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# **CONTENTS**

ALBU Lucian-Liviu	TRENDS IN STRUCTURAL CHANGES AND CONVERGENCE IN EU AND IN ADRIATIC- BALKANS REGION	7
BALTEŞ Nicolae CIUHUREANU Alina- Teodora	STUDY ON THE RISK MANAGEMENT IN BANKING INSTITUTIONS	67
BRĂTIAN Vasile Radu OPREANA Claudiu Ilie	TESTING THE HYPOTHESIS OF AN EFFICIENT MARKET IN TERMS OF INFORMATION – THE CASE OF THE CAPITAL MARKET IN ROMANIA DURING RECESSION	79
BUDAC Camelia BALTADOR Lia	MEASURES FOR STIMULATING COMPETITION ON MOBILE SERVICES MARKET IN ROMANIA TO MAXIMIZE BENEFITS FOR END USERS	107
BUNESCU Liliana COMANICIU Carmen	ISSUES ON FISCAL POLICY OBJECTIVES IN ROMANIA AFTER 2000	116
CĂTOIU Iacob STANCIU Oana ȚICHINDELEAN Mihai	STATISTICAL INFERENCE USED IN MARKETING RESEARCH	130
COMANICIU Carmen BUNESCU Liliana	SOME CONSIDERATIONS ON THE RELATIONSHIP BETWEEN UNIVERSITY STRATEGIES AND FINANCIAL INDICATORS	137
DUMITRESCU Luigi VINEREAN Simona	THE GLOCAL STRATEGY OF GLOBAL BRANDS	147
GATUT Budiono ARYANTO Vincent	BATIK INDUSTRY OF INDONESIA: THE RISE, FALL AND PROSPECTS	156
GOVOREANU Alexandru ŞERBAN Anca MORA Andreea	PRIORITY MANAGEMENT – A DIRECTION TOWARDS COMPETITIVENESS	171

HOROBEȚ Alexandra	INTERNATIONAL INVESTMENTS WITH	
	EXCHANGE RATE RISK: THE CASE OF CENTRAL AND EASTERN EUROPE CURRENCIES	185
MIHAIU Diana	STUDY REGARDING THE EFFICIENCY OF PUBLIC SPENDING ON EDUCATION AT EU LEVEL THROUGH BENCHMARKING	201
NICULA Virgil NEAGU Roxana	THE ECO-ECONOMICAL PRINCIPLES – ESSENTIAL ELEMENTS IN THE DECISIONAL PROCESS FOR THE TRANSFORMATION OF THE AGRO-TOURIST PENSION INTO AN ECO-TOURIST PENSION	215
OPREANA Alin	THE LONG-RUN DETERMINANTS OF INVESTMENT: A DYNAMIC APPROACH FOR THE FUTURE ECONOMIC POLICIES	227
PETRAȘCU Daniela	INTERNAL AUDIT: DEFINING, OBJECTIVES, FUNCTIONS AND STAGES	238
SHKURTI (Perri) Rezarta LEKA (Gjoni) Brikena	DEVELOPMENT OF THE ACCOUNTING PROFESSION IN ALBANIA IN THE NEW ERA OF MARKET ECONOMY	247
SIMA Elena	THE ADVANTAGES OF IMPLEMENTING A PREDICTIVE MANAGEMENT WITHIN THE MAINTAINIG AND EQUIPMENT REPAIR AT AN ENTERPRISE WHICH PRODUCES COMPONENTS FOR THE AUTOMOTIVE INDUSTRY INCLUDING TECHNICAL ASSISTANCE AND SERVICES	259
SPASOVA Stanislava	FROM MOTIVATION TO WELL-BEING	270
STANCIU Oana ȚICHINDELEAN Mihai	CONSUMER BEHAVIOR IN THE DIFFERENT SECTORS OF TOURISM	277
ŢĂRAN-MOROŞAN Adrian SAVA Raluca DIACONESCU Claudia	THE COSTS AND BENEFITS OF EDUCATION - A BRIEF REVIEW	286
TERCHILĂ Sorin	THE EVOLUTION OF ADVERTISING MARKET WHERE IS ADVERTISING NOW, AND WHERE IS IT GOING?	294

TILEAGĂ Cosmin	CRISIS: EFFECTS IN THE ECONOMIC AND SOCIAL FIELD	309
TUTULEA Anca	MANAGING THE LEADERSHIP CHALLENGES	315
VINȚEAN Adriana MATIU Ovidiu	ELECTRONIC DICTIONARIES AND ESP STUDENTS	324
VINȚEAN Adriana OBILIȘTEANU Georgeta	STIMULATING THE STUDENTS' CREATIVITY IN THE FOREIGN LANGUAGE CLASS	330

# TRENDS IN STRUCTURAL CHANGES AND CONVERGENCE IN EU AND IN ADRIATIC-BALKANS REGION<sup>1</sup>

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#### Abstract:

Coming from lessons done by standard economic growth theories and empirical evidences, we are considering the convergence in the level of income per capita as a result of structural changes in economy. Based on some our old studies, we investigate the differences among countries in EU in terms of the share in total economy of main sectors. Then, based on the spatial (empirical) distribution of such shares in EU we are proposing a model to estimate a typology of the convergence process in the European area. Taking into account the existing differences among sectors in matter of productivity, there are two versions of the model: one considering the share of sectors in total employment and the other one in GDP. Moreover, we developed several modelling schemes that could be useful to improve the strategies oriented to achieve a real convergence in EU and further in Adriatic-Balkans region. In this way, we can obtain simulations from a country or group of countries (European Union, for example) on long term and quantifying the impact of structural changes on the convergence process. Indeed, the actual global crisis seems to influence negatively the convergence process in EU. As a rule, just new adhered countries were more affected by the actual crisis. Today all forecasts are suffering by uncertainty. Thus, further efforts must be allocated to evaluate the negative impact of actual crisis on the convergence process.

*Keywords:* structural changes, convergence, stages of economic development, spatial distribution, natural unemployment rate

#### 1. Introduction

Economic theory of development postulates major changes in the structure of national economies along with the historical growth process. At historical scale, in national economies firstly agriculture predominates; then industry is the predominant sector; and finally sector of services becomes the major part of economy. According to

<sup>&</sup>lt;sup>1</sup> Funding for this research was provided by the Adriatic Danubian Clustering, EU Project, South East Europe, Transnational Cooperation Programme (2009-2011).

a general rule, during the first stage of development, along with a general increase of income, the demand for agricultural goods is growing, but slower than income due to a smaller elasticity of income relatively to their demand. Contrary, in case of manufactured goods there will be a larger elasticity of income relatively to their demand. Thus, the share of secondary sector in economy will increase. However, in the historical process of development, income continuing to increase, coming from one moment people begin to consume more services, taking into account that in their case income elasticity relatively to demand is even larger. Consequently, the tertiary sector will develop faster. This general rule is supposed to guide development at historical scale, but based only on empirical facts.

Such schema may be sometimes false. Thus, may exist underdeveloped countries from the level of income per inhabitant viewpoint, in which tertiary sector is predominant as consequence of an extended activity in tourism, concomitantly existing a non-developed secondary sector. This situation implies major risks. For instance, in case of a deep recession in countries supplying tourists can strongly affect income from tourism in destination country. Further, the overall effect will compromise at a large scale the general development process in this country. In cases where there is not developed either primary sector or secondary sector to be potentially re-improved, loan and increasing debt will be alone solutions.

In actual world expansion of tertiary sector is coincident just with the emergence and fast development of so-called new economy. Thus, the new economy is often viewed as economy of services. Many authors consider as base of spectacular growth of tertiary sector in developed countries during last time certain activities such as: scientific research and technological development; design and experimentation; marketing and trade (including external trade); production, stocking, processing and transmission of information; improvement of human factor, education, health, and increasing of life quality (including quality of environment, leisure, tourism); financial activity, banking, insurance societies, and capital markets, etc. Just such "services", from which essentially depends the efficiency even in so-called material sphere of production, demonstrate today highest dynamics. They are either integrated together with proper productive activities in the same system or developed as autonomous systems, such as: "banking industry", "tourism industry", "information industry", etc.

#### 2. Theoretical model and empirical evidences

Economic theory usually uses a number of stylised facts of structural changes along with economic growth process. According to it, a satisfactory theory of structural changes should be able to explain the real evolution illustrated by empirical data. Among conclusions three stylised facts are highlighted: the share of primary sector shows continuing decrease converging on long-run to a small constant value; the share of secondary sector increases until a maximum value but further it decreases converging on long-run to a constant value; the share of tertiary sector shows continuing growth converging on long-run to a high value. Consequently, a model of structural changes should be able to simulate such dynamics.

In order to estimate parameters describing medium- and long-run evolution of structure of different national economies usually are used either econometric models or alternatively they should be calibrated to fit reasonably empirical data.

To build a theoretic model, in this case essentially non-linear model, we consider some limit-values to which trajectories of the shares in case of the three sectors are asymptotically converging on long-run, function of the level of GDP per inhabitant. The basic hypotheses, plausible from theoretical viewpoint, should be also in accordance with empirical data. There are three hypotheses that we used for the model, as follows:

$$na = h = ct., \quad \text{for } y \to +\infty$$
 (1)

$$ni = 0, \qquad \text{for } y \to 0$$
 (2)

$$ns = d = ct., \quad \text{for } y \to +\infty$$
 (3)

where na, ni and ns are shares in employment of primary sector (mainly agriculture), secondary sector (mainly industry), and respectively tertiary sector (services). Coming from these hypotheses dynamics of shares of agriculture and services in total employment can be function of GDP per capita, y, expressed by the following two relations:

$$na(y) = (A^*h^*y + m^*B) / (A^*y + m)$$
(4)

$$ns(y) = d / (1 + e^{0 - c^{-y}})$$
(5)

where A, h, m, B, d, and c are calibrated parameters (they can be also econometrically estimated); e is base of natural logarithms. Moreover, considering the complementary relation, na+ni+ns=1, one should write also dynamics of the share of industry in total employment:

Also, taking into account hypothesis (2), we obtain the following implicit relation:

$$B = 1 - [d/(1 + e^{b})]$$
(7)

Based on available cross-section statistical data in period 1970-2000, for a number of about 100 countries (including all groups of countries, from poorest to richest), and on hypothesis of some long-run asymptotical trajectories, we calibrated the model. Simulating of the model demonstrated that in case of industry there are a local minimum and a global maximum, corresponding to two specific critical values of

income per inhabitant. Based on the model we can also simulate certain relevant longrun trajectories of structural changes. For instance, using the following set of values for parameters, A=2, h=0,02, m=3, d=0,8, b=1,12, and c=0,21, from the simulating of the model resulted in case of industry a maximum of its share in total employment, ni, equal to around 42% (corresponding to a critical value of GDP per capita y=4000 USD) and a minimum equal to around 14,7% (corresponding to y=28500 USD). The complete map of simulation is shown in Figure 1 (where y is in thousand USD). Discrepancies among countries can be viewed now not only as difference in income per inhabitant but also in terms of structural gap. Moreover, the simulating of model demonstrates a general converging of structures on long-run along with economic growth process.



#### 3. Convergence in UE-27

Based on the study of structural changes by stages of economic development resulted that the differences among countries can be evaluated by discrepancies in services sector contribution both in total employment and in GDP. Analysing data on the share of services in GDP in an historical short period, 1995-2005, demonstrates a

#### - 10 - Studies in Business and Economics

strong expanding tendency for all EU countries. Regarding this criterion of convergence, Romania is the second country within EU, registering an increase of 16.1 percentage points, from 38.8% to 54.9% (Latvia, placed on the first position, registered in the same period an increase of 17.4 percentage points, from 56.6% to 74.0%). However, Romania continues to be on the last place in EU after the share of services in total GDP. Consequently, in case of Romania, the shares of agriculture and respectively of industry in total GDP are highest among the EU members (10.1% and respectively 35.0%, at the end of considered period).

In order to estimate trends in structural convergence in EU function of economic growth we used a model just a little different from previous theoretic one. Statistical data are referring to 2004. In Figure 2 is presented the variation of structure by the three sectors of economy in EU function of GDP per inhabitant level (where on abscise axe are countries in EU-27 arranged increasingly by level per capita of GDP, y). We calibrated econometric model by supposing that exist certain limit-values to which each of the three trajectories are tending along with the income per capita growth. Thus the specification of the model is in line with both long-run growth theory and empirical data supplied by economic history. These hypotheses are synthetically expressed by the following equations used for regression in case of agriculture sector, ya, and respectively services sector, ys:

$$ya_E(y) = [(k1^*y + k2) / (k3^*y + k4)]$$
(8)  

$$ys_E(y) = [k5 / (1 + k6^*e^{k7^*y})]$$
(9)

#### where k1...k7 are estimated and e is the base of natural logarithms.



Figure 2.

Studies in Business and Economics - 11 -

In order to estimate the share of industry sector in GDP, yi, simply we operate substitution of the above two relations in the balance relation, ya+yi+ys=1, obtaining the following equation:

 $yi(y) = 1 - \{ [(k1*y + k2) / (k3*y + k4)] + [k5 / (1 + k6*e^{k7*y})] \}$ (10)

The results of applying the cross-section model on EU countries are presented in Figures 3-5 (where the two dashed lines delimit the confidence statistic interval). Moreover, in Figure 6 is shown the resulted general theoretical model at the level of entire EU for 2004. Thus, as minimum for the share of agriculture sector resulted a value equal to about 1.7% and as maximum for the share of services sector resulted a value equal to about 82.7%. These values show in the case of new adhered countries that a big gap still exists relating to the average EU level in matter of structural changes. In case of industry sector resulted a value of global maximum equal to about 31.4% (corresponding to a critical value of GDP level per capita equal to about 9700 USD) and respectively a value of long-run minimum equal to about 15.6% (in case of a very large income per capita). More detailed interpretation can be extracted from socalled surface plot or 3D map and contour plot representations of the estimated EU model (see Appendix 1). Indeed, it will be needed to extend the analysis of structural EU model from only one year to a number of years by using a sort of panel models.

According to the resulted cross-section model (estimated on the base of 2004 data) we can evaluate long-run dynamics structural changes for each individual country. Thus, the actual gap between new adhered countries and average level in EU could be interpreted as delay in time, their actual structure of economy representing a similar situation with that existing in developed western countries in EU 10-20 years ago. Moreover, there are evidences demonstrating that the long-run trends in new members of EU will be similar to those registered in western countries. For instance, according to simulation of the general estimated model for EU, in case of an annual GDP growth of 6% in Romania for entire interval 2006-2015, the following shares will be registered at the end of period: ya=4,6%, yi=31,3%, and ys=64,1%. Indeed, such significant decrease of agriculture sector share only in ten years means huge investment and modernisation efforts.



Figure 3.



Figure 4.



Figure 5.



#### 4. Spatial Distribution of some Macroeconomic Variables in UE-27

There are many methods trying to estimate trends in economy in the business cycles context, usually coming from studying changes in natural rate of unemployment. Our study is coming from a general analyse of long-run trends in inflation-

unemployment relationship in European Union (EU-27). Using an adequate methodology, we investigate how fundamental macroeconomic variables are spatially distributed within EU, how geographic area is involved in it. Then, applying a standard model, already used intensively in literature, we estimate NAIRU ("Non-Accelerating Inflation Rate of Unemployment") in case of each actual member of EU and how it changed during last decade. Moreover, we estimated which type of correlation between unemployment gap and change in inflation predominated. Finally, we are proposing a simple model to estimate, outside of natural rate model, so-called pure productivity. Applications on some EU countries come to complete the analysis.

Following some old preoccupations (Daianu and Albu, 1996; Albu, 1998, 2001 and 2004), we present here only few conclusions based on an empirical analysis of changes in inflation-unemployment relationship in European countries after 1970. Empirical studies demonstrate, on the background of business cycles, some major changes of trends in western countries during last three decades. Among these it can be remarked a major effort to cut inflation level accompanied by an increasing trend in case of unemployment and a general slower annual GDP growth.

A basic conclusion derived from empirical data is that a smaller volume in 3D map (estimated by considering the variation in case of the three macroeconomic variables) represents a higher economic stability and perhaps less strain in economic system. Evolution in western European countries was from a period in which high inflation predominated toward one in which unemployment plays now this role. This could mean that on the unemployment-side occurred a relaxation, higher levels of unemployment being viewed as "normal" but is not the case for inflation. A deeper analysis suggests that some persistent trends and long-run attractors could exist. When the income level per capita rises to a very high level, it was demonstrated a specific evolution process in western countries, namely that to a higher natural rate of unemployment and to a period in which unemployment becomes more autonomous relating to the dynamics of GDP. For instance, in Appendix 2 it is shown a graphical representation of the evolution during a large period (1970-2007) in the threedimensional space: unemployment rate (u%) - annual growth rate (y%) - inflation (p%)for ten old EU members (Belgium, Denmark, England, France, Germany, Italy, Ireland, Netherlands, Portugal, and Spain).

On the other hand, in eastern countries there was an opposite situation at least during the first years of their transition; open inflation rose rapidly in the region whereas unemployment did also rise but at a smaller pace. Today, under their economic plans within the context of so-called national convergence programmes, in eastern countries of EU there is generally a trend of rapid growth, inflation is in a process of controlled decreasing, but unemployment is often still high. However, there are evidences demonstrating that in long-run trend will be similar to that registered in western countries. Most important for eastern countries (and for conducting their convergence programmes), in actual period of an impressive expansion of "new economy" and globalisation phenomenon, the converging process do not suppose necessarily a repetition of the western evolution coming from the '60s, thus the convergence period could be substantially reduced.

Applying similar simulation models we can obtain deeper analyses of the relation unemployment - growth rate - inflation in case of each individual EU country or region. As example, in Appendix 3 are presented two 3D graphical representations and their attached contour plots for Italy and for Romania based on data for the period 2000-2007. We can see that in case of Romania, in order to maintain inflation under 10% it is needed, quit independently of unemployment rate, to register a higher GDP growth rate (more than 6%). In case of Italy there is a complex map (meaning a more structured economy), existing multiple solutions to maintain inflation at a low level (around 2%). Moreover, inflation dynamics can be analysed in relation with changes in GDP per capita (as application, in Appendix 4 are presented two 3D graphical representations and attached contour plots for Italy and Romania obtained by using data for the same period, 2000-2007).

In context of actual convergence policy in EU-27, it is useful to analyse the spatial distribution of some basic macroeconomic indicators. Moreover, according to recent available data from EUROSTAT for EU countries we are presenting as output of simulation models some significant 3D graphical representations and their attached so-called geodesic maps or contour plots.

Among selected macroeconomic variables, the most significant is GDP per inhabitant. In Figure 7 is shown its spatial distribution in 2006, as a stylised map of EU, where LO is longitude (on its left side relating to the origin, 0 meridian, we changed West longitude, as it is marked usually on geographical maps, in negative values), LA – latitude, and yIPPS – level of GDP per capita in thousand Euro PPS (Purchasing Power Standards). On the stylised map of EU-27 (including also Bulgaria and Romania adhered to EU in 2007) we can see two distinct groups of regions delimited by 30 to 55 contour lines (red colours) and respectively by 20 to 10 contour lines (blue colours) representing highest and respectively lowest GDP per capita levels. As two general rules, GDP per capita level is increasing from the right side of EU stylised map (eastern EU regions) to the left side (western EU regions) and respectively from the bottom (southern EU regions) to the top (northern EU regions).



In case of unemployment rate, u%, the stylised EU map seems quite different in 2006, as it is shown in Figure 8. As general rule, highest values of this indicator are registered in eastern regions delimited by 8 to 16 contour lines (red colours), but lowest values are mostly located in western regions delimited by 5 and 6 contour lines (blue colours).



Figure 8.

More highlighted differences between western and eastern countries in EU are in matter of inflation rate,  $\pi$ %, in 2006, as it is shown in Figure 9. As general rule, highest values of inflation (computed from CPI level) are placed on the right side of the stylised map of EU in regions delimited by 3 to 7 contour lines (red colours), but lowest values are located in western regions delimited by 2 to 1 contour lines (blue colours).

Taking into account significant discrepancies existing among EU countries and regions, the convergence process is one of the most important goals within EU policies. This means that less developed countries and regions in EU must increase

more rapid their GDP per inhabitant in order to approach average EU level. In a broader sense, the distribution map of GDP growth rate, y%, can illustrate the convergence process during a long period, as it is shown in Figure 10 for 2001-2006. On the stylised map of EU, we can see a remarkable group of eastern regions delimited by 3.5 to 9 contour lines (red colours), where the growth rate was high in this period. On the other hand, in western regions slower GDP growth registered (blue colour predominates within the left side of EU map).





Studies in Business and Economics - 19 -



Figure 10.

Following a study of Ball and Mankiw (2002), in which it was demonstrated that NAIRU (a useful concept within the business cycle theory) is in fact very similar to the natural rate, in order to estimate its value in case of EU countries, we rewrite the equation of Phillips curve as follows:

$$\Delta \pi = aU^* - aU + v$$

(11)

where a and U\* are parameters,  $\Delta\pi$  is the deviation of actual inflation,  $\pi$ , from expected inflation,  $\pi e$ , and v is shock on supply side. U\* is named natural rate of unemployment. In case of accepting adaptive expectations, the expected inflation is a weighted average of the past inflation rates. The simplest solution is to consider expected inflation to be equal to the registered inflation in previous period. Supposing that U\* is constant and U is uncorrelated with v, then the value of U\* can be estimated by regressing the change in inflation,  $\Delta\pi$ , on a constant and unemployment U. So, the ratio of the constant term, noted as m=aU\*, to the absolute value of the unemployment coefficient, noted as a, is an estimate of U\*.

Based on available data for the period 1998-2007 and using this methodology we estimated the value of natural rate in case of each EU country (excepting Bulgaria where data covered 1999-2007 period and Cyprus, Malta, Poland, and Romania where data covered 2000-2007 interval). The distribution of this constant value of natural rate of unemployment in EU (noted this time as Un in order to not be confused further with the dynamic natural rate, U\*) is presented in Figure 11. It seems like a different picture from that obtained in case of actual unemployment EU map for year 2006 in Figure 8.

However, many economists contest the assumption of a constant NAIRU and a growing literature tries to estimate persistent movement in NAIRU. The main hypotheses are based on idea that changes in U\* are long-term shifts in the unemployment-inflation relation, but the shock v captures short-run fluctuations. Following again the Ball and Mankiw's methodology, we used for application the next equation obtained by rearranging terms:

$$U^* + (v / a) = U + (\Delta \pi / a)$$

Its right-hand side can be computed from statistic data, generating in this way an estimate of U<sup>\*</sup> + (v/a), which in fact measures the shifts in the Phillips curve. Usually, U<sup>\*</sup> represents the longer-term trends and v/a is proportional to the shorterterm shocks. Consequently we can try to extract U<sup>\*</sup> from U<sup>\*</sup> + v/a using a standard approach to estimating the trend in a series. Generally, in literature it is used the Hodrick-Prescott filter (Hodrick and Prescott, 1997), noted below as HP. In case of using HP filter, we must choose two parameters: the Phillips curve slope, a, and respectively the smoothing parameter  $\lambda$  (this makes the trend, U<sup>\*</sup>, to be smoothed and not with large oscillations, by replacing the banal procedure of fitting every movement in U<sup>\*</sup> + (v / a)). The selection of a value for parameter  $\lambda$  is guite arbitrary.

In case of our experiment on EU countries during last decade (1997-2007), we used in case of annual series for coefficient a the values already obtained previously, by regressing  $\Delta \pi$  function of one constant and the actual rate of unemployment, U. These fixed values can be interpreted in relation with the disinflation cost. Regarding the selection of HP parameter  $\lambda$ , in literature there are reported numerous experiments (based on empirical evidence, in specialized literature there are recommended certain values for parameter  $\lambda$ : 100 in case of annual series, but other authors suggest 1000

(12)

in order to obtain a more smoothed trend; 1600 in case of quarterly series; and 14400 for monthly data).



#### Figure 11.

In fact, HP filter is equivalent to an interpolation method. Therefore, given a time series, it is natural to consider as candidate each other method permitting to estimate a smooth trend. In our exercise on EU countries, we used a number of procedures. They can be found within sources-packages in *MathCAD* referring to the classes "Polynomial Regression" and respectively "Smoothing Data". Then we used them in order to estimate the trend of U\*. For instance, the concrete three estimation

#### - 22 - Studies in Business and Economics

functions are as follows: 1) regress (vx, vy, k) returns a vector which interp uses to find the kth order polynomial that best fits the x and y data values in  $\mathbf{vx}$  and  $\mathbf{vy}$ ; it generates a vector permitting interpolation, finally expressed by function *interp* (vs, vx, vy, x)); k is a positive integer specifying the order of the polynomial we want to use to fit the data (usually it is recommended to choose k < 5); 2) loess (vx, vy, span) returns a vector which interp uses to find a set of second order polynomials that best fit a neighbourhood of the x and y data values in  $\mathbf{vx}$  and  $\mathbf{vy}$ ; it generates a vector permitting interpolation, finally expressed by function interp (vs, vx, vy, x)); span is a positive real number for specifying how big a neighbourhood we want to use (usually it is recommended to select larger values of *span* when the data behaves very differently over different ranges of x; a good default value is span=0.75); 3) ksmooth (vx, vy, b) returns an *m*-element vector created by smoothing using a Gaussian kernel to return weighted averages of the elements in  $\mathbf{vy}$ ; b is the bandwidth of the smoothing window (it should be set to a few times the spacing between x data points). In case of the first two procedures vx is a vector of real data values in ascending order. These correspond to the x values. vy is a vector of real data values and they correspond to the y values. The number of elements is the same as **vx**. **vs** is a vector generated by regress function and respectively by *loess* function. x is the value of the independent variable at which we want to evaluate the regression curve. In case of the third procedure vx is an *m*-element vector of real numbers and vy is an *m*-element vector of real numbers. For applications we used the following values for parameters: k=3. span=1 and b=5 (indeed, depending on available data other values could be attributed to parameters). Moreover, we used the HP filter with I=100 and the simple linear trend, noted as Ue.

Some results of our exercise on EU countries using annual series are synthetically reported in Appendix 5 for only three filters: Ue filter, HP filter, and TK filter (*ksmooth* estimation function). The natural rate of unemployment estimated by simple regression, relation (1), is noted Un in order to not be confused with U\* (Un has an unique value for each EU country for the whole considered period, but U\* means the trend in long run of natural rate estimated conforming to each filter used.

Based on simulations, we can see as a general rule the favourable impact of a positive difference between effective unemployment rate and its natural rate ( $\Delta U$ ) on change in inflation ( $\Delta \pi$ ). The gap is noted as  $\Delta U=U$ -Ue in case of the linear trend,  $\Delta UH=U-U_HP$  in case of HP filter, and  $\Delta UK=U-U_TK$  in case of TK filter. We can see from Figures in Appendix 5 that the points in 2D space,  $\Delta U$ - $\Delta \pi$ , are distributed mostly in sectors II and IV (in the trigonometric sense) along with the right line transcending the origin of axes (or better within an ellipse covering this transcending line as part of its long axis). Eventually, the differences (the points evading from two mentioned sectors) can be attributed to the short run supply shocks. Also, corresponding to the three filters, we computed the correlation coefficient between unemployment gap and inflation variation for the period 1998-2007 (1999-2007 in case of Bulgaria and 2000-2007 in that of Cyprus, Malta, Poland, and Romania). As it is

expected, the correlation coefficient between this gap and variance of inflation  $(\Delta \pi)$  is usually negative (exceptions are Cyprus, Finland, Ireland, Italy, Malta, and Spain). However, based on some deeper analysis, we can see that, according to individual business cycles in each EU country, periods in which unemployment is countercyclical relaying to inflation could alternate with those in which unemployment is procyclical.

As it is asserted in literature, productivity growth could affect in a significant way the long-run trend in natural rate of unemployment. In order to verify their eventual link, it is essentially to use an independent model to estimate productivity trend. Moreover, taking into account that the current level of productivity is implicitly influenced by the value of unemployment rate, more accurately is to evaluate the level of so-called pure productivity. This level must be independently from short-run variation in employment, being affected more in long-run by various factors: general technological progress, increasing in education level, expanding of R&D system, impact of the extending share of "new economy" within the whole economic system together with their multiple implicit impact, etc.

In order to estimate the level of pure productivity and its trend we are proposing a simple particular model having as hypotheses the following two equations (the time subscript, t, being omitted):

$$q = A E^{\alpha} = A L^{\alpha} \mu^{\alpha} = qmax \mu^{\alpha}$$
(13)

$$s = s0 E \tag{14}$$

where q and s are production (GDP) and respectively all costs implied by its achievement (taking into account that the production function has here just one factor – labour force); qmax and s0 are production under the hypothesis of an integral utilization of labour force (if E=L) and unitary cost (indeed including also the wages) per employed person in active labour force, E, respectively; a is a positive and sub-unitary coefficient, which determinates how looks the production curve function of employment share, m, in total labour force, L ( $\mu$ =E/L). For the moment all considered variables are evaluated in real terms, therefore under the hypothesis of constant prices (of a year selected as base).

The difference between q and s can be interpreted as being the profit or net accumulation, therefore the quantity that stimulates entrepreneurs to make future investments and to develop their affaires. It mainly depends on two factors: employment degree, Ia, and respectively coefficient  $\alpha$ . Since the evaluation of the employment share in total available labour force is not a problem, to estimate  $\alpha$  is an extremely difficult issue, as well as its economic interpretation. Economists generally accept the sub-unitary restriction, as it ensures the concavity of production function. The explanation is: as the share of employment growths, tending to value one, the average level of labour productivity tends to decrease (as well as the adapting

#### - 24 - Studies in Business and Economics

possibilities of entrepreneurs to some permanent moving markets). In order to solve the problem of estimating the production function curvature, we took into account also the long-run price evolution. The hypothesis that we adopted, however very restrictive, is referring to the absence of some pertinent information on the future evolution of prices. The remaining solution is to compute the maximization of the future profit by reporting to the actual level of unitary costs (although knowing that in reality this is not the case for the future period). It would be reasonable that even such decision (founded on a highly restrictive hypothesis, like that of basing the maximization of the future profit on maintaining unchanged specific costs) could yield sweet fruit in the future (any way larger than in case of no evaluating calculus). The real adjustment will be operated (indeed instantaneously conforming to the "new wave" of rational expectations theory) when the pressures on cost (such as those coming from trade unions) will not confirm the effective pre-evaluation. The implicit hypothesis of this "backward dynamics" mode of interpretation is that the effective change of unemployment rate in current period from precedent period corresponds even to the solution of profit maximization under the hypothesis of maintaining unchanged cost between the two consecutive periods, but also to the modification of total price of production exactly at the value effectively registered. Thus, the actual level of unemployment rate means even its optimal level, however computed previously on the base of total cost in precedent period together with the index of prices in current period. Since we accept this interpretation, the maximization function will be:

Be 
$$(\mu) = Q - s = q p - s$$
 (15)

where Be is the anticipated profit (despite of knowing that the planed benefit will not be integrally obtained), Q is the value of production in current prices, p. This function admits a maximum given by the solution of the following equation:

$$\mathbf{p} = (\mu^{1_{-\alpha}}) / \alpha \tag{16}$$

The restriction imposed by this equation facilitated us to estimate (only based on a special numeric procedure) the values of a coefficient. The model permitted to estimate also other synthetic indicators characterizing the evolution of economy, such as:

- Coefficient of using capacity (or the degree of using potential GDP, noted as qmax)

 $k = q / qmax = \mu^{\alpha}$ (17)

- Share of profit

$$b = B / Q = (Q - s p) / Q = (q - s) / q = 1 - \mu^{1 - \alpha}$$
(18)

As example, we applied this model in cases of Italy and Romania for the period 2001-2006 by using some additional variables: qe00 and qmax as actual GDP in constant prices (prices of year 2000) and respectively potential GDP (it is viewed here as the maximum level of GDP obtained in case of no unemployment, u%=0, and being distinct from natural level of GDP corresponding to the natural rate of unemployment as it was computed previously); w00 and wL00 are the effective productivity in constant prices and "pure" productivity in constant prices (corresponding to the case of integral using of labour force,  $\mu$ %=100).

In order to identify the type of relation between unemployment and productivity, following some studies existing in literature (Staiger et al., 2001; Ball and Moffitt, 2001; Ball and Mankiw, 2002) we examined the estimated data supplied by the natural unemployment rate model and respectively by "pure" productivity model together. Generally, for the productivity growth an inverted scale is used in order to reflect better the two supposed inverse movements: the long-run unemployment trend and productivity growth trend. In case of an example-application on Italian and Romanian economies, we maintained the original scales, but used a calibrating procedure to force the two trends to come in a closer region of their co-joint space. In Figure 12 we are presenting, for Italy and Romania, three estimated trends of natural rate of unemployment corresponding to different filters (Ue filter, HP filter, and TK filter) together with the trend of "pure" productivity (noted as y\_wL00). From this graphical representation it is an evident inverse correlation between the estimated natural rate of unemployment and productivity growth.

Moreover, in Figures 13 and 14 we are presenting the spatial distribution of two additionally macroeconomic variables in case of EU-27: Energy consumption per inhabitant (e) and CO2 emission per inhabitant (em).



Figure 12.



Figure 13.





#### 5. Spatial Distribution in EU-27+4

Adding the potential candidate countries to the EU from Adriatic-Balkans region (Bosnia-Herzegovina, Croatia, Montenegro, and Serbia) we obtained a lager stylised map of Europe, namely that of EU-27+4. In this case, the spatial distribution of GDP per capita (expressed in PPP\$) is presented in Figure 15.



Figure 15.

Moreover, the spatial distributions in EU-27+4 of the shares in labour force of agriculture, industry, and services are presented in Figures 16-18 and those in GDP in Figures 19-21.



Figure 16.



Figure 17.



Figure 18.



Figure 19.



Figure 20.





In order to analyse the future movement of labour force among sectors in a national economy or, more general, the structural changes in the extended EU, the following 3D graphical representations of the agriculture-services relationship (IfAgr% - IfServ% - yPPPdol), of the industry-services relationship (IfInd% - IfServ% - yPPPdol), and of the industry-agriculture relationship (IfAgr% - IfInd% - yPPPdol), like in Figures 22-24, could be useful.


Figure 22.



lfIndlfInd%,lfServ%,lyPPPdol

Figure 23.



Figure 24.

# 6. Spatial Distribution in Adriatic-Balkans Region

Considering only the regions included in this EU project, Bosnia-Herzegovina, Bulgaria, Croatia, Montenegro, Hungary, Italy (only the northern part included in the project), Romania, Serbia, and Slovenia, we are presenting, as a stylised map, the spatial distribution of GDP per capita in 2009, expressed in PPP\$, in Figure 25, and respectively in current prices, in Figure 26.



Figure 25.



Figure 26.

Analysing the Adriatic-Balkans region at the level of so-called NUTS 2, the resulted spatial distributions of GDP per capita (in PPP dollars and in current dollars), more detailed and more refined, are presented, as stylised maps of the region, in Figures 27 and 28. Also, a more precise map is presented (only as a contour plot imagine) in Figure 29, obtained by considering the area of Adriatic Sea included in the stylised map at 0 level.



LO,LO,,LAI,'yPPPdol

Figure 27.



Figure 28.

## Studies in Business and Economics



Figure 29.

Moreover, in Figure 30 is presented the distribution of unemployment rate in Adriatic-Balkans region at the level at NUTS 2. Also, in Figures 31 and 32 is presented the distribution of inflation rate in this region, for the years 2008 and 2009 respectively.



LO,LO,,LAi,u%

Figure 30.



LO,LO, LA, *π*%2008

Figure 31.



Figure 32.

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Appendix 1









ya%, yi%, ys%





u%,y%,π%

Appendix 3



uIT%uIT%,'yIT%,'πIT%



uROuRO%, yRO%, π/RO%

Studies in Business and Economics - 55 -

Appendix 4



uIT%uIT%l, yIIT, `#IT%



uROuRO%, yIRO, πRO%

Studies in Business and Economics - 57 -

**Appendix 5** 













Studies in Business and Economics







Studies in Business and Economics



0

4



# Studies in Business and Economics









Studies in Business and Economics - 63 -



 $\Delta UE_i$ 

0

-10

-5 -2.5

0

 $\Delta \pi_i$ 

2.5 5

(

Studies in Business and Economics

0





Studies in Business and Economics - 65 -



# STUDY ON THE RISK MANAGEMENT IN BANKING INSTITUTIONS

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#### Abstract:

Risk is a key factor for businesses, because you cannot get profit from any activity without risk. Since banking risks are a source of unpredicted expenses, their proper management might stabilize revenues, having the role of shock absorber. At the same time, strengthening the value of banking shares can only be achieved through real communication with the financial markets and the implementation of adequate programmes of banking risk management. The paper analyzes, for the beginning, a series of general aspects regarding risk and banking risk management. Then, we present the conclusions resulting from the quantitative research descriptive type which had as objective the analysis of knowing the measures that have to be taken in the banking management for a better management of risks that might cause bankruptcy and opinions about the NBR responsibilities to monitor and control the banks in the system.

Keywords: risk, management, bank

## 1. Introductive aspects

So far, risk has been regarded as a negative concept. The positive interpretation of risk reflects a new understanding of the relationship between the well-managed risk and the improved performance. The risks faced by any organisation are considered continuous. They can be evaluated in terms of unexpected events, uncertainty and opportunity, and also from the point of view of the influence they have on the level of performances and of achieving the strategic objectives.

In a synthetic sense, **risk** is the variability of results under the pressure of factors from the environment in which the organisation operates. Risk can be regarded from the viewpoint of uncertain events that might affect the strategic, operational and financial objectives. Risk is a measure of the inconsistency between different possible

*results, obtained under more or less favourable or unfavourable conditions* (Mihalcea and Androniceanu, 2000).

There is always the distinction between risk and uncertainty. **Risk** *can be related to a situation in which various possible effects might occur and there is a past relevant experience that would allow obtaining some statistics to estimate the effects.* **Uncertainty** *occurs where there are various past effects but the previous statistics do not allow estimating them* (Drury, 1992).

It is a universal truth that the existence of risk implies the existence of failure. Not all risks are identical and nor failures have the same magnitude. In fact, failure may occur for several reasons, each of them having a particular importance in the risk management (Haubrich, 2001):

- > the first reason refers to the unsuccess of the managerial control;
- the second category of reasons includes the situations in which managers intentionally assume certain risks and lose;
- the third possibility can be considered more subtle: the organisation takes certain risks which, on their own, are the best – the management understands and accepts the importance of the exposure – but the sum of the undertaken risks are not socially optimal.

As a conclusion, we may state that risk can be considered as the variation of real values as compared to the average values or the estimated ones, variations however caused by accidental causes. One situation is considered risky if there are certain doubts as how to obtain an expected outcome (Ciuhureanu, 2009).

The banks' place and role in the economy is closely related to their quality of main intermediary in the savings-investments relation, a decisive relation for economic growth. As intermediaries between savings depositors and credit beneficiaries, the banks undergo a series of operations: they collect funds; they assume the debtors' risks (they analyse credit applications and take the associated risks); they assume the risk of the interest rate, because intermediation involves a change of maturity.

As a consequence of efficiently achieving these functions, the banks get a reward, this representing the basic source of the banking profit. Banking institutions, like any other enterprise that produces goods and services, have as a major purpose the responsibility towards stakeholders, to maximise profits (Isaic-Maniu, 2010).

There can be found various classification criteria in the specialty literature. We shall further on present a brief selection of them.

- depending on the degree of exposure: pure risks, lucrative risks
- depending on the market that causes the risk: risks caused by the product's market and risks caused by the capital market;
- depending on the banking characteristic: financial risks, performance risks, environmental risks;
- depending on the allocation within the financial system: diversified risks, undiversified risks.

Taking the risk involves overcoming individual opposition and that of the unfavourable decision context. They say that a manager who hesitates to take risks

should not work in business or management (Dijmărescu, 1998). Risk management is characterised by the management of a large volume of information. Thus, there is the necessity of having the risk management whose main purpose is to give the banking institution the possibility to meet its objectives (Constantinescu and Dobrin, 1998), provided that the unexpected part of the revenue, the one that results from unexpected events, quantifies the real risk of the business. After all, if we would get what we expected without doing anything, we would not be talking about risk, uncertainty, the management of risk and performance.

Risk management (Ciuhureanu, 2005) aims a better achievement of business objectives and the successful implementation of strategies. Risk management provides the necessary elements to answer the complexity of risk monitoring. The concept of risk management consists both of preventing and minimising the occurrence of certain events and also in their system of identification, evaluation and quantification. Moreover, the risk management goes through development stages, being of great usefulness nowadays in the implementation of measures for diminishing losses that might occur.

**Identifying risk** is a crucial stage in the process of banking risk management, being generated and influenced by the following **factors of change** that characterise the business environment: *the competition's pressure, political changes, globalisation, legislative pressure, financial openness.* 

It is important that managers make sure that risk is well-defined and explained to facilitate further studies. An exact definition of risk implies **the development of a risk profile**, which is of utmost importance for the success of the banking risk management. Once the risk has been identified, managers shall make an **evaluation** of a possible impact and of the probability of occurrence by using some adequate parameters that would facilitate the drawing up of a risk map. In the planning stage, managers shall have to agree on the best definition of risk and on the risk categories that might be used during the evaluation of the occurrence probability and their impact.

Assessing the potential impact of a risk may become difficult because there is a wide range of possible effects and also because the risk may occur several times during a particular period of time. Such complications should be anticipated, managers adopting an adequate approach by even trying to estimate the worst effects of risk in a given period of time (usually one year). The evaluation of the impact that risk might have on the bank should take into consideration the financial impact, the impact over the bank and the evaluated objectives, the impact on the political and social sensitivity. The study can be qualitative or quantitative, but it should allow comparisons over time. One example of qualitative study can be achieved by considering the impact as having bad, medium or insignificant consequences.

The risk management process is complex, starting with the establishment of an infrastructure and continuing with identifying, analysing and evaluating risks, implementing certain prevention measures or loss minimisation, as well as adopting the decisions regarding the necessary financial treatment to minimise inevitable losses. **The defining characteristics of bank risk management process** can be summarised as follows (Soviani, 2003; Faulkner and Bowman, 2000; Lewis et. All, 1995; Bărbulescu at. all, 2002):

- it is an inclusive and support process of the management ;
- it produces, structures and presents the best available information on risk;
- requires a high level of commitment of the managerial team;
- allows management decisions to generally facilitate communication between operators, regulators and the public regarding the nature of risk and is management;
- it includes the risk identification and analysis;
- *it includes the identification, analysis and selection of risks' alternative control measures and the evaluation of performance;*
- it gives the possibility to plan "the way" to meet the set objectives;
- it structures logically, brings consistency, documents and explains the approach of choice, according to uncertainties and benefits, between competitive alternatives;
- it needs adequate and sufficient information;
- it must cover the entire spectrum of risks;
- the risk management problems are structured, but flexible, they include performance measurement and request monitoring, tracking and reporting of progresses regarding the expected results.

The implementation of risk management is not an answer to risk, but rather an organisational paradigm which involves changes in the way the banking institution (IFAC and FMAC, 1999): organises, assigns responsibilities, and approaches the risk management as a key competence, continuously and in due time implements the risk management.

In conclusion, the risk management should be an integral part of the bank management, promoting operational efficiency rather than bureaucracy, by permanently analysing the cost/benefit generated by the reaction to risks.

## 2. The research methodology

Depending on the pursued objectives, the study included two successive researches: a qualitative research, exploratory type and a quantitative research, descriptive type.

The exploratory type qualitative research aimed the elaboration of certain hypotheses that have made the object for the further descriptive type quantitative research, the establishment of further research priorities. The methods used in this preliminary research were the following: analysing the secondary information, which involved turning the available information from different sources aiming to discover certain problems, ideas, solutions; the interviews among experts had as objective to get additional information from banking experts; workgroups or focus groups enabled some discussions on the topic.

Depending on the venue, the conducted research was a field research, and depending on the frequency of deployment, the research was occasional.

In formulating the hypotheses, the information and conclusions depicted from the previous exploratory research were had in view.

One of the objectives of the research, described in the paper, is the analysis of the measures that have to be taken in the banking management for a better management of risks that might cause bankruptcy and of the opinions regarding the RCB responsibilities in the supervision and control of the banks in the system.

In order to measure the phenomena, several scales and scaling methods were used, which were selected according to the quantity and quality of the desired information, the characteristics of the employed phenomenon, the respondents' capacity, the measuring context and the post-measurement analysis possibilities of the collected information. Under these circumstances, in order to scale the collected information, ordinal scales have been used. The Likert scale was used to measure the ordinal variables.

Two questionnaires were used in the research: A questionnaire for the managers and a questionnaire for the customers of the banking institutions.

The questionnaire for managers was distributed in 45 banks (central, branches) from the Centre Region (the counties of Alba, Brasov, Covasna, Harghita, Mures, Sibiu). 35 questionnaires were returned out of which 5 were annulled due to some errors while filling in. Thus, there are 30 valid questionnaires.

The questionnaire for the customers of the banking institutions was distributed to 340 people (natural individuals and representatives of the legal persons) in Sibiu county. There were returned and validated 300 questionnaires.

In the data processing stage there were used standardised procedures for data encoding and the data processing was done on the computer. The SPSS 10.0 for Windows programme was used, the Microsoft Excel spreadsheet programme included in Microsoft Office XP.

One of the most important limitations of the research consists of the small size of the sample. We mention, however that when the size of the sample was established, the objectives of the research were had in view, considering that the study has a high level of accuracy even if the chosen sample is small.

Considering the purpose of the conducted selective research, the distributed questionnaire was anonymous, researchers ensuring respondents of the confidentiality of the provided information.

## 3. Conclusions resulting from the research

## a. Favourite customers

The proper management of risk, limiting it are very important both for the banks and for any other organisation, regardless of its type or how it is formed. The success of achieving the objectives depends in the end on how managers are concerned about the risk and about how to reduce it. Under these circumstances, one first objective of the research is to know the preferences of the banking managers regarding their type of customers. For this, there was formulated in the questionnaire the question: "In your current activity, what kind of customers do you prefer (managers and other specialists)?" The collected information is summarised in table 1.

Curre nt no.	Valid	Frequency	Percentage
1	Oriented towards preventing risk	19	63,33
2	"We shall see what we are doing tomorrow" type	11	36,67
Total respondents/answers		30/30	100

Table 1. Favourite customers

After processing the information, we can conclude that the majority of respondents (63,33%) would rather work with "customers oriented towards preventing risk", and 36,67% of them have as favourite customers the "we shall se what we are doing tomorrow" type. This makes us wonder why are there bad loans, which are the reasons for granting a loan. In conclusion, the hypothesis stated before the research ( $I_{10 \text{ M.S.}}$ : *In the banking organisation, most managers want to work with customers that take into consideration the prevention of risk in their own companies*) is being confirmed. We believe that financing the "we shall se what we are doing tomorrow" type of customers is a lack of responsibility, in an effort to gain only short term profit.

## b. Managed risks

Another objective of the research was to know the respondents' opinion on the risks managed by banks where control and banking auditing can play a key part. The collected data are presented in table 2.

Curre nt no.	Valid	Frequency	Percentage
1	The risk of liquidity	30	100
2	The credit risk	30	100
3	The market risk	15	50
4	The operational risk	15	50
5	The reputational risk	15	50
6	The currency risk	10	33,33

Table. 2. Managed risks
7	The transfer risk	5	16,66
8	The price risk	5	16,66
9	The rate of interest risk	5	16,66
10	The risk of insolvency	5	16,66
11	The risk of management	5	16,66
12	The resource risk	5	16,66
13	The risk of the activity	5	16,66
Total re	spondents/ answers	30/150	

Processing the collected information outlined the fact that the majority of managers from the banking institutions know the five major risks in the banking activity managed with signs of danger, where the control and banking auditing may play a key part.

According to banking managers and specialists, the five major risks in the banking activity are:

- the credit risk, according to 100 % of the questioned managers;
- the liquidity risk, according to 100% of the questioned managers;
- the market, operational, reputational risk in a proportion of 50% from the questioned managers.

Consequently, the stated hypothesis (*Most managers know the five major risks in the banking activity, managed with signs of danger, where control and banking auditing may play a key part*) is being confirmed.

#### c. Measures to diminish risks

Reverberating bankruptcies of banking institutions and not only were due to some known risks, but unconsidered by the management. It is the most serious error that happened to banks, with the most known consequences worldwide. From this perspective, the third objective of the research aimed to identify certain measures which, according to the bank managers, may prevent such situations. The collected information is presented in table 3 with a graphic representation in figure 1.

Current	Valid	Frequency	Percentage
no.	Vana	requercy	rercentage
1	Prudential regulation of the banking activity	14	46,66
2	Involvement of material responsibility	14	46,66
3	Giving up on high-risk banking products	12	40
4	Medium and long term risk analysis	9	30
5	Granting good loans	9	30
6	Compliance with the regulations of the NBR	8	26,66

Table 3. Measures to	o diminish risks	according to managers
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7	Orientation on the customer and not exclusively on profit	8	26,66
8	Forecasting risk, not only analysing it	8	26,66
9	Maintaining the balance between raised or placed resources	4	13,33
10	Developing new procedures to fight or diminish risk	2	6,66
11	Changing the managing team that does not		
	take measures to reduce risk	2	6,66
Total res	pondents/ answers	30/90	



Figure 1. Measures to diminish risks according to managers

After processing the collected information, we can notice that according to most respondents (46,66%) there are required two measures that should be adopted by the banking management in order to prevent banking bankruptcy: "The prudential regulation of the banking activity" and "The involvement of material responsibility". At a close distance (the option mentioned by 40% of the respondents) is "Giving up on high-risk banking products". The lowest percentage (6,66%) is for "The development of new measures to fight or diminish risk" and "Changing the managing team that does not take measures to reduce risk".

In our opinion, the most important three measures that should be adopted by the banking institutions, under the current economic context, are the following:

- "Giving up on high-risk products" mentioned by 40% of the respondents;
- " Orientation on the customer and not exclusively on profit" mentioned by 26,66% of the respondents, which shows the interest for profit to the detriment of the careful study of the customer, a conclusion also supported by the processing of the answers for point a. "Favourite customers";
- " Forecasting risk, not only analysing it" option mentioned by only 26,66% of the questioned persons.

The hypothesis stated before the research (*Most bank managers know the measures that should be adopted by the banking management in order for the Romanian banks to properly manage the risks that may cause bankruptcy*) is being confirmed.

The data collected from the banks' customers is shown in table 4.

Current	Valid	Frequency	Percentage
no.	Vanu	Trequency	reicentage
1	Involvement of material responsibility	210	70
2	Forecasting risk, not only analysing it	200	66,66
3	Improving regulation in the field of risk	180	60
3	analysis and strengthening control	160	00
4	Giving up on sophisticated, high-risk	110	36.66
	products	110	50,00
5	Orientation on customer, and not exclusively	90	30
5	on profit	50	50
6	Awarding managers according to the	20	6 66
	volume/value of loans	20	0,00
Total res	pondents/ answers	300/810	

Table 4. Measures to diminish risks according to customers

After processing the collected information, we can conclude that most interviewed customers (70%) consider that in order to diminish risks the involvement of material responsibility is required. Moreover, 66,66% of the respondents consider that one measure is the improvement of regulations in the field of risk analysis and control strengthening.

Therefore, the hypothesis stated before the research (*Most customers do not know the measures that should be taken to reduce the risks that might cause the bank's bankruptcy) is invalidated.* 

# d. Opinions on the responsibilities of the National Bank of Romania in preventing risks

The National Bank of Romania, through its surveillance and control activity, plays a decisive part in establishing banking order and discipline and preventing risks in this field. Under these circumstances, the respondents – the managers of the banking institutions – were requested to mention two opinions on the responsibilities of the National Bank of Romania the field of risk prevention. The collected information is presented in table 5 with.

Table 5. Responsibilities of the National Bank of
Romania in preventing risks according to managers

Current	Valid	Frequency	Porcontago
no.	Vanu	rrequency	reicentage
	NBR responsibilities are limited as compared		
1	to the international and national	15	50,00
	macroeconomic and financial context		
2	NBR supervision is beneficial for the	12	40,00
2	Romanian banking system	12	
3	NBR inability to monitor and control the flows	12	40.00
	towards the parent banks	12	40,00
4	Compliance with the regulations	11	36,66
	The NBR provisions on reducing risk in the		
5	banking activity have prevented collapses of	5	16,66
	middle-sized banks		
6	Greater supervision and control of the NBR	5	16,66
Total respondents/ answers		30/60	

The research has outlined that according to 50% of the respondents, "NBR responsibilities are limited as compared to the international and national macroeconomic and financial context", and 40% of them consider that "The NBR is unable to monitor and control the flows towards the parent banks". We have also noticed that 40% of the respondents appreciate the fact that "NBR supervision is beneficial for the Romanian banking system".

Consequently, the hypothesis stated before the research (*Most managers and bank specialists know the responsibilities of the NBR that play a decisive part in establishing order and banking discipline and prevent risks in the banking field*) is being confirmed.

The information collected from the customers of banking institutions is shown in table 6.

Current no.	Valid	Frequency	Percentage
1	Greater supervision and control of flows towards the parent bank	220	73,33
2	Control responsibilities are limited, only for the banks with Romanian capital	210	70
3	NBR actions should be directed towards imprinting a tendency to reduce interests and reviving lending	70	23,33

# Table 6. Responsibilities of the National Bank ofRomania in preventing risks according to customers

4	Increasing transparency of the NBR control	50	16,66
5	NBR banking prudential policy	50	16,66
Total respondents/ answers		300/600	

After processing the collected information we notice that most of the respondent customers (73,33%) claim that there can not be an financial order and discipline as long as the National Bank of Romania is not allowed to, according to the provisions on the subject, control the transfers of foreign currency towards the parent banks. Moreover, 70% of the respondents admit that there can not be a financial discipline as long as the control responsibilities are limited only to the banks with Romanian capital.

In conclusion, the stated hypothesis (*Most customers do not know the NBR* responsibilities that play a decisive part in establishing the banking order and discipline and preventing risks in the banking field) is not valid.

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# TESTING THE HYPOTHESIS OF AN EFFICIENT MARKET IN TERMS OF INFORMATION – THE CASE OF THE CAPITAL MARKET IN ROMANIA DURING RECESSION

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#### Abstract:

This paper is trying to test the hypothesis of efficient market (EMH Efficient Market Hypothesis), the case of capital market in Romania during the economic financial crisis. According to the purpose in view our research is aiming at testing the hypothesis of random walk of stock exchange indexes BET, BET-C, BET\_FI of Bucharest Stock Exchange. In this respect we will enforce statistic tests to see if the capital market in Romania is efficient in a weak form during this period.

Keywords: efficient capital market, random walk, stationary tests, normal distribution.

#### 1. Introduction

The informational efficient capital market concept (*Efficient Market Hypothesis*) was introduced by the American professor Fama Eugene (1965, 1970), marking the beginning of modern literature on the subject, *defining an efficient capital market as a market in which the rate of financial assets completely reflects the available information at some point on the market*.

According to this thesis, no investor on the market can obtain earnings by speculating some imbalances between the stock rate (the observed value) and the financial value (intrinsic) of the investment. So, generalized, the value of a company is looked upon as being equal with the stock capitalization. But in reality, there are informed investors and uninformed investors on the financial market.

Due to this fact, many researchers have brought a series of criticism upon this concept, so that Fama Eugene eventually proposes that to the meaning of this

balanced value corresponds the balanced price determined through a general balance model or a convention of dividing the investors from the market in informed and uninformed (naives).

This is practically very hard to achieve because the overall available information cannot be precisely known, and setting the balanced price must be made based on a model. In this respect, in his article from [1970], Fama proposes a much more agreed new definition: "a market in which the price perfectly and permanently reflects the available information is an efficient market".

Conceptually, there are three forms of the informational efficiency of the capital markets, which will be presented as follows:

> **The poor form:** the price of an asset instantaneously and completely reflects all the information contained in the past history of that investment's price. This means the impossibility of obtaining consistent surplus profit from transactions inspired by studying the history of the assets' rate based on a technical or graphical analysis. The fundamental hypothesis of the technical or graphical analysis is that the past tends to repeat itself, and some graphical forms, once tracked, will offer information regarding the future rate variation.

> The semi-strong form: the information considered relevant is, this time, besides the rate history, all the public information available about the issuer. This includes: the balance sheet, the operating accounts, capital risings, announcements about mergers or acquisitions, public information related to the perspective of the activity area, the perspective of the national economy etc.. On an efficient market in a semi-strong form the fundamental analysis based on the public information is useless. In the extent that the information becomes public, it is being instantaneously and completely integrated by the current price of the assets, which does not allow obtaining consistent surplus profits from transactions based on this information.

> The strong form: the relevant information embedded by the current assets rate is, by this level, the public information as well as the private one. In such a situation, all the unexploited possibilities of earnings shall be eliminated. The difference between public and private information is not so easy to achieve. Three categories of agents are susceptible to having private information: the mediators from the financial markets, the managers of the companies which have information regarding their company and the administrators of the investment funds. In the empiric studies it is difficult to establish how much of the performance of these categories of agents is due to an informational advantage and how much is due to their superior capacity to treat common information.

The earlier presentations of the level of efficiency may seem general and abstract, but there are a series of methodological approaches for checking them, based on empiric or econometric tests.

#### 2. The informational efficiency of the Romanian capital market

During the last years, there have been published various studies regarding the analysis of the informational efficiency of the Romanian capital market.

Preoccupied by this matter, the majority of Romanian researchers channeled their efforts in order to underline the existence of some trends in the variation of the stock exchange rate which would deny the random walk. So, methodologically, based on the completed analysis are autocorrelation tests, stationary tests or tests analyzing the data series probability distributions based on which it has been tried to validate the hypothesis of weak form informational efficiency of the capital market in Romania.

Despite these facts, the results of the tests do not lead to a pertinent and definitive conclusion of this matter.

One particular study, relatively recent and different from those existing, which captures our attention, is that of Voineagu and Pele [2008], in which the efficiency of the capital market in Romania is tested using an econometric model based on the random walk theory, proving the weak form efficiency of this market.

#### 3. Testing the informational efficiency of the capital market in Romania

The shares represent the most traded securities on the capital market in Romania. Despite the fact that there have been developed various specialty papers linked to the Bucharest Stock Exchange, the approaches linked to the way of evaluating these securities in the specific context of the capital market in Romania are more symptomatic. Besides, their content represents more of some translations of developed studies for other economies, which beyond the scientific importance, many times indisputable, cannot always catch the particularities of the Romanian capital market. In other words, although the approaches linked to the formal side of the stock operations accurately present the phenomenology of the capital market, they do not equally catch the substance of the problem, given by the stock evaluation logic, base of the transactions done in a rational manner. On the other hand, the issues related to the evaluation of the financial assets, as a premise of an advanced management of the portfolio, are favorite topics in the economic scientific research, even on an international scale.

In the attempt to identify the instruments through which they can be evaluated in a manner that takes notice of the particularities of the capital market in Romania, the study has been started from the hypothesis of the financial market efficiency. Unfortunately, the majority of studies that aimed at testing the capital market efficiency in Romania evidenced, partially at least, the fact that it is characterized, at least for now, through a certain level of inefficiency, which raises question marks regarding the possibility of evaluation based on the mechanisms used in the classic fundamental analysis. Among the elements which should be taken into account in order to elaborate some advanced management instruments (and also adapted to the realities in Romania) are the liquidity variability, the volatility (many times important) of the stock rates, the rationality of the agents who act on the market.

The considered period of time for this study is the 24<sup>th</sup> July 2007 (the date of the historic maximum of the indicators tracked on the capital market in Romania) – the 29<sup>th</sup> October 2010 (the recent moment at which the research assumptions have been established).

In this respect, by selecting this period, we intend to test the informational efficiency on the capital market in Romania during the economic and financial recession which affected the economic environment globally. It was analyzed the evolution of stock indices BET, BET-C and BET-FI.

Our empiric test followed the research of the random walk hypothesis of three stock indices of the Bucharest Stock Exchange, being made the following tests<sup>1</sup>:

- Tests regarding respecting the normality hypothesis of distributed instantaneous yields (logarithmic) of stock indices;
- Stationary tests for instantaneous yields (logarithmic) of stock indices;

The log normal distribution is used in order to model the processes from the capital market because it eliminates the shortcomings of normal distribution.

A first analysis we can take into consideration to assess normality and homoscedascity is the study of the graphics of logogrammatic returns of stock exchange indexes, as:



<sup>&</sup>lt;sup>1</sup> We specify that we used EViews 7 as technical support for the tests.



Graphically we notice that the lack of normality is not very efficient but heteroscedasticity is quite easy to be grasped by the irregular amplitude of variations.

# 4. Tests on the hypothesis of normality of instantaneous returns of indexes followed on the Romanian Stock Exchange

To test the hypothesis of normality<sup>1</sup> of instantaneous returns of indexes BET, BET-C, BET-FI we use qq-plot and the Jarque- Bera test.

<sup>&</sup>lt;sup>1</sup> On an efficient capital market, returns follow a normal (or lognormal) distribution





As it can be noticed from the analyzed data, the qq-plot charts for the considered stock indices highlight the fact that the daily yields are not normally distributed. Also, we cannot conclude that the series distributions are normal based on the Jarque-Bera test<sup>1</sup>. Because of the correlation existing between yields, and because they do not have a normal distribution, we reject the hypothesis that these time series are random walk type and so, serious question marks are raised regarding the existence of weak form informational efficiency on the capital market.

