The Impact of FDI on the labor market in Central and Eastern Europe during the international crisis

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Abstract: One of the most important consequences of the economic and financial crisis is the record of negative growth rates and high rates of unemployment. FDI are widely recognized for their contribution on host country economic growth, therefore foreign capital inflows are considered a viable solution to reduce unemployment and stimulate economic growth. The aim of the paper is to review the main features of the labor market in Central and Eastern Europe countries, to analyze the dynamic of FDI flows in these countries and theoretically to present the effects of FDI on employment. The econometric analysis is conducted on the situation of Romania and emphasizes the negative relationship between FDI and unemployment.

Keywords: foreign direct investment, labor market, employment, unemployment, crisis

JEL Codes: E22, F21, J21, J6, J82

1. Introduction

The imbalances in the world economy caused by the economic crisis have generated changes of the economic conditions in the CEECs through three main channels: international trade, financial markets and internationalization of the production. On the worldwide scene, labor force mobility and technology transfer are essential elements which emphasize the interdependencies among economies.

The dynamic of global economy and forecasts for future development of financial markets, including the labor market, have caused increased concerns of the authorities towards adopting and carrying appropriate policies to find solutions to social problems they face: worsening poverty, long-term unemployment, aging population. Europe 2020 program adopted in Lisbon presents fundamental aspects to achieve higher, but also smart, sustainable and inclusive growth rates, using three pillars (macroeconomic policies, regulations on employment and macroeconomic reforms), thus encouraging unemployment reduction because of decreasing or eliminating disparities among the worldwide economies or among persons.

The economic and financial global crisis emphasized the important dangers the society is dealing with (active population and young employees decrease, the difficulties they have to face concerning labor market access, the migration phenomenon) and thus, the European initiatives – “An agenda for new skills and jobs” and “Youth on the move” aims are: to stimulate young people to find a job after graduation, to improve the working environment through education and training institutions, characteristics of labor market that will enhance the productivity.

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The economic damage caused by international financial imbalances lead to increased unemployment rates in CEECs and European authorities to adopt measures and macroeconomic reforms to enhance employment and reduce labor market disparities among countries [12]. In the worldwide economy, FDI flows exert a substantial influence through contribution to economic activity development or expansion gaining a higher level of labor employment. The liberalization of capital movements between economies under the influence of globalization allowed the reduction of the differences among them, FDI playing an essential role in this process despite the asymmetric effect generated on the labor market and representative indicators [8]. Empirical studies have shown that FDI has a crucial impact on the employment and unemployment rate, and the effects are dependent on the type of investment. Economic and financial crisis has demonstrated the instability of the international and financial system to turbulences by GDP decrease, influencing both development prospects of CEECs and the macroeconomic relevant indicators: sharp increase of unemployment rate, migration, layoffs and a downward trend in FDI volume attracted.

The aim of this paper is to shed light on the changes suffered by the labor market during the economic crisis in CEECs. The paper is structured as follows: section two presents the dynamic of the most relevant indicators on labor market previously and during the actual crisis; section three analyzes the evolution of the FDI volume in the selected countries and approaches theoretically the connection between FDI and employment and the last section studies the FDI impact on the unemployment rate in Romania and establishes the correlation between the variables.

2. The main features of the labor market in CEECs

The labor market, based on its basic mechanism – demand and supply, positively influences the economy development and economic growth, revealing the interdependencies and connections between social – economic prosperity, as a demand resource and population, as a resource of labor supply. The labor importance in economy is supported by Adam Smith who says that human labor is the foundation of progress and civilization.

The length of the transition process that CEECs has passed through was dependent on the economy characteristics, but the implications of the transfer from a centralized state economy to a market one were the same: the sudden decrease of active and employed population, high unemployment rates, limited capacity for creating new jobs, state enterprises privatization (FDI played a significant role) which often has led to jobs restructuring. EU accession due to meet the requirements of the community acquis and the release of international barriers caused an increased rate of emigration, the exodus of young generation with high intellectual developed skills and also by those with an average level of training animated by the desire of gaining increased incomes [5].

Europe Strategy 2020 provides for economic growth stimulation and creation of new jobs the use of three main politics and instruments: strengthening the single market, investments in economic development and instruments of foreign policy. The global economic crisis affected the economy, financial and commercial transactions in all its branches, CEECs suffering a severe contraction of real GDP growth since late 2007. Of these countries, Slovenia recorded the largest annual decline of -8 % in 2009 and Poland is the only country to avoid recession, demonstrated by GDP value in 2008 -1.6 % and 3.9 % in 2010. Romania and Bulgaria, both EU members since 2007 were among the hardest affected by global imbalances, recording GDP values of -5.5 % and -6.6 % in 2009, meanwhile in 2010, Bulgaria has an important progress in economic development reaching a GDP value of 0.4 %, while Romania was the only one that had an economic growth contraction of -1.6 %. Provisional and estimated data for 2011 – 2013 highlight national
economy recovery through a slow process, with small and insignificant progress and economic activities in intensity and scale [14], [18].

