A REGIONAL PERSPECTIVE ON THE IMPACT OF THE CURRENT ECONOMIC CRISIS IN ROMANIA

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Abstract

The outbreak of the financial crisis in Romania at the end of 2008 marked a turning point from the strong economic growth of the previous years. Starting from the nature and the key features of the current economic crisis, we examine its impacts in Romania, both from the national and regional perspective, and the corresponding policy responses.

Keywords: economic crisis, regions, Herfindahl specialisation index, location quotients, Romania

JEL Classification: O18, R11, R12.

The nature of the current economic crisis

The current crisis, the most difficult financial and economic turmoil since the Great Depression, has severely affected the global economy. It emerged in the USA, but rapidly spread into a global economic shock due to the tight connections within the financial system itself and also the strongly integrated supply chains in global product markets. The transmission of financial distress to the real economy also evolved at record speed, with credit restraint and declining confidence hitting business investment and household demand, notably for consumer durables and housing .

Various attempts have been made in order to explain the nature and the underlying factors of the current economic crisis. The prevalent approach is to accept the crises as natural phenomena for market economy, as they come and go quite regularly and differ depending on the actors and sectors of the economy which either initiate the next crisis cycle or deepen it. From this perspective the present crisis was produced by the slump on the subprime mortgage credit market, combined with the collapse of the real estate market and the weaknesses of consumer goods market, partly due to a high level of household debt. The current crisis must reach its bottom (as any previous cyclical one) before reaching a new equilibrium, by a gradual self correction process of the market. Therefore, the changes caused by the crisis will mainly apply to the scope of control over financial flows and instruments and the crisis is expected to 'cleanse' economic structures of inefficient companies and ventures, although this process may be obstructed by excessive state intervention.

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The second approach implies the rejection of the neoliberal model, based on a more profound view of the long-term business cycles, which are not self-generated, despite the fact that they recur with great regularity. According to leading economists such as Joseph Stiglitz, Paul Krugman, George Soros, each crisis has its own causes and produces different effects, leading to deep social and political changes. It is argued that the current crisis, which is the first truly global crisis, leads to complex processes from which a self-regulated exit is not possible, therefore need for the intervention of the state, able to perform regulatory functions based on its strong institutions and aided by large-scale support provided by the central bank (Stiglitz, 2008). This interpretation of the current crisis stresses that without strong financial state support for the banking system and active regulations of the financial system, the market economy will not be able to overcome the slump and even with the state's assistance, the process will be long and may last several years.

The third approach is focused mainly on the qualitative aspects of the current crisis compared to the previous ones. Firstly, it is argued that the current crisis does not have its roots in the finance sector, being rather a crisis of the relations between the state and financial institutions which changed to a point which made any state control over financial institutions impossible and, moreover, it actively supported processes of contracting loans with practically no chances of repayment (Gowan, 2009). Secondly, the ongoing qualitative processes fundamentally changed the principles on which the current market mechanisms were based, and disconnected the banking from the other sectors of the economy.

The European perspective on the crisis

The crisis impacted different economies with varying intensity. For instance, Japan has been hit by the greatest recession in sixty years and its exports have dropped by half, the US recorded negative growth rate, continuing decline of the stock market, drastic drop of real estate prices, and increase of unemployment and falling demand as well and the EU economy entered the steepest downturn on record since the 1930s.

In Europe, the effects on particular economies are considerably differentiated – from a major collapse of such economies as Iceland and Latvia, through serious difficulties of Hungary and southern EU countries to a relatively stable, though greatly weakened, economic situation in Poland, the Czech Republic, and Slovakia.

From the autumn 2008, the crisis has propagated in the new member states of the EU, showing its first signs in the capital flow reversals, reduced access to liquidity, etc. The impacts varied from moderate decline in economic growth (Poland) via significant drop (e.g. Slovakia, Czech Republic, Bulgaria) to sharp drop (e.g. The Baltic states, Romania), owing to differences in economic structure and openness of the economies

Although the present economic downturn has directly affected the new member states with about one year delay, the depth of the crisis is not likely to be

smaller than in advanced economies either, due to insufficient financial and institutional strength of the state in countering the crisis. Moreover, crisis management in the euro area has been blamed for worsening the crisis in Central and Eastern Europe as it primarily served the interests of the financial institutions and the economies of the euro area (Darvas and Pisani-Fery, 2009), thus creating the danger of a new political and economic divide within Europe. Western European ownership of new member states banks had a role in the pervasive development of foreign-currency loans to the private sector in many countries in the region, which now adds to their vulnerability face to the financial crisis.

Effects of the economic crisis in Romania

The financial crisis initially hit the Western Europe, while Romania, like other peripheral countries in the EU, was still experiencing strong economic growth. The global financial turmoil has reached Romania during the last quarter of 2008 and very soon it became obvious that the crisis would have serious effects on the real economy. The international economic crisis has impacted the Romanian economy through various channels, as follows (Isarescu, 2009):

- The trade channel: the exports slow down and even decrease.
- The financial channel: the access to external financing is limited, which determines a contraction of the crediting volume and generates difficulties with the private foreign debt.
- The exchange rate channel: the reduction of external financing has been reflected by the national currency depreciation.
- The trust channel: withdraw of foreign investors from East-European countries.

Romania had experienced robust economic growth for eight consecutive years, but as the financial crisis started spreading across the economy, things took a sharp turn for the worse. A drop in external and domestic demand led to a slowdown in *real GDP growth* - from an average of 8.9% on an annualised quarter-on-quarter basis during the first three quarters of 2008 to an almost 13% decline in the fourth quarter, one of the sharpest turnarounds among emerging markets.

The worst affected economic activities were, in a first stage, manufacturing and financial activities, real estate, lending and services for enterprises. Other activities decreased as well, but managed to maintain positive growth rates. Manufacturing turned from a 4.9% increase in the first three quarters to – 7,7% in the fourth one, while financial activities moved from +5.3% to – 1.5% in the same period.

