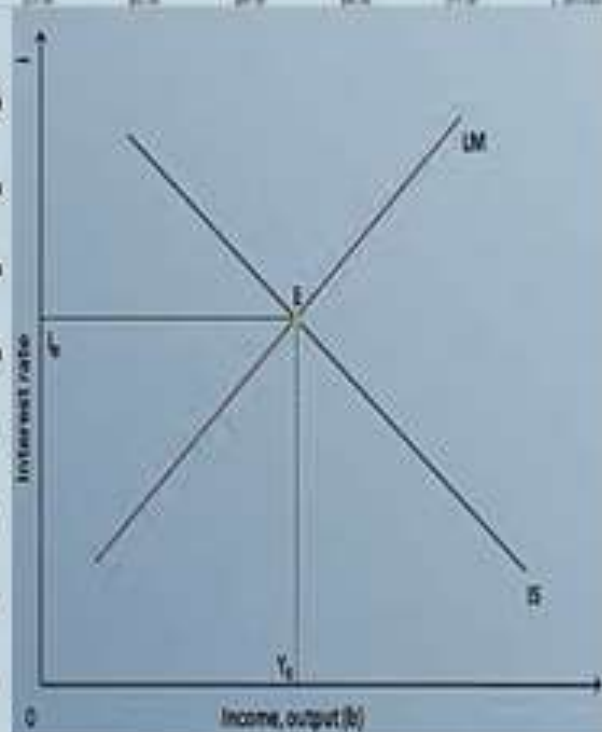


Vol. 2, Issue 4(2), 2014  
ISSN 2343-7995 (online)



# Hyperion Economic Journal



**HYPERION ECONOMIC JOURNAL**

**Quarterly journal published by the Faculty of Economic Sciences from the Hyperion University  
of Bucharest, Romania**

**YEAR II, NO. 4(2), DECEMBER 2014**

**ISSN 2343-7995 (online)**

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## MONETARY POLICY ADJUSTMENT AT THE GLOBAL FINANCIAL CRISIS CONSTRAINTS

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**Abstract:** *The global financial crisis marked a border for central banks, as it raised challenges which constrained them both to extend the range of monetary policy instruments and to redefine their role in the financial system. The present paper aims to identify features of conducting the monetary policy of some central banks, during and after the global financial crisis outbreak. For that purpose, we apply to a comparative analysis between some central banks of European Union (EU), namely Czech National Bank (CNB), National Bank of Hungary (NBH), National Bank of Poland (NBP) and National Bank of Romania (NBR). We also assume that the monetary policy could be characterised through both the challenges faced by the central banks and the type of measures adopted, as a reaction to these challenges. Analysis shows that central banks have different levels of burden, according to domestic condition, and also different “pattern” of monetary policy adjustments, using more or less unconventional or macro-prudential measures. An important conclusion raised from this article refers to the increasing role of these special measures for central banks, which requires defining a new monetary policy framework in the near future.*

**Keywords:** unconventional measures, macro-prudential instruments, inflation targeting, monetary policy framework

**JEL codes:** E52, E58, G01

### 1. Introduction

The global financial crisis burst in 2007 has generated a number of challenges for national macroeconomic policies, and central bank is usually the main institution over which the management decisions reflected the burden of financial problems.

In Europe, as it turns out, the global financial crisis worsened after the Lehman Brothers shock (in 2008) by amplifying the already installed uncertainty in the global markets and freezing the interbank market, the main source of liquidity for the banking system. Many European banks, which were dependent on the short-term funding, turned to the financing from the central bank. To manage the liquidity crisis in the interbank market, central banks have reduced more or less aggressively the monetary policy rate, reaching in some cases to the minimum level (*zero lower bound*). Given that it had entered a period of economic slowdown and in the most European Union (EU) countries inflation rate was already at low levels, a passive behaviour of the central bank could generate the risk of deflation, so that many central banks have applied to a series of unconventional measures which meant actually an extension of their traditional function, that of lender of last resort.

Unlike advanced economies, which having a more developed financial system had been directly hit by the global financial crisis, the European emerging countries had been indirectly affected through their connection with the global market, especially with the European market, considering that the financial flows liberalization in these countries and their accession to the European Union (in 2004 and 2007) have engendered increasing investments of foreign banks in the domestic market. This external dependence meant also a weakening of the national financial systems (Criste, 2014), and implicitly a greater burden for central banks. In these countries, the global financial crisis hit the economy by the commercial channel (as a result of economic openness), by the financial channel (as a result of the limited access to the external funding which further harmed the lending activity and generated difficulties to the private external debt service), by the channel of confidence in these economies which determined investors to outflow from this region. For inflation-targeting countries, an additional channel of crisis propagation is the exchange rate channel, through the depreciation of national currencies and higher exchange rate volatility.

## 2. Literature review

The studies that focus on the role of central banks and monetary policy in managing the global financial crisis effects (Eichengreen et. al, 2011, Borio, 2011) converge to the opinion that after the financial crisis outbreak the monetary authorities have been under strong political pressure to intervene by assuming responsibilities that go beyond their traditional institutional framework. This situation raises the risk of impairing the credibility and independence they enjoyed a long period of time (during the “Great Moderation”). Cecchetti (2013) warned that central banks currently face serious risk of being forced to solve virtually any macroeconomic or financial stability problem, although these institutions cannot solve the structural ones. Besides, such a risk concerns the political pressure exerted on the monetary authority to become a component of the government funding, on the pretext of the financial stability policy.

Shirakawa (2013) considers that the monetary policy function presumes a broader framework which should including both interest rate policy and the lender of last resort policy. Criste and Lupu (2014) highlight that the broadening of the operational framework of this authority by actions performed toward the restoring of the financial system represents a challenge for central banks in the next years.

In order to contribute to the financial stability, central banks from developed countries have applied not only the traditional instruments (policy interest rate, standards open market operations and standing facilities), but also unconventional monetary policy tools for providing further stimulus to the financial system and to the economic activity. Some studies analysis the types of unconventional measures, the features for implementing them (Borio and Disyatat, 2009; Cecioni et al., 2011), while others investigate the general impact and the challenges of that instruments (Shirai, 2014) or the benefits of the short-term effects, underlying also some costs of their application (Williams, 2014), and the limits of these measures (Lenza et al, 2010; Peersman, 2013; IMF, 2013).

Papadia (2013) approaches the subject of central bank cooperation after the financial crisis outbreak (during the “Great Recession”), asserting its role in mitigating the global financial crisis fallouts. He calls the cooperation between central banks during these critical times as a lesson of applying a global monetary policy.

Galati and Moesner (2011) emphasize that over time (from 1970s) central banks of the emerging countries have a larger propensity of using macro-prudential instruments in order to curb the credit expansion and capital inflows and to influence the liquidity of the banking system.

Numerous empirical studies analyse the way of monetary authorities from different countries reacted in order to deal with the global financial crisis fallouts, but they take into account especially central banks that are important at the global financial and economic level: the US Federal Reserve Bank, the European Central Bank, the Bank of England, the Bank of Japan, the People's Bank of China, which are considered “systemic” banks for the global economy.

The subject developed in this paper extends this field of research by analysing the reaction of some EU central banks, which are candidates to the Eurosystem. Although these central banks have not a global prominence they become relevant at a regional level through their involvement in the European integration process and also through their connection with the European Central Bank.

### 3. Methodology and Data

The complex activity of central banking implies, besides the monetary policy, other relevant functions like financial system supervision or preserving financial stability, but in this article we focused solely on the monetary policy function.

Defining of the monetary policy applying after the onset of global financial crisis is based on identifying both the challenges facing central banks and the measures taken by them.

We use a comparative analysis between several National Banks from EU countries which has three common features: they belong to the Central and Eastern Europe region; they have the same monetary policy strategy (inflation targeting); they use a flexible exchange rate and they are candidates to the Eurosystem. The analysis is made for an extended period, 2008-2014, supposing that the global financial crisis outbreak has largely changed central banking conditions so as their challenges develop for a longer time. Data and information are collected from Annual Reports of the selected central banks, and also from Statistical National Offices of Czech Republic, Hungary, Poland and Romania.

### 4. Results

#### 4.1. Central banks challenges

According to the information collected from Annual Reports of the four selected central banks, we identify challenges faced by these institutions during critical time (after Lehman Brothers shock), which are synthesized in Table 1.

**Table 1 Challenges of central banks after the global financial crisis outbreak (2008-2013)**

Challenges, as central bank's intents	Czech National Bank	National Bank of Romania	National Bank of Poland	National Bank of Hungary
1. Managing inflationary phenomenon				
2. Easing the monetary conditions				
3. Preventing/reducing disturbances in the interbank markets				
4. Improving liquidity transfer in particular financial markets segments				
5. Avoiding/reducing excessive exchange rate fluctuations (reducing the exchange rate risk)				
6. Maintaining the banking system stability				
7. Sustaining/stimulating lending activity to private sector (to companies)				

*Source: Author's compilation based on information collected from Annual Reports of central banks from Czech Republic, Hungary, Poland and Romania, 2008-2013.*

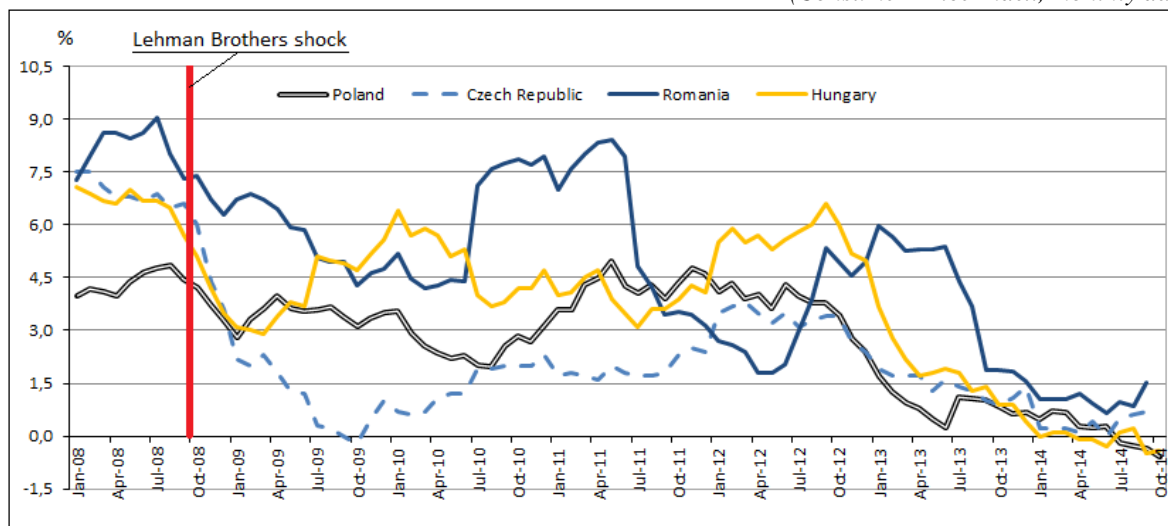
Comparing the four central banks concerning the challenges facing, it is noticed that the CNB had a narrower range of challenges than the other three central banks. The explanation

can be given by the robust position of the banking sector, gained even before 2008, as a net external creditor, with a conservative balance sheet structure, with the lending activity mostly financed by household deposits denominated in national currency. Moreover, the high degree of liquidity of the banking sector has reduced demand for financing banks in the interbank market. The complete domination of local currency lending has significantly reduced the transfer of the currency risk to the private sector given that the national currency would be depreciated (as a result of the financial crisis).

The managing of the inflationary phenomenon was different for the four central banks. While for the CNB the challenge was the undershooting of the inflation target and easing the monetary conditions, for the other three central banks the inflation controlling and the reducing of the inflation expectations were almost constant concerns during this time, although NBP was initially (2008-2010) focused on the monetary easing, given the persistent decreasing of the inflationary pressure in the economy (see Chart 1). These three central banks (NCP, NBH and NBR) have also focused on the mitigating the currency exchange rates volatility and the currency risk, in order to avoid the compromising of the price stability objective, but also given the high share of local bank loans denominated in foreign currency.

**Chart 1 Inflation Development in Poland, Czech Republic, Romania and Hungary (2008-2014)**

*(Consumer Price Index, monthly data)*

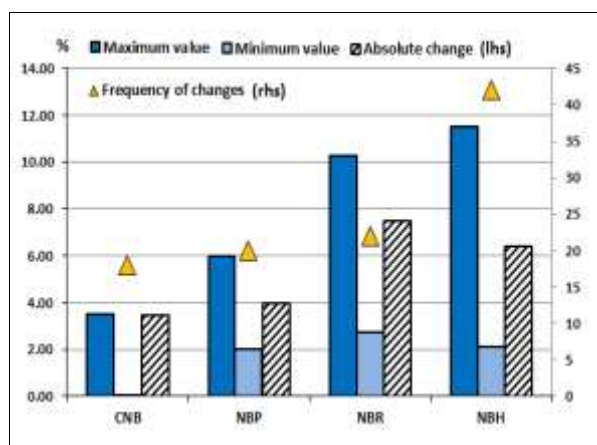


*Source: Data form Statistical National Offices of Czech Republic, Hungary, Poland and Romania.*

#### 4.2. The monetary policy instruments

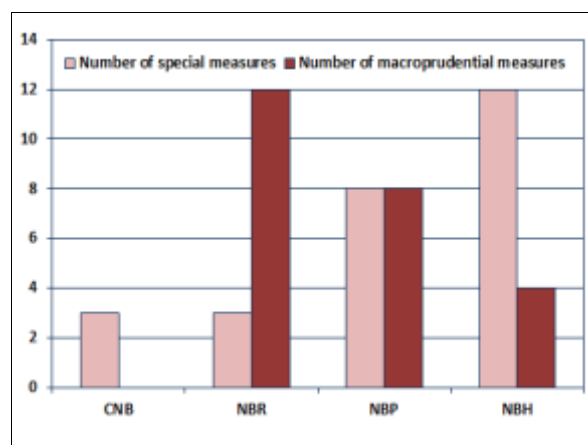
The problems of managing inflation phenomenon in Hungary, Poland and Romania are reflected in the way of using the policy rates, which were more frequently changed, especially by the NBH (see Chart 2). Central banks of Poland, Hungary and Romania had to proceed prudently in aggressively reducing the policy interest rates, given the potential risk of a sharp depreciation of the national currencies which could adversely affect the financial stability. This situation was more critical in Hungary and Poland given the higher foreign currency lending to the private sector.

As reflected in the Chart 2, CNB used least frequently the monetary policy interest rate during 2008-2014, as only in 2008-2012 it modified the key interest rate by reducing it significantly, given both the increasing interest rates in the money market and the lack of risks regarding inflationary pressures. As consequence, in November 2012 the key interest rate reached the minimum level.

**Chart 2 Central Banks using monetary policy rates<sup>1)</sup>**

Source: Data from web sites of the Czech National Bank, National Bank of Hungary, National Bank of Poland and National Bank of Romania.

Notes: 1) The maximum and minimum values of policy rate during Sept.2008-Oct. 2014; the absolute change means the differences regarding the value of policy rate between September 2008 and October 2014; the frequency of changes means the number of changes of policy rate made by National Bank during Sept.2008-Oct. 2014; 2) The number of special and macro-prudential measures - according to data from Table 2.

**Chart 3 The prominence of using additional monetary policy instruments<sup>2)</sup>**

Source: Annual Reports 2008-2013 of Czech National Bank, National Bank of Hungary, National Bank of Poland and National Bank of Romania.

During 2008-2013, the analysed central banks have extended the monetary policy tools in order to respond to the specific challenges of the global financial crisis spread, using special (unconventional and macro-prudential) instruments, as depicted in Table 2.

**Table 2 Reactions of the selected central banks at the global financial crisis challenges (2008-2013)**

Years	Unconventional monetary measures	Macro-prudential measures
<b>Czech National Bank</b>		
008-012	- extraordinary liquidity-providing repo operations aimed at supporting the functioning of the government bond market - FX swaps	
013	- exchange rate currency as additional instrument for monetary policy	
<b>National Bank of Hungary</b>		
008-2009	- FX swaps (cooperation with European Central Bank) - two-week and six-month loan tenders - auctions to purchase government securities - broadening the range of eligible collaterals	
009	- Bank) - FX swaps (cooperation with Swiss National Bank) - converting the net current and capital transfers from EU in the FX market	
010	- EUR/HUF swaps - flexible minimum reserve system - publication of a liquidity forecast for the banking system	- reducing the reserve ratio - LTV and DTI limits for FX mortgages (more stringent for foreign currency loans than for domestic currency loans) - FX lending ceiling; ban on foreign exchange mortgage lending
011	- National Bank's mortgage bond purchase programme	
012	- introduction of the HUFONIA swap	
013	- Funding for Growth Scheme (refinancing loans and currency swaps)	
<b>National Bank of Poland</b>		

Years	Unconventional monetary measures	Macro-prudential measures
008-010	<ul style="list-style-type: none"> <li>- repo operations for longer periods (under the <i>Confidence Package</i>)</li> <li>- expanding the range of acceptable assets as collateral for National Bank refinancing operations</li> <li>- expanding the scope of acceptable collateral in refinancing loans by foreign currency deposits</li> <li>- decreasing the value of collateral as compared to the amount of the credit obtained by commercial banks from NBP by the marginal lending facility</li> <li>- FX swaps (cooperation with Swiss National Bank and European Central Bank)</li> <li>- providing the banking sector with longer-term liquidity (up to 6 months)</li> <li>- allowing rollover (renewal of the credit with the same collateral)</li> <li>- NBP bonds redemption before maturity (under the <i>Confidence Package</i>)</li> </ul>	<ul style="list-style-type: none"> <li>- more stringent DTI ratios for foreign currency-denominated loans to unhedged borrowers</li> <li>- DTI limits for newly extended FX mortgage loans</li> <li>- Recommendation S (II): banks which advance foreign currency-denominated loans should furnish their clients with reliable information on how they use foreign-exchange spread and of its impact on the loan cost; loan agreements should contain precise provisions on specifics of the loans; clients are allowed to change the method of repaying FX-indexed loans and repay them in the indexing currency.</li> <li>- restrictions on profits</li> <li>- reducing reserve requirements</li> </ul>
011-2012		<ul style="list-style-type: none"> <li>- increasing the risk weights for foreign currency-denominated retail exposures</li> <li>- more stringent LTV and DTI for foreign currency loans</li> </ul>
National Bank of Romania		
008-2009	<ul style="list-style-type: none"> <li>- repo transactions through auction procedures at fixed rates</li> <li>- FX swaps</li> <li>- reducing the maturity of standard deposit-taking operations</li> </ul>	<ul style="list-style-type: none"> <li>- more stringent LTV and DTI for foreign currency loans than for domestic currency loans</li> <li>- increasing the capital adequacy ratio for individual banks</li> <li>- power for NBR to forbid or contain profit distribution until the financial standing is improved</li> <li>- reducing the reserve requirement on domestic currency liabilities (two times)</li> <li>-- reducing the reserve requirements on foreign currency liabilities (three times)</li> <li>- reducing the reserve requirements on foreign currency liabilities with maturity of less than 2 years</li> </ul>
010-2011		<ul style="list-style-type: none"> <li>- higher risks weights or capital requirements</li> <li>- setting specific maximum LTV levels for housing purposes, differentiated by currency and type of loan</li> <li>- reducing the reserve requirements on foreign currency liabilities with maturity of less than 2 years</li> <li>- removing reserve requirements for deposits with residual maturities over 2 years which have been rolled over</li> </ul>
012		<ul style="list-style-type: none"> <li>- introducing IFRS provisioning</li> </ul>

Source: Annual Reports 2008-2013 of Czech National Bank, National Bank of Hungary, National Bank of Poland and National Bank of Romania.

