.

The main aim of this study was finding the relationship between the enterprises' growth and innovation and technology. As assumed above and proved here, there exists a strong relationship between enterprises' growth and innovation technology and organizational changes. Table 7 shows this reality.

### **CONCLUSIONS AND RECOMMENDATIONS**

There is a widespread consensus among decision-makers that small and medium-sized enterprises (SMEs) are important for both job creation and GDP growth. They also provide an important and unique breeding ground for innovation and thus for national competitiveness (Bresnahan et al., 1999; Audretsch and Thurik, 2001; European Commission, 2002a; European Commission, 2003b). The role of the SMEs in the economies in transition is very important, especially for the utilization of the new technologies and innovation, (Baumol 2004). This paper was focused on Albanian SMEs and factors affecting them positively or negatively, and especially factors related to innovation and technology. We presented different ways in which Albanian enterprises had undertaken innovations and changes in their technology and organization structures. We used data from 204 Albanian enterprises selected by EBRD survey (BEEPS05) and processed them using the SPSS program. The statistical results were very impressive and significant. We found a great positive relation between enterprises' growth and innovation and new technology.

These results help us understand the best ways for enabling the SME development in Albania. Further and continuous improvements in innovation and technology will provide the basis for a sustainable economic development. These improvements should be supported by the decision-making authorities on local or central level. A strong and effective relationship should be established among business, government, researchers and SMEs developing centers.

Government's role too, is to create an enabling environment for SME competitiveness and to develop markets for SME relevant services, rather than substituting for them (Hallberg, 2000). Policymakers worldwide have increasingly realized the key role of innovation – and innovation policy – for competitiveness, economic development and growth. Our recommendations highlight in this directions:

- \*Develop incentives for more R&D investment by the private sector, including by SMEs

- \*Improve existing efforts to promote collaboration between public and private sector research initiatives (e.g. technology development zones)

- \*Design strategies/initiatives for promoting international cooperation on R&D and enhancing local absorptive capacity in regard to international knowledge flows, while taking action to counter the build-up of massive new administrative capacity and bureaucracy to attract foreign R&D-funding.

This research study will provide the basis for further studies on the subject. Further research will help inform the Albanian business concerning the importance of innovation and technology for their further development. They will also help the Albanian government to create the necessary infrastructure supporting innovations and technology change.

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## **TABLES**

**Table 1. Has your company development successfully a major new product line/service and how important was for the survival and growth of your company?**

New product line	Enterprises	Percentage
No	127	62.3
Yes	77	37.7
Total	204	100.0
Opinion about the importance	Enterprises	Percentage
No or little important	16	26.9
Very important	57	73.1
Total	73	100.0

**Table 2. Has your company upgraded an existing product line/service and how important was for the survival and growth of your company?**

Upgrade an existing prod. Line	Enterprises	Percentage
No	111	54.4
Yes	93	45.6
Total	204	100.0
Opinion about the importance	Enterprises	Percentage
No or little important	30	33.3
Very important	61	66.7
Total	91	100.0

**Table 3. Has your firm acquired a new production technology over the last 36 months?**

New technology	Enterprises	Percentage
No	122	59.8
Yes	82	40.2
Total	204	100.0

**Table 4. What was the most important way your firm acquired this new technology?**

Acquiring ways of new technology	Enterprises	Percentage
Embodied in new machinery and equipment	69	33.8
Hired key personnel with the technological expertise	4	2.0
New license from international resources	2	1.0
Developed or adapted within the firm	3	1.5
Transferred from the parent company	1	.5
Developed in cooperation with the customers	1	.5
Developed in cooperation with suppliers	2	1.0
Total of enterprises with changes in their technology	82	40.2
Total	204	100.0

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**Table 5. Organizational changes over the last 36 months.**

Organizational changes	Frequency	Percent
No	166	81.4
Yes	38	18.6
Total	204	100.0

**Table 6. Innovation, technology, organization changes and growth**

Innovation, technology and organization changes	Growth		Total
	Decrease	Increase	
0.00	33	36	69
1.00	53	82	135
Total	86	118	204

*\*0.00 present enterprises that have not undertaken any of changes in their activities, 1.00 otherwise.*

**Table 7. Innovation, technology, organization changes and growth**

Innovation, technology and organization changes	Growth		Total
	Decrease	Increase	
0.00	33	36	69
1.00	16.2%	17.6%	33.8%
	53	82	135
	26.0%	40.2%	66.2%
	86	118	204
Total	42.2%	57.8%	100.0%

*\*0.00 present enterprises that have not undertaken any of changes in their activities, 1.00 otherwise.*

## **ANTITRUST AGENCIES AND HARD-CORE CARTELS: A GAME THEORETIC PERSPECTIVE**

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**Abstract:** This article studies the strategic interactions between cartelists and the antitrust agency in two theoretical game settings. In the simultaneous game, the numerical results show that it becomes harder for the firms to sustain collusion, but easier for the antitrust agency to detect collusion as the damage multiplier and the effectiveness of leniency program increase. In addition, inelastic demand can also lead to higher detection probability. Therefore, the cartel's collusive price can be reduced when the antitrust agency increases the damage multiplier, and/or implements the leniency program more efficiently. In the sequential game where the cartel decides its collusive price in the first stage, the equilibrium collusive price is higher, and antitrust agency's budget allocation on cartel detection is smaller than in the simultaneous game. And the probability of detection is 5% higher in the sequential game.

**JEL classification:** K21, L00, L12

**Key words:** Cartel, Simultaneous Game, Sequential Game, Antitrust, Detection

### **1. INTRODUCTION**

The focus of most studies of business cartel behavior has been on the economic and financial incentives present in market conditions that facilitate cartel activity (as., Stigler, 1964; D'Aspremont et al., 1983; Donsimoni et al., 1986; Haltiwanger and Harrington, 1991; Bryant and Eckard, 1990; Bernheim and Whinston, 1990; Shaffer, 1995; Raith, 1996; Bagwell and Staiger, 1997; Levenstein, 1997; Connor, 2001, 2003, 2004, 2005, 2006; Spagnolo, 2000; Evenett et al., 2000; Posada, 2001; Harrington, 2004, 2005; Aubert et al. 2006). Of course, firms collude to obtain greater market coordination and increased profits in oligopoly markets usually involving homogeneous or nearly homogeneous products. As Connor (2003) correctly points out, without strong detection behaviour from government antitrust agencies, cartels likely would have dominated most world economies. Historically, this was observed before the 1890 Sherman Act in the United States, before 1945 in Germany, and before 1956 in the United Kingdom (Connor 2003).

A survey collected by the Competition Committee of the Organization for Economic Co-operation and Development (OECD) in October 2001 showed that domestic cartels had existed for decades in those countries where the enforcement of antitrust was lax (see details in OECD 2002). Connor (2003) points to reductions in the U.S. agency budgets from 1981 to 1992 as a prime factor in allowing many illegal cartels to flourish in the U.S. during that time period. For obvious reasons, cartels are commonly considered harmful to domestic and world economies. Furthermore, because

cartel behavior is a criminal act that has a menu of consequences if discovered,<sup>52</sup> sophisticated cartelists usually set the price lower than the monopoly price in order to avoid suspicions. Therefore, for the antitrust agencies, detection of collusive behavior can be difficult and building a legal case sufficient for courts to act is even more challenging.

In the context discussed by Harrington (2005), it is useful to consider the relationship between the antitrust agency that polices cartel behavior and the firm members of a cartel. This chapter provides such an application in a game theoretic setting. In particular, I study the interactions between two agents: an incumbent cartel and an antitrust agency as both parties try to maximize their one-shot expected payoff. The model characterizes sanctions against illegal collusive behavior by linking the outcomes to account for the probability of cartel detection. The fact that the antitrust agency and the cartel operate with conflicting objectives regarding detection, the strategic interactions and findings provide for a useful and revealing foundation for improved policies.

The studies of strategic interactions between multiple agents in a static game framework have covered a wide range of topics including the well-known prisoners' dilemma, the Bertrand model of price competition, the Cournot model of quantity competition, the first price sealed-bid auction (Milgrom and Weber 1982; Kagel and Levin 1993), and the business location decisions (Carlton 1983; Guimaraes et al. 2003) to name several. I begin with a model in which an incumbent cartel chooses its price to avoid being detected and at the same time to maximize its collusive profit; and an antitrust agency decides its budget level to discern the cartel when the cartel members collude in one commodity market and at the same time to maximize its expected payoff.

The interactions between a cartel and an antitrust agency are very complicated in practice. Thus, instead of finding specific quantitative solutions for the two parties, the qualitative results obtained by the simple static models in this chapter are used to shed some light on a couple of policy issues faced by the antitrust authorities. First, what is the effect of the multiplier of damages on the collusive price and antitrust budget? Second, how does the leniency program affect the collusive price and the antitrust budget allocation? Third, what kind of market feature can affect the detection probability? What will be the outcome when one party moves first?

The article is organized as follows. Sections 2.1 and 2.2 present the basic model and the Nash equilibrium resulting from the interaction between the cartel and the antitrust agency in a simultaneous move game. Section 2.3 examines how damage multiplier, the effectiveness of leniency program and the slope of the market demand affect the probability of cartel detection respectively. Section 2.4 studies the interaction between the two parties in a sequential move game. And the results obtained in the sequential game are compared with those obtained in the simultaneous move game. Section 3 concludes.

## **2 THE BASIC MODEL**

### **2.1 MODEL SETUP**

I begin with a basic model in which a cartel is operating in the market and an

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<sup>52</sup>If found guilty, substantial financial penalties could put the firms out of business, and the responsible company executives might pay huge personal fines and possibly face prison sentences.



antitrust agency is trying to detect the cartel's operation by allocating the antitrust budget. Both the cartel and the antitrust agency are assumed to be risk-averse. The cartel as a whole chooses its collusive price  $p$ . The collusive price is some value between the competitive price  $p^c$  and the monopoly price  $p^m$ , i.e.,  $p^c \leq p \leq p^m$ . In order to gain more profits, the cartel is willing to set a high collusive price, but higher price brings more suspicion from the antitrust authority, and hence higher detection probability. So the optimal collusive price is determined by weighing the two. The antitrust agency chooses its budget amount  $B$  to detect the incumbent cartel. When the cartel is in operation, the cartel members enjoy the increased collusive profits. At the same time, the antitrust agency receives the loss in consumer surplus due to cartel actions.

The probability of detecting the cartel is given by  $\theta(p, B)$ , which is a function of the antitrust agency's budget  $B$  and the collusive price  $p$ .  $\theta(p, B)$  is assumed to be twice differentiable. It increases as the collusive price increases, i.e.,  $\partial\theta(p, B)/\partial p > 0$ . And it increases with the antitrust agency's budget level, but with decreasing marginal returns, i.e.,  $\partial\theta(p, B)/\partial B > 0$  and  $\partial^2\theta(p, B)/\partial B^2 < 0$ . In addition, the probability of cartel detection is 0 if the antitrust agency allocates no resources in detecting cartels or the collusive price set by the cartel is 0, and it is close to 1 if the agency allocates an enormous amount of budget in cartel detection, i.e.,  $\theta(p, 0) = 0$ ,  $\theta(0, B) = 0$  and  $\lim_{B \rightarrow \infty} \theta(p, B) = 1$ .

For simplicity, I assume that the marginal production cost is zero and the firms are engaged in Bertrand competition in price. So the competitive price is zero in this setting, i.e.,  $p^c = 0$ . If the cartel is detected, the whole cartel has to pay a penalty fine in the amount of  $F$  and earn the competitive profit which is zero. And the antitrust agency will collect the penalty fine  $F$ . In practice, the penalty fine amount  $F$  charged by the antitrust authorities is a multiple of the difference between the collusive profit  $\pi$  and the competitive profit  $\pi^c$ , i.e.,  $F = r\pi$  because  $\pi^c = 0$ , where  $r$  is the multiplier set by the antitrust agency.

## **2.2 FINDING NASH-EQUILIBRIUM**

The demand function facing the firms is given by the following linear form:

$$D(p) = a - bp \quad (1)$$

where  $a$  is the intercept and  $b$  is the slope. In the one shot Nash game, with probability  $1 - \theta(p, B)$ , the cartel is not detected, the cartel firms continue to enjoy collusive profit  $\pi$ . And with probability  $\theta(p, B)$ , the cartel is detected, the cartel firms pay a penalty fine  $F$  which is  $r\pi$ . The cartel tries to maximize its expected payoff by choosing the collusive price  $p$ . Following Zhuang and Bier (2007), let

$$\theta(p, B) = \frac{pB}{B + k}, \text{ where } k > 0 \text{ is a constant representing the effectiveness of the}$$

leniency program. As  $k$  increases, the leniency program is not well implemented, so the cartel detection becomes more difficult for the antitrust agency, and hence the probability of detection decreases. When the leniency program is implemented

efficiently,  $k$  decreases and the cartel detection becomes easier for the antitrust agency. This functional form of the detection probability satisfies all the assumptions defined before about  $\theta(p, B)$ . So the cartel's maximization problem is:

$$\max_p (1 - \frac{pB}{B+k})(ap - bp^2) - \frac{pB}{B+k}rp(a - bp) \quad (2) \quad \text{Similarly, with}$$

probability  $1 - \theta(e^a, e^c)$ , the cartel is not detected, the antitrust agency receives the loss in consumer surplus due to the cartel collusion behavior. And with probability  $\theta(e^a, e^c)$ , the cartel is detected, the antitrust agency collects the penalty fine. The antitrust agency is trying to maximize its own expected payoff by choosing its budget level  $B$ :

$$\max_B (1 - \frac{pB}{B+k})(\frac{p^2}{2b} - \frac{a}{b}p) + \frac{pB}{B+k}rp(a - bp) - B \quad (3)$$

The first order condition to equation (2) for the cartel is given by:

$$[\frac{B}{B+k}(3+3r)b]p^2 - [\frac{B}{B+k}(2a+2ra)+2b]p + a = 0 \quad (4)$$

Equation (4) has a solution only when

$[\frac{B}{B+k}(2a+2ra)+2b]^2 - 4a[\frac{B}{B+k}(3+3r)b] \geq 0$ . And the first order condition to equation (3) for the antitrust agency is given by:

$$\frac{pk}{(B+k)^2}[arp - brp^2 + \frac{ap}{b} - \frac{p^2}{2b}] - 1 = 0 \quad (5)$$

Equation (5) has a solution only when  $ar - brp + \frac{a}{b} - \frac{p}{2b} > 0$ .

Then the best response function of the cartel is:

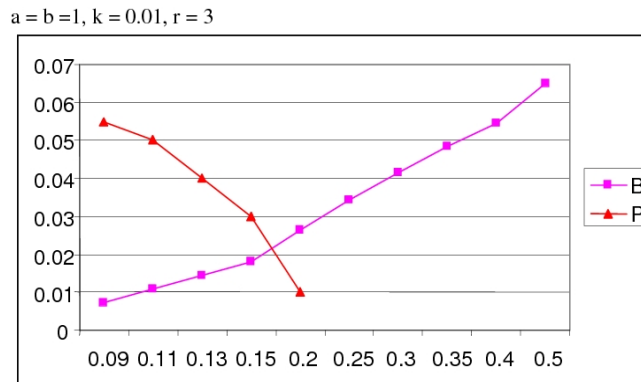
$$\hat{p} = \frac{\frac{B}{B+k}(2a+2ar-abr)+2b - \sqrt{[\frac{B}{B+k}(2a+2ar)+ab]^2 - \frac{12ab(1+r)B}{B+k}}}{6b(1+r)\frac{B}{B+k}} \quad (6)$$

Similarly, the best response function of the antitrust agency is given by:

$$\hat{B} = \sqrt{pk(arp - brp^2 + \frac{ap}{b} - \frac{p^2}{2b})} - k \quad (7)$$

Combining the best responses by the two parties,  $\hat{p}(B)$  and  $\hat{B}(p)$ , we can obtain the equilibrium collusive price level by the cartel and the budget level by the antitrust agency ( $p^*$ ,  $B^*$ ). Instead of solving equations (6) and (7) simultaneously to yield the Nash equilibrium because of the computational difficulty, I provide a numerical solution by specifying the values of the parameters  $a$ ,  $b$ ,  $r$  and  $k$ . Let  $a = b = 1$ ,  $r = 3$  and  $k = 0.01$  which is the base case. With  $a = b = 1$ , the collusive price is 0 and the monopoly price is 0.5, so the collusive price is between 0 and 0.5. The

best response functions of the cartel and the antitrust agency are shown in the following figure:

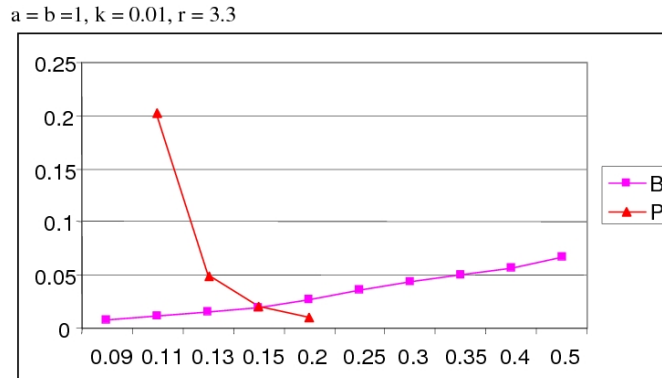


**Figure 1. Equilibrium solution for the collusive price and the antitrust budget when  $r = 3$ .**

From Figure 1, the equilibrium solution is  $p^* \approx 0.15$  and  $B^* \approx 0.021$ . So, in the equilibrium, the cartel sets the collusive price at \$0.15 which is lower than the monopoly price, and the antitrust agency allocates \$0.021 billion for cartel detection.

### 2.3 COMPARATIVE STATICS ANALYSIS

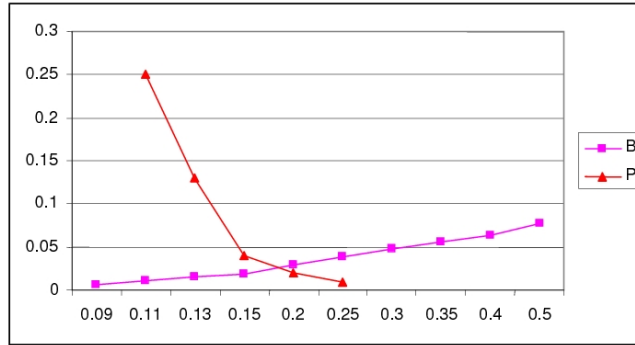
The antitrust agency has the right to adjust the multiplier and uses the leniency program to affect the equilibrium solution. By increasing the damage multiplier  $r$  by 10%, the effect on the equilibrium collusive price and the antitrust budget is displayed in Figure 2.



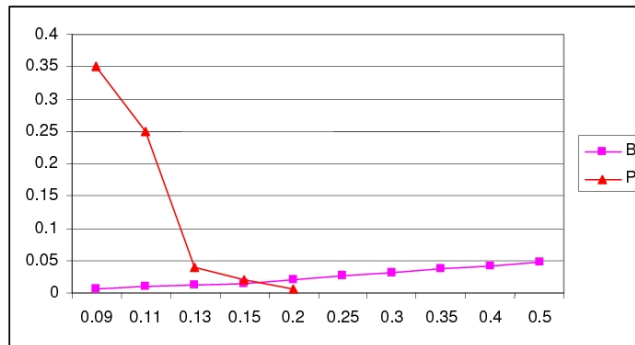
**Figure 2. Equilibrium solution for the collusive price and the antitrust budget when  $r = 3.3$ .**

Compared with Figure 1, when the damage multiplier increases by 10%, the equilibrium collusive price decreases to \$0.138, and the antitrust budget is also reduced to \$0.02 billion. So, the collusive price is reduced by 8%, and the antitrust budget is reduced by nearly 5%. Next, I change the value of  $k$  which means the effectiveness of the leniency program varies. The following figure shows the equilibrium solutions when  $k = 0.015$  and  $k = 0.005$  respectively.

$a = b = 1, r = 3, k = 0.015$



$a = b = 1, r = 3, k = 0.005$



**Figure 3. Equilibrium solutions for the collusive price and the antitrust budget when  $k = 0.015$  and  $k = 0.005$ .**

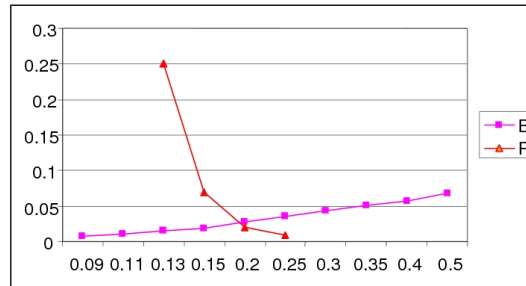
Compared with the base case in Figure 1, when the effectiveness of the leniency program decreases, i.e.,  $k$  is increased from 0.01 to 0.015, the equilibrium collusive price is increased from \$0.15 to \$0.16 with a growth rate of about 6.7%. And the equilibrium antitrust budget is increased from \$0.021 billion to \$0.026 with a growth rate of 23.8%. However, when the effectiveness of the leniency program increases as  $k$  is reduced from 0.01 to 0.005, the equilibrium collusive price is reduced from \$0.15 to \$0.14 with a decrease rate of about 6.7%. And the equilibrium antitrust budget is decreased from \$0.021 billion to \$0.016 with a decrease rate of 23.81%.

If  $r$  and  $k$  stay the same as in the base case, what will be effect of the demand elasticity on the equilibrium solution? Figure 4 shows the equilibrium cartel price and antitrust budget when  $b = 0.9$  and  $b = 1.1$ .

When we have treble damages and the effectiveness of leniency program is given, the market demand elasticity also has effect on the collusive price and the budget allocation. If the market demand becomes less elastic, the equilibrium collusive price set by the cartel is increased from \$0.15 in the base case to \$0.17 with a growth rate of 13.3%. The budget level is increased from \$0.021 billion to \$0.025 billion with a growth rate of 19%. And if the market demand is more elastic, the equilibrium collusive price decreases from \$0.15 to \$0.14 with a decrease rate of 6.7% and the antitrust budget is about the same as in the base case.

In sum, the comparative statistics results are shown in Table no. 1.

$a = 1, b = 0.9, r = 3, k = 0.01$



$a = 1, b = 1.1, r = 3, k = 0.01$

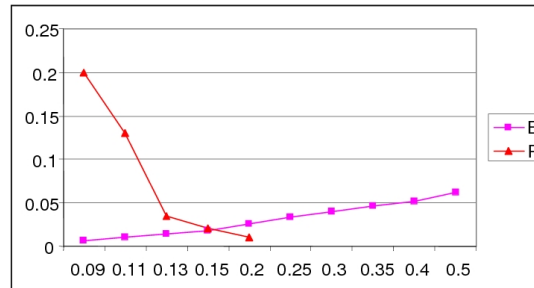


Figure 4. Equilibrium solutions for the collusive price and the antitrust budget when  $b = 0.9$  and  $b = 1.1$ .

Table 1. Simultaneous equilibrium solutions with various parameter values.

$a$	$b$	$r$	$k$	$p^*$ (\$)	$B^*$ (billion\$)	$\theta^*$
1	1	3	0.01	0.15	0.021	0.1016
1	1	3.3	0.01	0.138	0.020	0.0920
1	1	3	0.015	0.16	0.026	0.1015
1	1	3	0.005	0.14	0.016	0.1067
1	0.9	3	0.01	0.17	0.025	0.1214
1	1.1	3	0.01	0.14	0.021	0.0948

The probability of detection is the highest when the market demand is less elastic. When the effectiveness of the leniency program increases 50%, the detection probability increases by 5.02%.

## 2.4 FINDING SUB-GAME PERFECT EQUILIBRIUM

Now I consider a sequential game with two stages. In the first stage, the cartel decides the collusive price level. In the second stage, the antitrust agency makes an antitrust budget decision to maximize its expected payoff after seeing the antitrust agency's price level in the previous stage. Throughout the game, I assume sub-game perfect equilibrium. I will start analyzing the equilibrium behavior using backward induction.

