ASSESING THE COSTS AND THE CONSEQUENCES OF THE ROMANIAN ECONOMIC CRISIS

Radu SOVIANI, PhD Candidate*

Abstract

This paper analyses the Romanian economic crisis (2009 – 2011) in terms of costs. If it is relatively simple to define the causes of the Romanian crisis, there are few studies that try to determine the actual costs. Each country has its own particularities so it is a general interest to determine the real costs. On the other hand, some of the costs may be exacerbated or distorted The focus of this Paper is to do a roughly estimate of the financial costs for the national crisis. We are aware that any estimation of the costs is going to be incomplete (for instance some of the costs are not yet recognized) and that is why we focus on a range of the likely costs for that the Romanian society gave up. The range is useful for future analysis of the preventive public policies in order to avoid a future crisis.

Keyword: cost of crisis, financial crisis, economic crisis, lost output, Great Recession

JEL Classification: E52, E58, G01, E62

1. Introduction

The economists are eager to find during or after a financial crisis if the policy makers took the right decisions and if they chose the right sets of instruments with a proper magnitude for addressing the turmoil. One way is to analyze the policy mix and the duration of the turbulent times and compare them with past crisis. A different approach is to propose a new set of instruments and by using estimates to figure a different duration or impact on the financial stability. Typically is difficult to assess the costs of the crisis because each indicator will be debatable and that is why most of the studies use the GDP losses (the contraction of the economy) that happened during turbulent times or in terms of bailouts. The 2009-2011

* *The Academy of Economic Studies, Bucharest.*

Romanian crisis was different at least for two reasons. First, while the world was going toward The Great Recession, Romania was building its own balance of payment crisis[1] that could have been triggered by a single shock or by a sum of shocks. Second, it was a very severe financial crisis that followed a historical boom in terms of economic expansion – the crisis of 2009 started to manifest in the third quarter of 2008 after a historical tranquil times (our findings are that in the 34 quarters of the expansion phase for the economic cycle before the crisis there was no recessions and we had just to quarters of negative economic growth (2000, Q3 and 2005, Q1). During such a long time probably the policy makers forgot the cost associated with crisis and that is why we try to estimate these costs, in order to have a tool of prevention in the future: ignoring the signals sent by the economy can be very costly and the social costs of the crisis are able to find a correspondent in terms of money.

2. Conceptual and theoretical context

A sum of factors induced the Romanian economic crisis: from the real estate bubble-burst cycle to lax (pro-cyclical) fiscal policy during the boom years, the accession of Romania into NATO and EU that attracted huge amount of money that were turned into easier borrowing that fueled a boom expansion (2004-2008) while widening the current account deficit to unsustainable levels. In the same time the monetary policy had to fight with still a high inflation (9,2% in 2004) while switched to the inflation-targeting regime. It is not unusual to see in emerging economy that the monetary policy objective (to achieve price stability) might be seen as an obstacle for the fiscal policy makers for whom the political cycle is more important than the economic cycle so they tend to be expansionary. When this view is used on a time frame when the GDP growth faster than its potential, the monetary policy tries to restrict the monetary stance by increasing the interest rate. For an economy that is still underdeveloped, and in a low interest rate global environment, it is easy for the commercial bank to prefer lending in a foreign currency. This limits the capacity of

[1] *As a PhD candidate, in our thesis ''The economic policies mix during a crisis ''(expected in September 2015) we argued that it is wrong to consider the Romanian Crisis just as a consequence of the Great Recession since Romania was developing its own balance of payment crisis before the Great Recession. We are going to use the results we look for in this paper in our Ph.D thesis as well.*

the central banks to restrict credit and adds vulnerabilities to the local banking sector. One of the reasons for a crisis to occur is a sudden stop in capital flows, that will dry money from the economy and finally will conduct to an economic contraction. Studies of the costs of financial crisis typically used output loss as an estimate, for instance Paoli, Hoggarth, Saporta (2009). Blinder (2013) argues that the costs of crisis are related to the speed of reaction. He compares the way Europe and USA acted during the Great Recession. He shows that the US Government was fast in reaction and that help contracting the initial package for helping the economy (the TARP program allocated 4.7% of GDP but finally just 3% of GDP were used, and more, the money were paid back, including interests). Blinder shows that the ad-hoc bailouts program adopted by the European Governments were late and more costly.