**The unconventional measures** are those extra-measures used both for managing the liquidity in the banking sector in order to reduce the financial deterioration especially in the first phase of global financial crisis in Europe (2008-2010), and for stimulating the credit activity to the private sector (to companies), especially in the second phase of the crisis, for economic recovery.

As it is shown in Chart 2, there are differences between the four central banks regarding the using of these measures. Unlike CNB or NBR, which applied such tools to a lesser extent, NBP, and mainly NBH, used a larger range of special measures. By the “*Confidence Package*” (a set of special measures), BNP aimed at both mitigating the tensions building up in the domestic financial markets and the difficulty of banks in obtaining financing in the domestic and foreign currencies. Another set of measures applied from 2009 was the “*Pact for the Growth of Lending in Poland*”, in order to ease the restrictions of lending for companies, but also to prevent the disturbances in the interbank market.

The special measures were more intensively used by NBH and were focused on supporting the foreign currency and forint liquidity of domestic banks. One of the important measures of NBH refers to the cooperation with other central banks (European Central Bank

and Swiss National Bank) in order to support the foreign exchange liquidity of credit institutions by FX swaps, but also some measures for stimulating lending to small and medium enterprises.

Czech National Bank has a different pattern of intervention, similar to central banks from developed countries, because it has already reached the lower level of policy interest rate since the end of 2012. In this condition, of *zero lower bound*, CNB set the exchange rate as an additional instrument for relaxing the monetary conditions (in November 2013). The koruna exchange rate is not a new monetary policy tool, but the novelty consists in the purpose of using it - to fulfil the inflation target when the policy interest rate is near zero. That decision is based on some characteristics of the domestic economy including a high level of liquidity in the banking sector, low level of long-term government bond yields. The size of the economy (Czech Republic is a small open one), and the balance sheets with no FX mismatches make efficient the central bank intervention in the FX market.

**Macro-prudential policies** were already applied before the global financial crisis in Poland, Romania and Hungary, in order to address the excessive foreign exchange lending to households, and they were more intensively and extensively used after 2008, especially in Romania and Poland (see Chart 3) due to the increasing level of risks regarding the foreign currency lending. Generally speaking, there are three types of macro-prudential measures for influencing: the credit activity, the liquidity level, and the capital level. According to data presented in Table 2, the NBH has focused on the first two measures, while the NBP and NBR have used all types of macro-prudential measures.

NBR, having an active conduit in managing the excessive growth of foreign currency lending, even before 2008, continued to have such a conduit, but it focused less on the unconventional measures, compared with the NBH and NBP. By an intensive using of macro-prudential measures, NBR aimed not only to create the conditions for lending resumption to the private sector and to avoid excessive volatility of the exchange rate, but also to compensate for the lack of appropriate (countercyclical) fiscal policy.

On the opposite side, CNB has not applied macro-prudential measures during 2008-2013, being more involved in the risk prevention than in dealing with global financial crisis effects. CNB have a different path than the other three central banks, as the internal conditions are different, too: stable developments of the domestic environment, with banks not depending on the interbank or external funding, with low levels of debt in terms of both the public and the private sector, and also with financial assets that were stable, with no significant volatility.

### 5. Some concluding remarks

Central banks of Czech Republic, Hungary, Poland and Romania have been more or less overburden by the global financial stability challenges and they have reacted by intensively using monetary policy rates, but also by extending the range of monetary policy instruments with unconventional and macro-prudential tools, as a new monetary policy framework. Although this is a typical pattern of reaction for a central bank in times of stress, there are differences concerning the nuance of using these instruments, underlying the flexibility of this new monetary policy framework.

We notice that the unconventional monetary policy measures have been implemented by central banks regardless the policy interest rate level. Theoretically, it is supposed that unconventional instruments are central bank's interventions entailed by the limited conventional monetary policy (when the policy interest rates is at the minimum level - zero lower bound), but practically those measures have been largely applied by National Bank of Poland and National Bank of Hungary, although their key interest rates were higher.

The macro-prudential measures applied during 2008-2013 were intensively used by those central banks with some experience in this regard. Poland, Romania and, to a lesser extent, Hungary have also used these instruments before the global financial crisis outbreak as a way of dealing with the massive financial inflows which have stressed the retail credit market. This is a common feature for those countries which have confronted with massive capital inflows and investments in the domestic banking system.

Going beyond these particular observations, two main general remarks could be stood out. Firstly, the enlargement of the range for monetary policy tools, as a new operational framework reaffirms the need for a change regarding the central bank's responsibility concerning the financial stability objective. Secondly, applying the new monetary policy framework could serve as a test for the central bank "credibility level", so far as the using of these special measures contributes to the restoring of the financial system.

## 6. Acknowledgement

This work was supported by the project "Excellence academic routes in the doctoral and postdoctoral research – READ" co-funded from the European Social Fund through the Development of Human Resources Operational Programme 2007-2013, contract no. POSDRU/159/1.5/S/137926.

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## ESTIMATING THE OUTPUT GAP FOR ROMANIA'S ECONOMY

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**Abstract:** *In this research paper the authors try to estimate Romania's Output Gap and how the country managed to evolve, from the given chronological perspective, in parallel with the estimated potential Output Gap. Romania started to feel the heat of the economic crisis at almost three quarters after the American economy started its decline, but when it comes to the economy's Output Gap, the country macro-behaved with a pace somehow differentiated in parallel with the global economy. Where was Romania and where it is heading that is the question that this research paper tries to answer from macroeconomic perspective.*

**Key words:** output gap, GDP, TFP, Cobb-Douglas function.

### 1. Introduction

After the crisis that started at global level almost 8 years ago there are voices that still highlight the fact that we are still in unstable global economic and the perspective is not clear. Romania, who entered about 3 quarters later the global crisis was one of the countries that is still in the middle of nowhere regarding the economic policies implemented for stabilizing the outcome of each year under the crisis tremendous and volatile social and economic pressure.

Furthermore, the government took measures in 2010 to cut government spending (the 25% cut for the salaries for state employed) and the increase with 5 percentage points in the VAT for collecting more money to the national budget. These measures created a stall in the Romanian economy, protected the government from going South with its deficit, but also postponed recovery.

The paper will try to underline through quantitative analysis what was Romania's potential and what it succeeded to establish in these times of economic distress.

### 2. Methodology

#### Primary used data:

- a) Quarterly GDP for average price for the year 2000, for the period Q1 2001 – Q3 2003. The frequency was quarterly and the source for the data was the National Institute for Statistics of Romania, the Measuring Unit was millions lei.
- b) The number of employees in the 2001 – 2013 timeframe. The basic frequency of the data monthly, but it was converted in quarterly data with the help of monthly' averages. Source: Labor Ministry.
- c) Fixed Capital Gross Formation in average prices for the year 2000, starting from Q1 2000 till Q4 2013. The frequency was monthly, source: the National Institute for Statistics of Romania, the Measuring Unit was millions lei.

**Secondary data (obtained through own estimations):**

- a) K (capital stock) was obtained through the Perpetual Inventory Method (PIM). To obtain the capital stock there are three conditions to fulfill: (1) there is needed a basic value with the role of a benchmark; (2) the statistics regarding the gross formation of fixed capital and (3) information on the life span of assets.
- b) Total Factors Productivity (TFP), is estimated after the initial process.

To estimate the Output Gap for the Romanian economy there was used the methodology proposed by Denis et al. (2006) regarding estimating the Output Gap for the European Union through the production factors' method. Furthermore there was also studied the revised version of the methodology proposed by D'auria et al. (2009), but the authors reacted by using for estimating the potential output through the Hodrick-Prescott filter (1997). The same methodology is used by Socol and Măntescu (2011), but the two authors use annual data. Denis et al. (2006) explains the path for estimating potential output: it is determined by using a Cobb-Douglas type function, by correcting or adjusting the excess ( $U_L$  &  $U_K$ ) and adjusted for its efficiency level ( $E_L$  &  $E_K$ ). The potential GDP is develop through the following relation (Denis et al., 2006):

$$Y = (U_L L E_L)^\alpha (U_K K E_K)^{1-\alpha} = PTF * L^\alpha * K^{1-\alpha} \quad (1)$$

After that, the Cobb-Douglas production function for the Romanian economy has the following design (Socol and Măntescu, 2011):

$$Y = PTF * L^{0.65} * K^{0.35} \quad (2)$$

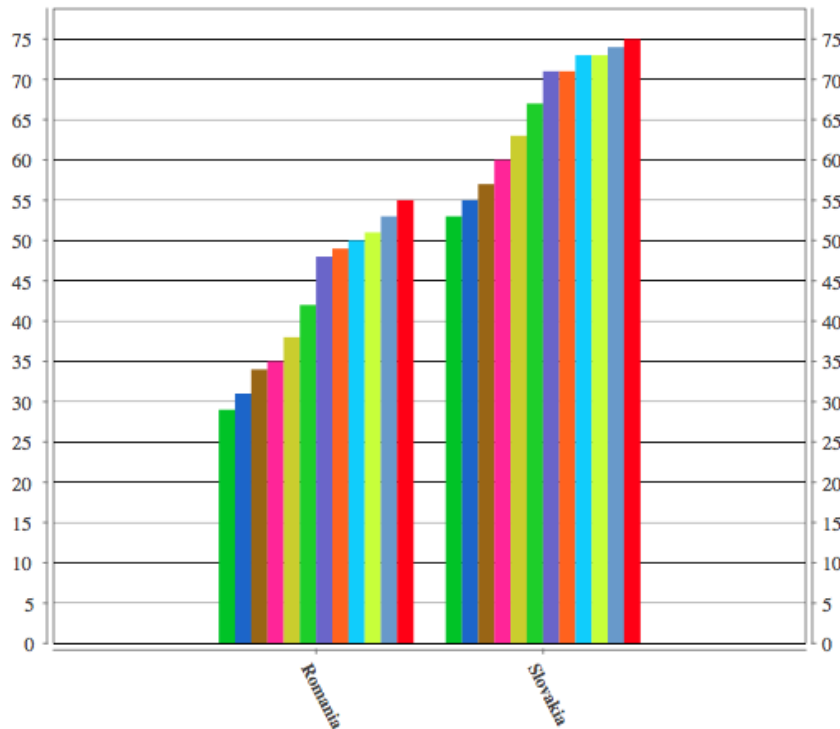
, where TFP is total factor' productivity.

There where chosen the yielded values of 0.65 and 0.35 according to Socol and Măntescu (2011), the authors underlining the fact that these yields for the Romanian economy where chosen because there are small differences if other approached values would have been selected.

**The first stage** consisted of estimating the time series for the capital stock. According with Altăr et al. (2010), the initial capital stock ( $K_0$ ) was estimated in tune with the ratio  $\frac{K_t}{Y_t} = 2$ . In Albu's paper (2014), at European Union's level, for the 2000 – 2012 timeframe, there was estimated an annual depreciation rate for capital of  $\rho = 2.785$  and an average life span for the assets of 35.9 years. Konuki (2008) uses the estimation for the Output Gap for Slovakia's economy in a working paper for the IMF a depreciation rate for capital of  $\rho = 4$ .

Even if Altăr et al. (2010) decide to set a value of 5 for this coefficient (a yearly depreciation rate for capital of 5%), according to Denis et al. (2006) and to almost all existant theoretical models, in our paper we used for estimating the capital stock a depreciation rate of 4% per year. To validate the choice we could state that there is a small deviation from the European Union's average, estimated by Academician Albu (2014) by the fact that the Slovakian economy had a similar trend and tendency compared with Romania's economy from last years, after is seen in the graphic below created using Eurostat data:

**Fig.1: Descriptive statistics for annual GDP evolution. The parallel between Slovakia and Romania (2002 – 2013)**



Source: the authors, by using Eurostat data.

As follows, the absence of an official statistics from European entities, to estimate the capital stock, according to PIM, there was used the following equation (Altăr et al., 2010):

$$K_t = K_{t-1} * (1 - \rho) + I_t = K_0 * (1 - \rho)^t + \sum_{j=1}^t I_j * (1 - \rho)^{t-j} \quad (3)$$

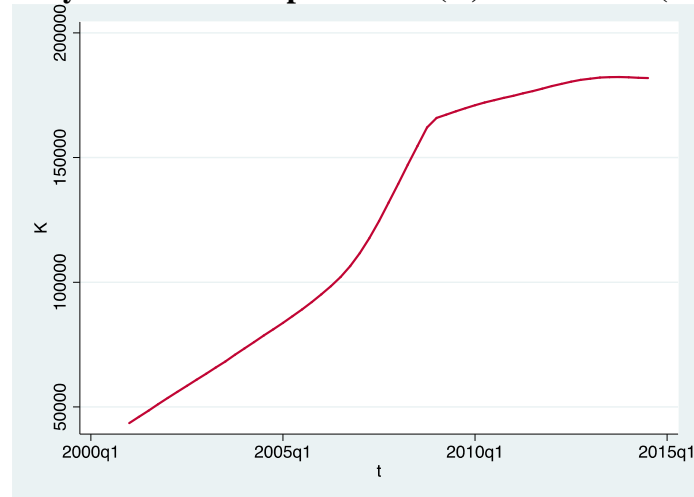
, where  $K_t$  = capital stock,

$\rho$  = the annual depreciation rate,

$I_j$  = the gross formation of fixed capital.

Official statistics for gross formation of fixed capital ( $I_j$ ) are available starting with the year 1995 and were created according to ESA 2010. According to the PIM methodology, the initial capital stock is less important if the initial moment is far away.

The evolution of capital stock starting with the first quarter of the year 2001, till the third quarter of the year 2014, is described in the following graphic:

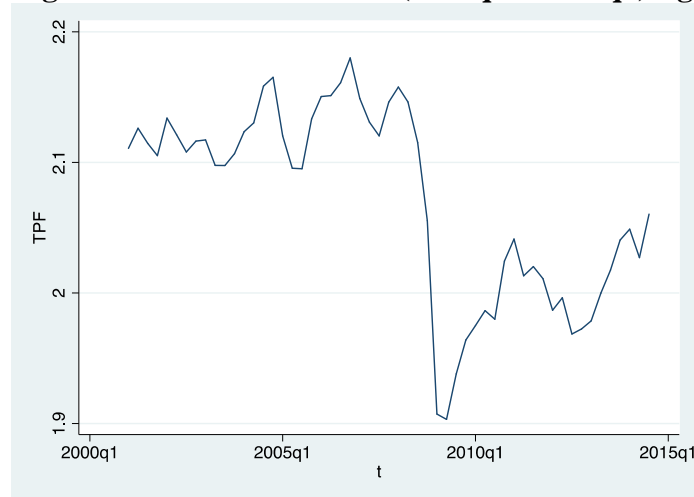
**Fig.2: The quarterly evolution of capital stock (K) in Romania (2001q1 – 2014q3)**

Source: own estimation

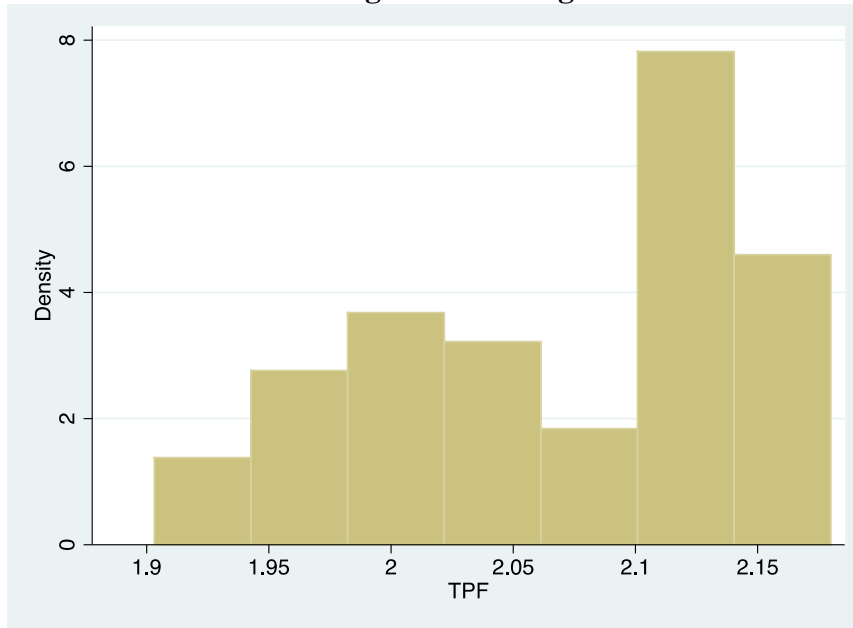
**The second stage** consisted of estimating total factors productivity (variable found from now on as **TFP**). This was calculated by using the following equality:

$$\ln TPF = \ln Y - (\alpha * \ln L + (1 - \alpha) \ln K) \quad (4)$$

Figure 3 highlights the evolution of the total factors productivity in the analysed period (2001q1 – 2014q3). This was situated between 1.9 and 2.18 interval, and the average was about 2.07, most of the values being concentrated in the superior frame of the interval, according to the histogram (fig. 4).

**Fig.3: The evolution of TFP (2001q1 – 2014q3)**

Source: own estimation

**Fig.4: TFP histogram**

Source: own estimation

Therefore, according to the methodology presented by Denis et al. (2006) and adapted for the Romanian economy by Socol and Măntescu (2011), we used a relation for estimating the potential GDP through the following equation:

$$Y_{pot} = TPF_{pot} * L_{pot}^{\alpha} * K_{pot}^{1-\alpha} \quad (5)$$

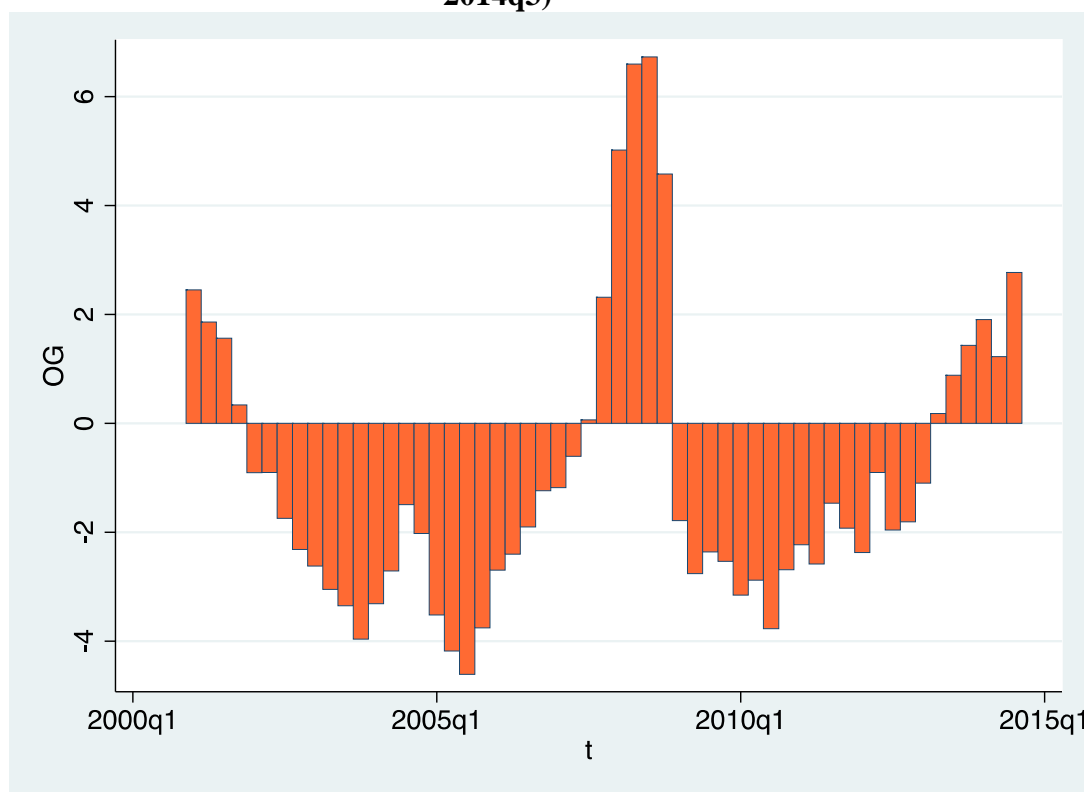
The potential values of TFP and those for L and K were obtained with the help of the Hodrick-Prescott filter. This filter was used to analyze the cyclicity and the volatility for the time series. The idea that represents the foundation of this filter is to decompose the time series in a sum that results into an evolutive trend and with a transitory deviation, that could be classified as a cycle, like follows:

$$\begin{array}{lcl} x_t & = & \tau_t + \xi_t \\ \text{observed series} & = & \text{the permanent trend} + \text{cycle} \end{array} \quad (6)$$

According to the literature, for data that are quarterly available, the most used adjustment parameter for extracting the permanent trend is  $\lambda=1600$ . We also used this parameter in this research paper.