In the second stage, the antitrust agency faces the same expected utility maximization problem in equation (3) as in the simultaneous game and the best response function of the cartel is given by  $\hat{B}(p)$ . In the first stage, the cartel knows that the antitrust agency will make decisions based on its best response strategy  $\hat{B}(p)$ , so the maximization problem for the cartel is then given by:

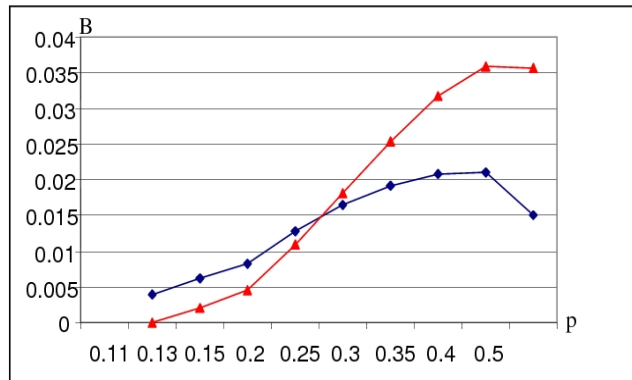
$$\begin{aligned} \max_p & \left(1 - \frac{pB}{B+k}\right)(ap - bp^2) - \frac{pB}{B+k} r(ap - bp^2) \\ \text{s.t. } B &= \sqrt{pk(arp - brp^2 + \frac{ap}{b} - \frac{p^2}{2b})} - k \quad (8) \end{aligned}$$

The first order condition to equation (8) is:

$$\begin{aligned} & (B+k)^2(a-2bp) - (B+k)B(ap-bp^2+arp-brp^2) - (B+k)Bp(a-2bp+ar-2br) \\ &= \frac{1}{2} pk(ap-bp^2+arp-brp^2) - \frac{2arpk-3brp^2k+\frac{2akp}{b}-\frac{3kp^2}{2b}}{\sqrt{pk(arp-brp^2+\frac{ap}{b}-\frac{p^2}{2b})}} \end{aligned} \quad (9)$$

Solving equations (7) and (9) would yield the sequential equilibrium. Again, a numerical solution is obtained by letting  $a = b = 1$ ,  $r = 3$  and  $k = 0.01$ . The sequential equilibrium is shown in Figure 5. In the sequential game where the cartel moves first, the equilibrium solution is given by  $\tilde{p} \approx 0.25$  and  $\tilde{B} \approx 0.015$ . So the cartel sets the collusive price at \$0.25 in the first stage and after seeing the price, the antitrust agency allocates \$0.015 billion to detect the collusive behavior. Compared with the simultaneous equilibrium solution when  $p^* \approx 0.15$  and  $B^* \approx 0.021$ , we find that the cartel charges a higher collusive price and the antitrust agency allocates a smaller antitrust budget in the sequential game. The probabilities of detection are  $\tilde{\theta} = 15\%$  and  $\theta^* = 10.16\%$  in the sequential game and in the simultaneous game respectively. And the cartel's expected payoffs are 0.0757 in the simultaneous game and 0.075 in the sequential game. Therefore, the cartel is not better off in the sequential game because the detection probability increases along with the collusive price. Although the cartel enjoys the first-mover advantage by being able to set a higher collusive price, the probability of paying penalties once detected and found guilty also increases, so its total expected payoff decreases in the sequential game.

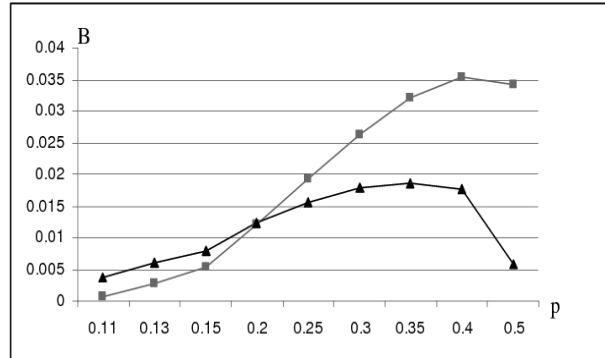
$a = b = 1, k = 0.01, r = 3$



**Figure 5. Sequential equilibrium solutions for the collusive price and the antitrust budget.**

Keeping  $a = b = 1$  and  $k = 0.01$ , again I increase the damage multiplier  $r$  by 10% to 3.3, the new sequential equilibrium is shown in Figure 6. When  $r = 3.3$ ,  $\tilde{p} \approx 0.18$  and  $\tilde{B} \approx 0.0125$ . Compared with the equilibrium solution in Figure 5, the collusive price decreases 28% and the budget amount decreases 16.7% respectively.

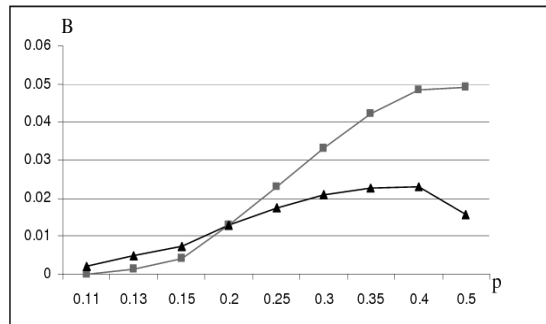
$a = b = 1, k = 0.01, r = 3.3$



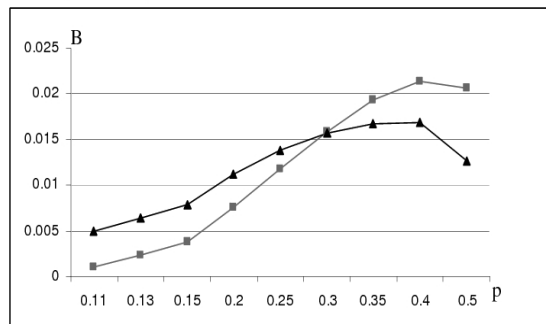
**Figure 6. Sequential equilibrium solution when  $r = 3.3$ .**

Then I change the value of the effectiveness of the leniency program  $k$  to 0.015 and 0.005 respectively, the sequential equilibrium solution is displayed in Figure 7. When  $k = 0.015$ ,  $\tilde{p} \approx 0.175$  and  $\tilde{B} \approx 0.0120$ . Compared with the equilibrium solution in Figure 5, the collusive price decreases 30% and the budget amount decreases 16.7% as the leniency program becomes less effective. When  $k = 0.005$ ,  $\tilde{p} \approx 0.275$  and  $\tilde{B} \approx 0.0152$ . The collusive price increases 10% and the budget amount increases 1.3% as the leniency program becomes more effective.

$a = b = 1, k = 0.015, r = 3$



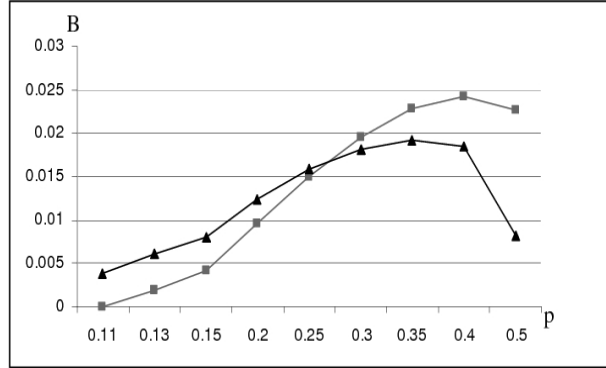
$a = b = 1, k = 0.005, r = 3$



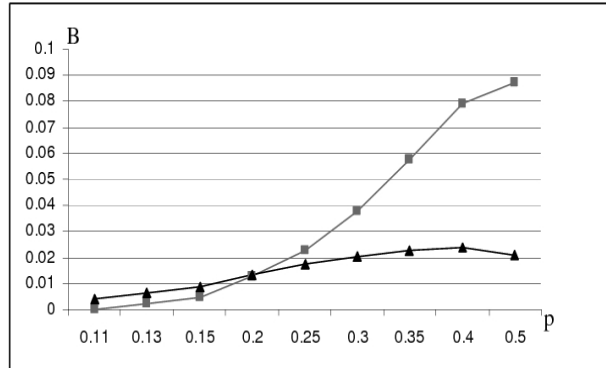
**Figure 7. Sequential equilibrium solution when  $k = 0.015$  and  $k = 0.005$ .**

Lastly, I change the slope of the market demand  $b$  to 1.1 and 0.9 respectively, the equilibrium solution in the sequential game is displayed in Figure 8. When the demand slope  $b = 1.1$ ,  $\tilde{p} \approx 0.248$  and  $\tilde{B} \approx 0.017$ . So the collusive price decreases 0.8% and the budget amount increases 13.3% as the market demand becomes more elastic. When  $b = 0.9$ ,  $\tilde{p} \approx 0.175$  and  $\tilde{B} \approx 0.014$ . The collusive price decreases 30% and the budget amount decreases 6.7% as the market demand becomes less elastic.

$a = 1, b = 1.1, k = 0.01, r = 3$



$a = 1, b = 0.9, k = 0.01, r = 3$



**Figure 8. Sequential equilibrium solution when  $b = 1.1$  and  $b = 0.9$ .**

In sum, the comparative statics results in the sequential game where the cartel sets the collusive price first are shown in Table 2.

**Table 2. Sequential equilibrium solutions with various parameter values.**

$a$	$b$	$r$	$k$	$\tilde{p}(\$)$	$\tilde{B}(\text{billion } \$)$	$\tilde{\theta}$
1	1	3	0.01	0.25	0.015	0.15
1	1	3.3	0.01	0.18	0.0125	0.10
1	1	3	0.015	0.175	0.012	0.095
1	1	3	0.005	0.275	0.0152	0.1659
1	0.9	3	0.01	0.175	0.014	0.1021
1	1.1	3	0.01	0.248	0.017	0.1561

Comparing Table 2 with Table 1, we find that the collusive prices in the sequential game where the cartel moves first are all higher than in the simultaneous game, and the antitrust agency allocates less budget used to detect the ongoing cartel in the sequential game.



### 3 CONCLUSIONS

In the first model of the strategic interactions between an ongoing cartel and the antitrust agency in a simultaneous game, my numerical results show that when the damage multiplier and the effectiveness of leniency program increase, the equilibrium collusive price increases and the equilibrium antitrust budget decreases. The equilibrium collusive price in the market with less elastic demand is higher and the budget level made by the antitrust agency is also higher. In the base case, the probability of detection is about 10% and can be increased by improving the effectiveness of the leniency program. And the detection probability is higher in the markets with less elastic demand. From the above results, if the cartel and the antitrust agency are interacting simultaneously, the antitrust agency can increase the damage multiplier to have a lower collusive price. And the agency can decrease the collusive price by improving the leniency program or any other program that can be used to affect the cartel detection probability.

In the sequential game where the cartel decides its collusive price, the equilibrium collusive price is higher than in the simultaneous game, and antitrust agency's budget is smaller than in the simultaneous game. The probability of detection compared to the simultaneous game is 5% higher at 15%. The cartel's benefits from charging a higher collusive price are offset by the higher probability of getting caught and paying penalties in the sequential game. When the damage multiplier set by the antitrust agency, the effectiveness of the leniency program and the slope of the market demand curve change, compared with the simultaneous results, the cartel charges a higher equilibrium collusive price and the antitrust agency allocates less budget spending to detect the incumbent cartel after seeing the cartel's price decision in the sequential game.

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## **A PARALLEL BETWEEN THE ROMANIAN AND EUROPEAN INVESTMENT FUNDS\***

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**Abstract:** This paper aims at making a parallel between the evolution of Romanian and European investment funds, starting with the year 2000 and up to the present day. In the first part the evolution of investment funds (both open-end and closed-end) from the year 2000 and up to 2010 is presented, both at a European level and in Romania, and the second part analyses the years 2009 and 2010 comparing the situation in Romania with that of other countries. The analysis was based on the official data offered by EFAMA, AAF and RNB, as well as by other national and international institutions. The main conclusion regarding Romania by comparison with the European level is the following: the value of the net assets of the investment funds is insignificant when compared with that of the European investment funds, in other words Romania is behind also in this area called investment funds.

**JEL classification:** E22, G15

**Key words:** investment funds, Romania, Europe

### **1. INTRODUCTION**

Investment funds are not just an alternative to bank products, they represent a significant source for the business enterprises that need capital and offer professional management, the diversification of the portfolio, transparency and mutuality, having an important part on financial markets. Through their activity, they influence the stock market, the interbank market and even the financial flux of companies.

The European Fund and Asset Management Association (EFAMA) is a non-profit organization, organized as a federation which represents the interest of the investment undertakings industry and of the asset management industry. It periodically elaborates reports and analyses regarding the evolution of investment funds.

The Romanian Association of Asset Managers (AAF) is an independent non-government professional organization of the operators in the Group Investment Organizations (O.P.C.) in Romania, which gathers:

- 19 investment management companies (S.A.I) which manage the Securities Group Investment Organizations (O.P.C.V.M.) and Other Group Investment Organizations (A.O.P.C.);
- 5 Financial Investment Societies (S.I.F.) former Private Property Funds;
- 3 deposit banks.

The A.A.F. purpose is:

- to promote the concept of group investment in securities as well as the activity of its members;

- to contribute to the organization and activity of its members so that these should be according to the national and international norms and standards;
- to contribute to the formation and development of the organizational, legislative and general professional frame for the improvement of the members' activity;
- to contribute to the advertisement towards investors and towards the public of the activity, rights, advantages and risks related to the activity of the members;
- to develop and raise the professional standards for the members of the Union;
- to ensure a high level of professional qualification for the staff of the Union's members, which should be compatible with the international qualification standards;
- to establish and develop ties with government or non-government organizations both internal and external, with the purpose of promoting the exchange of points of view and experience in the area, as well as promoting the capital market and securities group investments in Romania.

## 2. OBJECTIVES

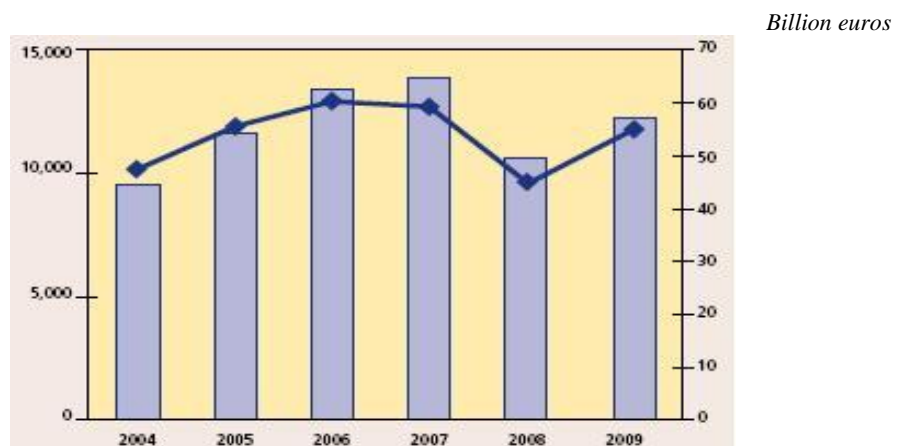
The aim of this paper is to analyze mutual funds in Romania and Europe to see Romania's rank compared with Europe.

## 3. METHODOLOGY

Comparative analysis of the data groundwork to the realization of this study. The analysis was based on the official data offered by EFAMA, AAF and RNB, as well as by other national and international institutions.

## 4. THE EVOLUTION OF INVESTMENT FUNDS AT A EUROPEAN LEVEL AND IN ROMANIA IN THE PERIOD 2000-2010

As it can be noticed in figure 1 European investment funds have had an ascending trend in the period 2004-2007 and in 2008 the effects of the economic crisis have been felt and the value of net assets has decreased, but it has resumed its ascending trend in 2009.



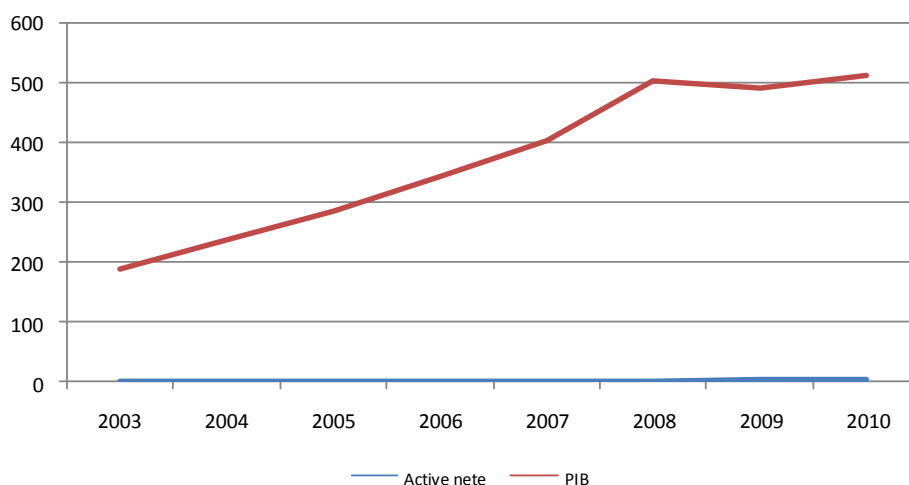
Note: Net assets per capita in EUR (left scale); Net assets as a percentage of GDP (right scale)

Source: Annual Report 2009 available at [www.efama.org](http://www.efama.org) accessed 18.05.2011

**Figure 1. The Evolution of European Investment Funds in 2004-2009**

The states member in the EFAMA in 2009 have been: Austria, Belgium, Bulgaria, The Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Lichtenstein, Luxembourg, Holland, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Switzerland, Turkey and Great Britain. Only in 2007 Slovenia has joined and Bulgaria and Romania have been observing countries and only in 2009 they have become full-fledged member states.

The GDP value compared to the value of the net assets of the investment funds is a lot larger, which shows that, in Romania, the investment funds are not yet an important part of the economy, as they are in other countries (USA, Luxembourg, France, Germany). The net assets of the Romanian investment funds represent 1% of the GDP. At a European level the net assets represent 45-65% of the GDP, the discrepancy between Romania and the European level is quite large.



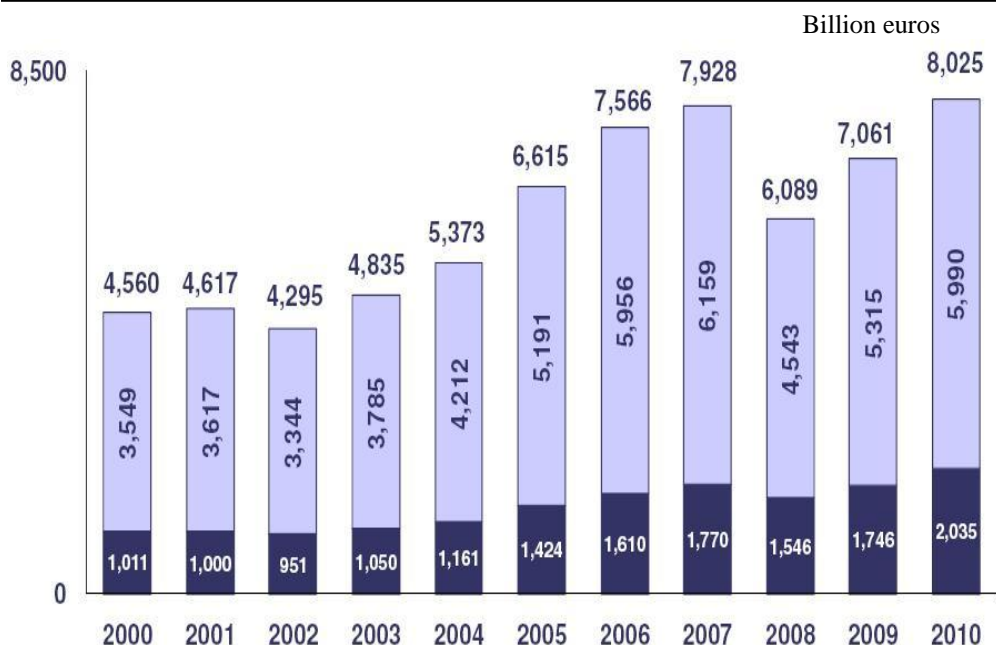
*\*Billion RON*

*Source: Representation of the data from [www.bvb.ro](http://www.bvb.ro), [www.bnro.ro](http://www.bnro.ro) and [www.insse.ro](http://www.insse.ro)*

**Figure 2. The evolution of the GDP and the total net assets of AOPC and OPCVM**

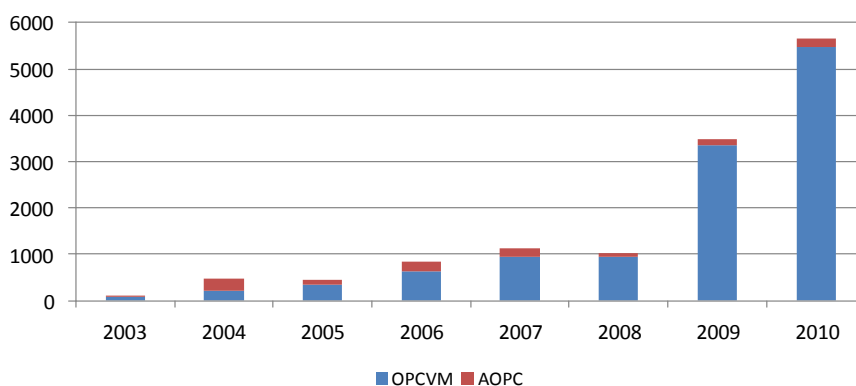
The value of the net assets of the investment funds which were open-end is three times higher than that of the closed-end investment funds. In the period 2000-2007, except 2002, the evolution of investment funds, both of those closed-end and of those open-end, was positive. In the crisis year 2008 a decrease in assets was obvious, but in the year 2009 they have resumed the increase, an increase which in 2010 has surpassed the value they had in 2007. And according to the type of open-end funds the evolution was positive until the year 2008, except the monetary funds, which continued to increase until 2009 and only then they started decreasing, whereas the other types of funds began increasing in 2009, as only 2008 was a crisis year.

In figure no. 4 one can notice that the value of net assets of the open-end investment funds is a lot bigger than of those which were closed-end, as it is in Europe as well, only that in Romania the value of the net assets is a lot smaller compared to the European one. In Romania one can talk about millions of lei, whereas in Europe one can talk about billions of Euro.



Source: EFAMA Quarterly Statistical Release, February 2011, no. 44, p. 3 available on [www.efama.org](http://www.efama.org) accessed in 17.05.2011

**Figure 3. The net assets of the European investment funds**



\*Billion RON

Source: Representation of the data from [www.bvb.ro](http://www.bvb.ro), [www.bnro.ro](http://www.bnro.ro) and [www.insse.ro](http://www.insse.ro)

**Figure 4. The division of net assets between OPCVM and AOPC**

The chart above shows how the number of closed-end funds has increased (except in the year 2008, when they increased), but they cannot be compared with the rise of open-end funds, which have increased greatly in 2009 and 2010, in 2009 being three times as many compared to 2008 and in 2010 double compared to 2009.

EFAMA has published the statistical report regarding the evolution of investment in the year 2010 on European territory. The comparison between the evolution of the Romanian investment funds and that in other European countries is presented below.

**Table 1. The value of assets managed in Romania compared with other European countries – 2010 and 2009**

	<b>Total assets 31.12.2010 Million EUR</b>	<b>% of total (December 2010)</b>	<b>Total assets 31.12.2009 Million EUR</b>	<b>% of total (December 2009)</b>	<b>Evolution 2010/2009</b>
Austria	147.591	1,84%	138.603	1,96%	6,48%
Belgium	94.030	1,17%	96.950	1,37%	-3,01%
Bulgaria	229	0,0%	179	0,0%	27,93%
Denmark	135.442	1,69%	109.612	1,55%	23,56%
Switzerland	253.216	3,16%	158.450	2,24%	59,81%
Finland	61.506	0,77%	54.251	0,77%	13,37%
France	1.401.625	17,47%	1.421.395	20,14%	-1,39%
Germany	1.125.853	14,03%	1.019.672	14,45%	10,41%
Greece	9.128	0,11%	10.279	0,15%	-11,2%
Ireland	963.326	12,01%	748.629	10,61%	28,68%
Italy	232.059	2,89%	257.804	3,65%	-9,99%
Liechtenstein	31.078	0,39%	24.592	0,35%	26,37%
Luxembourg	2.198.994	27,41%	1.840.993	26,08%	19,45%
Great Britain	793.957	9,9%	638.312	9,04%	24,38%
Norway	63.243	0,79%	49.925	0,71%	26,68%
Netherlands	78.066	0,97%	79.020	1,12%	-1,21%
Poland	28.757	0,36%	22.592	0,32%	27,29%
Portugal	25.793	0,32%	28.463	0,4%	-9,38%
Czech Republic	4.883	0,06%	4.426	0,06%	10,33%
<b>Romania</b>	<b>1.350</b>	<b>0,02%</b>	<b>833</b>	<b>0,01%</b>	<b>62,06%</b>
Slovakia	3.763	0,05%	3.418	0,05%	10,09%
Slovenia	2.251	0,03%	2.239	0,03%	0,54%
Spain	169.568	2,11%	194.520	2,76%	-12,83%
Sweden	166.089	2,07%	126.402	1,79%	31,4%
Turkey	17.565	0,22%	16.281	0,23%	7,89%
Hungary	13.541	0,17%	11.071	0,16%	22,31%
<b>Total</b>	<b>8.022.903</b>	<b>100%</b>	<b>7.058.911</b>	<b>100%</b>	<b>13,66%</b>

Source: <http://www.despreinvestitii.ro/1775/piata-investitiilor-din-romania-vs-pietele-europene/>

One can notice in table no. 1 that the countries with the highest number of assets managed by investment funds are Luxembourg, France, Germany, Ireland and Great Britain, at the opposite pole are Bulgaria, Romania, Slovenia, Slovakia and The Czech Republic, although Romania has the greatest annual increase in assets +62%. The assets in Romania are comparable to those of countries like Slovenia and Slovakia, which have not registered such a spectacular increase. It is important to regard these evolutions overall, in the context of the market size.