In order to estimate the costs that the Romanian society gave up as a consequence of the economic crisis, we will use the following indicators:

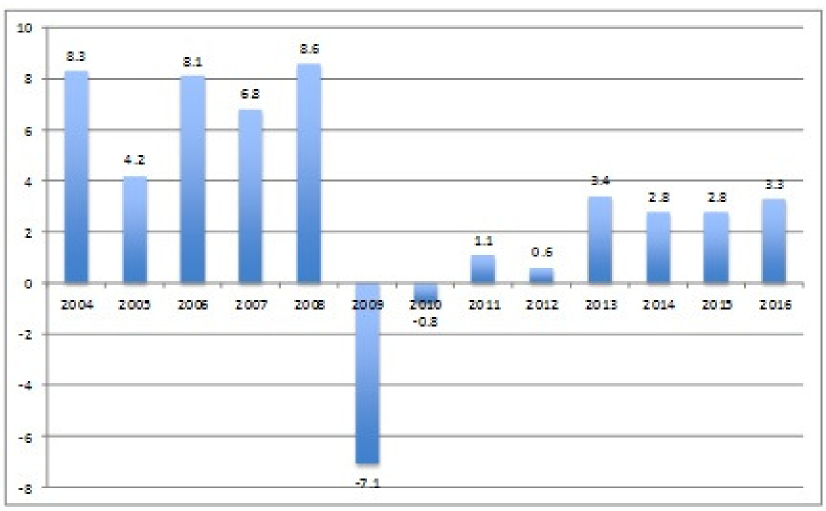
- The cost of lost output: how much does the society pays relative to a baseline trend that might have been in the absence of the crisis (and we define the baseline trend from the pre-crisis period;
- The decrease in the household wealth, as the crisis consume a lot of the net worth of the population;
- The decrease of the financial wealth. We will look at the evolution of non-performing loans (NPL) and also at the lost revenue for the public budget because of the NPLs;
- The losses of the human capital in terms of current wage income. For this, we will use the compensation of the employees as percent of GDP as a proxy for the forgone consumption;
- The losses of human capital in terms of lost jobs – the extended unemployment and reduced opportunities
- The costs associated with VAT and excises increase (the costs with fiscal adjustments);
- The costs with budgetary deficits associated to the crisis and the costs associated with the increase of the public debt (other than public deficit). The costs for financing the supplemental public debt.

3. The size and the time frame for a full boom-bust Business Cycle in Romania

Even if the crisis started to manifest in Romania in the third quarter of 2008 (when the quarterly GDP turned negative, -0.3% growth in Q3 comparing to Q2), the full deployment of the Romanian crisis was felt in 2009 (Soviani, 2014), when the annual GDP fell by 7.1%, continuing in 2010 (-0.8%) and going to 2011 as well. In 2011 the real GDP managed to growth at a annual rate of 1.1%, but we fully include 2011 in the Romanian economic crisis since in the last two quarters (Q3, Q4), the Romanian economy turned back intro recession, with two consecutive negative growth rates (as shown in Figure 2).

Figure 1

Real GDP Growth (%), 2004-2016



Source: AMECO Database, 2015; European Commission estimates for 2015-2016 annual growth