The negative impact of the crisis in Euro-area has continued in 2009, the Romanian real GDP recording –7,1 annual percentage change. The fall in demand on the main Romanian export markets combined with the decrease of FDI severely hit domestic manufacturing triggering an overall decline due to the reduction or even temporary stop of the activity in many of the production units. In the industry sector

the sharpest decline in production capacities has occurred in some key sub-sectors: goods made of non-metal ores, metallurgy, computers and electronics. In spite of that, a revival of the economy is still expected to start in 2010, considering the low point of the economic decline will be reached in the coming two-three quarters.

Export growth has also declined, but imports have dropped even more steeply, from +28.3% in the first three quarters of 2008 to -10.2% in Q4. Meanwhile exports fall from +25.9% to +1.6% growth and the declining trend continued in 2009.

The *current account deficit* had been very large in recent years, as imports chronically outstripped exports. A large part of the consumption was financed by private sector debt, most of it in foreign currency. Now the stronger decrease in imports generates a rapid correction in the current account deficit: the current account deficits are expected to drop from 12.3% in 2008 and 3.9% in 2009 to 3.3% in 2010. Among the factors explaining this reductions, consumption contraction (especially durables) and an improvement of the negative saving rates are playing important roles.

Although *unemployment rate* usually increases in Q4, its escalation in the fourth quarter of 2008 (0.4% increase against the common 0.1-0.2% in the previous years) has to be considered a clear manifestation of the current crisis. After many years of low unemployment, mainly due to over two million Romanians working abroad, annual unemployment rate raised from 4.1% in 2007 and 4.4% in 2008 to 7.8 % in 2009.

Net investments recorded a severe decline, dropping from their long recorded tendency of 15-30% growth on a year to year basis to just + 2.3% in the fourth quarter of 2008 and -0.3% in the first quarter of 2009. *Foreign direct investments* declined as well. The value of FDI, which had been 7 million euro in 2007 and 9.3 in 2008, dropped to only 4.8 billion euro last year, which is though considered a moderate decline compared to the average international investments trend in the current economic environment.

While some important foreign companies (e.g. Unilever, Kraft Foods and Coca Cola) relocated their Romanian subsidiaries in cheaper workforce countries as Moldavia and Bulgaria, new companies decided to invest in Romania. For instance, PepsiAmericas, one of the world's most important fizzy drinks production companies, opened in September its largest European production unit, located in Ilfov county. The company also finalised in May this year a ten million dollars investment to modernise and enlarge the production line capacity for mineral water in Covasna. On the other hand, an encouraging tendency is the orientation of foreign investors to Greenfield projects in South-East of Romania, in counties like Prahova, Buzau, Gorj, Calarasi, Giurgiu and Dobrogea zone. Till now preference was given to Bucharest and the West of Romania.

Return migration and remittances. The global economic recession significantly reduced in 2009 the amounts of money sent by the Romanians working abroad, which had been quite large before, reaching a peak of 5.1 billion euro, or 4%

of the economy in 2008. According to the World Bank data, Romania is among the top ten states by size of remittances.

Statistical data show that by May 2009, remittances sent in Romania amounted to only 1.8 billion euro, down by a third from the same period of 2008. Remittance flows are expected to further decrease due to job losses, lower earnings, slower migration, and even return of immigrants (especially from Italy and Spain) in Romania. This is an worldwide trend: the Institute of International Finance predicts continually dropping net private-capital inflows into emerging economies: from $929 billion in 2007 and $466 billion in 2008, to around $165 billion in 2009.

The banking sector has been less affected so far thanks to Romania's lack of exposure on financial products which generated this turmoil (subprime loans) as well as to "the Central Bank's prudential measures and its monetary policies" (Isarescu, 2008). According to the Central Bank Governor Mugur Isarescu, the Romanian financial system is stable and sure for the time being and new measures are prepared in order to ensure liquidity or to increase prudential rules and to strengthen the deposits guarantee policy.

Regional distribution of the recession in Romania

Romania's administrative-territorial structure includes eight development regions, corresponding to NUTS2 level of the EUROSAT, which have been established on a voluntary basis (without being administrative units) in order to ensure the regional development policy elaboration and implementation framework. Each region comprises between 4 and 7 counties (excepting Bucharest-Ilfov region).

As far as the regional disparities are concerned, the distance between the richest and the poorest NUTS2 regions is about a factor of three, more precisely 3.39:1. Thus, in Bucharest-Ilfov region the GDP per capita reached 83.8% of the EU-27 average in 2006, whereas the lowest GDP per capita compared to the EU-27 average was recorded by the North-East region of Romania, namely 24.70%. These figures reflect an increase in regional disparities determined by the rapid development of Bucharest-Ilfov region: its growth rate between 2001-2006 was two times higher than the national average.

Five out of the eight NUTS2 Romanian regions are included in the fifteen lowest EU regions in terms of GDP per capita. Apart from Bucharest, the only region that has succeeded to leave this group since 2004 is the West region. In 2006 the GDP per capita at PPP of the West region was 45.2% of the EU average.

Moreover, the disparities are even higher at the NUTS3 level, between the counties included in each region. For example, in South-Muntenia region there are well developed counties such as Prahova, Arges, Dambovita but also much less developed ones such as Calarasi, Giurgiu, Teleorman.

The current economic and financial crisis displays an uneven distribution of its effects at regional scale, depending on the specific economic and social structures, regional specialisation degree, export orientation of economic activities, etc. A study

supported by the Romanian journal "Capital" (Amariei and Hritcu, 2009), estimates that 25 counties out of the total of 42 are in danger to be seriously hit by recession. In these counties the industrial production already decreased by 30% to 70% in the first quarter of 2009 compared to the same period of 2008, while the unemployment doubled in many cases in just five months (end of February 2009 compared to end of September 2008). New foreign investors have not been attracted whereas some of the old ones are about to leave. The worst situation is recorded by the cities of a high specialisation degree, where the economy is mostly depending upon only one big employer as, for instance, Galati city in Galati county -dominated by Acelor Mital (steel industry) and Pitesti city in Arges county – highly dependent on Dacia Renault (car industry). The methodology employed was based on a series of indicators such as: the evolution of the unemployment rate, the industrial production index, foreign investments per capita, the share of employment in vulnerable sectors, the export dependency ratio, private debt, banking employment degree, average salary, economic diversification, vacant jobs, number of construction permits per capita, all of them calculated at county level.