Also interesting is the comparison between the value of the assets managed in relation with the GDP (estimate for 2010) in some Central and Eastern European countries.

**Table 2. The assets of the investment funds compared with the GDP – 2010**

	Total assets managed by funds in 2010 (million EUR)	Estimated GDP 2010 (million EUR)	Assets invested in funds relative to GDP
Bulgaria	229	35.900	0,64%
Poland	28.757	350.000	8,22%
Czech Republic	4.883	145.800	3,35%
<b>Romania</b>	<b>1.350</b>	<b>118.700</b>	<b>1,14%</b>
Slovakia	3.763	66.100	5,69%
Slovenia	2.251	36.500	6,17%
Turkey	17.565	557.100	3,15%
Hungary	13.541	97.800	13,85%

Source: <http://www.despreinvestitii.ro/1775/piata-investitiilor-din-romania-vs-pietele-europene/>

Romania is among the countries which invest the least in investment funds in relation to the overall size of the market. In Romania this percent is little over 1%, which is a lot less than in other countries like The Czech Republic, Poland, Slovakia, Slovenia, Hungary or even Turkey.

EFAMA has recently published a statistics regarding the evolution of international investment fund markets in the year 2010, which shows the differences between various countries, as BRIC (Brazil, Russia, India and China), the Central and Eastern European States or the developed states of the world.

**Table 3. The evolution of investment funds' assets in Q2-Q4 2010**

	Total assets managed Q2 2010 (million EUR)	Total assets managed Q4 2010 (million EUR)	Evolution Q4 2010 – Q2 2010
World	17.474.162	18.484.241	5,78%
Americas	9.771.958	10.168.290	4,06%
Brazil	658.109	733.758	11,49%
USA	8.557.323	8.846.488	3,38%
Europe	5.537.188	5.914.411	6,81%
Bulgaria	185	226	22,16%
Czech Republic	3.906	4.122	5,53%
France	1.211.452	1.210.280	-0,1%
Germany	228.137	249.748	9,47%
Hungary	8.376%	8.631	3,04%
Poland	16.884	19.155	13,45%
<b>Romania</b>	<b>1.065</b>	<b>1.282</b>	<b>20,38%</b>
Russia	2.587	2.932	13,34%
Sweden	128.313	153.756	19,83%
Turkey	15.037	14.627	-2,73%
Great Britain	559.954	639.435	14,19%
Asia & Pacific	2.077.503	2.295.557	10,5%
India	96.472	83.386	-13,56%
China	243.100	273.152	12,36%
Africa	87.513	105.983	21,11%

Source: <http://www.despreinvestitii.ro/1884/romania-vs-pietele-internationale-evolutii-investitionale/>



At the end of the year 2010 the assets managed by investment funds on the global market have increased compared to the first half of the year 2010 with 5,78% (percentage in EUR). Romania has one of the most significant rises (20,4% in EUR), being surpassed in its growth pace only by Norway (24,2%), Bulgaria (22,2%) and South Africa (21,1%).

At a continental level, the greatest assets are managed on the American continent, but the fastest growth is registered by the African continent.

## 5. CONCLUSIONS

At this time Romanian investment funds (open-end and closed-end) represent only 1% of the GDP compared to the European level, where the funds represent over 50% of the GDP, we can say that Romania has a long way to go until it reaches a level comparable with the European one.

Although there is a rising trend and both the number of investors increases every year (except the years 2007-2008 when the economic crisis came), and the volume of net assets, the Romanian investment funds represent 0,1% of the European investment fund industry (according to data from AAF and EFAMA), an insignificant percentage.

The reasons why Romanian investment funds have a long way until they reach the European level is due to the FNI history and due to the population's habit of using bank products when it comes to placing their savings.

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## **ROMANIA AND THE INTERNATIONAL BUSINESS ENVIRONMENT – BETWEEN NATIONAL IDENTITY AND EUROPEAN INFLUENCE**

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**Abstract:** This project tries to isolate the weight and the influence of national specificities of the Romanian culture, reported the influence of Western European culture elements, particularly in the context of the member of European Union state and economic integration and convergence processes. Globalization and economic integration are just two of the factors that influence the manifestation of cultural elements for reducing the intensity of the specific national or international business. Beyond these two factors: economic performance and desire, desire to take an already tested model in terms of efficiency, contribute to this process again.

**JEL classification:** M16, M30

**Key words:** national identity, business environment, national culture, European influence, globalization

### **1. THE COMPARISON - THERE IS A EUROPEAN CULTURAL MODEL?**

What model and what are the values of European Cultural, theorists have different views:

- Values are principles that underlie the action of individuals, directing them. Value is a criterion for a personal decision. There is no good values and bad values. People think differently because they are different. So are the companies in which they live. Values are not the same or even higher in a community, a country such as population, they vary depending on many factors, including education level, age, place of residence (village or town), etc.

- "[...] A value is not what you have. Nothing to proud of that achievement. A value is a mission, a motivation, an incentive to move to action. The more powerful incentive, the more we can get together in the battle to 'live better'. Not only our lives but also of others. In Europe and the world. [...]" Jan Peter Balkenende, Prime Minister of the Netherlands, Conference "Common European values", The Hague, September 7, 2004.

- Expansion means expanding the area of European values, the most important being freedom, solidarity, tolerance and human rights, democracy and the rule of law. [...] Under the treaties, which are legal - Union gates are open "to all European states which respects the values and is committed to promoting them. [...]" Olli Rehn, Member of the European Commission responsible for enlargement.

Integrating economic model of the European Union has led not only to economic development in some countries, that an increase in all countries, and over

time, reduce disparities between rich regions and the poorest of the Union. How did this thing through the practical application of another European values: solidarity. Solidarity with those who have more than one who is less lucky with the solidarity of the more unlikely. He did such a great leap from model to model development overcame defeat which everyone wins.

**Peace, prosperity, solidarity**, only three European Union's values and one can even explain what the European Union became over its history a magnet for the rest of the continent. More and more states have wanted to apply the same model to enjoy these values. But they are not the only values. Another value, especially young people they care about is freedom: freedom of expression, freedom of association, freedom to study and work in any Member State.

## **2. ROMANIAN CULTURAL IDENTITY**

**What is really modern Romanian culture, how deep is located in modern Romanian culture?** This question highlights the fact that there is a continuum behind all the controversies, debates and polemics on subjects such as: national identity, cultural identity, form and substance, imitation and critical spirit, our relations with the West, East, Balkans, Europe etc.. This process was called in the literature re-invention of modernity: help use the intellectual tools to analyze and describe modernity a reality that often proved to be too modern.

Romanian national culture has its unique style, created by the geographical and historical course of its evolution. Current areas and belonging to different cultural traditions have been intertwined, simultaneously and successively, in this context. The only Orthodox Christian believers among the nations in Latin and Eastern Orthodox area, Romanians have tenaciously preserved their Romanian roots and have tried hard to harmonize with orthodoxy, to turn the "island" in ethnic dialogue with other cultures.

It may be noted that indigenous cultural modernity outlines features centralized ideal of cultural unity that affiliation or membership of a model is always asserted. Romanian economy has witnessed a poor institutional framework (Barbu 2010).

Modernization of Romanian culture, which includes everything more than two centuries, is not fully completed. We are still within the confines of a parish with reflexes paternalistic culture, mined its own complex identity, with small islands of modernity. Despite the institutionalization of our European identity rural world remains the main reference is visible both in the way collective memory is preserved by museums, exhibitions, leaflets, albums, books or documentaries and, above all, by the way it promoted its image abroad. It's ideal image of a peasant who lives in a traditional village, a historical and timeless, not the real peasant, who experienced several land reform and forced collectivization and try to survive in post-Communist world that no one understand and are not found (Neagoe, 2008).

Cultural unit pre-modern Romanian language offered by religious faith, an oral culture especially in comparison with a Scripture, was acquired by statehood, where sometimes focus exclusively on this factor gave pragmatic cultural centralization understood as' unity .In other words, sometimes willful confusion is made between cultural unity and allow centralized control of cultural diversity, cultural diversity that restricting the scope of a cultural ideology driven by a single center. Unlike other modern cultures, whose unit is viable especially in the area of language, culture and the written confession, modern Romanian culture is especially active in modern statehood,

relatively new, built after 1918. The binder language was not cohesive for Romanian communities outside Romania, as also that of any religious faith has a pragmatic effect, leaving the plane of projection of national unity made or unrealizable fragmentary (Jucan 2004).

Based on the connections between what is said to be a Romanian cultural model as a cultural form and economy in transition, would be necessary to elucidate the real perception of Romanian cultural model.

Modernity and modernization of the Romanian depended and still depends, to a prevailing measure, a rural culture in opposition to the urban, where the ambiguities of defining the citizen as a crucial element of civil society, and in another plane, no less importantly, of defining the concept of property ownership and the various categories for understanding the degree of autonomy that it has real Romanian citizen.

Quite another aspect is the democratization, the place where Western standards, namely the Euro-Atlantic have been and are made by other cultures than the Euro-Atlantic questioning. But not the Romanian culture, which is recognized as belonging to the European one, although there is doubt not only on the outside Romania belong, that they are expressed since the sentence Maiorescu form without content, to doubt the ability of a rapid European integration. Criticism of our Europeanism surprising democratization inefficient institutions, civil society atomized by Stalinism rehabilitation, socio-cultural behavior of modern precarious. **Trademarks also have an important role in the transmission of national culture.** For business products is important to be talked about national identity, and increasingly more people forming an image on the culture of countries of origin through their brands. The image of a country is the sum of knowledge, and information about a country, which spreads through official channels, through media, through direct contacts with citizens of countries that are carriers of a certain culture and mentality. It builds image, image is known (as well known) and position (the key features we attribute) and it should not be left to chance.

An image is formed gradually over the years, the information from the media, advertising, staff comments institution, organization, and by the satisfaction obtained from the use of products or services. The image is basically a subjective and psychological.

**Table 1. Romania in the World**

<b>Positive aspects</b>	<b>Negative aspects</b>
Positive image boost - Sports	Religious discrimination
Traditions and habits	Development delay
Romanians are hospitable and hardworking	Migration
Education	Corruption

*Source: author's summary*

Market surveys shows that those who are loyal to certain products or services cannot be distinguished from other similar products or services, consumers are actually a picture of you have about the product. So the image can be crucial in determining the demand for products / services. This justifies the actions of marketing and public relations management of a company's brand image and the image of products and services. Fight for the image is therefore as important as the quality of services and products. From this point of view we can talk about "the power of the brand image."

Countries have started to be aware of the power of their image and its need for long-term management. In these circumstances building a good image is as important for a country as any company or institution. As far as control is increasingly in the hands of consumers, through their power of choice in an age advanced information, export of goods and services, investment and import policy ideas are emotional resonance imaging facility in the country abroad. The investment market for example, countries perceived as having the same politico-economic situation have been assigned a common brand image.

For example, 90% of Spaniards can not mention names or trademarks of Romanian products, which reflects a poor image of the Romanian products on Spanish market. Only 1% of respondents considered that the Romanian products is better than products from other European countries is 47% considering that the Romanian products as they are about your access to products from other European countries (Nicolescu 2006).

### **3. CULTURAL VALUES TRANSFERRED TO BUSINESS**

The phenomenon of globalization makes the world a new form and open new perspectives in international relations arena. This phenomenon, although economic in itself, has implications and generates impacts in all areas of human life. Thus, **globalization has a major impact on social, cultural and political**. As we showed in the first chapter, in this context, private firms are delegated with the power and legitimacy of their rule with the right to intervene when appropriate, of course in universal harmony with the other companies.

We believe that globalization has interests beyond national interests; private companies will be invested with the power necessary to carry out their activities according to its own rules, within a framework proposed by local governing. That is, firms will work both for their own benefit and the country of origin.

According to some economists, globalization is a system born as a vocation neo-feudal empire of classical feudalism. Currently, all countries, whether developed, developing, least developed or transition, is global market-oriented policies, opening their businesses access to international competition. Thus, especially in countries in transition, all companies, large or small, depend on the international business world. They have the same vital interests and businesses in the developed countries or developing countries. Globalization represents a step forward, an exchange of information, an economy without borders and without political implications. Of course, globalization also has negative aspects nations.

We believe that as the globalization of business, global system of business rules through a process of continuous refinement. International business community faces a position of increasingly greater impact of this process.

For better participation in international affairs is so necessary in this century more than ever, to clearly understand the implications that these rules have on businesses, particularly on firms in developing countries and transition.

Currently, the Romanian business and their values have changed dramatically in the last 10-12 years, following the phase through which the Romanian economy. The road to a market economy is paved with obstacles of the most diverse and supplemented by the manifestation of international trends of globalization of business. Recent years have witnessed the Romanian economy driven by major changes on all

levels of the economic, social, cultural and political. As these changes continued at a fast pace, a key problem arise in connection with the directions in which they develop and as regards the content of these changes.

At the macroeconomic level changes that have occurred have led to changes in business that generated new values. It should be noted that the new values generated carries a significant impact on business, the business community, business associations and people. Of course, the present values of the business will put their mark on the prospects of development of Romanian business in the globalised business.

It is known that **cultural differences between nations consist of values** and the origin of these differences, as well as the differences between ethnic subgroups, religious or linguistic minorities within nations are hidden in history. Of course, these differences do not prevent people with a good cooperation within different cultures. Moreover, sometimes people within certain cultures will cooperate more easily with strangers than with other compatriots.

Insufficient material and symbolic remuneration received within academic institutions and scientific organizations, intellectuals led the public to head for a diffuse, much broader than the one formed by colleagues who were guild above address. Thus the intellectuals could not resist the call of the mass media. As such, they will adapt their intellectual production "cultural tastes" the general public oriented mass media. Journalists decide today on the interest of an idea, a theory or a text and the general public the opportunity presentation.

Officials are those who believe that a particular consumer depends on their belonging to one or another social group prestige. The uncertainty of tomorrow and the stress of companies and organizations have all contributed to influencing people's attitudes change. On the contrary, these factors have caused even more people deepening uncertainty for tomorrow. Romania is currently under the sway of big changes at all levels of society, including all types of organizations.

It should be noted that the communist period meant reducing individual performance, depersonalization and unifying society even to the destruction of individuals as distinct personalities .Also, Communism has led to a different hierarchy of values promoting bad loans and obedience to the party. In this context, even copying Western democracy mechanisms we can save. The most difficult thing in the present situation of transition to market economy is to create a value system that has become absolutely necessary foundation for big changes. Those who can contribute to this system of values are those that are found in organizations of our country.

People of Romanian companies, for the most part, are trained in the communist period. They are still conservative, operating, and transmitting information through a ciphered communication, they fail to understand well the importance for the success of an organization's time for them because time is tied to the rhythms of nature and not indestructible rhythms of the business world increasingly alert. Westerners belief that "time is money" has taken on new meaning diversion from some duties and responsibilities, not on behalf of the organization.

Some consequences of communist indoctrination may not be evanescent or concealed because they are still well represented by many individuals in society. For example, fear of open views to tell you generate in terms of secrecy and manipulation of data storage which are given more importance than they actually. The consequence is that many Romanian companies considered business strategy and goals as secret. How

a market economy this kind of information usually are released, keeping their secret can only lead to losses both in domestic relations, and foreign relations organized by businesses. Other important consequences of the communist period, both individual lives and organizations are: lack of trust in the word said, the need for obedience to "someone" to take decisions, to judge and monitor, the belief that all must suffer because we are in a time of crisis.

If during the communist Romanians subconscious knew that these beliefs are generally good and improper development of society, now, fortunately, they are aware of this and strive to find new meanings and values to change. The practice of recent years but showed how hard it is to overcome the shock of 1989 when the national culture, putting their mark on how to develop the economy and society in general is difficult to change.

Research values present in Romania in the European context and in the context of globalization, that there is a convergence of values specific international market economy, European values, often taken without proper overlap over national cultural specificity, or without a minimum degree of functionality.

Thus, currently the **dominant values** are: selfishness and individualism, short-term vision, focusing strictly on money that single goal, the decentralization of business, to some extent return to religion, tolerance and excessive tendency to copy Western models, lack of information and vision and hope. However Romanian display a high level of creativity that can be used for business (Bobircă A., Drăghici A., Dumitrescu S., Mihailescu O., 2009).

Today, Romanians are central to their own problems, to obtain more money, all things considered to be well placed. Having two or even three jobs each, the Romanians look to family, friends and the beauty of life. Money is their ultimate goal of education is growing level, more and more individuals are prone to financial efforts in order to attend university. They are not willing to work too much for a diploma, believing that you can pay for studies and more. Of course, people are becoming less and less willing to accept and to bear the hard work, uninteresting, and some treatment by employers.

The survival of firms depends on the free play of supply and demand. So in the nation's entrepreneurial spirit and manifest democracy and the state's role diminishes by the day. It occurs only in the public. The tendency is the penetration of entrepreneurship in sectors which belonged exclusively to state and health, education, retirement. Also, there are legislative attempts to encourage small and medium businesses, but without significant results. Marginalized and persecuted in the communist era, religion is experiencing a revival. There is a certain return to religion. Ancient feature of the Romanian people, tolerance is manifested in the political, social and economic development. Romanians are at the same time tolerant of their politicians, with corrupt businessmen, state bodies and institutions, with their countrymen and foreigners. Poor people are tolerant (Popescu-Nistor 2003).

#### **4. CONCLUSION**

For the citizens of Romania, European Union and the European spirit has manifested ID: jobs, fighting poverty and social exclusion, decent education, adequate medical care, a common approach to the problem of environmental protection, climate change and food security. They also want a more active in foreign affairs, defense and

security matters in the fight against crime and terrorism. Reducing bureaucracy, a safe and prosperous economy, preservation of EU countries, in parallel with the deepening of integration are other goals of citizens of Member States and candidate countries.

We believe that the Romanian people during the communist isolation from other peoples of Europe and the world. The phenomenon of globalization instead of coming to play Romania in the European context, but without anything in return. For Romania and the Romanian, European Union and the affiliation to a security group had significantly away from communism and centralized economy values and approach of a Western democratic market economy.

For Romanian people but it must be hard on the European integration process. Recently, the economic crisis has revealed some problems that are not only Romania, but in fact they are universal, namely: environmental degradation, unemployment, wage inequality, inflation, corruption, famine, etc.

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## **AN ANALYSIS OF THE VALUE ADDED – CRITERION FOR THE DETERMINATION OF THE ECONOMIC COMPETITIVENESS\***

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**Abstract:** Any enterprise activity involves the acquisition of production factors, their use and the achievement of goods and services necessary to satisfy the human needs. Under the circumstances of a market economy, where all entrepreneurs aim to maximize the profit, in order to survive, a company should develop an activity as effectively as possible (profitable) to achieve much higher performances. One of the most important evaluation indicators of economic and financial performance of a business is the value added. This is a significant indicator for the economic analysis, on its size being established: the true size (waist) of an enterprise, its economic power, the contribution to GDP, all these being the underlying elements that reflect the economic level of competitiveness. Based on these considerations, this paper aims to highlight the level of value added registered in the Romanian economy and, in particular, the contribution of the South-West Oltenia Development Region in getting it.

**JEL classification:** C82, E01

**Key words:** added value, GDP, competitiveness

Along with the turnover, the profit, the gross surplus of exploitation and other indicators, the value added represents one of the most important indicators of expressing the economic performances of an enterprise. This is an element which helps to set the economic financial efficiency degree of an enterprise and its management can adopt a series of rational decisions.

At the same time, the gross added value also represents a basic element for the measurement of the A economic activity on a national level. In this context, starting from the aspect that the gross value added represents the newly created value through the productive activity of an enterprise, then we might say that this also reflects the contribution of that enterprise to the gross domestic product. On the level of each branch or sector of activity, if from the total value of goods and services we deduct the intermediary consumption, the gross added value of that branch or economic sector represents what it is left.

$$GVA_i = P_i - Ci_i$$

where:  $GVA_i$  = gross value added of the branch „i”

$P_i$  = gross value added of the goods and services manufactured in the branch „i”

$Ci_i$  = intermediary consumption

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In consequence the gross domestic product which expresses the gross value of the end production obtained in a period determined by the economic operators carrying out their activity inside a country will be equal with the amount of the gross added value (expressed in the prices of the factors) registered in all sectors and branches of activity on the level of the national economy taking into account the taxes, customs taxes and subsidies per product.

The gross domestic product represents a synthetic indicator expressing the macroeconomic results in a given period and which together with other derived indicators is used in order to analyze the efficiency of using the production factors, to carry out a series of comparisons between the economies of various countries on an international level and also to set the living standard and the degree of competitiveness of an economy.

In other words, if on the level of a national economy, in order to characterize and analyze the efficiency of the activity carried out the GDP indicators is calculated and analyzed on the level of a unit or branch of activity it is necessary to analyze its efficiency through the gross added value indicator.

Starting from these arguments, we consider that it is more than necessary an analysis of the gross value added through the contribution of the enterprises from an economy as the main factor of economic development of a country or region.

In this article we wanted to point out based on the national statistical data, the contribution of the 8 development regions to the gross value added on the level of our country, the accent being put on the development region South West Oltenia and on the contribution of the counties which make up this region, but also based on the analysis of the contribution of the branches of activity.

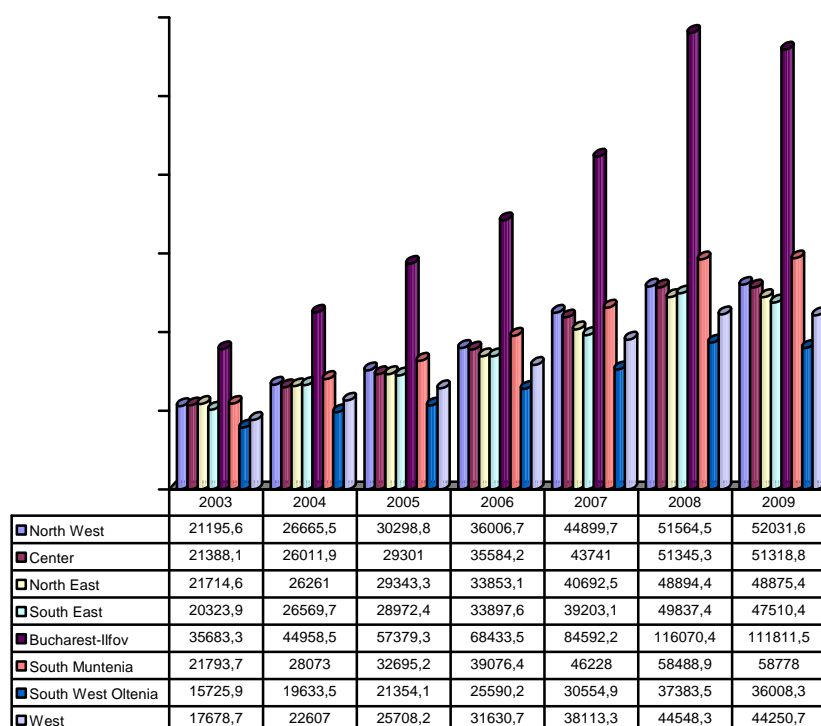
The reality of the past years proved that in Romania as well as in most of the countries, the economic-social development registers different levels and rhythms from one region to another. In order to make such a comparison between the development regions of a country it was necessary to consult a framework of regional accounts which regard each region as a distinct economic entity. These regional accounts represent a version of the national economy accounts on a regional level.

Therefore, taking into account the period 2003-2009, for which there are information supplied by the regional and national accounts one can notice that from the point of view of the gross added value on the level of Romania, the highest contribution was registered by the region Bucharest-Ilfov. Therefore, one can notice that during a 7 years period this region registered shares between 20,3% (in 2003 and 2004) and 25,3% (in 2008) which a slight decrease in 2009 (24,8) regarding the development of the gross value added on a national level.