The series are asymmetric on the left, because the Skewness<sup>2</sup> indicator (the asymmetry coefficient) is negative in all three cases, and the Kurtosis<sup>3</sup> indicator (the flattening coefficient) shows us that the series have a vaulting superior to the one specific to the normal distribution (k=3), the distributions of the daily instantaneous

<sup>&</sup>lt;sup>1</sup> Jarque-Bera test is synthetic test of normality. To accept the null hypothesis test is necessary that the associated value to be lower than the table value for a hi-square with two degrees of freedom  $\chi^2_{1-\alpha}(2)$  to threshold of significance.

<sup>&</sup>lt;sup>2</sup> Skewness measures the asymmetry distribution seriesaround its average. A positive S indicates that the distribution has the right side enlogated and a negative S implies that the distribution has a left side enlogated.

<sup>&</sup>lt;sup>3</sup> Kurtosis measures how sharp or flat is the series distribution to normal distribution is.If kurtotica has a value bigger than 3, then the analyzed distribution is sharper than the normal distribution (leptokurtotical). If it is less than 3, then the distribution is flatter than the normal distribution (platykurtotical).

returns of the three stock indices being leptokurtosis. The null hypothesis is rejected in both cases.

# 5. Stationary tests for instantaneous returns of stock indexes observed on the capital market in Romania

To test the stationary for instantaneous returns, daily calculated, of the stock indexes on the Romanian capital market, we use *Augmented Dickey-Fuller (ADF)* and *Phillips-Perron tests.* 

ADF test implies that the series of natural logarithms of stock indexes, analyzed by us, to follow the stochastic process<sup>1</sup>, type  $AR(1)^2$ . In other words, ADF Test Statistic represents the t test for accepting or rejecting the null hypothesis of the Dickey-Fuller test.

*Phillips-Perron* test is a test that does not include in the tested equation differences between the past series and is using the method of least squares in a simple form. The test itself is a t-statistic for regression coefficient, but adjusted to remove errors.

To interpret the results, we used the following indicators:

> ADF Test Statistic and PP Test Statistic represent the t test for accepting or rejecting the null hypothesis of the Dickey-Fuller and Phillips Perron tests. To reject the null hypothesis (series is unit root), if the value of the *t* statistic test is less than the critical value for the significant level chosen.

> *Std. Error* is the estimated standard error of the estimated coefficients. The standard error measures how statistically significant the coefficient is. The higher the standard error is the more statistical noise is contained in the estimators. If errors are normally distributed, with a 66.6% probability, the actual regression coefficient is given within one standard error, and with a probability of 95% is given within two standard errors.

> *t-Statistic*, calculated as the ratio of the estimated coefficient and standard error of this coefficient is used to test the null hypothesis: the estimated coefficient is zero.

> *Probability* - is the probability of acceptance or rejection of the null hypothesis of significant level at t test to choose. At a probability of 0.05, the absolute value of t-statistic must be at least 2.

> *R-squared* (noted with R2) measures success of the regression in forecasting the values of dependent variables. The relationship between the dependent variable variance explained by independent variables and the total variance. This indicator takes values between [0,1] and is equal to 1 if the regression fits.

<sup>&</sup>lt;sup>1</sup> A stochastic process represents a random process which can be characterized by mathematical expectancy and dispersion.

<sup>&</sup>lt;sup>2</sup> Autoregressive process of order 1

Adjusted R-squared. A problem with using R-squared indicator is that he never decreases as more repressor is added. Adjusted R-squared, noted with aR2, penalizes the introduction of new regressors who have no power to explain the model. aR2 may decrease as regressors are added and may be even negative.

> SE of regression represents the standard error of regression based on the estimated variance of the residue.

Sum of Squared Residuals - is the sum of squares of residues

> Log Likelihood - likelihood function value (assuming that the errors are normally distributed) evaluated on the basis of estimated values of the coefficients.

> *Durbin-Watson* measures the serial correlation in residues. DW takes values within [0, 4], 0 if the correlation coefficient is 1 and 4 if the correlation coefficient is -1. If the correlation coefficient is 0, the DW is 2.

> The average and standard deviation of the dependent variable is calculated using standard formulas.

> Akaike Information Criterion is often used in models selection, as the AIC lower is, the model is better.

> Schwarz Criterion. It is an alternative to AIC, which penalizes more drastic the introduction of new coefficients.

> *F-statistic and associated probability.* F-statistic tests the hypothesis that all coefficients in a regression (excluding the constant) are 0. Under the null hypothesis with normally distributed errors, this indicator has F distribution with k-1, respectively T-k degrees of freedom: F (k-1, T-k). The associated probability represents the marginal significance of F test. If the p-value is lower than the Significance level (egg: 0.05) we reject the null hypothesis: that all coefficients are equal to zero.

Basically, after processing the data using the Eviews program, we have the following results:

# 6. The results of the ADF and PP tests for BET- calculation

For the first difference

Null Hypothesis: D(LNBET) has a unit root Exogenous: Constant Lag Length: 0 (Automatic - based on SIC, maxlag=20)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-27.02348	0.0000
Test critical values:	1% level	-3.438100	
	5% level	-2.864850	
	10% level	-2.568587	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation Dependent Variable: D(LNBET,2) Method: Least Squares Date: 11/22/10 Time: 18:21 Sample (adjusted): 3 822 Included observations: 820 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LNBET(-1)) C	-0.942135 -0.000781	0.034864 0.000837	-27.02348 -0.933558	0.0000 0.3508
R-squared Adjusted R-squared S.E. of regression Sum squared resid Log likelihood F-statistic Prob(F-statistic)	0.471668 0.471022 0.023946 0.469058 1897.667 730.2684 0.000000	Mean de S.D. dep Akaike in Schwarz Hannan-( Durbin-W	pendent var endent var fo criterion criterion Quinn criter. /atson stat	3.81E-05 0.032924 -4.623577 -4.612091 -4.619170 1.999055

Null Hypothesis: D(LNBET) has a unit root
Exogenous: Constant
Bandwidth: 3 (Newey-West automatic) using Bartlett kernel

		Adj. t-Stat	Prob.*
Phillips-Perron test statistic		-26.99984	0.0000
Test critical values:	1% level	-3.438100	
	5% level	-2.864850	

- 88 - Studies in Business and Economics

10% level	-2.568587
*MacKinnon (1996) one-sided p-va	alues.

Residual variance (no correction)	0.000572
HAC corrected variance (Bartlett kernel)	0.000551

Phillips-Perron Test Equation Dependent Variable: D(LNBET,2) Method: Least Squares Date: 11/22/10 Time: 18:26 Sample (adjusted): 3 822 Included observations: 820 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LNBET(-1)) C	-0.942135 -0.000781	0.034864 0.000837	-27.02348 -0.933558	0.0000 0.3508
R-squared Adjusted R-squared S.E. of regression Sum squared resid Log likelihood F-statistic Prob(F-statistic)	0.471668 0.471022 0.023946 0.469058 1897.667 730.2684 0.000000	Mean dep S.D. depe Akaike in Schwarz Hannan-O Durbin-W	pendent var endent var fo criterion criterion Quinn criter. atson stat	3.81E-05 0.032924 -4.623577 -4.612091 -4.619170 1.999055

### For level

LNBET Null Hypothesis: LNBET has a unit root Exogenous: Constant Lag Length: 0 (Automatic - based on SIC, maxlag=20)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-1.816023	0.3728
Test critical values: 1% le	1% level	-3.438090	
	5% level	-2.864846	
	10% level	-2.568585	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation				
Dependent Variable: D(LNBET)				
Method: Least Squares				
Date: 11/15/10 Time: 19:42				
Sample (adjusted): 2 822				
Included observations: 821 after adjustments				

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LNBET(-1) C	-0.003632 0.030123	0.002000 0.017088	-1.816023 1.762783	0.0697 0.0783
R-squared Adjusted R-squared S.E. of regression Sum squared resid Log likelihood F-statistic Prob(F-statistic)	0.004011 0.002795 0.023953 0.469884 1899.759 3.297939 0.069732	Mean dep S.D. depe Akaike inf Schwarz Hannan-O Durbin-W	bendent var endent var fo criterion criterion Quinn criter. atson stat	-0.000873 0.023986 -4.623044 -4.611569 -4.618641 1.882567

# LNBET Null Hypothesis: LNBET has a unit root Exogenous: Constant Bandwidth: 1 (Newey-West automatic) using Bartlett kernel

		Adj. t-Stat	Prob.*
Phillips-Perron test statistic		-1.811805	0.3749
Test critical values:	1% level	-3.438090	
	5% level	-2.864846	
	10% level	-2.568585	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	0.000572
HAC corrected variance (Bartlett kernel)	0.000605

Phillips-Perron Test Equation Dependent Variable: D(LNBET) Method: Least Squares Date: 11/15/10 Time: 19:52 Sample (adjusted): 2 822 Included observations: 821 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LNBET(-1) C	-0.003632 0.030123	0.002000 0.017088	-1.816023 1.762783	0.0697 0.0783
R-squared Adjusted R-squared S.E. of regression Sum squared resid Log likelihood F-statistic Prob(F-statistic)	0.004011 0.002795 0.023953 0.469884 1899.759 3.297939 0.069732	Mean dep S.D. depe Akaike inf Schwarz o Hannan-G Durbin-Wa	endent var endent var o criterion criterion Quinn criter. atson stat	-0.000873 0.023986 -4.623044 -4.611569 -4.618641 1.882567

By putting into practice the 2 methodologies of testing we can conclude: the null hypothesis is accepted for level, and for the difference it is not accepted, therefore the BET is of 1 order (with 1% level of significance).

# The results of the ADF and PP tests for BET-C - calculation For the first difference

Null Hypothesis: D(LNBETC) has a unit root Exogenous: Constant Lag Length: 0 (Automatic - based on SIC, maxlag=20)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-26.38716	0.0000
Test critical values:	1% level	-3.438100	
	5% level	-2.864850	
	10% level	-2.568587	

\*MacKinnon (1996) one-sided p-values.

#### Augmented Dickey-Fuller Test Equation

Studies in Business and Economics - 91 -

Dependent Variable: D(LNBETC,2) Method: Least Squares Date: 11/22/10 Time: 18:29 Sample (adjusted): 3 822 Included observations: 820 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LNBETC(-1))	-0.918663	0.034815	-26.38716	0.0000
C	-0.000945	0.000771	-1.226644	0.2203
R-squared	0.459810	Mean de	pendent var	3.49E-05
Adjusted R-squared	0.459150	S.D. dep	endent var	0.029967
S.E. of regression	0.022038	Akaike in	fo criterion	-4.789635
Sum squared resid	0.397291	Schwarz	criterion	-4.778149
Log likelihood	1965.750	Hannan-	Quinn criter.	-4.785228
F-statistic	696.2821	Durbin-W	/atson stat	2.001080

Null Hypothesis: D(LNBETC) has a unit root Exogenous: Constant Bandwidth: 3 (Newey-West automatic) using Bartlett kernel

		Adj. t-Stat	Prob.*
Phillips-Perron test statistic		-26.37006	0.0000
Test critical values:	1% level	-3.438100	
	5% level	-2.864850	
	10% level	-2.568587	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	0.000485
HAC corrected variance (Bartlett kernel)	0.000476

Phillips-Perron Test Equation Dependent Variable: D(LNBETC,2) Method: Least Squares Date: 11/22/10 Time: 18:31 Sample (adjusted): 3 822

# - 92 - Studies in Business and Economics

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LNBETC(-1)) C	-0.918663 -0.000945	0.034815 0.000771	-26.38716 -1.226644	0.0000 0.2203
R-squared Adjusted R-squared S.E. of regression Sum squared resid Log likelihood F-statistic Prob(F-statistic)	0.459810 0.459150 0.022038 0.397291 1965.750 696.2821 0.000000	Mean de S.D. dep Akaike in Schwarz Hannan- Durbin-W	pendent var endent var fo criterion criterion Quinn criter. /atson stat	3.49E-05 0.029967 -4.789635 -4.778149 -4.785228 2.001080

Included observations: 820 after adjustments

#### For level

LNBETC Null Hypothesis: LNBETC has a unit root Exogenous: Constant Lag Length: 0 (Automatic - based on SIC, maxlag=20)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-1.882265	0.3408
Test critical values:	1% level	-3.438090	
	5% level	-2.864846	
	10% level	-2.568585	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation Dependent Variable: D(LNBETC) Method: Least Squares Date: 11/15/10 Time: 19:44 Sample (adjusted): 2 822 Included observations: 821 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LNBETC(-1)	-0.003260	0.001732	-1.882265	0.0602
C	0.025338	0.014049	1.803578	0.0717

R-squared	0.004307	Mean dependent var	-0.001066
Adjusted R-squared	0.003092	S.D. dependent var	0.022106
S.E. of regression	0.022072	Akaike info criterion	-4.786609
Sum squared resid	0.398983	Schwarz criterion	-4.775134
Log likelihood	1966.903	Hannan-Quinn criter.	-4.782206
F-statistic	3.542922	Durbin-Watson stat	1.837347
Prob(F-statistic)	0.060154		

#### LNBETC

Null Hypothesis: LNBETC has a unit root Exogenous: Constant Bandwidth: 5 (Newey-West automatic) using Bartlett kernel

		Adj. t-Stat	Prob.*
Phillips-Perron test statistic		-1.856765	0.3530
Test critical values:	1% level	-3.438090	
	5% level	-2.864846	
	10% level	-2.568585	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	0.000486
HAC corrected variance (Bartlett kernel)	0.000552

Phillips-Perron Test Equation Dependent Variable: D(LNBETC) Method: Least Squares Date: 11/15/10 Time: 19:53 Sample (adjusted): 2 822 Included observations: 821 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LNBETC(-1)	-0.003260	0.001732	-1.882265	0.0602
C	0.025338	0.014049	1.803578	0.0717
R-squared	0.004307	Mean de	pendent var	-0.001066
Adjusted R-squared	0.003092	S.D. dep	endent var	0.022106
S.E. of regression	0.022072	Akaike in	ifo criterion	-4.786609

Sum squared resid	0.398983	Schwarz criterion	-4.775134
Log likelihood	1966.903	Hannan-Quinn criter.	-4.782206
F-statistic	3.542922	Durbin-Watson stat	1.837347
Prob(F-statistic)	0.060154		

Similar to BET index and for BET-C for the level the null hypothesis is accepted and for the difference it is not accepted therefore the BET-C series is of 1 order (with 1% level of significance).

# The results of the ADF and PP tests for BET-FI - calculation For the first difference

Null Hypothesis: D(LNBETFI) has a unit root Exogenous: Constant Lag Length: 0 (Automatic - based on SIC, maxlag=20)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-25.14790	0.0000
Test critical values:	1% level	-3.438100	
	5% level	-2.864850	
	10% level	-2.568587	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation Dependent Variable: D(LNBETFI,2) Method: Least Squares Date: 11/22/10 Time: 18:34 Sample (adjusted): 3 822 Included observations: 820 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LNBETFI(-1)) C	-0.871173 -0.001398	0.034642 0.001201	-25.14790 -1.163831	0.0000 0.2448
R-squared	0.436024	Mean de	pendent var	5.05E-05
Adjusted R-squared	0.435335	S.D. dep	endent var	0.045709
S.E. of regression	0.034347	Akaike in	fo criterion	-3.902150
Sum squared resid	0.965026	Schwarz	criterion	-3.890664
Log likelihood	1601.881	Hannan-	Quinn criter.	-3.897742

F-statistic	632.4169	Durbin-Watson stat	2.008012

Null Hypothesis: D(LNBETFI) has a unit root

Exogenous: Constant

Bandwidth: 2 (Newey-West automatic) using Bartlett kernel

		Adj. t-Stat	Prob.*
Phillips-Perron test statistic		-25.16439	0.0000
Test critical values:	1% level	-3.438100	
	5% level	-2.864850	
	10% level	-2.568587	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	0.001177
HAC corrected variance (Bartlett kernel)	0.001189

Phillips-Perron Test Equation Dependent Variable: D(LNBETFI,2) Method: Least Squares Date: 11/22/10 Time: 18:35 Sample (adjusted): 3 822 Included observations: 820 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LNBETFI(-1)) C	-0.871173 -0.001398	0.034642 0.001201	-25.14790 -1.163831	0.0000 0.2448
R-squared Adjusted R-squared S.E. of regression Sum squared resid Log likelihood F-statistic Prob(F-statistic)	0.436024 0.435335 0.034347 0.965026 1601.881 632.4169 0.000000	Mean dependent var S.D. dependent var Akaike info criterion Schwarz criterion Hannan-Quinn criter. Durbin-Watson stat		5.05E-05 0.045709 -3.902150 -3.890664 -3.897742 2.008012

# For level

# LNBETFI Null Hypothesis: LNBETFI has a unit root Exogenous: Constant Lag Length: 1 (Automatic - based on SIC, maxlag=20)

		t-Statistic	Prob.*
Augmented Dickey-F	uller test statistic	-1.839107	0.3616
Test critical values:	1% level	t-Statistic Prob.* istic -1.839107 0.3616 -3.438100 -2.864850 -2.568587	
	5% level	-2.864850	
	10% level	-2.568587	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation Dependent Variable: D(LNBETFI) Method: Least Squares Date: 11/15/10 Time: 19:45 Sample (adjusted): 3 822 Included observations: 820 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LNBETFI(-1)	-0.003566	0.001939	-1.839107	0.0663
D(LNBETFI(-1))	0.128068	0.034594	3.702024	0.0002
C	0.035216	0.019944	1.765705	0.0778
R-squared	0.020680	Mean dependent var		-0.001612
Adjusted R-squared	0.018282	S.D. dependent var		0.034615
S.E. of regression	0.034297	Akaike info criterion		-3.903842
Sum squared resid	0.961047	Schwarz criterion		-3.886613
Log likelihood	1603.575	Hannan-Quinn criter.		-3.897231
E-statistic	8 626023	Durbin-Watson stat		2.007611

Adi. t-Stat	Prob.
Exogenous: Constant Bandwidth: 5 (Newey-West automatic) using Bartlett kernel	
Null Hypothesis: LNBETFI has a unit root	
LNBETFI	

Phillips-Perron test statistic	-1.916283	0.3249

Studies in Business and Economics - 97 -

Test critical values:	1% level	-3.438090
	5% level	-2.864846
	10% level	-2.568585

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	0.001192
HAC corrected variance (Bartlett kernel)	0.001558

Phillips-Perron Test Equation Dependent Variable: D(LNBETFI) Method: Least Squares Date: 11/15/10 Time: 19:54 Sample (adjusted): 2 822 Included observations: 821 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LNBETFI(-1) C	-0.003793 0.037285	0.001950 0.020057	-1.945370 1.858970	0.0521 0.0634
R-squared Adjusted R-squared S.E. of regression Sum squared resid Log likelihood F-statistic Prob(F-statistic)	0.004600 0.003384 0.034566 0.978538 1598.627 3.784465 0.052072	Mean dep S.D. depe Akaike inf Schwarz o Hannan-G Durbin-Wa	endent var ndent var o criterion criterion tuinn criter. atson stat	-0.001662 0.034624 -3.889470 -3.877995 -3.885067 1.742018

Regarding the BET-FI index, the results are similar with those for the other 2 indexes: for level the null hypothesis is accepted (unit Root) and for the difference it is not accepted, the BET series is of 1 order (with 1% level of significance).

#### Tests on independence of the instantaneous returns distributions

For the daily series the indexes of autocorrelation between the instantaneous yields have been calculated with a lag of k according to the formula:

$$\rho_{k} = \frac{\operatorname{covar}(\operatorname{d} \ln S_{t}, \operatorname{d} \ln S_{t-k})}{\operatorname{var}(\operatorname{d} \ln S_{t})}$$

Basically, after processing the data using the Eviews program, we have the following results:

# <u>For BET index</u> Autocorrelation coefficients' method for level

Date: 11/15/10 Time: 19:10 Sample: 1 822 Included observations: 822

Autocorrelation	Partial Correlation		AC	PAC	Q-Stat	Prob
·   ******	- ******	1	0.996	0.996	819.00	0.000
. *****		2	0.993	-0.004	1633.0	0.000
. *****		3	0.989	0.011	2442.1	0.000
. *****		4	0.986	0.037	3246.9	0.000
. *****		5	0.983	0.014	4047.5	0.000
. *****		6	0.979	-0.059	4843.2	0.000
. *****		7	0.976	0.042	5634.6	0.000
· -		8	0.973	0.015	6421.8	0.000
· ·		9	0.969	-0.043	7204.4	0.000
		10	0.966	-0.016	7982.2	0.000
. ******		11	0.962	-0.011	8755.1	0.000
. ******	.	12	0.958	-0.062	9522.5	0.000
. ******	.	13	0.954	-0.001	10284.	0.000
. ******	.	14	0.950	-0.001	11041.	0.000
. ******	.	15	0.946	-0.030	11791.	0.000
. ******	.	16	0.941	-0.021	12536.	0.000
. ******	.	17	0.937	-0.005	13275.	0.000
. ******	.	18	0.933	-0.001	14008.	0.000
. ******	.	19	0.928	-0.004	14735.	0.000
. ******	.	20	0.924	-0.043	15456.	0.000
. *****	.	21	0.919	0.028	16171.	0.000
. ******	.	22	0.915	-0.018	16879.	0.000
. ******	.	23	0.910	0.001	17582.	0.000
· <b> </b> ******	.	24	0.906	-0.003	18278.	0.000
-  *****	.	25	0.901	-0.013	18968.	0.000
. *****	.	26	0.896	-0.031	19651.	0.000

. *****	.		27	0.891	-0.002	20328.	0.000
. *****	.		28	0.887	0.015	20999.	0.000
.  *****	.		29	0.882	-0.018	21663.	0.000
.  *****	.		30	0.877	-0.035	22320.	0.000
.  *****	.		31	0.872	-0.005	22971.	0.000
. *****	.		32	0.866	-0.022	23614.	0.000
.  *****	.		33	0.861	-0.018	24250.	0.000
. *****	.		34	0.856	0.029	24880.	0.000
. *****	.		35	0.851	0.015	25503.	0.000
. *****	.		36	0.846	0.007	26119.	0.000

#### Autocorrelation coefficients' method for the first difference

Date: 11/15/10 Time: 18:26 Sample: 1 821 Included observations: 821

Autocorrelation	Partial Correlation		AC	PAC	Q-Stat	Prob
.	.	1	0.058	0.058	2.7590	0.097
.	.	2	-0.013	-0.016	2.8891	0.236
.	.	3	-0.041	-0.039	4.2595	0.235
.	.	4	0.006	0.011	4.2920	0.368
.	.	5	0.061	0.059	7.3849	0.194
.	.	6	-0.047	-0.056	9.2031	0.162
.	.	7	-0.055	-0.047	11.682	0.112
	. *	8	0.071	0.082	15.855	0.044
		9	0.041	0.026	17.224	0.045
.	.	10	0.015	0.004	17.400	0.066
. *	. *	11	0.091	0.105	24.275	0.012
.		12	-0.007	-0.013	24.319	0.018
		13	0.022	0.009	24.715	0.025
		14	0.056	0.065	27.296	0.018
		15	0.056	0.059	29.890	0.012
		16	0.048	0.030	31.834	0.011
.	.	17	0.043	0.055	33.407	0.010
		18	0.011	0.018	33.508	0.014
		19	0.059	0.041	36.423	0.009
		20	-0.048	-0.055	38.406	0.008
		21	-0.009	0.004	38.481	0.011
	*	22	-0.054	-0.068	40.979	0.008
		23	0.031	0.029	41.769	0.010
		24	0.003	-0.016	41.779	0.014

.	.		25	0.014	0.000	41.938	0.018
.	.		26	-0.006	-0.021	41.966	0.025
.	.		27	-0.026	-0.044	42.556	0.029
.	.		28	0.036	0.021	43.674	0.030
. *	. *		29	0.091	0.081	50.703	0.008
.	.		30	0.015	-0.006	50.888	0.010
.	.		31	0.032	0.042	51.768	0.011
.	.		32	0.026	0.027	52.359	0.013
.	*		33	-0.057	-0.069	55.131	0.009
.	.		34	-0.014	-0.024	55.308	0.012
.	.		35	-0.015	0.013	55.505	0.015
.	.		36	0.014	0.014	55.668	0.019

As we can see by using this method the BET series is integral of 1 order.

#### For BET-C index

# Autocorrelation coefficients' method for level Date: 11/15/10 Time: 19:15 Sample: 1 822 Included observations: 822

Autocorrelation Partial Correlation			AC	PAC	Q-Stat	Prob
-	. <b> </b> ******	1	0.997	0.997	819.60	0.000
.  ******	.	2	0.993	-0.011	1634.7	0.000
.  ******	.	3	0.990	0.003	2445.3	0.000
.  ******	.	4	0.987	0.031	3251.9	0.000
.  ******	.	5	0.984	0.017	4054.6	0.000
.  ******	.	6	0.981	-0.059	4852.8	0.000
.  ******	.	7	0.977	0.030	5646.8	0.000
	.	8	0.974	0.006	6436.7	0.000
.  ******	.	9	0.971	-0.028	7222.3	0.000
	.	10	0.968	-0.012	8003.5	0.000
.  ******	.	11	0.964	-0.007	8780.2	0.000
.  ******	.	12	0.961	-0.049	9551.9	0.000
.  ******	.	13	0.957	-0.003	10319.	0.000
.  ******	.	14	0.953	-0.005	11080.	0.000
.  ******	.	15	0.949	-0.034	11837.	0.000
.  ******	.	16	0.945	-0.023	12588.	0.000
.  ******	.	17	0.941	-0.004	13333.	0.000

. *****	* .	18	0.937	0.000	14073.	0.000
. *****	* .	19	0.933	-0.005	14808.	0.000
. *****	* .	20	0.929	-0.045	15536.	0.000
. *****	* .	21	0.925	0.018	16259.	0.000
. *****	* .	22	0.920	-0.015	16976.	0.000
. *****	* .	23	0.916	0.001	17687.	0.000
. *****	* .	24	0.912	-0.003	18393.	0.000
. *****	* .	25	0.907	-0.011	19092.	0.000
. *****	* .	26	0.903	-0.029	19786.	0.000
. *****	.	27	0.898	0.002	20473.	0.000
. *****	.	28	0.894	0.002	21154.	0.000
. *****	.	29	0.889	-0.017	21829.	0.000
. *****	.	30	0.884	-0.024	22498.	0.000
. *****	.	31	0.879	-0.000	23160.	0.000
. *****	.	32	0.875	-0.021	23816.	0.000
. *****	.	33	0.870	-0.011	24466.	0.000
. *****	.	34	0.865	0.024	25108.	0.000
. ******	.	35	0.860	0.010	25745.	0.000
. *****	.	36	0.855	0.001	26376.	0.000

#### Autocorrelation coefficients' method for the first difference

Date: 11/15/10 Time: 18:28 Sample: 1 821 Included observations: 821

Autocorrelation	Partial Correlation		AC	PAC	Q-Stat
. *	. *	1	0.081	0.081	5.4514
	i i	2	0.008	0.001	5.4998
.	. 1	3	-0.033	-0.034	6.4106
.	.	4	-0.000	0.005	6.4106
. *	. *	5	0.078	0.079	11.463
.	.	6	-0.030	-0.045	12.210
.	.	7	-0.044	-0.040	13.842
.	.	8	0.047	0.061	15.674
.	.	9	0.041	0.031	17.060
.	.	10	0.008	-0.009	17.117
. *	. *	11	0.076	0.087	21.958
.	.	12	0.005	0.000	21.975
.	.	13	0.033	0.019	22.884
. *	. *	14	0.087	0.087	29.173
.	.	15	0.066	0.062	32.849

.			16	0.050	0.027	34.915
.			17	0.059	0.064	37.825
.			18	0.020	0.021	38.173
.	Ι		19	0.070	0.053	42.328
.	Ι		20	-0.038	-0.049	43.523
.			21	-0.009	0.004	43.599
*		*	22	-0.069	-0.084	47.661
.			23	0.033	0.036	48.572
.			24	0.001	-0.021	48.572
.			25	0.024	0.011	49.068
.			26	0.008	-0.008	49.123
.			27	-0.022	-0.033	49.530
.			28	0.042	0.017	51.035
.			29	0.073	0.059	55.586
.			30	0.015	-0.015	55.788
.		.	31	0.039	0.037	57.061
.			32	0.012	0.003	57.177
.			33	-0.050	-0.063	59.319
.		.	34	-0.004	-0.016	59.334
.		.	35	-0.001	0.020	59.335
.	Ι		36	0.015	0.010	59.532

Similarly we see that by using this method the BET-C is integral of 1 order.

# For BET-FI index

```
Autocorrelation coefficients' method for level
```

Date: 11/15/10 Time: 19:19 Sample: 1 822 Included observations: 822

Autocorrelation	Partial Correlation		AC	PAC	Q-Stat	Prob
.   *****	-  ******	1	0.996	0.996	818.61	0.000
. ******	.	2	0.992	-0.034	1631.4	0.000
.  ******	.	3	0.988	-0.005	2438.4	0.000
.  ******	.	4	0.984	0.004	3239.7	0.000
.  ******	.	5	0.980	0.015	4035.4	0.000
. ******	.	6	0.975	-0.051	4825.1	0.000
.  ******	.	7	0.971	0.035	5609.1	0.000
.  ******	.	8	0.967	0.014	6387.7	0.000
.  ******	.	9	0.963	-0.022	7160.7	0.000
. ******	.	10	0.959	-0.007	7928.0	0.000

. *****	* .	- 1	11	0.955	0.007	8689.8	0.000
. *****	* .	- 1	12	0.951	-0.032	9445.6	0.000
. *****	* .	- 1	13	0.946	-0.000	10196.	0.000
. *****	* .	- 1	14	0.942	0.006	10940.	0.000
. *****	* .		15	0.938	-0.020	11678.	0.000
. *****	* .	- 1	16	0.933	-0.028	12410.	0.000
. *****	* .		17	0.929	-0.001	13135.	0.000
. *****	* .	- 1	18	0.924	-0.005	13855.	0.000
. *****	* .	- 1	19	0.919	0.000	14568.	0.000
. *****	* .	- 1	20	0.915	-0.044	15274.	0.000
. *****	* .		21	0.910	0.036	15974.	0.000
. *****	* .		22	0.905	-0.015	16668.	0.000
. *****	.		23	0.900	-0.019	17356.	0.000
. *****	.		24	0.896	-0.002	18036.	0.000
. *****	.		25	0.891	-0.015	18710.	0.000
. *****	.		26	0.886	-0.012	19378.	0.000
. *****	.		27	0.881	-0.007	20039.	0.000
. *****	.		28	0.876	0.009	20693.	0.000
. *****	.		29	0.871	-0.005	21340.	0.000
. *****	.		30	0.866	-0.016	21981.	0.000
. *****	.		31	0.860	-0.005	22615.	0.000
· *****	.		32	0.855	-0.006	23242.	0.000
. *****	.		33	0.850	-0.007	23862.	0.000
. *****	.	I	34	0.845	0.034	24476.	0.000
. *****	.		35	0.840	0.023	25084.	0.000
. *****	.		36	0.836	0.003	25686.	0.000

#### Autocorrelation coefficients' method for the first difference

Date: 11/15/10 Time: 18:28 Sample: 1 821 Included observations: 821

Autocorrelation	Partial Correlation		AC	PAC	Q-Stat	Prob
. *	. *	1	0.129	0.129	13.675	0.000
.	.	2	0.042	0.026	15.135	0.001
.	.	3	0.016	0.007	15.335	0.002
.	.	4	0.001	-0.003	15.336	0.004
.	.	5	0.068	0.069	19.165	0.002
.	*	6	-0.057	-0.076	21.903	0.001
.	.	7	-0.051	-0.039	24.042	0.001
.	. *	8	0.059	0.076	26.971	0.001

.	1	.		9	0.028	0.017	27.642	0.001
.	1	.		10	-0.036	-0.054	28.742	0.001
.	1	.		11	0.028	0.047	29.389	0.002
.	1	.		12	0.014	0.012	29.548	0.003
.	1	.		13	0.022	-0.000	29.956	0.005
.	I	.		14	0.040	0.039	31.320	0.005
.	1	. *		15	0.072	0.083	35.725	0.002
.	I	.		16	0.056	0.020	38.347	0.001
.	I	.		17	0.046	0.025	40.115	0.001
.	I	.		18	-0.010	-0.012	40.198	0.002
.	I	.		19	0.047	0.045	42.038	0.002
.	1	*		20	-0.060	-0.087	45.116	0.001
.	1	.		21	-0.011	0.015	45.218	0.002
.	1	.		22	-0.028	-0.022	45.880	0.002
.	I	.		23	0.005	0.012	45.900	0.003
.	1	.		24	-0.003	-0.019	45.907	0.005
.	1	.		25	0.007	0.026	45.944	0.007
.	1	.		26	0.026	0.016	46.530	0.008
.	1	.		27	-0.012	-0.031	46.645	0.011
.	1	.		28	-0.013	-0.016	46.799	0.014
.	1	.		29	0.020	0.034	47.156	0.018
.	1	.		30	0.027	0.004	47.789	0.021
.	1	.		31	0.017	0.003	48.026	0.026
.	1	.		32	0.022	0.022	48.459	0.031
*	1	*		33	-0.077	-0.086	53.576	0.013
.	1	.		34	-0.043	-0.044	55.142	0.012
.		.		35	-0.029	-0.001	55.884	0.014
.	1	.		36	0.047	0.073	57.825	0.012

For BET-FI were obtained similar results to other two indexes, so that we can conclude based on this method that the BET-FI series is integral of 1 order.

#### 7. Conclusions and considerations

Following statistical tests applied to stock indexes BET, BET-C and BET-FI, we can take the following conclusions:

- applied statistical tests to detect random-walk type behavior led to the rejection of hypothesis behavior of these daily series of stock indices.
- have not obtained sufficient evidence to support the efficient market hypothesis in weak form, for the daily stock indices.

From a statistical viewpoint, the test results do not confirm the random-walk hypothesis of stock indices value and the instantaneous returns are autocorrelated for

certain lags .Even in cases when the normality hypothesis of the instantaneous returns can not be dismissed, autocorrelation coefficients are found to be significantly different from zero for one or more of lags from 1 to 10. They may suggest using past information to obtain abnormal returns. Under these conditions, using models based on the efficiency hypothesis seems unspecified in order to obtain useful results.

The statistical tests performed for each of the stock indexes indicate the fact that the evolution of the training is independent from one period to another (autocorrelation coefficients are significantly different from zero), which invalidates the efficiency hypothesis of weak form market.

In these circumstances, the logical conclusion would be possible to obtain abnormal gains. However, the reduced liquidity of Romanian capital market and the existence of significant transaction costs and differentiated, can reduce or even eliminate the possibility of such gains.

We specify that regardless of the conclusions we reached in this worksheet, they will be confirmed by further analysis of the companies listed on the Bucharest Stock Exchange, taking into account the analysis of weekly data to eliminate the effect of random influences.

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# MEASURES FOR STIMULATING COMPETITION ON MOBILE SERVICES MARKET IN ROMANIA TO MAXIMIZE BENEFITS FOR END USERS

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#### Abstract:

In the last years, the market of mobile services in Romania had a huge success; the number of users of this type of services is constantly growing. The interest of the investors who were encouraged by statistics and have recently appeared on the market shows that Romanians are leaders in mobile services and that people are very attached to their mobile devices. ANCOM – the National Authority for Administration and Regulation in Communications) is the institution governing the mobile services market in Romania which establishes the rules and ensures that the market players comply with these regulations. Its mission is to ensure arbitrage on the communications market and genuine competition for the benefit of users. The major objectives of this authority are: to promote competition, protect the interests of users, the use of the limited resources, encourage efficient investment in infrastructure, promote innovation. To achieve these objectives, the regulatory activity in the communications sector is based on the following principles: need, opportunity, proportionality, obligation, technological neutrality, transparency, predictability, stability and resource efficiency.

Keywords: stimulating competition, social welfare, regulation, mobile services market

Mobile services market in Romania functions as an oligopolistic structure, characterized by the existence of a small number of companies that offer similar services. The small number of mobile services suppliers on the market determines their mutual interdependence in terms of sales, services, investments in new technologies and advertising plans.

The *entry barriers* (highlighted by the investments required, limited-resource management – the spectrum and numbering resources, environmental restrictions on the installation of transmitters and international support of the existing operators – the power of the groups they belong to) are the main cause of the existence of an oligopoly

on the market. These are relevant in terms of explaining how things happen on this kind of market/the phenomena on this kind of market.

At present, in Romania, there are five providers of telephone services by means of public land mobile networks: S.C. Orange Romania S.A., S.C. Vodafone Romania S.A., S.C. Telemobil S.A. (the brand name "Zapp") - Company purchased by Cosmote RMT S.A in the summer of 2009, S.C. Cosmote Romanian Mobile Telecommunications S.A., S.C. RCS & RDS S.A (since 2007) and S.C. Romtelecom S.A.

At retail level, there has been identified a group of mobile services which includes all the services provided by means of mobile networks (received calls, dialed calls, SMS, international calls, international roaming, emerging services - video and data). This group of mobile services is independent of geographical area, generation of the technology used or type of consumer (natural or legal person).

At wholesale level, there have been identified three segments: access and origin, termination and international roaming, with similar scope and content of relevant markets identified in the European Commission's recommendations on relevant markets of products and services in electronic communications sector which can be the object of existing regulations mobile services in accordance with Directive 2002/21/EC of the European Parliament and the Council on a common regulatory framework for electronic communications networks and services.

In fulfilling its statutory role and functions, ANCOM - Autoritatea Naţională pentru Administrare şi Reglementare în Comunicaţii (The National Authority for Administration and Regulation in Communications) constantly consults and cooperates with the Competition Council and the National Authority for Consumer Protection, for mutual supply of information necessary for implementing the provisions of competition law and the provisions of the law on electronic communications and protection consumer.

Promoting competition in the electronic communications sector requires taking action in the following areas:

a) preventing actions that are intended or have the effect of distorting or restricting competition in electronic communications and information technology;

b) taking all measures necessary for users, including those with disabilities or special social needs, to maximize the benefits of a competitive market conditions, in terms of diversity of offers, rates and service quality;

c) encouraging efficient investment in infrastructure and promoting innovation;

d) promoting the efficient use and ensuring effective management of limited resources.

A supplier of electronic communications services is considered as having significant power on a particular market if, individually or together with similar suppliers enjoys a dominant position. A *dominant position* on the market means that a supplier of electronic communications services is able, to a significant extent, to be independent in relation with competitors, customers and consumers. Among competitors, there are also potential competitors, that is, those persons who, in the given economic data,
have the ability to enter that certain market providing services on other geographic areas or by adapting quickly the available technology, in acceptable efficiency conditions.

To determine the significant power of a supplier on a specific relevant market there are taken into account one or more of the following criteria: market share and its stability, vertical integration, the number of competitors, the power to deal with users, development of prices and profits, degree of products diversity, size of suppliers, the absence of potential competitors, control over a network or associated infrastructure, hard to duplicate, scale economies, economies of purpose, technological advantage, easy or privileged access to financial resources, the existence of a developed network of distribution.

The main criteria that can be used to determine market shares of suppliers are: turnover, number of users, traffic volume, capacity of installation, traffic amount.

For two or more suppliers to jointly enjoy significant power on a relevant specific market (collective significant power) it is necessary that they are legally and economically independent and to act towards users and competitors as a single entity that has significant power on the relevant specific market.

In determining the existence of significant collective power on a relevant market specific, we may consider one or more of the following criteria:

*a) market concentration* - a high concentration of the market may indicate the existence of significant collective power;

*b) market transparency* - collective significant power may arise when suppliers can easily obtain information about prices and customers of the competitors;

*c) maturity of the market* - a high degree of maturity of the relevant specific market makes more difficult the entry on the market and to attract new customers;

*d)* stagnation or moderate growth of demand - a rapid increase in demand stimulates competition on the relevant specific market, suppliers have the opportunity to increase market share and profits;

*e) low elasticity (flexibility) of demand* - if demand does not change significantly in response to price changes, there is a low motivation of suppliers to reduce prices with the purpose to increase their market share;

*f) homogeneity of products* - the higher the homogeneity of products is or it is perceived by users in this way, the more suppliers' motivation to adopt a similar behavior on the market will increase in order to avoid price competition and lower profits;

*g) similar cost structure* - at a given price, a similar cost structure will cause a similar level of profits and it may lead to a mutual agreement suppliers on prices;

*h) similar market shares* - adopting a similar behavior on the market by suppliers can be encouraged by the existence of similar market shares;

*i) lack of technical innovation and technology maturity* – the higher technology maturity is, the more the competition by means of technological innovation decreases;

*j) absence of extra capacity* - it may prevent the occurrence or maintenance of agreements between providers, being stimulated to use additional capacity to increase profits;

*k) high market entry barriers* - the existence of a significant collective power on a relevant specific market is favored by high barriers at entry on the market;

*I) lack of power to deal with users* - a high counter-power power of users can prevent the appearance of the significant collective power on a relevant specific market;

*m) lack of potential competitors* - the perspective of entry of new competitors on the relevant specific market limits the possibility of existence of a significant collective power on that particular market;

*n)* different types of informal links providers likely to have significant collective power - although setting informal links between providers may have a legitimate purpose of solving some common problems raised by their activity, the existence of such links may indicate a controversial action on the market;

*o)* existence of mechanisms for counter-attack - providers will be encouraged to keep the agreements on the market whether they can expect the implementation of measures to counter-attack their competitors in case of breach of such agreements;

*p)* lack of competition or low degree of competition in terms of prices – in case suppliers anticipate a strong competition in terms of prices, they may try to prevent effective competition between them by an agreement on prices on the market. The existence of such agreements might indicate reduced stability or fluctuation in prices over time.

The increase of competition and the improvement of the transparency of prices on retail market were identified as the main guidelines of action that have guided regulatory intervention in the mobile services sector.

Intervention options to *increase competition* in mobile phone industry, take into consideration the following: regulation of end calls charges of mobile points (reduction MTR - Mobile Termination Rate - The average mobile termination rate of the operators with significant power on the market, number portability (MNP - Mobile Number Portability), granting of the fifth mobile license, prohibiting terminal block, sharing infrastructure and interconnection, national roaming and MVNO (Mobile Virtual Network Operator) access regulation.

To improve *price transparency* of retail mobile services, in such a way to help users to understand the actual price they pay, there has been identified a number of possibilities for intervention.

In the context of almost reaching the saturation level in terms of mobile services penetration, most potential customers already benefit from electronic communications services and attracting new customers will be achieved mainly on the account of competitors' portfolio. Under these conditions, low fluidity (the fluidity of the market occurs when buyers can freely choose their suppliers, and manufacturers can freely enter or leave a particular market. In this case, there are no legal or institutional barriers for entry of new competitor producers on the market of a particular product) on the retail market segment means that the effective competition occurs at a particular reduced scale as a whole segment; this means that this reduced competition is manifested mainly at consumer's level as they may change the service provider based on contracts or agreements that can be easily terminated.

According to economic theory, perfect competition is characterized by a series of cumulative characteristics: atomicity of participants, mobility of production factors, fluidity and market transparency (market transparency defines that situation in which all players on a given market, whether suppliers or consumers are perfectly informed about the structure and operation of the market and can anticipate changes that may occur), product homogeneity. As pure and perfect competition does not match the actual functioning of economies and markets, promoting this model of competition cannot be a goal of regulation. Implementing legislation requires minimizing intervention to promote that level of competition that maximizes social welfare.

Thus, one can think that the extension of competition area by improving the fluidity of retail segments and as well support for rational and informed consumer behavior represent regulatory options to maximize social welfare.

In terms of actions to improve competition on retail markets by encouraging their fluidity, dynamic segments indicate the need to supplement at wholesale asymmetric interventions, aimed primarily to stimulate supply (introduction of selection / preselection of the carrier), by creating the conditions for alternative operators to compete with symmetrical regulatory instruments aimed at all active operators on the retail market, in the corresponding homogeneous segments (number portability).

Theory and practice of regulation in various sectors have indicated that the asymmetry between the information available to consumers against suppliers of the services provided and fees, distort consumer behavior by increasing the artificial demand based on the complexity of charges. Consumers should be helped to adopt a rational behavior, according to their needs, both in terms of choice of service provider and in terms of the option for a particular service offer. Increasing consumer demand based on consumer information asymmetry is not likely to increase social welfare (see Figure 1).

The policy of stimulating fluidity and transparency does not aim at direct intervention in retail markets, or limiting its value to the creative imagination of marketing policies, but aims at ensuring that suppliers' market actions are not at the expense of consumers. This policy must consider the extent to which, on the one hand, the information consumers need to make choices are available at a reasonable level of transparency and accessibility, and, secondly, that users can switch services without facing undue obstacles.





Policy elements to stimulate fluidity and transparency in the retail market is intertwined with elements of access policy (in terms of network access solutions for carrier selection and preselection), interconnection policy, etc.

Packages and schemes for end-user prices have become increasingly complex over time: multiple pricing plans, rates for calling within / outside network, to the mobile / fixed network, at / off rush hour, according to destination, the favorite numbers and many other options.

Such complexity makes practically impossible for the end user to control expenditure on communications services and he/she is moving away from taking rational decisions on the choice of provider or even of his/her consumer behavior.

Improving the level of information for users and reducing the complexity in retail rates help to improve consumer power, which will make the consumers to defend better their interests. Also, increased transparency in terms of comparative levels of charges depending on the type of supply or traffic light profile is likely to help citizens to make consumer choices based on rational criteria.

Given these considerations, the strategic objective of the regulation aims "to create an environment where information on availability, supply conditions and tariffs of services must be transparent, easy to access and available to all citizens" (Document by ANCOM regarding the Regulation Strategy in the electronic communications sector in Romania during the period 2007-2010).

In achieving this goal, the regulation authorities require from operators the following:

Develop a web page dedicated to information needs of users - such instrument would aim to provide a user-friendly interface for citizens, in a non-technical language, to provide relevant information and answers to questions on key issues concerning their relationships with suppliers of electronic communications services and to reduce information asymmetry of demand in relation to the supply of electronic communications services.

Detailed Billing (Invoices) – Establishing the information to be presented in the detailed invoices issued by the mobile service providers is a regulatory tool that provides end users a minimum of information to help improve awareness of tariffs, to facilitate understanding of pricing services used and to allow verification of content of the bills issued by providers in terms of protecting users' privacy rights of callers and the called subscribers.

Tools for comparing prices (completion of this project is estimated in the third quarter of 2011) - making available through Web pages, a tool to enable comparison of information on rates and conditions offered by different suppliers, to ensure potential users make independent assessments. This instrument takes the form of "search engine" available online, updated with efficiency, to generate the best offers available at any given time for a specific consumer profile. An additional facility would provide an existing classification of tenders based on predefined criteria (e.g. "the best offers for calls to fixed networks).

The regulation authority action has a limitation effect on the free competition and replaces the market forces; therefore it must be temporary and have a limited range of action; in addition it must be suppressed as soon as effective competition can be supported by the market forces. Thus, in order to avoid market distortion or the creation of premises for dominant position abuse by the economic agents subjected to the regulations, the regulation actions need to be approached through the perspective of the competition law, by thoroughly applying its principles. Consequently, regulations must be justified, proportional, appropriate, undiscriminating and limited both in duration and in range as far as the imposed remedies and the operators subjected to the regulations are concerned. The regulation authority must identify those measures which either open the market and insure new entries, or, as in this case, replace the market force.

In order to regulate some markets, the regulation authorities must analyze if the following criteria are cumulatively fulfilled:

- the presence of untransitory barriers (of structural or legal nature) at entering the market;

- the lack of analyzed market features that would determine its trend towards effective competition (this criterion shall be considered even if there are barriers encountered at market entrance);

- only the compliance of the competition law cannot efficiently remedy the deficiencies that the market presents.

Any public mobile network operator has a monopoly on the end calls services market in their own network. Due to the lack of competition constraints made on mobile spots end calls service suppliers, their action to reduce the price of mobile spots end calls services to an efficient level is unlikely. Another important aspect is that, considering that the average prices for the calls made in the same network are nearly 50% lower compared to the average call prices to other public mobile networks, the percentage of same network calls within the total public mobile calls in Romania remained constantly at high levels of 76 - 78%, within the period 2004 – 2007. Consequently, the operators have both the possibility and the interest to apply excessive prices for supplying these services to their competition both to raise their costs, and to maximize thus the benefits of their own end users at the expense other networks users. Thus, mobile service providers can show a discriminating behavior by charging higher tariffs for end calls originating from networks of other providers, compared with domestic supply of services; the consequence is the increase competitors' costs by increasing the afferent costs of providing services at the level of retail market. If the difference between the retail network and end calls rates in the wholesale market is unable to provide sufficient margin for the supplier competitor activity in the retail market and to offer reply, there may appear practices of "predatory pricing" or "margin squeeze".

Economic theory has highlighted the need for a balance between the need to ensure a framework to encourage market entry (by anticipating a reasonable level of profit for potential new players, with the prospect of depreciation of infrastructure investments) and also stimulate competition on merit principle designed to ensure consumer welfare. Therefore, imposing obligations on authorized operators there must be taken into account the investment made by that provider to allow for a reasonable rate of return on capital invested, considering the risks associated with investment. Any cost recovery mechanism or pricing methodology required by the Authority must promote economic efficiency and competition and maximize consumer benefits. Thus, ANCOM must provide correct economic signals to the economic operators who wish to enter the market and to increase business efficiency, investment and innovation in a dynamic perspective, creating a fair and predictable competitive environment. Therefore, the regulation authority must ensure that, on the one hand, this regulatory action has no adverse effects, to deter new entry and reduce competition at infrastructure level, and on the other hand, it leads competition stimulation and a normal competitive environment to promote consumer interests.

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# ISSUES ON FISCAL POLICY OBJECTIVES IN ROMANIA AFTER 2000

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#### Abstract:

Financial policy differs from one country to another depending on the country's economic potential, the level of economic development, natural resources, national or international conditions, methods of managing the national economy, the interests of political parties and other factors. But, we should not overlook the fact that economic and financial experience of countries can provide models to be applied in other countries. In terms of financial policy, budgetary policy and fiscal policy are the most important.

This paper aims to compare the objectives of fiscal policy in Romania during the last three programs of government in the period 2001-2012 and, under the Romanian fiscal responsibility law, to underline the principles they are based on.

Keywords: fiscal policy, fiscal responsability law, fiscal policy objectives, budgetary policy

#### 1. Introduction

According to the Romanian Language Explanatory Dictionary, the term "politics" comes from Latin and refers to "all goals and objectives pursued by social classes and groups to fight for their interests, the means for achieving these goals and objectives." However, politics is, pragmatically, defined as a form of human community organization and management for achieving its interests or as a set of decisions taken by the authorities to organize and conduct economic and social activity. In this sense, it manifests itself at all levels and organizational structures of society. Whatever the concept of policy is defined, it directly involves methods and means of action, which are specific for human activity's fields.

To speak about budget theory and policy development involves a wide range of different elements: the budgetary provisions, principles to be observed, the classification of expenditure, political purposes to serve the budget process, descriptions and analysis of how national systems have evolved.

This paper aims to examine the objectives of fiscal policy in Romania from a theoretical perspective. The paper is structured as follows: the introductory part briefly presents the financial policy as part of the economic policy and its role in the economy. The second part details some issues on tax policy principles existing in the Romanian legislation, and, the third section discusses the interdependent nature of financial policy with the other components of economic policy. This section contains the budgetary and fiscal policy objectives found in the programs of Government in Romania after 2000. In the last part of the paper are listed some of the world countries experiences in setting fiscal policy objectives. Among the research methods used can be found traditional methods such as classification, synthesis, induction, deduction and theoretical investigation.

### 2. The role of financial policy in the economy

Economic policy is a component of state's general policy. It is recognized that, a public policy promotes specific interests, which generally correspond to the society's objectives. As to achieve a sustainable economic policy is imperative an effective coordination of the mentioned policies. Each type of policy has its own identity, but also they are integrated in the economic policy as a whole by their content and tools, by dynamic and interdependent relationships.

Considered separately, financial policy expresses the choices on methods, means and institutions of financial nature. These are involved in the procurement, allocation and utilization of financial resources, including arrangements that influence social and economic activities in the desired direction. In a narrow sense, the financial policy concept is used for the purposes of public finance policy, to describe the phenomena that give rise to a public task, which is based on the financial factor. However, given the broad meaning of the finance, is looming a more comprehensive notion for "financial policy". In this sense, there can be distinguished several components of the financial policy, including: fiscal, budgetary, monetary, currency policy etc. The financial policy is required to determine both the amount and source of financial resources, on the one hand, and on the other hand, to underline the social and economic effect of using these resources. (Comaniciu, 2005)

Financial policy has a range of financial instruments which can influence the social and economic processes in order to achieve economic equilibrium. The financial policy is related to the other components of economic policy, working together to fulfill its objectives: economic development, upgrading and modernization of national economy sectors, more equitable income distribution, etc.

Financial policy may contain specific elements, both strategic and tactical. The first items are materialized by the financial policy decisions on the achievement of longer-term objectives and more extensive, as reflected in the financial plan. In

### Studies in Business and Economics

principle, it is recognized that financial policy decisions, determined by coordinates for a given stage of evolution of society, are reflected in longer-term financial programs and represents the financial strategy. The administrative plans and programs for short periods are components of financial tactics. (Filip G., 1999, p. 233) The structure of the financial policy on strategic and tactical elements is present at different levels that take financial decisions and their implications are included in results achieved by each functional component. If financial strategy and tactics are different in terms of the relevant time horizon, it is not always easy to delimit the boundary between the two concepts.

The financial policy directly influence the growth and modernization of the country's productive potential, the distribution of this potential on the national territory, the increase of efficiency for entire socio-economic activities, to maintain the integrity of public assets, the evolution of population living standards. (Ungureanu M.A., 2007, p. 29).

Financial policy differs from one country to another depending on the country's economic potential, level of economic development, natural resources available (Văcărel, 2006, p. 111), domestic and international conditions, management methods of national economy, the interests of political parties and other factors. But, we should not overlook the fact that economic and financial experience of countries can provide models to be applied in other countries.

Budgetary policy, as part of financial policy, represents all the activities that influence social and economic processes by public revenue and public expenditure. Budget policy supposes the decisions reflected in formation, distribution and use of budgetary resources, financing the budget deficit and using the public budget for GDP redistribution and for influencing the economy. Some authors consider the budgetary policy as having a complementary nature in relation to fiscal policy (fiscal-budgetary policy). Both policies are represented by all coherent instruments available to the State by which it coordinates the economic activity. In our opinion, fiscal policy is reflected in a subcomponent of budgetary policy. In simple terms, any budget, whatever the purpose for which it is used, has two parts: revenues and expenses. At the macroeconomic level, the budget includes public revenues on the one hand, and public spending on the other hand, which leads us to say that budget policy has two components: public revenues policy and public expenditure policy.

Public revenue policy aims to establish the amount and the sources of financial resources that can be purchased by the state during a given period of time, usually one year, the revenues sampling methods and the objectives to be achieved in this sector. Government revenue policy aims: the volume of financial resources needed for state functions and its tasks (their size depends on the value of gross domestic product, the tax rate and the amount of public expenditure for a specified period of time), financial resources' sources (internal and external), procedures for obtaining public money to public funds, the tax burden supported by legal entities and individuals. The volume of financial resources, that a state needs, is dependent on the amount of public spending, but between the volume of expenditure considered necessary for meeting social needs

## - 118 - Studies in Business and Economics

(the demand for financial resources) and volume of financial resources possible to procure from domestic sources (the offer for financial resources), there is not always a full line: either demand for resources is greater than supply, or vice versa. (Văcărel, 2006, p. 114) But it is obvious that the amount of resources depends on the development of national economy

Tax policy refers to the choice of tax instruments, the rates at which taxes are set, the nature of exemptions and the assignment of taxes to different levels of government. A good tax system should be defined as to meet the requirements of equity in burden distribution, efficiency in resource use, the goal of macro policy and the ease of administration. It should also allow the country's authorities to implement tax policy in the most efficient way. The relationship between fiscal policy and the economic situation is characterized by reciprocity, the economic situation affects the amount of compulsory levies on the one hand, and on the other hand, their level acts on the economy status at a time. The sensitivity of tax levies to changes in economic situation refers to the speed and extent to which their performance is affected by variations in the economic activity.

Public spending policy represents all decisions taken by authorities to establish public expense having as a starting point the social needs, that must be satisfied with priority by public resources, for economic growth and a high degree of satisfaction of citizens' needs. This policy aims to establish the size, purpose and composition of public spending, a goal to be achieved with minimum financial effort through various types of expenses. Public expenditure represents the social and economic relationships expressed in financial terms, which takes place between the state, on the one hand, and individuals and legal persons, on the other hand. All these are incurred by the distribution and use of public financial resources to perform state's functions. (C. Comaniciu, 2005)

Public expenditures reflect a fundamental component of the financial policy of the state, having a profound impact on the general policy. The fact, that financial resources are limited and destinations are in a constant competition, leads to more interest on the economic efficiency and social efficiency with which each national currency is spent. In terms of public expenditures, financial policy will continually seek to establish an optimal balance between effect and effort, between efficiency and effectiveness, and the solution chosen for each type of expenditure shall be one that produces the most economic, social and financial effects.

# 3. Fiscal responsibility law and the principles of fiscal policy in Romania

Ensuring financial balance caught the attention of both policies, public revenue policy and public expenditure policy. Is important, that through fiscal measures, to ensure a related and balanced development of public financial resources collecting process. In this respect can be noticed a trend between world governments to legislate on fiscal responsibility. A "Fiscal Responsibility Law" is a limited-scope law that elaborates on the rules and procedures relating to three budget principles: accountability, transparency and stability. A distinction is made between a fiscal responsibility law, which satisfies four specific accountability/transparency criteria, and fiscal responsibility law-type laws, which may include a number of provisions relating to fiscal transparency, accountability and stability. (Lienert, 2010)

Usually a fiscal responsibility law would include in annual budget documents some mandatory and optional features. The mandatory components refer to a mediumterm fiscal policy strategy and an annual budgetary strategy, the optional components refers to new versus existing policies, fiscal risks, tax expenditures and futures scenarios. The two mandatory elements of a fiscal responsibility law are (Lienert, 2010:

- ⇒ A medium-term fiscal policy strategy. The fiscal responsibility law would require the government's fiscal strategy and policy intentions to be published. Macroeconomic and fiscal projections, including the main technical and policy assumptions, would be prepared for a period of at least two years after the upcoming new fiscal year. The medium term budget framework would show quantified objectives and targets for the fiscal balance, aggregate revenue and expenditure, and government debt. It would also spell out the broad fiscal policy priorities of the government.
- ⇒ An annual budget policy strategy. The fiscal responsibility law would require the government to explain how the proposed budget for the upcoming fiscal year helps achieve medium-term fiscal policy objectives and targets, along with the fiscal policy measures envisaged to achieve the annual and mediumterm fiscal targets. The fiscal responsibility law would require the government to explain why the government is deviating from the previously announced fiscal strategy, if this is the case.

To achieve and maintain a budgetary and fiscal discipline, transparency and long-term sustainability of public finances, the Romanian Parliament issued a law in this respect, entitled "Budgetary and Fiscal Responsibility Law." Having a budget and fiscal responsibility law is justified because it may encourage the formulation of fiscal policy decisions by providing sustainable principles and rules on revenues, debt, deficit, expenditures and risk management. Fiscal policy promoted in recent years has clearly demonstrated the fragility of the institutional framework and lack of proper rules.

In this context, the Fiscal Responsibility Law sets out the principles to be followed by fiscal policy in Romania to meet EU's long term goals and standards they must meet in order to add value to stability and economic growth: (Law No. 65/2010)

1. The principle of transparency in terms of setting goals and developing budgetary and fiscal policy - the Government and local public authorities are forced to do a public debate on all the necessary information to allow evaluation of the implementation of fiscal and budgetary policies, their results and the state of public finances.

2. The principle of stability - the Government is obliged to conduct fiscal policy in a manner to ensure predictability over medium term in order to maintain macroeconomic stability.

3. The principle of fiscal responsibility - the Government is required to conduct fiscal policy in a prudent way and to manage budgetary resources and fiscal risks in a manner that ensures fiscal sustainability on medium and long term. Sustainability of public finances requires that, on medium and long term, the Government should be able to manage risks and unexpected circumstances, without having to make significant adjustments in expenditures, revenues and deficit.

4. The principle of equity - the Government will run fiscal policy taking into account the potential financial impact on future generations and the impact on economic development in the medium and long term.

5. The principle of efficiency - the Government's fiscal policy will be based on efficient use of public resources. It will be defined by its economic efficiency. The public investment allocation decisions, including those funded by grants received from the European Union and other donators, will be based on the economic assessment and the absorption capacity assessment.

6. The principle of effective management of personnel expenses paid from public funds - the wage policy and public institutions' staff should be in accordance with budgetary and fiscal targets of fiscal and budgetary strategy in order to streamline staff expenditures management.

This law is a framework for fiscal and budget strategy of our country. Budgetary and fiscal strategy (Law No. 65/2010) is the document that establishes the public policy objectives and priorities in terms of public revenues and expenditures and, also, in terms of general government budgets and evolution of budgetary deficit/ surplus over a period of three years. By 30 May of each year, the Government should approve the budget strategy for the next 3 fiscal years proposed by the Ministry of Finance. This strategy contains: the macroeconomic framework, fiscal and budgetary framework with estimates, medium term expenditure framework and a statement of responsibility.