Usually the crisis induces **a higher vulnerability** of the most developed counties, which are much closer to the world economy's evolution and, thus, more exposed to the crisis shocks. Within this category the profile of the most crisis-vulnerable counties can be described as follows: a mono-product based industrial development, predominantly export-oriented, industrial firms re-located from Western Europe (e.g. lohn-type production), big investment projects of multi-national firms, large industrial parks, etc. On the other hand, in our opinion, given the economic potential of the most developed counties, it is likely that they will recover easier after the highest crisis intensity will have been left behind. In particular, the counties displaying a higher production diversification will be in a better position. Among zones of a higher vulnerability are also those characterised by a high indebtedness degree of agricultural producers, food industry producers and SMEs in general.

The study identified the top 3 most vulnerable counties to be:

- Galati (South-East region). Its economy is excessively dependent on the Acelor-Mital steel works, whose production recorded a serious drop in the Autumn 2008 and continues to be confronted with recession caused problems.

- Arges (South region). The whole economy is dependent on Dacia-Renault car company: a serious problem of this company might bankrupt the whole area.

- Arad (West region). The big employers are car components producers, largely dependent on the foreign demand.

At the opposite pole are situated the predominantly agricultural counties, of a traditional economy, located in South and East of Romania. The experts estimate that these counties, with a high share of rural population will suffer less than the developed ones as a result of their subsistence agriculture, where the crisis influence is very low. In fact, in such counties the current overall economic situation is overlapping on a previously low development level. In the counties resistant to crisis

the stability is also based on the low vulnerability of their most important industrial branches, mainly represented by milk processing, mineral water bottling, wood processing, etc., less sensitive to crisis compared to car industry or constructions, for example.

In the top 3 most resistant to crisis counties are:

- Suceava (North-East region). Its big advantage consists in high tourism potential. Other well developed sectors are milk processing, mineral water bottling and wood processing industry.

- Dambovita (South region). It has a diversified economic structure. The highest share is recorded in agriculture.

- Giurgiu (South region). Food, textile and chemical industries have the highest share, but agriculture is also very well represented in county's economy.

Some relevant examples of counties in each category, with their strengths (S) and weaknesses (W) in terms of resistance to crisis are presented below.

Severe vulnerability

Arad. S: Important investments in infrastructure. Well qualified labour force. **W:** Big employers are car components producers. Export dependency.

Arges. S: Expected big investments in constructions. Low indebtedness degree. **W:** Major dependency on Dacia-Renault company. Low level of public investments.

Galati. S: Quite low crediting rate. Low banking employment degree. **W:** Extreme economic dependency on the Acelor-Mital works activity.

High vulnerability

Bucharest. S: High level of foreign investments, high saving ratio and economic diversity based on activities connected to the international economy. At the same time, more opportunities to recover after the trough of the cycle. **W:** High share of employment in service sector and export dependency.

Cluj. S: Economic diversity based on activities connected to the international economy. High income level. Low unemployment rate. At the same time, more opportunities to recover. **W:** High indebtedness degree. Export dependency. High banking employment degree.

Average vulnerability

Dolj. S: Ford recent investment. High amount of funds allocated to infrastructure projects. **W:** High indebtedness degree. Decrease in industrial production. Low job offer.

Low vulnerability

Suceava. S: Diversified structure of local economy. Important share of food industry. **W:** High unemployment rate.

Our own calculations regarding the specialisation degree at county level support most of the findings mentioned above. Thus, Appendix 3 shows the values recorded by the Herfindahl specialisation index, which confirms the well-documented positive linkage between the development level and the degree of the diversification of the economic activity with the best developed counties having the most diversified economic structure, while the least developed ones usually display a high degree of specialisation.

Although it is largely accepted that the bigger the specialisation level the higher the economic risks in case of economic shocks, from the perspective of the current economic crisis, territorial specialisation may entail vulnerability only for the regions dominated by economic activities open to the current crisis such as banking and finance sector, constructions, real estate, automobile industry, etc.

On the opposite side there are highly specialised counties, based to a great extent on a subsistence agriculture, that are less sensitive to the economic crisis. These are counties with a low development level and a low diversification of economic activities, agriculture having an important share in their economy (the location quotients for agriculture are also above 1 – see Appendix 1 for methodology and Appendix 5 for data) and making their economies more stable and less vulnerable to economic downturn. In this respect can be mentioned counties like Botosani, Vaslui, Calarasi, Giurgiu, Ialomita, Teleorman – all of them concentrated in the two least developed Romanian regions, namely North-East and South-Muntenia.

The values recorded by the Herfindahl specialisation index (Appendix 2) indicate an important diversification of activities in the best developed counties like Cluj, Constanta, Brasov or Bucharest Municipality, mainly based on activities connected to the international economy. Such a situation makes these counties more receptive to the economic crisis effects. Besides the counties already mentioned, in this category can be included Iasi, Arges, Prahova, Valcea, Arad, Timis, Bihor, Mures, Sibiu, Ilfov. As highlighted by Appendix 5, in these counties the location quotients are above 1 for activities such as manufacturing industry, construction, hotels and restaurants, real estate transactions, finance and banking, etc., more open to economic crisis effects.

An overall view points out that the most developed regions also present the highest diversification of the economic activity. For example, in the case of Bucharest-Ilfov region the development index of 0.7208 (see Appendix 1 for methodology) and the Herfindahl specialisation index of 0.1174, for West region the values of these indices are 0.3793 and 0.1560 respectively, for Centre region – 0.3471 and 0.1598 respectively. These regions display a high amount of foreign direct investments per capita as well (Appendix 3).