As for the contribution of the other regions to the gross value added one can notice that during the analyzed period, the region South Muntenia was constantly on the second place (with shares between 12,4% and 13% in 2009) while the 3-6 places were occupied by the region North West (the 3<sup>rd</sup> place, except for 2003, when it was situated on the 5<sup>th</sup> place), the central region (4<sup>th</sup> place, except for 2003 and 2004 when it was situated on the 6<sup>th</sup>, respectively 5<sup>th</sup> place), north-east and south-east. The last two regions from the point of view of the share to the gross added value were analyzed each year, the Western region (7<sup>th</sup> place) and the south-west Oltenia region (8<sup>th</sup> place).

At the same time, in what the region South-West Oltenia is concerned, although the regional gross value added expressed in current prices was doubled in absolute sized in the analyzed period from 15725,9 mld. lei in 2003 to 36008,3 mld. lei in 2009, in

relative size (as a share in the gross value added on a national level) there was a decreasing trend from 9% in 2003 to 8% in 2009.



Source: processed according to the data supplied by the Romanian Statistical Yearbook

**Figure 1. Gross Value Added (GVA) on development regions in Romania in the period 2003-2009**

Starting from the aspect that the gross value added is the result of the economic activity, and its size is as large as the efficiency of the activities is higher, then we might consider that from the 8 development regions in Romania, the most competitive ones are: Bucharest Ilfov, South Muntenia, North West, Central Region followed by North East, South East and South West Oltenia.

A similar conclusion comes from the "Evaluation manual for regional competitiveness" drafted by the Applied Economy Group in 2007, where with the help of a competitiveness index calculated according to economic, social and technologic indicators (analyzed on the level of 2005), one could develop a classification of the competitiveness level for all Romanian regions. This hierarchy is mainly the same, the region Bucharest Ilfov being on the first place, a spectacular jump being registered by the region West which appears in this classification on the second place, the other regions maintaining their positions.

In order to be able to make a complete analysis of the economic activity carried out on the level of the development region South-West Oltenia, we think that it is necessary to provide details for each county to assess the contribution of the regional gross value added, because there are disparities not only on a interregional level, but also inside the regions.

**Table 1. Classification of the regions and the level of competitiveness**

Region	Classification according to the competitiveness index	Classification according to GDP per capita
Bucharest - Ilfov	1	1
West	2	2
North - West	3	4
Center	4	3
South - Muntenia	5	6
North - East	6	8
South - West Oltenia	7	7
South - East	8	5

*Source: Voinea L. (coord.), Regional competitiveness assessment manual, GEA, Bucharest, 2007, pp. 46 and Cojanu V., Botezatu E., Peleanu I., Formulating operational concepts for a cohesive and competitive policy, Studies Collection IER, no. 22, Bucharest, 2009, pp. 16*

From the analysis of table 2 we can notice that the highest share in obtaining the gross value in the total number of regions was held by the county Dolj, share which increase in the period of the 6 analyzed years from 28,8% in 2003 to 32,3% in 2008.

**Table 2. Evolution of Gross Value Added on the level of the development South-West Oltenia, in the period 2003 - 2008**

Million lei – current prices						
Counties	2003	2004	2005	2006	2007	2008
<b>TOTAL Region, from which:</b>	<b>15725,9</b>	<b>19633,5</b>	<b>21354,1</b>	<b>25590,2</b>	<b>30554,9</b>	<b>37383,5</b>
Dolj	4522,4	5840,4	6401,2	7789,4	9441,6	12084,0
Gorj	3663,6	4374,0	4743,1	5592,0	6820,1	8600,9
Mehedinți	1966,1	2355,1	2383,3	2888,4	3328,5	4149,7
Olt	2475,1	3297,0	3468,0	4018,6	4919,3	6019,9
Vâlcea	3098,7	3767,0	4358,5	5301,8	6045,4	6529,0

*Source: Romanian Statistical Yearbook 2010*

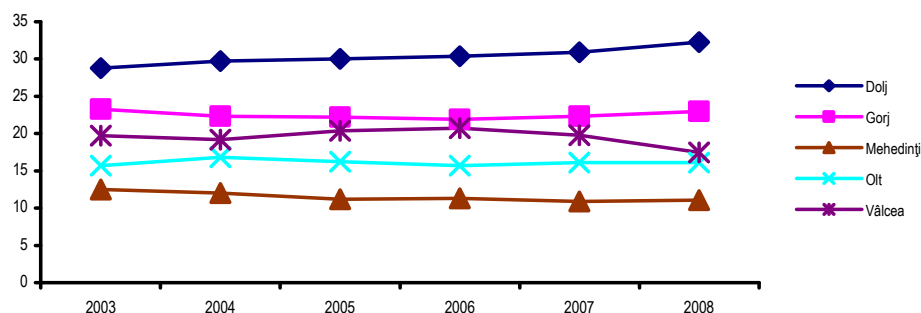
If on the level of the county Dolj there was a continuous growth in the contribution of the gross value added, this contribution was not manifested on the level of the other counties of the region (Gorj, Mehedinți, Olt and Vâlcea) where the share either decreased in most of the analyzed period or increased and afterwards decreased to an inferior level:

- as for the county Gorj, the contribution of the regional gross value added decreased from 23,3% in 2003 to 21,9% in 2006, and it subsequently increased by 23% in 2008;

- as for the county Mehedinți, the contribution to the regional gross value added decreased from 12,5% in 2003 to 10,9% in 2007, and it subsequently increased by 11,1% in 2008;

- as for the county Olt, the share regarding the contribution to the gross value added increased from 15,7% in 2003 to 16,8% in 2004, and in the following years it continuously decreased to 15,7% in 2006, stabilizing in 2007 and 2008 at the level of 16,1%;

- in the county Vâlcea, from a share of 19,7% in 2003 regarding the contribution to the regional gross added value it reached 20,7% in 2006, and in the following two years this share decreased strongly up to 17,5% in 2008.



**Figure 2. Evolution of Gross Value Added (GVA) on the level of the development region South-West Oltenia, in the period 2003 - 2008**

Therefore, we can currently state that the gross value added, in a decreasing order, on the level of the development region South West Oltenia was accomplished mostly due to the economic activities carried out on the level of the county Dolj, followed by the counties Gorj, Vâlcea, Olt and Mehedinți.

We can assess that this reality was and is amplified by the process of economic restructuring, especially in the mono-industrial areas, where due to the shutdown of the non-profitable state enterprises, a significant part of the population was affected by unemployment.

From the analysis of the way in which the gross value added is accomplished in the activity branches on the level of the 5 counties of the development region South West Oltenia, in the period 2003-2008, we can draw the following conclusions:

- on the level of the county Dolj, the branches with the highest contribution to the achievement of the gross value added are the industry (ca. 30%) and trade and services (ca. 20%), the difference of 50% being divided between agriculture (12-14%), construction (6-10%), financial services and real estate transactions (ca. 12%) and public administration, defense, education, health (15-17%);

- on the level of the county Gorj, the branches with the highest contribution to the achievement of the gross value added are the industry (40-45%) and trade and services (ca. 20%), while the agriculture contributes with 5-10%, constructions 8-10%, financial services and real estate transactions 7-10% and public administration, defense, education and health 11%;

- on the level of the county Mehedinți the largest part of the value added also comes from the branch of industry (23-27%) and the branch of trade and services (14-18%), while the agriculture has ca. 8-12% of the gross value added, and the construction branch 7-13%, financial services and real estate transactions 11-17%, public administration, defense, education and health 16-19%;

- la on the level of the county Olt, the industry (25-30%) and agriculture (20-28%) contribute to the highest extent to the gross value added while the public administration, defense, education and health contributes with 17-21%, trade and services 11-14%, constructions 6-12%, financial services and real estate transactions 12-15%;

- on the level of the county Vâlcea, most of the value added comes from the branch of industry (25-33%) and the branch of trade and services (19-26%), while the

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agriculture has ca. 8-17% of the gross value added and constructions 7-13%, financial services and real estate transactions 11-14%, public administration, defense, education and health 13-15%.

**Table 3. Contribution of counties of the development region South-West Oltenia on branches of activity to the achievement of the Gross Value Added (GVA) in the period 2003 - 2008**

Million lei – current prices						
Branches of activity	2003	2004	2005	2006	2007	2008
<b>County DOLJ</b>						
<b>TOTAL county, of which:</b>	<b>4522,4</b>	<b>5840,4</b>	<b>6401,2</b>	<b>7789,4</b>	<b>9441,6</b>	<b>12084,0</b>
Agriculture	653,0	1121,3	812,0	775,3	586,4	1433,9
Industry	1331,5	1704,5	2033,4	2459,3	3011,6	3634,5
Constructions	275,5	336,0	436,2	622,9	944,4	1252,0
Trade and services	968,3	1106,7	1256,2	1673,0	2047,6	2359,2
Financial services and real estate transactions	498,3	593,5	740,5	916,1	1307,1	1516,1
Public administration, defense, education health	795,8	978,4	1122,9	1342,8	1544,5	1888,3
<b>County GORJ</b>						
<b>TOTAL county, of which:</b>	<b>3663,6</b>	<b>4374,0</b>	<b>4743,1</b>	<b>5592,0</b>	<b>6820,1</b>	<b>8600,9</b>
Agriculture	417,8	486,4	441,0	474,5	403,5	482,1
Industry	1631,6	1983,6	2069,1	2244,6	2692,1	3669,8
Constructions	289,0	339,5	356,9	520,1	659,6	900,1
Trade and services	627,8	784,3	920,2	1194,6	1453,1	1680,8
Financial services and real estate transactions	283,2	320,8	400,9	545,3	815,7	881,1
Public administration, defense, education health	414,2	459,4	555,0	612,9	796,1	987,0
<b>County MEHEDINTI</b>						
<b>TOTAL county, of which:</b>	<b>1966,1</b>	<b>2355,1</b>	<b>2383,3</b>	<b>2888,4</b>	<b>3328,5</b>	<b>4149,7</b>
Agriculture	444,6	540,1	362,4	420,8	266,0	504,1
Industry	502,7	637,2	640,2	736,0	885,9	986,8
Constructions	136,9	194,9	224,4	314,1	410,7	541,7
Trade and services	288,1	329,1	385,2	508,0	608,1	765,8
Financial services and real estate transactions	215,4	271,7	333,2	392,6	559,4	630,6
Public administration, defense, education health	378,4	382,1	437,9	516,9	598,4	720,7
<b>County OLT</b>						
<b>TOTAL county, of which:</b>	<b>2475,1</b>	<b>3297,0</b>	<b>3468,0</b>	<b>4018,6</b>	<b>4919,3</b>	<b>6019,9</b>
Agriculture	523,1	920,4	614,0	693,1	475,1	912,7
Industry	624,9	877,5	1028,7	1202,9	1505,9	1784,7
Constructions	177,8	195,9	253,7	339,2	660,0	729,9
Trade and services	321,2	359,8	438,9	580,2	706,2	834,2
Financial services and real estate transactions	305,3	395,8	463,1	501,3	738,4	731,1
Public administration, defense, education health	522,8	547,6	669,6	701,9	833,7	1027,3
<b>County VÁLCEA</b>						
<b>TOTAL county, of which:</b>	<b>3098,7</b>	<b>3767,0</b>	<b>4358,5</b>	<b>5301,8</b>	<b>6045,4</b>	<b>6529,0</b>
Agriculture	539,6	549,1	430,6	499,5	494,8	539,5
Industry	927,3	1190,2	1373,4	1693,1	1974,7	1607,0
Constructions	228,1	330,5	415,1	484,0	707,9	871,9
Trade and services	587,0	757,1	935,8	1189,7	1372,3	1698,6
Financial services and real estate transactions	334,6	436,8	601,0	720,1	692,5	821,8
Public administration, defense, education health	482,1	503,3	602,6	715,4	803,2	990,2

*Source: Romanian Statistical Yearbook 2010*

In consequence we can notice that on the level of the 5 counties of the region South-West Oltenia, the main branches bringing gross value added are the industry (except for the county Vâlcea where in 2007 the main branch was represented by trade and services), than trade and services (Dolj, Gorj, Vâlcea).

Agriculture has a significant share only occasionally according to the climate conditions and natural phenomena (draught, flooding) which were encountered to a higher extent in certain years and in certain areas. Therefore, agriculture was the second branch in what the gross value added is concerned as follows:

- in 2003, in the counties Mehedinți and Olt;
- in 2004, in the counties Dolj and Mehedinți.

In the years 2005-2008, the contribution of agriculture gradually decreased, and in most of the counties it was along with the branches of constructions the branch with the smallest contribution in obtaining the gross value added (except for the county Olt, where in 2008 it was noticed an invigoration of the activity in the agricultural field).

In consequence, we can notice that the industry represents the branch in which the products with the highest gross value added are obtained even if inside the region there are significant disparities from one county to another. For example on the level of the year 2008, the contribution of the industry for the gross value added was of 42,7% on the level of county Gorj, 30,1% on the level of county Dolj, 29,6% on the level of county Olt, 24,6% on the level of county Vâlcea and 23,8% on the level of county Mehedinți.

Taking into account that the industry represents the main branch of activity, we think that it is important to analyze the structure on products in the industry in order to identify the extent to which these contributions to the achievement of the gross value added.

Therefore on the level of Romania, in the period 2004-2005, the highest gross value added was registered by the products manufactures in the branch of food, beverages and tobacco industry, followed by the branches of electrical and thermal industry, gases and water (in 2004 and 2005) and the transport industry (in 2006, 2007 and 2008). Other products characterized by a high value added were the ones obtained from the branch of the metallurgical industry and the metal products as well as the products from the textile industry. In the years 2007 and 2008, as a consequence of the new economic-social realities, the products in the textile industry were overcome from the point of view of the gross value added by the products of the electrical and optical equipment industry.

In consequence taking into account the development region South West Oltenia is the regions contributing to the least extent to the Gross Domestic Product in Romania, due to the total volume of activities in its 5 counties, it is also characterized by the lowest level of gross value added; therefore we think that there should be taken certain measures in order to capitalize the strengths and opportunities which come from the SWOT analysis of the region.

**Table 4. Evolution of the gross value added in the branch of industry in the period 2004 - 2008**

Million lei – current prices					
Branch	2004	2005	2006	2007	2008
Energy extractive Industry	2137,9	2702,9	3153,6	3938,8	4046,8
Non-energy extractive industry	1133,3	1085,6	1591,0	1718,7	1128,6
Food, beverages and tobacco industry	15169,0	17469,3	19916,0	23108,0	27404,2

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Branch	2004	2005	2006	2007	2008
Textile and clothing industry	5029,7	5224,5	5603,2	6509,2	6924,9
Leather and leather products industry	1238,5	1303,3	1506,2	1607,4	1717,7
Manufacture of wood and of products of wood industry	2408,8	2616,1	2983,1	3587,4	3964,7
Manufacture of pulp, paper and paper products	1953,8	2418,2	2843,7	3756,2	4830,5
Manufacture of Coke, refined petroleum products and nuclear fuel	2210,8	3619,4	3729,9	3215,0	4755,1
Manufacture of chemical, chemical products and fibers and synthetic and artificial fibers	2368,6	2484,4	3062,9	3594,8	4191,6
Manufacture of rubber and plastic products	1692,7	1988,3	2511,6	3339,8	4122,5
Manufacture of rubber and plastic products	2465,3	2729,5	3586,6	4544,8	5548,7
Manufacture of other non-metallic mineral products	4639,7	5322,3	6516,7	8765,3	10231,9
Machines and tools industry	2722,1	3101,7	3510,0	4349,9	4906,8
Electrical and optical tools industry	2949,2	4006,8	5539,3	6885,1	7051,6
Transport industry	4537,1	6065,6	7801,6	9571,0	12697,2
Other industrial activities	2676,4	2900,9	3305,5	4118,0	4488,9
Electrical, thermal, gases and water industry	6294,3	6692,4	7395,1	8538,6	10474,3

*Source: Romanian Statistical Yearbook 2010*

Moreover, we also think that it is necessary to follow the capitalization of the opportunities generated by the fact that in the counties Gorj and Mehedinți there are many units which produce electrical energy; the Danube river is an important source for the industry and tourism as well as a low-cost transport path; in the counties Olt and Dolj there are large surfaces of agricultural land with fertile soils for a modern agriculture; the construction of the bridge Calafat Vidin will facilitate the access to the highway and the railway to Bulgaria, Greece, Turkey, the Close and Middle East.

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## **CAUSALITY OF WEATHER CONDITIONS IN AUSTRALIAN STOCK EQUITY RETURNS**

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**Abstract:** This study investigates causality of weather and its impact on Australian stock market returns. The Australian S&P/ASX Index 200, which includes exclusively Australian domicile companies as well as some weather-sensitive companies, has been selected as a proxy for the Australian capital market. This chapter contributes empirical findings on the impact of weather conditions on stock returns and discusses it from the Efficient Market Hypothesis (EMH) and Behavioral Finance (BF) perspectives. The ARCH and GARCH models along with the Granger Causality test are applied to gain precise and accurate results. On one hand, the capital market could respond to new weather-related information (news) and could incorporate this information in the stock valuation process. Alternatively, stock prices could be affected by the mental and/or physical changes in investors caused by weather conditions.

**JEL classification:** G14, G10.

**Key words:** critical: Weather Effect, Granger Causality Test, Australian Stock Exchange, ARCH and GARCH Tests

### **1. INTRODUCTION**

An acceptance of investors' rationality causes a deep divide in opinions between the Efficient Market Hypothesis (EMH) and Behavioral Finance (BF). EMH was developed by Nobel Laureate *Samuelson* (1965) and *Fama* (1970), and formed the term 'efficient market' in economical and financial literature. An efficient market was defined as a market which 'adjusts rapidly to new information' (*Fama et al, 1969*). Fama assumes that in an active market of a large number of well-informed and intelligent investors, stocks will be appropriately priced and will reflect all available information. EMH assumes that investors behave rationally and predictably.

In contrast, Behavioral Finance assumes that investors may be irrational, and takes into account human psychology to explain security prices valuation and market anomalies. There are many instances where emotion and psychology influence investors, causing them to behave in unpredictably or irrational ways. The capital market's 'mood' can turn from irritable to euphoric and it can react hastily one day and make amends the next (*McClure, 2009*). Investors are subject to various psychological

and behavior biases including overconfidence, loss aversion and mood fluctuation, and they can also be affected by factors such as culture, weather, religion and others.

There is significant scientific evidence showing that human psychology is affected by weather-related factors including sunny or cloudy days, as well as rainy or windy days, and therefore, that these factors influence people's moods, thinking and judgement. After a period of heavy rain, people tend to have a greater sense of well being. Conversely, during periods of strong wind, people's moods tend to be more negative. In addition, there are a variety of weather related factors which can influence human mental activity, such as atmospheric pressure, temperature, humidity and other factors. For example, a negative mood can be caused by a change in atmospheric pressure and high humidity. These alterations irritate human nerve endings and lead to general irritability, anxiety, fatigue and a lack of concentration (*DiVito et al, 2005*), and there is even more evidence to show how climatic factors affect the chemical balance of the human brain, consequently psychology and behavior.

There is a relation between human behavior and environmental factors. Even though we cannot claim that environmental factors are unique in influencing human behavioral disorders, there is some evidence in the literature. Numerous studies in the area of environmental psychology have investigated the influence of exposure to sunlight on suicidal behavior (*Petridou et al, 2002; Preti, 1998*), correlation between genetic and environmental factors (*Jang et al, 1998*), lunar effects on the human body and mind, and consequently human psychology and behavior (*Yuan, Zheng and Zhu, 2005*).

If this information is considered to be accurate, it could be meaningful to investigate climate and weather effects on stock exchanges. Research in this area is rapidly expanding with very surprising results. Researchers reported that seasonal disorders, lunar phases, geomagnetic storms and other climate-related events show the greatest relationship to equity pricing (*Dowling and Lucey, 2008; Kliger and Levy, 2008; Yuan et al, 2006*). Some researchers believe that sunshine puts people in a good mood (*Saunders, 1993*), consequently that people in a good mood are happier and make more optimistic choices.

Recently, an increasing number of researchers in behavioral finance have empirically investigated the weather effect on an individual's emotional state and mood, and hence, on investment decisions, by testing the different capital market indexes and stocks in different countries, regions and cities (*Pardo and Valor, 2003; Loughran and Schultz, 2003; Dowling and Lucey, 2005; Tufan and Hamarat, 2004, 2006; Borghesi, 2007; Chang et al, 2006, 2008; Forgas et al, 2008; Levy and Galili, 2008, and others*). While some research found a significant association between weather effect and returns, other research found an insignificant relationship.

A limited number of empirical studies investigated the effect of weather related moods and feelings on the Australian stock returns (*Worthington, 2006*), and weather effects on the Australian capital market (*Cao and Wei, 2005*). *Cao and Wei's (2005)* and *Worthington's (2006)* results indicate no significant relationship between the weather and Australian market returns.

However, there is no research that focuses on the causal direction between weather and stock returns, thus the present research attempts to fill this gap. The purpose of this paper is to investigate whether or not the weather affects Australian share prices. This study contributes empirical findings on weather causality in Australian securities returns and discusses it from the Efficient Market Hypothesis and

Behavioral Finance perspectives. The ARCH and GARCH time-series models and Granger Causality test relies on temporal predictability as evidence of causality have been applied, for more informative results.

The remainder of the paper is organized as follows. Section 2 discusses the literature on how weather conditions affect human mood and behavior, and consequently stock returns. Section 3 describes the data and discusses the methodology. Section 4 gives empirical results, Section 5 discusses results, and the final section delivers conclusions and provides suggestions for future research.

## 2. LITERATURE REVIEW

EMH is based on the assumption that individuals act rationally and consider all available information in the decision-making process. However, many examples of irrational behavior and repeated errors in judgment have been documented in academic studies. The weather effect on the human body and mind, and consequently on psychology and behavior is suggested empirically in psychological and biological literature. For example, *Petridou et al, (2001)* investigated whether exposure to sunshine can trigger suicidal behavior. They applied data from 29 OECD countries and reported a remarkably consistent pattern of seasonality, with peak incidence around June in the northern hemisphere and December in the southern hemisphere.

*Preti (1998)* conducted research into the direct influence of climate on suicidal behavior, focussing on Italy. The researcher reported that the distribution of deaths by suicide shows a negative relationship to mean yearly temperature values, maximum and minimum, and with sun exposure indicators, and a positive, but less significant relationship to rainfall values. Considering climatic variables as a whole, stepwise regression identifies three relevant factors, with significant relationships to suicide rates, humidity grade, rainfall mean and sunlight exposure.

Numerous psychological studies suggest that mood can affect human judgment and behavior (*Frijda, 1988; Schwarz and Bless, 1991*). Research undertaken by *Forgas et al, (2008)* examined the relationship between mood and weather, and found that weather-induced negative mood improved memory accuracy.

*Borghesi (2007)* tested price efficiency in the National Football League (NFL) point spread betting market by examining the relationship between betting line forecast errors and game day temperatures for 5463 NFL games from 1981 to 2004. As a result, they reported that game day temperature significantly affects team performance and that this information is not efficiently incorporated into betting prices.

Behavior finance literature documents evidence on the effects of mood on assets prices (*Avery and Chevalier, 1999, Kamstra et al, 2000*). Recently, an increasing number of researchers in behavioral finance have investigated weather and its impact on the equity markets. *Saunders (1993)* was the first to examine the influence of the weather on asset returns. He examined the Dow-Jones Industrial Average (DJIA), the New York Stock Exchange (NYSE) and the American Stock Exchange (AMEX). He found that the weather in New York City is significantly correlated to the daily returns of the three major stock indices.

*Kramer and Runde (1997)* also replicated Saunders' study in the German stock market and found that the level of cloud cover over Frankfurt did not influence the shares of the Deutscher Aktien Index. The same result has been reported by *Pardo and Valor (2003)* for the Madrid Stock Exchange, and *Loughran and Schultz (2003)* for portfolios of the Nasdaq share index, based on companies located in 26 U.S. cities. *Keef*

and Roush (2003) found the absence of a cloud-cover effect but reported a marginal negative temperature effect and strong negative wind effect.

Later, Keef and Roush (2003; 2005) again confirmed that prices of stock indices are negatively influenced by wind factor. They are ‘inclined to the view that the evidence of the influence of cloud cover on stock return remains mixed’ (p.436). Dowling and Lucey (2005) examined weather influence for the Irish Stock Exchange and concluded that rain was a minor, but significant, influence.

Chang, Nieh, Yang and Yang (2005) investigated the effect of economically neutral behavior variables on equity returns in Taiwan. They found that temperature and cloud cover are two important weather factors that affect stock returns. They suggested that weather factors should be included in assets pricing models.

Tufan and Hamarat (2004, 2006) delivered Turkish case evidence regarding the weather effect on the Turkish stock exchange (ISE) and reported evidence favoring the effects of days when snow fell. Their research results claimed that cloudy and rainy days do not have any effect on ISE 100 Index returns, whilst snowy days do have an effect.