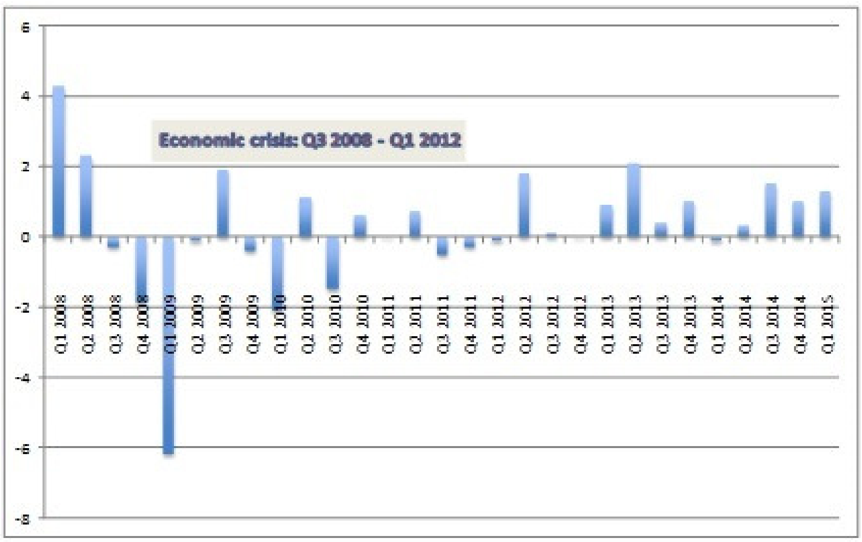
As shown in Figure 2 (Quarterly economic growth, seasonally adjusted data), the quarterly GDP started to decline in Q3 2008 (0.3%), and the last quarter of decline was in Q1 2012 (-0.1%). So, we set as a time frame for the economic crisis this period, which consists of 15 quarters.

As calculated from the data that were used for Figure 2, the average quarterly economic growth in the 15 quarters time horizon (Q3 2008 – Q1 2012) was -0.6%. Q1 2009 showed the maximum decline (-6.2%) while the best quarterly results during this economic crisis was in Q3 2009 (+1.9%).

In terms of lost output, we will further refer at the 2009-2011 yearly data as a base for computing the costs of the Romanian Economic Crisis.

Figure 2

Real GDP growth, quarterly change (%), 2008-2015



Source: Romanian National Institute of Statistics (INSSE)

In order to simplify the time frame on which we estimate the costs of the Romanian economic crisis we will use the yearly data for GDP dynamics and will split the time frame (2004-2015) into 3 intervals as follows:

- 2004-2008 – The pre-crisis. As data are reflected in Figure 1, the average yearly economic growth for the 5 years time frame was 7.2%;
- 2009-2011 – The crisis. As data are reflected in Figure 1, the average yearly economic growth for the 3 years interval was -2.26%;

• 2012-2016 – The after crisis. As data are reflected in Figure 1, the average yearly economic growth for the 5 years time frame is 2.58%. We consider 2016 as the end of the interval since the European Commission; in its Spring 2015 report on Cyclical Adjustments on Budget Balances considers 2016 as the moment of closing the output gap for the Romanian Economy.

4. A simple method to estimate a monetary cost of the Crises for the Romanian Society

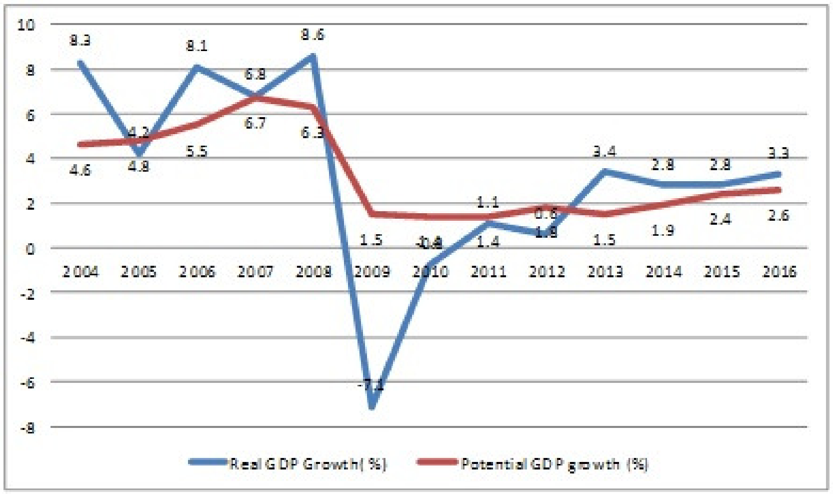
Usually, the economic literature uses the size of the economic contraction or the value of the rescue package for calculating the costs for a financial downturn. In this Paper we want to estimate a more accurate cost by trying to quantify some indicators as costs paid by the society, on the medium and long term.