**The third stage** consisted of the actual estimation for the Output Gap of the Romanian economy. The results of the equation no.5 could be described as follows in the figure 5. It is stressed the fact that there is a recession gap starting with the first quarter of the year 2002, that finalised in the third quarter of the year 2007. Afterwards, in the economic boom period, the output gap was positive, reaching a maximum value of 6.73 percentage point, in the second quarter of the year 2008.

**Fig.5: The evolution of the Output Gap for Romania, percentage points (2001q1 – 2014q3)**



Source: own estimation

It is highlighted the fact that the way through which the economic crisis influenced economic activity through the existant recession gap seen in the entire economy in the 2009q1 and 2013q1 interval. After this period there was a period of stability, that was seen to have also small positive values.

### 3. Conclusion

This paper was developed to highlight the evolution of the Romanian economy in tune with its potential, and the best way to show that was by describing the evolution of the Output Gap for Romania's economy, starting from the first quarter in the year 2000 till the third quarter of the year 2014. We should state that Romania evolved under its potential starting with the year 2002 and it is seen as a question mark because that is the same period when Romania signed the agreement that helped it to enter the European Union in 2007.

Badly adjusted economic and public policies corroborated with sinuous access to pre-entering European funds led to a delay bigger than 4% in the third quarter of 2005, when the economy was accelerating but not to overheat just to catch up to its potential. The economic crisis was delayed for a while in Romania, because the economy caught on momentum and it accelerated to its positive peak of 6.73% in q2 2008, fact that gave policy makers a „false positive” in the fact that Romania was protected against the economic crisis. The situation was seen desperate when just after another positive Output Gap, the economy decelerated and entered into recession with all economic measures set for an overheating economy. The response did not come fast and the handbrake was activated only at the starting point of the third quarter of 2010. From that moment on, the economy was again on a positive trend, but with the need to catch up or limit the negative Output Gap. Starting from the first quarter 2009 the Romanian economy is again in a positive Output Gap situation, but according to

Schumpeter (2011) only if reach an average above 2 percentage points per year the government could state that it is improving the economy, because 2% it is the level at which any given economy grows by its own, without any policies.

#### 4. Acknowledgement

This work was supported by the project “Excellence academic routes in doctoral and postdoctoral research - READ” co-funded from the European Social Fund through the Development of Human Resources Operational Programme 2007-2013, contract no. POSDRU/159/1.5/S/137926.

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## THE TWO SIDES OF MONEY LAUNDERING

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**Abstract:** *The mainly goal of money laundering is to carry out more and more illegal economic transactions or activities to produce individual or groups gains and then to legitimate them. Money laundering converts illicit source of money generated by criminal activities in order to hide the connection between money and their original illegal activities. This is one of money laundering side. The second side implies corruption. While money laundering is a passing channel for illicit funds due to its criminal origin source, such funds may derive from corruption offences. All corruption's forms represent the most important illicit funds branches for money laundering process. Corrupt people methods used to exploit the national and international financial system reflect the relationship between those two criminal activities. Criminals achieve their personal interests by hiding their corruption proceeds and transfer these gains to official economies. Corruption spread in any society entails money laundering spread, and the converse, too. There is a quite "indecent" relationship between money laundering and corruption. This paper tries to identify the multiple connections between the two phenomena showing the negative impacts these criminal behaviours are having on the national and international economy. We conclude by highlighting the necessity of a multidisciplinary approach in order to fight against money laundering and corruption by integrating these problem frameworks at national level. International community must focus their resources on money laundering and corruption risks areas and maximize their response impact.*

**Keywords:** money laundering, corruption, illicit funds, black market, organized crime, criminal activities

**JEL Codes:** K40, K42, H26, O17

### 1. Introduction

Masciandaro (2007, p.2) statutes that "money laundering is an illegal and autonomous economic activity whose essential function implies liquidity transformation by converting illicit purchasing power into real purchasing power used for consumption, savings, investment or reinvestment". Fundamentally, money laundering is naturally relating with the illegal subsidiary activity that generated it. Moreover, the illegal profits usually come from various criminal activities such as corruption, drug trafficking, lethal weapons trafficking, human beings trafficking, smuggling etc. Illicit financial funds are included in a complex transformation process. Money laundering is the best way and its purpose is to convert "dirty money" and provide illicit funds an apparent legal origin. However, corruption generates enormous incomes to be laundered. Introducing income sources to official market is strictly linking with the implementation of anti-money laundering rules. At the same time, robbery, swindling, embezzlement or fraud compromise anti money laundering systems.

Money launderers have always tried to hide their activities, which generate illegal gains. Based on black market openings, such organizations generate bigger and bigger profits. Their problems come from the more difficulties that appear when they try to blind these gains

in order to spend them on official and legal market. Corruption could solve these kinds of problems. One tends to create and reciprocally reinforce the incidence of the other. Corruption generate huge profits to be laundered, funds that usually are bleached in the international financial system. In the same time, funds resulting from bribery, influence trading, and embezzlement can compromise the success of anti-money laundering rules. That's why corruption and money laundering, subject of different approaches for a long time, are closely interrelated now. The failure of proper understanding of symbiotic relationship between corruption and money laundering made difficult the real knowledge of each particular problem and undetermined the real success of corresponding policies.

Finally, we have to underline that corruption facilitates money laundering and vice versa. Any success in combating one type of financial crimes can generate a fight in combating the others. Money laundering can take many different forms, but corruption covers an even wider range of behavior, from petty bribery to insider trading to wholesale looting by kleptocrat dictators (Chaikin & Sharman, 2009).

## 2. Corruption

Professor Joseph Nye defines corruption as a "behaviour that deviates from the normal duties of a public role, or violates laws against offering exercise specific influence types, such as bribery, cronyism, and funds misuse".

Limited corruption to simple reports of bribes (small corruption) is less significant from economic point of view. Not the same problem arises in the case of grand corruption, a funds diversion for programs or projects with a national impact or their fraudulent spending, affecting budgets and automatically removes certain public services or keeps them at a very low quality standard, privatizations, and public procurement of fraudulent grant of preferential tax and licensing, facilities, trading of influence etc.

Corruption is a legal standards deliberate departure, a public resources misuse by officials, for private purposes. It has a deviant economic consequence. Individual's motivation and mechanisms are represented by tensions generated by their inability to accede to the legal ways to achieve personal goals.

Economic corruption often occurs in commercial contracts: to obtain a transaction with the State, you have to offer bribes. Getting profit involves certain costs. Bribery is one of them. Through bribes, favours companies intend to ensure fast and safe opportunities that would never have been able to accede to other conditions. They avoid costly expenses generated by advertising; staff salaries involved in the design of project documentation, it eliminates the risk of auction losing, gains time from bureaucratic formalities, and use the lack of competition that allows to avoid additional expenses monopoly necessary to maintain the leading position. Thus, in the economic context pursues Adam Smith's "invisible hand" becomes "invisible foot", a term used to highlight the competition effect of economic actors in their attempt to purchase public property or to provide goods at any cost in order to obtain a gain. Corruption becomes the most prominent vector through which the exchange between Government and citizens can be a source of State institutions' inefficiency (Abraham P., 2005).

Corruption and bribery are the main causes of lack of administrative management and inefficient funds allocation. There may be underline some serious certain allegations to the municipality:

- Aid and domestic compensation preferential allocation;
- Award of public contracts by underperforming companies;
- The criminal offences interpretation depending on circumstances;
- Use of public property for private purposes;
- Licensing facilitated by money transfers;

- Permits granting;
- Extended functions, generating serious social problems;
- Lack of transparency in local contracts implementation;
- Huge local taxes that push taxpayers to tax evasion;
- Ineffective decisions.

The corruption level may be symptomatic for economic, political, and social life development. In addition, all forms of corruption harm public morals and ethics and public confidence in the rule of law.

Institutionalized corruption assessment (at the level of governmental or political decision) is made using the index "state capture" that highlights the State's seizure of this phenomenon. The values of this indicator, ranging between 0 and 10, indicate companies in certain industries to "State capture" or exercising inappropriate influence, lack of honesty, political process. The higher the score, the greater the lower the tendency of companies to use contributions to politicians and political parties to get a certain influence on policies, laws or Government regulations. The standard deviation is less than the wider consensus among respondents.

We are witnessing corruption infiltration in areas that should support a country economic development. Firms are pushing into the shadow economy gearing. The immediate effect is a vicious circle in which endemic corruption generates public revenue and investment decreased and rule of law credibility weakens.

The effects of corruption on the formal economy may be viewed from different perspectives: corruption as ante-profit tax, can stimulate the market new goods or technology entry, involving some initial investment costs, but generates negative changes in economic development through inefficient, slow and transactions lacking rationality. We can even say that the low economic development may be associated with systemic corruption, affecting the accumulation of capital and its Government revenues, productivity and quality of public infrastructure.

### **3. Money laundering**

Money launderers have always tried to hide their activities, which generate illegal gains. Based on black market openings, such organizations generate bigger and bigger profits. Their problems come from the more difficulties that appear when they try to blind these gains in order to spend them on official and legal market.

Nowadays globalization offers a very important facility for legalization of illegal activity incomes. The freedom of capital movement and the international financial market are an appropriate way to clean dirty money. Obviously, such operations generate negative effects for worldwide countries and societies because underground businesses have got an international character. In order to prevent such activities, international organizations have adopted a lot of issues and legal rules referring to transnational crime and money laundering. International community makes important efforts and progresses to find the best way to fight against organized crime using anti-money laundering policies. A proper policy has to account that a boost of national and international sanctions can produce higher crime rates. A higher sanctions policy does not hold. It can extend organized crime because the corruption rings may extend on state domain controlling in order to obtain a real reduction of expected punishments. So, we can think to a criminal sanctions paradox where the higher punishments level and frequency lead to higher organized crime activities and higher level of corruption (Kugler, Verdier, Zenou, 2003).

The power of money laundering phenomenon generate critical effects on the economic growth, brings a lower productivity for the real economic sector, diverts financial resources, and encourages corruption. It erodes the structure of financial institutions that are vulnerable

to corruption carried out by criminal elements who seek to acquire a greater influence on money laundering channels. The diversion of financial resources and their orientation to less productive activities by fostering corruption and organised crime, minimize the economic growth rate, placing those savings in contrast with the principles of sustainable growth.

Money laundering involves significant funds that affect all economic sectors and generates significant macroeconomic effects. Economic models could reveal the multiplier effect that dirty money plays when they are generating in underground economy and they are spending in formal economy. Unfortunately, data regarding “clean” money spending are insignificant or not available. However, the identified illegal profits and offences are always higher than penalties or punishments imposed to cover the economic damages.

#### 4. Vulnerabilities

Corruption and money laundering are closely linked. Corruption offences are usually committed in order to obtain private gain and profits. Money laundering is concealing illicit gains or profits that were generated from illegal activities.

Money laundering is used both ex ante and ex post corruption. There are not many individuals that pay huge bribes using their own money obtained from legitimate sources. The most cases show that bribe money comes from illicit activities such fraud, fictitious invoices, fictitious contracts etc. Those involved in corruption make arrangements to hide the source of funds and who receives them.

There are some ways to limit money laundering generated by corruption and create the opportunities to weed out corruption. International legislation provides few advices:

- Confiscation of the proceeds of economic crimes, including corruption and bribery;
- Require suspicious transaction reports;
- Require the real identity of money owners by financial institutions;
- Establish enhanced identification procedures for public officials;
- Provide effective methods for international financial data exchange.

The corruption approach was always problematic due to its hidden and multifaceted nature. The activities that involve corruption and money laundering are generated by a corrupt behaviour. These kinds of behaviours involve different activities and different areas. The most affected sectors are:

- Procurement;
- Contracts;
- Human resources appointing;
- Delivering programmes and/or services;
- Infrastructure construction;
- Licensing/regulation/issuing of permits;
- Justice, health, education;
- Public administration;

As it sees, any public sector that delivers goods and/or services is vulnerable. Despite a clear difference between poor and rich countries (corruption focuses especially on poor countries), there are worldwide strategies that develop methods for:

- economic crimes activities and offences;
- investigation, prosecution and sanctions of economic offences;
- anti-corruption and anti-money laundering governmental agencies;
- structural reforms;
- capacity buildings.

These means implementation are not always successfully. Corruption can take many forms and scopes, as money laundering, by the way. That's why any strategy should focus on both corruption and money laundering by creating a functional relationship between initiators,

participants, and targets. Moreover, any strategy must refer to sector-by-sector basis (agriculture, energy, infrastructure, justice etc.).

Corruption and money laundering have international and even global impact. Much legislation is limited to national borders and law enforcement is constrained by jurisdictional limits. These phenomenon controls must imply a public policy perspective as well as general prevention and control principles.

### **5. Corruption – another side of money laundering**

Corruption excesses have served as an incentive for anti money laundering systems both the national and global levels. Ideas that grand corruption has harmed development efforts have motivated international organizations to take some measures against corruption and money laundering.

Opportunities for corruption and money laundering are increasing even if the international economy has become a riskier place both for those who accept or demand bribes and for those who pay them. At the same time, the complexities of national and international financial flows have increased.

Almost all the time the financial investigation techniques used to identify money laundering can be also used to detect, investigate, and prosecute corruption. Prevention is a very important matter. At the same time, the enforcement must include investigation, prosecution, freezing assets, confiscation, and punishment for money laundering and often for the underlying predicate crime (Reuter and Truman, 2004). Both prevention and enforcement must be interdependently.

Money laundering provides an international mechanism to carry out and obfuscate corruption. It always includes international transaction and it depends on the financial systems and business practices of some other countries. Offenders have seized on all new globalization opportunities by expanding their activities.

Almost all important financial centers have experienced corruption and money-laundering scandals. We have no reason to suppose that they will not be redundant. We agree that “offshore laundries” represents an important corruption enabler, since without them, funds might have to be stored “onshore,” exposing them to detection and confiscation by a successor regime or an independent justice system.

We have to underline that anti money laundering regulation is not specific to corruption. It is true that some of its primary aims are stopping a broad class of crime that involves moving large amounts of money. These could be a cover for grand corruption of political leaders. But much corruption takes place on much smaller scale. Sometimes the suspicion of even medium-scale corruption may not be considered important enough for scarce financial allocation to investigate.

Another issue refers to anti money laundering measures that require a wide section of the public to see a possible connection between a commercial transaction and a corrupt act and to be motivated, or sufficiently afraid of sanctions, to report suspicions. Also, there are no statutory checks for money laundering at a critical weak point—inside the organization undertaking the act of corruption.

Despite of international higher barriers against money laundering, it will continue but through more devious and costly laundering mechanisms. In addition, where heads of state or their families are involved in grand corruption, it is far from obvious that none has sufficient motivation to take serious action.

### **6. Conclusions**

There is a vicious circle of money laundering and corruption. Grand corruption has a very important impact on the national culture and the public’s perception of corruption. That

is a reason of anticorruption programs that need to consider not only national efforts to curb opportunities for corrupt behavior but also international mechanisms to detect money laundering which almost always represents the proceed of corruption.

Corruption is one of the most significant contributors to proceeds of crime that become available for laundering. Its connection to money laundering prevents the adoption of effective measures against money laundering, and may succeed if not detected and checked. Corruption could impede the implementation of anti money laundering measures by interfering with the capacity of mandated institutions to perform their duties, or corrupting the relevant officials. It also sabotages the effective implementation of anti money laundering measures by falsifying information or concealing information. Finally, corruption can take advantage of differences in levels of implementation of anti money laundering measures in different countries to frustrate transnational co-operation to investigate money laundering or track proceeds of crime.

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## Acknowledgements

*This work was financially supported through the project "Routes of academic excellence in doctoral and post-doctoral research - READ" co-financed through the European Social Fund, by Sectorial Operational Programme Human Resources Development 2007-2013, contract no POSDRU/159/1.5/S/137926.*

## ANALYSIS OF EFFICIENCY OF INVESTMENT IN THE EU AGRICULTURAL FUNDS

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**Abstract:** *The purpose of this paper is understanding of the importance of financial support for agricultural development and achieved results. The aim is an assessment of the importance of the European Union funds intended for agricultural and rural development. In accordance with the purpose and objectives of the research, we analyze the efficiency of investment in the European Union agricultural funds. Also, the interdependence between agriculture expenditures from the European Union funds and results achieved in agriculture in the European Union countries is examined in this paper. Homogeneity of the European Union countries, according to agricultural expenditures and agricultural results is analyzed. The results of this research highlight the importance of financial support provided from the European Union funds for agricultural and rural development.*

**Keywords:** agriculture, expenditures, results, indicators.

**JEL classification:** Q10, Q14

### 1. Introduction

Some very important questions in contemporary conditions, such as food production and environmental protection, place agriculture in the top priorities of modern society. Since agriculture is the backbone of the development of rural areas, there is an unbreakable relationship between the degree of agricultural development and the degree of rural development. Agriculture is the most important activity of most rural areas. Agriculture is of great importance for the way of life in rural areas and its economic development. The competitiveness of agriculture is caused by specific factors such as natural potential and the availability of fertile arable land, but also by factors such as the quality of the workforce, the quality of the organization of production, investment and modernization of the production process, sources of financing. This paper examines the role and importance of the resources provided from the European Agricultural Guarantee Fund (EAGF) and the European Agricultural Fund for Rural Development (EAFRD). We analyze efficiency of investment in the European Union agricultural funds in the member states. The importance of the European Union (EU) funds is reviewed based on examination of interdependence between agricultural expenditures and agricultural results in the EU countries. Also, the paper examines the homogeneity of the EU countries regarding allocation of the EU funds earmarked for agriculture and rural development and achieved agricultural results.

## 2. Literature Review

The absolute majority of the European Union population believes that agriculture and rural development are of great importance for the future of the community. The issues of agriculture and rural development are systematized by the Common Agricultural Policy (CAP).