Kamstra et al, (2003), Garrett et al, (2005) and Kliger and Levy (2008) investigated the effect of seasonal affective disorders on capital market returns. Kamstra et al, (2003) studied the number of hours of potential daylight, which is less in winter, and found that it is significantly related to returns on international equity indices. Garrett et al, (2005) applied a conditional CAPM to investigate the U.S., Sweden, New Zealand, the U.K., Japan and Australia. They concluded that seasonal affective disorders come with seasonal depression, which was reflected by changing risk premiums. Moreover, Hirshlefer and Shumway (2003) attempted to examine weather-equity returns’ relationship in 26 international markets and found a negative relationship for Milan, Rio de Janeiro and Vienna.

Dowling and Lucey (2008) investigated the relationship between seven mood-proxy variables which are constructed from weather data (precipitation, temperature, wind, geomagnetic storms) and biorhythm data (seasonal affective disorders, daylight savings time changes, lunar phases) and a global equity dataset using a variety of group tests. The researchers reported that seasonal affective disorders and low temperatures show the greatest relationship to equity pricing. Levy and Galili (2008) investigated the effect of cloudy days on 3000 individual investors. In this study, the degree of cloud cover has been used as a proxy for mood, and the study found that three subgroups of investors (male, young and poor) are more likely to be net buyers of equity on cloudy days.

Cao and Wei (2005) examined the international weather effect in six markets including Australia, and found that the temperature was not a significant factor for the Australian market. However, they suggested that extreme temperatures could increase risk-taking, and hence, cause higher returns. Worthington (2006) examined the impact of weather-related moods and feelings on the Australian stock market over 47 years from 1958 to 2005. His results indicate that there is no statistically significant relationship between the weather and Australian market returns, however, he is concerned about the inadequacies of the empirical techniques employed in this area. Following Loughran and Schultz (2004), and Goetzmann and Zhu (2005), Worthington suggested direct modeling investor decision making. Research in this area has been mainly undertaken in the United States and Europe, where data are more available. A

limited amount of research has been conducted examining the weather effect on the Australian capital market; moreover, none of the studies address causation.

### 3. DATA AND METHODOLOGY

The present study attempts to confirm or reject a causality of weather and its impact on the Australian capital market. The S&P/ASX All Australian 200 Index has been selected as a proxy for the Australian capital market. The S&P/ASX All Australian 200 is a broad market index that consists exclusively of Australian domiciled companies.

Following previous research in behavior finance in the area of environmental psychology, the data set covers temperature, quality temperature, wet bulb temperature, quality wet bulb temperature, humidity, pressure and vapors pressure variables. The data set is a daily return time series and covers the period June 1, 1992 to July 7, 2006, and was provided by the Australian Bureau of Meteorology. Sydney's meteorological data was selected to match the stocks that were traded on the Australian Stock Exchange, because Sydney is generally accepted as the financial centre of Australia. All missing (Sydney city) data has been replaced by data from Sydney airport's meteorological station.

capital market data is of daily-end closing share prices traded on the Australian Stock Exchange and was collected from DataStream's database. Daily stock returns are calculated with the formula;  $R_t = (R_t - R_{t-1}) / R_{t-1}$ . Here,  $R_t$  indicates return in day  $t$ ,  $R_{t-1}$  indicates closing price of day  $t$  while  $V_{t-1}$  indicates closing price of day  $t-1$ .

To examine a long term relationship between weather variables and S&P/ASX All Australian 200 Index returns and how this relationship has been formed, the following empirical model has been applied:

$$Y_t = \beta_0 + \beta_1 T_t + \varepsilon_t \quad (1)$$

Where,  $Y$  indicates return in time  $t$ ,  $T$  indicates weather variables,  $\varepsilon$  indicates error term while  $\beta$  indicates parameters, respectively.

To estimate the model, the following procedure has been applied:

1. Jarque-Bera statistics have been used to test the null hypothesis that the residuals are normally distributed.
2. Augmented Dickey-Fuller (ADF) statistics have been applied to test that time-series data are stationary and co-integrated.
3. ARCH and GARCH models have been used to identify the volatility of stock returns.
4. The Granger Causality test has been employed to determine the causal relationship between weather and return on investment.

#### 3.1 THE JARQUE-BERA

The Jarque-Bera is a two-sided goodness-of-fit test suitable for use when a fully-specified null distribution is unknown and its parameters must be estimated. The test statistic is

$$JB = \frac{n}{6} (s^2 + \frac{(k-3)^2}{4}) \quad (2)$$

where  $n$  is the sample size,  $s$  is the sample skew, and  $k$  is the sample kurtosis. If the  $p$ -value is below the default significance of 5%, and the test rejects the null hypothesis, then the distribution is normal.

### **3.2 THE AUGMENTED DICKEY-FULLER TEST**

ADF Unit Root Test and regression model below (Gujarati 1995):

$$Y_t = \rho Y_{t-1} + u_t \quad (3)$$

Where,  $Y_t$  indicates index return in time  $t$ ,  $Y_{t-1}$  indicates index return in time  $t-1$  while  $u_t$  indicates stochastic error term. The same model has been applied to weather variables. In this model,  $\rho=1$  indicates that the stochastic variable  $Y_t$  has a unit root, so the series is known as a random walk.

If the null hypothesis is rejected and series are stationary (or have been transformed to stationary), the assumption is that the series is integrated of order one. The degree of co-integration will be used as a lag coefficient in causality test.

### **3.3 THE ARCH (1) AND GARCH (1) PROCESSES**

The long-term relationship between weather and capital market return has been modeled as ARCH (1) and GARCH (1) processes. These processes maintain the essential characteristics of the ARCH (GARCH) effect, including an important persistence effect in volatility. Financial time series often exhibit volatility clustering or persistence, where large changes tend to follow large changes, and small changes tend to follow small changes. Volatility clustering, which is a type of heteroskedasticity, accounts for the excess kurtosis typically observed in financial data.

ARCH(1) has been used since the conditional variance depends on only one lagged squared error. In the ARCH (1) model conditional variance of a shock at time  $t$  is a function of the squares of past shocks:

$$h_t = \omega + \alpha_1 \varepsilon_{t-1}^2 \quad (4)$$

Where,  $h$  is the variance and  $\varepsilon$  is a 'shock,' 'news' or 'error'.

GARCH model is useful to examine the volatility of the series over time:

$$h_t = \omega + \alpha_1 \varepsilon_{t-1}^2 + \beta_1 h_{t-1} \quad (5)$$

Where, the variance ( $h_t$ ) is a function of an intercept ( $\omega$ ), a shock from the prior period ( $\alpha$ ) and the variance from last period ( $\beta$ ).

If the S&P/ASX 200 Index has a variable variance, this could stem from weather variables and the weather factors could be Granger-cause stock returns.

### **3.4 THE GRANGER CAUSALITY TEST**

The existence of a co-integrating relationship among variables suggests that there must be Granger causality in at least one direction. It is not rational to expect that returns on investment of the S&P/ASX200 Index could affect weather conditions. Thus, the one way relationship between weather variables and return on investment of the S&P/ASX200 Index has been determined:

$$R_t = \sum_{i=1}^n \alpha_i X_{1t-i} + \sum_{j=1}^n \beta_j R_{t-j} + \varepsilon_{1,t} \quad (6)$$

$$R_t = \sum_{i=1}^n \alpha_i X_{2t-i} + \sum_{j=1}^n \beta_j R_{t-j} + \varepsilon_{1,t}$$

$$R_t = \sum_{i=1}^n \alpha_i X_{3t-i} + \sum_{j=1}^n \beta_j R_{t-j} + \varepsilon_{1,t}$$

$$R_t = \sum_{i=1}^n \alpha_i X_{4t-i} + \sum_{j=1}^n \beta_j R_{t-j} + \varepsilon_{1,t}$$

$$R_t = \sum_{i=1}^n \alpha_i X_{5t-i} + \sum_{j=1}^n \beta_j R_{t-j} + \varepsilon_{1,t}$$

$$R_t = \sum_{i=1}^n \alpha_i X_{6t-i} + \sum_{j=1}^n \beta_j R_{t-j} + \varepsilon_{1,t}$$

$$R_t = \sum_{i=1}^n \alpha_i X_{7t-i} + \sum_{j=1}^n \beta_j R_{t-j} + \varepsilon_{1,t}$$

where  $R$  are returns of the S&P ASX 200 Australian index and  $X$  are weather—related variables:  $X_1$  and  $X_2$  are temperature and pressure respectively,  $X_3$  and  $X_4$  are humidity and quality of air temperature  $X_5$  and  $X_6$  are wet bulb temperature and quality of wet bulb temperature,  $X_7$  is vapor pressure, and  $\varepsilon_{1,t}$  represents uncorrelated error terms. It is assumed no white noise exists between  $\varepsilon_{1,t}$  and  $\varepsilon_{2,t}$  (which is not given in the equation). Granger Causality Test is based on  $F$  statistics which were proven by Wald (Işığık, 1994):

$$F_{n;m-2n} = \frac{(ESS_r - ESS_{ur}) / n}{ESS_{ur} / (m - 2n)} \quad (7)$$

Where,  $ESS$  indicates the sum of error terms squares,  $ur$  indicates the model which is unrestricted, while  $r$  indicates the model which is restricted.

If the computed  $F$  value exceeds the critical  $F$  value at the chosen level of significance ( $\alpha$ ) with  $(n; m-2n)$  degrees of freedom, the null hypothesis ( $H_0$ ) that there is no causality between the two series should be rejected. So, coefficients (or coefficient) in the model are statistically significant.

## 4. EMPIRICAL ANALYSIS

### 4.1 DESCRIPTIVE STATISTICS

The descriptive statistics of the weather variables and S&P/ASX200 Index returns are presented in Table 1. The descriptive statistics for weather-related variables indicates that the average temperature in Australia is around 21oC, maximum is around 39oC and minimum is 8.5oC. The minimum of 2.2mb (millibars) and maximum of 62.0mb indicate high changes in atmospheric pressure, but moderate fluctuation in humidity.

The minimum of -6.78 per cent and maximum of 5.89 per cent show that daily losses on return on investment are slightly higher than gains, on a daily basis. Also, a positive mean and median indicate a positive return on average. The high positive kurtosis indicates the possibility of a severe market reaction to events.

Jarque-Bera (J-B) statistics have been used to test the null hypothesis that the data are from normal distribution. All J-B statistics are greater than the critical value 5.99. Thus, the null hypothesis of normality is rejected. The return's kurtosis of 7.30

exceeds the value 3 of normal distribution, but skewness is less than  $\pm 1.00$  due to the large sample size.

**Table 1. Descriptive Statistics**

	Temperature	Quality Temperature	WBT	Quality WBT	Humidity	Pressure	Vapor Pressure	ASX200 Return
Mean	21.21	11.31	15.90	55.76	1010.77	14.24	25.96	0.0033
Median	21.00	12.00	15.90	56.00	1011.00	14.00	24.90	0.0002
Maximum	38.70	24.00	26.10	99.00	1031.80	62.00	68.80	0.0589
Minimum	8.50	-13.40	6.00	9.00	986.10	2.200	11.10	-0.0678
Std. Dev.	4.23	5.71	3.71	16.49	7.34	5.01	7.04	0.0077
Skewness	0.34	-0.51	0.03	-0.00	-0.25	0.40	1.13	-0.3369
Kurtosis	3.13	2.84	2.23	2.99	2.97	4.50	5.61	7.3037
Jarque-Bera	74.30	166.40	91.53	0.001	39.69	451.93	1836.17	2909.7
Probability	0.00	0.00	0.00	0.99	0.00	0.00	0.00	0.0000
Sum	78074.3	41656.4	58536.8	205218	3719641.	52412.8	95557.70	1.2127
Sum Sq. Dev.	65896.2	120015.6	50765.9	1000850	198658.3	92355.3	182559.80	0.2209

#### **4.2 AUGMENT DICKEY-FULLER TEST (ADF)**

The ADF test has been used to test if the data are stationary and co-integrated. Augment Dickey-Fuller Test Statistics results are presented in Table 2.

The returns could in general be affected by a time trend, a constant and a unit root. The ADF test has also been used to test for these possibilities and has been performed with a linear trend and constant, constant alone and with no constant/trend. The null hypothesis of a unit root has been applied to the S&P/ASX200 Index return:

$H_0$ : ASX2000 returns have a unit root and are non-stationary, or  
 $H_0: \delta_i = 0, \rho = 1$ .

$H_1$ : ASX2000 returns have no unit root and are stationary, or  $H_1: \delta_i \neq 0$ .

The null hypothesis of a unit root and non-stationary data has been tested for all weather variables separately:

$H_0$ : Weather variables have a unit root and are stationary, or  
 $H_0: \delta_i = 0, \rho = 1$ .

$H_1$ : Weather variables have no unit root and are stationary, or  $H_1: \delta_i \neq 0$ .

The absolute value of the  $\tau$  statistic exceeds the DF absolute 1% (-3.95), 5% (-3.41) and 10% (-3.127) critical  $\tau$  values. However, except temperature, quality wet bulb (10% significance) all series are not stationary in 'none' conditions. The S&P/ASX200 Index returns series have been found stationary for all conditions after taking first differences into account.

The null hypothesis of a unit root has been rejected and that means that all the variables do not have the unit root problem and the series are stationary. Moreover, since all time series are stationary, the assumption is that the series is integrated in the order of one. The degree of co-integration 1 will be used as a lag coefficient in the causality test.



**Table 2 Augmented Dickey-Fuller Test Statistics**

Exogenous	Temperature				
	1% level	5% level	10% level	t-Statistic	Prob.*
Constant	-3.431947	-2.862131	-2.567128	-5.840922	0.0000
Constant, Linear Trend	-3.960542	-3.411031	-3.127332	-5.854211	0.0000
None	-2.565593	-1.940910	-1.616641	-0.726992	0.4019
Exogenous	Quality Temperature				
	1% level	5% level	10% level	t-Statistic	Prob.*
Constant	-3.431946	-2.862130	-2.567128	-6.948791	0.0000
Constant, Linear Trend	-3.960541	-3.411030	-3.127331	-6.979036	0.0000
None	-2.565593	-1.940910	-1.616642	-2.364890	0.0175
Exogenous	Wet bulb Temperature				
	1% level	5% level	10% level	t-Statistic	Prob.*
Constant	-3.431946	-2.862131	-2.567128	-5.295731	0.0000
Constant, Linear Trend	-3.960542	-3.411031	-3.127332	-5.294090	0.0000
None	-2.565593	-1.940910	-1.616642	-0.984942	0.2912
Exogenous	Quality Wet bulb				
	1% level	5% level	10% level	t-Statistic	Prob.*
Constant	-3.431942	-2.862129	-2.567127	-30.13833	0.0000
Constant, Linear Trend	-3.960535	-3.411027	-3.127330	-30.15889	0.0000
None	-2.565593	-1.940910	-1.616641	-1.654385	0.0927
Exogenous	Humidity				
	1% level	5% level	10% level	t-Statistic	Prob.*
Constant	-3.431943	-2.862129	-2.567127	-17.57673	0.0000
Constant, Linear Trend	-3.960537	-3.411028	-3.127330	-17.75911	0.0000
None	-2.565595	-1.940911	-1.616641	0.255220	0.7601
Exogenous	Pressure				
	1% level	5% level	10% level	t-Statistic	Prob.*
Constant	-3.431946	-2.862130	-2.567128	-6.762404	0.0000
Constant, Linear Trend	-3.960541	-3.411030	-3.127331	-6.788669	0.0000
None	-2.565593	-1.940910	-1.616641	-1.578393	0.1078
Exogenous	Vapor Pressure				
	1% level	5% level	10% level	t-Statistic	Prob.*
Constant	-3.431947	-2.862131	-2.567128	-6.085786	0.0000
Constant, Linear Trend	-3.960542	-3.411031	-3.127332	-6.107463	0.0000
None	-2.565593	-1.940910	-1.616641	-1.152124	0.2278
Exogenous	ASX Return				
	1% level	5% level	10% level	t-Statistic	Prob.*
Constant	-3.431941	-2.862128	-2.567127	-58.98151	0.0001
Constant, Linear Trend	-3.960534	-3.411027	-3.127329	-58.97828	0.0000
None	-2.565591	-1.940910	-1.616642	-58.88553	0.0001

*\*MacKinnon (1996) one-sided p-values.*

### **4.3 ARCH/ GARCH EFFECTS AND GRANGER CAUSALITY TEST**

The volatility of the return has been tested by applying ARCH (1) and GARCH (1) models. Results from Table 3 indicate that intercept is statistically significant ( $t = 5.11$ ,  $p = .000$ ) and represents the fact that an average daily return on the S&P/ASX200 Index is 1.33 per cent. ARCH (1), up to 1 lag, is statistically significant ( $t = 13.59$ ,  $p = .000$ ). This indicates that the current square of error term is statistically correlated with the previous day squared of error terms. GARCH (1) up to one lag variance of error term is also statistically significant and indicates volatility clustering. Variation in the returns today is dependent upon variation and squared error term of the preceding trading day. Thus, ARCH has been found to be significant and has been interpreted to show that today's volatility (squared error term) has impact over the next trading day's volatility. GARCH can be interpreted as today's volatility (variance of error term) is correlated with the previous trading day's volatility (with both squared error term and variance). The sum of ARCH (1) and GARCH (1) coefficient nearby 1 (0.97) which is statistically significant, indicates that the S&P/ASX200 Index has persistent volatility and variable variance. The Granger Causality test could reveal whether the variance stems from weather variables and Granger cause S&P/ASX200 Index returns.

**Table 3. Results of ARCH and GARCH Tests**

le: ASX2000 return				
Method: ML - ARCH (Marquardt)				
Sample: 1 3680				
Included observations: 3680				
Convergence achieved after 12 iterations				
Variance backcast: ON				
	Coefficient	Std. Error	z-Statistic	Prob.
<b>Variance Equation</b>				
<b>C</b>	1.33E-06	2.61E-07	5.107223	0.0000
<b>ARCH(1)</b>	0.070750	0.005206	13.59129	0.0000
<b>GARCH(1)</b>	0.908652	0.008358	108.7152	0.0000
<b>R-squared</b>	-0.001808	Mean dependent var		0.000330
<b>Adjusted R-squared</b>	-0.002353	S.D. dependent var		0.007750
<b>S.E. of regression</b>	0.007759	Akaike info criterion		-6.995989
<b>Sum squared resid</b>	0.221381	Schwarz criterion		-6.990926
<b>Log likelihood</b>	12875.62	Durbin-Watson stat		1.941033

One way direction of Granger causality should be present from weather variables to S&P/ASX200 Index returns, and a one day lag for stationary related daily variables should be used. Testing Granger causality involves using  $F$ -tests to determine whether lagged information on weather-related variables provides any statistically significant information about returns. It is assumed that the estimated coefficients on the lagged weather-related variables are statistically indifferent from zero, as a group indicates there is no causality between two series (Gujarati 2001; 621).

The values of  $F$  statistics suggest that, with the exception of humidity, weather variables do not cause S&P/ASX200 Index returns. The results in Table 4 indicate that only humidity affects S&P/ASX200 Index returns at a 10 per cent level of significance.

In other words, unidirectional causality from humidity  $H_t$  to S&P/ASX200 Index returns is indicated if the estimated coefficients on the lagged  $H_t$  are statistically different from zero as a group (i.e.  $\sum \alpha_i \neq 0$ ) and there is causality between the two series, at least from  $H_t$  to S&P/ASX200 Index returns.

**Table 4. Granger Causality Test Results (1 Lag)**

Null Hypothesis:	Obs	F-Statistic	Probability
TEMPERATURE does not Granger Cause ASX200 RETURN	3679	0.19142	0.66177
QUALITY TEMPERATURE does not Granger Cause ASX2000 RETURN	3679	1.50619	0.21980
WET BULB T does not Granger Cause ASX200 RETURN	3679	1.06009	0.30326
QUAL.WET B does not Granger Cause ASX200 RETURN	3679	1.10131	0.29405
HUMIDITY does not Granger Cause ASX200 RETURN	3679	2.97973	0.08440*
PRESSURE does not Granger Cause ASX2000 RETURN	3679	1.22423	0.26860
VAPOUR PRESSURE does not Granger Cause ASX2000 RETURN	3679	0.18178	0.66987

\* There is one way Granger causality from the humidity variable to ASX200 return series (10%).

## 5. DISCUSSION

Thus, the results from one way Granger causality suggest that past values of weather- related variables do not lead market behavior, with the exception of humidity. Australia experiences high humidity all year round, but has an extremely humid wet season from December to April. Under conditions of high humidity, the body's efforts to maintain an acceptable body temperature may be significantly impaired. Blood circulation at the body's surface cannot shed heat by conduction to the air and a condition called hyperpyrexia can result. With so much blood going to the external surface of the body, relatively less goes to active muscles, the brain and other internal organs. Physical strength declines and fatigue occurs sooner than it would otherwise. Alertness and mental capacity may also be affected. The resulting condition is called heat stroke or hyperthermia. Therefore, high humidity could have a negative impact on physical and psychological conditions and consequently, could influence investors' decision-making processes.

However, humidity is an important metric used in forecasting weather. Weather has always played an important role in the economy and could have a significant impact on business activities. Every sector of the economy has some sort of weather sensitivity. Extreme weather events like heat-waves, torrential rain and freezing cold are bad for business, and bad weather can decrease productivity, lower profits, and increase the costs of running businesses. However for some companies, bad weather in the traditional sense of cold, grey and rainy days can actually be good for business.

The Australian economy is also exposed to weather conditions and its variability. The Australian S&P/ASX200 Index includes companies from the major weather sensitive sectors of the economy such as energy suppliers, transportation systems and others that are heavily dependent on weather and weather forecasting. Thus, there is a high possibility that investors do actually incorporate weather-related information in their decision-making processes.

Thus, on one hand, capital markets could respond to new weather-related information and incorporate this information in the stock valuation process. On other hand, stock prices could be affected by the mental or physical state of investors caused by weather conditions. People are 'rational' in standard finance and they are 'normal'

in behavioral finance. Rational people have perfect self-control, and they are always averse to risk and never averse to regret. However, normal people do not always follow that pattern (Statman, 1999).

The Efficient Market Hypothesis is associated with idea of ‘random walk’, which is used in financial literature to characterize the price series where all subsequent price changes represent random departures from previous prices. The logic of the random walk is that the information is immediately reflected in stock prices. The news is unpredictable, and thus price changes must be unpredictable and random. The importance of the EMH is that it justifies the use of movement in stock prices as the test of usefulness of financial and non-financial information. However, behavioral finance points to the existence of market bubbles and manias as examples of cases where human behavior may be the missing link that explains such market anomalies. This study suggests that Australian stock market returns are affected by weather; however, the way in which weather affects stock prices remains the question.

## **6. CONCLUSIONS**

If modern finance relies on two key assumptions: rational people and a ‘fair price’ being determined by financial markets, behavioral finance examines the psychology underlying investors’ decisions to explain irrational behavior. Recent literature in behavioral finance investigated the effects of weather conditions on the emotional state of investors. This study investigated the hypothesis that the weather causes changes in Australian stock market returns. But contrary to previous research, this study found that the weather effect of humidity causes significant changes in Australian stock returns.

Australia experiences high humidity throughout the year. High humidity could significantly affect physical and mental capacity and, consequently, could have an effect on financial trading activities and investment decision-making processes. Moreover, humidity is an important metric in weather forecasting. Weather has always played an important role in the economy and could significantly impact on business activities. The S&P/ASX 200 All Australian Index is a broad market index that includes Australian domicile companies as well as companies that depend on weather for their business.

On one hand, the capital market could respond to new weather-related information and could incorporate this information in the stock valuation process. Alternatively, stock prices could be affected by the mental or physical changes in investors, caused by weather conditions. Does weather-related information have an effect on stock prices? The answer is yes, it does. However, how weather-related information actually impacts on stock prices is a question for future research.