![Figure 1 GDP growth rate during 2000 – 2013 in EU – 27 and CEECs (Source: processed by [20])](image1)

The turbulences on international markets influenced the labor market dynamic in CEECs through the relevant indicators’ evolution: employed population, total and structured unemployment rate, by gender and age. Economic downturn, the reduction of the existing activities of multinationals or in the worst case, closing of its workstations put their stamp on the employed population evolution which, according to the figure below was maintained in most countries around the steady, the decrease being more obvious in Romania and the increase in Poland.

![Figure 2 Total employment during 2000 – 2010 in EU – 27 and CEECs (Source: processed by [20])](image2)

Main features analysis of labor market must include the study of unemployment rate, its level outlining a general image on national economy welfare. During the last year, unemployment turned into a primary and recurrence problem that most EU countries have to face and focus on identifying the best solutions to limit its increase. Figure related to unemployment rate evolution in EU-27 and CEEC highlights the progresses they have made during 2000 and 2007 through the programs and policies adopted which limited unemployment raise, but the situation changed under the impact of worldwide crisis. EU unemployed

![Figure related to unemployment rate evolution in EU-27 and CEEC](image3)
population was 19703.4 million people in 2000 and its trend was upward till 2005 and then in 2009 the growth was sudden, reaching in 2011 a value of 23223.10 million persons.

![Figure 3 Unemployment rate dynamic in EU – 27 and CEECs during 2000 – 2011 (Source: processed by [21])](image)

The labor market fluctuations during 2000 – 2011, pointing out that Slovakia, Hungary and Bulgaria have the highest levels of unemployment, reaching in 2011 a rate of 13.4 %, 10.6 %, respectively 11.1 % and in 2010, 14.4 %, 11.2 %, respectively 10.2 %, along with Poland which also have high levels of unemployment till 2006 (13.6 %). The lowest unemployment rates were registered in Slovenia, which, during 2007 and 2009 the value was between 4.4 % and 5.9 %, in 2010 amounted to 7.3 %, like in Romania and the Czech Republic, the latter with an unemployment rate in 2011 of 6.8 % [7]. In Romania, the unemployment rate has an oscillating character, with a minimum of 5.8 % in 2008, reaching 7.4 % in 2011. Maintaining unemployment rate in Romania at a level between 6.4 % and 8 % during 2000 and 2007 was mainly due to macroeconomic policies and reforms adopted to limit its growth and reduce inflation, generating additional costs that were favorable to its persistence. The dynamic of unemployment was significantly influenced by the plans, projects and strategies failed to ensure macroeconomic stability, the lack or low level of investments in infrastructure, insufficiently developed economic, political and democratic system. Labor market recovery is stimulated by economic growth and productivity, impact on real wages and in achieving these targets set by authorities, FDI play a fundamental role [10].

The unemployment rate has different characteristics by gender – women and men – and by age. At the international level, the female unemployment rate emphasizes an increase of women participation on labor market, in the society and in trade, economic and financial operations. The dynamic of the female unemployment rate shows a downward trend till 2008 and a slow increase after 2008, but the levels are much lower than 2000. The maximum, respectively minimum values are in Slovakia -13.3 % in 2011 and 6.8 % in Romania. At the beginning of the period, Poland recorded the highest value -21 % and during the recession reached a 10.5 % level.
Analyzing the male and female unemployment rates in CEECs during 2000 and 2011 we noticed that in EU, Czech Republic, Poland, Slovakia and Slovenia have the female unemployment higher than male. In Hungary, the statistics show that the superiority of one gender unemployment is oscillating and the higher values are 11.6% for male in 2010, respectively 10.8% for female, in 2011. Under the impact of the current crisis, in Romania both female and male unemployment raised significantly, the latter being slightly lower than the former.

One of the most important international problems is youth employment. The national policies and regulations regarding education have a strong impact on the labor market and the employment population, especially the youth, meaning stimulation or inhibition. Thus, cheap labor with low skills will encourage FDI penetration in economy branches with low added value, unlike the labor force with high level of theoretical and practical knowledge has a superior cost and stimulate FDI inflows in sectors with higher added value, positively influencing the economy of the recipient country. The European initiatives – “An agenda for new skills and jobs” and “Youth on the move” aim to achieve a decrease of youth unemployment, improving
labor macroeconomic policies and the environment framework through education and training institutions to obtain a higher productivity growth.