One characteristic for the Romanian crisis it was that it was not anticipated and even worse, the fiscal policy makers were ignoring a contraction scenario and acted like the expansion of the economy is granted. This lead to expectations for people and companies that was unrealistic. While money were lost by wage cuts, a significant loss occurred by distrusting the policy makers and that was seen in a sharp contraction of the private sector deficit (before the crisis, in 2007, the current account deficit was 80% generated by the private sector while in 2009, it was 100% generated by the gsector, showing a sharp contraction). Even if the people and companies had money, they were afraid to spend. Some fiscal measures that were abruptly taken (like VAT raise and wage cuts) contributed more for a prolonged recession that was seen in a lower GDP for an extended period, greater households wealth decrease, higher and longer unemployment, etc. We summarize the main factors that are quantifiable, in our opinion, and might represent the costs of the crisis.

a) The cost of the lost output. As we concluded that the economic growth pace in the pre-crisis period was higher than the potential GDP, we will use as a baseline trend that might have been in the absence of the crisis the average potential GDP during 2004-2008. The indicators are calculated by the EU Commission and are included in its 2015 Spring Report on Cyclical Adjustment Budget Balances. The trend line can be observed in Figure 3.

Figure 3

Real GDP vs Potential GDP (%), 2004-2016



Source: AMECO Database

As the baseline trend is defined by the average potential GDP growth (2004-2008) respectively 5,58% annual ''potential'' growth instead of the real average GDP growth during this period (7,2%), and while the real average output (-2,26%) in the 3 years period crisis (2009-2011) fell far below its average potential growth for the same period (1,43%) the result for the lost output, just for the 3 years period is:

Lost output = 3 * (5.58 + 2.26) = 23.54% of GDP.

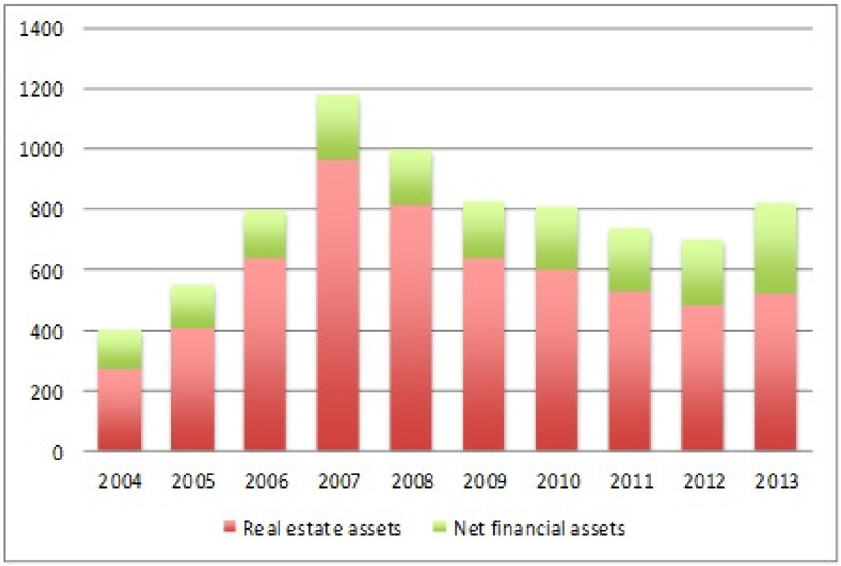
This is a minimum estimation since it doesn't count the real output GAP for 2009, 2010, 2011. In the second instance, the lost GDP would have been 27.81% of GDP. We also count the effects just for 3 years (even if we know that the GDP is affected for much longer).

b) The decrease in the households wealth (which includes Real-estate assets and Net financial assets), as the crisis consumes a lot of the net worth of the population.

According to the data of the National Bank of Romania (Georgescu, 2015), the household wealth decreased from its 2008 level (1,000 billion lei) to 820 billion lei in 2013.