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## **THE RELATIONSHIP OF PERCEIVED ORGANIZATIONAL SUPPORT WITH ORGANIZATIONAL CYNISM AND ITS EFFECTS ON TURNOVER INTENT: A RESEARCH ON 4 AND 5 STAR HOTELS**

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**Abstract:** Perceived organizational support is defined as the behavior of the organization towards its employees and the interpretation of organizational motives underlying this behavior in return for the organization. Organizational cynicism is described as 'the negative attitudes of employees towards the organization'. Turnover intention is expressed as a thought of voluntary staff turnover from the organization. Highly perceived organizational support provides reduction of absenteeism, late comings and acting in non-associated efforts with the work. From this point, it is aimed to investigate the effects of the organizational support on formation of organizational cynicism and turnover intent. In this context, in the current study, organizational support perception of Hotel employees, and its effects on organizational cynicism and turnover intent have been measured

**JEL classification:** M12, M54

**Key words:** organizational support; cynism; hotels

### **1. INTRODUCTION**

#### **1.1. PERCEIVED ORGANIZATIONAL SUPPORT**

Perceived organizational support (POS) means that employees feel confident and that they know organization stands just behind them (Özdevcioğlu, 2003). Staff tends to perceive organization representatives' behaviors as the attitude of organization itself. Individualization of organization is provided by (a) having legal, moral and financial responsibilities for behaviors of organization members, (b) regulating role behaviors and providing continuity through the policies, norms, organizational examples, traditions (c) displaying its power on individuals through representatives of organization (narrated by Eisenberger (1986) from Levinson (1965)).

Perception of organization's affiliation to its employees (POS) by the staff contributes general obligation so as to protect organization and to reach organizational targets (Eisenberger, 2001). Employees develop a general belief regarding the

organization appreciate their contributions to the organization and attach importance to the welfare of employees. In view of the staff, the assignment of personality features on organization affects the organizational support. According to the organizational support theory, which is analyzing the form and results of improvement of perceived organizational support, employees are developing perception of organizational support in order to determine that socio-emotional needs are covered and that contributions to organizations is rewarded by the organization (Shanock & Eisenberger, 2006). High POS leads the employee to work for organization more and to disregard additional working time (Wang & Shu). In order that organization can meet its purposes, POS causes employees to feel obligation on adopting some additional roles such as helping other employees working in the same organization (Shanock & Eisenberger, 2006). However POS may change depending on organization and employee. While some employees consider this as a help by organization members to complete a work or provide some means, the others may evaluate it within the scope of education opportunity supplied by the organization members (Çakar & Yıldız, 2009).

Eisenberger et al. (1990) stated in their study that general perception of employees that they are considered important and appreciated is in direct proportion to (a) honesty in realizing their traditional work responsibilities, (b) affective-commitment in organization and (c) bringing forward new ideas on behalf of organization in the event of lacking direct reward being expected or personal acceptance. Additionally, POS is also in direct proportion to standard work efficiencies which are measurable with the terms of maintenance and performance criteria.

Adaptation support, financial support and career support of organization is important in the formation of POS. Adaptation support means to give importance on the activities for the job orientation of new member in organization. Financial support means to provide a pay off in accordance with employees' contribution and provide material benefits considering their financial needs. Career support is expressed as providing career opportunities for employees (Akın, 2008).

According to the findings that Eisenberger (1986) has obtained in his study; (a) employees are developing a general belief on how their contributions to organization and their welfare is evaluated by organization, (b) perceived organizational support decreases absenteeism and (c) the relationship between absence and perceived organizational support of employees who have strong idea of change is higher compared to the other employees. Employees have changed some of their behaviors in response to the perceived organizational support so as to adapt some organizational aims like absence. Employees having middle or higher idea of change have differed greatly on the matter of absence as a function of organizational support.

High POS can increase the performance of employee and decreases absenteeism (Aselage & Eisenberger, 2003); that management serves as a model for employees, determine certain and clear aims, give some feedback and encourage creative ideas, increase job satisfaction and prevents turnover intent (Çekmecelioğlu, 2005). Employees having higher perception of support have shown stronger commitment and loyalty to the organization. The findings obtained are supportive of studies on employees whose contributions are highly appreciated contribute more emotional support to the organization. Employees having high POS have great expectations in that higher effort provides pecuniary awards like more pay off and promotion as well as some social rewards such as acceptance and being realized. High



POS is in direct proportion to putting forward new ideas by employees (Eisinberger et al., 1990).

### **1.2. ORGANIZATIONAL CYNICISM**

There is no common definition introduced for organizational cynicism. In some studies it is stated that organizational cynicism appeared in relation with the change, treated as an obstacle against the change involving pessimism and lack of hope towards the efforts for reform. Thompson et al. (1999) discussed the concept in a wider framework and defined organizational cynicism as negative attitudes of the individual to organization he/she works for (Thompson et al., 1999). These attitudes include negative emotions and critical behaviors regarding the organization (Abraham, 2000).

Dean et al. (1998) define cynicism as (1) belief that the organization is not sincere, (2) negative emotions vis-a-vis the organization and, (3) negative attitudes including belittling and important behavioral patterns in line with beliefs and emotions, all related to the organization the individual works for. At this point Dean et al. (1998), emphasized that cynicism is a multi-dimensional concept and is not a personal characteristic, on the contrary it is an expression towards the organization the individual is working for. When the three main dimension of organizational cynicism are analyzed, there exists no integrity, justice, honesty and sincerity within the organization in the belief dimension. Individual interests are at the forefront for organizational decisions. There are strong emotional reactions against the organization at the affect dimension. That means that, anger and sadness towards the organization exist, workers might be hating from the organization and might be feeling embarrassed when they think about the organization. The dimension where the workers may have a negative and usually belittling attitude towards the organization is the behavior dimension. In this regards, strong criticisms against the organization is among the most widespread types of behavior (Dean et al., 1998).

There are various studies on cynicism. Some of the studies in the national and international literature is related to definition and structuring of cynicism (Dean et al., 1998; Brandes & Das, 2006; Lobnikar & Pagon, 2004; Berman, 1997; Mirvis & Kanter, 1991; Abraham, 2000; Eisinger, 2000), to the definition of relationship of cynicism with other variables (Davis & Gardner, 2004; Johnson et al., 2003; Güzel, Şahin Perçin & Aydın Tükeltürk, 2009; Kutanis & Çetinel, 2009; Özler, Atalay & Şahin, 2010), and to the cynical attitudes towards organizational change (Thompson et al., 2000; Thompson et al., 1999; Reichers et al., 1997; Wanous et al., 2000; Brown & Cregan, 2008).

Thompson et al (2000) referring to Andersson (1996) stated that cynicism is different from the concept of trust, it has a wider scope and includes the distrust components as well as the emotional components of hopelessness and frustration. However, it was said that trust does not include an emotional component, and the concept is more attitude than belief. In this context, the belief component of trust involves cynicism taken as an attitude (Thompson et al., 2000).

Reichers et al. (1997), on the other hand, focused on cynicism towards organizational change and stated that the skeptics have doubts about the fact that the success would indeed take place while having hopes for positive developments occurring in the future. In cynicism towards change, there is a loss of belief for the leaders and the unsuccessful of previous change efforts lie at the root of it (Reichers et al., 1997).

Thompson et al. (2000) attempted to put forward the difference between the cynical attitudes towards change and the trust. Accordingly, only the cynical attitudes of senior managers affect the concept of trust while it does not happen in the case of middle managers. Thompson et al (2000) explain this situation as the workers' ability to distinguish between the organizational groups they trust and the people toward which they would direct their cynical attitudes.

Abraham (2000) measured the correlation between organizational cynicism, and job satisfaction, organizational loyalty, alienation and organizational citizenship in the study he conducted in different sectors in order to measure different levels of cynicism. According to that study, organizational cynicism explained 65% of job satisfaction, 54% of organizational loyalty and 42% of alienation.

Johnson and O'Leary-Kelly (2003) examined the relationship between dimensions of cynicism and psychological contract breaches, and stated that there is a linear relationship between cognitive dimension of cynicism and psychological contract breach, and affect dimension of cynicism and psychological contract breach and cognitive aspect of cynicism. Moreover, the study shows a robust and linear relationship between affect dimension of cynicism and emotional deprivation (Johnson & O'Leary-Kelly, 2003).

Wanous et al. (2000) analyzed the cynical attitudes towards organizational change and stated that there is inverse proportion with participation and decision-making, supervisory activity, motivation in attempts to realize change, while there exists a linear relationship with negative attitudes (affectivity), number of complaints and situational characteristics towards unsuccessful attempts for change (Wanous, 2000).

Brown and Cregan (2008) explained in their study on cynical attitudes towards organizational change that information is shared between the employees and managers and the cynical attitudes are low in case of participation to decision-making by employees (Brown & Cregan, 2008).

### **1.3 TURNOVER INTENT**

Turnover intent is one of the solution methods for some employees who feel dissatisfied and under stress to get rid of the grievance and pressures of the professional life, and is also called as voluntary turnover or resignation (Eroğlu, 2000). From time to time employees may confront various pressures due to differences between their expectations in professional life and desires of the organization. In such cases, the individual needs certain behaviors to defend himself/herself. One of the defensive behaviors is to distance oneself from the organization, which is seen as the source of the danger, and to quit the job (Aldemir et al., 2001).

Turnover leads to crucial problems for the jobs requiring a certain level of experience and expertise within the enterprise. Turnover of key employees working at the jobs requiring high potential and skill leads enterprises to develop strategies regarding their key employees because of the difficulty to find and replace those employees with the same level of skill and ability to contribute to the enterprise as well as due to its effects on efficiency. In addition, the new employee recruited in lieu of the experienced one creates negative results of the intent to quit job in the form of training expenses to bring the new employee to a certain level of qualification and the material losses incurred, increasing the importance of the issue that should be researched to understand the causes and to create solutions (Arnold and Feldman, 1986).

When the elements affecting the intent to quit job are grouped, they are examined in three groups namely, environmental factors, organizational factors and factors related to personal characteristics. However, factors that are most focused on by the enterprises and attach special importance to their research are the intent to quit job factors arising from organizational factors, and it is an important area of study within human resources management. This is because of the fact that detection of real reasons of voluntary resignation is very important in resolution of a crucial problem directly affecting the efficiency and profitability of the organization by obtaining data to be used in determining the human resources policies of the organization (Açıkalın, 1994).

When the elements affecting the intent to quit job are grouped, they are examined in three groups namely, environmental factors, organizational factors and factors related to personal characteristics. Factors such as unemployment rate, job perception, existence of trade unions, rate of participation of new employees to the workforce, environmental factors, salary, job performance, satisfaction with manager-salary-colleague-promotion possibilities and organizational loyalty, factors related to the job, age, seniority, sex, marital status, level of education can be taken as personal characteristics (Yıldız, 2008). Moreover, issues like responsibility and authority, organizational behaviors of employees (Choi, 2006), job-family and family-job conflicts (Karatepe & Kılıç, 2007), socialization (Lam et al. 2006) also have an impact on the intent to quit job. According to Pearson (1995), the most important reason for quitting the job is the fact that the expectations of the employee are not met. Employees have certain expectations on the job and organization when entering a job. When those expectations are not met, individual quitting from the enterprise is an anticipated situation. Organizational support, which is perceived similarly, is one of the important factors of intent to quit job and a low POS causes severance rates to get higher (Cho et al., 2009).

When high employee turnover rates, especially in the hotel enterprises in tourism sector, which is a labor-intensive one and important problems that emerge due to that, are taken into consideration. It is critical to determine the factors affecting the intent to quit job and to put forward the ways of solution. There are various studies conducted by researchers to determine the elements that affect the employee's intent to quit job in tourism sector. For example Woods (1997) defines the severance causes of employees working at hotel enterprises in three main groups: low salary, wrong or insufficient recruitment practice and insufficient management weakening the morale. Many employees indeed leave the enterprise due to one or more of those reasons.

According to the results of a research carried out by Pizam and Thornburg (2000) on employees working at hotel enterprises, dissatisfaction with salary levels, job dissatisfaction, negative relations with co-workers and expectations before having started at the workplace being not met are the most important factors leading to the turnover intent.

According to the research administered by Bonn and Forbinger (1992), conditions like salary levels and long working hours are the most important ones for employees voluntarily resigning or even getting transferred to other sectors.

In another study carried out by Iverson and Deery (2000) in order to determine the factors affecting the intent for quitting the job of hotel enterprise employees; relationship between the intent to quit job, and structural elements (career development, role conflict, etc.), employee orientation (job satisfaction, organizational loyalty, etc.), environmental factors (possibilities to find job, employee turnover culture, etc.) and

trade union membership are examined. According to the findings of the research, it was seen that while organizational loyalty and trade union membership decrease the intent to quit job, negative personal characteristics increase it.

## **2. OBJECTIVES**

Main objectives of the study are to determine whether there exists a meaningful difference between organizational support, cynicism and turnover intent of the hotel enterprise employees perceived from the viewpoint of demographic variables, and to find out whether the perceived organizational support affects cynicism and turnover intent in employees. Hypotheses have been established accordingly for the present study. The fact that majority of the studies that form the basis of literature had been implemented in foreign enterprises and in sectors other than tourism makes the present study unique in this field.

## **3. METHODOLOGY**

Within the scope of this research, 185 employees working in various units in 17 five-star hotels in total located in Marmara region participated in this study. The data necessary for the research were obtained by questionnaire technique and were analyzed via SPSS 16 program. In the questionnaire, a scale developed by Eisenberger et.al. (1986) to measure perception of organizational support, and organizational cynism scale developed by Dean, Brandes and Dharwadkar (1998) to measure perception of organizational cynism, and a scale developed by Singh et.al. (1996) was used to measure turnover intent. 5 point Likert scale was employed in the questionnaire. 154 questionnaires were evaluated. In analyses, T-test, ANOVA, correlation and regression analyses were made use of. Reliability coefficient of questionnaire is (Cronbach Alpha) ,761.

## **4. ANALYSES**

Following results were obtained in the analyses of questionnaire data: 66.2% of respondent employees are male, 54% of are married, 46% of are between the ages 26-35, 38% of are graduates of high school or their equivalents, 46.1% of are educated in tourism, 58.4% of are permanently employed in hotel enterprises, 38% of are in companies 27% of are working in private sector for 2,5 years, 32% of are in the unit of food&beverage, 53% of are working at low-level and 53% of them have income between 501 – 1000 TL. 61% of respondents are independent and 41% of are employed in five-star hotels.

**Belief dimension of cynism** makes no difference in the followings; employees to gender ( $p=,337$ ), whether they have been educated in tourism ( $p=,989$ ), their staff position ( $p=,159$ ), their marital status ( $p=,884$ ), to their age ( $p=,584$ ), level of education ( $p=,290$ ), employment period in establishment ( $p=,732$ ), employment period in sector ( $p=,797$ ), to the assignment unit ( $p=,121$ ), level of income ( $p=,715$ ) status of the hotel they are employed in ( $p=,814$ ) and to the hotel rate ( $p=,171$ ). Belief dimension of employees differ only as regards to their staff level ( $p=,019$ ). Accordingly managers' belief dimension of cynism (mean 1,82; std. dev. ,908) are in the lowest level. This is respectively followed by employees of lower level (mean 2,11; std.dev. ,884) and department chief (mean 2,59; std.dev. 1,082).

**Emotion dimension of cynism** makes no difference in the followings; employees to gender ( $p=,922$ ), whether they have been educated in tourism ( $p=,554$ ),

their marital status ( $p=,670$ ), to their age ( $p=,248$ ), level of education ( $p=,396$ ), employment in ( $p=,747$ ), to the assignment unit ( $p=,460$ ), to their staff level ( $p=,191$ ), level of income ( $p=,602$ ), status of the hotel they are employed in ( $p=,434$ ) and to the hotel rate ( $p=,553$ ). However emotion dimension of cynism differs as regards to their staff position ( $p=,000$ ) and employment in sector ( $p=,006$ ). According to this, affective cynism of permanent employees employed in the organization (mean 1,58; std.dev. ,760) is lower compared to contracted employees (mean 2,05; std.dev. 1,034). In other words contracted employees may be in more cynic manner to the organization. When their employment duration in the sector is considered; employees working in sector less than 1 year (mean 2,50; std.dev. 1,132) is in the lowest level and this is respectively followed by employees working in the sector for 4 years and more, 6-9 years, 10-13 years and ve 2-5 years.

**Attitude dimension of cynism** makes no difference in the followings; employees to gender ( $p=,786$ ), whether they have been educated in tourism ( $p=,093$ ) their staff position ( $p=,543$ ), their marital status ( $p=,624$ ), to their age ( $p=,386$ ), employment in property ( $p=,506$ ), employment in sector ( $p=,103$ ), to the assignment unit ( $p=,267$ ), to their staff level ( $p=,133$ ), level of income ( $p=,571$ ), status of the hotel they are employed in ( $p=,286$ ) and to the hotel rate ( $p=,886$ ). However attitude dimension of cynism differs as regards to employees' level of education ( $p=,050$ ). According to this, graduates of primary school (mean 2,23; std.dev. ,960) is in the lowest level and it is respectively followed by high school or their equivalents graduates (mean 2,42; std.dev. ,970), bachelor's level (mean 2,45; std.dev. ,821), postgraduate (mean 2,50; std.dev. 1,132). Associate's graduate (mean 3,07; std.dev. 1,303) are in the instability level.

**Perception of career dimension of POS** makes no differences in the followings; employees to gender ( $p=,370$ ), whether they have been educated in tourism ( $p=,818$ ), marital status ( $p=,621$ ), to their age ( $p=,489$ ), level of education ( $p=,386$ ), employment in property ( $p=,253$ ), employment in sector ( $p=,987$ ), to the assignment unit ( $p=,599$ ), status of the hotel they are employed in ( $p=,798$ ), to the hotel rate ( $p=,667$ ). However perception of career of employees differs as regards to their staff level ( $p=,013$ ) and level of income ( $p=,030$ ). According to this, perception of career of permanent employees (mean 2,20; std.dev. ,968) are less compared to contracted employees (mean 2,55; std.dev. ,916). As regards to their staff level, managers' perception of career (mean 1,89; std.dev. 1,017) are in the lowest level. This is respectively followed by employees of lower level (mean 2,35; std.dev. ,916) and department chief (mean 2,77; std.dev. 1,134). According to this, department chiefs have the highest and the managers have the lowest perception of career. When income level of employees is analyzed, those who earning more than 2001 TL (mean 1,64, std.dev. ,964) have the lowest POS perception of career and this is respectively followed by 1501-2000 TL (mean 2,05, std.dev. ,878), 501-1000 TL (mean 2,48, std.dev. 1,025), 1001-1500 TL (mean 2,48, std.dev. ,964). POS perception of career of employees earning less than 500 TL incomes is in exact instability level.

**Financial dimension of POS** makes no differences in the followings; employees to gender ( $p=,893$ ), whether they have been educated in tourism ( $p=,944$ ), their staff position ( $p=,914$ ), their marital status ( $p=,254$ ), to their age ( $p=,383$ ), level of education ( $p=,749$ ), employment in sector ( $p=,343$ ), to the assignment unit ( $p=,402$ ), to their staff level ( $p=,795$ ), level of income ( $p=,894$ ), status of the hotel they are employed in ( $p=,874$ ) and to the hotel rate ( $p=,228$ ). However it differs as regards to

staff's employment in property ( $p=,034$ ). According to this, while employees working between 6-9 years have low perception of POS financial (mean 2,38, std.dev. 1,090), this is respectively followed by 2-5 years (mean 3,01, std.dev. ,922), 14 years and more (mean 3,17, std.dev. 1,146), employees working less than 1 year (mean 3,19, std.dev. 1,030) and perception of POS financial of employees working between 10-13 years (mean 3,38, std.dev. 1,043) are instability level. In other words, the others apart from the employees working for 6-9 years in the establishments are instable about POS.

**Turnover intent** makes no difference in the followings; employees to gender ( $p=,613$ ), their marital status ( $p=,513$ ), level of education ( $p=,134$ ), employment in property ( $p=,241$ ), to the assignment unit ( $p=,508$ ), to their staff level ( $p=,652$ ), level of income ( $p=,085$ ) and to the hotel rate ( $p=,764$ ); however it differs as regards to their age ( $p=,050$ ), whether they have been educated in tourism ( $p=,022$ ), their staff position ( $p=,022$ ), employment in sector ( $p=,013$ ), status of the hotel they are employed in ( $p=,027$ ). When the age of employees are considered, turnover intent of employers between 36-45 years old is the lowest (mean 1,68; std.dev. 1,191), and this is followed by 26-35 ages (mean 2,21; std.dev. 1,107), 18-25 (mean 2,33; std. std.dev. 1,340) and those between 46-55 ages (mean 2,50; std.dev. 1,658). According to this, employees do not think to leave the job; this thought is denser between the employees at the age of 36-45. When those with tourism education are analyzed, employees usually have no turnover intent and those with tourism education (mean 2,35; std.dev. 1,239) tend to instability more compared to those without tourism education (mean: 1,89; std.dev. 1,155). When it is considered as personnel status, permanent employees (mean 1,89; std.dev. 1,137) have less turnover intent compared to contracted staff (mean 2,42; std.dev. 1,332). In other words, contracted staff are closer to level of instability in this regard compared to permanent employee although both group has not turnover intent. When employment process in the sector is analyzed, those with less than one year employment in the sector (mean 1,28; std.dev. 0,566) have the lowest turnover intent. This is respectively followed by those employed in the sector for 10-13 years (mean 1,92; std.dev. 1,091), 14 years and above (mean 2,03; std.dev. 1,420), 6-9 years (mean 2,15; std.dev. 1,051) and 2-5 years (mean 2,35; std.dev. 1,303). According to this, most of currently working employees have no turnover intent. When the status of the hotel is considered, employees working in chain hotels (mean 1,72; std.dev.,909) have less turnover intent compared to those working in independent hotel property (mean 2,27; std.dev. 1,340). In other expression, employees of chain hotels have no turnover intent.

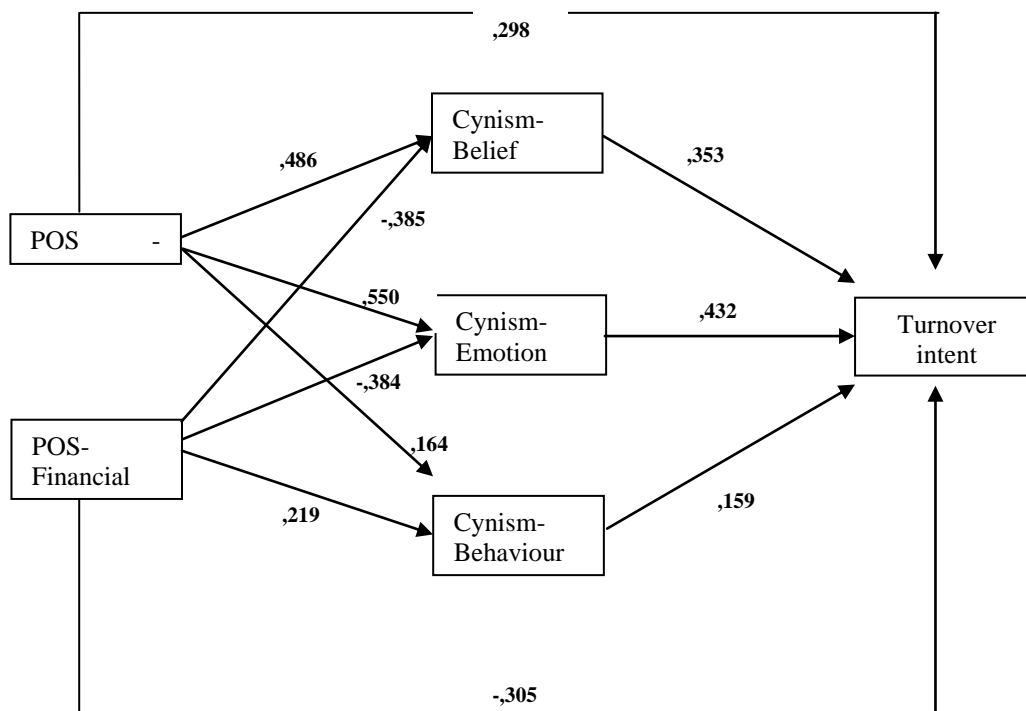
It is one of the basic aims to analyze the correlation between perception of organizational support of employees and their cynic attitudes. According to this, correlation analysis has been performed and the relation between dimensions of organizational support and cynic attitudes and turnover intent is shown below;

**Table 1. Organizational Support, Cynic Attitudes and Turnover intent correlation Graph**

		1	2	3	4	5	6
Cynism-Belief	Pearson	-	632*	267*	486*	-385*	353*
	Sig.	-	,000	,001	000	000	000
Cynism-Emotion	Pearson	632*	-	275*	550*	-384*	432*
	Sig.	,000	-	001	000	000	000
Cynism-Behavior	Pearson	267*	275*	-	164*	-219*	159
	Sig.	,001	001	-	047	009	051
POS-Career	Pearson	486*	550*	164*	-	-399*	298*
	Sig.	,000	000	047	-	000	000

		1	2	3	4	5	6
POS-Financial	Pearson	-.385*	-.384*	-.219*	-.399*	-	-
	Sig.	,000	,000	,009	,000	-	,000
Turnover intent	Pearson	,353*	,432*	,159	,298*	-.305*	-
	Sig.	,000	,000	,051	,000	,000	-

When the data in the Table no. 1 is analyzed, it is figured out that there is significant and positive relationship between POS-Career dimension and belief, emotion and behavior dimensions of cynism as statistically. Additionally, it has been observed that there is also positive relationship between POS-Career dimension and turnover intent. When POS-Financial dimension is analyzed, it is seen that there is significant and negative relationship between belief, emotion and behavior dimensions of cynism and turnover intent as statistically. According to this, the effects of organizational support upon cynic attitudes and turnover intent can be studied as below. There is a significant relationship between belief dimension and emotion, behavior dimension of cynism statistically. According to this, increase in belief dimension causes increase in emotion and behavior dimension.