The objectives of fiscal and budgetary policy established by the Romanian law on fiscal responsibility are:

 $\Rightarrow$  to maintain public debt at a sustainable level on medium and long term;

 $\Rightarrow$  to achieve a balance of public budget closed to zero over the economic cycle, while ensuring the country's competitiveness;

 $\Rightarrow$  to manage resources and obligations assumed by public sector and a prudent management of budgetary and fiscal risks;

 $\Rightarrow$  to maintain adequate budgetary resources to pay public debt

 $\Rightarrow$  to assure a predictability of tax levels and tax rates.

Fiscal policy refers to government discretionary measures that influence the direction of the economy through changes in the level and composition of public expenditure and funding. It contributes to the economy by delivering on the three principal functions of government namely, efficient allocation of resources, fair distribution of incomes and stabilization of economic activity.

The process of choosing fiscal policy objectives is very often contradictory, that means achieving one objective can lead to failure of other targets. So, a great

## Studies in Business and Economics

emphasis is met on establishing a single objective of macroeconomic policy to allow achieving macroeconomic stabilization. Among the elements of fiscal policy and economic policy components are established relationships of interdependence. In a State evolution, budgetary policy, in general, and fiscal policy, in particular, have played a major economic role of macro-stabilization. They have become instruments of market economy that lead to the objective of dynamic economic growth, inflationary and sustainable, able to generate new jobs in parallel with the acceptance of structural reforms.

# 4. Highlights of fiscal-budgetary policy objectives in Romania between 2001 – 2012

To get the political power, each political party outlines its own program that establishes guidelines for its work in order to solve problems facing any kind of country. State policy, both internally and externally, is defined by the Government. Achieving the targets set in such a program involves providing the necessary resources and state intervention in the economy through economic instruments, institutions and financial regulations. Below can be found the main directions that fiscal-budgetary policy of Romania followed after 2000 during the three regimes of governance.

The primary objective of *budgetary and fiscal policy in the period 2009 – 2012* under Government Program is restoring the credibility and stability of public finances through:

- $\Rightarrow$  establish an appropriate balance between short-term response to economic crisis and medium term goals of strengthening public finances.
- $\Rightarrow$  compliance of budget deficit target in 2010 and reducing net financing need of the government sector.
- ⇒ further fiscal consolidation towards achieving the deficit target of 3% of GDP by structural measures
- ⇒ ensure medium term sustainability and maintaining the schedule for adopting the euro.

 $\Rightarrow\,$  promote a countercyclical fiscal policy to provide sustainability of economic growth process.

 $\Rightarrow$  strengthening control and increasing responsibilities of institutions outside the central government (local authorities, self-financed institutions and state companies), including reduction of state arrears.

 $\Rightarrow$  tax administration reform.

 $\Rightarrow$  increase efficiency and to improve budgetary and fiscal policy predictability.

To fulfill its goal in the period 2009-2012, the state should reduce the deficit to 5.9% of GDP in 2010, to streamline the public sector institutional structure, the number of employees and costs associated, to have a prudent wage policy of public sector which takes into account the macroeconomic and budgetary constraints, to promote

fiscal responsibility law, to promote budget and pension reform, to reduce the budget deficit gradually to a level below 3% of GDP in 2012, to launch a multiannual action plan to reform tax administration, to develop a centralized reporting system of costs incurred by local authorities, a better targeting of social assistance programs, to restructure over 200 existing social benefits so as to gain a complementary role, to improve the collection of taxes, to accelerate the decentralization of public administration with adequate financial resources.

Under Government Program, fiscal policy between 2005 - 2008 has been focused on ensuring a stimulating role of taxes and duties, in order to economic increase and development, of fiscal consolidation and middle class strengthen. It is designed and implemented based on the following principles: of tax neutrality, the tax efficiency, equal tax treatment and tax law sustainability. During the government 2005 -2008 fiscal policy was designed to work for tax producers, rather than for tax pickers. The fiscal policy should be based on a real partnership between the state and the taxpayer. Budgetary policy between 2005 - 2008 aimed at efficiency of budget allocations based on priorities, the transparency of public expenditure, providing the multiplier effect of public expenditure on the real economy. It was designed and implemented based on the principles of minimizing the costs of revenue collection, the performance of using public funds, but on the principle of multi-budgeting too. The strength of the Government was considered to be a decrease in tax burden as a mean of relieving the tax business environment, to stimulate private initiative and to encourage the formalization of the hidden economy. Decreasing tax burden gave to Romanian business environment some flexibility, predictability and flexibility.

Under Government Program, *financial policy between 2001 and 2004*, with its two components - fiscal policy and budgetary policy - aimed at ensuring sustainable socio-economic development and improving the supply-demand ratio, stimulating growth through domestic supply of goods and services, reducing inflation and maintaining the limits of current account deficit (balance of payments), stimulating the economic sectors with potential internal and external competitiveness, attracting foreign investment and foreign loans.

Fiscal policy has sought to reduce the level of taxation, both by abolishing some contributions to special funds, and replacing the tax burden and the ratio of direct and indirect taxes, to boost employment, savings, investments, small and medium enterprises and exports. In fiscal policy terms, the Government has focused its actions to substantially increase spending efficiency and transparency as an effect of allocating public resources based on projects and programs and by establishing a coherent system of priorities within them.

The comparative analysis of government programs between 2001-2012 in terms of financial policy show that the objectives and directions of the budgetary and fiscal policy differs considerably from one period to another, from one government to another, coupled with the changes made in the international macroeconomic context. A first difference that stands out is the fact that Romania's 2009-2012 budgetary policy has as direction the budget deficit reduction and keeping it down, considering that in

the periods 2005-2008 and 2001-2004, the budget deficit did not represent a major objective of budgetary policy.

Another difference that stands out consists in the attitude of state authorities to the elements of fiscal policy: if in 2001-2004 reducing the tax burden was a priority (lower wages and social contribution, lower progressive income tax rates), between 2005 - 2008 tax reduction remains the key objective of government as with the role of incentive tax liabilities increase (the flat tax of 16%), and after 2009, with the manifestation of the increasingly obvious effects of global economic crisis and the inadequacy of public resources, is taking a position opposite to the fiscal relaxation (increase in VAT). A specific issue of the period 2001-2004 among the objectives of fiscal policy is reducing the inflation rate in Romania, which it no longer figures in the current government program.

A third difference in terms of public expenditure budget policy targets, such as in the period 2001-2004 it emphasis on performances in allocating budgetary resources, between 2005-2008 to ensure realization of public expenditure and multiannual budgeting transparency and in 2009-2012 policymakers efforts are focused on reducing public spending for fulfilling the obligations assumed when contracting loans from the IMF. As you can see, the fiscal policy in our country differs from one period to another and from one government to another.

## 5. International experiences on fiscal policy goals

In this last part of the paper, it can be found a brief presentation of the fiscal policy objectives in United Kingdom, Turkmenistan, India and Czech Republik.

In **United Kingdom**, the fiscal policy objectives after 1999 are set on as follows: *over the medium term*, ensuring sound public finances and that spending and taxation impact fairly both within and across generations. In practice this supposes that the Government to meet taxation and spending priorities while avoiding an unsustainable and damaging rise in the burden of public debt; and those generations who benefit from public spending also meet the costs of the services they consume. *Over the short term*, the fiscal policy consists in supporting monetary policy, where possible, by allowing the automatic stabilizers to play their role in smoothing the path of the economy in the face of variations in demand (HM Treasury, 1999).

The UK fiscal policy framework has been created to be based on the next five principles: transparency in the setting of fiscal policy objectives, the implementation of fiscal policy and in the publication of the public accounts; stability in the fiscal policy-making process and in the way fiscal policy impacts on the economy;

- $\Rightarrow$  responsibility in the management of the public finances;
- ⇒ fairness, including between generations; and efficiency in the design and implementation of fiscal policy and in managing both sides of the public sector balance sheet.

These principles were enshrined in the Finance Act 1998 and in the Code for Fiscal Stability, approved by the House of Commons in December 1998. The UK

Government has two key rules that accord with these principles. These are: *the golden rule*: over the economic cycle, the Government will borrow only to invest and not to fund current spending; and *the sustainable investment rule*: public sector net debt as a proportion of GDP will be held over the economic cycle at a stable and prudent level.( HM Treasury,1999)

The United Kingdom Fiscal Responsibility Bill for 2010 imposes a reduction of government borrowing and debt. The Parliament gets through this law a greater role in fiscal policy. The Fiscal Responsibility Bill was being introduced at a time of extremely high levels of public sector borrowing in United Kingdom due to the financial crisis. In this fiscal responsibility law can be found the follow main clauses: (HL Bill 24 2009-2010)

- ⇒ imposes a duty on the Treasury to ensure that for each of the financial years ending in 2011 to 2016 public sector net borrowing as a percentage of GDP is lower than the previous year;
- ⇒ imposes a duty on the Treasury to ensure that by 2014 public sector net borrowing as a percentage of GDP is at least halved from its level for the financial year ending 2010;
- ⇒ imposes a duty on the Treasury to ensure that public sector net debt as a percentage of GDP is lower as at 31st March 2016 than it was as at 31st March 2015;
- ⇒ imposes a duty on the Treasury to report on progress towards and compliance with the duties at the time of laying before Parliament relevant Economic and Fiscal Strategy Reports and Pre-Budget Reports. (HL Bill 24–EN, para 8)

The Fiscal Responsibility and Budget Management Act in India was adopted in August 2003 provide the responsibility of the central Government to ensure intergenerational equity in fiscal management and long-term macroeconomic stability by achieving sufficient revenue surplus, transparency in fiscal operations and a fiscal policy in a medium term framework. This law sets task for central Government to lay in each financial year a statement of fiscal policy: the medium term fiscal policy statement (three years rolling target for some fiscal indicators), the fiscal policy strategy statement (the state policies relating to taxation, expenditures, the strategic priorities, the key fiscal measures, fiscal management principles) and the macroeconomic framework statement. The Medium Term Fiscal Policy Statement 2010-11 provides the roadmap with fiscal deficit declining to 4.8 per cent of GDP in 2011-12 and further to 4.1 per cent of GDP in 2012-13. A focus on bringing down the level of public debt as envisaged in the Thirteenth Finance Commission's Report and as announced in the Budget for 2010-11 would anchor the fiscal consolidation process in a sustainable debt framework. The fiscal policy for the year 2009-2010 has as objectives to keep the economy on the higher growth trajectory amidst global slowdown by creating demand through increased public expenditure in identified sectors. The medium term objective will be to revert to the path of fiscal consolidation at the earliest, with improvement in the economic situation.

In *Turkmenistan*, The Strategic Planning and Economic Development Institute of Turkmenistan has identified some priorities for 2010 fiscal policy, such as: tax incentives for structural, investment and innovation shifts and the development of the private sector and free competition. The state concentrates on a system of benefits to stimulate business activities in the main sectors if the economy. Turkmenistan has as priority to reduce tax burden in a medium term perspective 2016-2020. Their plan is to attract direct investment through the tax system. In the long term (2021-2030 years), Turkmenistan tax system is aimed to stimulate research and innovation, foreign direct investment and the development of free economic zones will remain the priorities. The budget policy 2011-2015 will have in Turkmenistan as objective the financial openness of the state and a strict budgetary control at all levels of budget system.

The priority of fiscal policy for 2010 in *Czech Republik* is fiscal consolidation and improvement in the structural parameters of public finances. In Czech Republik, the fiscal objective is to achieve a general government deficit of at most 2.9% of GDP in 2013. In its policy statement, the government also set a target of balanced public budgets in 2016, providing that economic growth continues. The Czech government's fiscal objective for 2010 is to maintain the general government deficit at 5.3% of GDP.

The fiscal objectives for 2011-2013 should aim to achieve the medium-term budgetary target set for the Czech Republic within the EU fiscal rules. The Czech Republic is obliged to achieve this medium-term budgetary target, corresponding to a structural deficit of 1.0% of GDP, by credible and sustainable means as soon as possible. Taking into account the government's longer-term objectives, the medium-term objective would probably be achieved around 2016. (Czech Republik Ministry of Finance, 2010)

Fiscal policy in **Uganda** focuses on stimulating economic growth, strengthening tax administration and raising tax revenue. A flexible fiscal regime has been maintained to respond to volatile movements in the foreign exchange market, unrealized revenue performance and shortfalls in the external budgetary support.

How we can notice, a number of countries have adopted a fiscal responsibility law. Around 40% of a sample of emerging countries have embedded, at some time in the past, a fiscal rule in fiscal responsibility law-type legislation. The corresponding percentage for advanced countries is only 20 percent. (Lierent, 2010)

Ministries of Finances and academic researchers tried to explain what reasons have countries for introducing this kind of law. Let's see some examples.

**New Zeeland**'s Fiscal Responsibility Act was adopted in 1994 and it requires the Government to be explicit about its objectives and to explain any changes to them; ensures the provision of comprehensive financial information for informed and focused debate about fiscal policy; requires the Government to specify its intentions for fiscal management beyond the next 12 months. The law does not prescribe fiscal targets in legislation, it does require Governments to set short-term fiscal intentions and longterm fiscal objectives.

In May 2000, *Brazil* enacted a Fiscal Responsibility Law (LRF, Suplimentary Law No. 101/2000) that strengthened fiscal institutions and established a framework of

fiscal planning, execution, and transparency of public decisions. The responsibility of fiscal management was seen through well-planned and transparent public actions to prevent risks and correct deviations that may affect the equilibrium of public accounts.

In 2003 *Sri Lanka* adopted the Fiscal Management Responsibility Act (FMRA). This law attempts to address several fiscal shortcomings, including the lack of codified rules for the formulation and execution of the annual budget in the context of strengthen transparency requirements.

**Pakistan**'s Fiscal Responsibility and Debt Limitation Act (FRDLA) was approved in June 2005. The law aims to eliminate revenue deficits and reduce public debt to prudent levels by following the principles of effective public debt management. When proposing to parliament a new draft annual budget, a government should be explicit about its fiscal policy intentions.

Reuters has communicated in November 2010 that the Croatian government proposed a fiscal responsibility law that aims a balanced budget in the coming years. As the government representative said, the goal of this law is to finance expenditures from revenues and to borrow only to repay maturing debt or finance development projects. Under the fiscal responsibility law *Croatia* plans to reduce its consolidated budget deficit by at least one percentage point a year. In 2011 the country plans a consolidated budget gap of 5.0 percent of GDP, up from 4.6 percent targeted in 2010.

In an analysis of fiscal policy objectives in the United Kingdom, India, Turkmenistan and Czech Republik may be found that they are correlated with economic situations and circumstances which are subject to these countries. So it is apparent that developing countries, which are facing to worried budget deficits, have as fiscal policy target to reduce their budget deficits as a percentage of GDP (Czech Republik, Romania, India). In Turkmenistan, the starting point is creating an economic environment capable of innovation and to attract foreign investors. The United Kingdom can afford to have a broader vision of this sector by fiscal accountability of politic deciders for the future generations.

It is apparent that developed countries do not have fiscal responsibility law (only five OECD member countries). This situation is due to the fact that their fiscal objectives can be achieved by arrangements. This kind of countries have wellestablished legal frameworks for public financial management. A part of the developed countries have in place institutional arrangements for providing fiscal information to the public, even institutions that are responsible of fiscal stability. In USA, for instance there is a public institution for these. President Obama created National Commission on Fiscal Responsibility and Reform to address fiscal challenges. The Commission is charged with identifying policies to improve the fiscal situation in the medium term and to achieve fiscal sustainability over the long run. Specifically, the Commission shall propose recommendations designed to balance the budget, excluding interest payments on the debt, by 2015. In addition, the Commission shall propose recommendations that meaningfully improve the long-run fiscal outlook, including changes to address the growth of entitlement spending and the gap between the projected revenues and expenditures of the Federal Government.



Source: Ian Lienert, Should Advanced Countries Adopt a Fiscal Responsibility Law?, IMF Working Papers, No 254, November 2010, pg 12

Concerning the EU countries, the 27 member states have well-known quantitative targets for debt and fiscal deficits, established by Maastricht Treaty and the Stability and Growth Pact.

### 6. Conclusions

As part of the general policy of the state, budgetary and fiscal policies are called upon to contribute to the country's economic potential and to meet in an efficient way the needs of the population, it must be continuously adapted to the demands of historical stages. In a State evolution, budgetary policy, in general, and fiscal policy, in particular, have played a major economic role of macro-stabilization. They have become instruments of market economy with the target of a dynamic economic growth, able to generate new jobs.

The connection between fiscal policy and the future economy is obvious. Fiscal policy can have important long-run effects on the health of the economy. The most important effect of fiscal policy on national saving has been through the direct government budget. When the government runs deficits, it reduce private savings, leaving less available for capital investment. So, fiscal responsibility is essential to create a better, stronger, more prosperous nation for the next generation. The economic future of a country directly depends on the fiscal responsibility.

The comparative analysis of government programs between 2001-2012 in terms of financial policy can be seen that the objectives and directions of the budgetary and fiscal policy differs considerably from one period to another, from one government to another, coupled with the changes of international macroeconomic context. The main objectives of fiscal policy in Romania remain: the restore of credibility and stability of public finances in the short and medium term which is circumscribed to budgetary

framework, to limit budget deficits, a prudent wage policy in the public sector, to improve the quality of public spending, to increase absorption funds.

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# STATISTICAL INFERENCE USED IN MARKETING RESEARCH

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#### Abstract:

The purpose of this article is to describe, theoretically, but also through several applications, the statistical methods or procedures through which the research results can be extended at the target population level. The target population represents the aggregate of all the elements, sharing some common set of characteristics that comprise the universe for the purpose of the marketing research problem

Keywords: marketing research, sample, statistical inference, statistic test

#### 1. Introduction

The purpose of every human being is to be happy during his lifetime. Companies are constituted out of people, but their happiness purpose relies in profit maximization and obtaining customer satisfaction. These two variables are directly linked one to another, obtaining customer satisfaction is the cause (and not the effect) for companies' profit. Marketing – as theory and practice – tries to find a balance point, equilibrium between these two company's goals, which apparently form a concave relation which needs empirical confirmation.

To measure the degrees of customer satisfaction, the company needs relevant information about their customers. The needed information is based on data about the customers' initial expectations, regarding the company's performance, and the final customer's perception about the company's performance. Measuring and analyzing data is part of the marketing research process. Marketing research is defined as a key element within the total field of marketing information. It links the consumer, customer and the public to the marketer through information, which is used to identify and define marketing opportunities and problems; to generate, refine and evaluate marketing actions; and to improve the understanding of marketing, as a process and of the way in which specific marketing activities can be made more effective (Malhotra N., Birks D., 2007). The scope of every marketing research of to deliver information, which may assist or help the decider in his/her decision. Thus, marketing research is viewed as a process, a sequence of phases and activities, which contribute to the achievement of the research's purpose and to the solution of a certain marketing decision problem (Catoiu, 2009).

According to the research purpose, the researcher will collect the needed data by using one or more of the marketing data gathering methods. There are four primary research methods through which original data (related to the actual research's purpose) is gathered: the survey (method based upon the use of structured questionnaires administered to a sample population- Malhora); the interview and the focus group (gualitative methods by which the researcher attracts gualitative data through discussion with one or more investigated subjects) and the observation (the recording and counting of behavioral patterns of people, objects and events in a systematic manner in order to obtain information about the phenomenon of interest -Malhotra). Other data gathering methods use secondary data (existing data) as a starting point for the future analysis: the simulation (a bundle of research methods and techniques of a real system S with the use of a simulated system S', with which it has an analogue relation - Catoiu), the experiment (research method which controls and manipulates one variable's variation - independent variable - with the purpose of measuring its effects on a second variable's variation – dependent variable - Catoiu) and the analysis of secondary data.

Each data gathering method uses information (primary and/or secondary data) from an investigated subject or data source. The number of investigated subjects does rarely equal the targeted population (there are rare cases in which the researcher undertakes a census); therefore a sample is drawn out of the target population. Based on the results of the sample data, the researcher is tempted to extend (to infer) his conclusion at the target population level. This inference should always be made on statistical basis.

## 2. Research methodology

The purpose of this article is to describe, theoretically, but also through several applications, the statistical methods or procedures through which the research results can be extended at the target population level. The target population represents the aggregate of all the elements, sharing some common set of characteristics that comprise the universe for the purpose of the marketing research problem (Malhotra, 2007). A census is a complete enumeration of the elements of a population or study's

### Studies in Business and Economics

objects, while a sample is defined as a subgroup of elements of the target population. Relevant results based on the sample data are obtained if the researcher rigorously respects all phases of the sampling process: defining target population, determining sample frame, choosing a sampling method, determining a sample size and testing the used sampling methods (Catoiu 2009). Within this article, based on the known sample size (although it takes different values), statistical methods are described and used in order to verify the relevance of the sample results for the target population.

Statistical inference is the process through which the researcher has to deduce or infer facts about the target population from which the sample is drawn (Thomas 1997). The problem in statistical inference relies in the variability of the sampling process, because different samples will yield different results.

Therefore, a sample of size "n" is called a randomly drawn sample if every combination of n-subjects of the target population has equal chances to become the actually drawn sample.

If  $\mu$  is the population mean and  $\sigma^2$  its variance, and a n-sized sample is drawn out of the population, than through statistical inference E(Xs) =  $\mu$  – expectation of the sample mean is the population's mean – and var(Xs) =  $\sigma^2$  – expectation of the sample variance is the population's variance. According to the Central Limit Theorem (CLT), if large sized samples are randomly drawn out of the target population with the mean  $\mu$ and the variance  $\sigma^2$ , than the sampling distribution's mean is a normal distribution, regardless of the initial distribution of the population from which the samples are drawn.

Therefore: Mean E(Xs) =  $\mu$  and var(Xs) =  $\sigma^2$ 

Estimation of the population's mean

If a parameter related to the population (mean or variance) is unknown, it can be estimated through two methods: Number (point estimate) and interval (confidence interval). In the following the authors present the first method – of point estimate.

Estimation of the population's mean relies on the known sample mean (Xs). If a very large number of samples would be drawn from the target population, than the distribution of the sample mean will rely on the probability density function of the population, like:



Figure 1 – Normal distribution

The mean value of the sample mean is the population mean: mean  $E(Xs) = \mu$ . It can be said that the point estimate of the population mean is not affected by systematic error; therefore he is an unbiased estimate.

To exemplify the up mentioned theory, a target population was chosen of 200 companies characterized by their revenues obtained in the year 2010 (http://money.cnn.com/magazines/fortune/fortune500/2010/full\_list/301\_400.html).

By using the procedure Random Sample of the statistic software PASW 18, a first random sample was drawn with n=60 companies. The population mean is  $\mu$  = 38.658\$, while the sample mean is Xs = 46.667\$. (Table)

				Std. Error
	n	Mean	Std. Deviation	Mean
Revenues	60	46677,22	56867,598	7341,575

 Table 1. Statistics for a n=60 sample. One-Sample Statistics

The two mean values are different, but how much different. Based on the difference between the two values, two hypotheses are developed which can confirm or not if the mean of the sample drawn differs significantly from the population mean.

Thus, a null hypothesis indicates that there is no significant difference between the sample mean and the population mean:

H<sub>0</sub>: µ=46.677\$

While an alternative hypothesis states that there is a significant difference between the sample mean and the population mean:

H<sub>1</sub>: µ≠46.677\$

According to CLT, Xs is following a normal distribution with mean  $\mu$  and variance  $\sigma^2/n$ . To test which of the hypotheses will be accepted, statistical testes are used based on tabular values of the standardized normal distribution (z-values) and of the t-Student distribution (t-values).

Assuming that  $H_0$  is true, namely that the mean value of the sample revenues does not significantly differ from the mean value of the population revenues, a test statistic:

T.S. = 
$$\frac{\frac{Xs - \mu}{\sigma}}{\sqrt{n}}$$
 will follow a normal standardized distribution N(0,1).

If H<sub>0</sub> is accepted, then the computed values should lie within the marked interval:



Figure 2 – Standardized normal distribution

The area between the curve and the Ox axis (to the right of a z-value of 1.64 and to the left of a z-value of -1.64) is 0.1, which is noted by  $\alpha$  and is called "significance level". If the value of the T.S. lies between the interval (-1.64, 1.64) we can reserve our judgment regarding H<sub>0</sub> that the sample mean is the same with the population mean. If it does not lie within the mentioned interval, we can reject H<sub>0</sub> (the sample mean differs significantly from the population mean) with a probability of 0.1 to falsely reject H<sub>0</sub>, which means that there is a 1 to 10 chance that the mean of another n-sized sample does not differ from the population mean.

In our example,

 $\frac{46.677 - 38658}{\frac{56.867}{\sqrt{60}}} = 1.091$ 

	Test Value = 38658					
					90% Conf	idence Interval of the
			Sig. (2-	Mean		Difference
	t	Df	tailed)	Difference	Lower	Upper
Revenues	1,092	59	,279	8019,217	-4249,24	20287,67

Table 2. Statistics of t-Student test for a n=60 sample One-Sample Test

We compare the computed value of the T.S. with a tabular value for the standardized normal distribution (the value is chosen based on the desired level of significance, for  $\alpha$ =0,1  $z_{0,1}$ =1.64) and a tabular value for the t-Student distribution (for  $\alpha$ =0,1 and r=n-1=59 degrees of freedom  $t_{0,1,59}$ =1,296).

T.S. =  $1.091 < z_{0,1}=1.64$  results that there is insufficient evidence to reject H<sub>0</sub>, but can say with a probability of 0,1 of being wrong that the mean of the sample revenues does not differ significantly from the mean population revenues.

T.S. = 1,091 <  $t_{0,1,59}$ =1.296 implies not a rejection of H<sub>0</sub>, because of lack of evidence. Table no.2 contains a value of 0.279 (Sig. 2-tailed) which represents the probability of 0.279 of rejecting H<sub>0</sub> when she is true.

If we draw out of the population a random sample n=5 companies, we obtain the following results:

Table 3.	Statistics	for a n=5	sample.	<b>One-Sample</b>	Statistics
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				Std. Error
	n	Mean	Std. Deviation	Mean
Revenues	5	23642.00	11857.794	5302.967

We want to test again if the sample mean differs significantly from the population mean.

Thus:  $H_0: \mu=46.677$  and  $H_1: \mu\neq 46.677$ 

$$\frac{23.643 - 38.658}{\frac{11.857}{\sqrt{5}}} = -2.836 \text{ (Table 4)}$$

	Test Value = 38658					
					90% Confi	dence Interval of the
			Sig. (2-	Mean		Difference
	t	df	tailed)	Difference	Lower	Upper
Revenues	-2.832	4	.047	-	-26321.11	-3710.89
				15016.000		

Table 4. Statistics of t-Student test for a n=5 sample. One-Sample Test

T.S. =  $-2.836 < z_{0,1}$ = -1,64 indicates that there is enough evidence to reject H<sub>0</sub>, at a significance level of 0.1. The negative sign of the T.S. indicates that the sample mean is below the population mean.

We reached the same conclusion by comparing T.S. =  $-2.836 < t_{0,1,4} = -2.132$ . The value of 0.047 (Sig. 2-tailed) indicates that there is a probability of 0,047 of rejecting H<sub>0</sub>, when it is true.

# 3. Conclusion and future research

The main purpose of the paper is to describe, theoretically, the importance of statistical inference as a process used within marketing research. The theoretical background is supported by an example through which the authors demonstrate, empirically, that the sample results cannot always be extrapolated to the entire researched population. The main factor which influences this inference (by using statistic tests) is the sample size. The bigger the sample size is, the more representative the sample results are, the bigger is the probability of rejecting H<sub>0</sub>, when it is true. In testing the power of a population estimate, the researcher should use different statistic tests, based on the sample size, if the sample size is small (n<30), one should use t-Student test, otherwise (n>=30) the standardized normal distribution test should be followed.

Future research will be orientated towards an empirical conformation of the theory regarding the estimate of the population variance. Furthermore, the authors will compare the strengths and weaknesses of the known sampling methods.

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# SOME CONSIDERATIONS ON THE RELATIONSHIP BETWEEN UNIVERSITY STRATEGIES AND FINANCIAL INDICATORS

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#### Abstract:

A very important role in establishment and foundation the activities of a university is strategies and policies developed by management authorities. Through this article we identify the relationship between the components of university strategy and financial indicators, taking into account that financial projections are those that can affirm or overturn the objectives. In this respect, the article is structured in such a way that could provide answer to questions like: What kind of university strategy must be adopted to insure academic success? What is the premises development strategy, as requirements for success in university management? What financial indicators can influence the components of the strategic plan?

*Keywords:* strategy, the university strategic plan, financial indicators in higher education, income from higher education institutions, expenditure from higher education institutions

# 1. What kind of university strategy must be adopted to insure academic success?

Regardless of the entity to which it refers, appropriate decisions taking into account the action plans should define clearly and concisely: actions must be accomplished; period of implementation of each action; place of each action; participants at the completion of each action; the stages of each action; resources to be used.

Studies on management includes numerous definition of the concept of strategy (Nicolescu O., Verboncu I., 1996), their essence is that, development of each organization, efficiency and effectiveness, profitability and maintain market share held,

depends largely on the strategy. All this will have direct implications for managerial success.

To support those mentioned above, we present some definitions of strategy in the vision of specialists, definitions which shows the significant role of financial resources in the strategy:

• "A strategy is, in essence, a set of actions, that coordinate the resource and commitments of a business to boost its performance." and " Strategic position can be based on customers' needs, customers' accessibility, or the variety of a company's products or services" (Porter M., 1996).

• "A strategy is an integrated and coordinated set of commitments and actions designed to exploit core competencies and gain a competitive advantage" (Hitt M., Ireland D., Hoskisson R., 2007).

• "Constantly integrating the simultaneous incremental process of strategy formulation and implementation is the central art of effective strategic management" (Quinn J., 1980).

• The strategy has been imposed in the theory and practice of management through multiple senses: plan, stratagem, behavior pattern, position (Băcanu B., 1997).

• Strategy means "all major long-term objectives of the organization, main ways of achieving, with the resources allocated, to achieve competitive advantage according to organizational mission" (Nicolescu O., 1996).

Analyzing those specified and taking into account the needs and requirements of a university's success, we can say that the relationship University Strategy - University Success depends very much on: the university goals, the university long-term objectives, the means used to achieve the objectives, establishing the resources necessary to conduct activities and their allocation; timescale for achieving the objectives.

The answer to the question What kind of university strategy must be adopted to insure academic success? can be found on the typology of managerial strategies, namely:

Types	Explanations				
	In terms of coverage				
Global Strategies	These strategies are all activities in a university, characterized				
	by high complexity, from the university structure and the				
	binomial learning - research.				
Partial Strategies	These strategies are aimed at a specific activity of a university.				
	Since the activity takes place at faculty/department, this				
	strategy can be characterized by a reduced complexity.				
	In terms of degree of participation in development				
Integrated	These strategies are those developed by the university rector				
Strategies	with representative's supra-systems they belong.				

Table 1. A typology of managerial strategies in the university

Independent	These strategies are developed by the university rector and lies
Strategies	in the foreground issues of efficiency and effectiveness of the
	university he leads.
	In terms of objectives
Recovery	These strategies are those aimed at achieving the quantitative
Strategies	and qualitative performance similar to those made in an earlier
	stage. These strategies focus on eliminating deficiencies in the
	recent past.
Consolidation	These strategies are those aimed at directions and ways to
Strategies	obtain quantitative and qualitative performance resembling
	those of the previous period. In these situations we insist on
	strengthening the competitive capacity and quality improvement
	activities in the university sides.
Development	These strategies are those setting superior quantitative and
Strategies	qualitative targets of the previous period. Performance can be
	obtained through major qualitative changes in all areas of
	activity of the university.
	In terms of nature approaches
Restructuring	These strategies have to refocus and/or resize all or part of
Strategies	university activities, which involve changes of substance,
	sometimes difficult to achieve and supported by teaching staff
	and non-teaching staff.
Innovative	Strategies are focused particularly on a high potential for
strategies	research - development. These strategies within the university
	to introduce new services, improved technology, new systems
	of organization.
Specialization	These strategies aimed at a narrower range of benefits, but
Strategies	their continuous upgrading is necessary to not lose its
	competitive edge.
Organizational	Strategies based on improving the organization of university,
Strategies	organization is considered essential management leverage.
	Also, these strategies aim higher professional education for
	teaching staff and non-teaching staff of the university.
Information	These strategies focus on redesign the information system on
Strategies	the university.
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(Source: typology of the strategies developed by Nicolescu O., 2000; Verboncu I., 2000; Petrescu I., 2002)

# 2. What are the premises development strategy, as requirements for success in university management?

Designing and implementing an effective management strategy involves establishing a set of methodological elements that relate, on the first, the premises for development strategy, and on the other hand, strategic stages.

With regard to premises development strategy, as requirements for success in university management, will take into account:

> Background strategies based on technological and organizational forecasts (structural aspect of the system, procedural aspect of the system, system resources).

> Background market research strategies.

> Systemic approach to all aspects involved in the development of the university. Each university must be treated as a system, and therefore the strategy will be developed and implemented to be a result of the variables within it. To ensure success, each university must undergo a continuous process of change, the most important issues are: setting the future of the university; the introduction of new working and organization methods; establishing a means of organization necessary to realize strategic advantage; the definition of work and organization in a connected world; the definition of organizational health.

> Using of participative management at all stages of design and implementation strategy.

Strategic process steps can be considered requirements for management success in university, they aimed at:

 ✓ Accurate establishing the place occupied by university in environment and the opportunities that are available;

✓ Establishing those real, mobilizing, stimulating and comprehensible strategic objectives;

 $\checkmark\,$  Establishing strategic approach and resources needed to achieve the university mission;

✓ Establishing the type and size of resources allocated to achieve objectives;

Phasing strategy implementation;

✓ Operationalization the strategy;

✓ The performance obtained as a result of the strategy implementation.

Based on these considerations, universities take into account in strategic plans, issues such as:

• academic excellence; a people-centered university; excellence in the university's core functions; excellence in the university's support services; local impact; transformation; interfaces; sustainability (University of Pretoria, 2007).

• maintain and enhance the academic excellence of the federal university; deliver highly effective services to colleges, offering excellent value for money; ensure the financial sustainability of all university operations; fulfill the regional, national and international roles of the university; create and retain a workforce with the necessary ethos, working practices and competences to deliver the university's strategic plan (University of London, 2009).

refine the governance structures; manage more effectively the size and shape of the university: initiate a university-wide program of curriculum renewal: enrich the experience of university life for all students; expand and diversify opportunities for students to develop as global citizens; develop the capacity to identify and support research excellence: develop the capacity to identify and promulgate excellence in teaching: develop a small number of major cross-disciplinary initiatives in research and education; agree coordinated strategies for identifying, developing and supporting research talent from undergraduate students to research leaders; promote indigenous participation, engagement, education and research; attract and support promising students from a diversity of social and cultural backgrounds; provide enhanced learning opportunities for all staff; prioritize international engagement on a regional basis to support the effective development of university-wide partnerships and networks; develop and implement a coordinated university-wide framework for local and rural community engagement; deepen the engagement with a supportive network. of alumni and friends; refine and apply the new university economic model to ensure greater transparency in resource and cost allocation and support strategic decisionmaking; systematically review arrangements for the provision of administrative and professional services (University of Sydney, 2010).

• high international standing; world class research; innovative knowledge transfer; excellent teaching and learning; widening participation; empowering collegiality; efficient and effective management; internationally competitive resources; more effective community service (University of Manchester, 2007).

• teaching and learning; student experience; research; infrastructure management; financial management; people management; information management; internationalization; work process improvement; stakeholder and community relations; faculty/division annual operational plans (University Charles Strut, 2007).

• academically excellent; develop confident employable graduates; create, exploit and transfer knowledge; international university; preferred partner; achieve the highest organizational standards (University Edinburgh Napier, 2009).

# 3. What financial indicators can influence the components of the strategic plan?

Whatever the structure of the university strategic plan, financial projections are those that can confirm or non-confirm objectives achievement.

To support this claim we present components of a strategic plan for higher education institutions, specifying the role of financial resources for each component (Burzănescu Ş., 2004):

Components	Questions can be answered	Financial indicators that can
	by the strategic plan	influence the strategic plan
	component	component
University	What is the purpose of	Total revenue; Total expenditure;
Mission	university? What is the	Income structure; Expenditure
	purpose of each faculty of the	structure; Public budget
	university? What kind of	allocation.
	university we are? What kind	
	of university is going to	
	become? In what way	
	educational services are	
	offered? How scientific	
	services are offered?	
Academic	How many faculties are in	Surplus or deficit for each faculty;
goals	university? What are the	Distribution of income and
	specializations of each	expenditures at each faculty;
	university? The orientation is	Efficiency for each program of
	towards nigner education or	study; Cost - benefit analysis for
	postgraduate education?	each program of study; Cost
	what is the future of the	indices.
Number of	university's portiono?	
Number of	How is the student's access	Number of equivalent students;
students	distribution of students in the	allocation: The amount of tuition
	facultion and specializations?	foos: The amount of
	What is failure rate of	administrative fees: Pelationship
	araduates in employment?	between extra-budgetary revenue
	What is the ratio of	and budgetary revenue. The
	students/MA/PhD2 What is	amount of income because the
	the flow of students in relation	flow of students: Income and
	to labor market demand?	expenditure of scientific research.
	What is the ratio of students	
	without charge / tax students?	
	What is the implication of	
	students in scientific	
	research?	
Strategies for	Teaching methods are in	The cost of modern educational
teaching	correspondence with the	technologies; The cost of
technology	expectations of students?	maintenance modern means of
	Educational technologies are	teaching and learning.
	effective? It improves the	
	quality of teaching?	

#### Table 2. The role of financial indicators in the university's strategic plan

- 142 - Studies in Business and Economics

Research	There is scientific research	Revenues from research;
strategies	plan? How to support	Expenses necessary to conduct
	scientific research? What is	scientific research; Financial
	the framework for research	results of scientific research;
	activity? What are the results	Funds mobilized by the university
	of scientific research? How	for scientific research projects;
	research results are	The cost of scientific events; The
	exploited? What scientific	cost – benefit analysis for
	events held in the university?	scientific research.
Collaborations	There are specific strategies	Income from donations and
	for collaboration on local,	sponsorships; Revenue derived
	regional or international?	from contracts; Expenditure
	What are the stages of	cooperation agreements;
	collaboration? Who designed	Financial resources allocated for
	the collaboration? What is the	student's mobility; Financial
	impact of locally, regionally,	resources allocated for teacher's
	nationally and internationally	mobility.
	collaboration?	
Strategies on	How is recruitment and	The share of personnel
human	selection off staff? How is	expenditure in total expenditure;
resource	done and when is done the	Salary scale; Pay arrangements
management	promotion of staff? Staff	depending on performance;
	performance is assessed? It	Relationship between teaching
	uses the associated teaching	positions filled and vacant staff
	staff?	positions, with implications for
		remuneration; Expenses related
		to teaching, research,
		administrative activities.
Base materials	What is the current portfolio	Capital expenditure; Expenditure
management	of the base materials? What	for the maintenance of base
strategies	are the intentions of future	materials; Expenditure for current
	development of the base	and capital repairs.
	materials? What are assets	
	owned by the university? How	
	is development of the base	
	materials?	
Strategies for	There are systems for	Costs for procurement,
information,	teaching, learning, research	implementation and use of
documentation	and administration? There is	information systems; Costs for
and libraries	adequate space to store	equipping laboratories; Costs for
	information materials? What	equipping libraries; Expenses for
	is the book background for	access to international
	learning and research? What	databases.

Studies in Business and Economics - 143 -

# Studies in Business and Economics

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	is the access to international	
	information system?	
Quality	What is organizational	Structure of revenues; Structure
Strategy's	culture? It is necessary to	of expenditures.
vision of Total	change organizational	
Quality	culture? What is the strategic	
Management	vision to eliminate	
	disturbances in the	
	university? There is a quality	
	strategy? Quality is quantified	
	in the university?	
Managerial	How the university intends to	Income available to faculty;
Strategies	improve the management	Income available to university;
-	system? What are the	Administrative expenses at
	procedures for evaluating	university or faculty; Settlement
	management performance?	between faculties; Distribution of
	How to develop	income and expenditure within
	communication system? How	the faculty departments.
	to improve transmission	
	system and adopting the	
	decision? How to ensure	
	transparency in decision	
	making? How to assess	
	organizational climate? How	
	to improve organizational	
	climate?	
University's	What is curriculum diversity?	Cost of curriculum diversification;
strengths	What is the professional	The cost - benefit for a new
-	experience of the teaching	educational program; Expenses
	staff? What's own editorial	to improve the teaching;
	production? What are the	Promotion and advertising
	priorities of the scientific,	expenses.
	teaching and methodology	
	plan?	
The	What is self-image? What	Structure of revenues; Structure
weaknesses of	resources exist to optimize?	of expenditures.
the university	What activities are	
	ineffective? What are the	
	possibilities of correction of	
	the negative aspects? How	
	can it be avoided in the future	
	occurrence of the negative?	
Potential	What are the areas of	Structure of revenues; Structure
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threats and	competition? How can we	of expenditures.
manifests	achieve a competitive	
	alternative curriculum? How	
	to manage unfair	
	competition? What is the	
	impact of changes in the	
	external environment on the	
	university? What is the	
	relationship of public school -	
	private school?	

### 4. Conclusions

New financial strategy of higher education institutions based on the overall financing provides flexibility in administrative plan and "determined to a considerable extent the economic rationale for the overall strategy of higher education institutions, providing an essential tool and an expression of university autonomy" (Mureşan V., Zaharia S., Stan E., Stan M., 1998).

Based on budgetary autonomy, freedom of universities to design, approve, execute and report its own budget in accordance with the law and its own objectives, main features of the financial strategy are: "achieve a differentiated funding to support research and teaching specializations that may prove competitive, support centers of excellence and departments to ensure a closer relationship with the socio - economic and cultural environment, encouraging initiative and competition" (Mureşan V., Zaharia S., Stan E., Stan M., 1998).

University should be considered an important economic sector with a clear mission to provide training services and scientific research. Modern University uses two very important instruments of management: Institutional Development Strategic Plan "whose objectives are to meet the continuing evolution of civil society and the economy, the aspirations and expectations of students, educational practice guidelines of the Government's overall" (Brătianu I., Lefter V., 2001) and unique university budget, which is the main tool to ensure financial balance, an instrument that reflected the strategic plan of institutional development.

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# THE GLOCAL STRATEGY OF GLOBAL BRANDS

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#### Abstract:

A few years ago, globalization was the new paradigm in international business, however from a branding perspective it has lost its initial efficiency giving the fact that consumers do not seem to feel a connection anymore with the standardized products of global corporations, catered to them in mass marketing communication programs. With their centralized decision making, most companies simply stopped having a connection with the new global marketplace and neglected its emergence. Hence, the influence of local characteristics arose, and with that a new term that encapsulates the global and the local – glocal. "Glocalization" encourages companies to "think global, act local", and they could do so by using the global brand, while localizing certain elements of that brand in order to suit a particular country.

Keywords: global brands, globalization, glocal strategy, glocal marketing.

#### 1. Introduction

In 1983, Theodore Levitt published a provocative Harvard Business Review article entitled "The Globalization of Markets", in which he stated that a new global market, based on uniform products and services, had emerged. He asserted that large scale companies have stopped emphasizing on the customization of their offers to providing globally standardized products that are advanced, functional, reliable and low priced. He argued that informed customers were heading toward a "convergence of tastes"; thus corporations should exploit the "economics of simplicity" and he maintained that the future belonged to global corporations that did not cater to local differences in taste but, instead, adopted strategies that "operated as if the entire world (or major regions of it) were a single entity; such an organization sells the same things in the same way everywhere". If a company forces costs and prices down and pushes quality and reliability up – while maintaining reasonable concern for suitability – customers will prefer its world-standardized products (Levitt, 1983). "Everywhere everything gets more and more like everything else as the world's preference structure

is relentlessly homogenized". In his article, Levitt used a lot of examples that represent the definition of globalization like Coca Cola, Pepsi, McDonald's; and that made the article even more credible.

Indeed, the term globalization was first coined by Levitt in the article stated above, and gained a lot of ground in the economic environment. Although Levitt did not explicitly discuss branding, managers interpreted his ideas to mean that transnational companies should standardize products, packaging, and communication to achieve a least-common-denominator positioning that would be effective across cultures (Holt, Quelch, Taylor, 2004).

But even though for a while selling standardized products and services was a good strategy, the world evolved and customers stopped feeling a connection with the generic products and communications. And now, even the products that were synonyms with 'globalization' took a different approach. For instance, Coca-Cola, the firm often portrayed as the exemplar of the standardized product, has found that it is increasingly standardized strategy had run its course. According to Coca-Cola's former chair Douglas Daft: "The world had changed, and we had not. The world was demanding greater flexibility, responsiveness and local sensitivity, while we were further consolidating decision making and standardizing our practices. The next big evolutionary step of 'going global' now has to be 'going local' " (Ball, 2003). The tuition for Coke learning was its loss of international market share to its competition, both global and local.

# 2. Global, Local and Glocal Strategies

Nowadays, global corporations face difficult decisions regarding what marketing strategy to adopt. Global marketing strategies aim to maximize standardization, homogenization and integration of marketing activities across markets throughout the world. (Kotler, 2009) However, global marketers must address a number of issues in their marketing strategy to ensure their brand will be successful worldwide. Examples of such issues include differences in the economic, political, social and cultural environment around the world.

While the theory of standardization of marketing activities works on a strategic level, it is often not suitable for the richness of detail needed on operative and tactical levels. Most marketing activities will be more successful when adapted to local conditions and circumstances in the marketplace. In this way a pure global marketing strategy is not ideal as it does not take locally related issues into account. Marketers need to understand how their brand is meeting the needs of customers and how successful their marketing efforts are in individual countries (Kotler, 2009).

Multinational marketers face challenges of creating marketing and advertising programs capable of communicating effectively with a diversity of target markets. To assist in this imposing task, various frameworks have been developed to determine the degree to which marketing and advertising efforts should be either globalized or localize, or mixed or combined.

The following table presents a framework that focuses on five marketing strategies available to a firm contemplating doing business on a global basis. A firm might decide to either standardize or localize its products, either standardize or localize its communications programs, or combine the two. The five possibilities that this decision framework considers range from a company incorporating a 'global strategy' (standardizing both product and communication program) to developing a completely 'local strategy' (customizing both the product and communication program) for each unique market (Schiffman, Lazar Kanuk, 2009). In the middle are the two mixed strategies and on the last row the strategies are combines. These three strategies have developed into 'glocal strategies'.

Table 1. A Framework for Alternative Global MarketingStrategies (Adapted from Schiffman and Lazar Kanuk, 2009, p. 472)

PRODUCT STRATEGY	COMMUNICATION STRATEGY		
	Standardized	Localized	
	Communications	Communications	
Standardized Product	Global Strategy:	Glocal Strategy:	
	Uniform Product /	Uniform Product /	
	Uniform Message	Customized Message	
Localized Product	Glocal Strategy:	Local Strategy:	
	Customized Product /	Customized Product /	
	Uniform Message	Customized Message	
	Glocal Strategy :		
	Customized Product / Customized Message		

"Glocal strategy" refers to the idea of "think global, act local", and, as is shown in the table above, it represents a middle way between the global and the local strategies.

#### Table 2. The Maxims for Local, Global and Glocal

Local	Thinking locally, acting locally
Global	Thinking globally, acting globally
Glocal	Thinking globally, acting locally

In other words, successful corporations must develop a **glocal** strategy, by utilizing their global experiences and then customizing and tailoring their services and products in such a way that would appeal to local markets. This should not apply just for product design or communications, as presented above; it has to incorporate branding and all of the seven variables from the marketing mix, whenever possible.



Figure 1. The Formation of Glocalization

A glocal strategy standardizes certain core elements and localizes other elements. It is a compromise between global and domestic marketing strategies. Glocal marketing reflects both the ideal of pure global marketing strategy and the recognition that locally related issues of marketing activities need to be considered. In other words, the concept prescribes that in order to be successful globally, marketing managers must act locally in the different markets they choose to enter. In a global strategy, the corporate level gives strategic direction while local units focus on the local customer differences. (Kotler, 2009)

The term "glocalization" first appeared in the late 1980s in Harvard Business Review articles, written by Japanese economists, and comes from the Japanese word dochakuka. The Japanese ideographs "do", "chaku" and "ka" means respectively "land", "arrive" and "process of" in English. Roland Robertson, who is credited with popularizing the term, describes glocalization as "the tempering effects of local conditions on global pressures" and that it means "the simultaneity – the co-presence – of both universalizing and particularizing tendencies." (Khondker, 2004).

The author Thomas Friedman defines glocalization as "the ability of a culture, when it encounters other strong cultures, to absorb influences that naturally fit into and can enrich the culture, to resist those things that are truly alien, and to compartmentalize those things that, while different, can nevertheless be enjoyed and celebrated as different" (Friedman, 1999). Glocalization, then, seems to be the art of attaining a fine balance of assimilating foreign influences into a society that add to its diversity without overwhelming it.

Foglio and Stanevicius (Foglio, Stanevicius, 2007) define these five items as glocalization;

 a way to supplement globalization and localization synergy ally and strategically;

- a system to manage the approach to the glocal market (global/local market);
- the capacity to remain rooted strongly in the local reality, also facing the global market;
- the chance of articulating in global and local (glocal) key the chain of the value (system of activities
- developed by the enterprise to plan, produce, sell his products or services);
- a method which allows the local or global enterprise to arrive in optimum way respectively to the global or the local market.

For a better understanding of the concepts evaluated in this paper, the following table highlights the differences between globalization, localization and glocalization.

Globalization	Localization	Glocalization	
Definition: "the	Definition: "the	Definition: "providing a global offer	
tendency toward an	process of adapting a	(brand, idea, product, service, etc),	
international integration	product or service to a	while taking local related issues into	
of goods, technology,	particular culture,	account"	
information, labor,	language, developing		
capital, or the process	a local appeal and		
of making this	satisfying local needs"		
integration"			
<ul> <li>Undifferentiation and</li> </ul>	Differentiation -	Utilizing global experiences or a	
convergence in	differences in	global brand name, and	
customer preferences	customer preferences	differentiating the offer in order to	
and income across	and income across	appeal to local markets	
target countries with	target countries	Operates within a global market	
economic development	<ul> <li>Takes into account</li> </ul>	and local market niches	
and trade	specific demand	Integrating both globalism and	
<ul> <li>Takes into account</li> </ul>	<ul> <li>Localism</li> </ul>	localism	
mass demand	<ul> <li>Quality and values</li> </ul>	<ul> <li>Integrating quality and values in</li> </ul>	
<ul> <li>Globalism</li> </ul>	Local brand	a product, that gets sold in large	
<ul> <li>Quantity</li> </ul>	recognition	quantities	
<ul> <li>International brand</li> </ul>	Competition from	<ul> <li>High notoriety of the brand</li> </ul>	
awareness	both successful	A glocal product / service can	
Cost benefits from	domestic products	face competition from both local	
standardization	and international	and international brands in a better	
<ul> <li>Falling costs of</li> </ul>	brands	way because it meets certain local	
trade with greater	<ul> <li>High costs of trade</li> </ul>	needs or preferences, at lower	
globalization	create separate	costs due to the global edge of the	
	markets	company	

#### Table 3: Differences between Globalization, Localization and Glocalization

Phillip Kotler elaborated certain advantages of glocal marketing (Kotler, 2009), as follows:

- Consumers feel that the brand is relevant to them and is tailored to their needs and wants.
- There is harmony and balance between the different levels of marketing activity: strategic, tactical and operative.
- Brands gain greater market share.

In the past years, as sales plunged, global - brand corporations started to pay more attention and listen to their local business partners about how to adapt product attributes and advertising messages to local tastes. Glocal marketing or brand managers have the task of balancing demands from headquarters with those of local branches and taking full advantage of local expertise, knowledge and information. So, some transnational companies began delegating more authority over product development and marketing to local managers, or in other cases, they started developing and promoting local executives to take over local firms.

Meanwhile, U.S. multinationals like Philip Morris and Coca-Cola ramped up their acquisition of local brands—for the same reasons that investors diversify a stock portfolio. Today, two-thirds of Coca-Cola's sales in Japan are from local beverage brands, and the company now owns more than 100 local beverage brands worldwide. In some cases, the global-brand owners are financing totally separate companies. Unilever India, for example, has set up the freestanding Wheel organization as a low-cost enterprise that markets quality, low-priced local brands to the mass market (Quelch, 2003).

Glocal marketing allows for local and global marketing activities to be optimized simultaneously. Nowadays, global companies understand that they often need to customize their products or services to a certain extent (Kotler, 2009).

In the following section, we presented certain glocal tactics, related to glocal strategies, that global corporation undertook in order to adapt and localize in different regions and countries. These examples are developed in connection with the four variables from the marketing mix.

# 3. Glocal tactics, of glocal strategies, developed in connection with the four variables from the marketing mix (Product, Price, Promotion, Distribution)

# Product

 McDonald's, a globalization stereotype, has adapted its global marketing to different regions or countries. For instance, the fast-food chain has beer in its product range in Germany, wine in France, mutton pies in Australia and McSpaghetti in Philippines. Also, it provides Maharaja Mac and Veggie McNuggets in India, which is made of lamb or chicken; the McLobster in Canada and, in Japan, the Ebi Filit-O, a kind of shrimp burger, Teriyaki Burger in Japan / Malaysia, Burger served with rice in Indonesia / Philippines, Samurai Pork Burger in Thaildand, McLaks (grilled salmon) in Norway and McHuero (poached hamburger) in Uruguay.

- Fanta offers country-specific flavours. In Romania 'Fanta Shokata' is available based on the socata, which is a traditional cordial made from elderflower. In China consumers enjoy green apple Fanta, while Portugal and Spain have watermelon Fanta.
- Nokia, a global telephone brand, due to the fact that there is a lot of dust in India that damages the phones, adapted its offers with an anti-dust keypad specially made for that market.
- When Procter & Gamble arrived into the Nigerian market, it introduced products that were differentiated by size. Their Ariel detergents could be bought in sachets, at sizes many families could easily afford. Ariel became very popular and soon other brands introduced sachets, however Ariel remained a favorite among consumer because it provided them with a new choice.
- For the Chinese market, Danone had to change its product base to a less lactosebased yogurt, because the Chinese are lactose intolerant.
- Fashion retailer H&M had to change its product range in the United States, giving the fact that the US male customers were less fashion conscious then their European counterparts.
- There is now a Volswagen car with a compass for pointing towards Mecca and a shelf for the Koran; thus Volswagen is a very popular market within the muslim community, because it acknowledged their culture
- Coca-Cola Japan boasts the richest portfolio of beverages, comprised of sparkling drinks and still beverages such as juices, tea beverage Sokenbicha, canned coffee Georgia, sports drinks Aquarius and water.
- PepsiCo has different snacks in its portfolio, and these tailored to different countries. For example, the most popular snack is the cheese-onions in United Kingdom, the Lemon Lays in Thailand, Paprika Lays in Germany, Sea-food Lays in China.
- Facebook approached the e-market with a 'one-size-fits-all' strategy, but now is facing the realities of cultural difference. In the US the country of origin having lots of friends is culturally acceptable and even encouraged. In Japan however, having more than 50 friends indicates that you are superficial. Therefore, Facebook has lost its lead market position in Japan due to the fact that it did not understand and encapsulate culture into its mass strategy. 'Mixi' is the social networking brand most Japanese people use; it doesn't tell others how many friends you have, it doesn't have a 'like' button and accounts do not display public walls. It meets the cultural requirements. Nevertheless, Facebook plans a defensive strategy and has now set up a team in Japan, considering how to

respond to the digital cultural challenges. This example shows that a glocal strategy may be necessary even in the digital environment.

# Price

'The Spar' uses a glocal strategy involving positioning through price. This brand is
positioned as a low-cost supermarket in Germany, whereas in United Kingdom and
Ireland it provides greater service and store design, and it is positioned as a small,
high-cost convenience store.

# Promotion

- McDonald's had to change its promotion/communications campaign and replace Ronald McDonald clown, because his white face denotes death in China and thus was not a good image to inspire lunch.
- Tesco, too, is adopting a careful local approach towards its expansion overseas. Although it has been happy to trade under its usual name and branding in countries such as Thailand, Hungary and the Czech Republic, when it entered the United States, Tesco did so under the name "Fresh & Easy Neighborhood Market", stressing its local credentials at every opportunity.

# Distribution

- French Louis Vuitton bags are sold from stands in shopping centers in Hong Kong, United Arab Emirates and lately in Romania, because these markets accept this as a valid method of distribution. But, if Louis Vuitton did this in countries such as United Kingdom and continental Europe it could damage the brand's luxury status.
- When H&M entered the US market, it found that by locating in the suburbs it faced too much price competition. And so, adapted its glocal strategy and now it locates its stores in more upscale and downtown locations, where it continues to offer lower prices.

# 4. Conclusion

In this paper we discussed how global brands are rethinking their 'one-sizefits-all' strategy, by approaching a glocalization one. As we have seen, even the major brands that used to represent a standard for globalization, like McDonald's and Coca-Cola, acknowledged the changes and tailored their products, so that they would not lose market share. Glocal marketing attempts to fill the gap between local culture, preference and the globalization of marketing activities, and tries to re-establish the connection between global brands and different cultures. In the end people want both global and local brands – brands that make them feel part of a broader international community, but also brands that root them in their home culture, respect and represent their tastes. Hence, a glocal strategy seems to be the answer.

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# BATIK INDUSTRY OF INDONESIA: THE RISE, FALL AND PROSPECTS

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#### Abstract:

Batik clothes are a society national cultural heritage of Indonesia. In the last four decades has experienced profit, loss and legal intellectual property rights disputes in its business development. It has huge economic income contribution to economy development of Indonesia. The problem of lack of property rights to be implemented has made several losses of income and legal ownership. A better production technology combined together with high cultural philosophical value needs to be paid attention to maintain quality and its exclusivity. The government should be more serious to protect batik craft pattern designers in order ascertain legal ownership product and design through a formal laws confirmations. Batik needs a better and competitive business strategy to win future market globally.

*Keywords:* product, cultural heritage, income, property rights, technology, business strategy, competitiveness, globalization.

#### 1. Background of Informations

The batik industry constitute of one of 14 classified creative industries in Indonesia featuring world famous specific Indonesian nation. Solo Batik Carnival program is an example had been conducted in the year 2009. Such program intend to boost Indonesian society to love their national product heritage, will be able to motivate business sector attracting world demand and investors to start their investment in Central Java Indonesia. The Central Java Batik specifically Batik of Solo riches with design and motive in heritage the royal palace culture or other arts and cultural combination widely potential to be world export to the USA, Swedia, Germany, United Arab Emirate and France.

The creative industry has contribute to gross domestic product (GDP) of Indonesia Rp 104,638 trillion averagely in the year 2002-2006, and absorbed employments 5.4 million averagely per year with its productivity reaching 19.5 million rupiah per worker per year. This worker productivity is higher than Rp18 million per worker national productivity yearly. In the year 2006, the creative industry has exported Rp81.5 trillion or 9.13 percent from total national export (kompas, 2008).

As a part of creative industry, batik design and the batik product is possible continuously develop, the consequence is the intellectual property right should be seriously considered to appreciate batik craftsmanship. Indonesia is rich with culture, it needs to be developed to increase value added. The various culture of Indonesia is an anvil of economic creative development has been developed by the Government of Indonesia to increase export value. In the mean time Indonesia has rank number 43 in the creative economy index ranking published by Economic Forum (WEF,2007).

The Central Java Batik export to USA \$29.3 million in 2007, rise 20.24 percent compare to 2006 of at least \$24.4 million. Such export value is reflecting 36.46 percent from batik total export of Indonesia in 2007 (Disperindag Surakarta, 2008). The technical term of creative economy has already discussed in Indonesia. Pratt (2004) an English creative industry researcher commented that such creative economy phenomena as a new economy. Nevertheless he opposed the use of creative industrial term instead of cultural economy. This term is interesting because cultural economy exploring all economic potential base on expertise and local wisdom. Cultural economy is not always connotating to traditional, retarded, and conservative a difficult condition to develop instead a dynamic, adaptive especially to information technology and communication.

New awakening has emerged to creative industry potential proven able to long existing in the middle of 1996 economic recession and keep developing based on local culture. The Department of Trading of Indonesia has mapping 14 creative industry sectors consist of advertising, architecture, art and antique market, craft, design, fashion, video film and photography, interactive play, music, art show, publishing and printing, computer service and software, television, radio, and research and development. The creative economy contribution to PDB is 4.75% in 2006 approximately Rp170 trillion and 7 percent from total export 2006.

The growth of creative economy has reaching 7.3 percent in 2006, or 5.6 percent greater than national economy of Indonesia. The economic sector can absorb around 3.7 million worker equal to 4.7 percent total worker new absorbance. The big three contributor are firstly fashion contribute 29.85 percent, secondly crafting 18,38 percent and thirdly advertising 18.38 percent. The next contributor is fourthly television and radio, fifthly architecture, sixthly music, seventhly publishing and printing (Disperindag Surakarta, 2007).

Majority previous publish researches of creative industry discussing public policy aspects. The micro aspects as corporate strategy have slightly been studied.

# Studies in Business and Economics

Generally batik industry today is facing many problems among others are similar batik textile product competition illegally imported from China, and even according to Kontan (2008) the illegal imports value is reaching Rp290 billion, such illegal imported batik cheaper due to duty unpaid. Up to the year 2007 the amount of batik industry in Indonesia has reached 48,300 business units and able to absorb 792,300 worker. These industries are spread in various area among others are Middle of Java, Jakarta capital city, Bengkulu. Batik production value today has reached Rp2.9 trillion.