Figure 4

Households wealth, bln. lei, 2004-2013



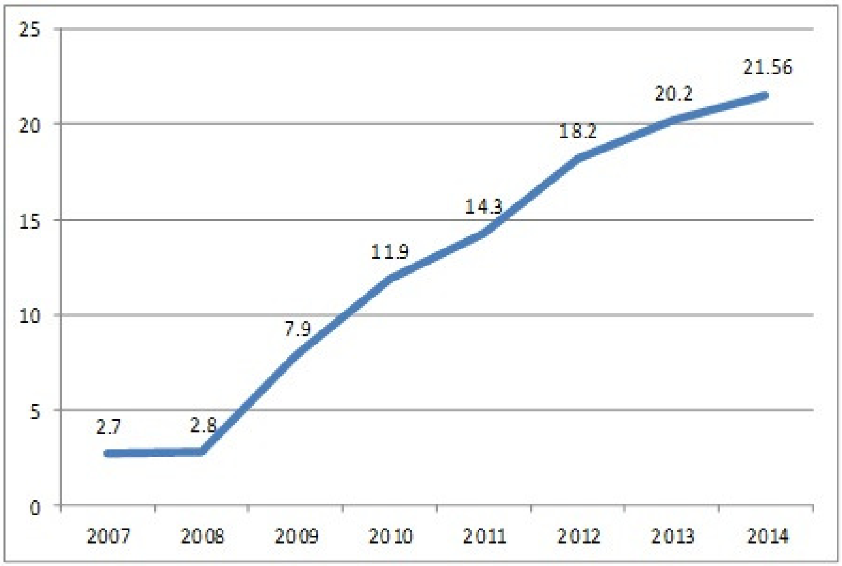
Source: National bank of Romania

The lost amount of 180 billion lei (49 billion Euros at the average EUR/RON exchange rate in 2008 – 3.6827 lei/ Euro) represents 35% of GDP, which we assume that is cost related to the decrease in the households assets. In time, some of this cost will be diminishing, but we take into consideration this figure 35% of GDP (for a GDP of 140 billion Euros in 2008) as an indictor for the decrease in the household's wealth. On the upper side, the diminishing of the household wealth from the peak in 2007 to 2013 was even larger, 95 billion Euros (or 67% of the 2008 GDP).

c) the decrease of the financial wealth. The evolution of the non-performing loans (NPL) is described in Figure 5 and we'll add to the cost of the crisis the lost revenue for the public budget because of the NPLs (as equivalent of the income tax applied on the stock of the NPLs).

Figure 5

Non-performing loans rate, as % of total loans



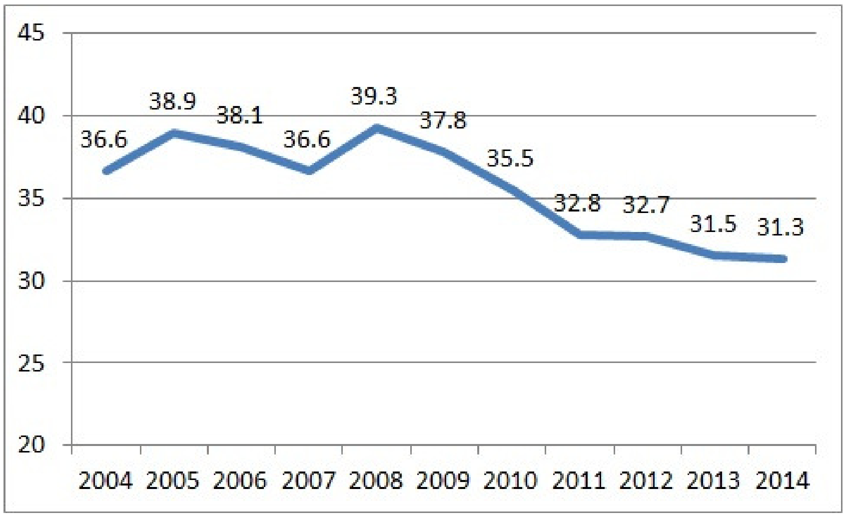
Source: National Bank of Romania

As we see, the NPL rate grew dramatically from 2.8% in 2008 to 21.56% in September 2014. The raise of 18.76 percentage points represents 40 billion lei (the rate is applied at the loans stock in September 2014), or about 10.86 billion Euros (at the average 2008 EURRON exchange rate). We will quantify as lost public revenue the result of the income tax (16%) on the NPL stock, since the NPLs diminish the profitability of the banks. **As a result we have a bill of 1,73 billion Euros on the public budget or 1.24% of GDP (2008).**