The Common Agricultural Policy is the oldest policy of the European Union and this policy consists of two main pillars. The first pillar covers direct payments and market interventions, and the second pillar covers rural development. This policy has experienced many changes over time, but its key objectives essentially are unchanged. The CAP's basic objectives are still precisely the same that was adopted in the Treaty of Rome, signed in 1957 and establishing the European Economic Community among its six original member countries in 1958 (Tangermann & Cramon-Taubadel, 2013, p. 19). Ensuring a stable income of the rural population, market stabilization and improvement of productivity and competitiveness in the food production stand out as a relatively stable objective (European Commission, 2012). Shortly, the common agricultural policy balances between enabling stable living standards of farmers and providing quality food at reasonable prices to consumers. For many years the common agricultural policy is the most important policy of the European Union. Nowadays, the CAP is a complex system of legal regulations, budgetary support and direct public intervention, which affects the state of agriculture and rural areas (Jankovic, 2009, p. 14). The latest reforms defined policy objectives for the period 2014-2020. Recent reforms emphasize the importance of rural development, small farms, and young farmers. Agriculture needs to adapt to new realities and to face challenges concerning the food safety, environmental protection, climate change, and the resurgence of the rural economy. In order to address these major challenges, the European Commission highlights the following objectives of the CAP for the period 2014-2020: a) viable food production; b) sustainable management of natural resources, and c) balanced territorial development (European Commission, 2010).

Financing in agriculture plays a significant role in carrying out of the economic activity in view of producing agricultural goods and services specific to this sector (Nanu & Buziarnescu, 2008, p. 45). Financial support provided from the relevant EU funds plays a huge role in the realization of the objectives of the EU Common Agricultural Policy. State financial support to agriculture and the financial support provided from the EU funds are particularly important when agriculture needed alternative arrangements outside the finance and banking sector (Trzeciak-Duval, 2003, p. 106). The European Agricultural Guarantee Fund and the European Agricultural Fund for Rural Development are two main funds from which the European Union provides support to agriculture and rural development.

Resources of the European Agricultural Guarantee Fund are aimed to direct payments to farmers and measures regulating or supporting agricultural markets. When using the resources of this fund, Member States should: a) establish criteria to be met by farmers in order to fulfil the obligation to maintain an agricultural area, b) define the minimum activity to be carried out on agricultural areas (European Commission, 2013, p. 620). In addition to direct payments to farmers, the European Union has precisely prescribed the form and conditions of public interventions, which should contribute to the improvement of agricultural market (European Commission, 2013c).

The European Agricultural Fund for Rural Development provides resources for financing rural development of the European Union. This fund supports the increase of the competitiveness in the agricultural sector, the rural development and the life quality improvement in the rural areas (Laptes & Popa, 2011, p. 26). The EAFRD shall contribute to the Europe 2020 Strategy by promoting sustainable rural development throughout the Union in a manner that complements the other instruments of the CAP, the cohesion policy and the common fisheries policy. The development of a Union agricultural sector must be more

territorial and environmentally balanced, climate-friendly and resilient and competitive and innovative. (European Commission, 2013b, p. 499). These funds are an important factor in achieving the objectives of the common agricultural and rural policy of the European Union.

### 3. Data and Methodology

The agricultural expenditures are an important category in modern conditions. Data on the absolute amount of financial resources intended for agricultural and rural development from the European funds confirms this fact. In order to evaluate the significance of agricultural expenditures of the European funds for achieving the objectives of rural development and agricultural development, interdependence between agricultural expenditures and agricultural results on a sample of the European Union countries, as well as the heterogeneity of the EU countries according to these indicators are examined in this paper. For the purpose of this research, we selected four agricultural results from the Eurostat database: Gross value added of the agricultural industry, Output of the agricultural industry, Animal output and Crop output. These results are valued at a basic price. The basic price is defined as the price received by the producer, after deduction of all taxes on products but including all subsidies on products. *Gross value added at basic prices* corresponds to the value of output (at basic prices) less the value of intermediate consumption. *Output of the agricultural industry* is made up of the sum of the output of agricultural products, agricultural services and of the goods and services produced in inseparable non-agricultural secondary activities. *Animal output* comprises sales, changes in stocks, and products used for processing and own final use by the producers. *Crop output* comprises sales, changes in stocks, and crop products used as animal feedingstuffs, for processing and own final use by the producers.

In accordance with the objective of research, the following hypotheses are defined in this paper:

H1: There are differences between the EU countries regarding the efficiency of investment in the EU agricultural funds.

H2: The correlation between the agricultural expenditures and agricultural results in the European Union countries is positive.

H3: There is no heterogeneity among the European Union countries in terms of the agricultural expenditures and the achieved agricultural results.

Defined hypotheses are tested by using the methods of comparative analysis, correlation analysis and cluster analysis.

### 4. Research Results

#### 4.1. Efficiency in investment of the EU agricultural funds

Base of the European Commission for information on agricultural expenditures - EAFRD Report (European Commission, 2013d) and EAGF Report (European Commission, 2013) for 2012 financial year and Eurostat database for data on selected agricultural results represent the information base of research. Relevant data for the European Union countries for 2012 are presented in Table 1. Croatia is excluded from the analysis, considering that the last available data are from 2012. Croatia joined the European Union on the 1<sup>st</sup> July 2013.

**Table 1 - Expenditure for agriculture and achieved results in agriculture in the European Union countries in 2012 (in million EUR)**

Country	EAFRD expenditure in million euro	EAGF expenditure in million euro	Gross value added of the agricultural industry - basic prices	Output of the agricultural industry - basic prices	Animal output – basic prices	Crop output – basic prices	Efficiency 1	Efficiency 2	Efficiency 3	Efficiency 4
1	2	3	4	5	6	7	8= 4:(2+3)	9= 5:(2+3)	10= 6:(2+3)	11= 7:(2+3)
Austria	535.9	744.9	2999.99	7246.29	3358.93	3233.95	2.34	5.66	2.62	2.52
Belgium	68.4	653.4	2696.47	8799.15	4769.46	3950.86	3.74	12.19	6.61	5.47
Bulgaria	306.7	425	1662.26	4423.72	1218.48	2672.89	2.27	6.05	1.67	3.65
Cyprus	19.8	46.2	332.81	719.56	339.75	347.83	5.04	10.90	5.15	5.27
Czech R.	418.9	768.9	1351.60	4860.58	1790.03	2849.85	1.14	4.09	1.51	2.40
Denmark	62.6	955.2	3595.28	11877.08	7059.66	4140.55	3.53	11.67	6.94	4.07
Estonia	325.6	91.4	360.14	898.20	383.69	428.62	0.86	2.15	0.92	1.03
Finland	302.3	552.3	1686.50	5052.80	2569.60	1856.00	1.97	5.91	3.01	2.17
France	933.1	8655.7	30136.10	76776.30	25996.00	44596.90	3.14	8.01	2.71	4.65
Germany	1311	5446.7	18261.00	55565.00	23562.00	28713.00	2.70	8.22	3.49	4.25
Greece	330.8	2416.4	5408.39	10734.60	2709.06	7017.53	1.97	3.91	0.99	2.55
Hungary	441.3	1165.4	2578.79	7498.53	2637.52	4339.45	1.61	4.67	1.64	2.70
Ireland	129.2	1293.2	1742.43	7033.48	4758.19	1915.06	1.22	4.94	3.35	1.35
Italy	1307.8	4813.9	27139.19	50512.00	16830.94	27160.79	4.43	8.25	2.75	4.44
Latvia	213.2	127.6	322.53	1326.69	460.00	750.07	0.95	3.89	1.35	2.20
Lithuania	235.2	332.1	1168.65	2972.89	917.31	1833.82	2.06	5.24	1.62	3.23
Luxembourg	10.3	35	123.75	411.59	177.65	201.58	2.73	9.09	3.92	4.45
Malta	8.9	5.6	57.06	127.96	71.17	49.32	3.94	8.82	4.91	3.40
Netherlands	102.2	927.6	9175.00	26866.72	10658.35	12790.85	8.91	26.09	10.35	12.42
Poland	2027	2847.7	9020.49	23198.35	10542.02	12036.20	1.85	4.76	2.16	2.47
Portugal	679	775.7	2311.97	6702.27	2781.99	3601.88	1.59	4.61	1.91	2.48
Romania	1101.9	1022.3	6209.14	14410.22	3992.65	9007.95	2.92	6.78	1.88	4.24
Slovakia	272.9	332.6	578.24	2397.06	959.27	1195.80	0.95	3.96	1.58	1.97
Slovenia	122	125.3	380.53	1143.52	530.64	592.59	1.54	4.62	2.15	2.40
Spain	821.1	5868.7	21329.39	41954.52	16245.06	24030.32	3.19	6.27	2.43	3.59
Sweden	293.1	715.9	1830.72	6402.11	2707.11	3038.43	1.81	6.35	2.68	3.01
U. Kingdom	734.7	3351.7	10377.63	29616.52	15900.10	11042.84	2.54	7.25	3.89	2.70

Source: <http://ec.europa.eu/>, <http://epp.eurostat.ec.europa.eu/> and authors' calculation for the data on efficiency

Poland (2027), Germany (1311), Italy (1307.8) and Romania (1101.9) has the largest amount of EAFRD expenditure in million euro allocated in 2012. When it comes to EAGF expenditure in million euro, the largest allocations were recorded in France (8655.7), Spain (5868.7), Germany (5446.7) and Italy (4813.9). The second part of the table presents the values of selected indicators of agricultural development, or selected agricultural results. Gross value added of the agricultural industry in 2012 is the largest in France, Germany, Italy and Spain. These four countries have the largest results also when it comes to Output of the agricultural industry, Animal output and Crop output. Reviewing the empirical data shows us a certain conclusion. Namely, we observe that those countries in which is recorded the largest allocation of the EU funds, also are the countries that recorded the most favorable results in agriculture. Minimum allocations from both funds in 2012 were directed at Luxembourg, Malta and Cyprus. Luxembourg and Malta are the countries with the lowest results in terms of all four indicators of agricultural production (Gross value added of the agricultural industry, Output of the agricultural industry, Animal output and Crop output).

In addition to data review, in Table 1 we calculate also the efficiency of investment in the EU agricultural funds. The efficiency as a performance indicator is a ratio which is mathematically constructed as the quotient between output and input, as well as between the

economic result (in nominator) and the amount of investment (in the denominator). We calculate the efficiency as the quotient between selected agricultural results and total amount of agricultural expenditures (EAFRD and EAGF expenditures). According to the ratio Efficiency 1, the Netherlands is the best positioned country, followed by the Cyprus and Italy. The worst positioned countries according to this ratio are Estonia, Latvia and Slovakia. The minimum values of the ratio Efficiency 1 is 0.86, while the maximum value is 8.91. The highest value of the ratio Efficiency 2 is recorded in the Netherlands 26.09, while the lowest value of this ratio is recorded in Estonia 2.15. The Netherlands also has the highest value of the ratio Efficiency 3 10.35, while Estonia has the lowest value of this ratio 0.92. When it comes to the ratio Efficiency 4, the Netherlands is the best positioned country, followed by the Cyprus and Belgium. Estonia is again the worst positioned countries. The minimum values of the ratio Efficiency 4 is 1.03, while the maximum value is 12.42. Based on these results we can conclude that the hypothesis H1 is confirmed. There are differences between the EU countries in terms of the efficiency of investment in the EU agricultural funds.

#### 4.2. Examining of Interdependence between Agricultural Expenditures and Agricultural Results in the EU Countries

The interdependence between agricultural expenditures and four agricultural results on a sample of the European Union countries is examined by calculating of the Pearson correlation coefficient between the mentioned variables. The results of the correlation analysis are presented in Table 2.

**Table 2 - Pearson correlation coefficient between expenditure for agricultural and selected agricultural results**

		<b>EAFRD expenditure</b>	<b>EAGF expenditure</b>
<b>Gross value added of the agricultural industry - basic</b>	Pearson Correlation	0.634(**)	0.962(**)
	Sig. (2-tailed)	0.000	0.000
<b>Output of the agricultural industry - basic prices</b>	Pearson Correlation	0.633(**)	0.938(**)
	Sig. (2-tailed)	0.000	0.000
<b>Animal output – basic prices</b>	Pearson Correlation	0.631(**)	0.966(**)
	Sig. (2-tailed)	0.000	0.000
<b>Crop output – basic prices</b>	Pearson Correlation	0.641(**)	0.953(**)
	Sig. (2-tailed)	0.000	0.000

\*\* Correlation is significant at the 0.01 level (2-tailed).

Source: Authors' calculation.

The maximum value of the coefficient of correlation is observed between the EAGF expenditure and indicator Animal output (0.966). The strong positive correlation exists between the EAGF expenditure and all other indicators. The correlation coefficient between the EAGF expenditure and indicator Gross value added of the agricultural industry is 0.962, between the EAGF expenditure and indicator Crop output is 0.953, between the EAGF expenditure and indicators Output of the agricultural industry is 0.938. The calculated value of the Pearson correlation coefficient between the observed variables is statistically significant. Slightly lower, but also a positive correlation (moderate positive correlation) is observed between the EAFRD expenditure and all selected agricultural results (Gross value added of the agricultural industry, Output of the agricultural industry, Animal output and Crop output). This interdependence is also statistically significant. Taking into account the results of the correlation analysis presented in Table 2, the hypothesis H2 is confirmed.

The positive relationship between agricultural expenditures and all agricultural results indicates the great importance of this type of support that is provided from European funds for the overall agricultural and rural development.

#### 4.3. Examining of the EU Countries Heterogeneity according to Agricultural Expenditures and Agricultural Results

Given the high level of correlation between the agricultural expenditures and selected agricultural results, it is necessary to examine the heterogeneity of the European Union countries according to these variables using cluster analysis. Cluster analysis is the method of multivariate analysis and serves for the classification of countries according to their characteristics. The European Union countries are classified in this case, according to the agricultural expenditures and agricultural results.

The use of the final cluster centers shown in table 3 has demonstrated that countries in cluster 1 have the smallest agricultural expenditures and the smallest agricultural results. Cluster 2 includes countries with higher EAGF expenditure and agricultural results compared to cluster 1, and with the highest value of EAFRD expenditure. Finally, cluster 3 consists of the countries with the highest values of EAGF expenditure and agricultural results, and with the higher EAFRD expenditure compared to the cluster 1.

**Table 3 - Final cluster centers (FCC)**

	Cluster		
	1	2	3
EAFRD expenditure (in mill. EUR)	293.95	1,050.67	933.00
EAGF expenditure (in mill. EUR)	629.10	3,876.33	8,656.00
Gross value added of the agricultural industry – basic (in mill. EUR)	1,869.86	15,883.78	30,136.10
Output of the agricultural industry - basic prices (in mill. EUR)	5,251.92	37,952.19	76,776.30
Animal output – basic prices (in mill. EUR)	2,209.61	15,623.08	25,996.00
Crop output – basic prices (in mill. EUR)	2,651.20	19,295.67	44,596.90

Source: Authors' calculation.

Based on FCC analysis, we conclude that the SEE countries are divided into three fairly heterogeneous clusters according to the agricultural expenditures and results. Clusters are quite heterogeneous also according to the number of cases (countries) in each cluster (Table 4).

**Table 4 - Number of cases in each cluster**

Cluster	1	20
Cluster	2	6
Cluster	3	1

Source: Authors' calculation.

Cluster 1 includes 20 countries, Cluster 2 includes six countries, while Cluster 3 consists of only one country. The cluster analysis of the European Union countries according to the agricultural expenditures and selected indicators determined the following structure of clusters:

Cluster 1: Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, Greece, Hungary, Ireland, Latvia, Lithuania, Luxembourg, Malta, Portugal, Romania, Slovakia, Slovenia, Sweden;

Cluster 2: Germany, Italy, Netherlands, Poland, Spain, United Kingdom;

Cluster 3: France.

Based on the results presented in Table 3 and Table 4, the hypothesis H3 is rejected. There is quite heterogeneity of the EU countries according to the agricultural expenditure and agricultural results.

## 5. Conclusion

The great importance of agriculture and rural development is indisputable in modern conditions. Awareness of the importance becomes stronger in the EU member states, and agriculture and rural development are considered as a factor that is very significant for the future of the community. Along with these tendencies, awareness of the necessity of the existence of a stable source of financing for agriculture and rural development also becomes stronger. The allocation of the funds intended for the realization of the Common Agricultural Policy, as well as the results achieved in agriculture in the European Union are analysed in this paper. The only review of the data shows that those countries that are leading countries by the amount of funds received from the EAGF and EAFRD, also are countries that recorded the most significant results when it comes to the agricultural value added and agricultural production. There are differences between the EU countries when it comes to the efficiency of investment in the EU agricultural funds. The Netherlands is a country with the best performances, followed by the Cyprus and Belgium. The worst results in efficiency are recorded in Estonia.

In order to define a clear link between agriculture expenditures and agricultural results, the correlation analysis is carried out in the paper. Results of correlation analysis confirmed the existence of a strong positive interdependence between all the observed agricultural results (Gross value added of the agricultural industry, Output of the agricultural industry, Animal and Crop output output) and the EAGF expenditures, and the existence of a moderate positive correlation between the observed agricultural results and the EAFRD expenditures. On that basis, we conclude that the EU funds play a very important role in the agricultural and rural development in the European Union member countries. Based on cluster analysis, we have concluded that there is considerable heterogeneity of the EU countries when it comes to the amount of used resources from the EU funds, but also when it comes to agricultural results. Even 20 out of the 27 analyzed countries are located in cluster 1, cluster with the lowest performance. On the basis of this we conclude that a more balanced approach when it comes to using resources from the EU funds is needed, which would lead to a more balanced agricultural and rural development of the member countries.

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**Acknowledgment:** The research is realised under the project no. 179066 that is financed by the Ministry of Education, Science and Technological Development of the Republic of Serbia.

## THE EUROPEAN FUND FOR STRATEGIC INVESTMENTS – PRIORITY OF THE EUROPEAN COMMISSION DURING JUNCKER MANDATE

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On July 15, 2014 Jean-Claude Juncker was elected President of the European Commission (EC) by the European Parliament (EP) following the presentation of the *Political Guidelines for the next European Commission – A New Start for Europe: My Agenda for Jobs, Growth, Fairness and Democratic Change*. With a vision of a *European Union that is bigger and more ambitious on big things, and smaller and more modest on small things*, Juncker has proposed a renewed European Union (EU) highlighting ten policy areas. The priority policy areas are aimed at employment, growth and investment, the digital single market, and the energy union.

**I. The policy area entitled A New Boost for Jobs, Growth and Investment** includes a commitment to draft, during the first three months in office, an *ambitious package* allowing *mobilisation of up to EUR 300 billion in additional public and private investment in the real economy over the next three years*.

Immediately after the start of office as President<sup>2</sup>, on November 26, 2014 the EC issued a *Communication – An Investment Plan for Europe*<sup>3</sup> (Communication).

The Communication notes the urgent need for investment in the EU. It is reinforced by the Report of the *Special Task Force on Investments in the EU*<sup>4</sup> (Report) which identifies in the EU approximately 2,000 potential investment projects worth EUR 1.3 trillion, of which those for the next three years are worth EUR 500 billion. In Romania, the Report identifies approximately 200 potential investment projects worth EUR 62.6 billion, of which those for the next three years are worth EUR 44 billion.