Another problem faced by batik industry or fashion is limited or 10 percent motive had been patented in Indonesia, such condition is prone to product piracy and even done by foreign hijacker, as an example there are many Indonesia batik had been patented in Malaysia (Radar Pekalongan, 2008).

#### 2. Several Theories

McWilliam *et al* (2008) have done creative industry library research published in many international journals, critisize that creative industry creativity is not merely an art expression instead of business model, organizing manner, technology integration, new product and services formulation and commercial knowledge formed as value and marketing. Creativity will sprout up innovation, some aspects of innovation as in: first: technological components comprise of software, new devices, and internet media connection, second: human components as in strategy, business model, institutional legislations and third: content component comprising of character, genre, and esthetics, modes and performance innovation.

Potts and Cunningham (2007) proposing in their research that there is significant correlation between creative industry and national economy. Such dynamic relation shaped in four models influencing creative industry as in welfare that means subsidy given to promote creative industry; competition among the same type of industry or substitution industry; growth which meaning the creative industry measured by creative industry investment growth and policy that drive the creative industry growth; Innovation related with the government policy of research and development.

The researcher proposes his research by comparing creative industry achievements with national economy. The research was using macro economics analysis among countries as Australia, New Zealand and European Union using secondary mathematical data to find out the most significant influencing variables. The research found growth and innovation are the most significant variables influencing countries' national economic specifically in income, employment creations, trading sectors.

The British public policy research done by Pratt (2004), intended to develop the creative industry criticizing the use of creative industry, that creativity is needed by other industry in order to create design and developing the product. Based on such principles the researcher proposed the use of *cultural economy* as an exact term of *creative industry.* The researcher stated that creativity would really driving innovation and entrepreneurship growth. The creativity started from internal organization atomistic and individualistic model. The creativity and innovations need a context to fertile sprout, care and developed to be something useful for the company. Creativity is a process that knowledge and technology are needed which possibly driving novel ideas to emerge.

Cunningham *et al* (2004) had done public policy study focusing the research on digitally based creative industry in Australia regarding innovation approach to develop creative industry. Three main key have the main role developing creative industry in Australia namely research institution, education and training institution, and the government that supporting creative industry development. These three institution oriented should be vigilant in order to develop a structural innovation system which having capacity to support creative industry. Tepper (2002) has secondary data research in the USA that the creative industry growth bigger double than service and financial industry, and even bigger compared to automotive industry, agriculture and aero space industry. Towse (2002) policy study regarding creative industry intellectual property rights aspects. The copy rights power Act to be enacted firstly in the year 1709 adopted later by various countries in the world, not only facilitating transactional aspects but copy rights natural justice.

The copy rights intended to protect ideas expressions and work of written, record, film and software. Meanwhile patent intended to protect ideas, intellectual property rights have done to protect it from free riders namely hijacker, saboteur, imitator etc. This policy research focus on fair use aspects namely the users or society who will using patent product and protected by the property rights should ask for permission from the inventor. The product of creative industry publish by digital media tend to be easier to hijack and easier property rights complicated emergent due to many countries have not ratify property rights yet and weaknesses of property rights violations.

# 3. Public Policy

The socialization and enactment of property rights is important to protect businessmen, branded product because due to lack of laws knowledge genuine product prone to piracy. Various batik motives the heritages of ancient royal family culture of Indonesia have been patented by Malaysia, hence Indonesia found difficulties to sell the product to such country. The protection of property rights actually had already understood long time ago since the Dutch colonial era with the term of "Auteurswet 1912". These laws is continuously to be enacted in accordance to the state laws of Indonesia Undang-Undang Dasar tahun 1945 while waiting new government legislations of Indonesia to be enacted to replace old laws. Nevertheless the Auteurswet 1912 could not be in practice along the colonial era because it could

not be enacted well. The copy rights were not really understood by many business parties because it has considered as the laws of western nations individual party and it has considered exagerate the rights of individual.

The copy rights laws has been known starting from the year 1960 and to be continue with some continuation studies in the 1970 decade. Indonesia has enacted the copy rights law in the year 1982 namely Undang-Undang Nomor 6 Tahun 1982 regarding intellectual copy rights. The rising of copy rights ordinance has considered as very important, hence, it is continuously to be renewed and to be completed. The enacting of Undang-Undang Nomor 6 Tahun 1982 regarding copy rights is opening the concept and Indonesia nation awareness to seriously protecting the copy rights and until the year of 1987 there has been enactment of Undang-Undang Nomor 7 Tahun 1987, Undang-Undang Nomor 12 Tahun 1997 and the last is Undang-Undang Nomor 19 Tahun 2002.

The copy rights is an exclusively rights for the creators or copy rights holder to declare or copying their creations, that automatically occurred after a certain product creation has been created regardless the limitation done by the valid laws. The exclusive rights contains economic rights, a right to have economical benefit of their creation and product right laws and moral rights as in creator rights or the heir to claim parties without his approval nullify the name of creator included in the creations, to include the name of creator in his creation and changing creation contents. These all are showing the correlation between the creators with his creations.

The government of Indonesia through its article number 12, of ordinance of Undang-Undang Nomor 19 Tahun 2002 admit and protecting some activities as in: Books, computer program, book cover of written works published and all result of written works; Speech, extracurricular lecture, lecture, and other creation of one kind; Instruments created for education and scientific needs; Song or music with or without text; Drama or musical drama, dance, choreography, leather puppet, and pantomime; Variety of arts in any forms as in picture drawing, sculpture, carving, calligraphy, etc; Architecture, map, batik, photography, cinematography, translation, interpretation, adaptation, other works of change of forms. This acknowledgement together with limitation of copy rights as arranged in section number 15 intellectual property rights with the requirement to include the sources for the necessity of educations, researches, scientific writing, report writing, critics writing and problem contemplations with the requirement not inflicting loss to anybody, this is also valid for the sake to plea, education speech, gratification shows, non commercial multiplication and so forth. The presidential ordinance of Republic Indonesia No. 28 year 2008 regarding national industrial policy to protect national industry changed to be core industry in the province and region. The creative industry including batik is included for protection of its existence.

#### 4. Competition and Growth

What is the condition of national batik industry of Indonesia today? Quantitatively batik national industry growth is in a good condition at every aspect. Some aspect show such condition as well as; the increase of batik total production in line with increasing market demand, variety of differentiation of product, the increase of total crafters, businessmen or increasing the numbers of batik product users. Nevertheless can it be a strong reason to define that the Indonesia national industry has no problems? According to batik artist Iwan Tirtaamidjaja and Soemarno batik businessman in Solo, East Java, Indonesia stated the development of batik today; though quantitatively continue to increase nevertheless the essence is diminishing continuously from time to time.

These condition has happened because the batik philosophical values is fading, this is mainly happen in some printing batik product that produced have done in any old way perfunctorily just for the sake to supply the market demand. Since the printing technology invented in 1970, the batik print is abundant in the market, nevertheless has a very cheap compared to write batik. These are all because of business competition influence in the batik industry without considering the philosophical values of batik, local wisdom and traditional culture as the main essence of the batik art of Indonesia. The philosophical values and local culture elements in batik tend to disappear. In other words the batik has lost its soul as the unique and high value of cultural heritage of Indonesia. And even some of the write batik businessmen have mixed their batik become *printul*, or printing and hand writing batik the lower value of batik.

Even more in the middle of an open global tight competition, Malaysia have even have already proclaimed back to batik program in the year 2003. In the mean time Malaysia has started a massive promotion of its batik to some countries including France, England, and the USA. Though Malaysia is just start to understand batik product in the year 1920 nevertheless according to Sulaiman Abdul Ghani, the head of Batik International Research and Design Access University of Technology MARA Malaysia, the country has a great efforts to promote its batik in the world, specifically in the Trengganu and Kelantan Malaysia which its batik came from Pekalongan and Cirebon Indonesia as its main source.

Such batik Malaysia industrialized in the year 1950, and since 1960 has an effort to include identity of Malaysia in such batik product. Malaysia is starting to understand canting or tools for making batik as a small dipper used to apply wax in batik process in the year 1970. In the early 1985 the batik of Malaysia buried down due to lack of design innovation and coloring. Nevertheless, now it has already regained its opportunity and even internationally inters continentally expanding (Kompas, 11 Desember 2005). The experience of Malaysia should be a motivator for Indonesia to have better batik strategic planning to develop future batik industry in order to be able better competing globally. When batik is still dominated by the hand writing batik, it is

# Studies in Business and Economics

merely has an important position in the society of Indonesia. The batik motif has meanings, it is not just a creative works of a batik crafter instead of having a highest philosophy background in entire process, product and its motifs. Batik could not be separated from the feodalism life style with its various of symbols embedded in it. Batik is really a high value of cultural art works. Gradually batik entering the common society's life style, hence, this is a responsibility for the next young generation to have it and to wear it. The larger spead of batik user is driving the batik businessmen providing product in variety of price and quality. The kind of batikdevelopment determined by the material development availability in the market and the sort of technology to produce it. Can all kind of batik and the batik works called as an art work? Who is the creators? The designer or the batik laborer as batik doer?

Such development progress internationally should be a motivator to strategic building and managing batik industrial development to face globalization. Hand written batik has an important position in the heart of the society. Batik is an artist's product and having a high philosophical value. Batik also a reflection of Royal and feudalistic society and having various symbols of living, batik is merely a product of art and culture. Now batik has widely already spread entering the large society's living from time to time, hence to be a traditional heritage for the next generation and is a must to have and wear it. The enlarging batik consumers are to motivate businessmen to produce batik with much variety as well as price and quality levels. The batik development progress has determined by the technology and availability and raw materials development. Are all batik and batik works could be called as an art product? Who is the designer or the batik crafter? There is a different definition among batik production with printing or silk screening batik.

Batik mostly has been traded regularly as a regular customer's product or maybe a regular textile. Can the consumer easily identify the real and unreal batik? For this matter the batik expert in Indonesia should be able to formulate such specific definition of batik and not batik. The batik foundation of Indonesia, Department Industry of Indonesia, Department of Culture and Tourism of Indonesia are preparing some ways to protect the real batik. Consumers found difficult to precisely indentify the genuine batik product or not genuine batik with providing information in the specific batik product whether the product is a genuine or not genuine batik product as in hand written batik, printed batik or a combination of both written and printed batik. This effort is limited only to the batik production process. Very difficult to identify how many pieces the certain batik motive or design had been made. The batik user and lovers may identify batik from its designer or the village origin of such batik. With the development of technology automatically changing variety of batik design, as in written batik delicate and rough, printed batik, silk screening and printing or the combination of such batik production process. The basic material aside from cotton called mori, can be also silk, lycra, rayon and polyester physically form as ordinary textile, there are also weaving products produced by using traditional weaving tool or traditional looms called ATBM with using certain patterns.

The weaving looms ATBM have developed with another method the result similar to batik motive. There is also can be found some additional mixed batik with contemporary model with the result called as "banun" or batik tenun or batik weaving. The batik designer has used computers to design some batik motives. The pattern and motive is following consumer's dynamic taste national and internationally called as contemporary batik model. These are reflecting the variety of batik product model. Nevertheless, can all that matter called as batik? Is there any distinction within such things? Can the consumers identify thereal and unreal batik? For these matters the batik experts of Indonesia should be able to create a difference within such batik and unreal batik product. These can be found in an effort to identify batik compare to some products among others are family belongings as in bed cover with Italia, Germany, Spain national soccer team motive or the famous clubs logo. The Adidas international sport equipment has produce a serial of shoes, bags and jackets with batik motives.

Basically there are big scale manufacturer in Solo, Indonesia, its marketing has already international namely: batik Danar Hadi, batik Keris, batik Semar, batik Aneka Sandang, and batik Pria Tampan. Generally such batik manufacturer have started from individual company have grown to be a big and famous batik manufacturer and continued by its next generation heir. Batik Danar Hadi has exported its printed batik to compete with China as well as exporting Moslem batik clothes to the Middle East must compete tightly with batik from African batik and peer batik companies from Indonesia. The hand written batik sold to the USA is not only for clothes purpose but for wall decoration purposes. The development strategy of batik industry should be highly responsive to identify the local or international consumer's product preferences.

The batik industry should focus to fashion and creative motive, aiming at children clothes multi segment, the teen and adults. The batik Keris has exported its product to various countries namely: East Europe, North America, Middle East, Africa, Middle and South America, Asia, West Europe and Australia. Meanwhile the Semar batik has exported its product to Japan, Italia, USA, United Emirat Arab, Dutch and South Korea. Generally the batik Solo industry were not yet able to fulfill huge batik multi demand monthly reflected in following data that in May 2009 Solo batik exports has increased 18%, export volume increased 31% or increasing from 18,924,61 kg in April 2009 total value US\$ 338,743,62 to be 22,417,08 kg in May 2009 total valued about US\$ 444,680,94. The Solo city batik export is approximately 300,000 – 350,000 yard per month, as the US market batik demand mounted more than 700,000 yards monthly, these condition shows the batik fashion industry is not really influenced by global economy crises (Disperindag Solo, 2009). The most favorite batik in USA is tidyed type of batik for quilts purposes.

The marketing pattern of batik big, medium and small batik industry in Solo has used the internet homepage with multi language as in Indonesia and English to reach world markets. Some example is as follows: http://batiklosc5.com Pusat Belanja Batik Pasar Klewer Solo, http://www.rumahbatiksolo.com Rumah batik Solo, http://www.batiklaksmi.com Batik Laksmi Solo, http://www.solobatik.athost.com Batik

# Studies in Business and Economics

Solo, http://id.88db.com some Solo's businessmen exploit the situs of DB.com, http://www.pitoyo.com Batik Pitoyo Solo, http://www.bisnis-surakarta.com the situs of some other Solo batik businessmen, www.danarhadibatik.com situs batik Danar Hadi Solo, www.batik-semar.com situs batik Semar Solo, www.batikkeris.co.id situs batik Keris Solo,

## 5. The Creativity, Innovation and R & D

Today somebody can do batik design with using many software to easier creative and innovative ideas applications. Such software has created by some scholar of Institute Technology Bandung (ITB) and University of Pajajaran (UNPAD) in West Java Indonesia. Pixel People Project with its Bandung Creative City Forum (BCCF). With this software the batik design process is easier and faster. This technology can be implemented in various explorations of batik motives; Batik Fractal Software (J Batik V 2.0) specific batik software designed for batik designer used in Indonesia, eventually variety of batik motif will form math theorems. Such Theorems will be developed more detail hence possibly used to design various new and unique pattern of batik. Almost all of batik pattern have already included in such software to help easier designers in doing batik various new design. For example this software has already used to create various motifs of Pekalongan batik, Garut batik, Yogyakarta and Solo batik. In other side this will strengthen social context of batik as a genuine craft originated from Indonesia not of other country. With such action the other countries claim that batik is their culture legacy in origin would not possibly to happen. Actually the batik is originated from Indonesia cultural heritage.

# 6. Fractal Batik

Indonesia has been known with its bright hand written batik craft with many cultural and natural motives. Such batik pattern can be pattern in various mathematical theorems named Fractal. In simple way Fractal is a math concepts discussing variety pattern of similarity in all scale. The batik pattern in these Fractal theorems can be modified with the help of computers technology to produce various new designs. The design diversity can be identified from graph, color, size, angle and its recurrence. The batik Fractal process can solve the problems of limited batik motif design, and even with high ability to create various simple, complicate and unique batik patterns in a high speed.

The Fractal batik can create many new motives of batik, standard traditional batik conformity can be manage, can be synchronize with industrial engineering, can create other three dimension product with batik theme. The superiority of application

# - 164 - Studies in Business and Economics

potential is appropriate for batik industry or national textile industry and other craft product as in statue, furniture which will explore and implementing the batik motives in its product. All human skill and creativity potential two aspects, it can provide spiritual aspect the mean of vertical relation between human being and its creator and material aspect the mean of horizontal relation between human being with their mankind. Batik is a part of daily mass production in the cloth decoration considering the market segments, it has a horizontal dimension. Nevertheless, batik gives a picture of many symbols regarding philosophical way of life aspects of people. The batik motive "sawat" symbolizing of firmness and determination symbolized by wings, batik motive of "semen" symbolized by several roots of all kind of plants symbolizing fertility, prosperity and entire nature of the universe. With such certain kinds of symbols batik design has another meaning as ethical meaning of wearing clothes. During a wedding party for example the bride and bridegroom are suggested to wear batik type of "sidomulyo" or "sidomukti" which means glory hoping the wedding couple would have a new life of glory, happiness, prosperity, long life and joy the whole life.

The Java traditional batik as in *"larangan"* motive is only permitted to be wear especially by royal family. The *"parang rusak"* motive is a classic example. The Java batik ornaments are really inseparable with the history of royal family. As well as in Europe royal family history including ancient China, the kingdom palace is merely a center of cultural and intellectual development. Nevertheless, nowadays such regulation has already changed more lax due to society's more modern life style development in every aspect and life style of society in all areas, hence the royal tradition life style has changed significantly in many forms, now batik is not only known in royal family environment instead of entire society in Indonesia.

A batik form is merely reflecting the wholeness of works starting from production process, ornamentation, up to its appreciation and the ethics of wearing batik. The meaning of batik cannot be reduced to just to be one of a series of its requirements to be a wholeness of works. An interesting perspective of batik design is because batik has its fractal characteristic in it. Fractal has reflecting a mathematical concept to model variety of things which cannot be modeled by using conventional geometry.

The conventional geometry variety of natural things into even numeral, for example dimension of 1 draws as line form; dimension of 2 draws by using rectangle, triangle and so forth; meanwhile cube, pyramid reflecting a number of 3 dimension. A different has occurred has occurred as stated by a well known scientist Benoit Mandelbrot, in his book The Fractal Geometry of Nature (1984), fractal is showing a contrary concept, the natural form reflecting odd number. Cabbage tread, crimpled paper ball made from crushed paper, smoke, shore line, reflected by odd and fraction numeral dimension. Shore line for example is not form as a line shows number of 1 dimension, and also not a flat dimension reflected a number of 2. These have happened due to orde meter pattern of the shore line by aero photograph have geometrical similarity with the shore long line or orde kilometer. This can be observed in batik design. If we do to and fro, a piece of batik or the whole, it would always spout

## Studies in Business and Economics

similar pattern would compose simple geometrical pattern called fractal. This character has occurred due to batik pseudo algorithmic: drawing huge design called *klowongan*, and then *isen-isen* or put something for content, ended with harmonization to fill up the empty part as explained by batik expert H. Santosa Doellah in his book: Batik The Impact of Time and Environment (2002). The *klowongan* batik and isen-isen batik is a basic motif drawing pattern repeatedly and this would conclude that batik has similarity characteristic in many scale and view patterns.

Nevertheless the fractal characteristic of batik is not only those which has mentioned before. The batik basic motive of basic character also has a fractal characteristic. Basic motive of *"mega mendung"* means the specific batik originated from Cirebon coastal area reflected by clouds, for example, shows pattern that one cloud can be drawn from other smaller clouds. This is the other character of fractal called as iterated function system. Such pattern can be found in many special traditional batik as in the drawing of *sawat*, *lar*, *kawung*, *parang rusak*, and so forth. These basic motives can be reconstructed repeatedly extracting existing patterns with using simple mathematical structural equations.

#### 7. Lycra Batik

Batik is a technique to make variety of decorations with holding the colors temporarily using the help of "malam" or wax. In Indonesia batik naturally has meaning of variety of decorating based upon some motives developed in Java Island. Batik is continuously revolution following the changing of epoch. The motives can be identify from the batik evolution easily adopting social changing in the batik crafters' environment as can be observed in the batik coming from the coastal areas. Even though it was always happening, except of the batik coming from hinterland areas which always maintain its color of "sogan" or brown color domination.

The batik innovation is continuously occurred. Malaysia has ambiguously to produce the hand written batik craft massively with the help of computerized "canting" machines, to overcome the scarcity of batik crafters. Iwan Tirta was the one who introduce "prada" or gold marks on the batik products and batik on the silk. Batik also experienced to be made on wool with the sponsor of Australia organization of wool; nevertheless it has not continued to produce anymore. This is because wool is not a product of Indonesia textile and probably unmatched with the process of batik or because the wool cost is very expensive for Indonesian, hence, the batik crafter or its user is very limited.

Today, a designer of Indonesia named Carmanita conduct a join production with Dupont to create batik on the lycra. Lycra is a kind of fiber founded and produced by Dupont in Delaware USA in the year 1958. When it was firstly founded lycra was used limitedly for lingerie. In the year 1970s, lycra has tried to be wear for sports mainly for swimming. Lycra has elastic characteristic and have the ability reforming perfectly to its original form, because of this characteristic lycra has already accepted massively. In the 1990s decade lycra had already started to be wore as a dress, and mixed with other fibers as in natural fiber or human made synthetic fiber as in polyester.

Another challenge to make batik on the lycra, as we understand lycra is a synthetic fibre with stretch as its main characteristic, mixed with another material as in silk, cotton, polyester with lycra's composition around five percents. The stretch characteristic of lycra has its own consequent in its color absorbability. More than two years have done the research on lycra mixed with other material and to be batik craft, and at least the match formulation of colors, kind, motif and "canting" match for lycra batik had already founded. Many kind of materials for this project among others are mixture of lycra and polyester have been done. The materials "jarring ikan" with full of holes in variety of sizes, color wide to the left and right with using a big size of "canting" the batik crafting process can be executed perfectly.

# 8. The Property Rights

At least not less than 90% from approximately 6.000 batik motifs in batik city of Bengawan have not vet completed with the property rights as the assets of the region. In the year 2008 the Solo city government have planned to register 140 batik motif, following at least 415 another batik motif that have been registered and patented in the period of 2004-2006 (Solopost 25 Juni 2008). According to source of industrial trading and capital investment agency city government of Solo (Disperindag PM, Solo), Sri Wahyuni, the patent motif registration have been started in the year 2004 for 215 batik motif batik and the following year 2006 for at least more than 200 batik motif. Current year with such approximately Rp70 billion coming from city funds, city of Solo has targeted at least more than 140 batik motif. Generally batik crafters patent registration awareness is still low. For the batik motif patent registration registered only 9.2 percent batik motif patent have been registered formally, hence the city government patent registration plan target has not been completed. Actually the patent registration cost is very cheap, it cost only Rp500,000. Nevertheless the process to complete such patent registration is complicated and need a long time to finish the property rights registration, at least it need one year to finish a patent registration. The administration procedures are really long and time consuming. But if the patent mindedness of batik businessmen society's have already aware, it would be good for the city government of Solo to boost the patent registration massively to avoid the specific Solo batik motif to be illegally use in other city except of Solo, or even outside the country of Indonesia intended for illegal individual profit taking motive. To register property rights done on behalf of the city government would be good for the sake of Solo batik crafters; hence batik crafters would not need to worry their batik would be imitated by other businessmen outside city of Solo exploit abuse of famous Solo city batik motif.

The registration on behalf of city government of Solo city is needed to be executed, the batik motif should be admitted originally created by the batik crafters in Solo whether individually or batik crafters as an organization as in batik cooperatives that many existed in city of Solo. The individual batik crafters or batik crafters cooperatives joined together with city government of city of Solo among others are Koperasi Pamong Penguasa Batik Solo, Koperasi Batik Bahari, Koperasi Batik KPN, Forum Kampung Batik Laweyan and Kampung Wisata Batik kauman. The recognition of intellectual property rights would ascertain that batik with certain motif is legally owned by Solo inhabitant.

Outside of the batik motif property rights recognitions, the batik crafters in Solo actually starting to realize the important of property rights. Nevertheless, today the awareness is only limited to trade mark awareness. According the data from Solo city government of industrial and trading affair, 25% batik Solo trade mark has been registered and having legal recognition from the directorate of property rights of the department of judicial affair and human rights of Indonesia.

# 9. Conclusion

The future creative batik industry development has two important dimensions complement each other. It is recognized as a cultural richness, national identity and as a national industrial wealth. Both dimensions are important as the basic to determine the direction of future batik development, without cultural value batik of Indonesia would lost its genuine soul and batik without industrial and technological touch would impossible gain its maximum opportunity. Hence, both dimensions should be in comprehensively united and holistic. Batik is merely sets of philosophy, cultural traditional full with local wisdom and skillful art feeling senses, which exactly would provide additional value for the creative industry of Indonesia. These matters should be comprehensively understood as a huge potential should really continuously to be developed to the future long last existence. As a part of national creative industry, the development of batik industry of Indonesia should have exact and certain directions to be executed, it should have a clear strategic framework to develop. Hence, the creative industry development could be more focusing and directed certainly in terms of its cultural contents, technology, marketing management, information technology, coloring textile industrial technology, production process handling and industrial waste management and human resource management. The technology design an art work full with esthetics value hence the batik quality and class influenced significantly by design quality as its motif.

The technological design in batik industry development is needed to avoid batik monotone patterns and faster to obsolete unfashionable. Batik art work pattern design very significantly influenced by mankind cultural development in their era. For example batik motif in the era of the royal family would certainly different compare to current batik motif. Nevertheless the batik technological design is not directed to strip off older classic motif.

In just the technological design is intended for the batik art would really still beautiful to be look with always following art development era, nevertheless with always discipline defending the batik original source well as a national high value cultural heritage. Hence, the batik philosophy will not wash away swallowed by the savage of civilization.

Hence, actually the technological contemporary design has the complementary role with the original cultural heritage design. To maintain the original cultural heritage design does not mean avoiding creative innovations, nevertheless in just such innovation possibly to be executed with discovering and developing the national cultural heritage roots in variety of batik motif.

The government supports unavoidable and must be executed continuously, this is showing the government concern to Indonesia historical national heritage and now has become a world heritage as written in the government of Indonesia regulation in PP No. 78 tahun 2007 stated that batik has recognized as Indonesia national heritage done by UNESCO through a debate and long struggle. The proactive demeanor should be ultimately done instead of reactive, after Malaysia the neighboring country have done the batik name patent as its part of Malaysia national cultural heritage, then Indonesia become confuse to have socialization of what an important is the batik product patent for the batik crafters in Indonesia. The cultural aspects is also very important as the paradigm and philosophy of batik art work is merely an intellectual property rights, this matter is not easy due to many batik motif without the name of the creators to be included embedded in such batik patterns.

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# PRIORITY MANAGEMENT – A DIRECTION TOWARDS COMPETITIVENESS

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#### Abstract:

In a time when the most of us have to cope with globalization, the key for surpassing the negative effects produced by it, resides in choosing the right strategy. This necessary involves a performance management. Through this paper we propose priority management as an efficient way of thinking about gaining the vital competitive advantage.

Keywords: priority management, the Pareto law, 1-3-6 method, competitiveness, efficiency

# 1. Introduction

Nowadays globalization is often mentioned for designating the correlations between national economies as well as the international economic flows in the background of the world economy.

The internationalization of economic activities represents a higher stage in the development of the above mentioned correlations which contains the world economy, all the countries and all field of activity.

Once integrated in the European Union, Romania must advance on this higher stage of development and this situation is possible just by increasing its competitiveness as well as all the individual components of the national economy.

Considering all this it is clear that we need a viable strategy at a microeconomic level as well as at a macroeconomic level, in order to survive in this competitive environment in an efficient manner through a high quality strategy.

At a macroeconomic level, the representatives of the state should conceive a new national strategy, applicable most efficiently as soon as possible. The state must

interfere in assuring the proper background for the economic development, therefore it must settle a list of priorities.

At a microeconomic level, the entrepreneurs collate themselves with major difficulties in choosing a proper strategy which will assure their companies' survival. The solutions proposed in both cases are multiple and not always applicable considering the limited resources and time that we dispose of.

Considering the fact that resources are limited, the strategy must be based upon establishing a reduced number of objectives which represent real priorities. If these priorities are well determined, the effects will have a bigger positive impact on the achievement of the objectives that were not initially considered a priority.

In the current crisis context, concentrating on the achievement of diverse objectives can lead to inappropriate allocation of the efforts (human, financial and organizational).

According to the Pareto Principle, 20% of the efforts lead to 80% of the effects. On this principle, now more than ever, these efforts that normally would be "lost" must be conserved or redistributed.

Taking into account all this, we propose a new way of thinking: priority management. Priorities represent a way of achieving the objectives. When the priorities are clear and specific, the organizations are aware of the new strategy, the way in which they should allocate resources, energy and time.

Priorities give the organization clarity and concentration. Without priorities, companies tend to do everything and to lose precious resources and energy by implementing measures that are inefficient.

The objectives of the paper are:

- 1. Supporting the utility, efficiency and effectiveness of priority management as a new way of approaching managerial thinking;
- Demonstrating the applicability of priority management at a microeconomic level (case study Apple);
- 3. Demonstrating the applicability of priority management at a macroeconomic level (increasing Romania's competitiveness at a global level).

# 2. Priority management in the contemporary world

Time is perceived and managed differently depending on the culture, company and person. The perception of time always depends on the number and complexity of our daily activities, of their rhythm, of the demands for surviving in a high competitive environment. It is obvious that time is a resource that is never enough or forthcoming in key moments. It is a resource that must be rationalized, controlled and optimized.

The big amount of assignments, the lack of delegation and prioritizing are just a few of the most important problems of the nowadays business environment. The increasing rhythm of life, the big amount of unexpected problems and the pressure of dealing with "urgent" problems have stimulated the creation of a new way of thinking named priority management.

Time management has always been very important but with a vital condition, to marshal time! Nowadays we have to dose time in order to manage the activities that make you gain the competitive advantage. This means setting priorities.

Priority management is a discipline that deals with setting objectives, strategic planning, quality control and project management.

This practice needs a measurable specification of assignments, an objective quantity evaluation of all the strategies. It needs also to be adjusted to the proposed objectives.

Priority management can be applied at a lower scale as well as at a higher scale. We can use this new way of thinking at top management, product planning, technical management, software engineering or systemic engineering. It is a discipline with a high range of applicability.

# The advantages of priority management:

- A lower rate of failure;
- A bigger probability of achieving our objectives;
- · High flexibility of actions when change occurs;
- Flexibility when it come to the usage of resources;
- Increasing efficiency.

#### The disadvantages of priority management:

- It consumes time for documentation;
- · High volume of work for measuring activities;
- Often evaluation activities.

Priority management is necessary for the efficient usage of limited resources. Before taking decisions regarding priorities, we have to collect information about the available resources. Not even foreknowledge or calculations can not accurately foresee the amount of resources we will require. We can't be certain of the budget that we'll receive or the people we'll dispose of for our activities so we can't prioritize correctly before the change process.

We have to wait and see how things are going and prioritize considering current trend. Nature does the same. Our body signals the need of water, food, and sleep on the bases of current data. This is the model we have to use in all types of decision that we take according to priority management.

When selecting priorities, one has to keep in mind 4 criteria: what is important, what is urgent, long term versus short term, realistic versus visionary. If we do not make choices because we have the idea that we can do everything, most of the times the result is not the expected one. We need the moral strength to choose the right equilibrium, knowing that some of the measures will not be so efficient (Covery, 2008).

Making a less good decision when it comes to priorities can have more than one source. It might be the case that the manager is scared to make the selection of just a few priorities, thinking that he could face all challenges.

In most cases it is necessary to choose the most unpopular priorities which implies a selection from an ocean of possibilities.

Managers have to do a slow work which implies sorting and selecting adequate priorities from multiple possibilities. One can settle good objectives and still select priorities wrong. In case you chose badly the objectives, you will have for sure the wrong priorities and your business will be in danger.

A big problem of nowadays managers is project delay. Most managers agree that they are postponing many activities and that is why they do not achieve the desired results. There are methods of combating this delay and implicitly improve the management process for a company. These are called prioritization methods.

# 3. Prioritization methods

The current economic environment is characterized by a series of measures that wait to be applied in order to get out of the economic crisis. Managers as well as persons from the higher levels of society have to ask themselves and find the answers for questions like: do we dispose of the necessary resources for putting in application the strategic plans of recovering after the crisis? Which should be our priorities? Which are the activities that assure the best results in the given situation in a short time? Which are the activities that are not relevant now?

Most of the times, managers take many responsibilities on a short or on a long term. In order to have success or in order to survive on the market, they have to know how to prioritize their activity and how to settle doable objectives.

In order to correctly and efficiently apply priority management it is necessary the utilization of a series of methods that can lead to a result with an immediate applicability.

# The Pareto principle

The **Pareto principle** (also known as the **80-20 rule**) states that, for many events, roughly 80% of the effects come from 20% of the causes.

Vilfredo Pareto observed in 1906 that 80% of the land in Italy was owned by 20% of the population; he developed the principle by observing that 20% of the pea pods in his garden contained 80% of the peas. It is a common <u>rule of thumb</u> in business; e.g., "80% of your sales come from 20% of your clients."

For a manager, the value of the Pareto principle resides in the fact that it reminds him to concentrate on the 20% that matter. From all the things that he does during a day only 20% really matters. Those 20% produce 80% of the results this is why a good manager identifies those 20 % activities.

When the manager is pressured by time or problems, he has to remember to concentrate on the 20 %. If he has to let go of a certain activity in one day, he has to make sure that the certain activity does not make part of the 20% that matter. A manager has not only to work intelligent but work intelligent at things that matter.

# Efficiency versus effectiveness

Efficiency = doing things right

Effectiveness = doing the right things

Many times when it comes to elaborating a strategy people forget about effectiveness and concentrate their effort towards efficiency. Unfortunately no matter that you **do things right**, it is difficult to obtain excellence and competitive advantage if you do not **do the right things**.

The next example illustrates very well the difference between the two terms:

Soviet Union in the 1930's: "due to Stalin's ambition of increasing industrial production, all the factories received objectives that had to be fulfilled. Failure meant punishment, prison or even death. A nail factory received a very difficult assignment: to double their quantity of nail production expressed in kilograms. The objective was fulfilled by producing a smaller number of bigger and heavier nails. The nails were totally useless, but they respected the quantity objective settled by the government. Efficient? Yes! Effective? No!

# The 1-3-6 exercise

The 1-3-6 exercise is an instrument that helps the companies prioritize their objectives. By implementing this exercise, you can prioritize the most important outcome and the actions and measures that you have to implement in order to achieve this outcome. Also with the help of this exercise, we can establish very clearly, which are the things that we have to stop doing for a while, because priority management is a process that works step by step.

1 – The most important outcome that one wants to improve;

3 – The three things that one can do, that would have the most positive impact on improving the most important outcome;

6 – The six things that one has to stop doing in order to have the resources for doing the three things with the most positive impact on achieving the most important outcome.

A company's resources are limited so in order to obtain an efficient activity, it has to use prioritization in the process of allocating these resources.

The biggest problem that managers have to face today is the selection of priorities for the company. Many consultancies have noticed that and they are offering to the companies their services for choosing priorities. This service is most common seen in the U.S. and Canada.

# Studies in Business and Economics

One of the most known consultants in priority management is Dan Coughlin. He holds many seminars each year about the importance of choosing right your priorities and about how you can do that using the 1-3-6 exercise. According to Coughlin, this exercise is a healthy and viable practice for the success of a company.

# The correlation between The Pareto Rule and The 1-3-6 exercise

In our attempt to develop a more efficient instrument that would help us implement the priority management, we correlated the Pareto principle with the 1-3-6 exercise. The main goal for this correlation was to find an efficient method for prioritizing a company's objectives. The use of this method demands the pursuit of 3 steps.

First step: Identifying the primary objective

The Pareto Rule says that a 20% effort leads to 80% from an outcome. When applying this principle, we have to analyze the objectives and to select the one that is producing the most important outcome for us.

The selected objective would represent the 1st from the 1-3-6 method. By correlation it results that this objective leads to 80% outcome.

Second step: Identifying the 3 things that have the most positive impact on improving your primary objective

In this stage we already know the primary objective. Now we have to analyze and to identify the 3 things that can be done in order to improve this objective. By correlation it results that these 3 things are in fact represented by the 20% effort of the company.

Third step: The last step of this method demands the manager's ability to give up 6 things in order to have more resources for doing those 3 things that have the most positive impact on improving the primary objective. These 6 things the manager decides to give up represent the 80% effort of the company which provides only 20% effect, which means a secondary result.

# 4. The applicability of the concept at a micro level - Case study Apple

The Silicon Valley companies are those that have always developed and implemented new management strategies. Bill Hewlett and David Packard have applied management by walking around, an approach that was more focused on the communication between executives and employees. This type of approach developed in the past years, being used by companies which realized that the human resource is their most valuable one. Nowadays, a Silicon Valley company called Google is probably the best example for how to apply this theory in order to obtain excellent results for the company.

Another strategy that appeared in the Silicon Valley is the one that Steve Jobs, CEO Apple uses. In 1997, Apple inc. was managed by another CEO and the

company's financials were getting worse. From a 8% market share in the early 90's, Apple felt to only 3% market share in 1997. Locally in the US the status was slightly better with a market share of 7%, but it was still a bad position for a company that fought for a while with the giant Microsoft.

After Jobs left in the late 80's, the company tried to remain in competition with Bill Gates, but even though they made numerous efforts they failed. In the 90's Apple made many unprofitable investments which have deteriorated the financial status of the company but also it's image. Even so, the Apple brand was still an appreciated one.

The path on which Apple was directed made the board decide to bring back Steve Jobs. He came and did immediately an analysis of the company's status. His first decision was to restructure the management, which according to Jobs was the main reason for the bad times Apple is facing. The big amount of bad investments that generated costs instead of profit, were the main argument for Jobs decision to change the management. His next move was towards to Apple's clients.

First of all, Steve Jobs analyzed the market for Apple products in the US. He wanted to find out for whom are these products relevant, which are the company's clients, what's their structure and why did they remained loyal to Apple.

The collected data has shown that 80% from those working in advertising, webdesign, press or creative content how Jobs called this market segment were using Apple for their applications. Also 64% of the websites were created using Apple products. Another thing that Jobs found out was that more than 60% of the PC's used in education were supplied by Apple, which generated an income of approximately 2 billion dollars.

After seeing all these information, Jobs decided to use a prioritization strategy of the company's efforts. This prioritization implied dividing the clients in 2 parts, professionals and amateur users. After this division, Jobs decided to sell 2 types of products for each category namely laptops and desktops. Of course these products were built accordingly to the user category's requirements. Besides this product segmentation, Jobs dropped out 70% of Apple's projects that were meaning only loss for the company. By doing that he had more resources for following out his prioritization strategy.

Jonathan lve, creation director of the lpod: "We don't make very much stuff. That's a very important part of our approach to what we do which is to not do a lot of unnecessary stuff, but just to focus and really try very sincerely to care so much about the few things that we do. I think that one of the things that we are good at as a team, is gently moving this fragile ideas along a bit so they become just a little more robust and you can actually see what they are."

Jobs realized that he has to focus more on the advantages that Apple still has, so he started to promote the Apple brand because it was still a successful one. The promoting campaign that followed was a total success for the company because it showed to the public that Apple is not dead.

# Studies in Business and Economics

The reports regarding the economic status of the company in the year 1998 have shown the efficiency of Jobs strategy. The company recorded in the first trimester of 1998 a net profit of 47 million \$ after having a net loss of 160 million in the last trimester of the past year. These results speak for themselves and prove that the priority management is a viable and successful strategy for a company.

# 5. The applicability of the priority management concept at a macro level

At the beginning of the XXI century, the world's economy is influenced by the globalization process which has a significant economical, political and cultural impact over all countries. Networks of relationships and dependencies acquire a growing potential to become international and global. Globalization and competitiveness are complementary and this is explained by the speed at which technology is changing, reducing product lifecycle.

According to the World Bank competitiveness is defined as *the set of institutions, policies, and factors that determine the level of productivity of a country.* The level of productivity, in turn, sets the sustainable level of prosperity that can be earned by an economy. In other words, more-competitive economies tend to be able to produce higher levels of income for their citizens.

Increasing the competitiveness has become, in the last decades, a primordial coordinate for the social-economic development strategies of most countries in the world, mainly of the developed ones, of the sector development strategies in national economies and business strategies.

The assertion of the globalization phenomenon, which has enlarged the confrontation arena of the economies, sectors and companies, has emphasized the importance of their competitiveness in gaining a favorable positioning in the international competition, and therefore, has obliged the "players" to take ample measures of stimulating the activity of the determinant factors and of superior capitalization of their effects (Russu, 2008).

A very efficient process through which one can establish the factors that have the most positive impact on increasing the competitiveness position of Romania in the international competition is a specific method of priority management namely the 1-3-6 exercise.

**1** – the main objective towards which all the efforts should be concentrated on is increasing Romania's competitiveness, advancing in the hierarchy made by the World Economic Forum from the 64<sup>th</sup> place in 2009, with an overall score of 4.1.

This is one of the most famous instruments of classifying the countries based on their competitiveness, through which their weak and strong points are identified. This report is based on the Global Competitiveness Index.

The Global Competitiveness Index (GCI) taken into consideration for this report evaluates over 100 countries based on a number of factors that influence the

business environment, grouped in 3 main development stages (factor-driven, efficiency-driven and innovation driven stage). These stages are made up of 12 pillars that not only are they related to each other, but they tend to reinforce each other: institutions, infrastructure, macroeconomic stability, health and primary education, higher education and training, goods market efficiency, labor market efficiency, financial market sophistication, technological readiness, market size, business sophistication, innovation.

It is clear that different pillars affect different countries differently: the best way for Romania to improve its competitiveness is not the same as the best way for US. This is because Romania and US are in different stages of development: as countries move along the development path, wages tend to increase and, in order to sustain this higher income, labor productivity must improve.

Although all 12 pillars matter to a certain extent for all countries, the relative importance of each one depends on a country's particular stage of development. To take this into account, the pillars are organized into three sub indexes, each critical to a particular stage of development.

The basic requirements sub index groups those pillars most critical for countries in the factor-driven stage. The efficiency enhancers sub index includes those pillars critical for countries in the efficiency-driven stage. And the innovation and sophistication factors sub index includes the pillars critical to countries in the innovation-driven stage.

			Table 1.
Sub index	Factor-driven stage (%)	Efficiency-driven stage (%)	Innovation-driven stage (%)
Basic requirements	60	40	20
Efficiency enhancers	35	50	50
Innovation and sophistication factors	5	10	30

The specific weights attributed to each sub index in every stage of development are shown below.

Countries are allocated in stages of development based on two criteria. The first is the level of GDP per capita at market exchange rates. A second criterion measures the extent to which countries are factor driven.

In the 2009 report, Romania was ranked as being an economy in transition from the efficiency-driven stage to the innovation-driven one. Due to this positioning, we have to take into consideration the pillars that form the first two development stages, and further analyze the pillars that characterize the stage we are in now, the efficiency-driven one.

The pillars are: institutions, infrastructure, macroeconomic stability, health and primary education, higher education and training, goods market efficiency, labor market efficiency, financial market sophistication, technological readiness, market size.

3 – the three factors that have the biggest contribution in achieving the main objective have to be selected from the 10 pillars that are relevant for the position hold by our country.

The selection criteria is based on the calculation made based on the rankings and weights offered by the report for each Index and Sub index. (Appendix)

The analysis results indicate the following factors:

Infrastructure

This factor represents a priority because, after the correlation between the weight it had in the GCI and its ranking, it appeared that this factor has a very low contribution (0.27) which positions it on the last place.

Technological readiness
 Although 3 out of the 8 factors that form this pillar are considered a competitive advantage of our country (Appendix), the weak score of the other factors have positioned it on the penultimate place, with an overall contribution of just 0.323.

• Goods market efficiency The 5 out of 15 factors considered a competitive advantage (Appendix) were not enough to influence positive the positioning of this pillar, having a contribution of just 0.357 in the calculation of the GCI.

The scores obtained by these three pillars after our calculations based on the World Economic Forum Report from 2009 are the lowest hence this are the competitive disadvantages with the highest influence over the competitiveness of our country.

- a) An efficient infrastructure is essential for the competitiveness of a country. It is crucial for the proper activity of the economy because the means of transport are the vital link between resources and commercial agents. The efficient ways of transportation for goods, people, services like quality roads, a developed railway system, airports and sea harbors, allow the entrepreneurs to offer their goods and services on the market in real time and also assure the movement of the employees to their work places. The economies are also influenced by the quality offered by the electricity suppliers and also by a telecommunication network that can bear a rapid flux of information which can sustain the business communication and the decision process of the commercial agents.
- b) The technological readiness pillar measures the speed at which an economy increases the productivity of the industries through technological upgrading. In the context of globalization, technology has become a crucial element for the competitiveness and prosperity of the companies, especially the ones that operate in the IT field. In Romania, the technological upgrading is rarely met. In general, the companies run their business with old, inefficient and obsolescence equipments. Moreover, a big drawback in the normal running of
the activity is represented by the lack of equipments which can facilitate the communication and the gathering of information.

c) Goods market efficiency – the countries with an efficient goods market are capable of producing the exact mix of products and services needed to satisfy the demand, as well as to assure their effective trading in the economy. A healthy competition, both domestically and internationally, is important for market efficiency and thus business productivity, as it provides conditions for efficient firms that produce the required goods to be the prevailing ones. The best climate for the exchange of goods requires a minimum intervention of the state in the business environment. Slower economic growth with declining trade and rising unemployment increased the pressure put on the Government to take measures in order to protect the domestic companies. A limitation of the global trade in the case of developing countries would have negative effects on the long-term growth.

The goods market efficiency depends also on the demand conditions such as the consumer's orientation or their sophistication. Due to cultural reasons, in some countries the demand may be higher than in others. This may create a competitive advantage because it forces companies to become more innovative and customer oriented, leading to the implementation of the necessary discipline to achieve market efficiency.

**6** – The six pillars that should not be prioritized have been determined based on their weight in the GCI and their score.

These pillars are the following:

- Institutions,
- Macroeconomic stability,
- Health and primary education,
- Higher education and training and labor market efficiency,
- Financial market sophistication,
- Market size.

The decision of not prioritizing these six pillars is based, on one hand on the assessment of some of them as being a competitive advantage for our country by the World Economic Forum (i.e. market size), and on the other hand on our calculations from Appendix.

According to the 2010 Global Competitiveness Report, Romania has dropped 3 positions in this ranking. The same as in the previous report the infrastructure is still the weakest point for the country's competitiveness, hence the urgent need to prioritize this pillar. Now more than ever it is important to focus on developing the infrastructure, keeping in mind that the economy is showing signs of recovery. Although the analyzed parameters have changed this year, the overall situation of Romania's competitiveness is still badly affected by the condition of the basic requirements that help a country's development. Moreover the crisis has led to the decrease of the GDP per capita with approximately 19%, causing the drop from the transition to innovation stage to the efficiency driven stage.

It is now vital to properly prioritize the main factors that enable us to return in the transition stage to innovation and which will also ensure a sustainable development for Romania.

#### 6. Conclusions

As we have demonstrated the utility of priority management is undeniable. This managerial mindset is a way to avoid the development of strategies based on objectives that cannot be achieved with the resources we have today.

Managers must make a mental work, which involves sorting and selecting appropriate priorities in an ocean of complexity and possibilities.

When selecting priorities they must choose from four criteria: what is important, what is urgent, short term versus and long term and what is realistic versus visionary. If they don't make choices, out of desire to do everything, the result will be confusing. Managers must have the psychological power to choose the right balance, knowing that some measures will not be as effective as others.

The key in the 1-3-6 method is not choosing the three factors that contribute directly to achieving the objective, but identifying and dropping straight the factors that don't have the same positive impact.

At the microeconomic level, using this strategy, companies could exceed the deadlock moments and even more, to streamline operations and develop a performance management. This practice has proved its usefulness several times, as we showed in the case study regarding the American company Apple. They have managed to overcome a difficult moment in the trajectory of business development in 1997 due to the implementation of a restructuring strategy and prioritization of activities.

Recognizing the efficiency of this practice at the microeconomic level, we can implement the same principle at the macroeconomic level. We are aware of the fact that at this level there are several variables that must be taken into account, but with a fair and objective evaluation we are confident that priority management may be viable solution for a healthy economy that increases the competitiveness.

Romania's position in the hierarchy based on the Global Competitiveness Index (GCI) of the Global Competitiveness Report prepared by the World Economic Forum for 2009-2010, reflects both the development stage we are in now, in transition from an efficiency-driven economy to an innovation-based economy and at the same time, provides clear benchmarks in terms of strengths and weaknesses of the national economy. The development of certain key directions identified in terms of contribution to the competitiveness index, will lead to Romania's climbing in the hierarchy of developed countries, namely to advance to the stage of innovation-based economy.

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#### Appendix

Crt. Nr.	Pillars	Pillars' weight	Score	Pillars contribution in the GCI	Ranking
1	Institutions	10%	3,7	0,37	5
2	Infrastructure	10%	2,7	0,27	9
3	Macroeconomic stability	10%	4,6	0,46	2
4	Health and primary education	10%	5,5	0,55	1
5	Higher education and training	8,5%	4,3	0,365	6
6	Good market efficiency	8,5%	4,2	0,357	7
7	Labour market efficiency	8,5%	4,3	0,365	6
8	Financial market sophistication	8,5%	4,4	0,374	4
9	Technological readiness	8,5%	3,8	0,323	8
10	Market size	8,5%	4,5	0,3825	3
11	Business sophistication	5%	3,8	0,19	-
12	Innovation	5%	3,1	0,155	-
Total		100%		4,1	

## INTERNATIONAL INVESTMENTS WITH EXCHANGE RATE RISK: THE CASE OF CENTRAL AND EASTERN EUROPE CURRENCIES

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#### Abstract:

The paper investigates the impact that exchange rate risk has on the risk-return profile of investments in emerging countries. The emerging countries under scrutiny are Czech Republic, Hungary, Poland, Romania, Russia and Turkey, all from Central and Eastern Europe. We examine the importance of currency risk from the perspective of a US dollar based investor, by looking at the contribution that changes in exchange rates of these countries' currencies against the US dollar has for the total risk of investments in these markets, on one hand, and on the correlation between these markets' returns and the US market return. Our analysis spans over an interval between December 2005 and August, 2009, thereby taking into account the exchange rate risk contribution in normal versus turbulent times. We find that exchange rate volatility is not an additional factor for the volatility of CEE markets when returns are denominated in US dollars. In general, exchange rate risk is a positive contributor to the risk of an investment in CEE markets, and that in more turbulent times, as the ones after September 2008, the impact of exchange rate risk is higher than in normal times. Moreover, in financial crisis times we observe that currency risk lowers the correlation between the US market and CEE markets, and does not indirectly increase the risk of a US investment made in any CEE market through the correlation between markets. Therefore, even in turbulent times, portfolio diversification in CEE financial assets may prove beneficial for US investors.

Keywords: Exchange rate, currency risk, international investments, Central and Eastern Europe

#### 1. Introduction

International investments are equivalent to investing in two different assets: the first one is the foreign stock or portfolio and the second one is represented by the foreign currency. Therefore, the actual risks and returns obtained from investing abroad are linked not only to the risk and return of the foreign asset or portfolio, but

#### Studies in Business and Economics

also to the changes in the exchange rate between the foreign currency and the home or reference currency of the investor. As changes in the foreign asset prices influence the risk-return profile of the internationally diversified portfolio, so is the case with changes in exchange rates. In a world dominated by floating exchange rates, either pure or managed, the currency volatility impact on international investments outcome is by no means a minor issue. But evaluating this impact is not a simple exercise, as currency movements influence the volatility of an international investment not only directly, through their own volatility, but also through the link between foreign returns and exchange rate changes. The good news is that, sometimes, this link can actually decrease the total volatility of an investment made abroad, instead of magnifying it.

In a framework of increasing international portfolio investments and of business opportunities diversification at the global level, but also of higher capital market integration, investors critically evaluate the exchange rate risk, particularly when investments are made in emerging markets. These markets are acknowledged to have higher levels of instability, compared to developed markets, and the crises that affected emerging countries in the 1990s, but also the current financial turmoil, have demonstrated that the negative impact of exchange rate fluctuations is seriously felt by international investors. In this context, various studies raised the issue of a "legitimate" risk premium associated to investments in foreign markets that would compensate investors for taking on higher risks than at home.

Research on the links between stock market returns and exchange rate movements has developed since the beginning of the 1980s, with rather mixed evidence, depending on the methodology employed. One set of studies uses arbitrage pricing models to identify the exposure of national stock markets or various industries to exchange rate fluctuations. Aggarwal (1981) is among the first researchers that study stock prices and exchange rates and he finds a significant relationship between the appreciating US dollar and US stock prices, but a few years later Soenen and Hennigan (1988) find an opposite relationship between the two variables. Jorion (1990) examines US multinational corporations exposure to exchange rate risk for a 17 years period and concludes that share prices of these companies are not systematically influenced by changes in nominal exchange rates. Bartov and Bodnar (1994) and Choi and Prasad (1995) confirm Jorion's findings, while Gao (2000) and Koutmos and Martin (2003) seem to detect a more significant link between American companies share prices and changes in the nominal exchange rate of the dollar against various currencies. British companies also display significant exposure, according to El-Masry (2003), but depending to a large extent on the nature of their businesses. Kyimaz (2003) investigates Turkish companies for the period 1991-1998 and finds significant exposures to exchange rate risk, but also variable in magnitude from one industry to another. For the Romanian market, Horobet and Lupu (2005) analyse the January 2000 - October 2005 period and find weak significant exposures of stock returns to the euro-leu and US dollar-leu exchange rate. Horobet and Lupu (2006) extend their analysis to ten CEE countries (Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovenia, Slovakia and Romania) by taking into consideration

changes in these countries' real exchange rates against the U.S. dollar and the euro. The results indicate the lack of contemporaneous and lagged exposures, which may be interpreted as a failure of stock market investors to incorporate changes in the competitive positions of firms in these countries in the stock returns. More recently, Horobet and Dumitrescu (2008) investigated the exposure of national stock markets from four countries in Central and Eastern Europe – Czech Republic, Hungary, Poland and Romania – to nominal and real exchange rate risk, using monthly data over the January 1999 – December 2007 timeframe. They find that companies from the region show contemporaneous and lagged exposure to nominal and real exchange rate risk and that these exposures are of the same type in all countries, suggesting a similarity in the economic structure of these countries in terms of foreign operations activity – exporting versus importing.

In this paper, our approach is different, as we examine the impact of changes in the exchange rates of a number of CEE countries against the US dollar on the riskreturn profile of an investment (supposedly) made by a US investor in these markets equities. Our analysis is directed towards identifying the significance of exchange rate volatility on the total risk of an investment in each of these countries from the point of view of an investor originating in the United States or with the US dollar as reference currency. At the same time, we aim at discovering the contribution that currency risk makes to the correlation between the CEE countries stock market returns, on one hand, and the US market, on the other hand. The correlation between international markets is an important building block of the risk associated to an international portfolio and we are particularly interested in examining it in normal conditions as well as in times of financial turbulences, such as the recent ones.

The paper is structured as follows. Section 2 explains the sources of currency volatility contribution to the risk-return outcome of an international investment, Section 3 presents the data and the methodology employed in this study, Section 4 discusses the main results and Section 5 concludes.

## 2. Currency volatility contribution to the risk-return profile of international investments

The evolution of exchange rates represents nowadays a major source of concern from both a microeconomic and a macroeconomic perspective, given the cvasi-generalised adoption of floating rates since 1973. The exchange rate is one of the most synthetic prices in an economy and it can be considered as the expression of a general equilibrium among the market for real goods and services, the money market and the capital market, which has the obvious potential of influencing the general economic equilibrium in any economy. The diversity of factors that directly or indirectly impact exchange rates raises the issue of the easiness of managing such a complex and dynamic macroeconomic variable. The choice of an optimal exchange rate regime

#### Studies in Business and Economics

is still an unresolved question of international macroeconomics, as the history of international finance shows. From the band fixed exchange rates in the '40s, '50s and '60s, countries have gradually moved towards more flexibility in their exchange rates, but a number of "intermediate regimes" have been employed at the international level with the aim of better accommodating a country's specificity with the exchange rate policy. Nevertheless, the currency crises that occurred in the last two decades - we refer to the Mexican peso crisis (1994), Asian crisis (1997-1998), Russian crisis (1998), Brazil crisis (1999) and Argentina crises (2000-2002) - have generated a growing support for clear-cut exchange rate regimes – such as hard pegged rates or free floating rates -, considered more appropriated in the current framework of higher financial integration fuelled by unprecedented capital mobility at the global level.

The impact of exchange rate fluctuations is felt at the level of risk and return for any investment made abroad, in a different currency than the reference currency of the investor. Jorion (1985), Levy and Lim (1994), Eun and Resnick (1994) and, more recently, Bugar and Maurer (2002) have shown that investors that do not control for the uncertainty associated to exchange rate movements are in the difficult position of obtaining gains from international investments that do not exceed the costs attached to holding assets abroad. The explanation resides in the correlations between exchange rates, which are not sufficiently small to provide investors with enough input for achieving good diversification in an international portfolio.

The rate of return that an investor obtains from holding a foreign asset can be decomposed in three parts: the income provided by any cash flows received during the holding period ( $CF_{t/t-1}$ ), the capital gain or loss provided by the changes in the price of the foreign asset and the currency gain or loss. Specifically,

$$r^{HC} = \left[1 + \frac{(P_t^{FC} - P_{t-1}^{FC}) + CF_{t/t-1}^{FC}}{P_{t-1}^{FC}}\right] \times (1+s) - 1$$
(1)

where  $P_t^{FC}$  and  $P_{t-1}^{FC}$  denote the prices in the local currency of the foreign asset at moments *t* and *t-1*, respectively,  $CF_{t/t-1}^{FC}$  is the cash flow provided by the foreign investment, also in the local currency (it can be either a dividend or an interest), and *s* is the change in the exchange rate of the foreign currency against the home currency of the investor (the US dollar is quoted in a direct basis). Equation (1) may be rewritten in the following manner:

$$r^{HC} = r^{FC} + s + (r^{FC} \times s) \tag{2}$$

where  $r^{HC}$  is the return in the home currency of the investor,  $r^{FC}$  is the return of the investment in the foreign asset in local currency terms, and *s* is the change in the exchange rate between the two currencies. Since typically the product  $(r^{FC} \times s)$  takes small values, it is ignored for most computations of the return and risk. One may easily observe that exchange rate changes have the potential of either increasing or decreasing the return that is finally available to an investor: when the foreign currency appreciates against the home currency of the investor, this magnifies the return in the

foreign currency; the reverse is true in case of a depreciation of the foreign currency against the currency relevant to the investor.

The risk of an asset is also different when measured in different currencies. If we ignore the cross-product  $(r^{FC} \times s)$ , we can prove that the variance of a return measured in the home currency of the investor equals the variance of the sum of the local currency return and of the exchange rate movement:

$$\operatorname{var}(r^{HC}) = \operatorname{var}(r^{FC} + s) = \operatorname{var}(r^{FC}) + \operatorname{var}(s) + 2\operatorname{cov}(r^{FC}, s)$$
(3)  
or

$$\operatorname{var}(r^{HC}) = \operatorname{var}(r^{FC}) + \operatorname{var}(s) + 2\operatorname{corr}(r^{FC}, s)\sigma(r^{FC})\sigma(s)$$
(4)

where  $\operatorname{var}(r^{HC})$  is the variance of the return measured in the home currency of the investor,  $\operatorname{var}(r^{FC})$  is the variance of the return measured in the foreign currency,  $\operatorname{var}(s)$  is the variance of exchange rate changes,  $\operatorname{cov}(r^{FC},s)$  is the covariance between the return in the foreign currency and exchange rate changes,  $\operatorname{corr}(r^{FC},s)$  is the correlation between the return in the foreign currency and exchange rate changes,  $\sigma(r^{FC})$  is the standard deviation of return measured in the foreign currency and  $\sigma(s)$  is the standard deviation of exchange rate changes. As the correlation is never greater than 1, the foreign asset risk and the currency risk are no additive, and we can prove that  $\sigma(r^{FC}) \neq \sigma(s)$ 

$$\sigma(r^{n_{\mathcal{C}}}) \le \sigma(r^{n_{\mathcal{C}}}) + \sigma(s) \tag{5}$$

The difference between  $\sigma(r^{HC})$  and  $\sigma(r^{FC})$  is called the contribution of currency risk to the risk of an international investment and it largely depends not only on the exchange rate volatility, but also on the link between the exchange rate and the foreign asset returns. There are a few noteworthy points regarding the overall impact of currency risk on an international investment. First, currency fluctuations affect both the total return and the volatility of any foreign-currency denominated investment and, from time to time, the effects of currency fluctuations on the investment return may exceed the capital gain or income, especially over short periods of time. At the same time, empirical studies indicate that currency risk, as measured by the standard deviation of the exchange rate movement, is smaller than the risk of the corresponding stock market. Second, the exchange risk of an investment may be hedged for major currencies by selling futures or forward currency contracts, buying put currency options, or even borrowing foreign currency to finance the investment, therefore currency risk can be easily eliminated in international investment strategies and does not represent a definite obstacle for international investments. Third, the contribution of currency risk should be measured for the total portfolio rather than for individual markets or securities, because part of that risk gets diversified away by the mix of currencies represented in the portfolio, as Biger (1979) and Giovannini and Jorion (1989) show. Fourth, the contribution of currency risk decreases with the length of the investment horizon, so an investor with a long time horizon should care less about currency risk than an investor who is concerned about monthly fluctuations in the portfolio's value.

#### 3. Data and research methodology

We use daily data on stock indices and exchange rates between December 1<sup>st</sup>, 2005 and August 31<sup>st</sup>, 2009. We employ the stock market indices from six CEE countries, namely Czech Republic, Hungary, Poland, Romania, Russia and Turkey, and a stock market index for Unites States. All indices are collected from the Morgan Stanley Capital International (MSCI) Database in local currencies and US dollars (USD). The exchange rates against the US dollar are collected from the Pacific Exchange Rate Service. The following time series are calculated from the data: logarithmic rates of return in local currencies, logarithmic rates of return in US dollars, logarithmic exchange rates changes, and measures of market correlations.