d) The losses of the human capital in terms of current wage income. For this, we will use the compensation of the employees as percent of GDP as a proxy for the forgone consumption.
As we see in Figure 6, the compensation of employees (as percentage of GDP) fell dramatically from 2008 to 2014 (from 39.3 of GDP to 31.3% of GDP), diminishing its share by 8 percentage points. We take now into consideration just the loss in terms of current wages income from 2009-2011.

Figure 6

Compensation of employees (% of GDP)



Source: AMECO

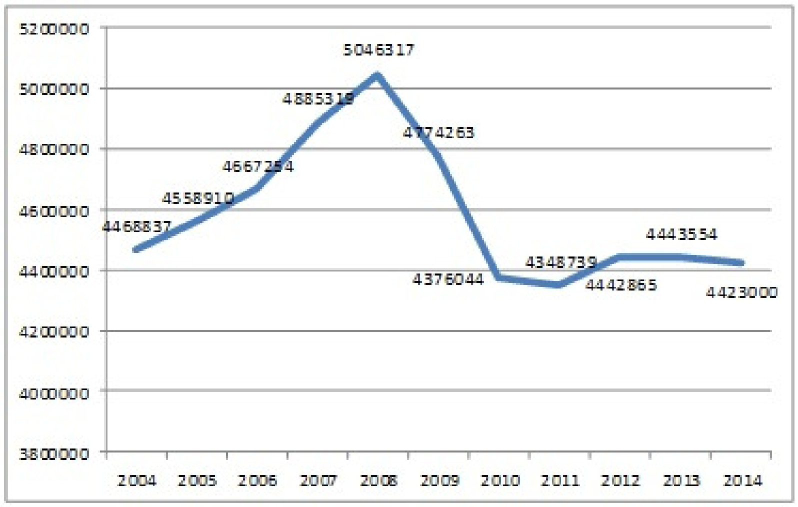
The Romanian economy's wage bill, on average, was 37.9% of GDP between 2004-2008, and 35.4% of GDP, on average, during the crisis (2009-2011). As we said, we do not assume as cost the further lost of share (till 2014) as we do a minimum estimate of the losses of the human capital in terms of compensations of employees. For the 2009-2011, the annual cost associated with the decrease of the average share of GDP is 2.5% of GDP, **with a total of 7.5% of GDP for the whole period, as estimation for the forgone consumption.** The average compensation of employees between 2009-2014 was 32.76%, so, on the upper side, we are able to estimate a broader number of 15.84 % of GDP (2009-2014).

e) The losses of human capital in terms of lost jobs – the extended unemployment and reduced opportunities.

As the crisis unfolded, the economy started to lose jobs. The maximum number of employees in Romania in 2004-2014 was registered in 2008 (5.04 million employees) while the minimum was reached at the end of 2011 (4.34 million employees). So, during the crisis, the economy lost about 700.000 jobs, as showed in Figure 7, 351.000 jobs being definitively lost.