Sector	EU (%)	RO <sup>5</sup> (%)
Energy Union	29	5
Transport	29	80
Knowledge, Innovation, and Digital Economy	18	4
Social Infrastructure	15	3
Resources and Environment	9	8

The sector distribution of potential investment projects for the next three years in the EU and Romania is showed herewith.

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<sup>2</sup> The mandate as President of the EC began on 01.11.2014.

<sup>3</sup> The European Council endorsed the Investment Plan (18.12.2014).

<sup>4</sup> [http://ec.europa.eu/priorities/jobs-growth-investment/plan/docs/special-task-force-report-on-investment-in-the-eu\\_en.pdf](http://ec.europa.eu/priorities/jobs-growth-investment/plan/docs/special-task-force-report-on-investment-in-the-eu_en.pdf)

<sup>5</sup> Own calculations based on the Report.

Moreover, in addition to the urgent need for investment, the Communication states that there are significant levels of savings and financial liquidity that could be mobilized.

According to EC estimates, the Investment Plan will lead to the creation of 1.3 million new jobs and add EUR 330 - 410 billion to EU GDP over the next three years, without pressures on national public finances and without producing new debt.

At the same time with the Communication, in the EP, President Juncker delivered his speech *Investing in Europe* to support the Plan, raising various policy responses<sup>6</sup>:

**Manfred Weber** (DE), EPP group chair - "Mobilising private capital is better than making new debts", nonetheless stressing that member states should continue structural reforms, because "if legal proceedings last as long as they do in Italy, if the labour markets are too rigid as in France and if planning procedures last months and years as they do in my country, then it is hardly surprising that there are no investments".

**Gianni Pittella** (IT), S&D group leader - "We would have liked more public money, more investment, but this is a good starting point". He stressed that his group is not interested in "what the credit agencies are saying - we are interested in peoples' lives". He also reminded Mr Juncker that the S&D supported him on condition that he delivered the investment package and that Parliament should be fully involved.

**Syed Kamall** (UK), ECR group leader - "How do we make sure it is a watering can that stimulates growth? How do we make sure that it is not a government flood that washes away private investment? How do we make sure that it is not a private irrigation system that is never turned on? What we need are detailed answers to some of our questions (...) Maybe then we can support your project".

**Guy Verhofstadt** (BE), ALDE group leader - "Maybe labour market reform should be a conditionality to get the funds", he suggested, also highlighting the need to complete the EU's digital, energy and capital single markets. "Otherwise, money would be lost on a big scale", he said. Mr Verhofstadt also suggested exempting use of the funds from tax, in order to attract more private investment.

**Dimitrios Papadimoulis** (EL), GUE/NGL group - "the package you presented is just empty words. EUR 16 billion comes from the EU budget and EUR 5 billion from the EIB. There is not one Euro of fresh money in there, and you promised that you are going to create some kind of leverage effect multiplying funds by 15. In these times of stagnation and recession in the Eurozone, there is no economist in the world that would believe this".

**Philippe Lamberts** (BE), coleader Greens/EFA group - called the investment package "very well intended", but stressed the need to "put an end to the casino economy". He argued that "fighting fraud and tax evasion" should be an "integral part" of

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<sup>6</sup> See <http://www.europarl.europa.eu/news/en/news-room/content/20141121IPR79833/html/Investing-%E2%82%AC315-billion-to-jump-start-the-EU-economy> and <http://www.dw.de/juncker-to-unveil-315-billion-euro-eu-investment-plan/a-18088988>

the plan and stressed the need to switch to greener energy sources within the EU. "We shouldn't be giving EUR 1 billion a day to Vladimir Putin and his energy system", he said.

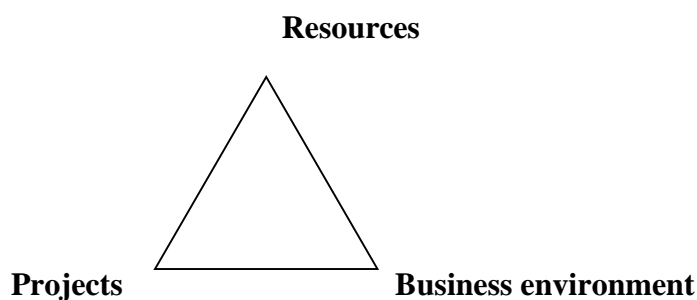
Patrick O'Flynn (UK), EFDD - Mr Juncker was "throwing good money after bad" while the main problem is the Euro as a single currency which prevents southern EU states from allowing national currencies to depreciate and thus create more favourable conditions for investment.

Gerolf Annemans (BE), non attached member - The investment package is "basically a recycling, a relabelling (...) This is a useless watering can, hocuspocus, abracadabra, and this is just monopoly money".

Catherine Mann (USA), OECD chief economist - "The EUR 315 billion is like a cloud number, it's up in the clouds. There's much more limited actual cash on the table. But to the extent that it can catalyze private investment, that's actually better."

Recently, on January 13, 2015 the EC has submitted a *Proposal for a Regulation on the European Fund for Strategic Investments and amending Regulations (EU) No 1291/2013 and (EU) No 1316/2013* (Regulation) with the invitation for adoption by the EP and the Council so as to enter into force until the middle of 2015, invitation supported by the European Council.

According to the Communication, the Investment Plan is based on three elements:



From this perspective, the Regulation establishes a regulatory framework for the implementation of two of these elements (mobilizing resources and directing resources towards projects in the real economy)<sup>7</sup>, i.e. the Regulation contains clauses on the conclusion, content and effects of the agreement (Agreement) between the EU represented by the EC and the European Investment Bank (EIB), as well as clauses on guarantees, as follows:

- ✓ Establishment of the **European Fund for Strategic Investments** (EFSI)
  - Goal
    - Supporting investments in the EU and ensuring increased access to financing for companies having up to 3,000 employees; supplying of new risk bearing capacity to the EIB

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<sup>7</sup> The third component – the business environment – includes a number of conditions for improving it.

- Governance
  - Steering Board – issuing the strategic orientation, the strategic asset allocation, the operating policies and procedures of EFSI
- Management
  - Investment Committee – examining potential operations in line with the EFSI investment policies and approving the EFSI support (the EU guarantee)
  - Managing Director – day-to-day management of the EFSI and Presidency of the Investment Committee
- Resources
  - EU – contribution in a guarantee of an amount equal to EUR 16 billion (EU guarantee)
  - EIB – contribution in cash<sup>8</sup>
  - Member States – contribution in cash or a guarantee acceptable to the EIB<sup>9</sup>
  - Third parties – contribution in cash (national promotional banks, public agencies owned or controlled by the Member States, private sector entities) subject to the consent of existing contributors
- Financial instruments and investment projects targeted

Financial instruments	Investment projects (general objectives)
<ul style="list-style-type: none"> <li>• loans</li> <li>• guarantees</li> <li>• counter-guarantees</li> <li>• capital market instruments</li> <li>• any other form of funding or credit enhancement instrument</li> <li>• equity or quasi-equity participations</li> </ul>	<ul style="list-style-type: none"> <li>• development of infrastructure, including in the areas of transport, particularly in industrial centres; energy, in particular energy interconnections and digital infrastructure</li> <li>• investment in education and training, health, research and development, information and communications technology and innovation</li> <li>• expansion of renewable energy and energy and resource efficiency</li> <li>• infrastructure projects in the environmental, natural resources, urban development and social fields</li> <li>• providing financial support for the companies with up to 3,000 employees including working capital risk financing</li> </ul>

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<sup>8</sup> EUR 5 billion, according to the explanatory memorandum.

<sup>9</sup> The EC has indicated that it will take a favourable position towards such contributions in the context of its assessment of public finances. See the EU Communication – An Investment Plan for Europe (26.11.2014) and – Making the Best Use of the Flexibility within the Existing Rules of the Stability and Growth Pact (13.1.2015).

- Co-investors
  - The manner in which third parties may co-invest with EIB financing and investment operations supported by the EFSI is to be provided for by the Agreement
  - The Member States, as co-investors alongside EIB, are allowed to use the structural and investment European funds for co-financing the eligible investment projects
- ✓ Establishment of the **European Investment Advisory Hub**
  - Goal
    - Supporting of the third parties on the use of technical assistance for project structuring, use of innovative financial instruments, use of public-private partnerships, and advising on relevant issues of EU legislation
- ✓ Establishment of the **European investment project pipeline** at the EIB and EC level<sup>10</sup>
  - Goal
    - Providing access of stakeholders to relevant, transparent and dynamic information on the present and future EU investment projects with a potential significant contribution to the EU policy objectives<sup>11</sup>
- ✓ Establishment of the **Guarantee Fund**
  - Goal
    - Paying the EU guarantee when EIB calls the EU guarantee
  - Governance and management
    - At the EC level (asset management)
  - Resources (maximum 50% of the EU guarantee)
    - Payments from the general budget of the EU<sup>12</sup>
    - Returns on guarantee fund resources invested
    - Amounts recovered from defaulting debtors

Based on the EC forecasts, the EU guarantee of EUR 16 billion will be topped up by another EUR 5 billion from the EIB. With a EUR 21 billion reserve, the EIB can cover financing and investment operations of EUR 63 billion. In view of the fact that the EIB will be financing the riskier parts of projects, private investors will be pitching in EUR 252 billion; hence a total of EUR 315 billion will be invested in economy.<sup>13</sup>

According to the Communication, with the support of national authorities, the EC and the EIB will initiate *dialogues* with investors, project promoters and institutional stakeholders to facilitate the launch of investment projects and will also organize workshops on *Investing in Europe*.

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<sup>10</sup> The Regulation provides also for the establishment of such a pipeline at the level of the Member State.

<sup>11</sup> According to EC, this measure could lead to a system of European certification for viable investment projects in order to attract private investors.

<sup>12</sup> EUR 8 billion until 2020, according to the explanatory memorandum.

<sup>13</sup> [http://europa.eu/rapid/press-release\\_SPEECH-14-2160\\_en.htm](http://europa.eu/rapid/press-release_SPEECH-14-2160_en.htm)

**II.** The second policy area – **A Connected Digital Single Market** intends to establish a digital single market by:

- Swift and ambitious legislative steps in the areas of data protection
- Swift and ambitious legislative measures in telecommunications
- Modernising and simplifying copyright and consumer rules for online and digital purchases

EC estimates that the Digital Single Market will lead to hundreds of thousands of new jobs, to 250 billion EU GDP growth during the EC mandate, and to a dynamic knowledge-based society.

The European Council called on the Union legislators to give new momentum to the work on the pending proposals regarding the Digital Single Market and on the Commission to submit an ambitious communication in this area before the June 2015 European Council<sup>14</sup>.

**III.** The third policy area – **A Resilient Energy Union with a Forward-Looking Climate Change Policy** provides for the reorganization of the European energy policy in a new Energy Union by:

- Legislative measures for the defragmentation of the rules for cross-border energy trade
- Legislative measures to address the market-distorting retail price regulation
- Actions to follow up on recent decisions concerning the 2030 climate and energy framework

The European Council called on the EC to draw up a comprehensive Energy Union proposal ahead of March 2015.<sup>15</sup> As a result, on February 25, 2015 the EC issued the *Communication – A Framework Strategy for a Resilient Energy Union with a Forward-Looking Climate Change Policy*.

### Acknowledgement

This work was supported by the project “*Excellence academic routes in doctoral and postdoctoral research - READ*” co-funded from the European Social Fund through the Development of Human Resources Operational Programme 2007-2013, contract no. POSDRU/159/1.5/S/137926.

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<sup>14</sup> European Council, 18.12.2014.

<sup>15</sup> European Council, 18.12.2014.

## THE INFLUENCE OF INSTITUTIONAL STRATEGIES ON THE UNDERGROUND ECONOMY

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**Abstract:** *The fight against shadow economy must be addressed not only as a permanent concern of economic analysts and decision-makers, but rather as a problematic ethical-moral nature affecting economic and interpersonal relations, as strategic and operational object. The authors attempt outline an institutional management strategy geared towards underground economy combating has as objective the strands establishment without having exhaustiveness claim. We make a case for extending the implementation of a coherent program, strategic and operational, and its adoption as a way of institutional management in the context it really wants to launch a concerted offensive to combat the underground economy.*

**Keywords:** underground economy, shadow economy, strategy, annual planning, strategic management, operational management, strategic programming, institutional strategies

**JEL Codes:** M1, K40, K42

### 1. Introduction

The adoption of a strategic and operational program, as a way of driving, geared towards combating the underground economy, involves a global approach, but also the need to ensure an organized targeting institutional effort in this regard.

It should be stressed that the strategy is that option that ensures the alignment of institution future direction and control. In this context it is clear that it is necessary to define the instruments of planning, to set objectives, which become operational targets, all of them gaining a predominant character in the context of practical guides and annual action programs.

Avoiding the strategic decisions adoption implies the existence of an isolated integrated and dynamic vision of future activity, which should materialize in a "strategy for medium or long term".

The most appropriate instruments for combating the underground economy are represented by medium or long term strategies and operational guidelines, which unlike the strategies; they need to have a detailed and predominantly technical character, specific to each activity sector addressed to.

### 2. A strategy to minimize underground economy

A strategy to minimize underground economy should summarize the major action objectives and lines decided at the institutional level in order to achieve the reduction of the proposed targets meaning the decreasing the systems underground economy (Figure 1).



**Figure 1.** General components of a strategy to reduce the shadow economy

*Source: own vision*

A proper strategy requires a clear distinction between economic issues and those related to its implementation. From the economic point of view, the strategy must provide answers at least to these questions:

- What are the costs generated by shadow economy?
- What are the prevention measures to be taken to quell the different forms of phenomenon?
- What are the benefits obtained because of shadow economy decrease, and what are the measures taken in order to increase the effectiveness of actions to combat it?
- How various adopted measures affect each other, positive or negative?
- What are the measures that should be taken and what are decision-making levels?
- How could be measured the degree of strategic objectives achievement?

It raises a lot of other questions when strategy is implemented. It seems important those relating to the manner in which the obtained benefits based on collaboration between all stakeholders, and how they can be neutralize or how they can be turned into allies. It should also be assessed the impact of the direct and indirect actions, should be guaranteed the necessity to improve strategy implementation chances and the monitored progress during its whole implementation.

However, the underground economy should not be approached only in terms of economic development and deployment. The fight against shadow economy must not be seen as the ultimate goal because, at some point, the economic costs of shadow economy reducing will outweigh the benefits, and a correct prevention and combat strategy may represent only a starting point for financial restitution at the institutional level, for the social service provision reforms, for greater citizens' involvement etc.

Institutional strategies geared towards combating the underground economy, covering the objectives and approaches to be followed in order to achieve them, reinforce efforts to combat the phenomenon in all societies. Although the need for a strategy may be evident, often campaigns against shadow economy does not formulate clear and specifically to such an approach.

The adoption of a reform strategy made essential knowledge of these principles and the real situation. Most of the times it is very difficult, if not impossible, to identify, monitor and punish the practices of the shadow economy at the institutional level. It seems easier strategies development targeted for the purposes of phenomenon limitation. However, they must involve organizational measures: strengthening of the necessary structures, adopting a system of incentives etc.

Institutional management strategies must first assess what are the benefits and what are the costs of the measures adopted. It is also necessary to have a coherent action plan to implement the strategic objectives, as well as a system of the results measurement.

The most important factors to be taken into account with a view to create a conducive climate to reduce institutional shadow economy are:

- ✓ a real state powers separation of;
- ✓ the existence of the periodic financial reporting systems very well developed;
- ✓ rigorously and institutional transparency;
- ✓ judiciary uncompromising, unruly politics;
- ✓ precise, clear rules;
- ✓ well grounded laws.

A strategy, no matter how well it is made up, can't set goals of simultaneously fighting against all forms of shadow economy. Therefore, we consider that priority should be established according to the direct and indirect impact that they have on society.

Furthermore, a strategy involving a clear vision of what you want to achieve, the means and the instruments that will be used, but also on the ways forward in the short term, medium and long term. To be credible, a strategy to fight against shadow economy must provide immediate, measurable results, however, it is necessary that it be a step-by-step action plan for three-five years, including realistic goals.

### **3. Strategic and operational programming and underground economy**

The establishment of the basic principles is the most important element of the fight against the underground economy in the right direction. There are also shared values that can provide a general institutional framework:

- ✓ citizen's rights, even if situations may affect the institution;
- ✓ a new quality of relationship with the citizen: citizens become an institutional partner;
- ✓ transparency: citizens must be fairly, clearly and timely informed;
- ✓ non-discriminatory treatment for all citizens: in any event, persons having similar situations should not be differentially treated;
- ✓ avoid adverse effects which the adhesion to the goals of the institution they might create: citizens should not be misled;
- ✓ increase computerization: it allows avoiding direct relationship, make face-to-face with citizens, which in turn will limit the opportunities of active or passive corruption;
- ✓ the professionalism and morality guarantee a good practice.

Practical implementation is a particularly vast mechanism, involving mediation between public power and institutional system, whatever it would be.

Implementation of the strategic objectives must be addressed, however, through multi-year objectives implementation annual concrete programs. A guideline in this regard could support the success of such strategies. It should describe the behaviours for the application and implementation of principles aimed at ensuring a conducive environment to the practical actions of the strategy, the strategic objectives, and action lines of, perennial or annual, as well as measures.

Because the program details the strategic objectives and lines of action is splitting them into specific measures, it must be virtually in its entirety. In this context, one can speak of a coherent plan of action based on accurate measures, timelines, responsibilities, and achievement indicators for results measuring.

A guide to ethics is part of overall strategic tools and has a practical value for default institution in implementing its primary purpose being to obtain efficiency.

Strategy and guidelines can be replaced with an anti underground economy programs that target directly the objectives and practices of the institutions in which it and their partners implement to.

Obviously, the programs are much more practical than practical strategies that include targets and a series of high-quality guidelines, principle, less quantifiable. Unlike these, the programs are less descriptive and more profound.

#### **4. Conclusions**

Complexity and at the same time, the specifics of the underground economy, leading to an integrated approach to problems, actors being not just civil servants and/or businesses, but the State itself. Therefore, most uncertainty related to the evolution of this phenomenon is the Government's responsibility towards the black economy generated in public institutions, intervention capacity of public powers and their interest in combating the phenomenon, the responsibility of the State in the context of the active participants in the activities specific to the shadow economy are, as a rule, government workers, taxpayers, on their behalf, intermediaries, etc.

"Agents" of the shadow economy are individuals or representatives of employees / managers or intermediaries, persons whose action cannot be held responsible State. Under these circumstances, can we consider the State as being guilty, or this Act, the authority to take measures to sanction such practices?

Because of the processes involved, based on knowledge of the present and future vision, the strategy puts special emphasis on adapting the Organization to the evolution of its environment. As a result, necessarily, the strategic approach should make an inventory of the goals, each of which is accompanied by lines of action and the necessary measures to be adopted. In addition, in the context of the annual action programmes shall be established deadlines for implementation and indicators for measuring results.

Implementation in the practical work of the strategy requires the establishment of milestones along the way at both central and local levels. This stage involves large, strategic objectives detailed in tactical and operational goals, flexible and tailored to specific institutional implementation, expressed quantitatively, capable of measuring its effectiveness.

Underground economy should not be seen as a chance to some, as a temporary irregularity in work or morals of a citizen or group of citizens who violate the rules and legal regulations. An efficient approach to the phenomenon must necessarily involve a management change at the institutional level. In other words, it takes a change of system and policies because the practice of specific activities of the shadow economy at the individual or group is only a consequence of their operation, and punishing those guilty has a relatively limited impact.