In order to distinguish between the impact of currency fluctuations on the riskreturn profile and on market correlations in normal as compared to turbulent times, we split the whole period in a number of 45 months, aiming at studying the time-varying attributes of stock market returns and risks, currency volatility and correlations.

To measure the extent to which the local markets volatilities and correlations with the US markets are influenced by exchange rate fluctuations, we first decompose the US dollar returns obtained in CEE markets as following:

$$r_{t}^{USD} = \ln P_{t}^{FC} S_{t}^{USD/FC} - \ln P_{t-1}^{FC} S_{t-1}^{USD/FC} = \ln (P_{t}^{FC} - P_{t-1}^{FC}) - \ln (S_{t}^{USD/FC} - S_{t-1}^{USD/FC})$$

$$= r_{t}^{FC} + S_{t}^{USD/FC}$$
(6)

where  $r_t^{USD}$  is the return in the CEE markets denominated in US dollars,  $P_t^{FC}$  is the CEE stock market index at time t, denominated in local currency units,  $r_t^{FC}$  is the local currency denominated return in the CEE stock market at time t/t-1,  $S_t^{USD/FC}$  is the exchange rate of the CEE currencies against the US dollar, and  $s_t^{USD/FC}$  is the exchange rate fluctuation of the CEE currencies relative to the US dollar at time t/t-1. Equation (6) shows that the return obtained by a US investor in CEE markets is composed of the return in the local currency and the exchange rate fluctuation.

Moving to the risk of an investment made in CEE stock markets, we compute the variance of returns as in equation (3), as follows:

$$\operatorname{var}(r^{USD}) = \operatorname{var}(r^{FC}) + \operatorname{var}(s^{USD/FC}) + 2\operatorname{cov}(r^{FC}, s^{USD/FC})$$
(7)

The proportion of US denominated CEE returns' volatility attributable to exchange rate fluctuations, which we denote by  $\lambda$  (lambda), may be computed as the following:

$$\lambda = \frac{\operatorname{var}(s^{USD/FC}) + 2\operatorname{cov}(r^{FC}, s^{USD/FC})}{\operatorname{var}(r^{USD})} = 1 - \frac{\operatorname{var}(r^{FC})}{\operatorname{var}(r^{USD})}$$
(8)

Equation (8) shows that the proportion of CEE markets volatility that is explained by changes in the local currencies exchange rates against the US dollar depends not only on the volatility in the foreign exchange market, but also on the covariance of the CEE stock market returns and exchange rate changes. This implies that the exchange rate volatility will not necessarily induce more volatility in the returns available to foreign investors, due to the value and sign of the covariance. The contribution of exchange rate volatility to the risk of a foreign investor in CEE markets depends on the ratio between the covariance and the variance of exchange rate changes. More specifically,

if  $\frac{\text{cov}(r^{FC}, s^{USD/FC})}{\text{var}(s^{USD/FC})} > -0.5$ , exchange rate fluctuations represent an additional source

of risk for the investors. Conversely, if  $\frac{\text{cov}(F^C, s^{USD/FC})}{\text{var}(USD/FC)} \le -0.5$ , exchange rate

fluctuations do not contribute to the volatility of returns in the home currency of the investor. We observe the evolution of  $\lambda$  for the entire period and for each of the 45 months in the interval.

Besides of the interest a foreign investor might have in investing in a CEE market per se, it would be also relevant to analyze the contribution that exchange rate risk has on the correlation between the respective market and the home market, presuming a desire to diversify the risk in the home market by investing abroad. We study this contribution starting from the correlation coefficient between the return in CEE markets denominated in the home currency of the investor,  $r_r^{USD}$ , and the return

obtained by the investor in his home market, denominated in US dollars,  $r_t$ :

 $\rho(r_{t}^{USD}, r_{t}) = \frac{\operatorname{cov}(r_{t}^{USD}, r_{t})}{\sigma(r_{t}^{USD}) \times \sigma(r_{t})} = \frac{\operatorname{cov}((r_{t}^{FC} + s_{t}^{USD/FC}), r_{t})}{\sigma(r_{t}^{USD}) \times \sigma(r_{t})} = \frac{\operatorname{cov}(r_{t}^{FC}, r_{t}) + \operatorname{cov}(s_{t}^{USD/FC}, r_{t})}{\sigma(r_{t}^{USD}) \times \sigma(r_{t})} = \frac{\operatorname{cov}(r_{t}^{USD}, r_{t}) + \operatorname{cov}(s_{t}^{USD}, r_{t})}{\sigma(r_{t}^{USD}) \times \sigma(r_{t})} = \frac{\operatorname{cov}(r_{t}^{USD}, r_{t})}{\sigma(r_{t}^{USD}) \times \sigma(r_{t})} = \frac{$ 

$$\phi = \frac{\operatorname{cov}(s_t^{USD/FC}, r_t)}{\sigma(r_t^{USD}) \times \sigma(r_t)} \div \rho(r_t^{USD}, r_t) = \frac{\rho(s_t^{USD/FC}, r_t) \times \sigma(s_t^{USD/FC}) \times \sigma(r_t)}{\rho(r_t^{USD}, r_t) \times \sigma(r_t^{USD}) \times \sigma(r_t)} = \frac{\rho(s_t^{USD/FC}, r_t) \times \sigma(s_t^{USD/FC})}{\rho(r_t^{USD}, r_t) \times \sigma(r_t^{USD})}$$

Equation (10) allows us to observe that for given values of  $\rho(r_t^{USD}, r_t)$ , the values of  $\varphi$  depend on the correlation between US market returns with the change in the exchange rate of the US dollar against the local currencies from CEE, on one hand, and the ratio between the exchange rate volatility and the volatility of the CEE market return denominated in US dollars. As in the case of  $\lambda$ , we observe the evolution of  $\varphi$  for the entire period and for each of the 45 months in the interval.

#### 4. Results and discussion of findings

Figure 1 shows the performance of an investment of one US dollar made in December 1<sup>st</sup>, 2005 until August 31<sup>st</sup>, 2009, in terms of monthly returns, in all the six CEE markets and, for comparison, in the United States.

For a US dollar based investor, an investment in the US market would have brought the highest cumulative return until the end of 2008, when the collapse in US stock markets made the investment of 1 USD to have only a value of 0.71 USD approximately. At the end of 2008, all the six CEE markets were able to provide a US investor with a higher cumulative return than the one obtained in the US market. The highest cumulative value at end of 2008 would have been obtained in the Hungarian market (1.2737 US dollars) and the lowest (0.7842 US dollars) in the Czech Republic. However, until August 2009 the investment in the US market recovered its lack of performance, as the cumulative value of a 1 US dollar investment, although it indicates an overall loss, was 0.7834 US dollars, higher than the cumulative value of an investment made in the Czech Republic (a cumulative value of 0.5915 USD) and in Turkey (a cumulative value of 0.7027 USD). It is interesting to note that in August 2009 the impact of the current financial crisis was largely present, as no market would have been able to provide the US investor a cumulative value of his investment higher than the initial 1 USD.



Figure 1. Cumulative value of a 1 US dollar investment in CEE markets, December 2005 – August 2009

*Note*: US – United States, CZ – Czech Republic, HU – Hungary, PL Poland, RO – Romania, RU – Russia, TR -Turkey

Another perspective on the performance of investments in CEE markets is provided by Table 1, which presents the values of mean daily returns, standard deviations, skewness and excess kurtosis, for stock market returns in local currencies, in US dollars and for the exchange rates against the US dollar. Overall, investments made in all CEE markets provided the US investor with small mean daily returns and comparable with the investment in the US market. Still, for four markets (Czech Republic, Hungary, Poland and Romania), the returns in USD are positive, while for the other two (Russia and Turkey) the returns are slightly negative. In terms of risk, the market that is the riskiest from the US investor's perspective is Hungary (with a standard deviation of daily returns of 0.0115), followed by Poland and Turkey. At the other end, the market with the lowest risk was Russia, followed by Romania. Another interesting point refers to the skewness of daily returns: except for Czech Republic, a US investor would obtain negatively skewed returns, actually similar to the ones in US. This is not necessarily good news from the US investor perspective, as positively skewed returns are searched for by all investors. The kurtosis values, as skewness values, indicate non-normality of returns and leptokurtic distributions in local currencies and in US dollars, thus confirming previous research on capital markets return attributes.

 Table 1. Descriptive statistics of stock

 market returns and exchange rate changes

	MSCI US (USD)	MSCI CZ (CZK)	MSCI HU (HUF)	MSCI PL (PLZ)	MSCI RO (RON)	MSCI RU (RUB)	MSCI TR (TRL)
Mean							
return	-0.0002	0.0000	-0.0003	-0.0002	-0.0005	-0.0003	0.0001
Standard							
deviation	0.0166	0.0196	0.0226	0.0191	0.0237	0.0315	0.0219
Skewness	-0.2214	-0.5184	-0.0095	-0.1695	-2.6767	-0.4421	0.0102
Kurtosis	8.6583	12.8729	6.4644	1.9395	35.6665	13.5763	2.5050
		MSCI CZ	MSCI HU	MSCI PL	MSCI	MSCI RU	MSCI TR
		(USD)	(USD)	(USD)	RO	(USD)	(USD)
					(USD)		
Mean return	1	0.0003	0.0001	0.0002	0.0001	-0.0001	-0.0001
Standard de	eviation	0.0093	0.0115	0.0110	0.0085	0.0058	0.0109
Skewness		0.4192	-0.0321	-0.0271	-0.8392	-2.0798	-0.5891
Kurtosis		4.6352	4.6032	5.4579	5.5702	25.3685	6.3803
		USDCZK	USDHUF	USDPLZ	USDRO	USDRUB	USDTRL
					N		
Mean return		-0.0004	0.0002	0.0001	0.0005	0.0004	0.0000
Standard deviation		0.0242	0.0295	0.0258	0.0271	0.0338	0.0294
Skewness		0.1147	-0.0128	0.1614	1.9098	0.4817	0.1813
Kurtosis		12.3728	7.8399	4.0499	21.9832	11.4855	3.2344

*Note:* CZK – Czeck Koruna; HUF – Hungarian Forint; PLZ – Polish Zloty; RON – Romanian leu; RUB – Russian Ruble; TRL – Turkish Lira

When we look at the exchange rate volatility and we compare it with the volatility of the local stock markets, we observe that all exchange rates have standard deviations of their changes that are higher than the standard deviations of the local markets returns. Nevertheless, this exchange rate volatility does not seem to be an additional factor for the volatility of CEE markets when returns are denominated in US dollars: with no exception, the volatility of an investment made in CEE markets over the December 2005-August 2009 period was lower for a US investor than for a local investor, since the standard deviations of all CEE markets returns in USD are lower than the standard deviations of the markets in local currencies. This result points towards the significance of exchange rate volatility for an international investor and tells us that its influence on the risk from a US based investor is small, even negligible.

Apart from the values of standard deviations for local returns compared to the US market we were interested, as mentioned in Section 3, in investigating the effective contribution that the volatility of the local currencies exchange rate fluctuations has on the CEE market returns denominated in US dollars. As indicated by equation (8), the proportion of local market volatility explained by changes in the local currency exchange rate depends not only on the volatility in the foreign exchange market, but also on the covariance between local market returns and exchange rate changes. Ultimately, the contribution of exchange rate volatility to the risk of a foreign investor in any CEE market depends on the ratio between the covariance and the variance of exchange rate changes; when the covariance is negative and higher in value than the variance of exchange rate changes, the foreign exchange risk has a negative contribution to the overall risk, thereby reducing the risk in US dollars from an investment in a CEE market.

Figure 2 shows the values for the  $\lambda$  parameter for an investment in Czech Republic, Hungary and Poland, while Figure 3 shows the values for Romania, Russia and Turkey, computed for each of the 45 months in the interval. We observe for all currencies the fluctuating values of lambda and, in general, its positive values, with just a few exceptions: for the CZK negative lambdas were recorded for September 2006, December 2006, April 2007 and August 2007, for the HUF in April 2006, for the PLN in April 2006, December 2006 and July 2008, for the RON in December 2005, April 2007 and January 2009, and for the RUB in September 2006, December 2006, February 2007 and April 2007.



Figure 2. Lambda values for Czech Republic, Hungary and Poland, December 2005 – August 2009



Figure 3. Lambda values for Romania, Russia and Turkey, December 2005 – August 2009

Table 2 presents the average lambda values for all currencies against the USD for the overall period, as well as for two sub-periods, chosen in such a manner as to offer a view on the influence of financial crisis on lambda: the first sub-period covers the December 2005 – September 2008 interval, and the second covers the October 2008 – August 2009 interval. We observe that average lambdas are positive for the overall period and also for the two sub-periods, but they are higher for the second sub-period than for the first one. This means that, in general, exchange rate risk is a positive contributor to the risk of an investment in CEE markets, and that in more turbulent times, as the ones after September 2008, the impact of exchange rate risk may be higher than in normal times.

	CZK-	HUF-	PLZ-	RON-	RUB-	TKL-
	USD	USD	USD	USD	USD	USD
Average for Dec.						
2005 – Aug. 2009	0.2637	0.3514	0.3161	0.2312	0.1174	0.3813
Average for first sub-						
period: Dec. 2005 –						
Sept. 2008	0.1944	0.3233	0.2525	0.2103	0.0792	0.3555
Average for second						
sub-period: Oct. 2008						
– Aug.2009	0.4779	0.4383	0.5126	0.2960	0.2356	0.4611
Maximum value of						
lambda	0.6837	0.5862	0.6444	0.8650	0.3915	0.6681
Minimum value of						
lambda	-0.3034	-0.0034	-0.0914	-0.1730	-0.1354	0.0816

#### Table 2. Lambda values, 2005-2009

As an international investor is interested in diversifying asset holdings, it is relevant to analyze the contribution of exchange rate risk to the correlation between CEE markets and the home market of the investor. The parameter  $\phi$ , defined in Equation (10) shows the contribution of exchange rate volatility to the correlation between the two markets; the average values of this parameter for the 45 months covered in our analysis, as well as for the two-subperiods (before and after the outburst of the financial crisis in October 2008) is shown in Table 3. The results are interesting and bring good news for an American investor: except for CZK for the overall period and for RUB for the first sub-periods, all  $\phi$  values are negative, which indicates a negative contribution of exchange rate risk to the correlation between CEE markets and the US markets, thus making CEE markets a worthy adding to a US portfolio of securities. For what concerns the differences between the two sub-period, we cannot draw a clear-cut conclusion for all markets, as  $\phi$  values are lower for some markets (Hungary and Poland) and higher for other markets (Czech Republic, Romania, Russia and Turkey). Nevertheless, in financial crisis times we observe that all  $\phi$  values become negative, which means that currency risk lowers the correlation between the US market and CEE markets, and does not indirectly increase the risk of a US investment made in any CEE market through the correlation between markets.

	CZK- USD	HUF- USD	PLZ- USD	RON- USD	RUB- USD	TKL- USD
Average for Dec. 2005 – Aug.						
2009	0.0432	-0.9570	-0.1483	-0.2790	-0.0209	-0.1850
Average for first sub-period:						
Dec. 2005 – Sept. 2008	0.1600	-1.1798	-0.1555	-0.2127	0.0105	-0.1418
Average for second sub-						
period: Oct. 2008 – Aug.2009	-0.3176	-0.2686	-0.1260	-0.4839	-0.1180	-0.3185
Maximum value of lambda	6.7838	11.7454	7.8244	2.3649	0.7770	3.8769
Minimum value of lambda	-4.6364	-44.1456	-8.2117	-2.2646	-1.0208	-1.1234

Table 3. Phi values, 2005-2009

Figures 4 and 5 show the  $\phi$  values for all the 45 months in our time interval, presenting a different picture as in the case of lambda. For three countries – Czech Republic, Hungary and Poland –  $\phi$  values are rather stable in time, in just a few months taking high negative values. For the other three countries we see a more fluctuating evolution of  $\phi$ , with more positive values but also with more negative values as compared to the first three countries.



#### Figure 4. Phi values for Czech Republic, Hungary and Poland, December 2005 – August 2009

#### 5. Concluding remarks

Our paper examines the impact of changes in the exchange rates of a number of CEE countries currencies against the US dollar on the risk-return profile of an investment made by a US investor in these markets equities. Our analysis is directed towards identifying the significance of exchange rate volatility on the total risk of an investment in each if these countries from the point of view of an investor originating in the United States or having the US dollar as reference currency. At the same time, we aim at discovering the contribution that currency risk makes to the correlation between the CEE countries stock market returns and the US market. The correlation between international markets is an important building block of the risk associated to an international portfolio of assets and we are particularly interested in examining it in normal conditions as well as in times of financial turbulences, such as the recent ones. We use daily data on stock indices and exchange rates over the December 1<sup>st</sup>, 2005 and August 31<sup>st</sup>, 2009. We employ the stock market indices from six CEE countries, namely Czech Republic, Hungary, Poland, Romania, Russia and Turkey, and a stock market index for Unites States.



Figure 5. Phi values for Romania, Russia and Turkey, December 2005 – August 2009

We find that for a US dollar based investor, an investment in the US market would have brought the highest cumulative return until the end of 2008, when the collapse in US stock markets made the investment of 1 USD to have only a value of 0.71 USD approximately. At the same time, at the end of 2008, all six CEE markets were able to provide a US investor with a higher cumulative return than the one obtained in the US market. When we look at the exchange rate volatility and we compare it with the volatility of the local stock markets, we observe all exchange rates have standard deviations of their changes that are higher than the standard deviations of the local markets. Nevertheless, this exchange rate volatility does not seem to be an additional factor for the volatility of CEE markets when returns are denominated in US dollars.

In general, exchange rate risk is a positive contributor to the risk of an investment in CEE markets, and that in more turbulent times, as the ones after September 2008, the impact of exchange rate risk is higher than in normal times. For what concerns the indirect contribution of exchange rate risk to the risk of an investment made in CEE markets through the correlation between markets' returns, our results bring good news for an American investor: except for CZK for the overall period and for RUB for the first sub-periods, we find a negative contribution of exchange rate risk to the correlation between CEE markets and the US markets, thus making CEE markets a worthy adding to a US portfolio of securities. Moreover, in financial crisis times we observe that currency risk lowers the correlation between the US market and CEE markets, and does not indirectly increase the risk of a US investment made in any CEE market through the correlation between markets.

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## STUDY REGARDING THE EFFICIENCY OF PUBLIC SPENDING ON EDUCATION AT EU LEVEL THROUGH BENCHMARKING

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#### Abstract:

The objective of this paper is to review the efficiency of public expenditure for education in Romania compared to other EU countries, and to the EU average. Thus we proceeded to a benchmarking analysis. In order to perform an analysis of public spending efficiency for education by benchmarking at the EU level, representative indicators must be chosen in order to quantify the volume of efforts and effects. The effort of education was represented by public expenditure on education as percentage of GDP, and the effects took the form of a composite indicator consisting of 19 sub-indicators. If the public sector effort was relatively easy to quantify, the effects involve a deeper analysis and determine the limitations of this study. The conclusion is that either the level of funding in Romania is oversized compared to its effects, or resources were not used properly in accordance with the principles of performance. It would be foolhardy to suggest increased funding for education, when the analysis carried out shows that the volume of financing is not the problem, but towards the use of funds.

Keywords: public sector, education, efficiency, benchmarking

#### 1. Introduction

Measuring efficiency and effectiveness in education is particularly important considering that resources are often limited while the need for such resources is often limited. These concepts are used to monitor and assess how well resources are used in education and to create a priority in the use of such resources. There are a number of techniques are often used to measure the efficiency of educational systems, such as: estimates based on regression or parametric methods, non-parametric methods, cost-benefit analysis, cost-effectiveness analysis, measurement of rate of return in education.

a) Parametric methods used in measuring the efficiency of educational system:

- Ordinary Least Squares (OLS): is one of the methods involving parametric regression analysis. OLS analysis places a line which minimizes the sum of squared vertical distances from observed output.

- Stochastic frontier analysis (SFA). A very common parametric approach is the Stochastic Frontier Analysis (SFA). It is a statistical method based on econometric models. This approach assumes a specific functional form for the relationship between input and output. The advantage of this method is that it is able to cover the effects of exogenous shocks, i.e. nondiscretionary factors. The model can specify the equations based on such assumptions (Mandl et al., 2008, p. 9; Aleksander Aristoynik, p.6).

#### b) Non-parametric methods: Data Envelopment Analysis (DEA)

The DEA methodology assumes the existence of a convex production frontier. The production frontier in the DEA approach is constructed using linear programming methods (António Afonso, Ludger Schuknecht and Vito Tanzi , 2008, p.21).

DEA can be used as an alternative to techniques based on regression is a nonparametric method. It does not involve statistical estimates, but instead makes use of linear programming and other forms of mathematical programming methods to characterize the set of efficiency ratios. There are a number of advantages on the DEA analysis, namely:

- Recognize a complex non-linear (concave or convex) relation to exist between output and costs, while regression usually restrict this kind of relationship on the basis that are either linear or simple shapes that are non-linear;
- Can operate with multiple input-output models;
- Inputs and outputs can have many different units of measurement.

#### c) Cost-Benefit analysis

Achieving the economic analysis includes identifying all costs and benefits, the availability of relevant data collection, valuation, updating and comparing the net present value of the proposals under consideration. The cost benefit analysis takes into consideration economic efficiency that is why the result of this analysis will indicate the options of less expensive public politics and those that assure more benefits. Every spent monetary unit will assure maximum benefits.

Cost-benefit analyses can be applied when costs and effects can be measured in monetary terms. Because is almost impossible to evaluate the effects of an educational process into a safe monetary quantity, cost-benefit analysis therefore cannot be applied into an educational context. For example a training program is more plausible to be evaluated in monetary terms, therefore cost-benefit can be adequate to this situation (Emmanuel Jimeney Şi Harry Anthony Patrinos, 2008).

*Education costs* are often understood as being educational expenditures. For CBA the costs must be expressed as being opportunity costs, which means

completeness of the resources involved in that option. At the same time, the educational system uses other resources with alternative use, that normally do not reflect in educational expenditures, like the time of the pupil or student that does not work by deciding to continue studying. This is a loss for the current productive capacity and a loss for current GDP of economics, overall a loss for the person's individual income. The opportunity cost must be included in economic analyses. Since education is seen as a form of social investment, then the relevant cost is represented by the sum of all economic resources allocated (social costs). This includes the time value of teachers, books, didactic materials and other goods and services, the amount of building and equipment usage, student time.

*Education benefits* are not only of financial nature, expressed in a higher salary income due to the studies made. Education is but a number of indirect benefits and externalities. Indirect benefits are not necessarily economic in nature, including social and cultural benefits. They are not economic benefits for the individual, for example personal satisfaction generated by education, known collectively as the consumption value of education, different from investment aspects. There are also external benefits, public, externalities that are not of economic nature, by transmitting the effects of education to others (dissemination effect). The literature has proposed several methods of measuring the benefits of education such as, for example, increase health, reduced fertility among women with low education, increased educational performance for children of educated mothers, but some benefits are almost impossible to assess accurately in monetary terms (Secretariatul General al Guvernului, Direcţia de Politici Publice, 2009, p.28-29).

#### d) Cost-effectiveness analysis

This analysis is applied when costs are expressed in monetary terms and effects are measured in non-monetary terms (but quantifiable, for example the number or percent of graduates of a course). In order to compare two alternative educational systems, either costs or effects of both alternatives must be fixed. When costs are the same for both alternatives, the system more effects is more efficient. When effects are the same for both alternatives, the system with less cost is more efficient. Often the exact measurement of effects in an educational system is very difficult. A less elaborated version of cost-effectiveness analyses requires assumption of equal benefits for considered options, which transforms the analyses into a *cost minimization analysis;* decision was taken based on the assessment of costs in monetary terms. In this case economic evaluation aims to find the alternative with the lowest costs.

#### e) Education rate of return

The concept of external effectiveness is often measured by analyzing the rate of return to education. Return rate is a measure of the effects achieved over time compared with the initial cost of education. Return rates can be measured from the individual point of view or society point of view. Private return rates measure the future net economic income from an individual in relation with "the quantity" of gained education, while social return rates measure the benefits to society made by education. Calculation formulas for both types are the same; just the costs and benefits that are implicated are different between the two.

A *number of difficulties* are being met when a significant measurement of efficiency is tried. These are:

- Difficulties in identifying educational components that are relevant to the analysis.
- Determining the way to measure components;
- Difficulties in estimating costs this includes problems collecting data about private costs in education both inside and outside educational institutes;
- Methodological problems regarding measuring the outputs and effects of education

To truly measure effectiveness of an educational system, the inputs and process must relate to effects. The educational system can be seen as being made out of four main components.

- Inputs: these are the real resources used in education, curricular area, books, facilities and equipment, and financial resources
- Processes: these represent the interactions between inputs and students, between different inputs and teaching/learning processes
- Outputs: these are the direct and immediate results of education, for example the number of graduates.
- Outcomes: these are effects of education, for example income increase of qualified labor force, productivity increase, health improvement and other nonmonetary results (European Research Associates, 2006).

# 2. Analysis of the efficiency of public expenditure on education, through benchmarking

As seen from the previous information, *efficiency analysis implies a relation between efforts (inputs) and effects (outputs), and from a mathematical point of view can be as a ration between the sum of effects and the sum of efforts (in this case a ratio greater that one means a higher efficiency), or the other way around, as a ratio between the effort sum and the effect sum (in this case a ratio with a lower value means a higher efficiency).* 

In order to perform an analysis of public spending efficiency for education by benchmarking at the EU level, representative indicators must be chosen in order to quantify the volume of efforts and effects.

**Public sector education effort** is given by the total public expenditure on education, and to assure data comparison between member states and eliminate influences made by different levels of development of these states, **it has been** 

chosen as an effort indicator, the percent from GDP allocated to education (public expenditures for education % GDP), expressed both per total education and per its levels (primary, secondary and tertiary).

If the public sector effort was relatively easy to quantify, the effects involve a deeper analysis and *determine the limitations of this study*. Education effects are both direct (tuition rate, literacy rate, number of graduates) and indirect (influence on unemployment, wage influences on the individual, the country's economic welfare, the increasing competitiveness both at the micro level as and macro), and the latter are difficult to quantify the influence strictly in relation to education, wage level of an individual depends not only on his studies but also on his talent, his skill, on the responsibility of the job involved.

Education should be seen as a priority area for national investment in human capital, which not only produce immediate effects, which often are not the most important, but continue to produce medium and long term effects on economic and social life of a nation, effects are often not counted because of their inability to quantify.

Efficiency of education can be viewed from several angles, can be viewed from the perspective:

- Of the student, through the efforts and the effects that produce them personally;
- Of State, through the macroeconomic efforts and effects.

The first option involves much subjective analysis, each individual perceives it differently its effectiveness of studies and is suitable especially for internal analysis, so I'll stop in this study on the analysis of efficiency of public spending for education, i.e. from a macroeconomic perspective.

The purpose of this analysis is to identify the countries that have achieved the highest efficiency in this area. It is also important to determine the EU average for Romania to be able to determine the distance to the average value and to the top efficiency states in education. It will be examined the efficiency of the entire public school system, but also its levels: efficiency of primary, secondary and tertiary levels.

The indicators chosen in the comparative study are presented in the following table, and values are taken from official reports of international bodies mentioned as the source. These indicators are input indicators, process, outputs and outcomes, attempting to cover as closely as efficiency dimensions.

It is important that the indicators for education systems to comply with several conditions, such as (Moşteanu Tatiana, Gherghina Rodica<sup>, 2009, p.378)</sup>:

- Must allow multi-dimensional coverage of the education system;
- Should allow comparison with the indicators used by international organizations and European organizations that need to be reported;
- Must cover the main areas of educational policy;
- Should allow multiple uses on the annual evaluation of the education system, and analysis at both central and regional level;
- Must contain information with a certain power to allow sector size analysis and caution in analyzing statistical data.

# Table 1. Indicators of effort and effect analysis of public expenditure on education

	Selected indicators	Sourse
	Public expenditures for	European Commission,
	education % GDP	Eurostat
	Public expenditures for	Eurostat
Effort indicators	primary education % GDP	
	Public expenditures for	Eurostat
	secondary education % GDP	
	Public expenditures for	Eurostat
	tertiary education % GDP	
	E <sub>1</sub> . Rate of primary	World Bank Statistics
	education dropout	
	E <sub>2</sub> . Rate of primary	World Bank Statistics
	education graduates that	
	continues the secondary	
	education	
	E <sub>3</sub> .Rate of primary education	Eurostat
	registration	
	E₄.Rate of graduation	Eurostat
	primary education by the	
	ones registered	
	E <sub>5</sub> .Percent of population	World Bank Statistics
	over 15 years that graduated	
	primary studies	
	E <sub>6</sub> . Rate of fallowing the	Eurostat
	secondary education	
	E7.Labor force from the	World Bank Statistics
	secondary education level	
	graduates	
	E <sub>8</sub> .Percent of population	World Bank Statistics
	over 15 years that have	
	graduated secondary studies	
	E9.Percent of students that	UNESCO
	obtained the maximum	
	performance score in the	
	PISA test	
	E <sub>10</sub> .Country rank after the	UNESCO
	results of the PISA test	
	E <sub>11</sub> .Rate of unemployment	Eurostat
	among graduates of	
-		

	secondary education	
	E <sub>12</sub> .Rate of graduation of	Eurostat
	tertiary education at 1000	
	inhabitants 20-29 years	
	E <sub>13</sub> .Percent of population	World Bank Statistics
	with university studies	
	E <sub>14</sub> .Labor force from the	World Bank Statistics
	university studies graduates	
	E <sub>15</sub> .Unemployment rate	Eurostat
Effects indicators	among university studies	
	graduates	
	E <sub>16</sub> .Enrolement rate in the	Eurostat
	tertiary education (number of	
	students in 100 000	
	inhabitants)	
	E <sub>17</sub> .Rate of early school	Eurostat
	dropout between 18-24	
	years	
	E <sub>18</sub> . Percent of population	World Bank Statistics
	having the age between 25-	
	64 years that have	
	graduated at least upper	
	secondary education	
	E <sub>19</sub> .Rateof adult participation	Eurostat
	in continuous training	
	programs	



Total effects of education are constructed like this:

 $E_t = (E_{inv. primar} + E_{inv. secundar} + E_{inv. tertiar} + E17 + E18 + E19)/6$ , where

# $$\begin{split} & \mathsf{E}_{\text{inv. primar}} = (\mathsf{E1} + \mathsf{E2} + \mathsf{E3} + \mathsf{E4} + \mathsf{E5}) / \mathsf{5} \\ & \mathsf{E}_{\text{inv. secundar}} = ( \ \mathsf{E6} + \mathsf{E7} + \mathsf{E8} + \mathsf{E9} + \mathsf{E10} + \mathsf{E11}) / \mathsf{6} \\ & \mathsf{E}_{\text{inv. tertiar}} = (\mathsf{E12} + \mathsf{E13} + \mathsf{E14} + \mathsf{E15} + \mathsf{E16}) / \mathsf{6} \end{split}$$

Given the fact that the indicators are expressed in different units of measurement, data standardization has become a process that was done after the following procedure:

- For parameters which are to be maximum optimized, the standardized value of the indicator was calculated by comparing the maximum value in the series ( $x_{i \text{ standardize}} = x_i/x_{max}$ ).

- For parameters which are to be minimum optimized, the standardized value of the indicator was calculated so:  $x_{i \text{ standardize}} = (x_i/x_{max})^{-1}$ , where  $x_{max}$  represents the smallest value from the mathematics point of view.

The results of the standardization process and quantification of the effort and effects of education for the public sector, for EU member states, are presented in the below tables:

STANDARDIZED EFFORT

COUNTRY	Public	expenditu	res educatio	n % GDP					
	TOTAL	Primary	Secondary	Tertiary	TOTAL	Primary	Secondary	Tertiary	
Austria	Austria         0.692         0.429         0.832		0.655	0.608	0.604	0.591	0.522		
Belgium	0.769	0.628	0.851	0.572	0.562	0.609	0.573	0.746	
Bulgaria	0.526	0.363	0.607	0.297	0.470	0.691	0.337	0.533	
Cyprus	0.885	0.863	1.000	0.703	No data	0.683	No data	0.603	
Czech Republic	0.538	0.257	0.670	0.467	0.671	0.563	0.738	0.529	
Denmark	1.000	0.823	0.924	1.000	0.735	0.911	0.524	0.643	
Estonia	0.615	0.500	0.743	0.467	0.605	0.611	0.582	0.737	
Finland	0.756	0.531	0.832	0.808	0.768	0.911	0.774	0.800	
France	0.718	0.518	0.842	0.537	0.513	0.590	0.511	0.601	
Germany	0.577	0.279	0.743	0.498	0.572	0.608	0.623	0.543	
Greece	0.513	No data	No data	No data	0.466	0.687	0.327	0.652	
Hungary	0.667	0.438	0.756	0.450	0.525	0.582	0.551	0.582	
Ireland	0.628	0.761	0.670	0.498	0.590	0.737	0.587	0.801	
Italy	0.551	0.478	0.653	0.332	0.440	0.850	0.368	0.378	
Latvia	0.641	0.549	0.696	0.406	0.505	0.488	0.379	0.680	
Lithuania	0.603	0.296	0.795	0.441	0.599	0.604	0.454	0.788	
Luxembourg	0.397	0.748	0.482	No data	0.549	0.563	0.480	0.382	
Malta	0.872	No data	No data	No data	No data	0.787	No data	0.475	
Netherlands	0.679	0.584	0.713	0.633	0.630	0.604	0.756	0.586	
Poland	0.628	0.704	0.624	0.406	0.624	0.507	0.519	0.618	
Portugal	0.679	0.655	0.690	0.524	0.405	0.995	0.365	0.395	
Romania	0.538	0.372	0.502	0.489	0.454	0.564	0.408	0.561	
Slovakia	0.462	0.296	0.558	0.345	0.621	0.564	0.501	0.510	
Slovenia	0.667	1.000	0.383	0.528	0.753	0.916	0.639	0.600	
Spain	0.551	0.487	0.548	0.432	0.485	0.853	0.399	0.603	
Sweden	0.859	0.743	0.871	0.773	0.708	0.799	0.651	0.669	

#### Table 2. Standardized public effort for education and standardized effects

STANDARDIZED EFFECTS

- 208 - Studies in Business and Economics

			S	Studies i	in Busir	ness and	d Econo	mics
United Kingdom	0.692	0.730	0.809	0.410	0.653	0.840	0.552	0.741
Average	0.637				0.58			
Source: own calculations								

ource: own calculations

It was decided removal of Malta and Cyprus from the analyses due to lack of data. The level of efficiency of the public expenditures for education, determined as the ratio between standardized effects (benefits) and effort (costs) is presented in the next table. For a country to reach the level of efficiency of public expenditures for education this ratio must be greater than one, this implies superior benefits of costs. A sub unitary ration characterizes week efficiency, or even the lack of it, because obtained results are not rising to the efforts made.

#### Table 3. Efficiency level of the public expenditures for education at the level of EU countries

EFFICIENC	Y OF PUB	LIC EXPEND		CATION
COUNTRY	TOTAL	PRIMARY	SECONDARY	TERTIARY
Luxembourg	1.369	0.753	0.997	No data
Slovakia	1.347	1.903	0.898	1.479
Czech	1.247	2.195	1.102	1.134
Republic				
Slovenia	1.130	0.916	1.670	1.136
Finland	1.016	1.718	0.932	0.990
Poland	0.994	0.721	0.833	1.522
Germany	0.992	2.182	0.839	1.092
Lithuania	0.991	2.040	0.571	1.788
Estonia	0.983	1.224	0.784	1.579
United	0.944	1.151	0.683	1.807
Kingdom				
Ireland	0.940	0.969	0.877	1.609
Netherlands	0.927	1.035	1.061	0.926
Greece	0.910	No data	No data	No data
Bulgaria	0.895	1.907	0.555	1.798
Spain	0.880	1.754	0.729	1.396
Austria	0.878	1.407	0.711	0.798
Romania	0.845	1.518	0.815	1.148
Sweden	0.825	1.076	0.748	0.866
Italy	0.799	1.780	0.564	1.141

#### Studies in Business and Economics

Latvia	0.789	0.890	0.545	1.675
Hungary	0.788	1.329	0.730	1.294
Denmark	0.736	1.107	0.568	0.644
Belgium	0.731	0.970	0.674	1.305
France	0.715	1.141	0.607	1.119
Portugal	0.597	1.520	0.530	0.754
EU Average	0.94			

Source: own calculations



Figure 1. EU country standings after the level of efficiency of the public expenditures for education

After the efficiency analyses of the public expenditures for education, with benchmarking results one can observe that the countries that obtained more results (effects) per cost unit are: Luxembourg, Slovakia, Finland and Poland. All these countries have an efficiency indicator greater than one, this means that effects outworked costs. Between the low efficiency countries is Portugal, France and even Belgium and Denmark. It may seem paradoxical that a developed country like Denmark to be situated on the lower part of the standings, but if you look at the raw data is easy to detect the cause: Denmark distributes almost 8% from GDP for education, registering the greatest effort, but even if the effects are greater than average, are not proportionally to the registered effort. Another apparent paradox may be in the case of Luxembourg, which although registers results below average, is leading the standings, and this due to the fact that Luxembourg distributes the lowest percent from GDP to education, about 3%, but in absolute quantity this percent means 14 000 EUR to PPC per student, representing the greatest allocation in the EU. The calculation of this efficiency indicator must be therefore understood: **maximum results** 

**obtained per effort unit.** This explains why some countries have registered results below average and declared efficient; the made expenditure for obtaining those results was also reduced.

Romania has an efficiency indicator of public expenditures for education of 0.845, sub unitary, meaning that results are not correlated to the made efforts, and lower with 11% compared to the EU member countries average (except Malta and Cyprus).

Creating a standing of countries which registered the best results (effects) in the education domain we will observe the first positions are occupied by: Finland, Slovakia, Denmark, Sweden, Czechoslovakia, Great Britain; but a part of these countries, like the case of Denmark, have obtained favorable results with a great level of effort compared to other member states. As it can be noticed from the next graphic, Denmark registers the greatest discrepancy between the level of effort and the one of effects, followed by Belgium. **Balanced countries from the made effort perspective with the results obtained are: Austria, Finland, and Germany.** 





Creating a comparison between Romania and EU average for the efficiency of public expenditures for education it can be observed Romania stands below the average, in 20076 distributes 4.2% from GDP financing public education, meanwhile the EU average of that year was 5.11%, in 2008 Romania raised the percent allocated to education to 6% from GDB, but in absolute values the average financing per student remains very low, Romania occupying the last position.



Figure 3. Education results in Romania compared with the EU average



Educations results in Romania can be seen in the above graphic, are inferior to the EU member states average, both on the overall education system and on the levels. The results of the tertiary education is close to average, but analyzed by components it can be noticed that due to quantity factors this result happened: large number of students at 100 000 inhabitants; from the quality factors point of view the situation is not favorable regarding the degree of labor occupancy of graduates. The unemployment rate among university studies graduates is over 10% in Romania, meanwhile the EU average is somewhere at 6%, and countries like Holland or Great Britain have a rate of unemployment of 3-4%.

Another problem that Romania is facing is the high rate, about 17%, of early autiting of education by young people having the age between 18 and 24 years. Another sensitive aspect for Romania, that places the country at the penultimate position in the EU member states, is the rate of adults between 25 and 65 years participation in continuous training programs. The value of this rate is 1.5% in Romania, compared with an average of almost 10%. The only dimension from those analyzed, that places Romania over the EU average, is the percent from the population having between 25 and 64 years which graduated at least post high school studies. Romania emerges a path towards the EU average in issues relating to education, but priority is leaning toward *quantitative indicators*, ignoring key issues such as school dropout rate in primary and early education (18-24 years) unemployment rate among graduates regardless of their studies, which show a weak capacity of insertion, educational supply mismatch and labor market needs, poor development of programs to facilitate transition of students from school to the labor market, reduce rate participation of adults in continuing education programs that will affect the competitiveness of labor mediocre results of PISA test of the Romanian students in mathematics, science and reading. In order to overcome these deficiencies, Romania should use available resources rationally, not necessarily to increase funding for that at the current level of funding is room for additional results. For example Czech Republic allocated in 2007 the same percent of 4.2% from GDP to education, same as Romania, but occupies the third place in top of efficiency; meanwhile Romania occupied the 17<sup>th</sup> place. With the same effort, Czech registers a rate of primary school dropout of 1%, a rate of early dropout of 5.4%, the rate of adult participation in continuous training programs of about 7%, aspects that can be analyzed from the below table:

COUNTRY	Public expendi ture % GDP (2007)	Rate of primary school dropout	Rate of unempl oyment of seconda ry school graduat es	PISA Rank	Rate of unemploy ment of tertiary school graduates	Rate of school dropout 18-24 years	Continu ous educati on % 25-64	% of population between 25- 64 years that have graduated at least secondary school	Efficie ncy Rank
CZECH REP	4.2	1.00	8.00	18	3.30	5.40	6.80	90.5	3
GERMANY	4.5	4.00	9.90	20	4.90	11.10	7.80	84.4	7
ROMANIA	4.2	7.00	10.00	3	6.40	16.60	1.50	75.0	17

Table 4. Comparisor	Romania – C	Czech Republ	ic - Germany
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Source: own calculations

It can be observed that with a very close level of effort with the one of Romania, Czech Republic and Germany have obtained superior results.

#### 3. Conclusions

The conclusion is that either the level of funding in Romania is oversized compared to its effects, or resources were not used properly in accordance with the principles of performance. It would be foolhardy to suggest increased funding for education, when the analysis carried out shows that the volume of financing is not the problem, but towards the use of funds. For this purpose we recommend, in case of Romania, a careful and rational use of funds, a budget based on clearly defined objectives and performance measured by indicators, and after the process has been improved may be taken to increase public expenditure on education as the process is implemented to generate enhanced results.

We believe that to be able to achieve an optimal level of efficiency of public spending on education, Romania needs to move away from sequential and isolated steps and relate to educational policies with other policies and socio-economic measures. Failing to fund the training of students who will not find a job and inefficiency in this area will click and will also reflect on the state budget through spending on social protection of these new unemployed. Incentives measures for access to education, increase the enrollment rate in education at all levels of education should be linked to incentives measures for the creation of new jobs by the private sector with measures to facilitate the transition from school to work with providing financial aid to children from disadvantaged social classes in order to ensure equal opportunities.

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## THE ECO-ECONOMICAL PRINCIPLES – ESSENTIAL ELEMENTS IN THE DECISIONAL PROCESS FOR THE TRANSFORMATION OF THE AGRO-TOURIST PENSION INTO AN ECO-TOURIST PENSION

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#### Abstract:

The development of the output during the last decades and the same time with growing population namely energy, raw material demands for industry and food have highlighted the conflict between man and nature, between the processes of socialeconomic development and natural resources with troubling consequences on the ecologic balance of the planet. If the models were taken into consideration before the beginning of the present economic-financial global crisis in present we can say that we match the second model: stopping the rhythm of economic development, even if the best model should represent the sustainable development.

Of course that elaborating a new development model of the human society means changing the old concepts, particularly the economic ones and aligning them to the specific of the environment management and the conditions of the actual crisis. In this respect, we analyzed to of the basic components of the sustainable development concept: on the one hand, the economy and on the other environmental protection. These components are also starting points for the eco-economy domain, which has to elaborate mechanisms, criteria, instruments, models that can be taken in consideration in an economic-ecologic vision of development of the society.

*Keywords*: eco-economy, agro-tourist pension, eco-tourist pension, sustainable development, tourism

The global spreading of the environmental problems which the human society of the present is confronting with placed the specialists and the decision-makers in front of a series of evolution models for the next years: the *sequel* in the same rhythm, direction and style, can be justified of the capacity (verified in the course of history) that

#### Studies in Business and Economics

humanity will find the solutions to get out crisis at the right moment, but are not immediate and the irreversible effects are already felt; *stopping the rhythm* of economic development at the minimum level of the material insurance and of the growth of population is an unrealistic solution; *the control* of population is rejected by religion or tradition (the evolution of the population in China will change many rules of the global economy), and restricting the access of the population to welfare is against the human nature; enforcing to all members of society of an ecological attitude through dictatorial methods is not feasible the history proving that the nondemocratic solutions have no viability; *sustainable development* – the only solution unanimously accepted which leads to the promoting of the market economy elements in a democratic background through keeping the high demands and ecological criteria.

It is important to underline that finding optimal alternatives between economy and environmental protection depends on the decision-makers' ability to choose and use the financial-economic instrument adequately to an effective promotion of the actions for environmental protection. The financial instruments that can be used, whose efficiency has been verified in other countries are: taxes that can be promoted as tax differentiation; subsidies to encourage the change of attitude and to grant funds for stopping pollution, deposit redemption.

Of course, it is the results' problem and the economic consequences of sustainable development. From this point of view there is no long term experience in the enforcement of the concept. Such consequences can be understood without having a certain level of certainty and without being finished: improvement service quality, evolution of large sectors of consumer energy and resources towards "cleaner" technologies and less resource users; the development of new types of approaches, jobs, activities; cutting down the resources and environment emergencies and mostly of their outcomes (see Bran Florina, 2002).

Regarding the types of economic growths which predominated in the 19<sup>th</sup> and 20<sup>th</sup> centuries we can state that there is a large consensus which has been reached. The concept of sustainable development represents a small bridge between the development which has been taken into account for four decades having no satisfactory results and a movement towards saving nature and environment. This is an alliance of two contemporary trends, both coming into being during the 20<sup>th</sup> century.

The notion of sustainable development supposes the accomplishment of interdependence between the three main ways of reaching this: education, scientific research, political activity. The Finnish economist Malaska explains widely: "The human development if interventions and the outcomes enforced by the human activities even economical, technological, social or cultural, do not alter the changing rate of nature and ecosystems in an uncontrollable way by nature or in an irreversible form from the future generations' point of view." The economic domain limits the social aspects through production and distribution of goods and services, meeting the human populations' needs. The authorities are called to ensure a policy where man and his rights are taken into account.
Underlining the fact that most of present problems regarding the environment are determined by the individuals way of life and solutions are found both by transforming the social conditions and the changing the way of each persons life.

Most important are economical and political structures responsible fro the determination of the so-called inequity, intra-generations that of the major difference between lower and higher strata which have been emphasized starting from development of the actual global crisis.

Due to the fact that the sustainable development takes as a basis the ecologic ethics, its merit belong to it but its weak points too; more than this the criticism of G D Pindex is present – measuring the degree of economic development. UI Hak came with the idea of a larger index to measure wealth too and life hope, education, welfare, all being incorporated in the Ratios on Human Development 1990.

Malaska introduced the term of 'welfare' concerning the capital a way to measure the GDP ability; this was the only objective criterion to observe the increase 'the offer' of civilization.

Until 2050 the population of the world now estimated to 6 billion will be situated between 7.7 billion and 10.9 billion (see Fig. 1). The last average projection is about 10 billion. The population growth is the main pressure on the environment and the imperative of survival is being translated through the obligation to satisfy the need of this huge population. (Bogdan A. T., 2010)



Figure 1. World population according to the medium scenario -Population development 2100

(Correlation calculates using UN, 2007. World Population Prospects) (Source: Bogdan A. T. et. al., *Ecoeconomic and Bioeconomic Impact of Food Safety and Security in Perspective Increased Consumption of Food and Feed During 2030-2100,* International Symposium Oradea, Romania) Until two years ago we could state that the sustainable development was meant to be economic growth (not zero or negative growth) tallying the demand of the ecologic balance and the whole human development.

Under the present conditions of the world economic recession we must rethink such notions and try to find adequate solutions to continue the sustainable development even under the conditions of diminishing financial results. The new development depends on the previous experience of people and governments of the ability to interpret the present, of the multiple difficulties our present peoples confront with.

The technical substantial base of this development will be a new technical way of production. One of its fundamental characteristic is the tallying on the so called 'soft' technologies – biotechnologies – and the narrowing up to eliminating the 'tough' ones as far as their use has polluted some geographical areas.

The problem is not exactly to know the volume of growth but that one referring to the kind of growth that has been looted for and accomplished.

Taking place under the conditions of limited resources and mostly those that are not recycled the process of economic growth is not a continuous set of circular fluxes where the poles are production and final personal consumerism. This means that on one side the economic development is addicted to the environment. On the other side any economic activity entails problems between nature and economy, man and environment. This ratio regarding the economic activity and the environment is outlined by entropy, entropic and antientropic.

In an economic area entropy means the process of degradation of material and energetic resources and this process takes place both within economic and not only.

If energy within a certain source might be infinitely used there would be no more economic activity therefore there would be no economy.

Free energy is the energy used to obtain a certain economic asset. After its degradation its transformation into rubbish, free energy changes into linked energy.

Low entropy has an ordered structure and is used in economic processes. High entropy represents a structure of total linked energy with disordered character. Such a qualitative, continuous and irreversible degradation takes place within the economic processes. The free energy turns into a linked energy, order turns into disorder (see Georgescu-Roengen, 1996).

Knowing that the economic processes have entropic character, people must act in correspondence with nature laws, to give a anon entropic character to their activities. Almost people by their actions especially economic ones, produce the acceleration of some natural entropic processes being able to act by accelerating the nonentropic processes too (see Georgescu-Roengen, 1996).

Today, more than ever the theories of the well known researcher seem to be true that he negative and positive social and economic process for Terra are taken into consideration by people in different ways: finding and using new types of energy, managing carefully the existent ones. Avoiding the pollution, degradation of environment factors; so one of the most important contemporary options is the selection with responsibility - the type of economic growth, economic development.

In context, is necessary that the economic agents to organize and to lead the economic processes, so as they to get the entropy free, instead of the linked on the organized entropy instead of the unorganized one. As a consequence, the intensity of non-entropic economic growth depends on two important complementary and contradictory processes: the entropic, where the natural potential is degrading; another nonentropic, creative, informative, with new possibilities to discover and valuing the resources, to use new ways saving.

By enforcing such a type of development means more powerful ecologic prices which overlaps the global financial-economic crisis. The ecological challenges mostly regarding the principles, the economic system works, shapes the dimension of the efforts which are being asked by this new way.

In a world in which the economy demands are forcing the limits of the natural systems to rely on the distorted signals of the market to guide the decisions on the investments is a certain way to disaster. Converting the economy into an eco-economy is a major challenge. Building an eco-economy will affect "every corner of our life" (see Brown L., 2001).

In an ecologic vision, tourism finds to be within a tight interaction with abiotic elements, biotic elements, antropic and economic, social, cultural elements of the environment. The current evolution of tourism is characterized by the profound renewal of the world touristic offer especially by developing a new array of touristic products, both by a qualitative and quantitative point of view.

Four general factors determine and influence directly the touristic activity: the quantitative and qualitative value of touristic resources; the general economic growth, which mostly influences jobs and incomes; the exchange rate, which determines the evolution of the purchase power of residents and non-residents; the reparation which determines the purchasing power of clients.

These factors mainly rely on exploiting the natural and cultural resources with touristic shades. All touristic activities determine in time and space potential effects on the environment, health or social system. All these influences together are being expressed through the notion of impact.

Tourism, more than any other domain, relies on the environment; this represents its "raw material", its object and domain of activity and tourism deployment being its main frame carrying the resources.

Tourism is being carried out through the environment and its quality can favor or on contrary, touristic activities.

The tourism-environment relationship has a special meaning, the development and protection of the environment representing a sine qua non condition of tourism, any alteration of it can cause damages also to the touristic potential by diminishing or even canceling its resources. Thus, the appreciation of the Swiss specialist prof. J. Krippendorf is conclusive: "If we can lose and then rebuild capital in other domains of the economy, in tourism this thing isn't happening where the base substance: landscape and earth – once lost is irrevocably lost" (see Zimmer P., 1999).

Of course, the problem is raised at the same level and obviously correlated to all touristic resources whose existence and attraction are directly influenced by the quality of different components of the environment. The more the damages onto the environment have a larger development, the more the touristic activities are affected. In the case of tourism, the consequences of damaging touristic resources generate serious social-economic implications.

From an economic point of view the deficiencies due to the existence of damaged touristic resources are reflected first in the impossibility of taking into account the touristic potential and mainly the lower use of touristic base and lower incomes from their marketing.

The touristic potential as part of the environment, the existence and development, on its quality, therefore considered a possible quality index for its environment, in other words, a barometer of its quality; it is intensively used in those areas in which the adequate requirements are met and it is diminished and gradually removed in those areas in which, for various reasons, a certain component of the environment, such as the scenery, air, or water is degrading.

The economic effects of tourism – estimate income, jobs – are easily emphasized while ecological effects cannot be qualitatively measured rather than quantitatively.

Besides the fact that it is a source of income and jobs, tourism is also a source of satisfaction, for people inhabiting touristic areas.

The protection of the environment and of the touristic heritage is greatly influenced by the ecological awareness of the population and its respect and love of nature, historical, artistic and architectural heritage. Education in the protection of the environment and touristic potential is interdisciplinary; it is a continuous process and an integral part of education in general. It includes the main issues of protection from both a global and regional perspective and examines the economic development and growth in relation to environmental protection, focusing on local, regional and national co-operation for an adequate approach to pollution-related issues.

Currently, in many countries, travel agencies do not always consider the ecological situation of the touristic areas. Tourists are mainly interested in costs rather than in ecological aspects in their social and ecological responsibility. Moreover, many travel agencies are not strong enough to spend substantial funds for involvement in the ecological compatibility of the offers they advertise.

The promotion of a "green" ecological tourism requires the involvement of several decision-makers. First the state, through its economic development policy, through its durable development strategies, provision of high-quality services so as to reduce excessive and inadequate exploitation of cultural and natural heritage. The state is able to trigger involvement of tour operators in environmental protection through legal, juridical and financial regulations. The involvement of local

administrations is equally required, as well as that of the population in Eastern European countries.

Green tourism involves the improvement of the infrastructure, the rural-urban development, the use of non-conventional sources of energy. Moreover, an effective marketing policy is required, as well as a macroeconomic development able to prevent excessive exploitation of a specific area.

The opinion of the local population with reference to the development of touristic areas is equally important.

Given the fact that pollution is not enclosed with the borders of a specific country, international co-operation is a must for the promotion of a regenerating, ecological tourism, for exchange programs and partnerships. Some European countries (Switzerland, Germany, Belgium, the Netherlands) have taken significant steps during the last 2-3 decades in developing an ecological tourism in the areas they intend to visit.

The main cause of the negative effects of touristic development on the environment is neither of a demographic origin, nor related to the increase in consumption, the urbanization, but it is due to the uncontrolled and unilateral such development.

The green tourism will facilitate the efficient use of resources, of the available labor, for the mitigation of inter-regional imbalances, a complex means of diversification of national economies.

The *Global Codes* of *Ethics* for *Tourism* was meant to regulate touristic behavior, to determine ecological and ethical lines of action and to become a code of good practice in tourism. Moreover, pilot-actions are envisioned for the development and promotion of new touristic products in rural areas facilitating the collaboration between local, regional and European tour operators.

The concept of durable tourism has become increasingly popular at a microeconomic level through the promotion of green tourism. The actors of the industry of hospitality and travel have become increasingly sensitive to environmental issues. Few are those who support the idea the economic activity does not influence the environment. On the other hand, more and more managers and employers in tourism admit that natural resources have a great economic, actual and potential value if they are adequately handled (see Glăvan V., ).

Developing a rural eco-economy depends on the global vision of the natural resources and on a broad understanding of the restructuring of economic notions and concepts needed to realize this vision.

Concerning the classification of some agro-tourist pensions from Romania (from the actual system with flowers or daisies) like eco-tourist pensions (on could adopting a system with acorn or something else), it is necessary to harmonize the existing system with international models (Swedish, Austrian, Swiss, German, French, and Italian) in order to adapt the methods and techniques of implementing an eco-pension to the local ecotourism, by taking into account the character and traditions of the Romanian tourist village.

Evaluating the preliminary conditions for accrediting the pensions in Mărginimea Sibiului as eco-pensions will be done by field investigation and surveys. The results obtained will allow formulating some proposals for issuing a series of methodological norms of classifying the reception structures with the function of tourist accommodation of the type of eco-pensions, in collaboration with ANTREC and other professional associations of the kind. What we monitor is the quantitative and qualitative analysis of the eco-tourist potential of the natural capital, clean technologies, ecological agriculture, the exploitation of non-polluting natural resources, evaluation of the ecological impact and strategic eco-marketing, in order to identify those pensions that have an eco-tourist potential.

The use of the expertise and results of the research for the specialists in ecology and food industry will enable the implementation of food biotechnologies, the preservation of biodiversity, and the development of eco-friendly economic activities, including ecological agro-tourism.

A great importance have that the administrators of pensions from Mărginimea Sibiului aware of the advantages offered by ecotourism, which is more compatible with the traditional way of living than the other forms of tourism.

Promoting the concept of eco-pension among the administrators of the pensions selected as having eco-tourist potential and the highlighting of the profitability in time of this activity will be done through meetings and discussions held with the support of the town hall and of the members of "Mărginimea Sibiului" Association.

Evaluating and directing the activities from the field of tourism in relation to the ecotourism criteria will allow the exploitation of local natural and economic resources through the certification of eco-tourist products and that of destinations and accommodation structures, in order to guarantee the eco-tourist quality. The food products obtained in the household through ecological farming and stock raising activities could be valorized as traditional products and ecologically certified, in accordance with the effective legislation. The eco-economical principles are essential elements when deciding to transform an agro-tourist pension into an eco-tourist pension. Ecotourism creates jobs, sustainable development alternatives, and a well defined image that can be used in marketing the local, regional, or national products.

By implementing adequate marketing strategies, on could promote, together with the interested tourism agencies, a realistic and attractive tourist product. In the same time, we shall elaborate a guide which will contain short studies, destined for the administrators of pensions, useful for implementing the eco-pensions in the Romanian rural tourism. Alongside norms regarding the use of ecological building materials, of unconventional sources of energy, the use of biotechnologies, the conservation of biodiversity, the guide will also include menus, traditional recipes for valorizing the ecological food products, and leisure activities in protected natural areas.

While acting as a trainer for the administrators of tourist pensions during the courses organized by CCIA Sibiu starting with 2005 and until the present moment, I have become familiarized with the realities and concerns of the owners of pensions from Marginimea Sibiului. As holder of the manager's license in tourism and manager

of a travel agency from Sibiu, I have been collaborating ever since 1992 with most of the agro-tourism pensions in the area. Our good relations and the long collaboration period represent an important starting point in the possibility of implementing bio principles and eco-economy in the agro-tourism of the region.

The marketing of ecological tourist services (accommodation, food, and leisure) that blend tradition and environmental protection will allow the sustainable development of the area. Ecotourism is the best practice for tourism in a sustainable environment. Adopting ecological technologies requires a systematic effort in formulating eco-economic policies, especially for restructuring the traditional agricultural activity. Sibiel has an old tradition (before 1989) and, more recently, holds the "Golden Apple" trophy for the hospitality of the people and the well established agro-tourism.

Eco-certification is more and more present in many of the fields of economy, including for identifying products with high ecological potential. The tourist product offered by eco-pensions can be a promoter of green tourism. The systematic construction of public support for changing the mentality implies an intelligent and concerted effort, developed with the help of well informed citizens. Ecotourism contributes to preserving the environment and to supporting the well being of the local population. Eco-pensions will represent a green model, focused on the strategy of the four R's (Reduce, Reuse, Recycle, and Reexamine), by using eco-economic systems, procedures, and strategies.

Transforming the agro-tourist pensions from the village of Sibiel into ecopensions, thus making Sibiel the first green village in Romania, and training the administrators of pensions and other key members of the tourist business into forming an eco-economic view of the sustainable development actively contributes to preserving the natural and cultural heritage, includes local communities in the sequential planning, development, and operating processes contributing to their well being.

For realizing such challenges, on elaborating an eco-agrotouristic pension guide, which combines essential knowledge about ecotourism and classification in ecotourism, in order to pass from an agro-tourist to an eco-tourist pension. The manual will represent a useful source of information that can contribute to generating new ideas or adapting practices of sustainable ecotourism to the local conditions of other regions. The manual will be based on the data gathered from the field from persons that will develop these initiatives and will reflect the complexity of small enterprises, the challenges and opportunities with which they are confronted, as well as the endless creativity that this type of business allows. The transition from the traditional economy to eco-economy is generally known, but there is too little understanding for the means that are involved and the technologies necessary in ensuring the development of this process. The necessity of an ecological agriculture, the safety of food, the use of nonpolluting technologies and the implementation of the eco- and bio-economy in the future eco-pensions represent an educational challenge (see Fig. 2).



Figure 2. Number of agro-touristical pensions in Mărginimea Sibiului

The role of the interdisciplinary teams of specialists resides in informing and making the local population aware, so that they are not just simple spectators to these changes, but actors that actively co-work at their accomplishment. The challenge launched by this research is to put together in a traditional agro-ecosystem as many pieces of sustainable development as possible, based on the principles of eco-economy. Once certified, the eco-tourist pensions in Sibiel can become polarization centres for the rural tourism activity. Obtaining the eco-classification and some commercial brands and inovative products of food biodiversity will generate the development of new projects. Taking part in fairs organized by ANTREC and ANAT (tourism scholarships) with our own stand dedicated to the eco-pension, and promoting the image of the eco-pension through leaflets, specialized catalogues and website, will ensure the coherence of the sustainable development.

Organizing a workshop with international participation has the purpose to implement among the administrators of pensions the methods and techniques of pensions eco-classification and to facilitate the exchange of experience with credible representatives of this field of activity.