According to the data published by Eurostat, the unemployment rate for young people has a significant level and the prospects confirm the future increase, mainly because they have to face business environment deterioration caused by reduced activities and the deficiencies of the national educational system which limited their access to labor market, to job opportunities after graduation, having poor knowledge and underdeveloped skills.

![Graph](image)

**Figure 6 Youth unemployment rate evolution during 2008-2010 in EU and CEECs (Source: processed by [22])**

The graphic emphasizes the upward trend, the maximum value being 33.6% in Slovakia in 2010, the lowest is 18.3% in Czech Republic. Youth unemployment in Romania has an increasing evolution from 18.6% in 2008 to 20.8% in 2009 and in 2010 reached a 22.1% rate.

The Romanian labor market recorded significant progress (modernization of responsible institutions and raising competitiveness on the international scene) and presents some distinctive features, its development being more important before the EU integration: legislation and regulations alignment to the European ones, increase unemployment rate and changing relationships between population structure (active, occupied, retired), change relations between labor demand and offer under the impact of the current crisis by: reducing business and investments, decreasing consumption and goods demand, decrease of real wages. As for the aspirations concerning the Romanian labor market, meaning the established national target in the context of Europe Strategy of 2020 of 70% employment rate of population between 20 and 64 years, Romania is situated at 6.9% distance from the target.

The efficiency of the Romanian labor market was strongly affected by: cheap labor force and labor productivity gap, lack of transparency in competition for vacancies, soaring school dropout from compulsory education from 10 to 8 years, trade, administrative and legislative barriers.
3. FDI impact on the labor market

Previous theoretical and empirical research on the relation between FDI and employment, although not many, emphasizes the benefits generated by foreign capitals on unemployment in the host country. The intensity of the connection depends on: FDI type, way of market penetration, destination of exports.

The study of the labor market dynamic in the literature is focused on unemployment determinants, the impact that politics, laws and regulations in the area exert on unemployment duration and the probabilities to find a job ([2], [3], [11]).

FDI encourages economic development especially in developing countries and the extension or relocation of the businesses of multinationals, determines jobs reallocation among developed countries and the ones with low incomes. The transformations suffered by these countries during the transition process from centralized economy to the market economy is characterized by: intensification of the privatization process of state enterprises which in many situations caused company restructuring, massive layoffs and accelerated increase of unemployment rate, becoming attractive destinations for foreign investors because FDI contributes to EU and west markets integration ([9], [1]).

FDI impact on the labor market is materialized both in creating new jobs, but also in maintaining the existing ones. The analysis of the effects generated by FDI inflows must consider, besides the number of new jobs in the host economy and their characteristics, the managerial and organizational knowledge and know-how transfer and expansion of the commercial and production relationships of the local actors. Competitiveness stimulation in the host country leads to an enhancement of local investments, as a result of the increasing role of the national companies as suppliers or domestic investments carried out to face competition.

Foreign capitals are the engine of financing and developing both the economy of host country and the home country, contributing through new jobs and new firms creation to unemployment decrease by carrying out the Greenfield investment projects, because foreign direct investment contributes directly to a reduction of migration through job creation in foreign affiliates and, through an array of forward and backward linkages, in host economies as a whole [17].

The intensity of the relation between FDI and growth economic rate is crucially influenced by: the absorptive capacity and efficient use of financial resources, level of human capital in host country, stimulating favorable externalities like: technological progress, know-how, managerial and organizational skills transfer. Reference [6] sustains that foreign capital flows play an essential role in ensuring a high level of employed population and productivity in economic activities, based on evaluation of FDI real potential as a stimulating factor of economic growth and encouraging the economic gaps reduction from the West Europe markets.

The multinationals have a strong and positive impact on labor market of the host country and its development through the job opportunities they create, by transferring knowledge, know-how, best practices concerning human resources management, improving the skills of the workers, proximity to sales and supply markets.