Unemployment is a major symptom of any crisis as it is one of its most visible and socially significant

effects. Despite having grown pretty fast in 2009, the unemployment rate is still moderate so far. In Europe as well as in Romania, it is currently not as high as several or a dozen years ago (e.g. in Spain in the mid-1990s and it reached almost 20 per

cent, and was slightly lower in Ireland and Finland) and is far from the extremely high rates of the Great Depression (30-40%). The evolution of the unemployment rate in Romania, depicted in Figure 1, indicates high territorial variation, ranging from 1,3% (Timis) to 8,2% (Mehedinti) in 2008 and from 1,8% (Bucharest Municipality) to 12% (Vaslui) in 2009. Except for Bucharest, in the 2008-2009 period there was an increase in unemployment in all counties, the highest relative growth of the unemployed being +162% in Bistrita-Nasaud, followed by Timis (139%), Sibiu and Arad. All these counties previously had very low levels of unemployment (below 2.5% in 2008). On the contrary, the countries less affected by the increase in unemployment were the ones which had higher inactivity levels earlier.

To understand the underlying reason for this we have to take into account the economic environment of backward regions. The historically higher inactivity levels in these areas have shown a lower than expected increase because they were undertaking economic activities less exposed to the crisis shocks. Nevertheless, the situation for a huge number of working age inactive population in backward regions is worse than before the crisis in the sense that their already small chance of getting formal employment has further decreased.

The growing unemployment will most likely have an impact on the rapid growth of the shadow economy and on the deepening of social inequalities. One of the consequences of unemployment could be remigration, mainly from big cities to villages or small towns – places of the migrants' origin and the return migration from abroad.
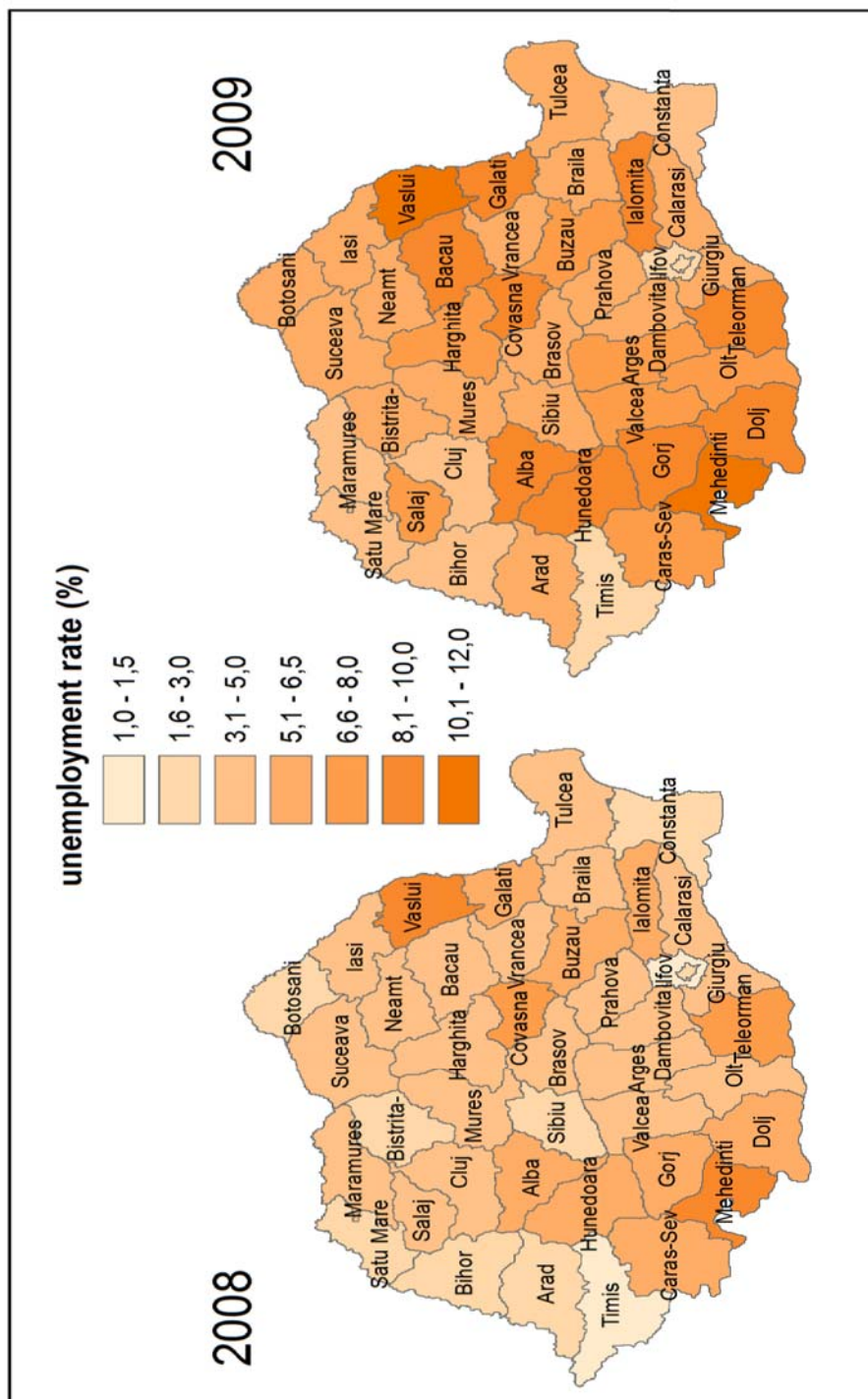
Figure 1. The territorial variation of the unemployment rate
Source: authors' processing based on data issued by the Romanian National Institute of Statistics

Policy response to the crisis

The response to the adverse effects of crisis in Romania cannot be similar to those formulated by various European countries and the US, considering the particularities of the Romanian economy, especially its big current account deficit, which indicates its dependence on external financing. Consequently, the National Bank Governor considers that strong fiscal and salary policies are necessary, accompanied by significant allocations for investments, able to create spillovers effects for other economic sectors and induce a further relaxation of the monetary policy (Isarescu, 2009). In other words, an optimal combination between budgetary, salary and monetary policy, of a similar degree of restrictiveness for each of them, which will be able to direct the economic activity to work and productivity.