Figure 7

Average number of employees



Source: AMECO

So the economy lost during the crisis (2009-2011) a total of 4.28 billion Euros (3.06% of 2008 GDP), as follows:

- 2009: 272.054 jobs (GDP/capita 2009: 5.912 EUR), total GDP lost: 1.6 billion Euros;
- 2010: 398.219 jobs (GDP/capita 2010: 6.260 EUR), total GDP lost: 2.49 billion Euros;
- 2011: 27.305 jobs (GDP/capita 2011: 6.616 EUR), total GDP lost: 0.180 billion Euros;

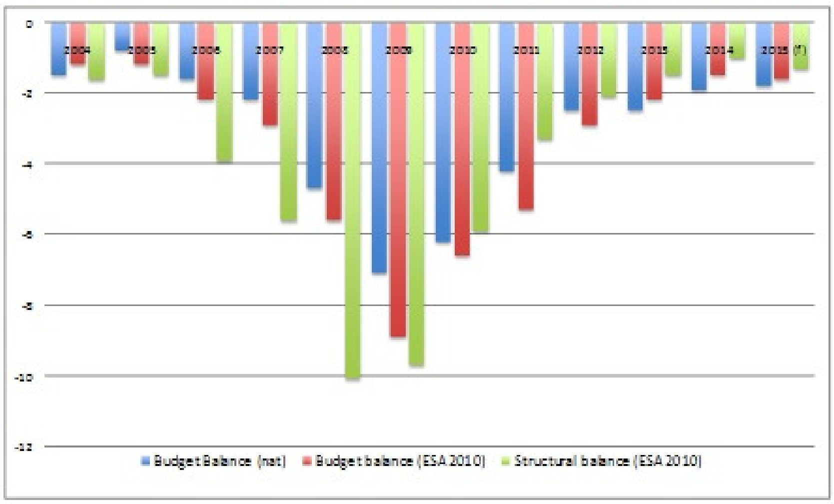
The 3.06% of GDP loss because of jobs is a minimum estimate as we calculated the GDP loss each year using just the jobs that were effectively lost that year and not modeling the financial costs of the long term unemployment (including unemployment benefit, permanent GDP loss for the long term unemployed). On the upper side, considering that the 351.000 jobs that were lost we have an additional 7.41 billion Euros further impact in 2012-2014, or 5.36% of GDP as additional losses.

f) The costs associated with VAT and excises increase (the costs with fiscal adjustments).

During the pre-crisis interval (2004-2008), the fiscal policy was pro-cyclical, so when the crisis unfolded there was a need for fixing the budgetary disequilibrium, especially because the high rate of growing of the budgetary expenses (including interests payments). As we see in figure 8, the budget balance in 2009 (ESA 2010) reached 8.9% of GDP (hiking from 5.6% of GDP in 2008).

Figure 8

Budget balances (national methodology, ESA 2010, structural Balance)



Source: AMECO

While we will consolidate the raise and the quantum of the yearly budget deficit **as the next cost (related to the raise of public debt), we quantify as costs of budgetary measures in order to fix the budget balance, measures like the VAT raise (from 19% to 24%), public servants wages cuts (-25%), excises raise. This set of measures reflects into to budget as ''fiscal consolidation''.**

Between 2009 and 2011, the budget deficit went from 8.9% of GDP to 5.6% of GDP. We consider as **costs for the fiscal adjustments during the crisis** the 3.6% of GDP decrease of the public deficit (the amount of fiscal consolidation). On the upper side, if we take into account the budget deficit curve between 2009-2014, the result is 7.2% of GDP.

g) The costs with budgetary deficits associated to the crisis and the costs associated with the increase of the public debt (other than public deficit).

As Figure 9 shows (General Government Gross Debt) shows, the public debt stood at 13.2% of GDP in 2008 (the average for 2004-2008 was 14.5% of GDP.

During the crisis (2009-2011), the public debt mounted from 13.2% of GDP to 34.2% of GDP (almost triple). In nominal terms, the public debt raised from 17.15 billion Euros to 44.68 billion Euros (27.53 billion Euros or **20% of 2008 GDP**).

Figure 9

Public debt - General Government Gross Debt, %GDP, 2004-2014

Source: AMECO

The public debt raised even further, reaching 39.8% of GDP in 2014 (four times higher than the 2008 level) with a correspondent nominal value of 59.2 billion Euros (+42 billion Euros, +244.9% comparing with the 2008 level and a quota of 30% of the 2008 GDP).

Since we follow the public debt dynamics in terms of costs just for 2009-2011, we will take into account the 20 percent share compared with the 2008 GDP as a direct effect of the crisis on public debt . According to this, we estimate the impact is **at least** 20% of GDP.