The integrated approach and the possibility to use the methodology of selection, elaboration, and application in the eco-pension of various results that regard the food biotechnologies will represent an opportunity for a future access to the post-adherence structural funds for the sustainable development of the Romanian village. The eco-pension is an important link in the chain ecological agriculture – ecological food – conservation of biodiversity bio and eco-economic development.

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## THE LONG-RUN DETERMINANTS OF INVESTMENT: A DYNAMIC APPROACH FOR THE FUTURE ECONOMIC POLICIES

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#### Abstract:

Investment is the sum of the purchases on newly produced capital, changes in business inventories referred to as inventory investment, and the purchases of new residential housing. The work covered by this study aims to identify the model that presents, in the best possible way, the method of investment's calculation and to determine the factors of influence. In the first part, the investment is analyzed as a linear function dependent on the interest rate; and the second part implies a new model for determining long-term investments, but also an identification of the measures that would lead to increased investments.

Keywords: investment, interest rate, tax rate, fiscal policy

## 1. Introduction

Of all the economic fluctuations in world history, the one that stands out as particularly large, painful, and intellectually significant is the Great Depression of the 1930s. During this time, the United States and many other countries experienced massive unemployment and greatly reduced incomes. In the worst year, 1933, one-fourth of the U.S. labor force was unemployed, and real GDP was 30 percent below its 1929 level. This devastating episode caused many economists to question the validity of classical economic theory

Classical theory seemed incapable of explaining the Depression. According to that theory, national income depends on factor supplies and the available technology, neither of which changed substantially from 1929 to 1933. After the onset of the Depression, many economists believed that a new model was needed to explain such a large and sudden economic downturn and to suggest government policies that might reduce the economic hardship so many people faced.

Keynes proposed that low aggregate demand is responsible for the low income and high unemployment that characterize economic downturns. He criticized classical theory for assuming that aggregate supply alone—capital, labor, and technology—determines national income. (Mankiw, 2009)

This paper aims to identify the factors determining the investment in a large economy, in this case the U.S. economy. In aggregated equilibrium models, the equilibrium condition between global supply and global demand is I = S. In the analysis of the consumption function, from Keynes's fundamental law, the investment is considered to be exogenous. The Keynesian cross is only a stepping-stone on our path to the *IS–LM* model, which explains the economy's aggregate demand curve. The Keynesian cross is useful because it shows how the spending plans of households, firms, and the government determine the economy's income. Yet it makes the simplifying assumption that the level of planned investment *I* is fixed. An important macroeconomic relationship is that planned investment depends on the interest rate *r*. To add this relationship between the interest rate and investment, we write the level of planned investment as

#### I = I(r).

This investment function is graphed in panel (a) of Figure 1. Because the interest rate is the cost of borrowing to finance investment projects, an increase in the interest rate reduces planned investment. As a result, the investment function slopes downward (Mankiw, 2009).

To determine how income changes when the interest rate changes, we can combine the investment function with the Keynesian-cross diagram. Because investment is inversely related to the interest rate, an increase in the interest rate from r1 to r2 reduces the quantity of investment from l(r1) to l(r2). The reduction in planned investment, in turn, shifts the planned-expenditure function downward, as in panel (b) of Figure 10-7. The shift in the planned-expenditure function causes the level of income to fall from Y1 to Y2. Hence, an increase in the interest rate lowers income. The *IS* curve, shown in panel (c) of Figure 10-7, summarizes this relationship between the interest rate and the level of income. In essence, the *IS* curve combines the interaction between *r* and *I* expressed by the investment function and the interaction between *I* and Y demonstrated by the Keynesian cross. Each point on the *IS* curve represents equilibrium in the goods market, and the curve illustrates how the equilibrium level of income depends on the interest rate. Because an increase in the interest rate causes planned investment to fall, which in turn causes equilibrium income to fall, the *IS* curve slopes downward.



Figure 1. Deriving the IS Curve (Mankiw, 2009)

## 2. Data and methodology

In the following section, the theoretical model, proposed by the economic theory, will be analyzed, and after the validation process, a new model for determining long-term investments will be proposed.

Based on the model presented above, the investment function will be established, and afterwards the validity of the model will be checked. In order to obtain this new model, the regression model will be used, based on empirical data provided by the Federal Reserve Economic Data FRED ®. In the analysis, quarterly data from 1948Q1-2010Q3 was used, and the processing of the information was achieved in Eviews program.

# The Identification of the Linear Regression Theoretical Model and the Verification of the Model's Validity

In the following section the investment equation is presented, based on the equation offered by the model:

$$I(r) = I_0 + i^*r$$
,  $I_0 > 0$  and  $i < 0$ 

where I(r) – investment,  $I_0$  – autonomous investment, i – investment sensitivity to interest rate change, r – interest rate

Studies in Business and Economics - 229 -

After applying the linear regression model of the historical data, the following investment equation is obtained:

I = -12.7895 \* r + 754.3386

#### **Table 1: The Investment Regression Equation**

Dependent Variable: I Method: Least Squares Sample: 1948Q1 2010Q3 Included observations: 251

Variable	Coefficient	Std. Error	t-Statistic	Prob.
R C	-12.78958 754.3387	14.92222 81.30221	-0.857083 9.278206	0.3922 0.0000
R-squared Adjusted R-squared S.E. of regression Sum squared resid Log likelihood F-statistic Prob(F-statistic)	0.002941 -0.001063 692.5199 1.19E+08 -1996.774 0.734590 0.392223	Mean dependent var S.D. dependent var Akaike info criterion Schwarz criterion Hannan-Quinn criter. Durbin-Watson stat		695.5841 692.1522 15.92649 15.95458 15.93779 0.003787

After analyzing the equation obtained, the following conclusions arise:

- Prob (F-statistic) = 0.3922> 0.05, indicates that the model is not statistically significant
- R-squared = 0.0029 and Adjusted R-squared = -0.0010 show a reduced intensity of the connection between interest rate (r) and investment (I)
- t-Statistic for the R parameter has Prob = 0.3922> 0.05, illustrating the fact that the parameter is not significant

Thus, after verifying the validity of the model, it can be stated that it is not valid, and that the investment is not a linear function of the interest rate.

## Achieving the Investment's Function

Investment is the component of GDP that links the present and the future. Investment spending plays a key role not only in long-run growth but also in the short-run business cycle because it is the most volatile component of GDP. When expenditure on goods and services falls during a recession, much of the decline is usually due to a drop in investment. Economists study investment to better understand fluctuations in the economy's output of goods and services. The models of GDP, such as the IS–LM model, were based on a simple investment function relating investment to the real interest rate: I = I(r). That function states that an increase in the real interest rate reduces investment (Mankiw, 2009). The global investment sum is tied, by Keynes, to the interest rate, and the investment decision belongs to the manufacturer,

who decides whether or not to convert amounts of money in physical assets, production goods (Frois, 1994).

Next, in this paper, the investments' function will be achieved, and also factors determining the investments will be identified. There are three types of investment spending. Business fixed investment includes the equipment and structures that businesses buy to use in production. Residential investment includes the new housing that people buy to live in and that landlords buy to rent out. Inventory investment includes those goods that businesses put aside in storage, including materials and supplies, work in process, and finished goods (Mankiw, 2009).

Based on these investment categories, the endogenous variables of the investment function were identified. The three types of investments are expressed below:

- Business Fixed Investment = f (marginal product capital, interest rate, taxes)
- Residential Investment = f (interest rate, demographic growth)
- Inventory Investment = f (interest rate, business cycle)

In this situation, for starters, the investment function will be defined, which depends on several factors:

*I* = *I* (*MPK*, *r*, *Taxes*, *demographic Growth*, *GDP Growth*)

	I	Demographic growth	GDP growth	МРК	R	т
I	1	0.26	-0.21	-0.26	-0.05	0.98
Demographic growth	0.26	1	0.09	0.03	0.25	0.23
GDP growth	-0.21	0.09	1	0.98	0.22	-0.25
MPK	-0.26	0.03	0.98	1	0.09	-0.28
R	-0.05	0.25	0.22	0.09	1	-0.12
Т	0.98	0.23	-0.25	-0.28	-0.12	1

**Table 2: The Partial Correlations** 

(Source: Personal Computation)

After the analysis of the partial correlations, the variables *demographic growth*, *GDP growth* and *MPK* will be eliminated from the upcoming evaluation, due to low correlation coefficient between the investment and these variables (the relationships' intensity between the exogenous variables and the endogenous variables were very low). But the interest rate is kept for further analysis, because it represents one of the most important instruments of economic policy. In relation to the taxes, these are dependent on the national income's volume, so, in order to achieve a better approach for economic policy, the tax rate will be used as a ratio between taxes and income.

After implementing the multicollinearity test, achieved using the Klein criterion and inflation factor criterion, the following results have been obtained:

Applied Criterion	Results	Conclusion		
Klein Criterion	$R^2 = 0.6413 > R_{x/y} = -0.0273$	R and TR are not collinear		
Inflation Eactor Criterion	F <sub>r</sub> = 0.9993	R and TR are not collinear		
	F <sub>TR</sub> = 0.9993			

## Table 3: The Multicollinearity Tests

#### (Source: Personal Computation)

After eliminating the insignificant endogenous variables and after the implementation of the of multicollinearity test, the following investment function was achieved:

$$I(r, TR) = I_0 + i_r * r + i_t * TR, I_0 > 0$$

where r - interest rate, TR - tax rate,  $i_r - investment$  sensitivity to interest rate change,  $i_t - investment$  sensitivity to tax rate change,  $I_0 - autonomous$  investment

After processing the empirical data, the next multiple regression for the investment function was established:

## I = 7072.95 - 17.94 R - 22323.88 TR

#### **Table 5: The Investment Regression Equation**

Dependent Variable: I Method: Least Squares Sample: 1948Q1 2010Q3 Included observations: 251

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C R TR	7072.952 -17.94857 -22323.88	304.6822 8.971191 1062.521	23.21419 -2.000690 -21.01029	0.0000 0.0465 0.0000
R-squared Adjusted R-squared S.E. of regression Sum squared resid Log likelihood F-statistic Prob(F-statistic)	0.641342 0.638449 416.1847 42955997 -1868.458 221.7332 0.000000	Mean deper S.D. depend Akaike info Schwarz crit Hannan-Qui Durbin-Wats	ndent var lent var criterion terion inn criter. son stat	695.5841 692.1522 14.91202 14.95415 14.92897 0.172816

The analysis of the model shows that investments are in an inverse proportion relationship with interest rates and with tax rates.

## The Verification of the Proposed Model's Validity

After testing the validity, through the F test, the following two conclusions arise:

ightarrow F<sub>calc</sub> > F<sub>tab</sub>, indicated that the model is statistically significant (valid)

Prob(F-statistic) = 0.00, indicated that the model is valid for a probability of 100-0 = 100%

Giving the R-squared of 0.6413 and the Adjusted R-squared of 0.6384, leads to the conclusion that there is a strong intensity of the relationship between the endogenous variables (interest rate and tax rate) and the exogenous variable (investment).

After testing the model's parameters, through t-Statistic, the following conclusions are obtained:

- > The  $I_0$  parameter has a t-Statistic of 23.21 and the Prob. of 0.0000 < 0.05, indicating that the parameter is significant
- The i<sub>r</sub> parameter has a t-Statistic of -2.00 and the Prob. of 0.0465 < 0.05, indicating that the parameter is significant</p>
- > The  $I_0$  parameter has a t-Statistic of -21.01 and the Prob. of 0.0000 < 0.05, indicating that the parameter is significant

## 3. RESULTS

After applying the multicollinearity tests, the F test for checking the validity of the model, the determination of the relationship's intensity between the registered variables, and the t-Statistics for testing the parameters, it can be stated that the proposed model is valid, and that the investments are determined by two factors: interest rate (inverse relationship) and tax rate (inverse relationship).

*I*(*r*,*TR*) = 7072.95 - 17.94\**R* - 22323.88\**TR*, where r – interest rate, TR – tax rate

For this study, the technical analysis indicator – Relative Strength Index (RSI) – was introduced. The Relative Strength Index, developed by J. Welles Wilder, is a momentum oscillator that measures the speed and change of value movements. RSI oscillates between zero and 100. Traditionally, and according to Wilder, RSI is considered overbought when above 70 and oversold when below 30. Signals can also be generated by looking for divergences, failure swings and centerline crossovers. RSI can also be used to identify the general trend.

$$RSI = 100 - \frac{100}{1 + RS}$$
, where RS = average gain/average loss

This indicator will be applied on the historic interest rates, tax rates, on the taxes' growth rate and on the GDP's growth rate. The resulting values are presented in the following table:

YEARS	RSI_I	RSI_r	RSI_TR	RSI_dT	RSI_dGDP
01.01.2002	60.76	26.65	41.08	46.60	49.93
01.04.2002	62.16	27.48	39.90	49.36	48.67
01.07.2002	62.32	27.29	43.78	51.91	48.43
01.10.2002	63.15	26.79	43.40	49.54	46.47
01.01.2003	63.94	24.78	43.61	50.29	49.89
01.04.2003	64.51	24.59	41.56	48.93	49.70
01.07.2003	69.41	23.45	42.71	51.72	56.77
01.10.2003	73.98	23.78	45.06	51.50	51.23
01.01.2004	75.49	23.57	46.91	51.40	52.18
01.04.2004	79.79	24.68	46.00	49.87	52.03
01.07.2004	81.35	31.68	47.12	50.86	51.28
01.10.2004	83.25	38.46	43.79	48.51	52.49
01.01.2005	85.04	46.10	57.87	58.28	54.72
01.04.2005	82.85	51.25	56.62	48.93	48.15
01.07.2005	84.30	55.70	56.92	50.29	53.21
01.10.2005	86.84	60.08	56.51	49.52	49.92
01.01.2006	88.00	64.19	54.98	49.80	54.86
01.04.2006	88.28	66.71	52.33	48.40	48.80
01.07.2006	85.66	68.99	49.54	47.78	45.79
01.10.2006	79.26	68.55	48.80	49.36	48.70
01.01.2007	78.04	68.97	47.96	49.49	49.66
01.04.2007	79.94	67.20	52.25	52.55	51.76
01.07.2007	77.69	66.37	53.12	49.93	47.79
01.10.2007	70.69	53.27	48.06	46.79	46.81
01.01.2008	63.52	42.09	41.06	44.29	41.98
01.04.2008	60.52	32.71	30.39	40.25	48.24
01.07.2008	54.60	36.27	39.28	54.07	42.21
01.10.2008	40.05	31.24	34.54	43.62	32.14
01.01.2009	29.22	28.82	32.12	46.45	39.68
01.04.2009	26.07	29.15	26.26	42.91	45.32
01.07.2009	27.47	29.38	32.60	54.04	49.23
01.10.2009	34.02	28.82	35.49	52.73	52.37
01.01.2010	40.63	28.76	37.54	52.24	52.54
01.04.2010	46.41	30.17	36.94	50.13	50.86
01.07.2010	49.25	30.17	41.07	53.12	51.63

## Table 6: The analysis of the investment, after applying RSI

(Source: Personal Computation)

By analyzing the above table, the tendency for the following period of time, in terms of interest rates, is to increase, given the fact that nowadays there is an overselling of financial securities. In this situation, there is a negative effect on

investments, and this could lead to a new recession of the American economy, creating the prerequisites for this W crisis. To counter these negative effects, the federal government can use as an instrument the fiscal policy. Thus, reducing the tax rate is absolutely necessary in order to determine businesses to increase their investments, and by doing so, to escape this difficult period.

The tax rate is dependent on the taxes' growth rate and on the economic growth rate. Thus, it is necessary to reduce the tax level or to increase the rate up to a level that is lower than the economic growth rate; and this would have a positive effect on the economy. Furthermore, the reduction of taxation will lead to increased investments, which will further conduct to an increased income, and this, in turn, will cause investments to surge even further.

The proposed model identifies the targets that would be pursued by the tax system.

▶ If GDP increases  $\rightarrow$  Taxes' growth rate < GDP's growth rate





Figure 2. The Investment Function

Increasing the interest rate from  $r_1$  to  $r_2$  in the panel entitled *The Investment Function (R)* leads to a reduction in tax rates from  $TR_1$  to  $TR_2$  in *The Investment Function (TR)* panel. Finally, this reduction in tax rates leads to the displacement of the IS curve to the right (in the panel entitled *The IS Curve*), i.e. to a growth of the goods and services market.

## 4. Conclusions

The short-term model proposed by Mundell and Fleming, in terms of investment as a linear function dependent on the interest rate, is not a valid model in the long term. On a long term, the investments are dependent on interest rates and taxation levels, as measured by tax rate:

I(r,TR) = 7072.95 - 17.94\*R - 22323.88\*TR, where r - interest rate, TR - tax rate

The model proposed in this paper identifies a set of measures for the economy's revival, giving the difficult economic times we are experiencing. Due to the fact that the investments are determined through an inverse relationship with the interest rate and with the tax rate, the government has at its disposal the fiscal policy, through which it can determine the investment's growth, even in terms of higher interest rates.

Interest rates fell very sharply in the last two years as a result of the anti-crisis programs developed, thus in the following period of time, it can no longer be used as an effective tool to fight recession; and forecasts of technical analysis show that, in fact, it will further grow. Under these conditions, an efficient fiscal policy will determine an increasing of the investments and economic growth.

By analyzing the investment equation, it emerges the fact that the higher coefficient of TR, than that of R, determines a higher sensitivity of the changes in investment at the changes in taxation, rather than at the changes in interest rates. In the next period, a new reduction of the tax rate is necessary and this can be done in

Reducing taxes

two ways:

Increasing the taxes by a rate lower than the economic growth rate (GDP growth)

In order to avoid affecting the budget deficit, a measure with positive effects on the economy is to increase taxation, but with a lower rate than that of economic growth. This measure will lead to increased budgetary revenues and economic growth, as a result of increased investments. In this context, the proposed model represents a new approach to economic policy. Interest rate and tax rate should fluctuate in opposite direction, in order to achieve economic growth; and increasing interest rates may cause a fiscal policy decision to increase taxes, but with a lower rate than the rate of economic growth. In this context, it can be stated that the fiscal policy is an extremely valuable tool for the government.

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## INTERNAL AUDIT: DEFINING, OBJECTIVES, FUNCTIONS AND STAGES

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#### Abstract:

This article aims, through a detailed presentation as to provide clarification for a better understanding of what internal audit definition, objectives, functions and stages of its development mean. It is also exposed a brief history about the emergence and development of internal audit and regulatory framework. I also plan to linking theory and practice by reference to documents used: both the evidence considered and especially those prepared by the auditors in connection with the performance audit and its use in the audit report.

**Keyworks:** internal audit, efficiency, effectiveness, risk audit, system audit, performance audit, regularity audit.

Audit term comes from the Latin word audit - auditare, which has the significance " to listen", but about the audit had been talking since the time of Assyrians, Egyptians, from the reign of Charles the Great or Edward I of England.

The occurrence of internal audit and external audit is closely linked to development of the economic crisis of 1929 in the United States, according to the specialist Jacques Renard, when businesses were fully affected by the economic secession. Employers were interested in reducing taxes and fees so that all accounts containing transactions generating taxes and fees, have been thoroughly analyzed in order to find the possibility of reducing the taxable supply or transactions for which fees were paid improperly".

As previously stated in the paragraph we realize how far we are in time from 1929 and paradoxically how similar we are affected by the current crisis.

Audit practice has a considerable experience as we use various terms such as: inspection, control, revision, checking, auditing, and supervision.

Each of these terms implies:

- comparing the actual situation with the situation that should be;

- establishment and analysis of the deviations and risks;

- proposal or recommendation of measures to contribute to the achievement of the entity or to provide correct information.

These terms may have a different scope and may be based on some specific investigation techniques and procedures.

Audit period, generally comes from the Latin word "audire"- to listen and inform others. In Anglo-Saxon countries today, the term signifies an overhaul of accounting and other information, performed by an independent professional in order to express an opinion on the regularity and sincerity audited information.

Audit in general, is a systematic process of objectively obtaining and evaluating the information or statements to assess their degree of compliance with predetermined criteria, and communication of results to interested users.

The audit consists of checking and certifying the financial statements by an independent expert to provide an opinion on the facts and accuracy of the data contained therein. The role of audit is to provide users with information on the principles and accounting practices and accounting and presentation of financial statements accurate picture, clear and complete financial position and financial performance of the company.

After the analysis of audit data definitions the following general features can be drawn:

 The audit is a process, a set of operations, collection, analysis and evaluation of information (audit trail) to obtain reasonable assurance on compliance of such information or statements with predetermined criteria.

In essence an audit process is:

- fair audit evidence-gathering (just the character of the evidence relates to the quality and effectiveness of the types of samples collected) and sufficient (sufficiency of evidence refers to the amount collected) necessary to express an opinion or to formulate a recommendation;
- correspondence assessment or inconsistencies between different types of collected samples;
- setting the deviations regarding the pre-set criteria.
  - 2. The audit is facing accounting policies and work procedures used in the entity with a set of criteria, such as International Financial Reporting Standards (IFRS), International Accounting Standards (IAS), national accounting rules, internal procedure manuals, tax regulations, etc To be useful, these confrontations have to be based on justifiable and verifiable information.
  - Auditors are competent professionals who have achieved that status based on exams. Examination of the information is not made at random, as it is by intuition auditors professional standards (codes of ethical conduct established by the profession and the Seventh Directive of the ECA in 1984. professional standards and technical standards work).
  - 4. Auditor's conclusions are summarized and systematized in the reports that are made available to those who are interested.

In 1999, the International Institute of Internal Auditors (IIA) in the U.S. has issued a new definition of internal audit, following a study of 800 students, coordinated by auditors from Australian universities, such:

Internal audit is an independent and objective activity, an organization that gives assurance as to the degree of control by the operations, a guide to improve operations and contribute to an adding value.

Internal audit helps the organization to achieve its objectives by evaluating a systematic and methodical approach to its risk management processes, control and management of the entity and making proposals to strengthen their effectiveness.

In the vocabulary " The words of the Audit" is given the following definition: "The internal audit function within an organization exercised in a manner mandated independent evaluation of internal control. This approach specifically compete with good risk control over the charge.

Internal audit is an independent activity, objective of assurance and consulting designed to create value and improve an organization's operations. It assists an organization in achieving its objectives by implementing a systematic and disciplined approach in evaluating and improving the effectiveness of risk management and control.

Internal audit profession is based on a flexible frame of reference, recognized around the world, which is adapted to the specific legislative and regulatory framework of each country, in compliance with specific rules governing the various sectors and culture organization.

The reference of internal audit includes:

a) the concept of internal audit, which indicates some essential elements:

- internal audit carry out assurance and advisory ;

- its areas of responsibility are risk, internal control and management entity;

- purpose of internal auditing is to add value to organizations;

b) code of conduct, which provides internal auditors principles and values that enable them to focus their professional practice according to the specific context;

c) rules (standards) for professional practice of internal auditing, which guides its auditors to carry out missions and management activities;

d) arrangements for implementing that comment and explain the rules (standards) and recommended best practices;

e)support for professional development, consisting mainly of theory papers and articles, the documents of meetings, conferences and seminars

The audit literature is structured in different ways and different criteria.

## A. Depending on the objectives:

## 1. Regular or compliance audit.

Its objective which is to establish if they met certain criteria defined by a competent authority. These criteria are usually specific entities or sectors of activities such as:

- compliance with management decisions or policies;

- compliance procedure manuals relating to the conduct of operations;

- compliance with contract terms;
- legal compliance and other external restrictions (such tax audit can be considered a compliance audit);
- ensuring exhaustivity, reality and accuracy of information;
- security assets;
- ensuring an atmosphere of moral- ethical thing etc.
  - 2. Audit of effectiveness or performance. In this type of audit criteria are not fixed, they change each time depending on the reasoning of auditors that look at what are the best, effective, reliable and timely solutions based on emerging internal and external cyclical. Effective audit can be viewed from two angles: management audit and operational audit.
  - 3. Financial audit relies in collecting audit evidence about the entity's financial statements and use these samples to assess their compliance with preset criteria. In Romanian legislation the expression "financial audit" is used, in the VIIth Directive of the European Community Council in 1984 is used in the same acceptation the term "legal control" (legal or statutory audit).

## B. Depending on the affiliation of auditors the audit types are:

- internal audit;
- external audit.

Internal audit is organized as an independent section of the structure of public and private entities, and external audit is carried out as the financial audit and contract audit conducted by independent professionals and management of auditees.

In our country, the law provides the following types of audit:

- audit system, which provides an assessment of depth of management and internal control in order to determine whether it works economically, efficiently and effectively, to identify deficiencies and make recommendations for their correction;
- the performance audit, which examines the criteria established for implementing the objectives and tasks of the public entity shall correct the results and assess whether the results are consistent with the objective;
- regular audit, which is examining the financial impact of actions on public funds or public property, in terms of compliance with all principles, rules, procedures and methodologies, according to legal norms.

## The audit objectives.

## Any type of audit objective is to improve the use of information.

Control and audit professionals have objectives that are interrelated and interconditioned between them, so:

- **Internal control** check activities and operations are conducted in accordance with the laws in force, in conjunction with the risks facing the organization;

- Favorable **external control** signals and how to ensure the system of internal control within the organization;

- **Internal audit** is the existence and operation of management control system and evaluate its effectiveness, and as a result may recommend giving up some control actions and develop others;

- The external audit shall ensure that the system outlined above exist and function within the organization. In this regard, it ensures that the tasks of internal control and internal audits to be conducted in accordance with standard practice, by different professionals and have regard to all activities and departments within the organization.

From the above results it holds the key role of the **INTERNAL AUDIT.** Thus, on the one hand, he evaluates the internal control on its functionality in relation to general management, but also in relations with external control entity received from the outside, but on the other hand, recommendations and conclusions that provides reports on which they draw, **EXTERNAL AUDIT** provides a basis for preparing and formulating an appropriate advice, taking into account the degree of familiarity with the organization and the general management degree of assurance provided by internal auditors.

Consequently, special attention should be given to this new profession of "INTERNAL AUDIT", which has already been fixed in the consciousness of professionals, through its introduction as a subject of study in the university system, all profiles and specializations, including faculty from outside the economic domain, and conducting internal audit activities of the master, which can be used for professional certification for internal auditors.

Internal audit is the activity of objective examination of all activities of economic entities in the real purpose of independent evaluation, risk management and control and their processes.

Internal Audit has as aims:

- verification of compliance of the economic entity audited policies, programs and their management in accordance with legal provisions;

- evaluating the implementation of financial and non-financial controls and arranged and performed by the head entity in order to increase economic efficiency;

- evaluating the adequacy of financial and non-financial data and information for management to know the reality of the economic entity;

- protecting those assets and off balance sheet and identify measures to prevent fraud and losses of any kind.

### Audit Functions.

International auditing standards define the internal audit activity assessment as an entity organized as a service to it.

Internal audit functions are among others:

- examination;
- evaluation;
- monitoring the adequacy and effectiveness of internal control.

Internal audit review the entity's activities and services, primarily to improve them. It leads to strict policies and procedures established by that entity and it is not limited to financial matters.

Internal audit is:

- a permanent review of the entity's economic activity ;

- an independent appraisal activity for the economic entity's management, by examining the financial operations, accounting and other services on all;

- an evaluation of conformity assessment tasks and accounting records, reports, assets, capital and results ;

- a certificate or certification of financial accounting documents .

Internal audit is a function of the entity's control structure. It should not be confused with the entity's internal control structure. The two departments are separate and independent, not being in the relationship of subordination.

Those responsible for carrying out internal audits, coordination of work or commitments, the signing of internal audit reports must be of Internal auditing.

Internal auditors are permanent employees of the entity and are directly responsible to the entity's management or the General Assembly of Shareholders.

Internal Auditor: advise, assist, recommend, but not decide, his obligation is to provide a means to improve the control that each manager has on his activities and those in coordination to achieve goals.

## Conduct internal audit

Internal audit of public entities is performed by internal audit department, which evaluates whether the financial management and internal control systems are transparent and comply with the rules of legality, regularity, efficiency and economy.

Internal audit is exercised over all activities in a public entity, including the activities of subordinates, or under the authority in coordination with the formation and use of public funds and the management of public assets, which runs under the specific methodology of internal audit steps, procedures and documents as follows:

## STAGE I

Preparing audit mission: what the following procedures requires:

- initiation of the audit (in which they are drawn: service order, declaration of independence, triggering notification of the engagement - Internal control questionnaire);
- 2. collecting and processing information (summary list of objects is drawn audited);
- 3. risk analysis ( to prepare table of "strengths and weaknesses"");
- developing the internal audit program (program audit, the preliminary program of intervention on the spot);
- 5. opening session (it made the opening minutes of the meeting).

## STAGE II

Intervention at the premises requires the following procedures:

1. collecting evidence (to be prepared the following documents: checklist, tests, job identification and analysis of problems;

2. finding and reporting irregularities (for declaration form is completed and the reporting of irregularities);

3. review working papers (note summary shall be prepared working documents);

4. closing session (it is written the closing minutes of the meeting.).

## STAGE III

## Internal Audit Report: requires the following procedures:

- 1. draft internal audit report (to prepare the draft report);
- 2. transmission of the draft audit report;
- 3. conciliation meeting (minutes of meeting of reconciliation is made);
- 4.final report (final report's preparation);
- 5. supervision (supervision shall prepare a list of documents).
- 6. dissemination of internal audit report.

## STAGE IV

**Tracking recommendations:** stage at which it is made recommendations tracking sheet. Based on its audited entity will be revise their work as auditors recommendations, recommendations which were accepted by the entity.

**Internal Audit Department audits** at least every three years, but not limited to, the following:

- budgetary and legal commitments arising directly or indirectly in payment obligations, including EU funds;
- payments made through the budgetary and legal commitments, including community funds
- sale, pledge, lease or rental of goods from the private sector of the state or administrative-territorial units;
- public revenue, respectively the licensing and establishment of debt instruments and facilities provided to their collection;
- allocation of budget appropriations;
- accounting system and its reliability;
- decision-making system;
- > management and control systems and associated risks of such systems;
- > information systems.

Internal audit assignments are made based on plan. The draft audit plan is prepared by the internal audit department, based on risk assessment and by taking suggestions from the head entity, in consultation with higher-level government entities, taking into account the recommendations of the Court of Auditors. The head of the public entity approves the draft internal audit plan The internal auditor carries out ad hoc audits, internal audit assignments that exceptional, not included in the annual internal audit plan.

In carrying out audits, internal auditors carry out their activities based on work order issued by the Head of Public Internal Audit Department, which explicitly states the goals, objectives, type and duration of the internal audit, nominating and audit team.

Internal audit assignments may be the main objectives:

- procedures and operations to ensure compliance with rules, regulations and laws a regular audit (an audit of this type is exemplified in this seminar notebook);
- assessing the depth of management and internal control in order to remove any irregularities and shortcomings of the public entity the audit system;
- examining the impact of the set objectives and desired quality of the public in terms of the criteria of economy, efficiency and economy - performance audit.

Mission objectives are statements prepared by auditors that define what they have set out to achieve during the mission.

Public Internal Audit Department shall notify the structure that will be audited, 15 days before the onset of engagement and it will include the purpose, key objectives and duration of the mission.

Public Internal Audit Department shall also notify, topic in detail, joint cooperation program, and the periods in which the interventions on the spot, according to methodological norms.

The internal auditors have access to all data and information, including electronic ones, which it considers relevant for the purpose and objectives specified in the order of service.

Management and executive staff of the auditee is required to provide documents and information required within the timescales, and all the support needed to carry out properly the public internal audit.

Internal auditors may request data, information and copies of documents certified by natural and legal persons in connection with the auditee, and they have the obligation to provide the requested date.

The authorized representatives of the European Commission and European Court of Auditors shall have the rights equivalent to those provided for internal auditors in order to protect the financial interests of the European Union; they must be authorized to that effect by a written authorization, to prove their identity and position, and a document indicating the object and purpose of inspection or spot inspection.

Whenever the public internal audit narrowly specialized knowledge is required, the head of internal audit department can decide whether to contract for expert services / advice outside the public entity.

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## DEVELOPMENT OF THE ACCOUNTING PROFESSION IN ALBANIA IN THE NEW ERA OF MARKET ECONOMY

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#### Abstract:

In this paper we give an overview of the most important developments that the accounting profession has experienced ever since Albania switched from a closed economy to an open market one. We put forth a discussion about the factors that recently seem to represent major challenges for the accountants. We identify as two of the most important and emergent challenges the technology innovations and the globalization trend in accounting and financial reporting. Since computers began to be widely used in industry the impact of technology has been strong on the way that the accounting transactions are processed and on the financial and fiscal reporting. The use of computerized accounting software is constantly rising and more and more complex packages customized for the specific need of the domestic companies are being developed in Albania. This has presented an ever increasing need for more trainings and specializations of accountants in information and communication technology. Another important development is the globalization of accounting and financial reporting. The implementation of the new National Accounting Standards in Albania in 2008 fully complying with the IAS/IFRS, presents a major change in the accounting environment in Albania. We conclude the paper with some recommendations about several actions that might be taken to smooth the effects of these latest changes and challenges that the accountants are facing.

**Keyworks:** internal audit, efficiency, effectiveness, risk audit, system audit, performance audit, regularity audit.

#### 1. Introduction

Like the other Eastern European countries, Albania switched to the free and open market economy in the early '90s. These changes in the economic system, from a centralized economy to a market economy, presented several requirements regarding the creation of a new legal and institutional infrastructure in all the economic fields and in accounting as well. Deep reforms and innovative measures were needed to build this infrastructure. The new accounting legislation after the '90s was mainly developed having the Western legislation in mind and to some extent also the experience of Eastern countries, that like Albania were also in a phase of transition. The new accounting law tried to take into consideration the developments of the Albanian economy right after the '90s too. One of the most important earliest steps in the accounting reform was the Law no. 7661 dated 19.01.1993 "On Accounting, which defined the general obligations, the principles and rules for accounting, preparation and presentation of financial statements. By establishing the *general accepted accounting principles (GAAP)* as well as several accounting norms, the Law no. 7661 founded a normalized accounting framework in Albania.

In the same year, as a direct consequence of the above law a General Accounting Plan<sup>1</sup> (GAP) was drafted and approved by the Albanian authorities. GAP described in detail the methodological and technical procedures for bookkeeping and accounting as well as for preparation of financial statements, to the extent that such procedures were common to the various economic units. The regulations set forth in the GAP focused on economic enterprises regardless of their economic activity (production, trade or services). The GAP tried to precede and address certain elements not yet put into practice in Albania and was considered to be quite adequate to fulfill the needs of the market for accounting and financial information during the late '90s.

But the new developments in the beginning of the new century revealed the shortcomings of the existing Accounting Law as well as that of the GAP. The economic development in Albania, sophistication of the domestic market, participation of important foreign companies, the commitment of the Government to sign the Stabilization & Association Agreement with EU, as well as other factors demanded higher quality in accounting and financial information reported by the Albanian economic entities. These were the reasons that the National Accounting Council took the initiative for drafting the new Law "On Accounting and Financial Statements"<sup>2</sup>. This law aimed to address and overcome the shortcomings of previous accounting procedures and financial reporting. The new law provides the necessary orientations to tackle various issues previously identified to present considerable problems for the preparers of financial statements. The law has specified the types of accounting standards (national or international standards) to be applied by the Albanian economic entities, according to the activity they perform and according to their organization type, if they were public enterprises or private companies.

The new law mandates the National Accounting Council (NAC) as the only responsible and authoritative body to compile the National Accounting Standards (NAS) in compliancy with the requirements of the new law (Law 9228, date 29.04.2004) and in coherence with the international accounting standards IAS/IFRS. The new NAS are effective for reporting years beginning in January 2008. For the last

<sup>&</sup>lt;sup>1</sup>General Accounting Plan (GAP) – Ministry of Finance and Economy, 1993.

<sup>&</sup>lt;sup>2</sup> Law 9228, date 29.04.2004 "On Accounting and Financial Statements" – available from the www.qpz.gov.al

two years economic entities in Albania have reported their financial statements under the requirements of the new law and the NAS, and regardless the prolonged period and extensive preparation by the respective authorities, their implementation still requires a lot of efforts to be exercised to guarantee the maximum efficiency<sup>1</sup>.

In this constantly changing environment the accounting profession has been persistently faced with serious challenges and very demanding commitments. Since the early '90s with the adaption from the centralized economy toward an open-market economy the accountants were in front of a deep revolutionizing trend of their profession. Especially with the new century in the early'2000, the "globalizing accounting" trends abroad as well as the aspiration of Albania for an EU integration presented new, dynamic challenges that the accountants should face. On one side these challenges require the accountants to constantly adapt their knowledge and expertise and on the other side the experience of the accounting professionals is vital in rendering the adaptation process more effective.

This study tries to address the recent more demanding challenges that the accounting profession is being faced with in Albania. The rest of the paper is organized as follow: in the first section we give an overview of the regulation and organization of the accountants' profession in Albania. In the second section we present with certain details what is considered the biggest innovation in the accounting framework in Albania, the new National Accounting Standards and their very first results after having been in use for the last two years since 2008. In the third section we discuss on the most emergent challenges that the accountants are facing since the verge of the new century. Albania is the focus in this section, but where appropriate other South and Eastern European Countries are mentioned as well. In the fourth and last section we conclude by giving several recommendations on probable actions that could improve the reaction toward the discussed challenges.

# 2. The accounting profession development and its current organization in Albania

Unlike the practice of several countries where one individual may practice both professions, that of the accountant and that of the auditor, based on the Law no 10091 "On organization of the Chartered Auditors and the Certified Accountants" approved by the Albanian government in March 2009, the professionals in Albania have to choose between being licensed as auditors or as accountants. One expert cannot be both; rather he has to choose between the two. In essence this law tries to provide a separation of functions, namely it eliminates the risk of overlapping the preparation of annual financial statements (done by the auditors), and the function of auditing these financial statements (done by the auditors), thus guaranteeing quality and avoiding the interest conflicts potentially present in situations of this kind.

<sup>&</sup>lt;sup>1</sup> Shkurti, R; Naqellari J. "Quality of financial and accounting information in Albania as perceived by the practicing accountants." Discussion paper of the University of Tirana, Albania.

## Studies in Business and Economics

In order to be licensed as a Certified Accountant a person should comply with several criteria like: a) graduating with an economic major which includes fields of study like finance, accounting, business administration or economics; b) working or having experience in the accounting, finance and/or financial control, or other similar fields for not less than three years; c) has attended a qualification season in the field of accounting and financial reporting (these qualification seasons are organized and administered by the respective accounting associations in Albania) prior to the professional examinations; d) has successfully passed two examinations of professional proficiency, one in accounting, financial reporting and financial statement analysis and the other in fiscal legislation in Albania. Except the four above criteria the Law specifies that for becoming a member in one of the professional associations, these associations may state additional membership criteria in their statutes.

Prior to the Law no 10091, the organization of the certified accountants was similar to the current one having the same criteria for licensing except the number of examination tests to be taken which was previously only one, combining accounting and fiscal legislation. Another major change introduced by the new law concerned the modality of testing and licensing administration giving the authority to license certified accountants to a *special commission* whereas previously the authority to organize the examination tests and to license the certified accountants remained with the Accounting Directory in the Ministry of Finance in Albania. The special commission authorized to administer the testing and licensing procedures is named the *Certification Authority* according the Law no 10091.

By the time of this study (May 2010) there are three professional accountancy associations in Albania, The Institute of Certified Accountants (ICA), the Association of the Accountants and Finance Experts of Albania (AAFEA), and the Association of Certified Accountants, ACA. The first two associations are founded prior<sup>1</sup> to the new Law no 10091, but were subsequently reorganized according the requirements of the respective law. Their main responsibilities are: 1) to maintain an updated registry of the Certified Accountants that are registered as their members; 2) to provide ongoing trainings and qualifications for their members and for the candidates prior to the professional tests mentioned above.

There are currently approximately 1200 registered Certified Accountants in Albania but not all of them are licensed with a business license. Thus some of them work as full-time employees in companies, even though they have the title of Certified Accountant, some of them work together under one business license and so on. There are several ways they can conduct their job in practice.

<sup>&</sup>lt;sup>1</sup> ICA is founded in 2000 under the previous name "Professional League of Certified Accountants" but since 2006 is known with this name; the AAFEA is founded in 1998 while the ACA is the newest one founded in late 2009.

# 3. The first results of the implementation of National Accounting Standards in Albania

The implementation of the NAS was a process that lasted for about two years. Right after the NAS were approved in mid 2006, they were announced obligatory to be applied for the accounting years beginning in January 1<sup>st</sup> 2008. The 2008, as the first year for the application of the NAS, would be the indicator for the success or failure of this implementation process. Several studies addressed the first effects of NAS implementation (Hoxha, Bollano, 2009 and Shkurti, Nagellari, 2009) but especially one of them (Hoxha, E; Bollano, J. 2009) revealed that the economic entities encountered quite some problems and difficulties in applying the NAS for the first time. Those economic entities that applied the NAS were characterized by a low level of knowledge on behalf of the preparers of financial statements regarding the standards. Even though the professional organisms, initiated several trainings programs since 2007 the preparers of the financial statements didn't respond well to the change. But since the human recourses and the logistics capacity were guite limited in proportion with the training demand, the number of the trained persons in this first year was relatively small. Also under this context, not in every economic entity, the management was subject to and interested in gualifying the adequate staff related to the NAS. This comes also from the fact that the business in general did not have the needed sensibility to understand the importance of applying the NAS<sup>1</sup>.

We state as another possible reason for not correctly applying the NAS the fact that the Law "For Accounting and Financial Statements" is not quite direct regarding the proper penalties for not applying in an obligatory way the standards. We should keep in mind that the reporting environment in Albania, in the case of a non-existent functioning of a capital market is more oriented towards fiscal reporting. This pushed the economic entities in 2008, like the previous periods, to pay more attention to the fiscal reporting rather than financial reporting and NAS compliancy.

The same study of (Hoxha, E; Bollano, J. 2009) also revealed several technical complexities and issues during the practical implementation of the NAS. The problems and difficulties that were faced by those entities during the first time application of the NAS were as follows:

- transition problems, of switching from the previous domestic GAAP to the new NAS;
- 2. the measurement, evaluation and reporting of the financial statement elements;
- 3. preparation of the new financial statements.

The transition problems refer mainly to the previous balance sheet items which were going to have a new accounting treatment in the successive period. It is worthwhile to briefly mention some of these elements. Regarding the Foreign

<sup>&</sup>lt;sup>1</sup> Authors' personal observation and opinion.

Exchange differences the economic entities used to have large amounts of such differences in the conversion of assets and liabilities accounts (balance sheets items under the previous GAAP). With the new standards the conversion differences were going to be included in the Income Statements. How should these translation differences be treated in the beginning of 2008? Next, what about the start-up expenses incurred by the economic entities? Previously they were recorded as an assets account, while under the new NAS another accounting treatment was needed.

**Measurement, evaluation and reporting problems:** The problems mainly involved in the new concept of evaluating the elements of the Financial Statement, are primarily problems deriving from the concept of the *"fair value accounting*". As for certain fixed assets there is no active market in Albania, then reporting these assets using the fair value represents a problem for economic entities in Albania. On the other hand using one of the alternative methods requires a qualification of the staff that prepares the Financial Statements. As a result there has been no effort made by the economic units to present these intangible assets and obligations under the fair value, because except of the insufficient qualification of the staff, a considerable influence came from the reporting culture, which as analyzed above is oriented toward the reporting for fiscal purposes. According to this view, the economic units did not exercise a serious effort to achieve a realistic and correct financial performance for the year 2008.

Several problems were also observed during the **preparation of the annual financial statements**. Presenting the information in a certain way for a long period created problems while adopting the new NAS. Some changes like adding the Cash Flow Statement, reversing the order of assets and liabilities in the balance sheet (the new NAS similar to the IAS/IFRS require the liquidity concept respected when preparing the balance sheet unlike the old GAP in Albania that used the functional order for assets and liabilities), adopting the carrying value of the fixed assets instead of the full cost concept, and the introduction of a completely reformulated Income Statement compared to the previous one, all required a lot of efforts and concentration on behalf of the accounting professionals regarding the proper and correct implementation of the NAS.

# 4. The emerging challenges for the accounting professionals in the new century

Following the above overview of the current situation of the accounting field in Albania in terms of the accountancy professionals' licensing and organization and the new accounting standards recently implemented in our country it is time to discuss about the major challenges that these and other new developments have posed in front of accountants. Especially in the context of ever increasingly changing environment domestically and abroad it is quite timely to reconsider the role of the accounting in this "information age". We have organized our discussion following five threads of debate: the impact of the recent phenomenon of the "global accounting", the
role the accountants play in the fight against corruption, the impact of the information and communication technology upon accountants work, frequent changes of the fiscal regulation and the adaptation of the higher education curricula in order to accommodate the much needed adaptation to the above trends emerging in Albania.

# 1. "Global accounting" phenomenon

The term "global accounting" is often used lately to describe the phenomenon of widely use of the IAS/IFRS and their adoption by more and more countries and institutions. Complying with the international standards or preparing domestic standards which conform with the IAS/IFRS has created a vast area of identical or similar accounting and financial reporting rules that facilitates the flow of capital and increased investments thus reducing considerably the costs of converting from one set of rules to another. In this era of "global finance" and "global markets" the "global accounting" was a must and a due necessity.

Nevertheless one can question if the "global accounting" is the right trend for small countries with mainly small businesses like Albania. A noticeable trade-off between the cost and benefits of adopting internationally compliable standards has been a field of debate among practitioners and academics even in Albania. On one hand adopting the NAS, as one of the prerequisites of aligning the financial regulation with that of the EU, has introduced more political advantages than potential economic advantages (given the limited number of big companies in Albania aspiring to attract foreign investments); and on the other hand it has been a considerable cost for the small businesses to adopt the new NAS because of the need for training of internal staff or increased fees from outside consultants.

Yes, "global accounting" is costly especially for small countries like Albania that don't have an active capital market that would benefit from better accounting rules and more transparent financial information. Still we believe that the initial technical difficulties and expensive requirements will pay off in the long-run future.

# 2. Increasing financial and accounting information quality as a measure against corruption<sup>1</sup>

The whole South East European region suffers from a high perceived level of corruption which implies high financial risk for foreign investors as well as for the domestic investors. The level of corruption<sup>2</sup> as often cited is high and often attributed to the lack of regulation and law enforcement. Albania as a country within this region reflects the same corruption and lack of transparency features that are present overall this region. We have to mention also that the cultural context and environment in

<sup>&</sup>lt;sup>1</sup> Rieger R. J. "South East Europe Implementing and Enforcing International Standards for Financial Reporting and Auditing".

<sup>&</sup>lt;sup>2</sup> The last Transparency International Association report on the level of perceived corruption index ranked Albania in the 95<sup>th</sup> place for the 2009 with an index coefficient of 3.2.

# Studies in Business and Economics

Albania and the region are characterized by certain common beliefs such as if not paying bribes no business can be conducted. No doubt, a healthy investment environment requires high level of financial transparency, adequate procedures to protect the interests of minority and majority shareholders, and in case of SEE countries, protection from the government and political manipulations, as the level of political risk here is significantly higher than in other European countries.

Accountants should play a vital role in the prevention and the detection of corruption, thus increasing transparency. They face considerable pressure from their employers, to engage in doubtful financial and accounting transactions, to submit and report false statements, and in general to be part in the many tax evasion schemes. In this context the accountants are the potential blow-whistlers who can report the false practices of their enterprises and employers. This depends on the level of their professional expertise as well as on the degree of integrity and other ethical principles that the accountants exercise in their profession. The problems and the challenges they face require high technical skills as well as strong beliefs to oppose old and deeprooted corruptive accounting practices, such as deflating revenues, overstating expenses and working with two different sets of financial statements (one for the tax authorities, and one for the owners, the so-called internal statements) which aim to evade from taxes resulting in high levels of shadow economies.

Thus it is not only their professional preparation but also their ethical values that establish the framework of their work and the extension on which they will not compromise with the existing practices but instead will choose to apply transparent procedures and will chose to comply with the law and with sound financial reporting practices that will guarantee increasingly high quality of information. The role of accountants is extremely vital in cultivating a different set of values, those of complying with the law and the regulations.

# 3. Impact of the technology advancements in accounting and financial reporting in Albania

It is almost impossible to not notice the recent trend of growing use of the computerized accounting software. Technology innovations have introduced concepts like Electronic Fund Transfer, Electronic Data Interchange, Point of Sales, Radio Frequency Identification device, Enterprise Resource Planning, all of which have radically changed the way accounting procedures are being done. Nowadays not only accounting is computerized but all the internal functions and processes of a company have been automated thus transforming the role of an accountant from a simple bookkeeper that only captures and transforms the information (which is now conducted by computers, via POS, ATM or other similar technologies) to a decision-maker who in turn having more time to analyze and improve, through leaving the routine and repetitive tasks to the computers, is already an important player in the tactic and strategic decision-making floor of the companies.

Albania has been involved in this flow as well, even though in a modest manner cause the needs of the small businesses here are not the same as of the big companies abroad. Before the 90s the use of computers in accounting was inexistent and all the accounting data was gathered, analyzed and reported manually. This was a very difficult procedure requiring extra efforts from extensive accounting sectors in the big central state-owned enterprises of prior 90'. It was costly, error-prone, not efficient and time-consuming.

After the 90s when the market economy replaced the former centralized economy the first computers entered Albania, and not long after that they began to be used in accounting and finance. General software was initially used and only in 1996 the first accounting software "made in Albania" was introduced by a company founded by two Albanian professors. The company "Instituti i Modelimeve në Biznes" launched in market the Alpha Accounting package, which was very successful and was soon followed by improved versions of the same software as well as by other packages offered by other software companies that entered the accounting software market after the success of the first software. Currently there are three companies offering a wide range of accounting software "made in Albania" that offer solutions for small businesses (simple packages) to big companies (modular software, easy ERP and full ERP). Besides the domestic companies there are also representatives of big foreign companies in the field of accounting software like SAP, Oracle and WinLine Mesonic that provide accounting and enterprise software mainly for the big companies as well as for the banks and other financial institution in Albania. As of the time of this study because of the low cost of the basic feature accounting packages even the smallest companies use any version of accounting software. There is no more any manual accounting in any companies.

Adopting technology in accounting and learning to master the new accounting packages has obviously proved more troublesome for the "old" accountants (those graduated and experienced before the 90s) than for the "new" accountants (graduating after the 90s). Thus is not unusual to find in Albania certified accountants and even some registered auditors that do not fully operate any accounting software, leaving the "technology thing" to their young assistants. Nevertheless this is a phenomenon which is destined to cease existing because of the ever increasingly introduction of new workforce contingent in the accounting market place, and the increased effort of the professionals to learn the accounting software packages while striving to remain competent.

Other recent changes worth to mention are the integration of the accounting packages with other applications like the POS and cash registers which are connected online with central databases of the Regional Tax Authorities in Albania (this has been a move on behalf of the tax authorities in effort to decrease the levels of the "shadow economy" in Albania"). The companies subject to the VAT tax in Albania are also obliged to file online all their monthly tax reports, thus decreasing considerably the use of paper-based reports and of manual interferences in the process of financial and fiscal reports preparation.

# 4. Changes in the regulating and fiscal requirements

As any other country in transition Albania is characterized by frequent changes and adaptation in its financial and fiscal legal framework. These changes have created restraining momentums for the foreign investors that regard Albania as a politically risky country. Another dimension of these frequent changes is the need to constantly follow-up the Albanian government and/or parliament decrees and to carefully implement all the changes otherwise penalties may follow.

It is often noticed that several paragraphs of different pieces of legislation in Albania contain contradictions, overlapping or not fully and clearly covered areas which lead to further ambiguity among practitioners of accounting and also between them and the tax controllers who are given the right (by the Law on the Tax Procedures in Republic of Albania) to interpret the law. All these inconsistencies beyond the frequent changes of the regulation represent hidden costs for the accounting professionals and in practice is one of the biggest challenges in their everyday work. This is especially true for the freelance accountants and for those working for small companies whose priority is not financial reporting but fiscal reporting. In this context we may say that even though the transition to the new NAS was a major change in the financial reporting landscape, it remains more straightforward and more stable compared to these constant, frequent and unpredictable changes in the fiscal requirements that are really presented one after one (not all in a single move like the NAS), but that are changing so often that do not give time and space to the accountants to get used with them.

# 5. Adaptation of the higher education curricula to accommodate the changes in the accountancy environment

Most countries in the region (and recently this is also valid for the countries worldwide), Albania included, are currently suffering from a lack of accountants and/or auditors who are qualified to prepare reports by (IFRS) international financial reporting standards, or by domestic standards which comply with the IFRS. Recently the countries of the region have been moving from old accounting practices toward new accounting standards and Albania is one of them. But the implementation of the new NAS brought several implications which were discussed earlier in this paper, with lack of proper training being one of the most emergent issues.

One of the biggest challenges for Albania in this dawn of a new global accounting era is to create a vast pool of qualified professionals that would guarantee the competition and high quality in the accounting jobs market. This could be achieved primarily through two means: university education and subsequent trainings after the graduation. Concerning the first one, recently the curricula of almost all the accountancy higher education programs have changed considerably to include topics such as IAS/IFRS, tax reporting, advanced managerial accounting, auditing and assuring services, professional ethics and accounting information systems. Concerning

the second one, the professional associations for accountants and auditors frequently organize trainings referring the recent and periodic updates of the accounting standards themselves as well as the internal government regulation in Albania.

# 5. Main conclusions and recommendations

Various issues concerning the most prominent challenges faced by the accountants in this new century are the center of this article. As the role of accountants is changing even more rapidly in the recent years it is time to stop and reconsider the necessary steps that should be undertaken in order to welcome this new century with its new challenges and requirements. We presented a discussion on several topics that are seen as the center of debate and that represent the major hindrances for the accountants to remain competent and competitive in the market.

Issues like "global accounting", information and communication technology, ethical role of the accountants against corruption, changes in the fiscal regulation and the need for update in higher education curricula are the "hot spots" of today's debate that is taking place among accounting practitioners, academics and other key players in Albania. Especially two of these issues are more prominent, namely the introduction of the new NAS and the need to improve in their implementation as well as the impact of the technology in the way accountants are doing their job. Regarding these two most important issues in this section of the paper we give an overview of the discussion and provide several recommendations to take advantage from them and to maximize their benefits.

Due to the recent introduction of the new accounting standards, the accounting environment in Albania has changed considerably posing new opportunities but also requiring new skills to conduct the job properly. In the process of EU integration Albania has been involved in the recent flow of the "global accounting" by introducing new National Accounting Standards in 2006 that became effective in 2008. The first results from these NAS implementation in practice are not those of a 100% success due mainly to two sets of reasons, one set of a *technical character* – those arising from technical details or difficulties within standards themselves and with application in practice – and the other set of a *bureaucratic character* – which relate to some delays in publishing the NAS, in offering supportive training session or explaining and guiding materials as well as a weak campaign and publicity about the standards.

What we recommend regarding *the technical reasons*, priority has to be given to the encouragement of professionals, accounting educators and professional organisms to publish technical supportive materials in order to assist the compilers preparing qualitative financial statement in one hand, and on the other to facilitate the users to read and properly understand the financial statements. The continuous process of training and qualifications on compilation of financial statements should be an important contribution of professional organisms. This process has to be in a progressive manner, so to include within itself the potential compilers of tomorrow. This means that university curricula have to be only the beginning of accounting

professionals. University education has to be the foundation and theoretical ground of future professionals in accounting.

Regarding the **bureaucratic reasons**, there is no room for delays in the publication of basic materials such as the case of International Accounting Standards or other additional and supportive materials that still nowadays is found published only in English. The business environment awareness should have a great significance on the importance of implementing the Accounting Standards. The business Community, in particular their senior leadership must understand that the financial statements are produced not only for the Tax Office but for many other users as well. Therefore, the correct implementation of Accounting Standards means approaching them in general and not in a selective way. In other words, if we take a practical example as 'the reevaluation of the fixed assets', since due to the tax purposes these are unknown incomes or expenditures, we should not overlook it and it is *mandatory to be done at least 1 time a year* according to NAS 5 and the Law "On Accounting and Financial Statements".

Technology innovation is another major challenge for the accountants in Albania, especially for the "old" accountants who are graduated and experienced prior 90'. Use of computers is becoming vital for offering timely, error-free and qualitative financial information and in this context accountants should catch the trend and align themselves to the new technologies being not only persons who learn how to use the accounting software but also consultants on how these software can better serve their everyday needs. We recommend active participation of the "old" accountants in training programs so they can learn how to use the accounting software. Luckily there are several accounting packages "made in Albania" that reflect the domestic features of the economic activities. This and the recent requirements of the Tax Authority that demand not only daily submission of the sales activities from cash registers to central tax databases but also the online submission of monthly tax reports are reasons to consider extensive coverage of ICT in higher education curricula and in subsequent qualifications.

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# THE ADVANTAGES OF IMPLEMENTING A PREDICTIVE MANAGEMENT WITHIN THE MAINTAINIG AND EQUIPMENT REPAIR AT AN ENTERPRISE WHICH PRODUCES COMPONENTS FOR THE AUTOMOTIVE INDUSTRY INCLUDING TECHNICAL ASSISTANCE AND SERVICES

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#### Abstract:

Economic efficiency within enterprises is represented by how maintenance and repair activities are organised and operated, the under repairing equipment's immobilization time because, by diminishing this factor significant reserve resources can be achieved by increasing production volume. The management activity shall be responsible to organise cars' and equipments' maintenance and repair activities, to apply rules of organisational structure and human resources, established and approved in the company's organisational chart, measures to improve the information system and relationships between departments and sectors, to improve tracking system and movement of documents and to permanently expand data processing sector.

Predictive maintenance is based on monitoring wearing parameters of the key elements or subparts of the fixed assets, by some specific instruments (wearing, vibration, oil analysers) in order for the maintenance interventions to be accomplished before the flaw appears.

Keywords: maintenance, repairing, predictive maintenance, reduced cost

#### 1. Introduction

In the current economic context, the machine industry remains one of the main sectors of the national economy, with an impact on all areas of the economic and social activity, with an important contribution to the accomplishment of economic growth in Romania.

In order to achieve the company's fundamental objectives regarding the supply with products and services in certain conditions, human resources, material and technical, established by experts as necessary, are not enough.

The company's management have to permanently know the maintenance and repair costs and, according to this, the cost for fulfilling the production activity, thus being able to determine its activity's economic efficiency in order to determine responsibilities and provide the employees with material incentives. Moreover, information regarding the size of repair and production expenses is very important to the company's management since it offers it the possibility to know how much of the product's value is the value of the production means used for that product's manufacturing and sale and how much is the newly-created value.

Maintenance and repair of production machinery and equipment has a particular importance and necessity for the company. Therefore, by carrying out these activities in optimal conditions, the normal operation of equipment is ensured, according to the production schedules, thus avoiding decommission, making a contribution to the achievement of a rhythmic activity.

Since the maintenance and repair activity implies significant costs, the main objective is the development of activities in terms of minimizing the total cost of interventions and repairs and reducing losses caused by failures.

The management of an industrial unit, taking into consideration the interruptions registered in the functioning of equipment within a production division, sets as objective the increase of equipment's availability within this division, requiring the maintenance department to establish a maintenance policy for the achievement of this objective.

The maintenance strategy shall be applied both at the level of the entire company, and at each machinery in part, it shall allow to redirect efforts on the critical departments to add some quality to the final result by doing this. We may conclude that the ultimate objective is the increase of machinery's and equipment's availability within the production divisions, thus forcing the maintenance department to establish an adequate maintenance policy with the purpose of eliminating losses.

# 2. The necessity of equipment's maintenance and repair activity and aspects related to their management

We must not forget that, after some time, the equipment wears out, recording a progressive degradation, unless an adequate maintenance and repair is ensured. With the physical wear of the equipment also comes a moral one, which is a process of quality depreciation of the equipment due to the technological progress, having more technically-efficient and more economical work means (Unguru, L.,1998).

The existence of the physical wear process requires the introduction of a series of activities that would reduce their effects and provide the maintenance of the equipment's functional characteristics throughout the entire operation period.

By analysing the equipment's behaviour in the wear process, there can be noticed that the wear of different parts takes place in a different way. This requires taking some extensive maintenance and repair decisions, in order to prevent the equipment's premature decommission. In order to prevent this, the permanent checking of machinery, the mandatory performance of maintenance and cleaning activities, the lubrication of moving mechanisms, the permanent monitoring of its maintenance, the operation of works with a well-trained maintenance team and the operation of repairs in due time are required. It is also requested that periodically the accessories that form the equipment are checked, although they are used more rarely.

Using the production equipment under proper conditions requires some preventive maintenance works, which would prevent premature wear and some control and revision operations that would allow the discovery of possible failures (Borza, A., 1995).

Due to the equipment's peculiarities to wear inconsistently, resulting in the fact that while some parts are completely worn-out, others may still be used for a particular period of time, lasting longer, it is economically requested that an adequate maintenance and repair system is adopted.

Therefore, carrying out such activities ensures the normal operation of production equipment, according to the production schedules, avoiding decommission and thus contributing to the accomplishment of a rhythmic activity.

With the major changes that have been happening in the recent years on a global and national level, the introduction of some modern maintenance and repair methods has become a necessity, in order to increase economic efficiency and also to make high quality products.

Providing a high quality of requested products and a high economic efficiency can be achieved by maintaining the equipment's and installations' functioning at proper parameters, without interruptions or accidental pauses.

Under these circumstances, there are only three conditions to become efficient:

- Refurbishment, which also includes the existing equipment's modernisation;

- Using at full capacity the already existing production capacities;

- The implementation of some new managerial methods that would lead to a maximum increase of company's performances.