Moreover, the Government can contribute to the improvement of the foreign investors' perception by various measures, such as the increase in the absorption capacity of EU funds and, thus, the replacement – to a certain extent – of the private foreign financing by public foreign financing or the creation of the new jobs in promising sectors such as infrastructure, tourism, agriculture, food industry, etc., which are seen as sectors able to gradually take over the role of economic growth engine. Also, the agreements with international institutions such as European Commission, European Investment Bank, International Monetary Fund are welcome, as they can compensate the significant diminishing of private capital inflows.

Financial support package from IMF and World Bank

The downturn led Romania to approach **the IMF** for a loan in March 2009. The IMF, together with the European Union and the World Bank, committed to supporting the authorities' efforts to counter the effects of the international crisis. The IMF's Executive Board has approved a 24-month Stand-By Arrangement for €12.95 billion as part of a total €20 billion financial support package to help cushion the effects of the downturn. The program covers three main areas: fiscal consolidation, banking reform, and reducing inflation to help restore financial stability (Franks, 2009):

- The **fiscal reforms** include measures to improve budgeting, streamline public wages and pensions, and make public enterprises more efficient to ensure that the deficit will remain low in the future; measures have already been taken to contain the fiscal deficit. Runaway spending will be curbed, but at the same time, the government will increase public investment to ensure a long-term improvement in competitiveness. To make sure vulnerable groups in society are not hit overly hard by these reforms, the government will make arrangements to protect the lowest paid public employees, the poorest pensioners, and others exposed to the economic downturn by boosting social safety net spending.

- To ensure that the **banking system** remains sound, the deposit insurance

system is being strengthened and bank resolution laws are being improved so that the government can respond immediately if banks were to get into trouble; Banks have agreed to a provide additional capital as a safety bag against future losses, and foreign banks in Romania have agreed to keep their money in the country.

- **Monetary policy**: Romania's National Bank is committed to bringing inflation down within its target range; lower inflation should result in greater financial stability and make it possible for the central bank to gradually reduce interest rates and stimulate a return to growth—without risking capital flight or instability in the exchange rate.

Romanian officials discussed late July with the officials of the International Monetary Fund the measures implemented in the framework of the anti-crisis plan and the progresses made so far.

On July 2009 *the World Bank* approved a 300 million euro loan for Romania as a first part of a programme that could total 1 billion euro to help mitigate the impact of the global turmoil. The next two tranches of 360 million euro and 340 million euro, respectively, are expected to be approved by the middle of 2010. According to Benoit Blarel , the chief of the World Bank Office in Romania the loan will underpin measures to reduce the impact of the international economic crisis, revive economic growth and convergence. He stressed that this fund are going "to strengthen public expenditure management, to cushion the impact of the crisis on the poor and vulnerable, and to minimise risks of a domestic financial sector crisis by addressing current and potential vulnerabilities" (Capital Online, 2009b). It is important for the future of the Romanian economy to make good use of these loans. The increase of expenditures stimulating the economy will cause an further increase of the already important state fiscal deficit creating a lasting burden for the post-crisis period.

Anti-crisis governmental plan

As conditions in the region worsened, the Romanian authorities decided to put together a comprehensive policy package to bolster their economy's ability to withstand the crisis. On March 2009 Prime Minister Emil Boc presented a government anti-crisis plan to parliament, including investing in infrastructure, maintaining the current flat tax rate, and injecting capital into the Romanian Savings Bank and Eximbank. The plan also includes measures to protect the low-income population, including a programme to subsidise medicines for pensioners.

The Romanian Government has also decided on the setting up of the credit counter-guarantee fund for small and medium-sized enterprises, a proposal included in the anti-crisis measures plan (Post Privatisation Foundation, 2009). The normative act was approved in order to improve SME access to financing by taking over some of the risks undertaken by guarantee funds upon extending guarantees. Under the emergency ordinance approved by the Government, the counter-guarantee amounts to a maximum of 80 percent of the contracted guarantees. The requirements for the award of the counter-guarantees are set up in a counter-guarantee scheme suggested

by the fund and authorized in accordance with the state aid legislation into force.

Other proposed measures envisage the credit guarantees for exports, agricultural producers and SMEs and the speed up of the access to EU funds as a solid financing source that does not create further foreign debt. The EU funding can contribute to agriculture development, tourism re-launching, social, transportation, energy and environment infrastructure modernisation, urban revitalisation, etc. – all of them able to revitalise the Romanian economy within the economic crisis context.

Some parties voiced criticism at the address of Romania's current anti-crisis policy which is considered to fail in providing the needed strategic vision and coherent solutions aimed at overcoming the crisis or limit its effects. For instance, the President of the Social Democratic Party (PSD, in ruling coalition) Mircea Geoana stated on June 16th that just three of the ten anti-crisis measures proposed by the ruling coalition produced coherent effects in economy (Financiarul, 2009). He warned that

"Irrespective of how many resources we will attempt to mobilize for capital investments, in the absence of some extremely energetic measures for combating corruption in the public acquisitions zone, solutions to the current crisis will be late to appear (...) We must think not only how we can overcome the crisis, but how we can prepare Romania's economic re-launch and positioning, as well as the European economies, in advantageous positions after this crisis. The biggest incurred risk in an electoral year is that the majority of important decisions are taken within an extremely tight and electorally oriented logic, with populist tendency."

He also drew attention upon the lagging behind between the European Union states and the risk of a "several speeds" Europe, with divergent economic and fiscal policies.

The government anti-crisis measures do not represent any radical intervention in the economy and are not likely to have strong regional effects, as well. Although territorial issues were not taken into account when these measures were designed, the anti-crisis policy may still have some regional impacts, for instance because of the regional concentration of the target groups.

In the 2007-2013 financial exercise, 16% of the funds allocated to the Regional Operational Programme[1] are directed to the North-East region, which might be an important opportunity for this region to cope with the severe underdevelopment: almost all its counties have a lower vulnerability to crisis in terms of sectorial economic structures, the biggest challenge being the capacity to ensure the requested co-financing. In this point the adverse effects of the crisis have to be overcome. Much lower allocations are directed, according to the distribution procedure, to the developed regions, which are already confronted with the crisis difficulties, given their orientation to activities affected by recession and export dependency. An important share of the sum allocated to the Regional Operational programme has as destination the social and transportation infrastructure modernisation as well as

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[1] The sum allocated to the Regional Operational Programme is 4.5 billion euros, which means that the North-East region will receive 725 million euros.

tourism promotion and development , which are sectors capable to generate high multiplier effects and, thus, to help the economy to recover.