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## COST BENEFIT ANALYSIS AND ITS ROLE IN INVESTMENT PROJECTS IN AGRICULTURE

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**Abstract:** *The investment projects have of particular importance for the development and progress of an organization. The development of investment projects involves making a decision and the existence of financial resources. The agriculture has specific features and contributes significantly to the gross domestic product, which is why channeling the investments to agriculture must be a priority. In this context, the cost-benefit analysis is a useful tool for evaluation and analysis of the investment projects, contributing significantly to the decision making regarding the choice of the optimal project. The objective of this article is to highlight the importance of cost-benefit analysis for the projects investment financed by the European Union through the Rural National Development Program 2007-2013, under axis IV LEADER. The article is structured in two parts which contains theoretical aspects and a case study. Thus it is made an overview of the investment, funding sources of the investment projects, the investment decision, the relevance of cost-benefit analysis for the investment projects. The case study aims to analyze the relationship between the results of the investment projects which include cost-benefit analysis and those that do not include cost-benefit analysis.*

**Keywords:** cost-benefit analysis, agriculture, projects, investments, decision.

**JEL codes:** M21, Q14

### Introduction

Investments are underlying the economic growth, producing revenue growth, resulting in an increase of consumption and savings.

Investment decisions are the starting point for any development strategy. The economic growth depends on a number of factors including productive capital, human capital, knowledge, social and political factors. All these development elements imply decisions making which involving currently spend economic resources in the hope of future benefits, distant and uncertain. Thus we consider that investment in agriculture generates benefits after a relatively long period of time, taking into account the specific activity.

In this context, in each project, regardless of the size, must pay a particular attention to the expected results in relation to costs, ie the cost-benefit analysis of the investment / action. Cost-benefit analysis is used mainly in the evaluation of projects due to the need to optimize public and european money spending. Moreover the cost-benefit analysis is an economic tool that helps decision making for project finance. CBA analyzes and describes in terms of costs, all benefits and results in order to achieve a goal.

*The research hypotheses* which we intend to check include:

- I1- any investment project must include CBA;
- I2- only major investment projects must include CBA;
- I3- projects that include the CBA in the selection procedure are more numerous than those that do not include CBA in selection procedure;
- I4- projects that include CBA analysis in the selection procedure are fewer in number than those that include CBA analysis in the selection procedure .

### **Research Methodology**

The research methodology used in this article combines qualitative with quantitative research. We chose an approach from general to specific, from a theoretical presentation of the current state of knowledge to a case study based on data analysis and interpretation. In the first parts there is made an overall of the investment, investment elements, their funding sources focusing on European funds for agriculture, continuing with the peculiarities of investment decision in agriculture, relevance of CBA for investment projects and its essential characteristics. As a main research technique it is used the literature review, documentation in the relevant literature, the study of various articles, websites, guides, and other specialty materials.

To capture the interactions between the different elements and obtaining information on the subjects studied, we used the case study, data analysis and interpretation. The case study is divided into two intertwined parts. So that in the first steps we proceeded to the identification of two Local Action Groups (LAGs) from West Region, the selection was made according to their size. After that we proceeded to analyze the database provided by the two LAGs and contains 150 projects funded by LEADER axis IV from National Rural Development Programme (RDP) 2007-2003, for each project are listed a number of issues such as : value, expected results, the duration of the project, implementation stage. From 150 projects were selected 100 projects based on the following criteria: the value of the project, implementation stage (being selected projects already implemented or those who are in the final phase of implementation). For each projects we analyzed a number of important documents: application form, contract financing, addenda if is the case, progress reports, payment requests.

After analyzing these projects we group them into two categories who are relevant for the research topic: projects that include CBA, ie 20 projects and projects that do not include CBA, ie 80 projects.

The purpose of this analysis is to find answers to four key questions and relevant to the topic studied: compliance with budgetary provisions in terms of costs necessary to carry the investment, results achieved, the impact of projects, the cost benefits ratio. For each of the 100 projects, taking into account the two categories in which the projects were divided, we proceeded to centralize the findings/observations.

### **The investment role**

In the literature, the investments are defined in different ways. One of the conceptual approaches of investment refers to "The investment means any expenditure made in order to obtain profit. So in a usual sense the investment can refer to the use of the money to buy the shares of a company or buying a house, land surfaces, even deposit a sum of money in a bank account in order to obtain a profit. All these economic transactions do not result in an increase in physical capital, they are in fact capital investments whose purpose is to make profit or obtain other advantages "(Cioarna, 2000).

The most general sense of the investment term is the expense, the french author P.Masse considering that the investment is an uncertain and actual expenditure that will produce effects in the future, most often uncertain.

A summary is presented suggestively, conclusive in one of the manuals of political economy, thus: "The golden rule of the economy endowment with capital- or, by investments are created the capitals- ensures accumulations for a stable economic balance, normal for the economic conditions, simultaneous with the highest level of consumption of the society members "(Cioarna, Cilan, 2006).

Any investment contains the following elements (Bogdan, 2004):

- a topic, person or entity that invests;
- an object that contains the means/resources in wich is invested;
- a cost, representing the funds allocated to the investment or effort made by the investor;
- the effect or economic value resulting from the investment.

The investments can be viewed as an expense or an advanced resource, meaning that it is currently used and will result in further effects.

The role and importance of investment in the current economic and social context are reflected in their functions, starting from the base, ie providing the financial and material support for the development, economic and social progress and continuing with those derived on increasing production capacity, creating new jobs, improving the material and technical base, development of material science, education, culture, health and other areas of social activities

### **Financing sources of the investment projects**

Financing of investments is one of the most important aspects of the investment process, and refers to the establishment of funding sources, the proportion of co-source, the combination of sources that minimizes the total cost of funding etc.

The most important problems that arise in an investment project are (Cucu, 2008):

- Ensuring the financial resources;
- Choicing the funding sources in order to ensure a lower cost of the capital that will be use for theinvestemnt;
- Recovery of invested funds and reduce the duration of this recovery;
- Payment of loans and interest;
- Ensuring a high returns from the investment works.

In general, investments involve a lot of costs, so that it appear the problem of finding the necessary funding sources and evaluating their profitability, there are compared the financing costs are with future financial results.

Regarding the financing sources of investment, those are grouped generally into two categories:

- Internal sources of funding include: self-financing, issue new shares, new intake of shareholders, etc.
- External sources of financing include bank loans, leasing, projects funded by the European Union, other types of financing.

In the current economic climate where internal sources are relatively limited, external sources are difficult to obtain, we consider that european funds are an important source of financing investment projects in general and in particular those for agriculture.

The European Fund for Agriculture and Rural Development (EFARD) is a financing tool created by the European Union to support countries in the implementation of the Common Agricultural Policy. Common Agricultural Policy (CAP) is a set of rules and mechanisms that estabilish the production, processing and marketing of agricultural products in the European

Union, and pays a great attention to rural development. EFARD is based on the principle of co-financing private investment projects. The European funds for agriculture can be accessed under the key document of the National Rural Development Programme (RDP). CAP is based on two pillars. Pillar 1 aims market measures, the demand-supply adjustment, increase farmers' income through grants and aid in accordance with the requirements of the RDP. Pillar 2 covers the modernization of agriculture, rural development by financing viable projects with funding support measures from the National Rural Development Plan (RDP).

For the total budget of CAP in the period 2007-2013, Romania had available 3,6%, or 13.524 million euros. Of the total, 40,7% were allocated to Pillar 1 and 59,3% to Pillar 2 (Zahiu Thomas et al, 2010). Regarding the estimated financial allocation for the financial year 2014-2020 through RDP, it is 8.015 million euro.

Under RDP 2007-2013, there are four priority axes of financing projects aimed to develop the rural area. In RDP 2014-2020, there are 19 measures of financing projects aimed to develop the rural area. These funding axes from RDP are an important funding source for the investment projects aimed the developing of Romanian rural area by viable projects.

### **Particularities of the investment decision in agriculture**

The decision is a dynamic process which has as objective the choice for several possibilities (variants) of a line of action to achieve a goal, given an economic and social efficiency as high as possible (Emilian, 2003).

For agriculture, as for any other activity, the decision making involves a complex process that consists of the following steps:

- identifying and defining the problem;
- defining objectives as a result of an initial assessment of the limitations;
- establish alternative measures of action from which is chosen the final decision;
- evaluation of alternatives consists of comparisons between alternatives, so that to the decision maker need to have a qualitative information in order to take a good decision;
- selection of an alternative;
- decision implementation, control and evaluation of results.

The investment decision is based on a technical and financial program, known as the investment project. The investment project is a complex and autonomous action program involving in the case of capital investments, purchase and operation of tangible and intangible assets.

The main features of investment in agriculture are based on the specific of the production, namely: the influence of natural factors, the existence of biological processes and organic production, the production and social character.

In the agriculture investment process, the economic decision go through several stages, depending on the level of efficiency calculations regarding optimizing the allocation of investment resources (Subic, 2003).

The first phase is focused on the investment decision guidance throughout the whole of agriculture, and later, on branches of production and the social and economic sectors. This step takes into account the social and economic aspect, in terms of development of productive forces, the competitive relations of production, increasing agriculture level in farms who are less developed, productivity growth, improve working conditions etc. Channeling investment in different directions depending on the production tasks and the economic effects in order to ensure the organization development.

The second stage refers to the orientation of the investment at the farm level when, according to production tasks from the future development of the farm, determine the investment objectives, taking into account the complex factors involved in the production

process. Among these factors are listed: natural factors, biological and agrotechnical and technological factors, work organization, production and social factors.

The third stage of decision refers the investment options using a complex system of economic efficiency indicators.

It can distinguish the following types of investment projects: innovation projects, expansion projects, projects of rationalization or increase productivity, strategic projects (Cucu, 2008).

In the case of the investment, the decision takes into account the rate of return on invested capital and marginal cost of capital. From a practical point of view, the situation is complicated by the following aspects: multi-profile of most modern organizations, the existence of several markets in which the organization operates, the existence of several equity markets and various interest rates. Therefore, the investment decision is a matter of choice between alternative (competing projects, multiple funding sources and other).

### **The importance of cost-benefit analysis for the investment projects**

Cost-benefit analysis has appear in the nineteenth century in the US, in the literature is considered as a method of economic assessment of the environmental effects (environmental, social, etc.) of the investment projects in construction, industry, transport, tourism and agriculture .

Cost-benefit analysis (CBA) is a tool used to estimate (in terms of benefits and costs) the socio-economic impacts of actions, projects, being one of the most used methods in evaluating investment projects. The impact must be assessed in relation to the assumed targets.

The objective of cost-benefit analysis is to identify and quantify the impacts of the action or project in order to determine appropriate costs and benefits. All impacts must be asselation with the objectives, and in terms of financial, economic, social, environmental, etc. Costs and benefits are assessed by considering the difference between the scenario "with project" and the scenario "without project", called "incremental approach". After that the results are cumulatted in order to identify the net benefits and to determine whether the project is appropriate and should be implemented. So the CBA is a decision tool used for assessing investment utility.

Cost-benefit analysis proves its usefulness for choosing the optimal (economic, environmental, social, technological) investment projects. It should not be confused with income-cost analysis which allows choosing the optimal project from purely economic considerations. In both cases we are dealingwith indicators (Internal Rate of Return, net present value, revenue-cost ratio). The differente between cost-benefit analysis (CBA) and income-cost analysis (CVA) is that the first compared with the second takes into account non-monetary elements derived from environmental impact not only monetary items in a classical sense.

Cost-benefit analysis helps the decision maker to identify the projects that will maximize the benefits and thus to set the priorities according to which the projects will be implemented.

In the projects financed by the Cohesion Fund (CF) and European Regional Development Fund (ERDF), it is provided by Council Regulation (EC) No. 1083/2006, Article 40, paragraph e, the obligation to perform CBA for the projects with a total value of over 50 million euro. In this context, CBA is required to assess whether a project who fits into the goals of EU regional development policy is appropriate in terms of economic and if needs financing source to become financially feasible. More specifically, in the development and evaluation of the projects funded by CF and ERDF, the CBA has the following objectives:

- To prove whether a project deserves to be financed. CBA is used to determine the extent to which the project contributes to economic and social cohesion policy and in particular to the objectives of the program under which funds are requested
- To determine whether a project needs financing and to what extent.

In the context of preparation of investment projects, the steps that must be taken to achieve the CBA are: identifying and defining the investment objectives, options analysis, financial analysis, economic analysis, sensitivity analysis, risk analysis, presentation of results.

Council Regulation (EC) No. 1083/2006 provides at Article 39 and 40 of the obligation to perform CBA for the projects with a total value of 50 million euros (for major projects). Regarding non-major projects (with values less than 50 million euros), EC recommends to Member States to develop their own methodology for evaluation and selection.

The cost-benefit analysis of the investment projects financed from European funds must comply with the "Guide for cost-benefit analysis of investment projects" issued by the European Commission and the instructions provided by Working Paper no. 4 "Guidelines on the methodology of cost-benefit analysis" issued by the European Commission.

The cost Benefit Analysis is one of the most used methods in evaluating the investment projects. CBA is used to highlight two important issues: whether a project that integrates in the objectives of EU regional development policy is appropriate in economic terms and if needs financing to become financially feasible.

Also, there are two other requirements that are performed by cost-benefit analysis:

- determine the financial sustainability of the project and the organization that will receive funds
- highlights the profitability of the project.

Cost-benefit analysis can be seen as a useful financial tool for forming an documented opinion and decisions mking regarding financing investment projects from EU budget. The main advantage of ACB consists in its methodology that brings together the costs and benefits of a project, regardless of the type of effects that it produces.

It is known that assessing the financial viability of an investment project is carried out by indicators:

- net present value
- revenue-cost ratio
- financial Internal rate of return
- cash flow.

The analysis used in the CBA must be determined in relation to the society in which the project will have a relevant impact. An important issue to be considered it refers to the impact that the project will have, it can be considered impacts at local, regional, national and even EU level. In estimating the potential impacts of a project, there is always uncertainty. This should be considered and treated properly in the CBA.

An essential component that occurs in any project, regardless of scope and scale, refers to the risk. A detailed risk analysis is the basis for a proper management strategy, which will be reflected in the project structure.

### **Case study**

Given the crucial role of cost-benefit analysis in the investment projects, we intend to realize an analysis of investment projects financed through NRDP which including cost-benefit analysis and those that do not include cost-benefit analysis. The purpose of this research is to determine whether there is a relationship between the goals assumed by the project and cost benefit analysis.

In order to determine the impact of cost-benefit analysis were examined 100 projects funded by axis IV LEADER of RDP 2007-2013 under different funding measures. The access to these projects was done through two Local Action Groups (LAGs) which have a portfolio of over 150 projects. In order to conduct the research, LAGs have provided a database with the projects from which were selected 100 projects based on two important criteria: project value (it were selected the projects with significant value, the minimum amount of a project being 50.000 euros) the implementation status (being preferred projects in the final phase or that have already been implemented). Before the selection of these projects, we study the site [www.apdrp.ro](http://www.apdrp.ro) and the Applicant Guidelines, the procedure manuals specific for each measures for National Rural Development Programme 2007-2013. After analyzing each project was concluded that of the 100 projects for private sector, 20 projects includes CBA and 80 projects don't includes CBA because it was not requested by the applicable procedure manuals. Also, it were examined some documents related to the project implementation, ie progress reports, payment requests.

The projects in number of 100 were divided into two categories:

- Projects that include cost-benefit analysis, which is required by the applicant guide;
- Projects that do not include cost-benefit analysis, by the applicante guide it is not required to perform cost-benefit analysis.

Later in each project we tried to find an answer to four questions presented in Table no. 1.

**Tabel no. 1**

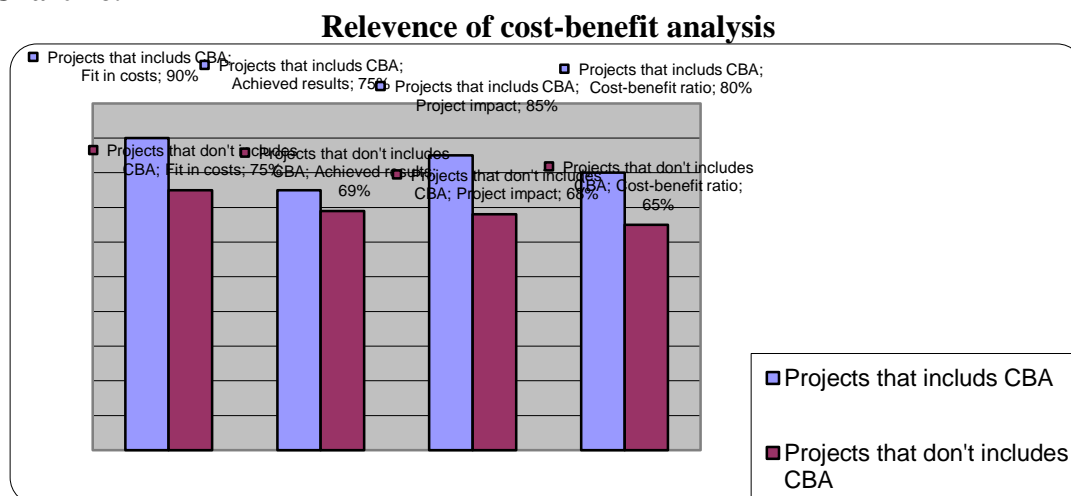
**Findings centralization**

Questions	Answers			
	Projects that includes CBA		Projects that don't includes CBA	
	Yes	No	Yes	No
1.The investments fits in the project budget?	18	2	60	20
2. The results assumed by the project have been achieved?	15	5	55	25
3. The project had a beneficial impact on direct/indirect beneficiaries according with the indicators assumed by the application?	17	6	54	26
4.The ratio between benefits and costs was positive?	16	4	52	28

*Source:* author's view, tata collected by the authors from the projects/reports

Graphical representation (in percent) of the importance of CBA is highlighted in chart no. 1.

Chart no. 1



Source: author's view based on the dates from table no. 1

### Analysis and interpretation, obtained results

From the data presented in the above table can be drawn some important conclusions regarding the importance and impact of cost-benefit analysis for the investment projects.

So that out of 100 projects considered only 20 (20%) projects include cost-benefit analysis because only for those was requested by the Applicant Guide to accomplish this analysis. It is easy to deduce that this analysis was required for large projects.

Regarding the framing of the investments in the amounts budgeted in the project, it appears that the situation is different from the projects that include CBA and those that do not include this analysis. So out of 20 projects which include CBA only 2 projects (10%) were not framed in budgeted costs, meaning that required additions funds. Of the 80 projects that don't include CBA, a significant proportion did not meet budgetary provisions, the amounts budgeted for various investments were not in line with market prices, ie 20 projects (25%).

If we reffere to achieve results undertaken by the project, it is noted that 75% of projects that include CBA reached their predetermined results while projects that do not include CBA only 69% of projects have achieved all targets, resulting that CBA has a beneficial impact on projects offering the best orientation for the costs incurred and expected benefits.

Regarding the impact of projects on direct and indirect beneficiaries, the tendency is that projects with includes CBA have a more positive impact than those that do not include CBA. So 85% of projects that include CBA generated a positive impact (eg creating new jobs, capitalize of the resources/existing products in rural areas, the growth and diversification of the rural economy, etc) while projects that do not include CBA only 68 % generated positive effects. This situation is explained by the fact that in the case of projects that include CBA have reached the highest part of the proposed results and fit within the budgeted costs which means a beneficial impact and positive effects on rural areas.