Maintenance is a relatively new term that defines activities that belong to the most common and best known category, employed on a regular basis in the industrial environment since the earliest of times. Although maintenance is known as "the maintenance and repair of equipment", it represents not only a notion but a higher approach of the specific activities, which have as purpose to maintain the performances of the used good, completed by specific and integrated methods in a systemic conception with logistics, administrative and managerial activities, so that economic efficiency is permanently improved (Unguru, L., 1998).

The main objectives of the maintenance activity within companies are:

- minimising economic losses due to interruptions and optimising maintenance and repair expenses;

- maximising performances obtained with the existing equipment, by increasing the equipment's operation time, either by increasing the time between two technical interventions, or by decreasing the time of its maintenance in repair;

- preventing accidental interruptions and their consequences on the rhythm and continuity of productive activities;

- ensuring the maintenance of the equipment running for a longer period of time;

- avoiding excessive wear and accidental decommission of the equipment;

- carrying out maintenance and repair activities with the lowest costs and the highest quality, by increasing productivity of the workers who are operating these activities;

- modernisation of obsolete machinery.

In the strategy of improving the economic activity, it is up to the manager to plan a series of specific activities in order to make the maintenance and repair activity a key factor of improving the usage of production capacities, both extensively and intensively by:

- providing growth opportunities of checking the equipment and of the slight change of wear parts from the design stage;

- proper placement of equipment so that maintenance and repair can be done without problems;

- organising the productive process so that intermediary stocks that would provide production continuity during interruptions are forecasted;

- optimisation of the maintenance and repair technology, so that the intervention time is the smallest possible, reducing the interruption times of the working equipment;

- carrying out a preventive maintenance programme that, by a planned inspections system and by changing some critical, wear elements, may reduce the probability of accidental interruptions (Borza, A., 1995).

Maintenance works have as purpose to provide the equipment's maintenance in perfect state of functioning, to avoid excessive wear and to accidentally, or before time remove it from usage, to increase the equipment's functioning time, both by increasing the time between two operations and by reducing the necessary time to carry out repairs, to make repairs with minimal costs and of the highest quality (Badea, F., 2007).

For the small and medium-seized enterprises, which use machineries and equipment, maintenance and repair works are provided by the workers and mechanical engineers within the enterprise, and this provides a number of major advantages:

- the possibility to intervene immediately in case of accidental failures;

- increased flexibility in carrying out repair works;

- reducing costs by carrying out maintenance and repair works which are a facility and are part of the company's general costs (Barbulescu, C., Bigu, C., 2001).

At the beginning of maintenance and repair activity of equipment, this was done in an empiric way, meaning that the repair activity of equipment was done only when the equipment broke down due to wear. To avoid excessive wear of equipment and prevent accidental decommission, maintenance and repair systems have been developed, whose main objectives are:

- knowing the date of the equipment's decommission for repair:

- establishing the way repairs should be done and the execution time, in order to get ready the materials, equipment and labour force necessary for their enforcement;

- determining financial resources necessary for the repairs.

Based on these requirements, two maintenance and repair systems were developed, namely:

- the repair system based on findings;

- the preventive-planned repair system.

The repair system based on findings consists of establishing the pause dates of the equipment for entering into repairs, as well as their content, after a close monitoring of how the equipment works by the specialised employees, based on which their functionality condition is determined.

The preventive-planned system aimed to provide a double character to the entire set of maintenance and repair measures, namely:

- prophylactic character;

- planned character.

The prophylactic character comes from the fact that this system requires the implementation of certain maintenance and control measures that would prevent the possibility of a premature failure, due to which the equipment is put out of use before the normal time of functioning expires. The planned character is given by the fact that the different maintenance and repair works included in the system are carried out at dates established in advance, with the corresponding motivation (Badea, F., 2007).

These two features of the preventive-planned system give the system an obvious superiority as against the system based on findings, having a positive influence on the quality of repairs, of their operation and of the production costs.

The preventive-planned repair system can be implemented in two ways:

- the standard way;

- after revision method.

The standard method consists of the fact that each equipment or installation enters for repairs at pre-established intervals, for each of them in part. The repairs' type, volume and content have a standard character, according to a technical documentation, regardless of the equipment's state of functionality at the moment of entry on repair.

This method has a number of advantages, such as: it allows carrying out repairs based on a well-prepared documentation, it is easy to be applied and it has high efficiency for the enterprises with a large number of machineries and equipment. The disadvantages of using this method would be the fact that it requires a large amount of work to prepare the documentation necessary for the implementation of the method, which unnecessarily increases the cost of repairs for the equipment for which repairs are made, although their technical state does not require it.

The after revision method consists of the fact that the amount and content of repairs is determined after a technical revision. To establish how repairs shall be done, a first cycle of repairs of each type of equipment in part is made.

The advantage of the method is that it allows finding the level of wear of the equipment, at the time of the technical revision, avoiding repairs for the equipment where their technical state does not require it. The preventive-planned repair system contains the following categories of technical interventions:

a) maintenance and daily supervision of the equipment carried out by workers who operate the equipment in the production divisions, or by the workers specialised in carrying out these operations, which aim the elimination of the equipment's small failures, without replacing parts;

b) the technical revision *R* which includes operations that are carried out before a current or capital repair. By doing a technical revision, one aims to determine the equipments' technical state and establish the operations that should be made within current or capital repairs. During the technical revision, adjustment and consolidation operations of certain parts and subassemblies can be also made, to provide a normal functioning until the first repair;

c) current repair, level I and II *R1* and *R2* are the ones in which repairs are done periodically, in order to eliminate physical wear, by replacing certain parts or used subassemblies, the difference between the two types of repairs depending on the time interval between two successive current repairs and the amount of repaired or replaced parts and subassemblies;

d) the capital repair R K is a technical intervention made after the expiration of a functioning cycle of the equipment, whose size is stipulated in its operating regulations and which has as a purpose to keep the equipment running until the end of its normal life. Capital repair is the most complex technical intervention; it has a general character, because a wide range of parts and subassemblies that form the equipment are subject to the maintenance, control and repair process. It is carried out when performance, accuracy and safety of the equipment is no longer provided (Barbuescu, C., Bigu, C., 2001).

In addition to the technical interventions included in the preventive-planned system, other types of technical interventions are carried out within the enterprise.

These are:

- accidental repairs which are carried out at undetermined time intervals, caused by unpredicted decommissions due to accidental failures;

- restoration repairs are carried out for the equipment that has gone through several capital repairs and have a high level of physical wear. Due to these repairs, it also recommended to have some modernisation works of the equipment;

- failure repairs are carried out each time equipment breaks down due to either bad handling or maintenance, or because of natural disasters: earthquakes, fires, floods, etc.

In conclusion, the preventive-planned maintenance and repair system is a set of maintenance, control and repair measures which:

- is carried out periodically, at well-established intervals;
- aims to prevent excessive wear and the occurrence of failures;
- aims to maintain the equipment running for a longer period of time.

The qualitative growth of repair works and the decrease of their operation duration heavily depend on the method used to carry out the equipment's maintenance and repair activity. Among the most efficient methods used in organising the maintenance and repair works, the most used ones are:

- the repair method on subassemblies;

- the repair method based on the principle of production flow lines.

The repair method on subassemblies is characterised in that, in the enterprises with a large number of equipment of the same category, a stock of functioning subassemblies are created.

These subassemblies shall replace the used subassemblies within the equipment that are to be repaired, and then the trouble failures shall be repaired and shall become part of the stock of functional subassemblies. This method reduces very much the equipment's time of repair and thus the equipment's operating time increases, with all the favourable consequences deriving from here.

The method based on the principle of production flow lines is used for the equipment that requires demounting from foundations and transporting them to the repair workshops (for the capital repairs). In this warehouse, in order to carry out the repairs, those possibilities offered by the production flow lines shall be used, from the enterprise's basic divisions.

To implement repairs through the preventive-planned repair system, the industrial production companies prepare a repair plan. This activity involves solving two problems:

a) drawing the repair cycle structure of an equipment;

b) determining the dates on which each technical intervention on the considered equipment shall take place.

The repair cycle is the time between two capital repairs, including the duration between them, usually the last one.

Preventive maintenance has worked well for the continuity and safe operation of the equipment but was not a long term economic solution, because maintenance works were carried out to the equipment that did not requested it. Experience has proven that machinery and equipment do not break down all of a sudden; they break down gradually, after a period of weeks, months or years. During all this time they give us various warnings and signals over time. These signals, for example, small changes of temperature, run-outs, vibrations or sounds can be discovered through predictive maintenance.

As a result, predictive maintenance gives us time to plan, programme, and make repairs before the equipment breaks down (see figure 1.1).



# Figure 1. The graph of signals in time up to the break-down of equipment

Predictive maintenance requires permanent control at given time intervals of certain manifestation modes of equipment's operation in the operating process or of some working parameters (Barbulescu, C., Bigu, C., 2001).

Off al types of maintenance, the predictive maintenance gives you the most time to plan and programme the maintenance and repair activities and that is why it should be number one in planning maintenance.

Advantages of predictive maintenance:

- Maintenance is carried out only in case of necessity.

- Smaller stocks of spare parts.
- Stops are shorter and lass frequent than in the preventive maintenance.
- It increases the life of the spare parts.
- It requires less maintenance personnel.
- Low costs.
- Accuracy of the machinery's operation is guaranteed by measurements.

Disadvantages of predictive maintenance:

- It requires expensive equipment (for example: the analysis of vibration sphere).

- It requires highly-trained personnel, for measurements and the implementation of results.

Benefits of predictive maintenance:

- maintenance costs fall by 50%;
- unexpected failures reduce by 55%;
- general repair and revisions reduce by60%;
- the inventory of spare parts reduce by 30%.

Hidden benefits of predictive maintenance:

- 266 - Studies in Business and Economics

- less stress;
- more calm;
- an easier work;
- more free time.

Preventive maintenance has worked well for the continuity and safe operation of the equipment but was not a long term economic solution, because maintenance works were carried out to the equipment that did not requested it (Badea, F., 2007).

Beginning with the '90s, the obligation to carry out preventive and planned maintenance and repair activities als disappeared, commercial companies implementing intervention measures according to necessities, when the accidental break down occurs. The reason for choosing this method is the carrying out of technological processes without interruptions, with the purpose of accomplishing the proposed plans and the finished products on time. But in time, with the technological development, a competitive information system and an increased tendency to diminish production costs and increase competitiveness on the market, the necessity to implement some new maintenance methods – preventive maintenance emerged.

# 3. The advantages of implementing a predictive management within the maintainig and equipment repair at an enterprise which produces components for the automotive industry including technical assistance and services

For the case study, there was chosen an enterprise whose object of activity is the manufacturing of components for cars, but also the performance of a wide range of services, and has as a main purpose to meet current and future requirements of customers and business partners.

Beginning with 2009, the predictive maintenance system was introduced to the machinery and equipment of the company.

The employees in the manufacturing division have the obligation to write on the evaluation charts of the equipment data on the possible deviations from the nominal operating parameters, easy vibrations, run-downs of the equipment, organoleptic oil checking, and to announce them immediately. The personnel in the chief mechanic's workshop has the obligation to carry out periodical measurements of the mobile elements movements, to detect possible wears of the moving bodies, to determine viscosity, to monitor the maintenance and repair activity. The chief engineer shall centralize the information provided by the machinists and mechanics in order to create a database and monitor the replaced parts, by establishing the proper intervention moment on the machineries.

Based on the information collected during the analysed period, the following accidental failures of the equipment in the company were noticed.

Current no.	Name of equipment	Number of		
		accidental break		
		downs		
		2007	2008	2009
1	SN 400 turner	8	11	7
2	Flat adjusting machine	2	5	3
3	Tin plate discharging guillotine	3	6	3
4	250 tf Hydraulic press	2	4	2
5	Round adjusting machine	1	3	1
6	Semi-automatic wire processing machine	3	7	4
7	6.3 tf Mechanical press	1	5	3
Total		20	41	23

# Table 1. Table of the equipment's accidental break-downs

Graphic representation of the number of accidental break-downs is shown below:



# Figure 2. Evidence of accidental failures of equipment

This shows that in 2008 there was an increase of accidental failures as compared to 2007, the motivation being the increase of operation duration and implicitly increased wear of parts. After implementing the predictive maintenance, there was a decrease in the number of accidental interruptions in 2009 as compared to 2008 in a percentage of approximately 50%. By comparing 2009 with 2007, the implementation of the principle led to a regression of accidental failures almost like that from 2007, which indicates the high performance of predictive maintenance.

Looking at the maintenance and repair activity for 2007, the company has replaced 13039 lei worth of parts for equipment, in 2008 the replaced parts 21.274 lei worth, and in 2009 the value of replaced parts was worth 11.232 lei. For the analysed period 2007-2009, the company has had total expenses with parts worth of 43.093 lei. The study proves that implementing the predictive maintenance led to the decrease of expenses for the year 2009 as compared to 2008 that had a significant increase as

# - 268 - Studies in Business and Economics

against 2007, which means that the company replaces parts rationally and scientifically. With regard to the value of work, in 2007 it was worth 13.039 lei, while in 2008 the value was of 43.091 lei, and in 2009 it was of 11.753 lei. During 2007-2009, an increase of the value of work can be noticed by almost 300%, but in 2009 it falls below the level registered in 2007, which reflects an increase of the value of work costs according to the technical time units to replace the worn parts.

## 4. Conclusions

The analysis of the company's incomes and expenses outlines a decrease of profit in 2008 by 52,37% due to the increase of operation expenses, but in 2009 there is a significant profit as related to 2008, with a percentage of 142,66% by giving an increased importance to incomes and judicious usage of operating expenses.

If during 2007-2009, there was an increase of the equipment's maintenance and repair operations, by implementing the predictive maintenance, after carrying out the measurements and operations specific to this type of maintenance, a decrease of failures and accidental stops was noticed, which allowed the significant increase of the turnover and also of the profit in 2009.

The analysis shows that the implementation of predictive maintenance caused the decrease of expenses for the year 2009 as compared to 2008, which registered a significant increase as against 2007, which means that the company replaces the parts rationally and scientifically. With regard to the value of work, in 2007 it was worth 13.039 lei, while in 2008 the value was of 43.091 lei, and in 2009 it was of 11.753 lei. During 2007-2009, an increase of the value of work can be noticed by almost 300%, but in 2009 it falls below the level registered in 2007, which reflects an increase of the value of work costs according to the technical time units to replace the worn parts.

It can be concluded that the introduction of predictive maintenance led to a decrease of expenses related to maintenance and repair works, of expenses of supply of spare parts and materials and indirectly reducing intercession time for problems and an increase of productivity.

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# FROM MOTIVATION TO WELL-BEING

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#### Abstract:

The concept about motivation is related to human behavior, or in details – to processes that direct human behavior toward attending a certain goal. People are complex creatures. There are a lot of theories explaining human-beings, but we cannot say which of them the right one is. We don't live in "social vacuum". Everything that is happening around us put a mark on our being.

A need is a pushing force that directs our behavior. According to Maslow there are five needs which he organized in a pyramid starting with the physiological ones – this is well known as Maslow's need hierarchy. People are established to satisfy first the basic needs and then move to the next step.

We have these needs and they are our goals ... but we have to do something to achieve them. This that "switches on" our body into action is motivation. It can be a state of mind; influence of other people or of some material benefits... It's individually for each human-being and that's way it's different to classify it. But one is for sure – rising on a higher levels of motivation leads to higher levels of well – being. That includes healthy body and mind, social outlook that enable a person to function effectively and hold a positive world view.

Keywords: motivation, human-beings, Maslow, goal, organizations

Human beings ... there are 6,882,000,000 of them living on the planet Earth! And each of them is unique! Ye, we are all born equal and we all live on the same planet ... but we all grow up in different environment!

From the moment you are born, you start "to explore" this world. With the first breath you take, the first word you say and the first step you make, you take the road of your life. In your early years you go to kindergarten, then to school and after that – university; you start your first job, meet the love of your life; make a family, have children; watch them how they grow up and take the road of their life ... And all these things that happen to you in one or another period of time, reflect on you; put a mark on your survival.

Dimensions of self, regarding to the Hierarchical structure, are:

Body – the exterior of self that is visible to any perceiver;

Body language – non-verbal signals that one's body emits (moves, speech, gestures);

• Inner self -thoughts and feelings.

Self is "a constellation of thoughts, feelings and actions". But as we don't live in "vacuum" on this planet, we are influenced from everything around us. Or as Maslow said: "Culture is sun, food and water. It's not the seed; does not create a human being ... only helps what exists in embryo to become real and actual".

Culture consists of shared values, beliefs, norms and practices of the people of the same geographical area. It reflects a shared totality of the externalized collective selves of the people. It creates the bio-social self of a person.

In addition we have social self – the self defined through group memberships (gender; ethnicity; nationality; etc). We are all social creations and we need one another to thrive – to create families, organizations, political and non-political groups, etc. Furthermore human beings are driven by competency motive for gaining mastery over the environment, which enables them satisfy their striving to feel good about themselves.

People are complicated! And we can say with no doubt that there's no one strategy or theory that can apply to everyone! Human behavior is complex and it's affected by biological, social and cultural factors. So it's really hard job to put people in certain group because you'll always find an exception to the rule.

We are all human beings and we all have one ultimate goal of life – well-being. That include healthy body and mind, social outlook that enable a person to function effectively and hold a positive world view. The difference comes from the way you take to get to this goal. In other words – motivation!

Motivation is the set of processes that arouse, direct and maintain human behavior toward attending a goal. We have to create a clear idea of what we want to achieve and how we'll get there. Of course, the goal we settle can be difficult, but attainable. Otherwise, if the goal is too high to realize, we can lose our motivation.

Is there any formula for motivation?!? Maybe! Yes! But it's not only one and it's not that simple! There is a complex array of forces managing the direction of each person, but trying to identify and study them it's a really hard job.

The most powerful motivating force in human-beings is the aspiration toward benevolent and spiritual goals. Regarding to Maslow, people will always pursue the highest and most idealistic aims – self-actualization.

Maslow described a hierarchy of needs starting with our most basic needs for survival and rising to the ultimate – self-actualization. As needs are met they no longer act as a motivator and the dominant motivator is to be found at the next level. Let's see what actually is Maslow's hierarchy of needs. It is often portrayed in the shape of a pyramid, with the largest and most fundamental levels of needs at the bottom, and the need for self-actualization at the top:

• Physiological needs – they are the literal requirements for human survival. If these requirements are not met, the human body simply cannot continue to function. Here is included satisfaction of hunger, thirst, sleep, sex.

• Safety and security needs – personal and financial security.

• Affiliation – humans need to feel a sense of belonging and acceptance; to love and be loved by others. This aspect involves emotionally based relationships, such as friendship, family, social groups.

• Self - esteem - normal human desire to be accepted and valued by others. People always compare themselves with others. They need respect of others, have status, fame, prestige, and attention.

• Self – actualization - this level of need pertains to what a person's full potential is and realizing that potential. Now, people don't have anybody to compare with, except their previous achievement, so they have to create a new potential to keep growing.

We can say that these are pushing forces that lead our behavior on the way to achieve our goals. It's really easy to think or speak about what you're going to do, but actually doing what you say takes commitment. So, we need something to make us getting into action... Motivation! It can be emotion, mood, ambitions, event, other people, material comforts ... for each person it's something different.

First, there are internal stimuli like needs, beliefs, emotions and mood. The mood is a state of being, which is created and affected by biochemical (hormones, energy levels, lack of sleep) and psychological (how we perceive and react to the things that happen to us) factors. There are unique for everybody. There are in your mind, only you know what's going on there, but most of the time even you cannot explain them! In these thoughts we can make one main division – sexes. Or how sex differences can affect motivation? Of course, this is common conclusion and there are exceptions from it!

People are saying "Clever girls, successful men!". And I'm totally agreed with this! Women can be better at exams, more disciplined, accurate at their work, but men are paid more and there are more of them on the top positions. Women are more other – focused. They like to speak about feeling, people and gossips. If they have a problem (which is most of the time), they are looking for empathy. Or they think that "a problem shared, is a problem halved". While men are more focused on objects and actions. They express their emotions through actions (not words). For them "a problem shared is one to be solved". They are looking for solution and support by doing actions. We can find a difference and when we speak about being self-critical. With no doubt men can confess if they've made a mistake. Most of them are not trying to search the reason for their fail, but they are trying to find out what's not working correctly and what could be done. While women, as I said, are more other – focused. They can always put the blame on someone else; they can always judge the others, but not themselves. They can analyse the past a hundred of times looking for the reason for their fail, instead of moving on.

That was division of human – beings into two main types – men and women. But in the society people are divided by their social status. Social status is the honor or prestige attached to one's position in society. One can earn their social status by their own achievements, which is known as achieved status. As I mentioned we don't leave in a vacuum. That means everything you do reflects somehow to the others and other's actions also have a reflection on you, your behavior, your well-being. People do not satisfy their needs, perform meaningful tasks or achieve challenging goals only by themselves and only for themselves. No, people always look around. They compare themselves with others to see whether rewards they are getting are fair enough or are unfair. There is three possible ways – fair deal, motivating and de-motivating one. The fair deal is when person contribute the same as the others and he is getting as much as them. De-motivating deal is when you tend the same or even more, but you're getting less than comparable others. In that case – should we give up?!? Just leave the things as they are without any change?!? A lot of people are ready to do it – to live "dress rehearsals" because they cannot motivate themselves to achieve their dreams and ambitions. But can the others motivate you???

There are a lot of talented people who are just sitting, waiting and wasting their time. Somebody has to go and tell them "come on, you can do it ... we are with you ... go ahead ... just do it ... ". It's like a football ball that you have to kick first so it can move on. And like in the football game – every time somebody has to kick the ball and give it direction to move ahead. In the real life "the ball" is de-motivated person. We have to control (give him direction) him in the way we train puppies. It's poor, but it's true! And I think everybody at least ones has been in situation like this. It's like your body is switch off and somebody has to press the button and turn it on. Sometimes it can be a call from close to us person, playing favorite song or just story we heard and inspired us. Next time people have to entreat us a hundred of times till we give up and say: "Ok, I'll do it.".

We are human-beings. We were born on this world and we try to survive till the end of our life. Every day is a "battle". We are trying to satisfy our basic needs of hunger, thirst, sleep, sex. The same like the animals! But we are not animals because there are four more steps we have to make before we leave this planet (regarding to Maslow's theory). And each step we take is one "idea" closer to the final line. Of course, whosever way we take it's not going to be easy. But as Lao Zi said : "A journey of a thousand miles starts with a single step.". You just have to make it!

We don't have to be scared of setting a major goal. If we know where we want to go (have a goal), we just have to find the path to get there (be motivated). Or if we have a goal, we can achieve it. It will be easier if we first set some mini-goals. When we succeed at them, we will be more motivated to challenge the bigger ones. It looks like a process of building a house. You need the idea of what kind of house do you want to live in. Then you start putting on bricks – one by one, paint the walls, bring some furniture and ... you live in your own house, you achieve your goal!

One of the ways to achieve your aim is to be concentrated on it. Thinking about it, about the steps you have to take, about the moves you have to make is always helpful. Thereby increase a possibility the aim to happen. The process is similar with the process of growing flowers. If you are taking a good care of them, they will grow; otherwise they will die.

You can do it only if you really want to do it and believe in this! People say that "We become what we think about all day". In other words – never stop dreaming!!!

# Studies in Business and Economics

Dreams can be also a motivator. If we have the clear idea about them you have to pluck it out of the inspiration clouds and bring it to the earth, where it can be real. People who are focused on their goal have a bigger chance to achieve them. Those with a vision and idea about their life have the ability to control their destiny and lifestyle. And those with no ideas are led by the others! When your thoughts are occupied from the goal you have, when you really want it to happen - then it will happen. People, who are concentrated on their own existence and future, have a bigger chance to succeed. When you are focused on the others – friends, people from your university, co-workers, people who you don't know, some profiles of some people ... you are spending your energy and time about them. I don't want to be misunderstood. You have to take care of your family, you have to respect your friends, you have to help other people ... and you will be "a great man" if you can do all! I'm sorry to say, but we live in a society which is other-focused. Today it is more important what the others are doing and what they have. People are "dying" to know all details about others' life. Of course, there is nothing bad if you see the success of the others, see what they achieve and how they do it. You can try to "plug it in into your life", you can learn experience of life or you can see and try not to repeat mistakes of the others. Unfortunately, just a few people can do this and they are really doing it. The rest are poking their noses into other people's affairs. Instead of taking good examples, they are ready to "blame" the others for their success.

When we speak about motivation, we have to mention and the organizations. Or how motivated are the people about their job? Less or more, all or nothing ... There are people who really love their jobs. They wake up in the morning, drink a coffee and go to work. They do all this with excitement. What motivate them? Maybe they find the job that satisfies their needs, they do it with pleasure and feel glad of the rewards they take. And when I say rewards, I don't mean only pay-checks they get. There are more important things than money, new car you've got or expensive clothes you're buying. Things like feel satisfied from what you are doing for you and for others, inner growth. If I have to give an example for people who love their professions, it would be – artists, artists, artists! To be an artist it's not only to paint, to play in the theater, to sing, to write novels ... it's to be creative! To have an imagination to do the things!

And what about the other people – those, who don't like their job or who are not motivated enough? Here comes the role of managers. These are people who are paid regarding to what their employees are doing. In case something is going wrong managers are the people who have to find out how to fix the problem. They have to motivate their employees as offer them better conditions of work, different bonuses, reward for their well-done job.

The companies live and die with their workers. They rely on them and exist because of them. It doesn't matter if it is a big or small one, in which country it is situated or what kind of products have. You like a manager, owner or director have to know how to motivate your subordinates. Each employee has to feel himself like an individual in a great team; to know that his job is significant for the company. If he is satisfied and well motivated, then he will be more productive and creative.

# - 274 - Studies in Business and Economics

There are a lot of theories and books with topics "How to motivate a group", "Employee motivation", etc, where you can read about motivation at a workplace. But we cannot say which one is the right formula. Employees are also human-beings and that means that their behavior is complex. If you use one strategy on two different people, they are going to act in two different ways. So we can say it again – there is no one strategy or theory that can apply to everyone! But speaking about organizations, there is one thing that is valid every time with no doubt – you have to train your employee in the way you train your puppy – "Jump and I'll give you a biscuit.". But in our case the biscuit are the money. Unfortunately we live in mercantile society where "money" are the answer of the question "what do you need?". Or in other words, it's easy to motivate people – just give them money. Yes, money are important because they can motivate you to attain other goals. But it's pity when money are a Goal for some people!

There are others things (except money) such as meaningfulness, freedom of choice, love and be loved ... but for how many of us these are important things??? Just a few! Less and less people are thinking about who we really are, what we have to do to change for the better, how we can help the others to find themselves ... maybe as the world is globalizing, people are getting more and more individuals !!!

The theory says: "as individuals we are capable of setting goals". Motivation is explained as force which causes people to act direct behavior to the attainment of specific goals. But how are the things in the real life??! How of us are really motivated to do something? How of us wake up every morning with the idea – I know what's going next? Not much! Lots of us don't know who we are; don't have clear idea about their future, and even don't pay so much attention to this. We are trying to clarify our images through what we consume – food we eat; movies we watch; music we listen; places we visit ... I don't know why but for people today it's really important to be like the others. Can this be a motivator – "I want to be like you"? How far we can go in our ambition to be anybody else? Who knows ...

Living in these years, people are influenced from everywhere. If I was writing this 15-20 years ago, I would probably say – people are influenced from the radio, newspapers, even books they read, social communication they have. But now, in 2010, there is only one thing – internet! Everything that you want you can find it there – read the latest news, make friendships, "visit" exotic places (with google earth for example), pay our bills, order food, ... actually you can do everything there, except taking a shower maybe ... People are so addicted to it, that they forget about simple things in the life. One walk in the park, make a picnic on Sunday afternoon, smile at someone even who you don't know ... Now there are others values – what kind of sell-phone do have, how much did you pay for the last dress you had bought, how many people are your friends in facebook ... Sad, but true! People are so faddish about the others – how they look like, where were they last night, what they said or made ... that they forget about themselves in "the ambition" to know everything about the others. But can the others motivate us??? Yep, they can. Just turn around you and see how the same are people. Everybody is trying to follow the example of somebody else –

# Studies in Business and Economics

Hollywood stars, models, famous singers and dancers. Of course, there's nothing bad in this when you want to be like them and try to do your best to realize "your dream". Poorly is when you want to look like them – with thinly body, blond hair and blue eyes. Why somebody else has to tell us how we have to look like and how we have to behave. Why don't we simply be ourselves, with the good and the bad in us, with our fears and strength of will, with the idea about less violence and more smiling faces ...

We have to be able to motivate ourselves and others in the face of the unexpected. We need to pick up, dust down ourselves and resume the battle! Resilience and self-reliance have to be the order of the day!!! I don't think we need motivation to find motivation. Everything is inside us. We only have to look for it and let it be! It's not going to be easy because the life is an endless war for survival. Nothing is easy, so we have to give something from ourselves, to make sacrifices in our daily life and ... and hope that we'll succeed at the end!

"Impossible is just a big word thrown around by small men who find it easier to live in the world they've been given, than to explore the power they have to change it. Impossible is not a fact. It's an opinion. It's not a declaration. It's dare. It's potential, temporary nothing." So it's up to you what you gonna do with your life and how you are going to achieve your own well-being.

# CONSUMER BEHAVIOR IN THE DIFFERENT SECTORS OF TOURISM

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# Abstract:

Consumer behavior is a fascinating but difficult subject to research. This statement is particularly relevant in the tourism field, where the decision to purchase by a consumer is of emotional significance. The consumption of tourism products is dependent on discretionary time and income. Thus, much attention has been devoted to determining motives for travel behavior, both in terms of choosing one tourism product over another and regarding the decision to commit time and money to tourism, as opposed to alternative uses of those same resources (Todd, 2001).

The holiday that the consumer buys will probably provide the consumer with the major highlight of the year - a chance to escape from work. Consumers are influenced in their decision making processes by many internal and external motivators and determinants when they choose products. It is very difficult to research how these many motivators and determinants affect the consumer when they are making their choices. They may be affected in different ways, according to the type of product or service that they are purchasing (Swarbrooke&Horner, 2007).

Keywords: consumer behavior, purchase decision, motivators, tourism

According to Williams (2006), tourism and hospitality have become key global economic activities as expectations with regard to our use of leisure time have evolved, attributing greater meaning to our free time. This results in marketing having potentially greater importance in tourism than in other industries but sadly potential that is not always fulfilled (Morgan and Pritchard, 2002). Williams (2006) believes that a major reason for such unfulfilled potential lies in most tourism marketing focusing on the destination or outlet (in other words the products being offered) and lacking focus on the consumer.

Motivation refers to the processes that lead people to behave as they do. It occurs when a need is aroused that the consumer wishes to satisfy. Once a need has been activated, a state of tension exists that drives the consumer to attempt to reduce

or eliminate the need. Marketers try to create products and services that will provide the desired benefits and permit the consumer to reduce this tension (Solomon, 2004)

A wide range of factors motivate consumers to buy tourism products. Motivated factors in tourism can be split into two groups:

- > those which motivate a person to take a holiday (primary demand)
- those which motivate a person to take a particular holiday to a specific destination at a particular time( selective demand).

There are many potential motivators that could relate to either or both of these factors. No widely recognized way exists of categorizing the main motivating factors in tourism. However, some of the major ones are:

- > physical: relaxation, exercise and health;
- > emotional: nostalgia, adventure, fantasy, romance;
- personal: visiting friends and relatives, need to satisfy others, search for economy;
- > personal development: increasing knowledge, learning a new skill;
- status: exclusivity, fashionability, obtaining a good deal;
- > cultural: experiencing new cultures (Swarbrooke&Horner, 2007).

Every tourist is different and so are the factors which motivate them. The main factors which determine individual tourists' motivations are probably:

their personality (are they adventurous or cautious? confident or timid?); Adventure travel represents an interesting form of consumer behavior that has see tremendous growth as a segment of the tourism industry. Adventure travel includes such high-risk activities as mountain climbing, backpacking, horseback excursions, hiking, river-rafting, canoeing, and kayaking (Scott and Mowen, 2007); A study by Alvarez and Asugman (2006) provides an example of research into the characteristics of the individual traveller, in this case the personality trait of novelty seeking. In this study, the results indicated that those travelers who scored highly on novelty seeking actively sought risk and adventure in their travel experiences and were less likely to use any information sources at all (Alvarez and Asugman, 2006).

Those travelers who were risk averse in their personality were likely not only to use a wider range of information sources, but also to choose certain types of holiday and accommodation choices (Alvarez and Asugman, 2006). Thus, the personality trait was linked to both type of travel and information source usage.

- their lifestyle which provides the context for their purchase decision. The motivations are likely to be different for people who are very concerned with being fashionable, or are preoccupied with their health, or live alone and want to make new friends, or enjoy partying;
- their past experience as a tourist and particular types of holiday;
- > their perceptions of their own strengths and weaknesses;
- how they wish to be viewed by other people.

That motivators change over the time for each individual in response to changes in their personal circumstances. These circumstances might include: having a

child or meeting a new partner, an increase or reduction in income, worsening health, changing expectations or experiences as a tourist (Swarbrooke&Horner, 2007).

No tourist is likely to be influenced by just one motivator. They are more likely to be affected by a number of motivators at any one time. Most people's holidays represent a compromise between their multiple motivators. Either one motivation becomes dominant or a holiday is purchased which ensures all of the motivators can be at least partly satisfied.

Not only are motivators different for each individual tourist but they also vary between different market segments. For example, the tourism industry seems convinced that segments are based on demographic criteria. They seem to assume that:

- > young people want to party, relax, have dance and make lots of new friends
- elderly people have a preference for sedate activities like bowls and to be almost obsessed by nostalgia
- parents are preoccupied with the need to keep their children happy (Swarbrooke&Horner, 2007).

Another aspect of demographics which the tourism industry seems to believe determines personal motivators, is gender. Different products such as golf trips or shopping trips seem to be based solely on a desire to match the perceived motivators of men and women respectively. However, when one looks at a range of personal motivators, there is some evidence to suggest that there is, in fact, relatively little difference between the sexes.

It is also very important to understand the influence of factors taken into account when making a purchase decision.

Price, in almost all cases, seems to be a constant factor regardless of which sector of tourism we consider. Location is another standard factor, whether we are talking about the area of a city in which a hotel is located, the departure airport offered by tour operator or how far an attraction is from the visitor's home. We can also assume that the tourist's previous experience of an organization's services and the reputation of the organization will also be relevant to purchase decisions in all sectors of tourism. By contrast, there are also some differences, for example:

- safety is a major issue for choosing airlines in some parts of the world, or selecting a holiday destination, but would rarely be an explicit factor taken into account when choosing a hotel
- fashionability can be a major consideration when choosing a holiday destination, but is rarely relevant when choosing airlines or accommodation units (Swarbrooke&Horner, 2007).

Most sectors have peak and off peak seasons, although these differ from one country to another. Often peak seasons will be the same for different sectors in any particular country. School holidays will usually be the peak time of demand for tour operators, charter airlines and visitor attractions. However, for city-centre hotels and scheduled airlines school holidays are their off peak season, because that is when business people usually take their holidays with their families.

Travel research consistently shows the importance of word-of-mouth (WOM) information sources in the travel decision-making process. Friends and relatives have been identified as organic image-formation agents, and it has been emphasized that this WOM information is one of the most relied-upon sources of information for destination selection. Consumers who used friends and relatives as WOM information sources generally appeared to represent travelers visiting friends and relatives, as indicated by their accommodation, transport and activities profile. This group seemed to contain many consumers travelling as part of a family group. The average income was higher than that of other groups, and they exhibited a high rate of repeat visitation. Given this profile, they were less likely to come into contact with other travelers and, therefore, did not identify this as an information source.

Consumers who received their WOM information from other travelers only showed a number of similarities to backpackers (or independent youth budget travelers), although it is acknowledged that they are not all backpacker travelers. This segment was younger, had a lower average income, and showed a preference for campervan or backpacker accommodation (Murphy et.al, 2007).

In most sections of tourism there are some common methods of segmenting the market which appear to work well. These include:

- > geographical
- > demographic
- business versus leisure travelers
- frequent travelers versus infrequent travelers
- > independent tourists versus organized groups.

Alternatively, there seem to be a few approaches to segmentation which appear largely to be applicable to one sector only. Foe example, in the visitor attraction sector, the tourists' personality can be an important way of segmenting the market. Introvert, studious people may prefer to visit museums while extrovert adventurous risk takers may form the core of the market for theme parks where white knuckle rides are the main attraction (Swarbrooke&Horner, 2007).

In recognition of the need to obtain more psychographic information, lifestyle segmentation is increasingly being used in an effort to better understand tourists' consumption behaviour (Swarbrooke and Horner,1999). Related studies in the area of tourism motivation and benefit segmentation assume that everyone wants to be on holiday, although the type of holiday they want differs. The use of selfconcept specifically helps in an understanding of how people actually feel, not just what they do while on holiday, or what they want from their tourism experience (Todd, 2001).

Benefit segmentation also allows the marketing manager to identify very well defined groups of people and target them with well designed products and services.

The global economic recession aggravated by the uncertainty around the A(H1N1) influenza pandemic turned 2009 into one of the toughest years for the tourism sector. International tourist arrivals for business, leisure and other purposes totalled 880 million in 2009, corresponding to a worldwide decline of 4.2%. Growth returned in the last guarter of 2009, after 14 months of negative results. The 2% upswing

registered in the last quarter of 2009 contrasts with the declines of 10%, 7% and 2% felt in the first three quarters respectively. Asia and the Pacific and the Middle East led the recovery with growth already turning positive in both regions in the second half of 2009.

Except for Africa, which bucked the global trend with a 3% growth, all world regions were negative in 2009. Europe (-6%), the Middle East (-5%) and the Americas(-5%) were the hardest hit regions. Asia and the Pacific achieved the most impressive upturn, from a 7% decline between January and June to a 4% growth in the second half of the year, closing the year at -2%.

In 2009, travel for leisure, recreation and holidays accounted for just over half of all international tourist arrivals (51% or 446 million arrivals). Some 15% of international tourists reported travelling for business and professional purposes and another 27% travelled for specific purposes, such as visiting friends and relatives (VFR), religious reasons and pilgrimages, health treatment, etc. The purpose of visit for the remaining 7% of arrivals was not specified (UNWTO 2010).

The largest proportion of holidaymakers across the EU (37%) said that the major motivation for their main holiday in 2009 had been "rest and recreation". About a fifth (19%) had wanted a sun/beach holiday and 17% said the main objective had been to visit friends or relatives. "City trips", "nature" and "culture and religion" were each selected by less than a tenth of holidaymakers (6%-7%). Less than 1 in 20 EU citizens who took a holiday mentioned sports- or health-related factors as the major motivation for their main holiday in 2009 (both 3%-4%).



Figure 1. The major motivation for EU citizens' main holiday trip in 2009 Flash Eurobarometer "Survey on the attitudes of Europeans towards tourism" (No 291)

In almost all countries included in the Flash Eurobarometer "Survey on the attitudes of Europeans towards tourism" (No 291), the largest proportion of holidaymakers said they were looking in the first place for "rest and recreation" when they went on their main holiday in 2009. The proportions selecting "rest and recreation" were the highest in Cyprus (65%) and Malta (62%).

In Austria, Norway and Sweden, on the other hand, just 22% of interviewees said this had been their motivation and a similar, or even higher, proportion said they had wanted a sun/beach holiday (22%, 25% and 26%, respectively). "Sun/beach" was also among the three most mentioned factors that had motivated respondents (in second/third position) in almost all other countries. Respondents in the former Yugoslav Republic of Macedonia (31%), Slovenia and the UK (both 27%) were the most likely to answer that they had wanted a sun/beach holiday.

In Latvia, on the other hand, almost equal proportions of respondents said that they had been motivated to find "rest and recreation" (37%) or to visit friends or relatives (38%). The proportion mentioning such social reasons for their main holiday trip in 2009 was also high in Estonia and Turkey where 24%-25% of respondents had visited friends or relatives.

Younger EU citizens were more attracted by sun and beach (24% of 15-24 year-olds vs. 13% of the over 54 year-olds), while older respondents more frequently selected "wellness/health treatment", "nature" and "culture and religion" (for example, 9% of the over 54s selected "nature" compared to 3% of 15-24 year-olds). The 25-54 year-olds, on the other hand, were more likely to say said that the major motivation for their main holiday had been "rest and recreation" (40%-42% vs. 33%-34% of younger and older respondents).

Finally, non-working respondents were less likely to have been motivated by "rest and recreation" when they went on their main holiday in 2009 (31% vs. 41%-44% across other occupational categories), but they were more likely to say that they had been motivated to visit friends or relatives (20% vs. 13%-17%).

When deciding on a holiday destination, the largest proportions (32%) of EU citizens named the location's environment (e.g. its overall attractiveness) as the key consideration. Cultural heritage (25%) and the options for entertainment (16%) were the second and third most widespread responses in regard to factors that influenced a choice of destination.

Gastronomy, arts and festivals (or other events) were each considered as having a major influence on holiday decisions by roughly 1 in 20 (5%-6%) EU citizens. Eight percent cited other attractions than the ones listed in the survey as key considerations when choosing a holiday destination and 3% had nothing to say (i.e. they gave a "don't know" response).



Figure 2. Attractions influencing the choice of destination 02/2010 Flash Eurobarometer "Survey on the attitudes of Europeans towards tourism" (No 291)

The proportion of respondents who named the location's environment (e.g. its overall attractiveness) as the key consideration when choosing a holiday destination ranged from less than a fifth in the Netherlands, Ireland, the UK and Norway (between 13% and 16%) to a slim majority in Germany (53%). In Finland, Austria, Lithuania, Slovenia, Hungary and Iceland, between 40% and 44% of respondents named the location's overall attractiveness.

Although Dutch and Norwegian respondents were among the last likely to consider the location's environment as an important factor when choosing a holiday destination, they were among the most likely to name cultural heritage in this context (35% and 37%, respectively). Respondents in Denmark (40%), Turkey (39%) and Cyprus (35%) were as likely, or even more likely, to list cultural heritage. In sharp contrast, only 11% of Romanians named this as an important factor.

The proportion of interviewees who answered that the options for entertainment influenced their choice of destination remained below 30% across all countries surveyed; ranging from 7% in Norway to 29% in Ireland.

Respondents in almost all countries most frequently selected the same two attractions, i.e. the location's environment and cultural heritage; Bulgaria, Romania, the UK and Ireland were the most notable exceptions. In Bulgaria and Romania, respondents were more likely to list options for entertainment than they were to mention cultural heritage as key factors in their decision to choose a holiday destination (Bulgaria: 26% Romania: 20%). In the UK and Ireland, on the other hand, "options for entertainment" ranked higher than "the location's environment" (the UK: 24%;Ireland: 29%).

# Studies in Business and Economics

Regarding holiday destination, Most EU citizens (57%) preferred to spend their holidays in conventional tourist destinations (or at least what they consider as "traditional" or "well-known" destinations). About half as many (28%) would rather go "off the beaten track" and explore less obvious tourist targets (these will be referred to as "emerging" destinations). Thirteen percent of respondents had no preference about the type of destination, and 2% could not – or did not want to – specify a preference.



Figure 3. Preferred holiday destinations 02/2010 Flash Eurobarometer "Survey on the attitudes of Europeans towards tourism" (No 291)

# Conclusions

Over the past six decades, tourism has experienced continued expansion and diversification to become one of the largest and fastest growing economic sectors in the world. Many new destinations have emerged alongside the traditional ones of Europe and North America.

The structure of societies is continuously changing: The world population is forecast to grow to 8.3 billion in 2030, life expectancy is projected to increase in most of the world, households and families are becoming more diverse, and migration is changing the face of societies (UNWTO, 2010). All these changes will impact upon the types of tourists, where they originate from, where they travel to, the types of accommodation they require and the activities they engage in while travelling.

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UNWTO Tourism Highlights Facts & Figures section at www.UNWTO.org/facts Flash Eurobarometer "Survey on the attitudes of Europeans towards tourism" (No 291)

# THE COSTS AND BENEFITS OF EDUCATION – A BRIEF REVIEW

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#### Abstract:

Information on the profitability of investment in the educational system of Romania is now almost inexistent, so the assertion that education is, at least in words, a national priority, which, exploited, can generate sustainable economic growth and social welfare, is not founded now on any economic data. Next we perform an analysis of the current global research findings in the field, emphasizing, where necessary, the problems remained unsolved.

Keywords: costs of education, benefits of education, the efficiency of the investment in education

In addition to obvious moral arguments supporting the investment in education there are strong economic fundamentals which support the individual's right to education. Economic theory deals with the time a person spends to be educated as an investment in future productivity and, implicitly, in its potential to win. The basis of this theory, known as the Human Capital Theory, was released by T. W. Schultz (1961) and G. S. Becker (1964). Although the theory as originally issued was examined and some of its parts have been changed, the general idea remains the same, namely that the individual treats education as an investment and is willing to educate if he will get superior effects of the efforts made. People are willing to invest into their developing knowledge capital and skills if they believe that after completion of studies they will get additional benefits higher than the costs of investments.

As with any other investment, as we go forward, it shows up that there are a number of effects and efforts that people generally take into consideration when deciding whether or not they should immobilize their availability of funds to invest in education. From a financial standpoint the decision shall take into account the additional earnings that future studies will generate. If they are higher than the costs of studies, investment in education is, at a first glance, a viable choice.

Education costs in general include both the actual expenses and the opportunity costs achieved by the person who made the investment in education, or in other words, income which he gave up during the life devoted to education. Actual expenditures resulting from the investment in education are easy to determine and include, besides many others, tuition fees, books, travel expenses incurred for education. These are supported by the individual who benefits from the monetary effects of education, and their amount forms the individual costs of education.

Individual benefits of investment in education are the easiest to be quantified in the form of additional income obtained during the life of the person who invested in education. The detailed way for the determination of these benefits requires the calculation of differences between average earnings of individuals with a higher level of education and average earnings of those with a lower level of education, earned over their average life expectancy. A correct calculation takes into account the influences of other factors, besides education, on the earnings obtained by individuals and removes the effects of these influences from the benefits obtained as a result of applying the method described before, using specific statistical tools for this purpose.

Besides education costs and benefits entailed for the individual, the actual theory determines also the costs and benefits brought to the society. For example, the costs of education for a certain number of people from many countries including Romania are partly supported by the society through the subsidiarization from the state budget of the studies followed by those people. The total cost of education of a person comprise both the costs supported by the individual but also the social costs paid by the society for him. In other words, it includes all the amounts paid for an individual to become educated, regardless of the person or persons who pay these costs.

Similarly, total economic benefits of investment involved in the education of the individual resume the total individual benefits of the person who is educated. It also resumes the social benefits arising from the interaction between educated individuals. According to B. Wolfe and S. Zuvekas (1997) long-term investment in education may be associated with these social benefits:

- more charity;

- reduced dependence on social assistance programs;

- reduced criminality process;
- increased capacity to save money;

- positive effects on individuals in future generations, whereas in most cases, an increase in the level of education of a generation determine higher expectations from the future generations related to their education (see also E. C. Dunn, 2007);

- more rapid changes in technology development due to increased investment in research and development;

- growth of population health status and average life expectancy of individuals, etc.

All these benefits help to increase the welfare of the country. Even if some of the population does not invest in their education, social benefits of investment in education it is felt also by it. From this perspective, state institutions, as institutional investors in education, take, or should consider when determining whether to increase, maintaining, or reducing the amounts for investments in education, the ratio of the total economic benefits and the economic costs of them.

One of the reasons why in some countries including Romania education is subsidized, and perhaps the most important of these reasons, is that society benefits from the social effects of investment in education. Public investment in education follows precisely the achievement that the level of training of the population determines the appearance of a maximum difference between the social benefit generated and the efforts made to obtain them. A good example that reflects the difference between the way the individual and his family and the society think about the investment in education is the example of the student who has completed high school and thinking of becoming a college student. Supposing a high school graduate wants to become a doctor, he will take into account expenses that will incur during college supported by him and his family in this period. He will also include the costs generated by the fact that he will not have time to work, so he will put in balance these facts with additional earnings estimates that he will get after obtaining a job when he finished the college. If these gains are lower than the costs of the studies he wishes to make, the student will refocus and maybe he will give up studying. But the society would achieve a lot if that person graduated the Faculty of Medicine and, after working in the field, will discover, for example, a drug that would be used to treat an incurable disease. This is the reason why the state institutions are interested to take part of the individual costs and turn them into social costs, if these costs do not exceed the social benefits that will result from the costs that were incurred.

In the comparison to the costs and economic benefits of education, the social costs (part of the economic costs) are generally easier to be measured than the social benefits, because their determination involves, in general, just setting the volume of public expenditure incurred for education. It is however, more difficult to assign a monetary value of social benefits resulting from investment in education. For this reason, many studies trying to compare the economic costs and benefits, ignoring the social benefits. Although this method underestimates the benefits of education, in the most studies made up to present, education benefits exceed costs of investment in this area (G. Psacharopoulos, 1999; G. Psacharopoulos and H. A. Patrinos, 2002). There is a limited number of researches that have been able to identify positive externalities of investment in education and to evaluate them, but their results are often very different and in some cases, ambiguous (see also R. H. Haveman and B. Wolfe, 1984; R. Venniker, 2001).

One of the indicators used frequently to reflect the efficiency of investment in education is the **rate of return**, which can be determined **both at individual and social level**. Rates of return on investment are similar to money rates for savings
accounts, and are also, in fact, rates of return. If the person who invests in education receives as a result of the investment, amounts higher than those invested, we say that the rate of return on the investment in education is positive, and in the reverse situation, we say that it takes negative values. An investment rate of return is a very useful indicator because it **expresses** through a single digit, **the efficiency of that investment**. A positive rate of return on an investment does not require, however, making that investment. In terms of limited resources, the investor will choose only the best or most profitable investments, so he will choose only those **investments with the highest rates of return**.

There **are two methods**, in the specialized literature, for determining the rates of return on investment in education (see also G. Psacharopoulos, 1994). The first method, known as **the full method** (or full-discounting), involves grouping individuals by age and average income taking into consideration the levels of their studies. The costs and benefits underlying the calculation of the cost associated with a higher level of education are measured by difference from the immediately level below. In case of using the second method, known **as the mincerian method** (named after the creator's name, J. Mincer), or **the earnings function method**, the rates of return derive from the difference between the earnings of people who are similar in statistical terms, except the graduated studies. The method used is often determined by the data to which the researcher has access. The mincerian method has the advantage of a lower volume of required data, while the full method uses a larger volume of data, but the results are more accurate. So there are **differences** due to the method used, but experience shows that often, they are not significant.

Both the recent researches and the oldest ones have identified the existence of an inverse correlation between rates of return and the level of economic development of a country in the sense that the higher the development level is, the lower are the rates of return on investment in education. The highest rates of return on investment in education are now found in countries from Latin America, the Caribbean, and the sub-Saharan Africa. Asian countries reach close values to the world average and the OECD member countries have lower rates of return to investment in education (G. Psacharopoulos and H. A. Patrinos, 2002). This inverse relationship between the level of economic development and the default size of investments in education and the rates of return of these investments can be explained by the general law of demand and supply, namely the fact that the larger the supply of more educated people is, the lower are the benefits of schooling (in relative sizes, of course, because in absolute values the situation is totally different).

**Opponents of comparative studies** on internal rates of return raised in time a number of reasons which have led them to claim that **the study results are often very far from reality.** Although the reasons given in the specialized literature are various (see P. Bennell, 1996), two of them undoubtedly support the conclusion that sometimes the rates of return determined for different countries can not be compared, namely: primary data source used and so, as I mentioned above, the calculation methodology used. To eliminate some of the shortcomings mentioned, there are

studies considered among the most reliable in the field, that have proposed the objective of the determination of rates of return on investment in education processing only data of a statistical population consisting entirely of twins with different levels of education (O. Ashenfelter and A. B. Krueger 1994; O. Ashenfelter and C. E. Rouse 1998; P. Miller, C. Mulvey and N. Martin 1995; C. E. Rouse 1999; J. R. Behrman and M. R. Rosenzweig 1999).

Research conducted until now have shown that education generates higher productivity and superior income and can be an important reason to increase macroeconomic performance of a country. So both older studies (see also T. W. Schultz, 1961; G. S. Becker, 1964) and muny of the recent research (see also N. G. Mankiw, D. Romer, and D. M. Weil, 1992; D. J. Henderson and R. R. Russell, 2005) identify among the major causes of the productivity growth the accumulation of physical and human capital. **Investments in education** can, therefore, generate higher rates of **economic growth and increased domestic product per inhabitant**, while the lack of attention given to education can influence macroeconomic indicators in the opposite way. A large number of studies that have been made since the second half of the last century, concluded that frequent changes in production processes lead to changes in demand for various types of work (R. R. Nelson and E. S. Phelps, 1966; Z. Griliches, 1969; F. Welch, 1970; T. W. Schultz, 1975; M. J. Lindquist, 2005; N. Winchester and D. Greenaway, 2007). From these studies arised the idea that **education is more productive the more volatile the technology evolution is**.

History of East Asian and Latin America's countries emphasizes the effects of attention and lack of attention to education experienced by those countries. Beginning in late sixties and early seventies of the last century, some East Asian countries have outlined a development strategy based on the investment in education. Relatively recent studies (J. S. Zhang, Y. H. Zhao, A. Park et al., 2005; S. Appleton, L. N. Song and Q. J. Xia, 2005) show fulminating increased rates of return on investment in education in urban China in the end of the last century and explain the reasons for this growth. At the macroeconomic level this investment was reflected by higher rates of economic growth and increasing gross domestic product per inhabitant. Effects of investments in education were not limited only to those mentioned. Higher rates of economic growth have attracted more investment in the area that have generated higher revenues for the budgets of these countries, which allowed, in return, higher investment in education and increasing equal opportunities in education (N. Birdsall, D. Ross, and R. Sabot, 1997). A volute of the effects of investment in education was generated this way. In Latin America the relatively low economic growth rates were connected by some researchers (N. Birdsall and J. L. Londono, 1998), with the limited and unequal access to education for various social categories. Public policy in this part of the world have encouraged major investments in physical capital to the detriment of human capital, generating major disturbances which have manifested for a long time through economic stagnation, social inequality and environmental damage (R. Lopez, 2003).

The debate between researchers in the economic field about the best way of measuring the effects of education on macroeconomic performance continues. Nearly all the individual studies made by different countries highlight the **benefit of education** on economic growth, but in what concerns the comparative researches made, **the results are not as clear** (see also C. Papagiorgiou and V. Chmelarova, 2005). The balance is inclined, however, in this situation too, for the sustainers of **positive effects of investment** in education on macroeconomic indicators.

The main theme for discussion of researchers is related to the determination of those issues or areas of education that have impact on economic growth. Some studies conclude that the average level of education of the citizens of a country is in touch with the level of economic growth, other classify the forms of education (see also G. Bertocchi and M. Spagat, 2004; P. E. Petrakis and D. Stamatakis, 2002) or people (see also J. Feyrer, 2007) depending on the importance that each one has on growth, and a third category concluded that not the average level of education but the growth registered by this level determine the level of economical growth. Another research group, fewer in number but well-known, established a negative link or the lack of it between increasing levels of education and economic growth. We take into consideration in this case, a recent study which concludes that education not in the sense of a form of graduate education, but in the sense of the knowledge base of individuals is closely linked with economic growth of various countries (E. A. Hanushek and L. Woessmann, 2008). In conclusion, even if there is not a consensus among researchers regarding the extent to which education affects economic growth, most believe that there is a direct link between investment in education and economic growth. Confusion arises, therefore, not when the question arises if there is a connection between education and growth, but largely when it comes to choose data and methodology used to measure the costs and benefits (especially benefits) of social education and to measure the intensity of this connection.

The importance of determining costs, benefits and rates of return on the investment in education is emphasized in recent years also by the fact that their calculation has become a focusing point of **many governments and international economic organizations.** We take into consideration with regard to this problem, by way of example, the Organization for Economic Cooperation and Development (OECD) for which the rates of return of investment in education are key indicators and the governments of Great Britain and Australia whose reforms in education are based on **studies on the economic implications of education**, funded by these states. Unfortunately, for our country, there are not any similar researches available in the mainstream publications in the field that the policy makers can consider as a base for their decisions taken in the education field.

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# THE EVOLUTION OF ADVERTISING MARKET WHERE IS ADVERTISING NOW, AND WHERE IS IT GOING?

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#### Abstract:

Advertising is more complicated than it used to be. In the innocent days of the 70's and 80's you could easily reach large audiences, both locally and nationally, through traditional advertising. Those days are long gone and an examination of the advertising playing field looks like a big pile of incomprehensible choice. In Romania, advertising has mushroomed over the past 10 years. with the emergence of large international companies and the budgets allocated to them in advertising, advertisers have appeared, only present in major cities of Romania. After 2000, there were several media institutions with very large budget and big plans for the advertising market in Romania.

Are some media groups and advertising agencies in Germany, France and the U.S. have invested in Romania, managing big budgets and companies are promoting. Advertising market had grown very large, especially in the period 2004-2008, when all the big companies big budget on advertising. After 2008, the advertising market was heavily affected by global financial crisis, and this has led companies to invest almost half of the regular budget for advertising. I will present the current situation on the advertising market and some estimates for the next period, from media groups and individuals specializing in the field.

Keywords: advertising market, strategy, budgets, forecasts



# 1. The evolution of advertising strategy

As technology, media and the marketplace evolve, the way we plan needs to adapt and change as well. This is truly one of the great challenges of modern marketing and it requires us to not only think differently than in the past, but also acquire the skills to meet new challenges and grasp emerging opportunities.

To gain perspective, let's review how we got to this point and then look to what the future holds.

#### **Creative Planning**

After World War II, most of the globe went through several decades of seemingly boundless economic expansion. People had ever more money to spend and business expanded to satisfy the demand. It was the dawn of the branding age and marketers strove to make their products popular with consumers hungry to join the consumer culture.

#### **Communications Planning**

In the 80's and 90's, cable and satellite technology transformed the media landscape and fragmented audiences. No longer could you be sure that your target consumer would see your message no matter how big the idea was.

In the new environment, media agencies moved upstream and communications planning was born. The central strategic question became "where is our consumer?" When you can't reach everyone, you need to target your messaging, before you can target your message.

#### Strategic Marketing Planning

The current marketplace requires us not only to choose the best communication channel to reach our consumer, but also to focus on what we want our marketing to achieve. Raising awareness will do little if we are not converting awareness to sales, just as increasing market share alone is a short sighted strategy if our competitor has built a strong community of consumer advocates.

#### The New Creativity

Most of all, the new marketplace requires a new notion of creativity. Big ideas aren't enough anymore. Creativity needs to be integrated across a variety of platforms by people with a diverse set of skills. Today's marketing problems need to be solved by cross functional teams that are often ad hoc and diffuse with weak operational interfaces.

## 2. Finding the best place to advertise your business

With so many media options out there these days, from the Internet to outdoor advertising to old-fashioned print products, you may very well be asking yourself which platform is the best, most cost-effective, and most visible means of advertising your business.

Aside from doing costly market research or hiring an ad agency to create a sophisticated media plan, there are a few simple ways to figure this out for yourself:

When it comes to selecting an ad medium, the most important factor, of course, is who is looking at or hearing those ads? As you yourself are both a business operator and a consumer of advertising and media in your market, you may be your own best test market, as are the customers, colleagues, and family members whose opinions you value. Just think for a minute: What is your own favorite media? Which do you find you spend the most time with or are exposed to the most, be it Web sites, newspapers, radio or TV stations, or billboards?

Next, seek out information directly from the media venue you're curious about doing business with. If it's a TV station, contact the local sales director to check on rates, information about producing TV ads, and demographic data. If it's a newspaper, check the paper's Web site or give the sales department a call to obtain what's known as a rate card, which details basic advertising information, including pricing and guidelines. Any Web site, naturally, is going to include a tab whereby users can obtain basic information about advertising as well as contacts for further information or placing an order. A quick check with the venue itself will provide basic answers that may be valuable in deciding whether that medium is for you.

Looking to do even deeper research on your own? A host of directories is available at any local library, which will contain useful information about most local media. Seek out directories published by the newspaper trade journal Editor & Publisher, for example, if you want data about a particular newspaper. The E&P Year Book (as the name suggests, published annually) is a rich resource for background about every daily newspaper in every market in the United States.

Other than who is looking at an ad, another important thing to consider is the advertising environment of the medium you're looking at. That is to say, which other kinds of businesses are advertising in that medium? If you are a retailer, for example, you're in good company if you use the daily newspaper to promote your business. In fact, depending on the type of business you're in and who you're competing against every day, a particular medium may in fact demand that you embrace it. Even though newspapers' reach has diminished as consumers in larger numbers turn to the Web for their news, the local daily remains a powerful and highly effective means of getting the word out about your business to a receptive and relevant audience. Just check out any morning's paper and there you will find pages upon pages of ads for department stores and other retailers.

The content of the proposed medium is also an important consideration.

Depending on your type of business, you may choose not to advertise alongside the personals listings in the local weekly. You may or may not want to promote your business during morning "shock jock" radio programming (suitable perhaps for a nightclub, but maybe not for a funeral home). A billboard or bus-shelter ad for a financial-planning company likely would reach its target more effectively in a downtown business district than in a beach town popular with day-tripping teenagers. Much of this may seem common sense, but as you've probably noticed, a lot of local ad placement (much of it placed by ad agencies or the vendors themselves) doesn't make much sense at all, which is why oftentimes you, as the business owner, are the very best judge about how and where to promote yourself.