Even if several engines of the economic growth in Romania until 2008 – real estate transactions, banking and finance, car imports, steel industry, chemical industry, car industry – are in a severe decline, there are other industries that can develop and support the economic growth: IT, telecommunications, food industry, pharmaceutical industry, public services, etc.

Final remarks

It is obviously too early to provide any definite prediction about the impacts of the current crisis, but, nevertheless 2010 is likely to be another difficult year for the Romanian economy. Even with help from the IMF and the World Bank, the recovery is very much dependent on the external economic evolution. Although many signs of economic recovery are visible in the advanced economies first hit by the downturn, it is premature to estimate when the economic crisis will come to an end and if Romania can made a quick recovery.

In line with the belief that Romania, as a peripheral country of minor importance in the world economy, has practically no influence on controlling the processes caused by the crisis and we have to expect for the global recovery to return, the government anti-crisis measures do not represent any radical intervention in the economy. Therefore, the policy makers are rather pursuing a crisis management programme that focus on alleviating the impact of the crisis and preparing for the likely post-crisis situation, in order to restore the economic growth as quickly as possible.

The anti-crisis governmental plan does not encompass measures which would have intended regional impacts. Nevertheless, all policy measures do have some regional impact, for instance because of the regional concentration of the target groups.

Romania has its own weaknesses which add to the challenges of the current crisis. A restrictive fiscal policy will be needed in the next period in order to correct for the fiscal imbalances of the last years. The IMF has been stressing the need to cut public expenditure, demanding a severe control of the finances of the government and local administrations and careful monitoring of state-owned companies, especially the ones registering losses.

If properly managed, the government's policies should allow Romania to avoid the worst effects of the crisis, although the ongoing recession is likely to leave deep and long-lasting traces on economic performance and social hardship.

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Appendix 1. Methodology

The Location Quotient LQ, is a simple measure of both concentration and specialisation of a region/county i in an industry j and can be computed based on either the concentration ratios g_{ij}^C or the specialisation ratios g_{ij}^S :

$$LQ_{ij} = \frac{E_{ij}/E_j}{E_i/E} = \frac{E_{ij}/E_i}{E_j/E} \Leftrightarrow LQ_{ij} = \frac{g_{ij}^C}{E_i/E} = \frac{g_{ij}^S}{E_j/E} , \quad g_{ij}^S = \frac{E_{ij}}{\sum\limits_{j=1}^{m} E_{ij}} = \frac{E_{ij}}{E_i} ,$$

where:

g_{ij}^S - the specialisation ratio: the share of the industry j in the total employment of region/county i;

E_{ij} - employment in industry j in the region/county i;
E_i - total employment in the region i;
i – region/county; j- industry.
E is the total country employment.

Owing to their simplicity, the location quotients are an easy to analyse and an useful tool in the early explanatory stages of the research. Values that surpass one unit indicate a level of regional/county concentration bigger than the average, while values under one are specific to regions/counties less concentrated compared to the national average. The pattern of change in the quotients over time depends upon the degree of industrial disaggregation. When interpreting the values of the location quotient we have to take into account that it is a relative measure that indicates the position of a territorial unit (region/county) compared to the average.

The Herfindahl Specialisation Index, an absolute measure of territorial specialisation:

$$H_i^S = \sum\limits_{j=1}^{m} (g_{ij}^S)^2 , \text{ where: } g_{ij}^S = \frac{E_{ij}}{\sum\limits_{j=1}^{m} E_{ij}} = \frac{E_{ij}}{E_i}$$

i – region; j- branch
E_{ij} - employment in branch j in region i;
E_i - employment in region i;
g_{ij}^S - the share of branch j in the total value of region i.

The Herfindahl index is increasing with the degree of specialization, reaching its upper limit of 1 when one region is specialized in only one branch. The main weakness of the Herfindahl index is the sensitivity of its lower limit to the number of observations: the lowest specialisation is 1/m (when all branches have equal shares in region i). As an absolute measure, this indicator has another important shortcoming: big regions, because of their larger shares, heavily influence the changes in the specialisation (the index is biased towards the larger regions). When computed out of county level data, the Herfindahl Index ranges between 0.0238 and 1 in Romania. We also have to note that the results are very much dependent on the fineness of the industrial classification employed.

The economic and social development of the counties and regions was estimated by means of a *Composite Territorial Index* of **Development** computed as an

weighted average of various indicators grouped in the following blocks: economy, health, education, infrastructure and standard of living (Mitrut and al., 2010).

Appendix 2. Development and specialisation level of Romanian regions and counties in 2007

Regions Counties	Development level*	Specialisation index (Herfindahl)
1. North - East	**0.2593**	**0.2097**
Bacău	0.3141	0.1616
Botoşani	0.2002	0.2784
Iaşi	0.3697	0.1634
Neamţ	0.2649	0.2391
Suceava	0.2882	0.2409
Vaslui	0.1187	0.2728
2. South - East	**0.3059**	**0.1675**
Brăila	0.3027	0.1733
Buzău	0.2601	0.2286
Constanţa	0.4222	0.1238
Galaţi	0.3006	0.1602
Tulcea	0.2658	0.1823
Vrancea	0.2841	0.2461
3. South - Muntenia	**0.2762**	**0.1961**
Argeş	0.3977	0.1744
Călăraşi	0.1432	0.2733
Dâmboviţa	0.3147	0.1971
Giurgiu	0.2446	0.3064
Ialomiţa	0.2347	0.2461
Prahova	0.3928	0.1523
Teleorman	0.2059	0.3312
4. South - West Oltenia	**0.3129**	**0.1972**
Dolj	0.3455	0.2112
Gorj	0.3528	0.1382
Mehedinţi	0.2523	0.2327
Olt	0.2418	0.2532
Vâlcea	0.3722	0.1747
5. West	**0.3793**	**0.1560**
Arad	0.3855	0.1786
Caraş-Severin	0.2552	0.1843
Hunedoara	0.3418	0.1359
Timiş	0.5349	0.1545