4. The estimation of the minimum costs for the Romanian economic crisis

As a result of the calculations done above, we are able to estimate de minimum costs of the Romanian economic crisis (2009-2011), as a share of GDP. We acknowledge that results could be even higher because the policy mix implemented during and after the crisis generate additional and lasts for many years.

Table 1

The costs of the Romanian economic crisis

The Costs	Minimum level (% of GDP)	Maximum level (% of GDP)
The lost output	23.54	27.81
Decrease in households wealth	35	67
Non performing loans	1.24	1.24
Losses of the human capital (wages)	7.5	15.84
Losses of the human capital (jobs)	3.06	8.42
The costs with fiscal adjustments	3.6	7.2
The costs with public debt	20	30
TOTAL COSTS:	**93.94**	**141.67**
Total costs (nominal, 2008 GDP, bln Euros)	**131.51**	**198.33**
Total costs/capita (Euros)	**6,575.5**	**9,916.9**

5. Conclusions on the assessment of the costs and the consequences of the Romanian economic crisis

An exact assessment of the costs of the Romanian economic crisis is hard to be made because of the strong correlations between indicators and the way they reacted on other policies that were implemented after the crisis. We are still able to do some estimates, in a range minimum-maximum, that goes from 93.94 percent of 2008 output to 141.67 percent of 2008 output.

Usually the costs of a crisis are associated with the lost output. We found out in our research that the costs associated with the human capital (in terms of jobs and wages) might be equal with the lost output on the medium term, and as high as half of the lost output on the short term (the conservative estimate).

We also found out that the correction of the wage bill (compensation of employees) was much sharper than the its expansion which is a tough lesson both for consumers (that use to draw long term plans based on short-term reality) and both for policy makers, who should understand that additional revenues to the state budget from a higher wage bill will turn sharp negative during a correction prompted by a recession. We found out that during the growth period in Romania (2004-2008), the average value of the compensation of employees grew by an average of 0.82/year, while the correction was 1.15 GDP points/year that shows a correction factor 40% higher than the expansion factor.

Usually, in terms of NPLs, economists are approaching just the shareholders losses. We stressed out that the NPLs, besides social costs in terms of present losses and future credit restrictions for the debtors might have an impact as high as the whole public deficit for a year, in tranquil times (in terms of profit revenues loss to the public budget.

Blinder (2010) that a fiscal stimulus might be successful and it was successful during the Great Recession in helping to end it and by accelerating the recovery. We found out that a fiscal stimulus was not possible in Romania (since a fiscal stimulus of about 12% of 2005 year GDP was pumped into the economy between 2005-2008 in a pro-cyclical approach of the fiscal policy and that is why, when the stimulus was needed (2009) the public budget had no room for stimulating the economy and also the policies acted pro-cyclical on while the economy was contracting, taking money out from the market). While this helped a lower cost of the fiscal consolidation it also influenced a higher cost in term of jobs that were lost.

Finally we hope that by using the result of the research (and as far as we know this is the first research about the Romanian crisis in terms of costs that quantifies not just the public debt and the output lost), the policy makers and other researchers will have the opportunity to have a broader view of the costs for ignoring a crisis before it unfolds.

The results we found are in line with some estimates for a different economy (Lutrell, Atkinson and Rosenblum, 2013a). For instance the crisis costs in the US economy in terms of 2007 GDP share is between 40% - 90% according to the path of output and between 100%-190% (Lutrell, Atkinson and Rosenblum, 2013b) according to the path of consumption.

We prefer to set as result for this paper the conservative estimated costs of the Romanian economic crisis the 93.94% of 2008 GDP, respectively a cost/capita of 6,575.5 Euros since some consequences are hard to quantify (for instance the impact of extended unemployment or permanently loss of jobs.

The costs are even higher but we are not able to quantify the impact of distrusting the economy (and significant lost of trust in government institutions and the adverse psychological costs. By the results we found, we hope to offer a first reference in terms of costs for the Romanian financial crisis.

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