# 3. Online advertising vs offline advertising

#### **Online Advertising**

To use the term online advertising or "new-media advertising" makes it sound so simple. Yet it is complicated and constantly evolving. What you have figured out today will most likely be ineffective, outdated, or highly evolved a year from today. Google rules the roost with its pay-per-click Adwords model. Even though paid search advertising is up, I think that will change over the next year. Independent social networks like Facebook and LinkedIn will gain importance and spending share because of their ability to target more specifically by lifestyle and demographic.

### Pay Per Click Advertising

To do well with pay-per-click advertising you have to be on your game and constantly pay attention. You also need a website that is built to convert pay-per-click traffic into customers. So before you launch a campaign, invest time and money into a website and landing pages that naturally lead visitors into a sales funnel. I also recommend spending some time educating yourself or hire a company that specializes in paid search advertising.

#### Social Network Advertising

As for advertising on social networks I've personally achieved mixed results and nothing that could be considered gangbusters. That doesn't mean it won't work for you. Facebook has a simple, easy-to-understand advertising interface and allows you to control your budget. You can experiment with a limited budget and test response rates. But just as in paid search advertising, have a landing site that is built to convert visitors into prospects. Some common techniques are to use Facebook advertising to gain Facebook page likes, or obtain email addresses through newsletter subscriptions.

#### Free Online Advertising

More effective, are Google's free tools such as Google Places and getting listed in Google's local 7-pack. We can attract more website traffic through local search

results and do it with less money. With a few tweaks to the website and an update to his Google Places page, one local client shot to the top of local search results for sprinkler repair. His phone has been ringing all summer.

# **Offline Advertising**

Also known as traditional advertising, we will hear many marketers declare its death. This is not so, of course. Things rarely die, they evolve. I personally use traditional advertising for local clients with excellent results, specifically for brand enhancement. So where is Traditional advertising evolving?

# **Television and Cable**

I believe we are moving toward an on-demand entertainment model where we won't be bound by network/provider schedules. Anything you want to see, you will be able to see when you want to see it, and where you want to see it. I don't know what that means for the visual media such as broadcast TV and Cable. With the advent of DVR and on-demand entertainment, local advertising will mostly go away in the visual media. You may see broadcast and cable go to a programming schedule of teasers or promos on air, while making their money via subscriptions and forced advertising through internet delivery of some sort. This is pretty bad news for local television stations and cable outlets who have little to no local programming to re-sell.

# Radio

Local radio stations will not be immune to on-demand entertainment. When internet access becomes widely available in cars and every entertainment device, listeners will be able to call up any song or program they want to hear at any time. Local radio stations will have to evolve, or surrender even more of their small piece of the advertising pie.

# **Outdoor Billboards**

The industry is positively evolving. You will see more digital billboards pop up in your community. For location and event advertising billboards can be a good choice. But the drawback for billboards is that they can be very expensive to gain significant market reach.

# Direct Mail

It's relatively inexpensive, plus we can somewhat control who receives your message, and when and where they receive it. Use a commercial mailing house to help you find the right mailing list and reduce your postage costs.

# 4. Mobile advertising – a wise choice for 2011

One must recognize that the mobile phone is now an indispensable tool for all of us. If you ask "what are the three things you always take when you go, you'll notice that the answers are almost always the same: keys, wallet and mobile phone.

The fact that each potential customer's pocket there is a cell phone, the importance given to information received through this device (usually read each message as you receive), the possibilities of interactivity and measurement of results which allows mobile phone transforms into a channel media very effectively.

Evolution of the global mobile advertising market is a fast, active involvement of companies like Google (which recently acquired AdMob), Microsoft (whose forecasts show that mobile advertising will take over 10% of the total expenditure for promotion within 5 years) and Vodafone (whose department specializing develop new channels and new possibilities for targeting advertising) come to confirm this.

This year, worldwide mobile advertising was directed by a percentage of total expenditure on advertising, up 55% from last year, a period of substantial declines in all other environments. And in Romania, this new media channel has a very rapid evolution, last year recorded a doubling in the number of campaigns, while marketing budgets allocated area increased by 85%.

The advantages of this media channel is why the rapid growth of the field. Among the advantages are quickly propelled mobile advertising solutions in several agencies' media strategies include:

- The possibility of differentiation from the competition in terms of the channel is not clutter;
- The large number of potential customers who may be targeted, number of channels similar to ATL;
- Relevant messages received extensive targeting capabilities due to age, gender, purchasing power, location, type of phone use, etc..
- Ability to discuss with potential clients through various forms of interactivity (click2call to call after advertisement, click2sms to send SMS to visit click2browse mobile advertiser's website, click2buy to buy the advertised product).
- > Reporting capabilities and campaign success measurement.

### 5. Advertising market is estimated worldwide in 2011

Advertising market will grow by 4.7% in 2011, Asia and Latin America are the main areas that will sustain its upward trend, according to new estimates the agency Carat, informs WARC.

Latin America will emerge as the biggest growth area, 14%, followed by Asia Pacific and Central and Eastern Europe. For Britain, France or Italy, Carat announced a positive trend of 4.1%, 2.7% and 2.9%, while forecasts for Spain and Germany are more reluctant, both states are characterized by stagnation in what publicity concerning the markets

In China and Russia are expected to increase investment levels, reaching a value of 15.3% in 2011, every state party, and Brazil and it will fit the same trend, with growth of 14.4% in the right investments advertising.

Budgets will be allocated mainly for online, TV, radio and outdoor advertising in print media law being less likely to halt the decline.

Top ten advertising markets 2007		Top ten advertising markets 2010	
Country	Ad expenditure (US\$ million)	Country	Ad expenditure (US\$ million)
USA	179,251	USA	196,971
Japan	41,017	Japan	43,335
Germany	25,758	UK	31,237
UK	25,429	Germany	27,759
China	16,049	China	26,243
France	13,890	Brazil	17,426
Italy	12,249	Russia	17,205
Spain	10,738	France	14,480
South Korea	9,967	Italy	13,382
Australia	9,831	South Korea	12,121

Figure 1. Top 10 countries that have invested the largest advertising budget

# 6. Estimates and achievements in 2009-2010 in advertising, forecasts for 2011

Leo Burnett: "advertising market in Romania this year will drop by at least 10%".

Advertising market in Romania will decrease this year in a double-digit pace, with at least 10%, says Anca Catarambol, group human resources director Leo Burnett Leo Burnett. The group aims to keep the salary level of employees and their number will make recruitment only to the extent that positions remain open.

The advertising industry is clearly affected by the crisis. The uncertainty regarding marketing budgets because it knows where they tried to cut through reducing costs, manufacturers have cut in marketing budgets were cut or even if there is no predictability that we had in previous years.

"This state of uncertainty affects us. I am clear that this year will be a doubledigit market decline, at least 10%", says Catarambol. Romanian advertising industry could see a decline of up to 20% this year, according to the most pessimistic estimates made specialists in the market.

After a year that saw advertising production increases 30% for outdoor company representatives are reluctant to make good positive estimates for 2009, given that all major companies have cut advertising budgets, informs NEWSin.

"Great international clients have already made budget cuts since the middle of last year and will be appreciated flexible suppliers, that meet customers; desires through special deals or partnerships"; said Liana Mihai, managing director House of Media, part of The group.

In turn, Stefan Iordache, Leo Burnett COO, believes that 2009 will have different meanings in terms of advertising budgets, according to each client.

"They have budgets that will go down, others will increase, even companies that will be their budgets will stay until the market thaws. But the general trend, I estimate that the total value of advertising budgets will have a minimal growth this year compared with 2008", says Leo Burnett.

Industry representatives interviewed believe that television will continue to play an important role in 2009.

"Traditionally in Romania are spent on TV advertising, on the one hand due to good penetration (the TV is still the cheapest entertainment in Romania), but also because TV advertising has proven its efficiency and power to generate sales. Certainly television will benefit most from the average budget in 2009, but the value will not rise to the level of 2008 or 2007", said Liana Mihai.

### Estimate vs 2010 performance advertising

#### Advertising Market: Decreases of 10-15%

In early 2009, leaders of media agencies estimates and published before the market drop to no more than 25-30%. Reality was more tough advertising market decreased by about 40% to 350 million euros, almost to the level of 2006. Now they are talking about a market decline of about 15%, which would lead the market in 2004.

Then as now, the challenge remains to win agencies fight to convince their customers and then give them good campaign.

"I think the reason most people in advertising are in this business is: to produce spectacular campaigns for our clients to bring their results to match. This has always been the main challenge in our industry and the complex as a year in 2010, the challenge will be even greater", said Manuela Necula, CEO Ogilvy Group, for Wall-Street

Declining trend will continue and that 2009 was not a good year for most investors in advertising, plus politica and economic instability.

"There are no clear motives for which budgets would grow", says Dana Bulat, managing director at United Media.

But will increase the pressure that will put customers on the agencies that work to expand your market share. And they want it without too much money out of pocket, especially if they are where savings.

"There were many cases when customers chose not to shoot a new spot. Instead investeaca 50,000 euros in a new spot investeaca preferred to him in the purchase of advertising space or cut it all and use some of the older spots obviously adapted to the demands of today's market. Now I've seen spots of three, four five years and fortunately was not the case with our clients", said Cosmin Radoi, managing director of advertising agency BBDO Graffiti.

"The challenge is still to convince marketers that they must leave our hands", said Adina Sorescu, managing partner of The Secret Service. "They often ask us for

new ideas and to be courageous but old (verified by someone at least) and safe (safe)".

Market expected better times since the last quarter. Adrian Tuluca, general manager of Propaganda, talking about a slight increase from 10 to 15%, marked the Romanian economic revival not so optimistic as to the direction the global economy is heading.

# Estimates media market:

- Dana Bulat, United Media: stagnation or minus 10-20%. I hope not to be an optimistic statement.
- > Cosmin Radoi, Graffiti BBDO: minus 15%.
- Sorin Popescu, Next Advertising: minus 10-15%, at least in the first nine months.
- Manuela Necula, Ogilvy Group: optimistic scenario comparable to 2009, a realistic scenario - minus 10%.
- > Adrian Tuluca, Propaganda: plus 10-15%.
- Manuela Necula, Ogilvy Group: plus 5-10% in the second half of the year.



# 7. Advertising in Romania in 2010 poorer

The crisis gave a new face of local advertising in 2010, approaching the volume, in 2005. Advertisers do not spend in a country without consumption. All traditional media are losing the Internet grows alone, but with small volumes. These are the premises of an advertising market that's held back only by the major international advertisers, filmmakers say Media Fact Book annual survey.

Nobody escaped the crisis. After a slight recovery in the first three months of 2010, when advertisers began to give way to the bag in May (up 2.5% over the same period last year - no), April and May have returned everything to 180 degrees. Budgeting may remain without income, the government announced austerity measures, the question arises "follows a new wave of crisis? Consumption has

begun to fall, after he noticed a touch of irony the filmmakers Media Fact Book, budgetary expenditure increased by 2.6% in 2010 vs. 2009.

A good part of the active population of Romania will have to deal with less money, while many will remain without jobs.

## 8. Forecast for the advertising market in 2011

In 2011 the advertising market would stagnate at 2010 levels.

"Our customers make their budgets for 2011 based on 2010 figures", said Nora Marcovici, CEO BBDO Group Romania. Basically, this is a sign that advertisers are leaving for the scenario in which next year will be at least at the level of 2010. Also, the most important medium of communication - TV - could be priced up to 20% higher in 2011, in the context of rising demand and sold-out appearance phenomenon, announces CEO BBDO Romania.

Media market in Romania in 2011 will grow by 4%. Prince drops by 6%.

The print media, the biggest drawback

The only media channel that will be faced with lower revenues in 2011 will be print media (mainly newspapers and magazines), which will lose about 6% compared with 2010.

TV – the winner book

Turning to media markets in the region, the analysis indicates the TV media as the least affected of the traditional media.

"Year 2011 will be one as difficult as 2010, then you have to start growth", said for Agerpres, president of Manufacturers and Importers Association of Advertising Industry (APIIP), Liviu Rogojinaru, who attended the official inauguration of the Fair Print Digital and Signage.

"I would like to be right who say that the brunt of the crisis has passed. I think that we are all on the sea bed and I feel that 2011 will be a year at least as difficult. Perhaps we can not fall lower than we are, and then you need to start increasing", said Liviu Rogojinaru.

Market advertising industry in Romania was estimated at 200 million euros at the end of 2008. Lower figure in 2009 and continued to fall this year.

"Getting money to cut the budget during the crisis are the publishers, so that our members are among the first to have been affected by the crisis. Speaking of the evolution of turnover, however, people should not we refer to the years 2007 or 2008, which were peak years. Perhaps it would be enlightening to make comparisons with 2002 or 2003, which were more specific about the Romanian market", said President APIIP.

"It is difficult to estimate the market share of each branch of the advertising industry, but about 30 percent of revenue comes from print market, another 30 percent are market Signing (letters, signs, etc.), 20 percent of the market is promotional items and still owned 20 percent of materials and equipment. In this production activity is added promotional gifts", said Liviu Rogojinaru.

In the past two years, some companies have gone on the advertising market, new ones have emerged. Among the large foreign firms, not only did not retreat either, but come May and a large Greek company. "The Romanian market is a serious market that attracts businesses. Unfortunately, it seems that there are some companies who put the padlock on the door măricele. But, ultimately, is that the flu crisis. It produces a kind of natural selection", added Chief APIIP.

Initiative Media: Romania media market to drop 9% in 2010, Internet is only medium to see a rise in ad spend

Total net ad spend in Romania would drop by a further 9% to 308 million euro in 2010, following a 37% fall in 2009, Initiative Media Romania says in its Media Fact Book 2010 report

According to the report, Internet would be the only medium to see an improvement this year.

Initiative Media estimations 2010 vs. 2009:

- TV ad spend drop from 222 million euro to 209 million euro
- Print drop from 37 million euro to 27 million euro
- Radio drop from 25 to 23 million euro
- OOH drop from 42 to 35 million euro
- Internet/Cinema rise from 13 to 14 million euro

# Top sources of information for Romanian buyers, in the report of media & advertising – Mediafax

Presentation of the shelf is the main source of information for urban Romanian buyers about most types of products, and advertising on the Internet is preferred for purchase of machinery, according to a study published by Media & Advertising Mediafax report 2010.

Study representative at the city shows that most of buyers get information from the store, the shelves when it comes to purchasing food (41% of buyers), alcohol (43%), cosmetics (42%) , cleaning products (49%), clothing and footwear (44%) and electronics and appliances (34%).

In contrast, Internet advertising, with the exception of online media advertising, which are analyzed separately, it becomes the main source of information when buying cars: 34% of Romanians in urban use, or to learn more about the various brands or models, or to see offers second-hand car dealers.

# The biggest investors in advertising, in 2010, budgets investing in Romania

Despite the crisis, or perhaps precisely why many companies have put his hand deep in his pocket, to increase sales. The biggest investors in advertising, in the first five months of this year are Procter & Gamble, Unilever, Orange, Vodafone and Henkel.

The rankings prepared by Capital, shows that the first place is, in terms of investments made in advertising, Procter & Gamble.

Consumer Goods Company for many years is one of the main investors in the advertising market. Only in 2009, the company had a promotion budget of over 410 million euros (rate card costs, gross value, without discounts).

The most advertised brands in its portfolio are: Ariel, Gillette, Head & Shoulders, Lenor, Pampers, the total investment is 122,216,461 euros.

In second place in the top ranks Unilever, the advertising investment of 84,300,813 euros, most of the budget going to TV promotion. But there were also campaigns on radio, print, OOH, online. Most brands were promoted Dove Dero.

Follow Orange, with 76,927,493 euros, Vodafone, 72,264,093 euros and Henkel Romania, with 68,495,195, the preferred channel of communication like TV stations, being located far away from newspapers. The most advertised brands in the first half of 2010, in each division of the FMCG company were: Persil, Palette and Ceres.

# Romanian advertising market in steady decline in the last 2 years! But will increase the next 4 years!



"In late 2010, the advertising market will reach EUR 308 million net, down by 9% against the value registered in 2009, according to estimates made by yearbook Media Fact Book Romania initiatives"

Romanian media and entertainment market will register an average annual growth rate of 9.1% in the period 2010-2014, reaching U.S. \$ 3.5 billion at the end of the period by about 60% higher than the 2009 value, according to the report PwC "Global Entertainment and Media Outlook"-2010.

The Romanian market downtrend started advertising again in October 2008 and came into full crisis in 2009. Overall, the investments have declined across all media platforms (TV, radio, print, Internet, cinema, outdoor), as most advertisers have focused on reducing costs. Last year, the Romanian media market has scored a total decline of 37% to the net, registering a lower level than in 2006, show directory Media Fact Book. All media platforms have been affected by economic crisis, but the print segment has been hit with a drop of 55%, followed by OOH (outdoor advertising) with 40%.

No TV, radio, cinema & the Internet did not note the discrepancy, noting that declines 34%, 28% and 19%. Despite lower volumes, increased its TV and 3% of total net media market, amid low prices. In addition, the economic crisis has strengthened its position as the main source of entertainment TV favorite Romanian, many increasingly choosing to spend their leisure time watching television. In 2009 they launched new TV channels but on the other hand, the print market was characterized by a drop in audience, as most magazines and newspapers has decreased circulation. Some titles have focused on the online version, while others were closed or sold.

Radio market experienced about the same problems as print media, many local stations have been closed, and 2009 was marked by changes in market shares of stations in Bucharest. Outdoor site in 2009 was nearly as affected as the print, especially the lack of measurement and evaluation. In 2009, online advertising has had the smallest decrease in volume. This was generated by the increasing number of internet users and because the credibility but growth. If we said last year that new media will be the revelation of the crisis, this is confirmed now that online advertising has been less affected by decreases in the field.

### Global entertainment & media outlook study by PricewaterhouseCoopers (PWC)

PwC: Advertising market in Romania falls to 755 million USD in 2009 to 725 million USD in 2010.

Global media and entertainment market, including both sales to consumers and advertising revenue will increase by an aggregate annual rate of 2.7% during 2009-2013, according to the study "Global Entertainment & Media Outlook", produced by PricewaterhouseCoopers (PwC), reaching 1.6 trillion USD in 2013.

"Initially, we expect to see a decrease of 3.9% in 2009 and a feeble growth of 0.4% in 2010, followed by a more intense period of growth at a rate reaching 7.1% in 2013", PwC inform.

The authors declare that they can "say with certainty that this recession will last longer than previous ones because of decreasing and steeper than the fact that the impact on consumption will be much more drastic than in the past". No media market and Entertainment is not immune to this trend, this segment is estimated that consumption will drop by 1.2% in 2009, remained at low levels in 2010 and an increase of 3.2% in 2011.

According to PwC, media and entertainment market in Romania this year will reach levels of \$ 2.636 billion, about equal to last year, as in 2010 to increase very slightly to 2.655 billion dollars.

Will record higher growth in 2011, when PwC considers a level of media and entertainment market in the country of 2.849 billion dollars in 2013 as they reach 3.596 billion dollars. 6.3% growth media and entertainment market in Romania 2009-

2013 Romania ranks 2nd in Central and Eastern Europe after Turkey - with an advance of 9.5% to 9.603 billion dollars .

In 2013, the advertising market in Romania will grow to 917 million dollars. The study highlights that, over the next five years, digital technologies will become increasingly prevalent in all segments of the media and entertainment industry as it expands digital migration. Although the current economic situation undoubtedly affected virtually every sector of media and entertainment market, while it has accelerated and intensified so the digital migration providers, and consumers of content.

# 9. Conclusion

For advertising market in Romania, was an intense growth period (2003-2008), but since 2008 the advertising is in crisis.

This crisis has led companies to reduce their budgets they invest in advertising, to terminate ongoing contracts, to stop the production of commercials in November and use them on those 2-3 years ago, where you pay a lot then. Currently, the largest advertising budgets of their foreign companies in Romania, taking advantage of the fact that many Romanian companies and not only blocked the advertising budgets.

I mention it's a good time to make yourself noticed in a field, much easier than three years ago. Who has the power to invest in advertising now, will have much to gain in the current period, from my point of view.

The situation is similar to European and international level. The print media has and will suffer the most. Radio and television are almost constant, even if they have lost quite large budgets. The Internet is a growing, and my opinion is that Internet advertising will take an even greater scale in future.

Finally, I want to note that the advertising market and its exaggerated budget (between 2006-2008) and was normal to defend this "crisis" that gives a refresh for all media companies and advertising for all agencies.

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# **CRISIS: EFFECTS IN THE ECONOMIC AND SOCIAL FIELD**

# TILEAGĂ Cosmin

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#### Abstract:

This paper aims to examine how issues relating to the economic crisis on society nationally and internationally. It reflects its own analysis based on own research aspect based on several macroeconomic indicators. To this end I studied the relationship between financial crisis – the economic crisis – social crisis – political crisis.

Keywords: crisis, direct investment, economic growth rate, unemployment rate

What is going on in the Romanian economy must not let us be impassive. The economic evolution during the last few years determines us to analyze a number of elements, which may reflect a certain perspective related to the future.

Certainly, a number of stages have existed in the evolution of the economic crisis, both at an international and national level.

The first stage of the crisis seen at a worldwide level, has started, of course from the financial-banking crisis, in which Romania had a wave of spreading a bit delayed, but devastating. Even if it seems odd, this first leg of the crisis at an international level was relatively easy to prevent, the Governments of the highly developed countries intervening on the market with high infusions of capital. The cost of this action could be estimated to approximately 700 billion dollars. The international banking system was saved in mid-2009, and the situation was steady enough to be considered, rightly, that the major catastrophe had been avoided.

If we ought to look at the situation in Romania, we may notice for sure that this propagation wave in the financial-banking market is reflected in the direct investments from the Romanian economy from a negative point of view. After several years in which the investments had an upward trend, a dramatic decrease of the investments had reached the Romanian economy after 2008 (from 9.5 billions in 2008 to 1.8 billion euros in 2010), reaching the end of the year to record levels of foreign direct investment, comparable with 2003.



**Direct Investments Romania** 



Unfortunately, the consequence can be seen and will be visible in the nearest future, when we talk about reducing economic growth, low employment in the economy and a significant increase in unemployment. This impact in the Romanian economy is due to the fact that roughly 80% of the banks which are operating in Romania have major foreign capital and the crisis experienced by parent banks to spread directly over them.

The second leg of the crisis affected the real economy in a natural way. The difficulties that the financial-banking system had encountered were mostly visible in the credit field. Without the "source of energy" supplying the work, the economy started to show failures. Bankruptcy of banks in the first stage, turned into the bankruptcy of companies, or restricting their activities in the second phase.

The intervention of the countries was restrained, and due to the fact that you can sustain a bank with capital infusion, it is very uneasy to help a small or a mid company which has lost its marketplace. You can not buy the production for state reserves, for example, and you can not find in due time an indoor or outdoor marketplace.

France created an investment fund designed to help entrepreneurs, Germany has reduced taxation, Britain sought a redistribution of resources, Romania has tried many and failed to nothing.

And because I spoke about Romania, at a simple analysis of the economic situation, we may observe that the economic growth rate had a sinusoidal evolution until 2008, while member countries of the European Union had a significant growth, but 2008 everything started to collapse. Not even in 2010, while member countries of the

EU recorded positive growth (fair enough, small ones), Romania can not pass the threshold of positive growth after the latest estimations. This is primarily due to the lack of active policies to encourage entrepreneurs in economic activity and also the lack of consistency in government's economic measures designed to stimulate the weakened economy.

The exports collapsed, the domestic market has constantly dropped, traders were hit by the financial crisis, all these things worsening the current economic situation. Those who were in debt soaring growth period found themselves suddenly insolvent, the state made redundancies to avoid an increase in external debt, and in this way the economic decline became inevitable (going from 7.8% in 2008 to -1.5% in 2010 and going through a painful -7.1% in 2009).



**Economic Growth Rate** 

Figure 2. Evolution of Economic growth rate in Romania Source: National Bank of Romania

The paid price for this second stage has taken the unemployment to a high level. This unemployment growth merged in a negative and unhappy way with the price, and with major capital expenditures. This led to a spectacular growth of deficits especially in Europe which led to a new stage in the economic crisis: the social crisis. A careful approach of the evolution of unemployment data shows that after a pretty significant decrease, an equally dramatic increase followed. Of course, the evolution of the economic crisis was visible and this was evidenced in both Romania and EU countries. The main economic sectors have suffered, because they had no choice. They were forced to reduce their deficits, in addition to the lack of resources in the economy, economies have resorted to massive cuts in public sectors and to significant reductions in spending money in the idea of not converting the initial crisis into a public debt, as severe as it can.

Moreover, they followed the state sector layoffs, salary cap or even reductions, the retirement age increased even for a short time to reduce pressure on the pension fund. All this measures are less costly from the economic point of view (they incline more to savings than outlay), but are extremely painful from the social point of view.

Events in Greece, France, Spain and Romania have already proved this. If we refer strictly to Romania, the unemployment evolution rate is not at all a reason to be happy. It may be remarked that this economic crisis caused an increase in the unemployment rate at a high level, enough if we were to do a comparison with the previous years. The values registered this year, return us to the level encountered in 2003, which is not gratifying at all.







Certainly, an economic recovery based on actions and policies of economic stimulation would result in medium-and long-term decrease in unemployment. In the conditions in which all governors speak of economic growth that could be achieved in the near future to influence the growth of living standards, it should be noted that this increase in living standards will be felt only when entrepreneurs are going to employ again, and the unemployment rate will be reduced.

We must not forget another important indicator in the economic analysis, the rate of inflation. Even if in the condition imposed by European Union countries that inflation must not exceed 2%, we can see that in Romania it is practically unattainable in the near future.

Of course, in the past there were many factors that negatively influenced the failure of the EU-imposed targets, but with the advent and increase, this economic crisis seems less feasible.

Even if there were at a given time assumptions that led to lower prices of goods and services due to reduced market demand and automatically fall in consumption, inflation did not follow a downward trend but rather a significant increase. This thing is mainly due to the depreciation of the national currency, exports reduction and, of course, the influence of the products prices imported by the Romanian economy. As seen in the graph, in the period of the economic growth that Romania recorded in 2007-2008,there was an inflation rate of 4,8%, followed thereafter by an increase in the estimated level about 7,7%, and by this year is being estimated a growth up to 7,7%. Efficiency and effectiveness of the Romanian economy are putting their negative mark on this extremely important indicator both for the economy and for the standard living of the population. A correlation of the inflation with the interest rate applied by banks operating in the economy, shows that in the near future lending (enabler of development investment) will be negatively affected which leads us to conclude that not even in the near future there is a small possibility of fast and efficient economic revival for our country.





Studies in Business and Economics - 313 -

Taking into account every stage, it can be concluded that there might be a fourth stage (not insignificant), that could strike seriously both the economic and social life. It is all about the political impact that may prove cruel in the long term. It can be very visible both in Romania and Europe. This impact refers to increasing extremes, despite the dominant political and economical doctrines. The premises which were based on a growth in the last few decades-EU Project, large prosperity, social security etc-is dangerously shaking under the weight of successive blows of the crisis.

Under these circumstances, voters are more easily persuaded by radical slogans which are other than what they normally hear, that amid violent destructuring of traditional doctrines, especially after the economic crisis.

On the capacity of Governments that are having the power in these tough moments, will depend the occurrence or avoidance of the fourth (potential) impact. If any solutions are to be found quickly in order to slow down the social pain, and if the suffering voters are to be persuaded, catastrophe is going to be avoided. If they will try to use the classic arsenal, they will fail and the consequences will be disastrous, putting in danger even the European project.

In the past century, the world has never overstepped the catastrophe of World War II due to the economic crisis - this had been exceeded in 1933-1934 - but because of its political consequences. This is the most important lesson for those who, today, lead our destinies.

# MANAGING THE LEADERSHIP CHALLENGES

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#### Abstract:

Even if since ancient times wealth and power have been associated with having physical resources, and the traditional production factors were predominantly physical, knowledge revolution is the shift from physical-based economy to predominantly knowledgebased economy. Experts have lately noticed the increase of economic importance of technologies, information, economic processes, human capital, the organisation's abilities and skills, each of these factors having a significant importance to the knowledge management. It is expected that future wealth and power shall mainly be derived from intangible intellectual resources, from the knowledge capital. This is why we considered it of absolute current interest to approach this theme and especially on managing staff's challenges.

Keywords: leader, knowledge-based economy, virtual team.

As the author Ovidiu Nicolescu and his collaborators state, knowledge revolution consists of "the transition from economy dominated by physical, tangible resources to the economy dominated by knowledge. The process is extremely comprehensive and profound, generating essential changes in all elements of the economic activities, similar to the ones caused by the industrial revolution. The result of the knowledge revolution is knowledge-based economy which shall rapidly expand in the humanity's developed area" (Nicolescu, 2003).

Thomas N. Garavan explains that the concept of the knowledge-based economy advances the idea that "knowledge creation is most significant source of economic growth" (Garavan, 2009). From *The Global Competitiveness Report* (2005) he extracts five dimensions of knowledge which show that the new economics of knowledge depends largely on the quality and management of human resources, given below:

- Knowledge has the potential to accumulate over time. It is an important engine of economic growth. The proportion of knowledge workers in an economy and their levels of knowledge are considered critical.
- Knowledge is different from information. Information is encoded, "know why" and "know what", whereas tends to be tacit and is embedded in people and contexts. It is the "know how".

- Knowledge is embodied in databases. This has resulted in organisations seeking to protect their intellectual property and offshore of this knowledge work to emerging economies.
- Knowledge possesses the capacity to spill over and to be localised. Breakthrough ideas created by one firm in the local region.
- The diffusion of knowledge is facilitated through the emergence of knowledge networks. These networks are particularly viable in the diffusion of tacit knowledge.

Năstase Marian points out the major mutations regarding the human resource (Năstase, 2007) and which cause changes and rapid decisions in all fields are:

- rapid increase in the employees' training level;
- increase in the level of work intellectualisation;
- high geographic mobility;
- reducing the work week and daily working schedule;
- increasing the use of information technology in achieving tasks;
- flexible working program and teleworking;
- materialization of the organisation and knowledge-based management.

Under this dynamic context, "the possession of superior knowledge and the organisational ability to use it represents a significant source of competitive advantage" (Garavan, 2009) and so modern leaders shall stand out. From these modern leaders are great expectations, that to use their human potential and the organisation's potential, so that they reach an economic-social increase, a development of technologies, meeting beneficiaries' requirements and ultimately cultural development.

That is why leadership can be considered "a field of activity that comes to complete the management's science, by opening new perspectives regarding concepts, approaches, work mechanisms and instruments, when knowledge revolution is increasingly present in our personal and professional life" (Năstase, 2007).

Among the principles regarding knowledge-based economy, experts have identified the ones concerning the human resource, generator of "intangible" knowledge of which we mention two of real importance in this changing society (Nicolescu, 2003):

- "the organisations' value is mainly determined by the value of intangible assets – meaning that the value is basically represented by its knowledge-based employees, on the ideas and information they or the organisation hold, which become the company's main assets";
- "people with knowledge become a country's and/or an organisation's greatest value since valuable ideas play an essential part in the current development, the people who own it become an immeasurable value, and keeping those people in the organisation by using a wide range of methods, including turning them into joint owners, has become an urgent necessity".

Management and leadership development is considered one of the most important human resource management policy areas that can be used to support knowledge management initiatives. Garavan Thomas cites Hunter which argued that the "provision of appropriate management and leadership development interventions is most appropriate when the knowledge management strategy is focused on building the social capital of its managers and knowledge employees" (Garavan, 2009).

Leaders are people with a very complex personality. All leaders must have a sufficiently developed intellect in order to be able to understand specific details of their responsibilities and challenges. Daniel Goleman considers that "leaders who are able to take decisions and who have an analytical and conceptual thinking are more valuable. Therefore, intelligence and clear thinking are basically the qualities that lead someone towards the door of leadership. However, a leader does not only need intellect. Leaders make a vision reality by motivation, guidance, by being a source of inspiration. by listenina. convincina and more especially bv creating resonance"(Goleman, 2007).

According to the same Daniel Goleman, the leaders' abilities can be of two types, being analysed and explained from the viewpoint of his experience over time (Goleman, 2007):

- 1. Personal abilities: which refer to the way in which everybody deals with himself:
  - Self-knowledge is basically understanding your own emotions, your own strengths and limits, but also your own values and motivations; it can be analysed from the point of view of:
    - emotional self-discovery: understanding your own emotions and acknowledging their impact; using intuition to take decisions;
    - o correct self-evaluation: knowing your own strengths and limits;
    - o confidence: judicious assessment of your own value and abilities.
  - Self-control assessed in terms of:
    - emotional self-control: keeping rebel emotions and impulses under control;
    - transparency: adopting an honourable and decent behaviour; showing that you are trustworthy;
    - adaptability: the flexibility to adapt to changing situations or the possibility to overcome obstacles;
    - ambition: the desire to improve performances and meet your own excellence standards;
    - initiative: the availability to act and to take advantage of opportunities;
    - o optimism: being able to see the bright side of things.
- 2. Social skills: those abilities that relate to the manner in which we manage our relationships:
  - the social consciousness analysed through:

- empathy: perceiving the emotions of others, understanding their perspective and active concern for their interests;
- organisational consciousness: interpreting tendencies, executive decisions and policies at the organisational level;
- solicitude: noticing and anticipating the subordinates', clients' or customers' wishes;
- managing relationships analysed through:
  - inspired leadership: counselling and motivation through a convincing vision;
  - influence: using some persuasive tactics;
  - training others: stimulating the abilities of the others through feedback and counselling;
  - catalysing changes: initiating relational management and mobilizing the others towards a new direction;
  - managing conflicts: solving disagreements;
  - teamwork and collaboration: cooperation and team consolidation.

Daniel Goleman concluded that effective leaders usually have strong points in at least one competence of each basic field of emotional intelligence.

Another study conducted in 60 countries on 1541 CEO, general managers and senior leaders in the public sector and 33 industries, answers to the question: Which will be the most important qualities of leaders for the next five years? The study "2010 Global IBM CEO Study" was taken over by "The Leadership Centre", from which we have underlined below the main results:

- The complexity of today is expected to grow and more than half of the CEOs have doubts regarding their abilities to manage. 79% of the CEOs estimate an increased complexity in the future. However, we notice a number of organisations which we call "Standouts" which have managed to turn high complexity into financial advantages during the last years.
- Creativity is the most important leadership quality, according to CEO. Companies that stand out on the market promote experimentation and innovation within their own organisations. Creative leaders are expected to make important changes of the business models to achieve their strategies. In order to succeed, they take into consideration moderate risks, identify new ideas and continue to make innovations regarding their leadership and communication methods.
- Successful organisations collaborate with the clients to create products and services, therefore integrating the clients in their basic processes. They adopt new channels to get involved and communicate better with the clients. Analysing better the existing data, successful managers make their clients' intimacy their first priority.
- Good performers manage the complexity of the organisations they lead, of their clients and partners. They do these things by simplifying operations and products and increasing the ability to change how they work, access

resources and penetrate worldwide markets. As compared to other managers, skilled leaders expect 20% more income in the future to come from new sources.

The article in "The Leadership Centre" argue the necessity of these qualities in "the leaders of tomorrow", from the viewpoint of the complexity "the leaders of today" have to face. "As we move towards the recovery of world economy, global leaders experiment increasingly complex and uncertain levels, where "8 out of 10 managers expect the activity environment to grow increasingly more complex and less than half of them believe they know how to successfully manage it". Here is the result of the study shown in Figure 1.



Figure 1: Leaders' indispensable qualities in the next five years Source: http://www.leadershipcenter.ro/care-vor-fi-cele-mai-importante-calitati-ale-liderilorpentru-urmatorii-cinci-ani.html

The results of the study show that the most important leadership quality for the next five years is creativity. "Creativity is essential when there is a high level of uncertainty and when it is expected for the future to be significantly different from the lessons of the past. When uncertainty is high, successful practices of the past can no longer be repeated, new thinking methods, new operating ways and new behaviour methods need to be found. Creativity is often defined as the ability to bring into existence something new or different. Creativity is the basis of disruptive innovations and continuous reinvention. Moreover, this requires an objective and focused thinking. Leaders have to be prepared to change the state of things even if this is a successful one. They must be familiar to and committed to continuous experimentation. This is not only that managers now realize the importance of creativity in the need to bring on the market innovating products, processes and experiences for the customers. Nowadays, however, creativity itself has become a leadership style. Traditional approaches for

business management require new ideas, which are meant to change the state of things".

Kris Bordessa explains that creativity is "a thought process that allows for much experimentation. It is a fresh way of looking at old situations". "It's a unique perspective" that leaders should think at. "It is the ability to perceive situations in a new and unusual manner". She sees leaders as "creative thinkers of the future" and they will have the opportunity to solve many problems – and there are plenty to go around. A creative thinking is about "attacking a problem from a different angle and coming up with a solution" and the result might come up in "successful plans and ideas that will benefit all involved". (Bordessa, 2006).

Due to the changing we are facing today, because knowledge is increasingly used as a source of competitive advantage in organisations and knowledge workers need to be managed in distinctive ways, Garvan observes three challenges that leaders have to face with (Garavan, 2009):

- Leaders need to develop skills in managing organisational knowledge.
- Leaders need to be proficient in developing others.
- Develop team-working skills and interdisciplinary team working initiatives.

Talking about this last challenge, virtual and global teams represent one of the greatest and latest challenges for leaders. "Virtual teams have members who work closely together even though they are based in different locations (including different countries) and may even be in different time zones. Typically, they have members from different countries who work across organisational boundaries. Leaders in virtual teams do not have available the normal methods with which to monitor team members, and they have to trust their team members without constant supervision and that they need to focus more on results."(Garavan, 2009)

Leigh L. Thompson in her book, "Making the team – a guide for managers", defines a virtual team as "a task-focused group that meets without all members necessarily being physically present or even working at the same time". A characteristic of virtual teams is that these "work closely together even though they may be separated by many miles or even continents". She explains that these virtual teams may meet through conference calls, videoconferences, e-mail or other communication tools, such as application sharing. Teams may include employees only, or they may include outsiders, such as a customer's employees. Virtual teams "work well for global companies but they can also benefit small companies operating from a single location, especially if decision makers are often at job sites or on the road". Also she notes that, if a company has a need for virtual teams, the biggest challenge for productivity is coordination of effort: "how to get people to work together compatibly and productively, even though face-to-face contact is limited and communication is confined to phone, fax, e-mail and others" (Thompson, 2004).

Here are four strategies that leaders must utilise in order to manage and to be effective in leading virtual teams, extracted from the book "Developing Managers and

Leaders – perspectives, debates and practices in Ireland" by Thomas N. Garavan, in Table 1.

Selection of Team	Team members need to have strong technical		
Members	knowledge and responsibilities to work effectively in a		
	virtual environment.		
	Small virtual teams tend to be more cohesive		
	and work together more effectively.		
	Members will usually come from diverse		
	backgrounds and viewpoints.		
Build Trust by Building	Virtual team leaders need to work hard at		
Connections	establishing connections between team members.		
	There is a need for initial face-to-face		
	interaction if trust is to be quickly established.		
	Leaders should have frequent intense		
	meetings that allow teams to go through key stages of		
	team development rapidly.		
	Team development, in a virtual team context, is		
	best established through bringing team members to the		
	same place at the same time.		
Establish the Ground	Team members need to understand both team		
Rules	and individual goals, deadlines and expectations.		
	Goal setting enables team members to monitor		
	their own performance and regulate their behaviour		
	appropriately.		
	Virtual teams need to agree on		
	communications etiquette. I his will include issues such		
	as time limits for responding to emails and the degree		
	to which it is appropriate to childse team members		
Line of Technology	openny.		
Use of rechnology	Leaders should, where possible, use face-to- face communication sossions that are rich in achieving		
	understanding		
	Leaders should schedule regular times for		
	neonle to interact online		
	Team members should be trained in the use of		
	electronic communications. Issues need to be made		
	more explicit when the communication is online		
	Incre explicit when the communication is online.		

# Table 1. Leadership Issues in Leading Virtual Teams

Source: Garavan T.N., Developing Managers and Leaders – perspectives, debates and practices in Ireland, 2009

Because virtual teams are increasingly used in the global context and team members live and work in different countries with different cultural norms and values, the greatest challenge is to build trust within them. Working within a group to solve a problem or come up with alternative ideas enhances the creative process, encourages cooperation and fosters clear communication. That is why leaders are often necessary for effective teamwork like to shape goals, coordinate effort and motivate members. Modern leaders have to face with all these things and it is not an easy way to do it.

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# **ELECTRONIC DICTIONARIES AND ESP STUDENTS**

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#### Abstract:

This article presents the results of an experiment conducted on two distinct groups of students attending our ESP classes in the academic year 2009-2010. The first group was formed of second year students majoring in business and the second group first year students majoring in computer science. The experiment involved presenting the students with a list of traditional dictionaries as compulsory course bibliography and a list of free electronic and internet dictionaries as additional resources in an attempt to prove that, irrespective of their major subject, most students prefer freeware dictionaries for their usefulness, currentness and user-friendliness; that is why they should be taught how to use such resources appropriately. The students were asked to build personal glossaries of technical terms (in business and computer science, respectively) and indicate two dictionaries they had used and found most useful. 85% of the Business students and 99% of the computer science students declared their preference for free electronic resources and dictionaries. Our conclusion was that students should be encouraged to use free electronic and internet dictionaries as well as participate in terminology-related discussions in forums and linguistic communities to improve their English.

Keywords: dictionary, reference tools, electronic dictionaries, printed dictionaries, ESP

### 1. Introduction

Dictionaries have been defined as alphabetical lists of words followed by pronunciation information, definitions, and etymology. "A dictionary is a reference book about words. It is a book about language. Its nearest cousin is the encyclopedia, but this is a book about things, people, places and ideas, a book about the 'real world', not about language [...] Dictionaries are reference books. People consult them to find out information about words." (Jackson 21, 22). These valuable reference tools are normally referred to as lexicographical products in the form of a book, but most language learners and linguists are aware of the benefits of electronic dictionaries. According to Y.V.Chon, electronic dictionaries are extremely useful in the ESL/EFL class, during reading activities but especially during writing tasks: "Writing particularly favours the use of electronic dictionary resources since, in educational contexts where

# - 324 - Studies in Business and Economics
computers are easily available with World Wide Web connections" (23). It is true, as Chon argues that dictionaries are useful when the mental lexicon is surpassed by linguistic challenges in an ESL/EFL context, but the student - especially in an ESP context - is also interested in double-checking their terminology, and the electronic dictionary provides them with the possibility to make this a pleasant and painless possibility. Not only does the electronic dictionary work faster than any other "traditional" reference tool, but it also absolves the user from the tedious task of browsing through a huge alphabetical (printed) list of words over and over again.

It is true that electronic dictionaries are fast but sometimes they are regarded as less reliable than their printed counterparts, even though a dictionary is, by definition, a limited resources (Walker 298). Most electronic dictionaries are facing huge quality problems, but the selection process should always involve careful testing and comparison. Some electronic dictionaries, such as those provided by Merriam-Webster ("Merriam-Webster Online"), Cambridge ("Cambridge Dictionary Online: Free English Dictionary and Thesaurus - Cambridge University Press - Cambridge Dictionaries Online - Cambridge University Press") and Word Web ("WordWeb: English dictionary, thesaurus, and word finder software."), are more reliable than what students might find in libraries. Nevertheless, there are some which should be carefully used, as their developers are constantly changing the database which threatens their reliability: dictionar.ro ("Dictionar - roman, englez, francez, german, spaniol, italian") or dictionare.com ("Dictionar Englez Roman - English Romanian Dictionary Online"). The price "factor" is always important and, in most cases, electronic dictionaries are free.

The idea of this experiment emerged from the need to provide our students with a list of reliable reference tools which are both cost-effective and easy to use. That is why we decided to selected only those reference tools that were readily available – for free – from the Internet or the University library. Starting from the assumption that "the relationship between dictionary use and language learning is a constant" (Campoy Cubillo 206), we decided to conduct this experiment in an ESP context because of the fact that most language learners – including ESP learners – expect their instructors to provide them with the necessary terminology and refrain from using a dictionary because, in most cases, they are not able to find a word in a particular dictionary or to accurately interpret its definition. Interpreting a definition is of crucial importance as "A dictionary does not describe a language, but give information" (ten Hacken 417). Even if electronic dictionaries are subject to the same treatment, they solve a problem that printed dictionaries have not yet managed to solve: their copy/paste function (see Word Web) prevents the user from misspelling a word and saves time by inserting or replacing the right word in a text.

#### 2. The Experiment

Given the fact that dictionaries are usually considered familiar tools, undergraduate students assume that they know how to use a dictionary even if that is not always the case. In most situations, students use first the dictionaries

#### Studies in Business and Economics

recommended by their teacher or instructor as compulsory reference tools and, if they do not find a specific word, they resort to using the internet. Using the internet, which seems even more familiar than traditional dictionaries, causes more trouble than it is actually able to solve, because most students do not actually know how to use it in order to improve their language skills.

Even when they talk about using the internet to find words and discover their meanings, most of them are sure that they can address the search engine as if it were a human ready to answer all their questions. That is why "looking up a word" became synonymous with finding web pages containing a specific word. Experienced users of the internet behave almost similarly, even though their searching abilities are significantly better in the sense that they are more familiar with search algorithms and rules.

Our experiment involved two groups of upper-intermediate students attending ESP classes, of which 50% were experienced internet users. The first group was formed of 20 second year students majoring in business (Group 1) and the second group of 20 first year students majoring in computer science (Group 2). We started from the assumption that all students possessed some knowledge of the internet and thus they would be able to use the internet resources and dictionaries recommended as learning aids. Both groups were given short lists of bilingual and monolingual dictionaries and a set of internet or downloadable dictionaries as additional resources (see Table 1) being instructed to use those they find more appropriate and reliable. However, we emphasized the fact that, in general, printed dictionaries were considered more reliable than their freeware electronic counterparts. As a course assignment, students were supposed to build their own glossary/dictionary of technical terminology and state, after having completed the assignment, which dictionary they found more useful and user-friendlier.

Given the fact that, in general, students use dictionaries on a regular basis and they consider them familiar and accessible tools, they were not given any instructions on how to use these reference tools or on hot to interpret the information they find in them. They were instructed to bring their glossary notebooks to every class and take down all technical words they consider important to their field of study in the texts read in class or those included in their reading assignments. They were also instructed to include in the definitions all information required for an accurate understanding of the use and meaning of that particular word: a short definition, a synonym, a short example or even a translation.

As the main aim of this experiment was to see whether students prefer electronic and internet resources to traditional reference tools, we did not refer in this study to the definitions and information included in the students' glossaries; we should add, however, that in most cases students included in their glossary entries at least on equivalent in their mother tongue for each term, especially for those in the technical vocabulary; there were also cases in which the students included a sentence illustrating the use of their term, especially for phrases and expressions.

	Group 1		Group 2	
	Printed	Free	Printed	Free
	Dictionaries	Electronic/Interne	Dictionaries	Electronic/Intern
		t Dictionaries		et Dictionaries
1	Bantaş, A.	WordWeb Free	Dictionar	WordWeb Free
	Năstăsescu, V.	Dictionary and	Tehnic	Dictionary and
	Dicţionar	Thesaurus	Englez-	Thesaurus
	economic	(freeware):	Român, Ed.	(freeware):
	englez-român,	http://wordweb.info	l ehnica,	http://wordweb.inf
	roman-englez,		Bucuresti,	0
	Ed. Niculescu,		2004	
	Bucureşti,			
2	2003.		Distigner	
2	Crutan	Wobstor Froo	Dictionar	Webster Free
	Nicolae	Online Dictionary	Pomân-	Online Dictionary
	Dictionar	and Thesaurus	Englez Ed	and Thesaurus
	economic	http://www.merria	Tehnica	http://www.merria
	englez-român	m-webster.com/	Bucuresti	m-webster.com/
	român-englez		2001	
	Ed Teora		2001	
	Bucuresti, 2006			
3	Dictionar	Cambridge	Dictionar	Cambridge
	Englez-Român,	Dictionaries Online	Englez-	Dictionaries
	Ed. Univers	(free access):	Român, Ed.	Online (free
	Enciclopedic,	http://dictionary.ca	Univers	access):
	Bucureşti, 2008	mbridge.org/	Enciclopedic,	http://dictionary.c
			Bucureşti,	ambridge.org/
			2008	
4	Longman	Free Online	Longman	Free Online
	Dictionary of	Dictionaries:	Dictionary of	Dictionaries:
	Contemporary	http://dictionare.co	Contemporary	http://dictionare.c
	English, Third	m/english/	English, Third	om/english/
	Edition,		Edition,	
	Longman		Longman	
	Dictionaries,		Dictionaries,	
	1995 Mobeter's	Eroo Onlino	1995 Mobatar'a	Eroo Onlino
Э	Inversal	Dictionaries:	Iniversal	Dictionaries:
	College	http://dictionar.ro/	College	http://dictionar.ro/
	Dictionary	http://dictional.i0/	Dictionary	
	Gramercy		Gramercy	
	Books New		Books New	
	York, 1997		York, 1997	

The criteria considered during the selection of the printed dictionaries in Table 1 were: availability (all printed dictionaries are available in the university library) and reliability (all printed dictionaries in the list were published by recognized Romanian or

#### Studies in Business and Economics

international publishing houses). The online dictionaries were selected after a close analysis of their reliability, speed and user comments. WordWeb Free Dictionary and Thesaurus was selected as one of the best freeware dictionaries on the market; it is downloadable from the website indicated in the table and it may be used offline. Most electronic dictionaries provide the user with the possibility to hear the pronunciation of the word they look up; this is probably one of the reasons why the majority of students preferred electronic over printed reference tools.

The other two electronic dictionaries, The Merriam-Webster Free Online Dictionary and Thesaurus and the Cambridge Dictionaries Online need no introduction as they are established competitors on the internet market. One of Merriam-Webster's strong points is the fact that it is more than just a valuable online dictionary, i.e. it provides the user with several other useful sections, such as "New Words and Slang," "Word of the Day," "Word Games," which proved to be very popular among the students participating in the experiment. On the other hand, Cambridge Dictionaries Online, even though they do not have specific sections focused on language learning and vocabulary acquisition (of the "Word of the Day" type, for example), provide the user with a full set of dictionaries: Advanced Learner's, Learner's, American English, Idioms and Phrasal Verbs comparable, in terms of reliability, to their printed counterparts. The Cambridge Dictionary of American English was mainly used by students in Group 2, because of their main interest in computer-related terminology and research articles written by American authors. Students in Group 1 found the online Cambridge Dictionary of American English extremely useful when their reading assignments included texts written by American authors.

The majority of students in Group 1 (86%) admitted that they first used the printed technical dictionaries, but afterwards, they switched to the online reference tools. Their reason was mainly ease of use and speed, only 10% of the members of Group 1 adding reliability to their list of reasons. All students in Group 2, probably due to the fact that they were majoring in computer science, started used exclusively the online reference tools, admitting that they looked up a few words in the printed dictionary mainly out of curiosity and to double check their online dictionaries.

The most frequent "problem" the students had to face, according to their own comments during the groups discussion held after the completion of this assignment, was that sometimes they were not able to find all words in one dictionary and thus they were forced to use multiple sources. Another issued they had to deal with during the experiment was internet connection; most of them declared that, of all the electronic dictionaries, Word Web was the most efficient because it worked well offline too.

## 3. Conclusions

ESP students prefer electronic reference tools which they find cost-effective and reliable (most of them are free or affordable). Teachers and instructors should

select electronic reference tools and test them for reliability, user-friendliness and availability. ESP students regard dictionary use as a useful activity as it teaches them how to look up words and how to interpret the definitions they find. Students should be encouraged to double-check their findings with a monolingual dictionary because electronic bilingual dictionaries are still in development, and thus reliability is not always their main positive quality. In most cases, students course work does not involve translation so a monolingual dictionaries is usually enough. Students should be encouraged to use a thesaurus to avoid repetition during writing tasks (the Word Web thesaurus is a reliable tool) to avoid repetition. Electronic dictionaries are especially useful during writing tasks, as the words may be copied and then pasted into an electronic document without worrying about spelling or typing errors (Word Web has a "copy" and a "replace" function which was highly appreciated by students in both groups).

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# STIMULATING THE STUDENTS' CREATIVITY IN THE FOREIGN LANGUAGE CLASS

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#### Abstract:

Throughout one's life time each individual is required to find solutions to different problems by carrying out new operations, by combining the data and knowledge available, or by joining together disparate pieces of information.

The students' creative potential must be formed through teaching techniques that stimulate their resourcefulness: the essay, the scientific paper, the research project and the portfolio, which can be used as useful complementary evaluation methods as well.

Keywords: learning, analysis, synthesis, stimulating, potential

Genuine creativity goes beyond the restraints of simply associating or putting together different items of knowledge and it involves finding out altogether new and more effective solutions to problems, which have not been employed before. The concept of creativity has been introduced in the vocabulary of psychology to denote something that goes beyond the limits imposed by the term 'talent'. What talent and creativity have in common is originality. Talent corresponds to a superior level of creativity. All individuals have, to a certain degree, creativity, but only those being endowed with superior creativity are talented. If talent is determined by one's hereditary dispositions, creativity is to a large extent the result of environmental and educational influences.

Creative personalities are characterized by adaptability, originality and fluidity in producing ideas. Flexibility in thinking refers to the capacity to easily change the point of view, to the way a situation is approached, the trajectory achieved by thinking when a procedure is not right and new requirements have to be faced. Originality is an expression of novelly, of innovation, manifesting itself in an individual's ability to provide rarely used, but at the same time useful ideas. Fluidity lies in an individual's ability to formulate as many answers to a problem as possible, even if not all of them

prove to be useful in solving a problem. Creativity is a key concept in psychology, which *"integrates in itself the individual's whole personality and psychic activity and, in its turn, is subsumed and organically integrated into the personality structures, thus becoming one of the most complex dimensions of personality"*. [M. Zlate]

Thus, creativity is the result of the optimal functioning of the whole personality, namely a synthesis of factors pertaining to the intellect (intelligence, thinking, imagination, memory), of factors pertaining to personality (motivation, creative aspirations, desire to create something new, will, perseverance, consistency) and to society (socio-cultural psycho-social and socio-educational). Se we can uphold that one's creative potential does not necessarily lead to creativity. An individual's creative potential must be formed through teaching techniques that stimulate his resourcefulness. The use of the essay, the scientific paper, the research project, as well as the portfolio leads to the development of an individual's creativity. All of these teaching methods can be successfully employed as complementary assessment methods, thus meeting one of the requirements of updating education, that of integrating the learning process into the evaluation one. They represent an alternative to the traditional methods, especially, to the excessive cognitivism to be found in the conventional evaluation. They allow the assessment of the degree in which certain objectives have been fulfilled (esp. in the field of emotions) aiming at aptitudes, attitudes, behaviours, which are more difficult to assess through the classical means of evaluation.

#### 1. The Essay

The term denotes commentary, reflexions, the expression of own attitudes with regard to a topic. Some of the general characteristics that are valid, irrespective of the domain to which they are applied, are: the open-endedness of the point of view expressed, which is not constrained by fixed rules, its meaningfulness and coherence.

As to the essay as it is used in school to stimulate the students' creativity, and also as a means of assessing certain capabilities, it can be employed by the social sciences and the humanities, where it can be successfully applied to evaluate:

- the students' ability to express original points of view, and to interpret information;
- the students' capacity to use a personal way of expressing his point of view and to properly use the language;
- the students' capacity to recognize and structure information creatively, but systematically organized at the same time.

Scoring the essays is not easy due to the difficulty of establishing general and accurate criteria for appreciating them adequately. However, they represent an important means of making up for the pitfalls of other means of evaluation, as they point not only to the students' capacity of using already known information, but also to the degree of development of the process of analysis and synthesis.

In grading the essay, the following criteria are to be taken into account in the field of humanities:

- the content of the essay: how well the approached topic is known, clarity in reasoning, accuracy in providing arguments, originality in dealing with the topic;
- the structure of the essay: the lay out of the three parts (introduction, body, conclusion) and their proportion, the way ideas are ordered, the structuring of the paragraphs according to the main ideas and details;
- *the style*: conciseness and clarity in using the language, proper use of concepts specific to the subject matter and of set phrases and idioms;
- correctness in writing: spelling and punctuation rules must be obeyed.

Advantages of using the essay in evaluation:

- it allows the teacher to obtain a synthetic image of the students' intellectual abilities;
- it makes possible the assessment of the students' critical thinking, argumentative reasoning and originality, creativity in thinking;
- it allows individuation in evaluation by pointing out to the way in which each individual approaches a topic.

Disadvantages of using the essay in evaluation:

- the difficulty in establishing precise criteria of evaluation that would ensure objectivity;
- scoring and marking the essays is time-consuming and it requires experience and professionalism on the part of the teacher, who must provide some observations along with the score granted for each essay.

# 2. The scientific paper

Scientific papers represent original syntheses of themes imposed by the teacher or chosen by the student, based on processing the information found in the bibliography consulted. They must include: personal points of view, original restructurings and reformulations of knowledge and information and own suggestions. Due to the fact that writing a scientific paper needs making use of the capacity to interpret and synthesize, it is regarded as a higher form of intellectual independent work, one of the most active and creative forms used by the students in the process of learning.

Stages in writing a scientific paper:

- drawing up a plan of the paper;
- study of the bibliography, selection and systematization of information;
- giving ample, well documented answers to the problems raised by the topic, insisting on personal, original ideas and appreciation of the ideas found in the bibliography consulted;
- writing the paper.

In the first stage, the students must draw up a plan of the paper, which will include all the points to be covered in dealing with the topic. In the second stage, the students must search for and identify the bibliographic material, primary and secondary sources. If they are not used to doing it, they must be supplied with suggestions. In selecting the information which will be included in the paper, it is advisable for the students to make notes on the ideas, to summarize points of view, to write down quotations. In the third stage, the problems raised by the topic must be amply developed, insisting on personal appreciation of ideas expressed by others and on original suggestions.

The following criteria are to be taken into account in evaluating a scientific paper:

- the integral treatment of the topic, with details of essential aspects;
- the way the information has been systematized;
- original ideas and convincing arguments;
- proper use of concepts specific to the subject matter;
- how well the structure of the paper has been followed: title, author, short plan of the main ideas, introduction – with the presentation of what has been achieved in the field so far, the development of own ideas, solutions, conclusions, and the bibliographic material;
- if the quotations have been inserted between quotation marks, indicating the source in brackets or as footnotes;
- correctness in spelling and punctuation.

## 3. The research project

This is an active-participative method that involves transfer of knowledge skills and interdisciplinary approach [Cosmovici A., lacob L.]. As loan Cerghit points out, the research project has become a research theme focused on a clearly-defined goal; fulfilling it implies not only scientific research, but also practical approach [Otet F. (coord.)]. Therefore, this method is extremely useful when the theoretical aspect of learning is aimed at being correlated with the practical aspect.

The research project is a complex activity which starts in class by understanding and defining the task to be carried out and continues at home for days or weeks on end, being also completed in class through a debate and presentation of the obtained results, sometimes of the accomplished products. The choice of the theme of the project to be carried out is made either by the teacher or by the students. The teacher plays the role of adviser, permanent coordinator and also of evaluator when the project has been completed.

In assessing the research project, there are two kinds of criteria: the first is focused on the quality of the project, the second on the quality of the work carried out by the student.

The criteria that focus on the quality of the project are:

- how valid the project is: the extent to which it corresponds to the approached theme;
- how complete it is: whether it has been dealt with thouroughly by means of interdisciplinary approaches;
- how it has been structured: accuracy of scientific concepts, meaningfulness and coherence in presenting ideas and arguments;
- how well the bibliographic material has been processed and analysed;
- how creative it is.

The criteria that focus on the quality of the work carried out by the students are:

- the degree in which the contents of the project correspond to the established theme;
- how well it has been structured by joining together its main parts;
- the relevance of the bibliographical material identified by the student to the chosen topic;
- the way it is presented, in an analytical, empirical or evaluative manner;
- its originality;
- the degree in which the obtained results can be put into practice.

# 4. The portfolio

This term used as a complementary method of evaluation is relatively new in pedagogy, denoting the whole set of the students' papers, built up with a view to identifying the efforts put in by the students and the progress they made throughout a semester or a year, from a cognitive, attitudinal and behavioural point of view in the study of a certain subject matter.

The constituent parts of a portfolio bear the print of the particularities of the subject matter for which they were produced and are generally established by the teacher, but the students are allowed to contribute with whatever they consider relevant for their activity. Enjoying this freedom of choice, the portfolio stimulates the students' creative potential and involves them actively in the process of learning.

The constituent parts of the portfolio are assessed separately on completion thus meeting the requirements of continuous evaluation and eliminating the stress generated by the use of traditional evaluation methods. Assessment becomes motivating and stimulating, not stressful and painful. However, due to the fact that it is a synthesis of a student's achievement over a longer period of time (semester or year), the portfolio is an integral part of summative assessment as it mirrors the overall progress made by the student, not his accidental achievements.

By making use of these evaluation methods, the interactive dimension of the teaching-acquisition process is attained and the students' creativity is stimulated. Being allowed to put into practice their practical abilities, the students have the opportunity of displaying not only what they know, but also what they can do with this knowledge in various contexts. From the teacher's point of view, he will be able to holistically assess the students' progress, permanently receiving updated information on their skills. This

information will determine an increase in the objectivity of the judgements made by the teacher on the students' achievements.

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- 336 - Studies in Business and Economics

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Studies in Business and Economics - 337 -