6. North - West	**0.3558**	**0.1793**
Bihor	0.3596	0.1840
Bistriţa-Năsăud	0.3178	0.2006
Cluj	0.5558	0.1390
Maramureş	0.3060	0.2108
Satu Mare	0.2880	0.2221
Sălaj	0.3080	0.2024
7. Center	**0.3471**	**0.1598**
Alba	0.3446	0.1837
Braşov	0.3752	0.1393
Covasna	0.2845	0.1859
Harghita	0.2807	0.1922
Mureş	0.3839	0.1724
Sibiu	0.4135	0.1541
8. Bucharest - Ilfov	**0.7208**	**0.1174**
Ilfov	0.5113	0.1642
Bucarest Municipality	0.9303	0.1199

*Composite Development Index (Mitrut and al., 2010)
Source: *authors' processing based on data provided by the Statistical Yearbook of Romania*

Appendix 3. Regional Foreign Direct Investments in relation to the development level, 2007

Regions	Development level*	FDI (%)	FDI per capita (euro)
1. North - East	**0.2593**	**1.6**	**180**
2. South - East	**0.3059**	**5.7**	**863**
3. South - Muntenia	**0.2762**	**6.9**	**888**
4. South - West Oltenia	**0.3129**	**3.2**	**601**
5. West	**0.3793**	**5.5**	**1,227**
6. North - West	**0.3558**	**4.5**	**698**
7. Center	**0.3471**	**8.3**	**1,399**
8. Bucharest - Ilfov	**0.7208**	**64.3**	**12,397**

* *Composite Development Index*
Source: *authors' processing based on data provided by the National Institute of Statistics and the National Bank of Romania*

Appendix 4. The ten largest foreign equity investors in Romania at December 30, 2008

Rank	Investor	Country of origin	Activities	Subscribed capital (EUR mn)
1	EON Romania SRL	Germany	Energy	72.3
2	Roche SRL	Switzerland	Healthcare	41.5
3	Unita Vienna Insurance Group SA	Austria	Insurance	35.9
4	WS Renewable Energy Hydro SRL	Austria	Energy	22.3
5	Lidl Romania SCS	Germany	Retail	21.4
6	Degi Titan SRL	Germany	Real estate	17.5
7	Nova Imobiliare SRL	Cyprus	Real Estate	15.8
8	Kato Drys SRL	Cyprus	Real estate	14.8
9	Siret Furniture Company SRL	Netherlands	Furniture	12.0
10	Trellborg Automotive SRL	Sweden	Automotive	11.9

Source: *Larive, based on the data from the Romanian Trade Register Office, December 2008*, www.larive.ro

Appendix 5. Location quotients by main economic activity, 2007

Region County	Agriculture, hunting and sylviculture	Fishery and pisciculture	Mining and quarrying	Manufac-turing	Electric and thermal energy, gas and water	Construc-tion	Trade	Hotels and restaurants	Transport, storage and communica-tions	Financial Intermedia-tions	Real estate and other services	Public administra-tion and defence	Education	Health and social assistance	Other activities
North - West	**1.103**	**0.211**	**0.447**	**1.125**	**0.729**	**0.835**	**0.983**	**0.876**	**0.940**	**0.884**	**0.685**	**0.797**	**1.066**	**1.024**	**0.792**
Bihor	1.107	0.899	0.954	1.180	0.826	0.766	0.983	1.091	0.906	0.696	0.671	0.797	0.994	1.034	0.443
Bistrița-Năsăud	1.230	0.000	0.241	1.141	0.638	0.774	0.950	0.619	0.818	0.698	0.523	1.119	0.975	0.923	0.693
Cluj	0.786	0.000	0.371	1.019	0.921	1.193	1.179	1.038	1.078	1.369	0.963	0.634	1.269	1.193	1.206
Maramureș	1.317	0.000	0.360	1.106	0.544	0.628	0.824	0.764	0.946	0.650	0.524	0.737	0.993	0.980	0.922
Satu Mare	1.320	0.000	0.136	1.242	0.449	0.770	0.797	0.597	0.691	0.803	0.453	0.833	0.958	0.852	0.701
Sălaj	1.222	0.000	0.200	1.166	0.728	0.446	0.976	0.715	1.090	0.632	0.686	0.984	1.015	0.910	0.414
Center	**0.833**	**0.238**	**0.739**	**1.296**	**1.023**	**0.852**	**1.091**	**1.338**	**0.979**	**0.845**	**0.742**	**0.873**	**1.084**	**0.995**	**0.949**
Alba	1.021	0.000	0.412	1.335	1.013	0.592	0.977	0.971	0.915	0.651	0.755	0.941	0.902	0.931	0.873
Brașov	0.465	1.054	0.344	1.284	1.082	1.312	1.312	1.966	1.100	0.952	1.105	0.900	1.165	0.933	1.158
Covasna	0.979	0.000	0.231	1.388	0.995	0.499	1.087	1.272	0.682	0.731	0.671	1.042	1.105	0.877	0.718
Harghita	1.129	0.000	0.537	1.237	0.660	0.618	0.984	0.886	0.864	0.606	0.513	1.006	1.176	0.931	0.661
Mureș	1.054	0.000	1.329	1.130	1.192	0.734	1.020	1.015	0.897	0.745	0.498	0.756	1.076	1.161	0.991
Sibiu	0.556	0.000	1.192	1.489	1.015	0.997	1.085	1.657	1.219	1.257	0.779	0.745	1.086	1.022	1.019
North - East	**1.398**	**1.188**	**0.558**	**0.816**	**0.862**	**0.849**	**0.871**	**0.823**	**0.705**	**0.613**	**0.620**	**0.882**	**1.159**	**1.085**	**0.831**
Bacău	1.059	1.110	2.038	0.961	1.170	1.232	0.952	0.549	0.778	0.752	0.677	0.873	1.182	1.100	1.000
Botoșani	1.729	1.629	0.133	0.717	0.660	0.555	0.749	0.586	0.583	0.473	0.456	0.900	1.033	1.038	0.826
Iași	1.126	1.680	0.034	0.795	1.022	1.140	0.914	0.906	0.791	0.732	0.911	0.830	1.427	1.398	1.100
Neamț	1.514	0.000	0.208	0.858	0.619	0.673	0.985	1.144	0.604	0.534	0.585	0.873	0.921	0.845	0.412
Suceava	1.570	1.026	0.712	0.715	0.777	0.675	0.851	1.038	0.757	0.563	0.442	0.910	1.110	0.863	0.896
Vaslui	1.686	1.714	0.000	0.847	0.741	0.503	0.663	0.539	0.600	0.497	0.455	0.946	1.114	1.168	0.483
South - East	**1.115**	**3.313**	**0.551**	**0.939**	**1.126**	**1.066**	**0.922**	**1.053**	**1.147**	**0.710**	**0.782**	**1.002**	**0.920**	**0.970**	**0.983**
Brăila	1.053	0.000	0.617	1.150	1.227	1.100	0.946	0.722	0.787	0.732	0.747	1.013	0.938	1.038	0.693
Buzău	1.442	1.374	0.898	1.004	0.743	0.775	0.844	0.618	0.692	0.532	0.484	0.966	0.872	0.815	0.639