If we refer to the ratio between benefits and costs of the 100 projects, it is easy to deduce that this ratio is closely correlated with the answers provided to the first three questions. So in the projects that include CBA, the ratio between costs and benefits is positive

in 80% of cases while in the projects that don't include CBA only 65% registers a favorable ratio between costs and benefits. It is important to note that this ratio refers to comparing the present value of future benefits to the present value of future costs.

It is important to note that in all projects financed through NRDP are required certain elements of cost-benefit analysis, for example: defining objectives in accordance with the financing measures, financial analysis, economic analysis, presentation of results. But there are not included some of the most important elements, like risk analysis, sensitivity analysis, options analysis.

### **Conclusions, future research directions**

To start an action/investment project involves making decisions behalf of certain data more or less concrete. More specifically the decision-making process includes a comparison of cash outflows (costs) and cash inflows (benefits) generated by a project, which benefits most often are uncertain.

CBA is an important tool that requires specific data on costs and benefits of the project in order to provide useful information in the decision making related to fund or not a project. We appreciate that the use of CBA is not useful for all kinds of investment projects, such as projects that have a social role (schools, churches, hospitals, cultural institutions), low value projects (ie less than 10.000 euros), the project in which is difficult to determine the costs and benefits. For these types of projects can be used other information to support the decision to fund or not a project.

Based on the above mentioned, it proves to be true research hypothesis I1 and I4, so that from the analysis performed is clear that the CBA has to be done for most of the investment projects. Also it is found that the projects who includes CBA the selection procedure are fewer than those who includes CBA in the selection procedure (hypothesis no. 4). Moreover, the projects that includes CBA meet their results, fit in the predictd costs in a higher proportion comparing with the projects that do not include CBA. On the other hand we should not overrated the importance of the CBA, there are other methods of project evaluation and measurement of costs and benefits.

Council Regulation (EC) No. 1083/2006 provides that the CBA is made only for projects with a value who is exceeding 50 millions euros, means large projects such as those funded through the Regional Operational Programme (ROP), Sectorail Operational Programme Environment (SOP). The possibility that projects funded under the RDP to rise to this value is very low. However under certain guidelines for the financing measures for RDP, is requested to achieve the CBA, as Measure 313 "Encouragement of tourism activities".

It is important to note that this article is a continuation of a research initiated earlier this year and which refers to the analysis of economic efficiency of investment projects in agriculture, continuing with this research aimed at highlighting the importance of CBA for investment projects. This research will be developed by extending the CBA, achieving macroeconomic research, conducting case studies of ACB, cost analysis used in the CBA.

**“This work was supported by the project “Excellence academic routs in the doctoral and postdoctoral research- READ” co-funded from the European Social Fund trough the Development of Human Resource Operational Programme 2007-2013, contract no. POSDRU /159/1.5/S/137926.”**

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## CAUSES OF TAX EVASION AND HOW TO REDUCE IT

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**Abstract:** *The level of taxation is influenced and determined by several factors such as: the performance of the economy at any given time, the effectiveness of financed from taxes public expenditure, property structure, public needs as determined by Government policy and approved by the Parliament, the degree of contributors' understanding of budgetary needs and adherence to Government policy, the stage of democracy in one country or another, etc. These make that between tax level and its base, represented by the GDP, not to be a strict correlation. On the State budget and public finance, the cases of tax evasion or avoidance may not have manifested but negative effects. In reality, even the potentiality of cases of tax evasion by taxpayers, adversely affect public funds through the necessary expenditure to be earmarked for the prevention and monitoring of the tax payers. The higher is the extent of the phenomenon of tax evasion, the more the public finances of a State will suffer. If this phenomenon is joined by a weak economy and a shaky fiscal system, the negative effects are augmented. It should also be pointed out another important aspect of feeble public finances: chances are that fiscal bodies to act in that tough situation under emergency and pressure status and to deceive this tension on the economy, making it more unfit to uphold degraded public finances.*

**Key words:** tax evasion, fiscal fraud, state budget and public finance

**JEL Classification:** H2, H26, H3

Tax evasion is one of the most important and complex social-economic phenomena which nowadays states are confronted with and which undesired consequences should be limited as much as possible, their total elimination being, practically, impossible. The effects of tax evasion directly strike against the level of fiscal income, lead to distortions in the market mechanism and may contribute to social inequities (their increase), due to the different “access” and “willingness” of the contributors to evade taxes.

Causes which are at the roots of committing acts and actions of tax evasion and fiscal fraud are pretty much, but the most frequent are split in four big categories: moral, political, economic and technical causes.

They will be treating in the following, according to our own perception.

1. The moral causes are not only related to fiscal civism, to consciousness and conscientiousness of the taxpayer in respect of the payment of the obligations to be paid to the State, but in the same measure to human reason that puts the issue of taxation morality in general, the right and honest obtained revenue, from hard work, and particularly to an excessive taxation in conjunction with an often proved ineffective use of tax revenues by the State.

2. Political causes are inadequate use of fiscal policy. The political factor through an unskillful maneuver of taxation in order to overly encourage certain categories of citizens and burdened too much on others is liable to incite fiscal evasion attempts for protection and

justice. There can be no doubt that, beyond the principle of tax equity, is hiding, in the cruel reality of contemporary societies, the fiscal and tax privileges and discrimination, regardless of political orientation of those in power. This is explained, first, that since there is the world, the many, the ones in the base rows that support the society, particularly the simple employees or workers, were appointed to ultimately bear all the naturally come or required by those at the helm of power burdens.

3. Economic causes refer to the stage of development and the economic situation of a country and the well-being and economic situation of its citizens-taxpayers. These causes can also feed the inclination to avoid payment of the taxes. As it is known and demonstrated, in developing countries both potential tax evasion and the actual evasion are higher than in developed countries, even if it's individual and national level is a tribute to the poor state of economic development.

4. Technical tax evasion causes are related, as appropriate, either to the precariousness of tax systems or their complexity. It is equally exciting to make tax evasion, if there is the necessary predisposition, both in a fragile fiscal system, under-developed and regulated, and in a complex one where there are a multitude of technical details, methods and models regarding the taxation, which make difficult to precisely calculate the tax debt by the tax payers and also the tax inspection by the tax authorities.

At the same time you can't just highlight tax fraud and evasion cases without having to insist and to outline the consequences of the phenomenon of tax evasion on the fraudsters, the State budget and public finances and lastly on society as a whole.

On the fraudsters, the follow-ups may be, from case to case, positive or negative. A tax evasion is made in order to avoid the payment of amounts to the State budgets so that the taxpayer's assets shall not be affected with a legal obligation to pay. To the extent that the action of evasion is successful, then the taxpayer's wealth will be higher than it would have been if he had paid the legal obligations to the State, exactly with the amount that was stolen. If we consider the possibility to use this amount in the future for fruit bearing, then enriching through tax evasion, compared to the situation when it respected the law, would be even more consistent. Even if the success of the action of tax evasion is aided by corrupting individuals in tax administration or justice, normally fraudsters should have a short and/or long-term gain. Evasion action can succeed amid various circumstances: the ability of the fraudsters, law imperfections and gaps, flaws in the organization of the tax authorities in the pursuit of tax burdens on taxpayers and fiscal control, lack of firmness in the application of the law, corrupting someone in the taxation or legal structures, etc. In the situation, predicament for tax Dodgers, their actions of tax evasion are failing, in the sense that sooner or later the competent authorities discover tax evasion maneuvers, then the consequences of tax evasion on the ones they produced will be negative. Being applied the rigors of the law, they will have to cover the damage created and to respond, where appropriate, also criminally. In this case, the fiscal risk they assumed is taking its effects.

On the State budget and public finance, the cases of tax evasion or avoidance may not have manifested but negative effects. In reality, even the potentiality of cases of tax evasion by taxpayers, adversely affect public funds through the necessary expenditure to be earmarked for the prevention and monitoring of the tax payers. The higher is the extent of the phenomenon of tax evasion, the more the public finances of a State will suffer. If this phenomenon is joined by a weak economy and a shaky fiscal system, the negative effects are augmented. It should also be pointed out another important aspect of feeble public finances: chances are that fiscal bodies to act in that tough situation under emergency and pressure status and to deceive this tension on the economy, making it more unfit to uphold degraded public finances.

On society as a whole, tax evasion has, as in the case of public finances, only negative follow-ups. First, because through the success of some to evade taxes, tax inequity grows: there is an increased prosperity to those who succeeded in this endeavor, assuming the tax risk, compared with the plight of those who exhibit fiscal civism required by law. Then, especially if tax evasion is extended with important amounts, it is expected that the amounts lost by the State to be passed on to other taxpayers, by increasing the future tax burden they have to bear. Last but not least, the power of the example being high, an increased number of taxpayers who have succeeded in achieving tax evasion, can also contaminate other contributors. Tax evasion often being associated with acts and crimes of corruption, the society may also record a bigger decline of morality of its citizens.

Explanations of the fiscal pressure's evolution, meaning their upside, must be, according to many researchers, searched in the inexorable increase of government spending, which at their turn are subject to certain economic, social and political "legalities". The level of taxation is influenced and determined by several factors such as: the performance of the economy at any given time, the effectiveness of financed from taxes public expenditure, property structure, public needs as determined by Government policy and approved by the Parliament, the degree of contributors' understanding of budgetary needs and adherence to Government policy, the stage of democracy in one country or another, etc. These make that between tax level and its base, represented by the GDP, not to be a strict correlation.

If we would try to systematize the above exposed factors, we could group them as follows:

1. the level of public expenditure to be covered which, in turn is influenced by the following factors:
  - a. the size and efficiency of public bureaucracy (IE extension and the functionality of the State);
  - b. the extent of implemented public policies (the production of public goods and services, the subsidization and support of the economic activity, subsidizing income-i.e. minimal income guarantee, regulation of private decisions on allocation and operation of the market, ensuring the rules of law, etc.);
2. the level of GDP, i.e. the degree of economic development of a country; It is influenced by the factors:
  - a. the heritage of production factors (particularly the capital) and how to use them;
  - b. the structure of the economy (industries that contribute to the achievement of GDP) and its degree of modernization;
  - c. the size and structure of foreign and interior markets.
3. the functionality of the tax system, determined by:
  - a. the structure of taxes and fees;
  - b. the means to regulate and enforce the fiscal law;
  - c. size and effectiveness of the fiscal system;
  - d. size of the tax evasion and its tradition.
4. influences from outside the country, brought about by induction of phenomena such as: pressure of the international community and organizations, especially in respect of employment in certain levels of budgetary deficits; inflation; economic and financial crises; tax experiences; attitudes of taxpayers in other countries relative to taxation; pressure of multinational companies to take advantage of diverse facilities and facilities, fiscal included, etc.

The fiscal pressure indicator is very often used in the making of temporal and international comparisons which often produces erroneous interpretations precisely because of the many strings attached to its levels, as indicated above. As a result, in addition to an

objective fiscal pressure, technically determined as required by the financing needs of public spending, there is also a (felt) psychological fiscal pressure that measures the threshold of tolerance to taxes. Most often, this takes the form of individual tax pressure which is the ratio between the total levies incurred by the taxpayer and the total income obtained by him before taxation. It expresses the sacrifice that the taxpayer is forced to agree upon all wealth obtained by him during a given period (usually one year). As a result, individual tax pressure allows to take into account the subjective elements of social life.

Simply by its existence, the tax is able to alter the economic and social behavior of the taxpayer, by the influence exerted on consumption and its saving degree. Increasing fiscal pressure will cause the taxpayer to opt between needs (necessities) that are to be satisfied and to choose those that have the greatest utility. Tax incidence is so entirely influenced by the elasticity of the needs. It also varies depending on the nature of the tax. A reduction in disposable income resulting from the taxation will lead to automatic savings reduction. Income tax adversely affects both the ability of saving, and consuming intentions in different proportions, depending on the social categories.

Individual tax pressure is, however, very difficult to set accurately, within certain limits, as long as it remains wedded to some random items that relate to the diversity of the abstraction, often occult character of their incorporation into prices, the volume of services that the taxpayer receives from the community and which is very difficult to assess, the subjective elements, as well as technical interventions for cashing (retention at source), which annihilates the sensitivity of the subject of taxation.

Fiscal pressure limits cannot be set so as to be scientifically based and put into practice in order to achieve "optimal tax" both from the taxpayer's point of view, and from the public powers' one. This is because the problem of limits lead us to considerations that are, at the same time, psychological, political and economic.

The political and psychological limits are imposed by taxpayers' reactions who may oppose a strong resistance to mandatory levies rise, when they consider to be excessive by: evasion, fraud, reduce the productive activity and even, in some cases the movements of protest or riots. Also, some compulsory levies can be made to appear less noticeable, and therefore more bearable by using techniques such as indirect taxation or withholding at source; the multiplication and diversification of sources of taxes' purchase, which make tax systems to be obscure and complex, etc.

On the other hand, taxpayers, in general, tend to see the compulsory levies as a seizure of a part of their income, without taking into account the advantages they benefit from public spending financed by them. In setting the fiscal pressure limits, an important contribution has also the political factor. It, represented by political parties, usually before elections, promise taxpayers tax pressure relief and, often, after winning the elections, they cannot or do not want to heed the promises previously made.

Economic related limits show the fact that minimum levies may have the effect of breaking the tilt towards the work, savings and investment, and the weakening of entrepreneurship. In a deeply competitive world, economic competitiveness is imperative for public powers, being one of the major economic concerns. From this point of view, businesses have all the interest to be affected by lighter social and fiscal burdens.

If increasing the fiscal pressure is borne by families, it doesn't regard less the enterprises' competitiveness, provided however, that the increase in indirect taxes, social contributions or indirect taxes borne by families not to be offset by wage increases. Such an orientation requires that worsening fiscal pressure to be funded based on purchasing power. As productivity increases, living standards improve as well, so fiscal pressure may significantly grow without reducing the purchasing power of the available income. The orientation of the rising levies more on families than on enterprises may also be justified by

the fact that they are the only economic agents who benefit from public spending and support, in reality, the burden of compulsory levies.

On one hand, the families are the most direct beneficiaries of public spending and even of the expenditure for enterprises (grants) as customers, employees or owners of these enterprises. On the other hand, taxes and social contributions that are legally put in charge on enterprises, however, are ultimately borne by families (as consumers, employees or owners). Directly imposing additional levies on the families, without passing through the taxes or contributions of enterprises, it is possible, under these conditions, to increase tax pressure without risking the competitiveness' weakening.

Tax pressure-induced offsets are expressed in that they constitute also an advantage for taxpayers through government spending it finances. In addition, according to P. A. Samuelson, reducing taxes carries expansion effects, but reducing taxes has a weaker effect than increasing government spending.

Avoiding taxes, without committing a tax crime, can occur in three ways:

1. the law provides tax evasion itself through a tax system of favor (here is the case, in particular, of the relevant standard of taxable assessment and tax heavens);
2. simply abstaining by the taxpayer to perform (run) the activity, the operation or the act of taxation; This method is common in the case of excessive taxation (fiscal overpressure) because the marginal tax rate is very high and the taxpayer prefers to abstain from providing an additional unit of work; tax evasion is occurring in this case through the substitution of free time relieved and taxed labor;
3. by using the tax system gaps. In this third case, tax evasion comes down to the ability to tax or choosing ways to pay fewer taxes.

Fraudulent tax evasion can be achieved either through bad faith, i.e., through actions or omissions committed in bad faith for evading taxes, either by fraudulent willingness, by using fraudulent means to evade taxation.

Law No. 241/2005 on preventing and combating tax evasion does not define tax evasion, but only determine the facts constituting the offence of tax evasion. These are:

- not reconstructing, willfully, the destroyed bookkeeping documents, within the time limit entered in the control documents;
- the unjustified refusal to submit to the competent bodies, after being summoned three times, legal documents and property of heritage, with the goal of deterring from financial, tax or customs checks;
- to prevent, in any form, the competent organs to enter, under the conditions provided for by law, in offices, premises or land, for the purpose of carrying out financial, tax or customs checks;
- detention and non-payment, with intention, within maximum 30 days after the due date, of sums representing contributions or taxes with deduction at source;
- putting into circulation, without right, of forged stamps, bands or standard forms used in the field of taxation, under special regime;
- printing or putting into circulation, willfully, of forged stamps, bands or standard forms used in the field of taxation, under special regime;
- setting in bad faith of taxes, fees or contributions, resulting in procurement, without right, of sums of money by way of repayment or remission of the consolidated general budget or compensation due to the consolidated general budget;
- hid taxable good or source, in order to avoid tax obligations;
- the omission, in whole or in part, to record, in accounting documents or in other legal documents, commercial operations or revenue in order to circumvent tax obligations;

- provision, in accounting documents or in other legal documents, of spending that isn't based on actual operations or highlighting other fictitious transactions, in order to circumvent tax obligations;
- altering, destroying or hiding accounting documents, registers of electronic charged memories or fiscal cash registers or other means of data storage, in order to circumvent the fulfillment of tax liabilities;
- execution of double accounting records using writings or other means of data storage, in order to circumvent the fulfillment of tax obligations;
- evasion from tax, financial or customs checks, through the non-declaration, fictitious or inaccurate declarations with respect to principal or secondary offices of the checked persons;
- substitution, degradation or alienation by the debtor or by the third party of seized goods in accordance with the provisions of the Tax Procedure Code and of the Code of Criminal Procedure.

### **How to reduce tax evasion**

On the basis of practical considerations, some specialists of the Ministry of public finance have concluded that the most effective method to combat the phenomenon consists in drawing up documents like *«Payer's File»*.

Proof of this lies in the relationship between taxpayers and the fiscal unit, relationship which presupposes the existence of a complex process, in which the following steps are required:

- determination and calculation of types of taxes and fees in accordance with the activity objects of each taxpayer, and also with tax legislation;
- determination of tax liability through cutting of taxes and fees with debit or create obligations for the rest of the income taxes;
- their tracking and payment;
- preparation of nominal tax records (per taxpayer), and the centralized ones (for the knowledge of the total volume of revenue from the obligations laid down for each taxpayer or income nature).

Currently, the finding, calculation and determination of the tax liability are known by the fiscal authorities to a satisfactory degree. But the same thing can be said about the transposition of these tax obligations in practice, on condition that a tax inspector has to cover a huge number of contributors.

Importance and necessity of *«Payer's file»* resides in the fact that in such a document should be included the amounts collected, in order to know at any time if the fixed amount were paid or not, whether or not the fixed amount exist, if there are any outstanding amounts or if it has been paid more than the obligations laid down.

Fiscal records must be a «mirror» for both taxpayers and the tax unit, with the purpose of calculating and determining the tax liability as well as the preparation of forms for tracking and collection of taxes and fees.

*Another mean to reduce tax evasion is fiscal relaxation.* Taxation threshold bearable by taxpayers was constantly raised by technicians, and practice seemed to overpass it every time.

The tax ceiling is variable because the maximum tax pressure is more a perception that changes depending on economic, political, social and psychological circumstances. The idea that “too much tax kills tax” change in the thinking of many economies.