**Figure 1. Cynism and turnover intent effects of organizational support**

When the figure is analyzed, there is a positive but slight relationship between POS-Career dimension and turnover intent. In other words, the increase in POS-Career subject enhances turnover intent. However there is a negative direction and weak relationship between POS-Financial dimension and turnover intent. In this sense, decrease in financial significance enhances employees' turnover intent.

#### **4.1. REGRESSION ANALYSES FOR RELATIONS BETWEEN VARIABLES IN THE RESEARCH.**

Within the scope of research, perceptions of organizational support in the dimension of financial support and career are towards the effect and relation of cynic attitudes and turnover intent. In this sense, simple linear regression has been made to analyze the relationship between variables. In the regression analyses, POS-Career dimension and POS-Financial dimension are considered as independent variables, dimensions of cynism and turnover intent are considered as dependent variables. According to this, analysis findings are presented below.

##### **4.1.1. POS-CAREER DIMENSION RELATIONSHIP BETWEEN CYNIC ATTITUDE AND TURNOVER INTENT**

##### **4.1.1.1. THE EFFECTS OF POS-CAREER DIMENSION ON CYNICISM-BELIEF DIMENSION**

Regression analyzes findings to specify this effect is presented in the charts below.

**Table 2. Model summary to specify the effect of perceived organizational support career dimension towards belief dimension of cynism.**

Variable	Referendum	R <sup>2</sup>	Corrected R <sup>2</sup>	Std. Dev. of Prediction
Cynism-Belief	,486	,236	,231	,86973

(Dependent Variable: Belief dimension of cynism, Independent variable: Career dimension of perceived organizational support)

**Table 3. Coefficient table to specify the effect of perceived organizational support career dimension towards belief dimension of cynism.**

Model	Beta	t	Sig.
Constant	1,104	6,049	,000
Perceived Organizational support-Career dimension	,468	6,602	,000

It is seen that career dimension of POS is 23,6% effective on belief dimension of cynism when both charts are analyzed. That Beta value is on positive way shows that relationship is directly related. According to this, providing organizational support in career dimension for employees causes some cynic attitudes as regards to belief. The scale of aforesaid relationship is in low level (R=,486).

##### **4.1.1.2. THE EFFECTS OF POS-CAREER DIMENSION ON CYNICISM-EMOTION DIMENSION**

Regressions analyze findings to specify these effects are presented in the charts below.

**Table 4. The model summary to define the effect of career dimension of perceived organizational support towards emotion dimension of cynism.**

Variable	R	R <sup>2</sup>	Corrected R <sup>2</sup>	Std dev. of prediction
Cynism-Emotion	,550	,302	,297	,75372



**Table 5. Regression analyze of Coefficient table to specify the effect of perceived organizational support career dimension towards emotion dimension of cynism.**

Model	Beta	T	Sig.
Constant	,630	3,995	,000
Perceived Organizational support-Career Dimension	,477	7,790	,000

It is seen on Tables 4 and 5, career dimension of POS is 30,2% effective on emotion dimension of cynism. That Beta value is on positive way shows that relationship is directly related. According to this, providing organizational support in career dimension for employees causes some cynic attitudes as regards to emotion. The scale of aforesaid relationship is in medium level ( $R=,550$ ).

#### **4.1.1.3. THE EFFECTS OF POS-CAREER DIMENSION ON CYNICISM-BEHAVIOR DIMENSION**

Findings of regression analyze to specify the effects are seen in the charts below.

**Table 6. The model summary to define the effect of career dimension of perceived organizational support towards behavior dimension of cynism.**

Variable	R	R <sup>2</sup>	Corrected R <sup>2</sup>	Std dev. of prediction
Cynism-Behavior	,164	,027	,020	1,01216

**Table 7. Regression analyze of Coefficient table to specify the effect of perceived organizational support career dimension towards behavior dimension of cynism.**

Model	Beta	t	Sig.
Constant	2,077	9,863	,000
Perceived Organizational support-Career Dimension	,164	2,001	,047

It is seen on both charts (Table 6 and 7) that career dimension of POS is 2,7% effective on behavior dimension of cynism. That Beta value is on positive way shows that relationship is directly related. According to this, providing organizational support in career dimension for employees causes some cynic attitudes as regards to behavior. The scale of aforesaid relationship is extremely in low level ( $R=,164$ ).

#### **4.1.1.4. TURNOVER EFFECTS OF POS- CAREER DIMENSION**

Findings of regression analyze to specify the effects are seen in the charts below.

**Table 8. The model summary to define the effect of career dimension of perceived organizational support towards turnover intent.**

Variable	R	R <sup>2</sup>	Corrected R <sup>2</sup>	Std dev. of prediction
Turnover intent	,298	,089	,082	1,19146

**Table 9. Regression analyze of Coefficient table to specify the effect of perceived organizational support career dimension towards turnover intent.**

Model	Beta	T	Sig.
Constant	1,267	5,113	,000
Perceived Organizational support-Career Dimension	,362	3,770	,000

According to analyze results in Table 8 and 9, career dimension of POS is 8,9% effective on turnover intent. That Beta value is on positive way shows that relationship

is directly related. According to this, providing organizational support in career dimension for employees causes turnover intent. The scale of aforesaid relationship is in low level ( $R=,298$ ).

#### **4.1.2. POS RELATIONSHIP WITH FINANCIAL DIMENSION, CYNIC ATTITUDE AND TURNOVER INTENT**

##### **4.1.2.1. THE EFFECT OF FINANCIAL DIMENSION OF POS ON BELIEF DIMENSION OF CYNISM**

Findings of regression analyze to specify the effects are seen in the charts below.

**Table 10. The model summary to define the effect of financial dimension of perceived organizational support towards belief dimension of cynism.**

Variable	R	R <sup>2</sup>	Corrected R <sup>2</sup>	Std dev.of Prediction
Cynism-Belief	,385	,149	,142	,92761

**Table 11. Regression analyze of Coefficient table to specify the effect of perceived organizational support financial dimension towards turnover intent.**

Model	Beta	t	Sig.
Constant	3,351	13,764	,000
Perceived Organizational support-Career Dimension	-,373	-4,907	,000

Table 10 and 11 shows that financial dimension of POS is 14,9% effective on belief dimension of cynism. That Beta value is on negative way shows that relationship is unrelated. According to this, providing organizational support in financial dimension for employees decreases cynic attitudes in terms of belief. The scale of aforesaid relationship is in low level ( $R=,385$ ).

##### **4.1.2.2. THE EFFECTS OF FINANCIAL DIMENSION OF POS ON EMOTION DIMENSION OF CYNISM**

Findings of regression analyze to specify the effects are seen in the charts below.

**Table 12. The model summary to define the effect of financial dimension of perceived organizational support towards emotion dimension of cynism**

Variable	R	R <sup>2</sup>	Corrected R <sup>2</sup>	Std dev. of Prediction
Cynism-Emotion	,384	,148	,141	,80602

**Table 13. Regression analyze of Coefficient table to specify the effect of perceived organizational support financial dimension towards emotion dimension of cynism.**

Model	Beta	T	Sig.
Constant	2,732	12,760	,000
Perceived Organizational support-Career Dimension	-,324	-4,888	,000

When both charts are analyzed, Financial dimension of POS is 23,6% effective on emotion dimension of cynism. That Beta value is on positive way shows that relationship is directly related. According to this, providing organizational support in financial dimension for employees decreases cynic attitudes in terms of emotion. The scale of aforesaid relationship is in low level( $R=,486$ ).

#### **4.1.2.3. THE EFFECTS OF FINANCIAL DIMENSION OF POS ON BEHAVIOR DIMENSION OF CYNISM**

Findings of regression analyze to specify the effects are seen in the charts below.

**Table 14. The model summary to define the effect of financial dimension of perceived organizational support towards behavior dimension of cynism**

Variable	R	R <sup>2</sup>	Corrected R <sup>2</sup>	Std dev. of prediction
Cynism-Behavior	,219	,048	,041	,99992

**Table 15. Regression analyze of coefficient table to specify the effect of perceived organizational support financial dimension towards behavior dimension of cynism.**

Model	Beta	t	Sig.
Constant	3,125	12,021	,000
Perceived Organizational support-Career Dimension	-,215	-2,662	,009

According to the 2 charts above, financial dimension of POS is 4,8% effective on behavior dimension of cynism. That Beta value is on negative way shows that relationship is unrelated. In this sense, providing organizational support in financial dimension for employees decreases cynic attitudes in terms of behavior. The scale of aforesaid relationship is in low level. (R=,219).

#### **4.1.2.4. THE EFFECTS OF FINANCIAL DIMENSION OF POS ON TURNOVER INTENT**

Findings of regression analyze to specify the effects are seen in the charts below.

**Table 16. The model summary to define the effect of financial dimension of perceived organizational support towards turnover intent**

Variable	R	R <sup>2</sup>	Corrected R <sup>2</sup>	Std dev. of prediction
Turnover intent	,305	,093	,087	1,20330

**Table 17. Regression analyze of Coefficient table to specify the effect of perceived organizational support financial dimension towards turnover intent**

Model	Beta	t	Sig.
Constant	3,255	10,425	,000
Perceived Organizational support-Career Dimension	-,372	-3,821	,000

In the charts, some findings were obtained that financial dimension of POS is 9,3% effective on turnover intent. That Beta value is on negative way shows that relationship is unrelated. In this sense, providing organizational support in financial dimension for employees decreases their turnover intent. The scale of aforesaid relationship is in low level. (R=,305).

## **5. RESULT**

It is known that an organization providing such support for its employees improves employees' loyalty within the organization whilst reducing negative feelings and thoughts about the concerning organization. Hence, this support in time influences both the workforce efficiency and profit of the organization. At this point, the

fundamental success lies behind the fact that the management team provides help towards their employees.

Other elements have been investigated showing employees' cynic attitude and their intention for leaving the organization in the presence of the organizational support. It has been resulted that it is no longer necessary to meet employees' expectations towards career plans which means that such concept would not rule out the possibility of said decisions along with personal expectations. In this manner it may be considered that a job promotion may not necessarily show employees are fairly treated and these decisions are taken according to employees' competence. However, such strong link across variables may be a low possibility wherein an only organizational support may not overcome organization's fair treatment against its employees together with warmth inside said organization and in order to eliminate employees' negative feelings, other influential aspects within the concerning organization must be taken into account as well as the support towards employees' career plan.

Secondly, a job promotion and an increase of employee responsibility or enlargement of authority may not necessarily eliminate employee dissatisfaction within said organization and in fact it may increase such risk of dissatisfaction. In addition, a balance between the two variables is another aspect to consider here. In fact, even though employees' desire towards better authority is provided, it is still possible that employees may have frustrations within the organization.

Thirdly, it has been shown that employee frustration could be reduced when there are considerations towards career plans inside said organizations. However, such dependency could be confirmed with limited evidence only. It is realized that any action towards employee career plan may not necessarily prevent employee under ration as well as their critical opinion about the organization but on the other hand this action is not the main cause only. In this respect, there may be other factors contributing towards employee behavior and such attitude of employees is not strongly correlated to organizational support towards employee career plan, which reveals that the culture of said organization should be overall investigated.

In addition, since there have been risks of job losses on various employees in this country following global economic crise, any organizational support towards employees' career plan may discomfort employees wherein employees may still leave their work as these considerations may be generated. However, knowing that the organizational support influences such employee intention only 9%, this result shows that there may be other reasons why an employee would leave the organization. It is therefore necessary to investigate other elements concerning the employee satisfaction and their connection to organization.

The fifth result explains that any attempt towards a pay rise and improvements of employee benefits could possibly minimize employee dissatisfaction whilst maintaining employee trust within the organization but in contrary there are also evidences showing such financial benefits could not prevent employees' negative behavior within the organization. At this point, it should be understood that moral rights should be taken into account as well as the financial matters therefore other elements influencing any doubt regarding the unfair treatment and employee dissatisfaction within said organization should be analyzed.

Another result is that employees' perceptions of organizational support for their expectation of financial support is being provided may reduce their anger against the organization. In this sense, that employees are paid high salaries and to provide some

additional income may reduce the embarrassment for being in the organization. However it could be considered to provide some different benefits rather than financial ones as provided financial support for employees decreases only 15% of their cynic attitudes towards organization.

Another obtained result is that the perception of financial support provided by organization can at least lessen their critical point of view towards the organization. However, compared to the effect level of 5%, providing financial support for employees cannot prevent them from criticizing the organization and insulting attitudes and having pessimistic thoughts about future. In this sense, employees may have a negative critical point of view towards the organization they are employed although they obtain financial benefits. However, that financial supports have low activity in effecting cynic behaviors shows that there are also some different effects both intra-organizational and outside the organization.

Lastly, providing financial benefits by organization for their employees can reduce their turnover intent. This finding is much more important compared to the others. Nowadays, when global crisis in progress, the effects of which is deeply felt, no doubt that supporting employees financially can reduce the risk of their looking for a new job, but to maintain their existence in the organization. Additionally, the low level relationship between employees' cynic attitudes intended belief, emotion and behavior with turnover intent can support the idea that there are some other factors leading employees leaving the job.

When study results are analyzed overall, perception of organizational support can be mentioned as the underlying reasons of their having cynic attitudes in dimensions of belief, emotion and behavior. However, it has been determined that in current work, providing organizational support is not so effective to reduce employees' cynic attitudes and turnover intent towards the organization. In this sense, some other factors have ensured that employees have negative thought towards the organization, personal interests are foreground inside the organization, the thought of lack in justice and sincerity, and their criticizing the organization in the negative way and their leaving the job. However this finding shouldn't mean that it is unnecessary to provide organization support for employees in terms of career. Beside of this, to provide financial benefits for employees and the result which reduces their cynic attitudes should not be concluded as that employees must be provided only financial benefits and the other organizational matters involving employees should be neglected. Thus, the result that perception of organically support in terms of financial has low effects on reducing employees' cynic attitudes shouldn't be ignored. In the view of these findings, the important thing is to reveal other factors increasing cynic attitudes and turnover intent.

Primarily, organizational climate and culture must be interpreted correctly by managers and employees so as to reveal the factors effecting employees' cynic attitudes. Thus, that the culture of organization is adopted correctly among employees and those new participants of organization having passed orientation progress successfully could be effective in their knowing the organization better. Thus employees will have better knowledge about the progress of work in the organization and they will be able to evaluate the underlying factors of decisions made in a more effective way. And this will effect employees' perceptions of justice, sincerity and help them interpret better distribution of financial benefits such as advance and rewards.

This case will both increase their cynic attitudes towards organization and it will also eliminate the negative thoughts against organization which is being run fairly.

In addition, in order to ensure the realization of socialization within the organization properly can reduce employees' cynic attitudes. Hence, an organizational socialization which will be realized properly should provide job satisfaction for employees, increase motivation and those who work in intensive tempo, especially in Hotels of tourism sector, will take place effectively.

Within the scope of organizational support, to behave fairly and sincere especially to the staff could be effective in decreasing their turnover intent primarily and their cynic attitudes. In addition, especially cynic attitudes in emotion dimension will be reduced because of the proud that they will have as being a member of organization where employees of are being treated fairly. It must be the basic aim to provide employees a positive view for future in order to reduce cynic attitudes in behavior dimension. By means of fair decisions to be made by managers, employees will be able to find a position in the organization of future, and this will shift their negative underestimating perspectives to a positive direction.

Finally, as mentioned before, current study has been prepared within the period of global economical crisis. Because of global crisis, Turkey has been affected negatively in hotel management as well as other sectors. In this sense, the number of hotel properties opened in 2009 has reduced compared to 2008 as a result of severe economic crisis of today, and despite this, the number of hotels has increased compared to the previous year. It is a predictable result that employees are worried to lose their current job as a result of which they expected financial support instead of career support, so this fact has been effective to reduce their cynic thought, emotion, behavior and turnover intent. However, so as to maintain the validity of findings, it is recommended that this study should be repeated during the periods when there are boom work and business opportunities. Thus, the effects of organizational support in terms of financial and career towards employees' cynic attitudes and their turnover intent can be analyzed loud and clear. Additionally, having considered that hotels are just one component of tourism sector, the study should be performed on the other business sectors and this will provide recognition of tourism sector and its employees more closely.

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## **STATISTICAL STUDY ON PROTECTION AND HUMAN DEVELOPMENT IN ROMANIA, FROM THE PERSPECTIVE OF SUSTAINABLE DEVELOPMENT**

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**Abstract:** Sustainable development is a broad concept currently debated. It is an important objective of mankind, even in the third millennium. Objectives of sustainable development in our country are contained in two groups: the “critical challenges” and “inter and trans-sectorial issues”. “Critical challenge” is to “protect the environment” and “protection and human development”. In this article, the authors pursue a statistical analysis of indicators aimed at protection and human development, so one of the most important directions of sustainable development.

**JEL classification:** C82, O11

**Key words:** sustainable development, human protection, human development, statistical analyze strategy.

### **1. INTRODUCTION**

One of the most used and this is discussed concepts of sustainable development, which is seen as a form of socio-economic development that provides satisfaction to the consumer without prejudice to those of future generations, namely the generation capacity to meet present without compromising the ability of future generations to meet their own needs, economic prosperity and environmental preservation must support each other<sup>53</sup>.

The government acts in Romania find sustainable development for the first time, the spur discussion in the United Nations Organization (in 1997-1999, the Romanian Government developed *The National Strategy for Sustainable Development* - with assistance from United Nations Development Programme). A more concrete character of these concerns it prints the EU accession, namely, it aims to solve problems related economic, social and environmental. Thus, the direct result of the obligations assumed by Romania, as EU member state, is *The National Strategy for*

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<sup>53</sup> Ciurlău C., Enea-Smarandache I., Murărița I. Coordinates of sustainable economic development, The Annals of The University from Craiova, Universitaria Publishing House, Craiova, 1999.

**Sustainable Development (NSSD)**<sup>54</sup>. Documents and steps taken to implement them is definite evidence of efforts to tackle key challenges and to meet European Union targets included in the „Sustainable Development Strategy” (SDS).

**The National Strategy for Sustainable Development** contains a number of **objectives**, which are divided into two groups: „the critical challenges” and „inter and trans-sectorial issues.” Among the „critical challenges” we have: „environmental protection” (which aims at „Climate change and clean energy”, „Transport”, „Production and consumption”, „Natural resources”) and „protection and human development” (containing „Health public”, „Social inclusion, demography and migration”, „Global poverty and sustainable development challenges”). „Inter and trans-sectorial themes” are: „Education and Training” and „Scientific research and technological development, innovation”. These objectives were set for time horizons 2013, 2020 and 2030. Objectives for 2020 aimed at achieving near or medium level in the EU, while for the horizon 2030, the targets placed in the middle and over.

Although joining the EU took place almost five years ago, for an effective integration time is needed because Romania has yet to catch up considerably from the other EU members, while learning and the implementation of the principles of sustainable development in the context of globalization.

## **2. EVOLUTION INDICATORS FOR THE PROTECTION AND DEVELOPMENT OF HUMAN FROM SUSTAINABLE DEVELOPMENT PERSPECTIVE**

Indicators to assess the protection and human development, sustainable development of Romania in the last decade, evolutions were very different. For a better perception of the situation, we considered useful to the dynamics of these indicators in the European context. Graphics will play in the evolution of our country compared to the general level of the European Union (EU27), the first three and last three ranking countries, but also Hungary and Bulgaria, neighboring states and can, therefore, to form a local image.

### **A. Public Health**

Concerning **public health**, the EU aims to promote quality of care and improve protection against health threats. Our country aims to Horizon 2013, further improving the health, quality of care and care provided by health services and improving the health of the population and increasing health system performance.<sup>55</sup>

To assess this chapter of NSSD, we decided to study the evolution of the following indicators: „Health care expenditure by provider”, „Expenditure of selected health care functions by providers of health care, per inhabitant”, and „Healthy life years at birth”.

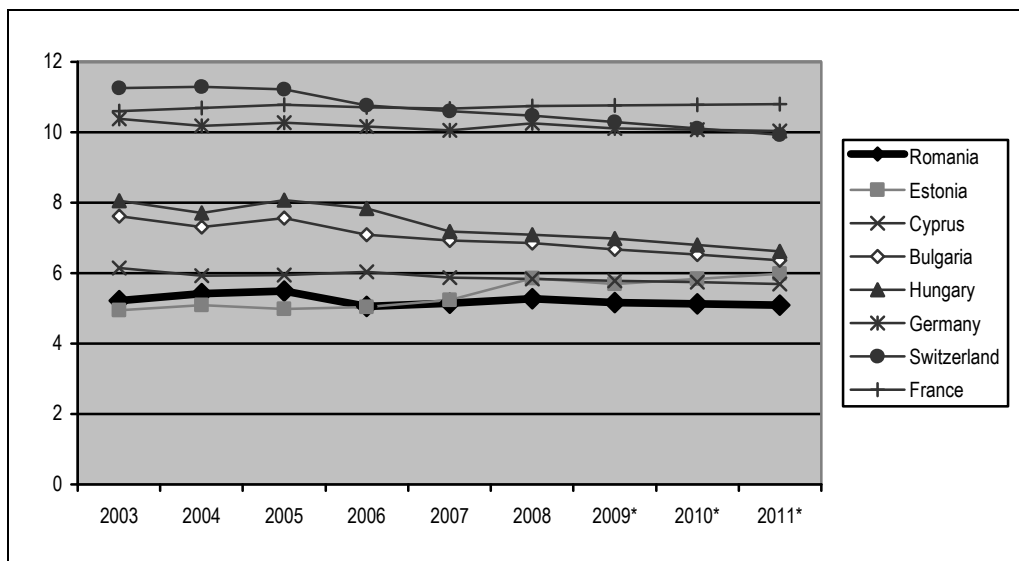
**Health care expenditure by provider (% in GDP)**, the Member of the European Union ranged from 4.95% (Estonia in 2003) and 10.80% (France in 2011). Figure 1 is the evolution of health expenditure in the period 2003-2011.

Lowest levels recorded in Romania (annual average in the 9 years, 5.22%), Estonia (average 5.41%) and Cyprus (average 5.89%) and the raised are those of France (average 10.73%), Switzerland (average 10.66%) and Germany (average 10.17%). Overall EU average was 8.17%, while at regional level, Romania is placed between

<sup>54</sup> *National Strategy for Sustainable Development of Romania*, Horizon 2013-2020-2030, Romanian Government, Ministry of Environment and Sustainable Development, United Nations Development Program, National Centre for Sustainable Development, Bucharest, 2008.

<sup>55</sup> *Idem*.

Bulgaria (average 6.99%) and Hungary (average 7.37%). The very low level of public expenditure on health held by our country (we are an unfortunate first place) reflects an unfavorable measures that are expected to address deep strategy.



Source: [http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth\\_sha\\_hp&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth_sha_hp&lang=en), from 03.06.2011, for the period 2003-2008, the authors' estimates for 2009-2011  
\*) forecast

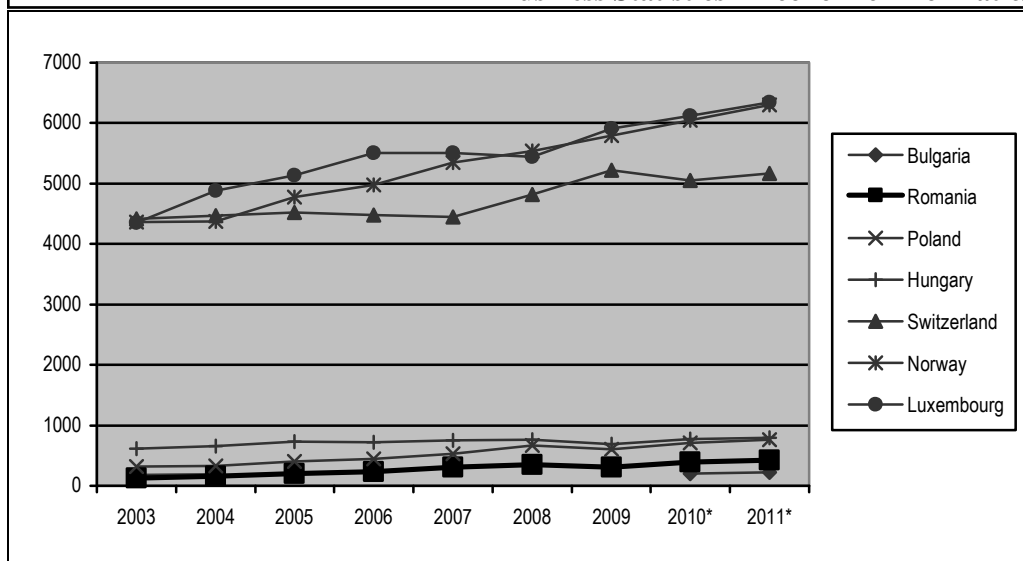
**Figure 1. Evolution of „Health care expenditure by provider (%)”, in the European Union, in the period 2003-2011**

The evolution of **“Expenditure of selected health care functions by providers of health care, per inhabitant”**, in the Member of the European Union, in period 2003-2011, is represented in Figure 2.