Constanța	0.757	0.826	0.607	0.765	1.450	1.450	1.105	1.614	1.880	0.906	1.127	0.871	0.886	1.008	1.384
Galați	1.035	1.211	0.296	0.993	1.374	1.202	0.933	0.871	1.078	0.742	0.887	0.993	1.043	0.943	0.870
Tulcea	1.239	31.215	0.811	0.960	0.690	0.783	0.660	1.020	0.932	0.549	0.632	1.472	0.969	1.130	1.359
Vrancea	1.549	0.000	0.141	0.938	0.746	0.577	0.757	1.007	0.743	0.556	0.409	1.039	0.827	0.961	0.777
Bucharest - Ilfov	**0.124**	**0.413**	**0.337**	**0.771**	**0.954**	**1.758**	**1.424**	**1.345**	**1.560**	**2.882**	**2.631**	**1.412**	**1.015**	**1.043**	**1.941**
Ilfov	0.811	1.673	0.342	1.135	0.452	0.708	1.519	1.316	1.392	0.324	1.334	0.896	0.463	0.666	0.848
Bucharest Municipality	0.028	0.235	0.336	0.720	1.024	1.906	1.411	1.349	1.584	3.242	2.814	1.485	1.093	1.095	2.095
South - Muntenia	**1.268**	**1.235**	**1.462**	**1.037**	**0.884**	**0.798**	**0.827**	**0.842**	**0.888**	**0.564**	**0.774**	**1.020**	**0.848**	**0.883**	**0.672**
Argeș	0.966	0.000	1.218	1.348	1.145	1.046	0.829	0.930	0.808	0.714	0.864	0.902	0.931	0.784	0.814
Călărași	1.700	2.463	0.101	0.818	0.666	0.579	0.580	0.553	0.737	0.556	0.584	1.154	0.961	1.046	0.486
Dâmbovița	1.239	1.233	1.912	1.073	0.833	0.463	0.979	0.748	0.972	0.398	0.752	1.011	0.912	0.895	0.538
Giurgiu	1.881	2.854	1.631	0.383	0.848	0.821	0.631	0.513	0.833	0.552	0.574	1.433	0.812	0.884	0.442
Ialomița	1.587	7.448	0.304	0.750	0.604	0.744	0.831	0.669	0.743	0.561	0.606	1.163	0.848	0.813	0.804
Prahova	0.765	0.000	1.949	1.318	1.001	1.137	0.956	1.332	1.178	0.638	1.017	0.882	0.790	0.976	0.742
Teleorman	1.945	0.000	1.862	0.630	0.638	0.333	0.645	0.354	0.574	0.406	0.531	1.080	0.691	0.794	0.643
South - West Oltenia	**1.348**	**0.000**	**2.624**	**0.812**	**1.490**	**0.911**	**0.824**	**0.758**	**0.753**	**0.590**	**0.706**	**1.052**	**0.931**	**0.943**	**0.680**
Dolj	1.398	0.000	0.628	0.788	1.247	0.771	1.005	0.691	0.779	0.642	0.611	0.969	1.023	0.977	0.637
Gorj	1.008	0.000	11.768	0.656	2.517	1.157	0.682	0.966	0.732	0.635	0.965	1.109	1.019	1.014	0.631
Mehedinți	1.550	0.000	0.992	0.716	1.910	0.921	0.642	0.496	0.838	0.570	0.809	1.146	0.808	0.860	0.622
Olt	1.585	0.000	0.529	0.956	0.700	0.854	0.578	0.485	0.641	0.511	0.517	1.084	0.889	0.892	0.689
Vâlcea	1.171	0.000	1.600	0.895	1.570	0.989	1.014	1.142	0.784	0.562	0.772	1.045	0.838	0.938	0.818
West	**0.839**	**0.575**	**1.855**	**1.271**	**1.096**	**0.862**	**1.026**	**0.950**	**0.976**	**0.696**	**0.892**	**0.953**	**0.926**	**1.049**	**1.069**
Arad	0.794	1.181	0.627	1.525	0.894	0.694	1.114	0.717	1.026	0.800	0.781	0.929	0.836	0.816	0.998
Caraș-Severin	1.214	0.000	0.250	1.020	1.157	0.850	0.742	1.191	0.953	0.526	0.571	1.502	0.962	1.209	0.862
Hunedoara	0.751	0.000	6.547	1.103	1.761	0.957	1.101	0.845	0.933	0.687	0.837	1.070	0.866	1.076	0.794
Timiș	0.782	0.745	0.426	1.303	0.806	0.915	1.030	1.072	0.979	0.697	1.113	0.698	1.006	1.121	1.354

Source: *author's processing based on data provided by the Statistical Yearbook of Romania*