The main cause for which fiscal relaxation operates is that a high taxation involves a series of “threats” to the real economy:

- reinforces evolution and the restructuring of domestic demand;
- hides a part of economic activity towards national accounts;

Fiscal loosening must be accompanied by a strategy which needs to consider increasing the capacity of the tax administration, through:

- separating tax administration from tax policy;
- removal of exemption or rescheduling debts to public budgets;
- reconsideration of tax evasion as an economic-financial crime and punish it as such;
- eliminate practices of amending tax regulations through legal acts of lower rank;
- increase administrative capacity of institutions which collect taxes and fees;
- assessment of the tax inspection procedures and the adoption of strict rules of ethics in the work of fiscal control, through cooperation with public authorities and business community.

*The effectiveness of the work of the institutions responsible for the control of the tax* could be much higher if they would put more emphasis on the prevention of the phenomenon which, as we have seen, not only depends on the degree of consciousness and seriousness of the taxpayer. It depends to a large extent on creating coherent and fair tax laws, fiscal pressure decrease and increase the level of economic and social development.

In the current Romanian economic conditions, tax professionals believe that if fiscal rules, on the one hand, and the endowment of the tax audit, on the other hand, would be better designed, it could accomplish two extremely important things to combat the phenomenon, namely:

- reducing tax evasion (wind up being impossible) and creating a balance between the members of the society, for the purposes of a medium-sized population, able to accumulate income in parallel with the maintenance of a central social budget as balanced, in the most part through their contribution;
- fiscal pressure decrease among taxpayers that would ultimately lead to a decrease in tax evasion.

An effective way<sup>16</sup> in combating tax evasion is also the concern to concentrate the taxes in areas that may be pursued by tax authorities with minimized costs. In support of this claim is that income taxes based on the contributors' assessment, bring to the budget less income than those retained directly by the State.

Record and following of fiscal discipline is carried out by means of fiscal criminal record. This tool requires the existence of a system of records of taxpayers who have committed acts which are tax, financial regulations, or which relates to financial discipline.<sup>17</sup>

In accordance with the regulations in force<sup>18</sup>, the acts which will be registered in the record of the tax payers are:

- refusing to submit to authorized by law control bodies, the supporting documents and records of accounts and material possessions which are subject to taxes, fees and contributions from public funds, in order to establish budgetary obligations;
- putting into service, in any manner, without the law, or the possession for the purposes of movement without the right financial and tax documents;

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<sup>16</sup>Pătroi, Dragoș, The offending nature of deviations from fiscal rules, Public Finances and Accountability Magazine, no. 3 – March 2006

<sup>17</sup> Iulian Văcărel & others, Public Finances, Didactic and Pedagogical Publishing House, Bucharest, 2003

<sup>18</sup> Decision 299 for the modification and completion of the GD 31/2003, regarding the methodology of enforcing the GD 75/2001 on organizing and functioning of the fiscal record, published in the Official Bulletin no. 237/16.03.2006

- putting into service, in any manner, without the right, or the possession for the purposes of movement without the right, of financial and tax documents;
- evasion of the payment of tax obligations by non-registration of activities for which the law provides the obligation of registration, in order to obtain incomes;
- the omission, in whole or in part, to provide in accounting or in other legal documents, the commercial operations or revenues or recording of fake operations or expenditure in order not to pay tax, or to diminish the tax or contribution;
- organization and management of double accounting records, tampering with or destroying accounting documents, registers of charged memories of fiscal cash registers or other means of storing data in order to reduce income or taxable supplies;
- conscious issuance, distribution, purchase, completion or acceptance of false tax documents;
- evasion of tax liability payment by transfer of shares held in a company with limited liability, made for that purpose;
- alienation, in fraud of creditors, in the event of the bankruptcy of a company, of a significant part of the shares;

The tax criminal record should contain only the final and irrevocable facts established through control documents completed starting with September 8, 2002, even if the acts were committed in the previous period.

### Conclusions

Tax evasion affects society as a whole, by affecting the budget incomes, which leads to insufficient financing of social and economic policy of the State, but also by practicing unfair competition and distorting the business environment.

Polemics upon the disastrous status of Romanian economy are becoming more common, and also on the State budget and, implicitly, on the figure of the State administration and its efficiency in spending public money. A State which cannot cover the greater part of expenditure on account of budgetary resources is lacking specific levers of intervention in the economy and in society, which significantly affects the ability to financially support the economic and social policy, and sustainable development in all areas of interest, respectively. I think that in Romania, the priority objective of fiscal-budgetary policy must be to improve the collection of taxes and levies due to the budget, and not raising taxes.

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## VALUATION OF INTANGIBLE ASSETS THE MAIN PAWN FOR NEW CHALLENGES RELATED TO THE KNOWLEDGE ERA

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**Abstract:** *Intangible assets are considered a resource controlled by an economic entity arising from past events that is expected to generate future earnings. Through them we can debate the technical-material and financial developments over time and due to permanent development capacity.*

*Today we are witnessing a constantly changing flow of information found in a perpetual technological change that began the emergence of a new stage in the evolution of society was called knowledge. In this context we talk about the new economy which tries to present more complex reality in which we find ourselves.*

*Evaluation of intangible assets constitute a comprehensive and very complex process that should be treated with great caution, especially since it appears that can lead to new challenges, both because of globalization and the development of technological innovation. It involves understanding the peculiarities of the competence assessment and an independent professional appraiser.*

**Keywords :** evaluation, intangible assets, knowledge era, new economy, challenge.

**JEL Codes :** B49, G12, D89, O16, D49 .

### 1. Introduction

The evaluation process is a complex system that includes all research, information, reasoning, analysis and conclusions to reach the estimated value. He is a complex and systematic procedure followed by the evaluator to provide customer response on the value<sup>19</sup>. It can be played as shown schematically in figure no. 1 below.

In the literature, evaluation is defined as the expression value of assets, processes, funds and financial results of the company. Chronologically, evaluation precedes the registration economic accounting operations. In other words, the evaluation determines the amount of the valued goods or elements.

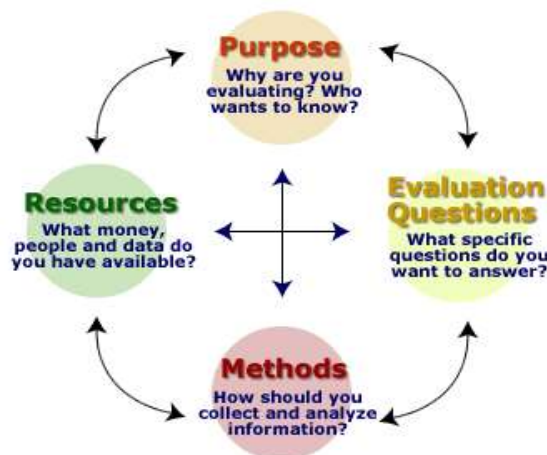
Valuation of intangible assets is carried out on the basis of the International Standard Practice in assessment - GN 4, with the same name. It is frequently required and made, at market value as value type, in accordance with International Valuation Standard - IVS 1: Market value - value type. In the context of contemporary society intangible assets are fundamental to success, providing sustainable competitive advantages.

The assessment of such property items hold great importance and requires finding the optimal way of estimating the value of an intangible asset using one or more valuation

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<sup>19</sup> [www.eval.ro](http://www.eval.ro)

methods. The starting point in applying one of the assessment methods is the quantification of economic benefits to the pool of assets that are associated with an entity.



**Figure No. 1 : Presentation of the evaluation process**

Source : [www.eval.ro](http://www.eval.ro) and processed by author

From my point of view know - how is a very important part of the trade that can lead to new challenges, innovations, programs and projects, etc. . Movies, music recordings, books, computer software and online services are bought and sold, because of the information and innovations contained.

Valuation of intangible assets are required in order to make acquisitions, mergers and sales of businesses or parts of businesses, purchase or sale of intangible assets, reporting to tax authorities, litigation and insolvency procedures, especially financial reporting.

Always remember that an intangible asset is initially recorded at cost of acquisition or production, as shown in all accounting rules and regulations. In a certain period, an intangible item reported as an expense can not be recognized later as part of the cost of an intangible asset.

Valuation of intangible assets gives us new challenges due to the variety of models of calculation and interpretation can lead us to the thought of creating our own assessment methods, which I will try to do in my further research.

## **2. The need to evaluate intangible assets**

Evaluation is a necessity of the first order and is to express using standard monetary means, processes and sources entities. Evaluation is the process of determining the value of the annual structures to be recognized in the balance sheet and profit and loss. In other words, the assessment is to quantify and specify the value of the monetary standard of living, movement and transformation of heritage to be reflected in the accounts.

Such a process is an absolutely essential tool for several different situations to each other. Among them we recall:

1. *Trading* - most often intangibles are traded in active employment. Trademarks and patents are most often sold by companies, thus requiring evaluation.
2. *Existence of the accounting compliance requirements* - always following the acquisition, the buyer should highlight the intangible asset in the balance sheet.
3. *Situation of association of enterprises* - companies often associated with the exploitation of an object of intellectual property, which is a significant part of the intangible assets.
4. *A licensing situation* - a situation in which a homeowner obtains a license and it must be obtained for its value, in order to determine the fee.

5. *The existence of a funding* – in this case intangible assets mean a share in the assets of a business or when applying for a loan, the bank is likely to require evaluation of patents, trademarks, copyrights, to be guaranteed the loan.

6. *The situation where there is a partition made pursuant to a divorce* - sometimes, in such situation, it is necessary to evaluate the patents held by one spouse.

7. *The evidence of damages for counterfeiting* - currently, there is an increase in litigation arising from the violation of trademarks and patents, by requiring these assessments to establish damages.

8. *Situation of the existence of transactions in the company* - through the transfer of patents and trademarks, between group entities is necessary to establish their fair value.

9. *Highlighting the existence of a tax on property* - patent, trademark or copyright, are considered parts of the property to be evaluated can be donated by the owner. Being carrying value must be identified to establish fees related donation.

10. *Finding the existence of a bankruptcy situation* - in this position are required to be performed assessments of intangible assets in terms of forced sale, with the purpose of determining net asset liquidation.

### 3. Evaluating assets versus liabilities<sup>20</sup>

An intangible asset is one that does not have a physical form but provides value to the firm. Examples of intangible assets include contracts and patents, i.e. assets that cost money to acquire but do not have easily-accessible markets through which to buy and sell them. Unlike tangible assets like machinery and automobiles, the lack of secondary markets increases the risk that the intangible asset can not be liquidated at a reasonable price. (Reilly and Schweih 1999)

It is vitally important for acquirers to communicate clearly to the market about the value of assets acquired and liabilities assumed as part of an acquisition.

Therefore, the telecom-specific assets of the target should be identified and valued using robust valuation techniques and methodologies. Estimated asset values are reported as part of a PPA analysis, performed in accordance with IFRS requirements.

Furthermore, IFRS 3 (Revised) has introduced new challenges in terms of purchase accounting. The most critical issues for valuation include:

- Valuation of non-controlling interests;
- Option to recognize goodwill on non-controlling interests;
- Contingent consideration measured at fair value.

The intangible assets of the organization is the most important source of competitive advantage granted to other companies. Excellent surgical organization, know their own market segments, and the knowledge to develop unique products and can inspire their employer, there will be a guarantee of success. (Kotler and Shalowitz and Stevens 2008)

For example I would to bring a good example for presenting the big importance of the evaluating of the intangible assets.

So, intangible assets are the company's core capital, is also an important source of corporate profits. Technical standards is the most valuable intangible assets, Fortune 500 companies it is through the control of the rules of the game achieved a dominant position and reap super profits. Gained market share by selling products around the industry's strength. Compared to the rules monopoly market monopoly is a qualitative leap. The market share of the Microsoft operating system is very high. Account for almost all the non-professional computer operating system software market, so that the other companies in order to meet the needs of

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<sup>20</sup> www.ey.com

computer users, only in Microsoft's operating system based on the development of new applications, or Microsoft operating system on the computer. The company's application software can not be used. If Microsoft to change some important parts of the operating system does not support the original version, the upgrading of software, and to make their products fully followed Microsoft's strategic plan is to go completely to become a pawn of Microsoft. And operating system software competitors with its own system due to a large number of application software is not compatible with simply no longer marketable in the market, therefore, the final operating system software market either Microsoft's mercy and long-term monopoly<sup>21</sup>.

In other words, a brand does not have its own core values, and not be able to rely on their own technical strength, factors such as product quality, branding and service system to build and enhance their intangible assets, then this brand is bound to gradually lose eligibility to participate in market competition. This development of the market is particularly reflected in technology-based industries. Proved in a particular industry, who can lead in technological innovation, who intangible assets have an advantage, who will take the initiative in the final competition<sup>22</sup>.

To demonstrate the importance of intangible assets effective, according to the literature, the famous US company Microsoft owns both intangible and tangible. The percentage is 70% for intangible items and the remaining 30% remains for tangible assets.

From my point of view, according to the object of activity (licenses, software and computer programs, contracts for the supply or possession of such services) is normal to have an inverse correlation with the heritage value of the existing elements analyzed.

As a conclusion on this part of the article designed, it should be noted that the assets and liabilities have great importance for any type of enterprise, economic entity or undertaking. It is well established the idea that there always has to be a balance economic - financial and the activities performed well, with a good evolving financial performance and a stable position on the market, there must be equality between the two parts of any existing patrimony, namely, between assets and liabilities (see Fig. no. 2).

<b>Balance Sheet</b> <b>Displays net worth of business at a given point in time</b>	
<b><u>Assets (what you own)</u></b> + Cash + Accounts Receivable + Inventory <hr/> <b>Current Assets</b> <i>(convertible to cash within one year)</i> + Equipment + Furniture & Fixtures + Property - Depreciation <hr/> <b>Fixed Assets</b> <i>(longer than one year to convert to cash)</i>	<b><u>Liabilities (what you owe)</u></b> + Accounts Payable + Accrued Taxes + Short-term Notes Payable + Current due on Long-term Debt <hr/> <b>Current Liabilities</b> <i>(Collectible within one year)</i> + Long-term Notes Payable <i>(Payable in longer than one year)</i> <hr/> <b>Total Liabilities</b> + Owners Investment + Retained Earnings <i>(income reinvested in the company)</i> <hr/> <b>Net Worth (Equity of the company)</b>
<b>TOTAL ASSETS</b>	<b>= TOTAL LIABILITIES + NET WORTH</b>

**Fig. No. 2: The current exposure of the balance sheet**

Source: www.score.org

<sup>21</sup> <http://www.ukessays.com/>

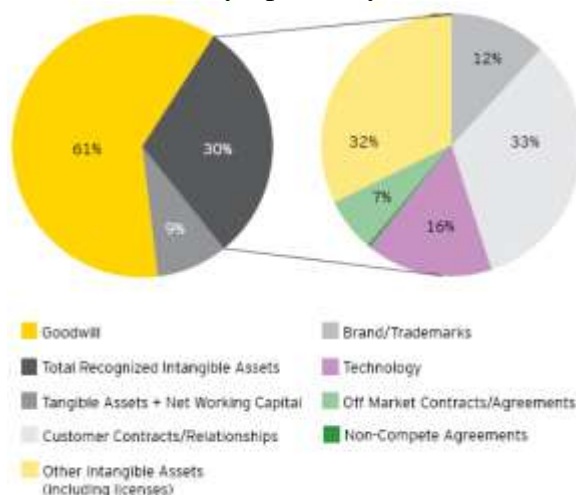
<sup>22</sup> <http://www.ukessays.com/>

In figure no. 2 we can see the standard format of a balance sheet where we can see how assets and liabilities are displayed at a certain time. In accounting, the balance sheet is a very important instrument that displays the net worth of a business at a given time.

#### 4. Valuation drivers in the telecommunications industry – Study case – Telcos Company

Telecommunications industry is a rather complex industry that includes all the specific services that facilitate the exchange of information on significant distances by electronic means. Such activities include the provision of telecommunications, voice messaging, data, text, sound, and video transmission. Plants that facilitates these activities are based either on a single technology or the combination of several technologies. The common point of these activities relate to the transmission of content, without being involved in its creation. The indicators cover the results of this field of data transmission, processing and efficiency, and telecommunications infrastructure<sup>23</sup>.

According to a benchmarking made in 2009, I realised that intangible assets represented — on average — approximately 30% of the telecommunications industry<sup>1</sup> targets' EV, while goodwill accounted for about 60% . This way I present you the second suggestive figure no. 3:



**Figure No. 3 : Intangible assets recognized in Purchase Price Allocation in the telecommunications industry**

Source : [www.ey.com](http://www.ey.com)

During this analysis I realised that in telecom acquisitions, the most significant value for the intangibles was typically assigned to:

- ✓ Customer relationships and contracts ;
- ✓ Licenses for mobile operators or technology-related assets for technology and equipment companies ;
- ✓ Trade names .

On the other hand we can find other intangibles like agreements, such as distribution, supplier or interconnect arrangements.

In the telecommunications industry the commonly methods used for valuing intangible assets are :

<sup>23</sup> [www.indicatorideperformanta.ro](http://www.indicatorideperformanta.ro)

✓ Income approach that allows future economic benefits of the asset to be captured (via the multi-period excess earnings method, relief from royalty method, build-out or greenfield method).

✓ Market approach which compares the asset with similar assets, and prices paid for them (comparable transactions method).

✓ Cost approach is based on the principle that no prudent investor would pay for an asset more than the cost to recreate it or to reproduce an asset of similar utility (it is also called replacement or reproduction cost method).

## 5. Conclusions. Further research

Intangible assets are a very important element, having a high enough funding implications vision of the knowledge society.

Valuation of intangible assets becomes day by day, more important business dynamics, requiring a multitude of situations imposed by the conclusion of transactions in such assets, by associations of undertakings or failures to obtain financing to establish tax Intellectual property, when determining compensation for dismissals or counterfeiting<sup>24</sup>.

In Romania, valuation of intangible assets is very less practiced. From my point of view, this is due mostly because netranzaționării such patrimonial elements and their unique nature.

In other words, valuation of intangible assets is made by an appraiser enterprise, they form part of the assets of a company.

So the research I tried to demonstrate that currently intangible assets have a greater weight to 10 years ago.

The emergence and development of multiple industries suggest that future studies on intangible assets should be controlled for each industry category or categories of such assets.

In future research will attempt to make a comparative analysis of assessment methods already known on these assets in order to create a new custom model.

According to studies done by the company specialist Insight Research, the global telecoms industry will reach 2.7 trillion dollars by 2017<sup>25</sup>.

So the global telecommunications industry continues to expand, as companies and consumers buy new wireless services.

According to the report, telecom services will generate revenues increasing from 2.1 trillion (2012) to 2.7 trillion dollars (2017). Combined average increase will be 5.3%.

The revenues generated by the wireless industry will grow by 64%, mainly due to the Asian region. The research director in the company - Insight Research, Fran Caulfield, said that despite the global economic uncertainty, the telecommunications industry significant growth, driven by the growing number of Internet users and business mobility solutions. Every day, new and new applications and often do not manage to cope.

However, regardless of these conditions uncertain, telecommunications is and remains a vital sector for economic growth. They bring added value, facilitating socio-economic advancement.

Therefore, we can say that it has become an indispensable tool, like water and energy.

Let's not forget that we are at the beginning of a long process of research and discovery. The vast majority of issues relating to intangible assets not yet been found and may be the subject of a long scientific study. The part which remains as the unknown cannot be contained in a single article, but certainly what we know today is very little compared to what we know over 10, 30 or 50 years and thus remains a matter of debate a very large scale.

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<sup>24</sup> [www.nou.anevar.ro](http://www.nou.anevar.ro)

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