Lowest levels recorded for Bulgaria (annual average in the 9 years of 205.19 euro / capita), Romania (average 277.82 euro) and Poland (average 527.18 euro) and the highest are those of Luxembourg (average 5466.38 euro), Norway (average 5279.83 euro) and Switzerland (average 4732.36 euro). Overall EU average was 2220.95 euro / capita, while at regional level, Romania is placed between Bulgaria and Hungary (average 720.43 euro). The very low level of health spending per capita recorded for our country (only Bulgaria is under us) also reflects an unfavorable situation.

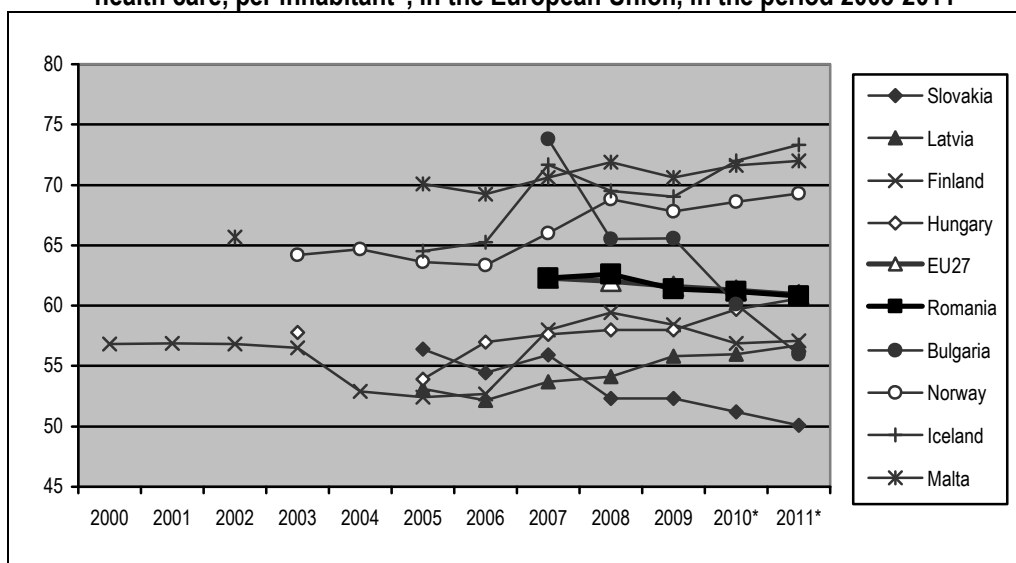
**Healthy life years at birth** is an indicator that reflects the hope of health, which combines information on mortality and morbidity. The evolution of this indicator, the Member of the European Union, from 2000-2011, is represented in Figure 3.

Lowest levels are recorded Slovakia (annual average in the 12 years, 53.2 years), Latvia (average 54.5 years) and Finland (average 56.2 years) and those of Malta are high (average 70.2 years), Iceland (average 69.3 years) and Norway (average 66.3). Overall average in the EU27 was 61.6 years, while at regional level, Romania (average 61.7 years) is placed between Hungary (average 57.8 years) and Bulgaria (average 64.2 years). Level it holds our country in the European rankings is acceptable, considering that is placed just below the EU27 average.



Source: [http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth\\_sha1h&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth_sha1h&lang=en), from 20.10.2011, for the period 2003-2009, the authors' estimates for 2010-2011  
\*) forecast

**Figure 2. Evolution of „Expenditure of selected health care functions by providers of health care, per inhabitant”, in the European Union, in the period 2003-2011**



Source: <http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&plugin=1&language=en&pcode=tsien180>, from 20.10.2011, for the period 2000-2009, the authors estimates for 2010-2011  
\*) forecast

**Figure 3. Evolution of „Healthy life years at birth”, in the European Union, in the period 2000-2011**

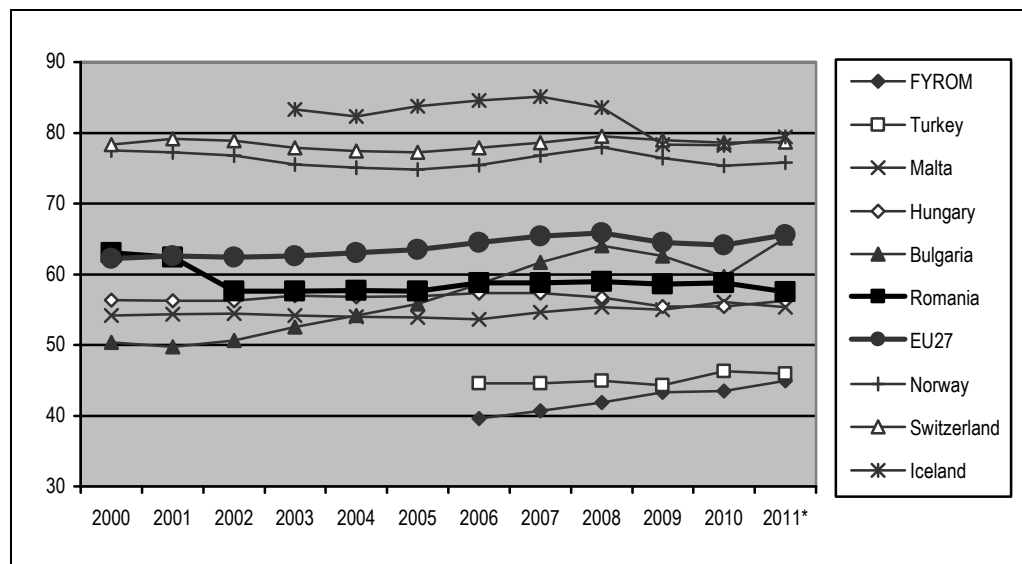
### B. Social inclusion, demography and migration

In terms of **social inclusion, demography and migration**, the EU's overall objective is to create a society based on social inclusion by taking into account solidarity between and within generations and ensuring their quality of life of citizens.

Romania aims with Horizon 2013, creating a legal framework, institutional and modern participatory risk reduction of poverty and social exclusion, promoting social cohesion, equal opportunities and cultural diversity.<sup>56</sup>

To assess this component of NSSD, we considered useful to the next evolution indicators „Employment rate by gender, age group 15-64”, „Natural population change (per 1000 inhabitants)”, „Life expectancy”, and „Emigration”.

„**Employment rate by gender, age group 15-64 (%)**” is calculated by dividing the number of employed persons aged 15 to 64 years in total population of same age group. In Figure 4 is represented the evolution of this rate in the European Union, from 2000 to 2011.



Source: <http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&plugin=1&language=en&pcode=tsiem010>, from 27.10.2011, for the period 2000-2010, the authors estimates for 2011

\*) forecast

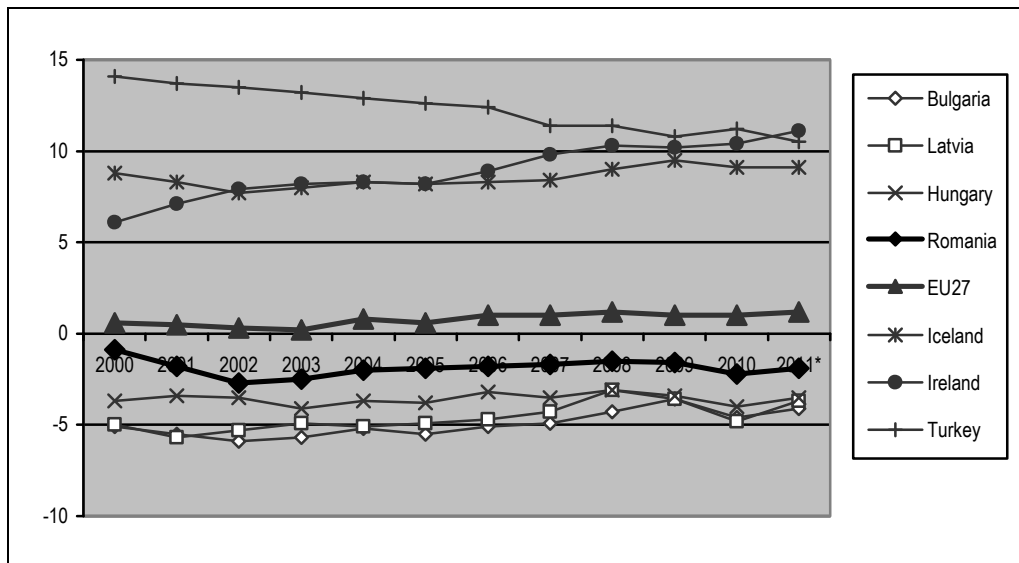
**Figure 4. Evolution of „Employment rate by gender, age group 15-64 (%)”, in the European Union, in the period 2000-2011**

Lowest levels are recorded by Former Yugoslav Republic of Macedonia, the - FYROM (annual average in the 12 years, 42.3%), Turkey (average 45.1%) and Malta (average 54.6%) and the raised are those of Iceland (average 82.1%), Switzerland (average 78.4%) and Norway (average 76.2%). Overall average in the EU27 was 63.8%, while at regional level, Romania (average 59.0%) is placed over Hungary (average 56.5%) and Bulgaria (57.1 average %). Fairly low level „Employment rate by gender, age group 15-64” our country has it reflects a bad situation that cannot be remedied only by increasing investments generating jobs.

With regard to demographic indicators we dispense with the dynamics of the total population in each state as huge difference between minimum and maximum values on the graph makes it impossible perception of the situation. However, note the continuing trend of reduction for the European Union. „**Natural population change**

<sup>56</sup> Idem.

(per 1000 inhabitants)” is the ratio of natural changes during the year (births minus deaths) to population average that year, expressed per 1,000 inhabitants. In Figure 5 is the evolution of this rate in the EU during 2000-2011.



Source: <http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&plugin=1&language=en&pcode=tps00007>, from 27.10.2011, for the period 2000-2010, the authors estimates for 2011

\*) forecast

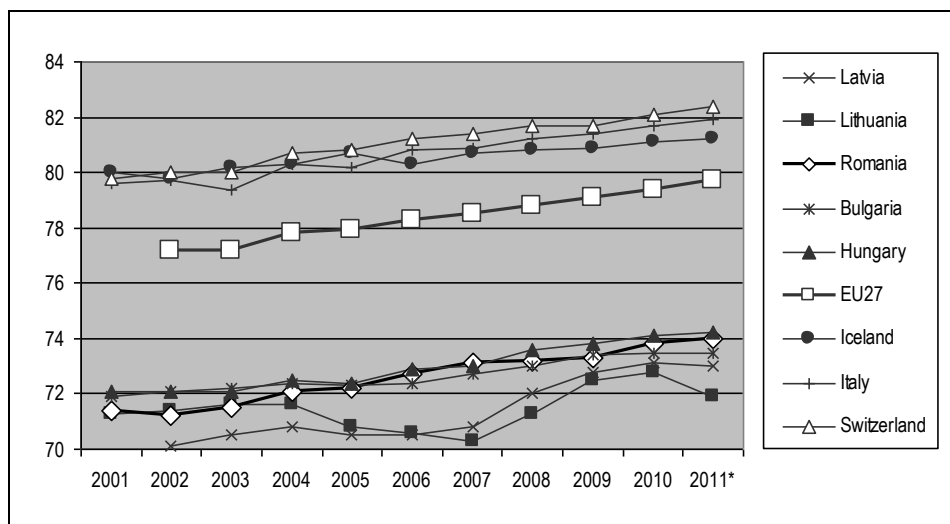
**Figure 5. Evolution of „Natural population change (per 1000 inhabitants)”, in the European Union, in the period 2000-2011**

Lowest levels recorded for Bulgaria (annual average in the 12 years, from -5.0 to 1000 inhabitants), Latvia (average -4.6) and Hungary (average -3.6) and the highest are those of Turkey (average 12.3), Ireland (8.9 average) and Iceland (average 8.6). Overall average in the EU27 was 0.8, while at regional level, Romania (average -1.9) is placed over Bulgaria and Hungary. The very low „Natural population change” recorded for our country reflects an unfavorable situation. In fact, the situation is much worse than appears at first sight, talk about the long term, even the disappearance of the Romanians as a people.

“Life expectancy” of the population in the European Union in the period 2001-2011, is presented in dynamics in Figure 6.

Lowest levels are recorded by Latvia (annual average in the 12 years, 71.4 years), Lithuania (average 71.5 years) and Romania (average 72.6 years) and the of Switzerland are high (average 81.1 years), Italy (average 80.6 years) and Iceland (average 80.5 years). Overall average in the EU27 was 78.4 years, while at regional level, Romania is placed under Bulgaria (average 72.7 years) and Hungary (average 73.0 years). The difference of nearly six years to the EU average, but nearly 10 years leading to the states, let us consider the situation as bad.

The indicator “Emigration” reflects the total population migration long-term migrants from one country reported during the reference year. In Figure 7 is represented the evolution of migration in the European Union, from 2000 to 2011.



Source: [http://appsso.eurostat.ec.europa.eu/nui/show.do?wai=true&dataset=demo\\_mlexpec](http://appsso.eurostat.ec.europa.eu/nui/show.do?wai=true&dataset=demo_mlexpec), from 20.10.2011, for the period 2001-2010, the authors' estimates for 2011  
\*) forecast

**Figure 6. Evolution of „Life expectancy”, in the European Union, in the period 2001-2011**

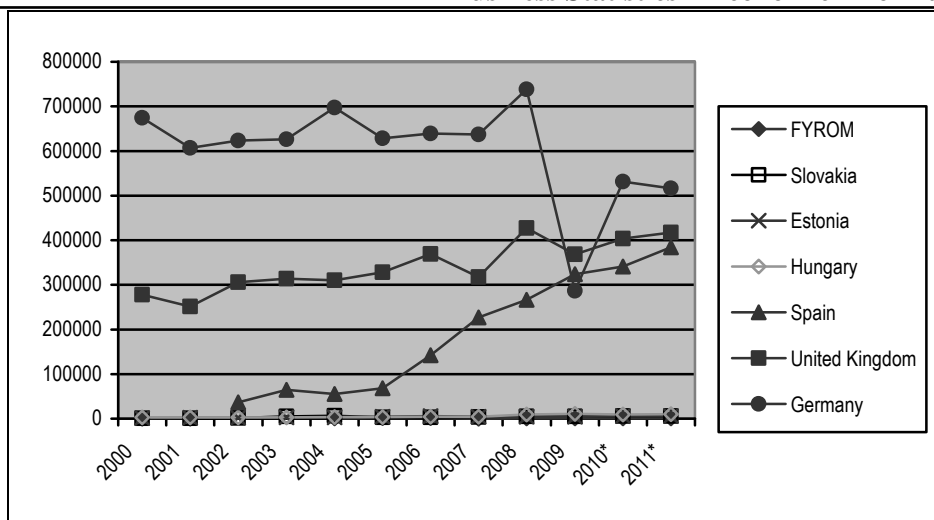
Lowest levels are recorded by FYROM (annual average in the 12 years, 590.8 by emigrants), Slovakia (average 3748.5) and Estonia (average 3935.5) and the highest are those of Germany (average 600,354.3), United Kingdom (average 340,876.1) and Spain (average 190,912.9). Lack of data prevents the calculation of overall average level of EU27, the same situation is encountered at the regional level, Romania and Bulgaria not reporting data (Hungary has an average of 5567.1). Moreover, high levels of emigration is found in countries with developed economy, our country showing a reduced attractiveness of this view.

### C. Global poverty and sustainable development challenges

Regarding to **Global poverty and sustainable development challenges**, the EU's overall objective to promote active global sustainable development and ensuring the coordination of the internal and external policies with sustainable development principles. For Horizon 2013, Romania's objective is to implement legislative and institutional instruments for Romania's status as donor of development assistance, according to EU membership obligations.<sup>57</sup>

To assess this component of NSSD, we considered useful to progress indicator **„People at risk of poverty or social exclusion (%)”**. *Europe 2020* strategy promotes social inclusion, particularly by reducing poverty, the goal being to keep at least 20 million people at risk of poverty and social exclusion. „People at risk of poverty or social exclusion” refers to people at risk of poverty (people with disposable income below the poverty risk, which is set at 60% of national median income - after social transfers), are severely disadvantaged (people living with constrained by lack of resources) or living in households with very low labor intensity (persons aged 0-59 years living in households where adults have used more than 20% of potential work their total last year). The dynamics of this indicator, in the European Union, from 2004-2011, is shown in Figure 8.

<sup>57</sup> Idem.



Source: <http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&plugin=1&language=en&pcode=tps00177>, from 27.10.2011, for the period 2000-2009, the authors estimates for 2010-2011

\*) forecast

**Figure 7. Evolution of „Emigration”, in the European Union, in the period 2000-2011**

Lowest levels are recorded by Iceland (annual average in the 12 years, 12.6% of total population), Netherlands (average 15.3%) and Sweden (average 15.3%), and the highest are those of Bulgaria (average 48.2%), Romania (average 43.0%) and Latvia (average 38.0%). Overall average in the EU27 was 23.7%, while at regional level, Romania is placed between Hungary (average 29.8%) and Bulgaria. Our country, with very high level of people at risk of poverty or social exclusion, is in an unfavorable situation compared to other EU countries (Bulgaria just passed us as average, but shows a downward trend).

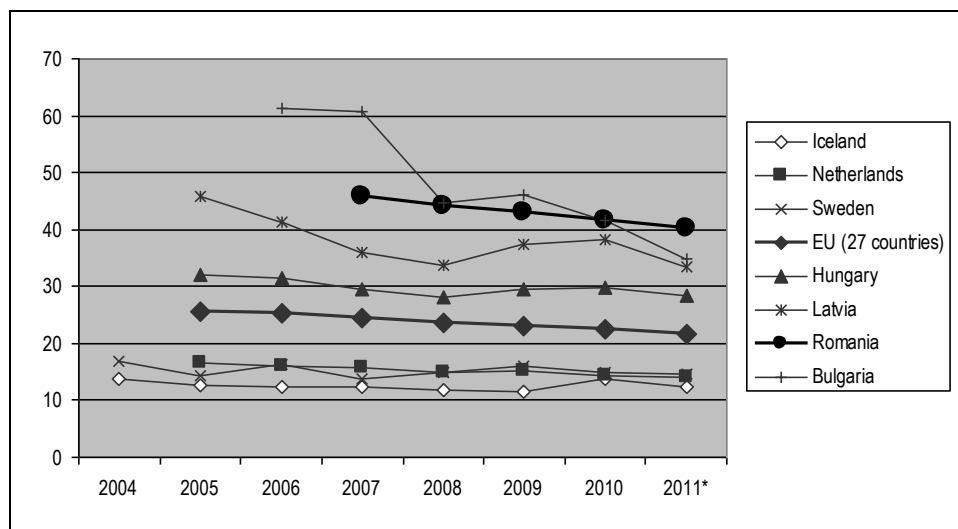
### 3. CONCLUSIONS

**Public health.** „Health care expenditure by provider” in GDP (%) in EU countries, varied between 4.95% and 10.80%, EU average being 8.17%. At the regional level, Romania is placed under Bulgaria and Hungary. The very low level of public expenditure on health held by Romania reflects an unfavorable situation. Overall EU average „Expenditure of selected health care functions by providers of health care, per inhabitant” was 2220.95 euro and in the region, Romania is placed between Bulgaria and Hungary. The very low level of health spending per capita recorded for our country also reflects an unfavorable situation. „Healthy life years at birth” as a general average EU27 were 61.6. At the regional level, Romania is placed between Hungary and Bulgaria. Classification of our country in Europe is an acceptable (just below the EU27 average).

**Social inclusion, demography and migration.** „Employment rate by gender, age group 15-64”, the overall average level of EU27 was 63.8%, and in the region, Romania is placed over Hungary and Bulgaria. The low level of this rate for our country indicates a bad situation. Overall average for the EU27 „Natural population change” was 0.8 per 1,000 inhabitants. At the regional level, Romania is placed over Bulgaria and Hungary. The very low rate for our country reflects an unfavorable situation. „Life expectancy” of the population in the European Union in the period



2001-2011 was 78.4 years. At the regional level, Romania is placed under Bulgaria and Hungary. Significant difference to the average EU level leads us to appreciation of the situation is unfavorable. „Emigration” is a phenomenon encountered primarily in countries with developed economy, our country presenting therefore a reduced attractiveness of this view.



Source: <http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&plugin=1&language=en&pcode=tsdsc100>, from 20.10.2011, for the period 2004-2010, the authors estimates for 2011

\*) forecast

**Figure 8. Evolution of „People at risk of poverty or social exclusion (%)”, in the European Union, in the period 2004-2011**

**Global poverty and sustainable development challenges.** „People at risk of poverty or social exclusion” in the EU27 was 23.7%. In the region, Romania is placed between Hungary and Bulgaria. The high level of population at risk of poverty or social exclusion in our country compared to other EU countries are in a bad situation.

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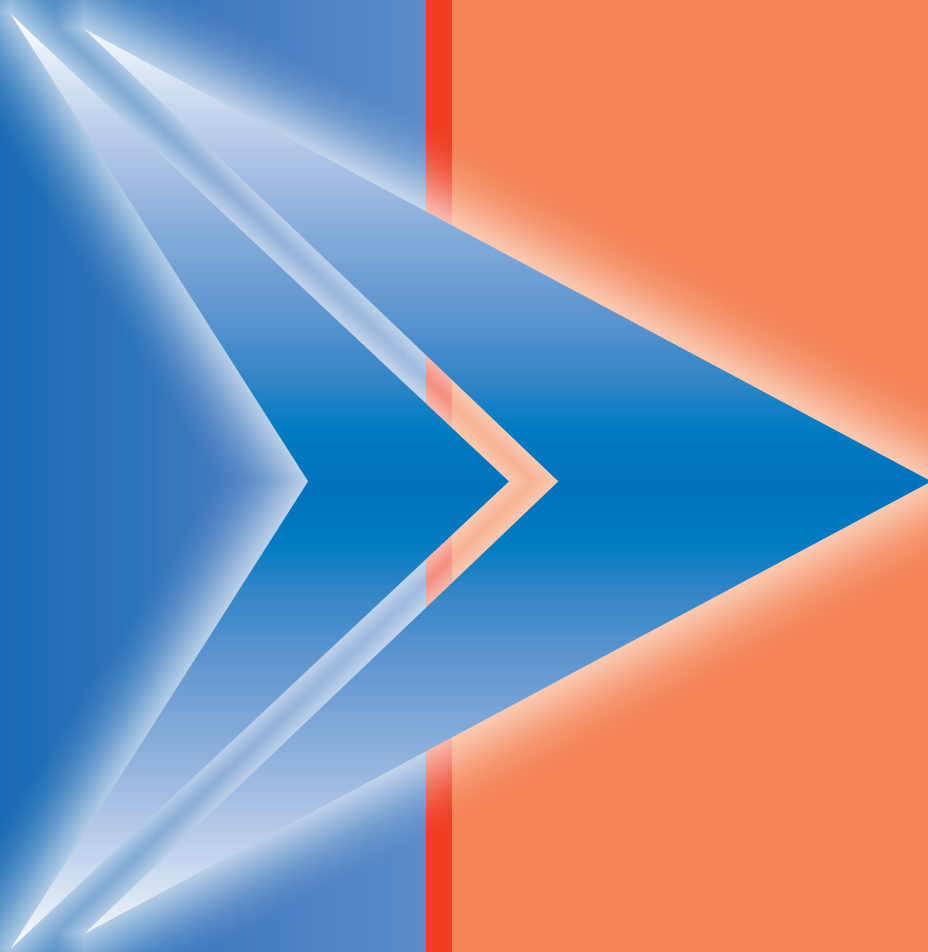
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5. \* \* \* <http://epp.eurostat.ec.europa.eu/portal/page/portal/eurostat/home/>

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