The analysis of workforce costs as determinants of FDI in CEECs carried out by [4] highlights a positive influence on foreign capitals dynamic, along with work productivity that recorded significant progress in high technology industry stimulating FDI inflows in this sector and in the entire economy. FDI evolution during 2000 – 2010 shows an increase of attractiveness degree of CEECs on the worldwide scene, influencing the economic growth of these countries, the value of the inflows reduction since 2008 but, even so, are still at pretty high levels that confirm their position in the international economy.
The privatization, a component of the transition process to market economy, generated at first, an activity decrease and FDI downturn, but since 2004 their volume increased as a consequence to the EU integration or the performance of the corresponding actions before the accession, the flows in Romania became three or four times higher than previous values. FDI felt and reacted later to the worldwide economic crisis, the impact being different in each economic branch, but among the most altered was the automotive industry in Hungary, Slovakia and the Czech Republic. In 2009, FDI flows in Hungary strongly fell, in the Czech Republic they were maintained at a level that allows external balance equilibrium and banking and financial system stability, unlike Poland where we cannot identify significant decreases because of the national market size which diminishes export dependency. In Bulgaria, foreign capital inflows decline was about a half from the previous year volume and in Romania, the downward trend of FDI flows was influenced by: the unfavorable economic climate, their exposure to risks, macroeconomic instability.

FDI consequences on employment degree in the beneficiary country can be divided in direct and indirect, which can also be classified as positive and negative.

**Positive**
- job creation through Greenfield investments or in areas with high rates of unemployment
- developing companies and competitiveness
- increased new capital stock
- enhancing work productivity
- applying best practices in organizing work
- stimulate suppliers to locate their businesses in areas with high unemployment rate to develop economic activities

**Negative**
- impact on domestic firms and employment conditions
- privatization and acquisition can lead to layoffs
- FDI directed in urban crowded areas
- job loss caused by the crowding out effect on national competitors
- displacement of local suppliers and unemployment increase
- investment in human capital and training lead to higher costs
The relation between FDI and employment level in the host country is strongly dependent on multinational motivation to orient their investments or to expand their businesses in a certain area, the chosen strategy to penetrate the market of the host country, the main characteristics of the sector in which they invest.

4. The analysis of FDI and unemployment relation in Romania

The econometric analysis carried out has the aim to determine the connection between FDI and unemployment rate and uses, for the two variables statistical data published by NBR reports about Foreign direct investments in Romania and the ones available on the National Institute of Statistics. The values for the two indicators are structured in the table below during 1991 and 2010.

<table>
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<tbody>
<tr>
<td>FDI (vol mill euro)</td>
<td>0.035</td>
<td>0.059</td>
<td>0.081</td>
<td>0.28</td>
<td>0.32</td>
<td>0.21</td>
<td>1.07</td>
<td>1.80</td>
<td>0.98</td>
<td>1.14</td>
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<tr>
<td>Un_rate (%)</td>
<td>3.0</td>
<td>8.2</td>
<td>10.0</td>
<td>11.0</td>
<td>9.5</td>
<td>6.6</td>
<td>8.9</td>
<td>10.0</td>
<td>12.0</td>
<td>11.0</td>
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<tr>
<td>Year</td>
<td>2001</td>
<td>2002</td>
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<td>2004</td>
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<td>2008</td>
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<td>2010</td>
</tr>
<tr>
<td>FDI (vol mill euro)</td>
<td>1.29</td>
<td>1.21</td>
<td>1.94</td>
<td>5.18</td>
<td>5.21</td>
<td>9.06</td>
<td>7.25</td>
<td>9.10</td>
<td>3.49</td>
<td>5.26</td>
</tr>
<tr>
<td>Un_rate (%)</td>
<td>8.8</td>
<td>8.4</td>
<td>7.4</td>
<td>6.3</td>
<td>5.9</td>
<td>5.2</td>
<td>4.0</td>
<td>4.4</td>
<td>7.8</td>
<td>7.0</td>
</tr>
</tbody>
</table>

Table 1 FDI and unemployment rate in Romania during 1991 – 2010 (Source: [19], [24])

The impact study of FDI flows on the level of unemployment rate in Romania, in the selected period is performed by using the correlation and regression analysis in SPSS which allows identification of the relation between the variable, the intensity and its direction, setting the regression model and testing the model parameters. In this simple and linear model which I intend to build the dependent variable is the unemployment rate and the independent is represented by the FDI volume.

The value of the correlation coefficient Pearson $\rho = -0.612$ shows that between FDI flows and unemployment rate is a negative, intense and indirect relationship.

The statistical test $T$ allows checking the significance degree of the correlation coefficient, resulting that between FDI and unemployment the relation is reverse and significant because $(\text{Sig} = 0.004) < (\alpha = 0.05)$.

Based on the coefficients table the equation of the regression model can be established, whose parameters should be tested: $\text{Unemployment_rate} = -0.500 \times \text{FDI} + 9.143$
The coefficient \( b_0 = 9.143 \) shows that the estimated average level for the dependent variable (unemployment rate) is 9.143% when the volume of FDI is equal to 0.

The coefficient \( b_1 = -0.500 \) corresponds to a reverse, negative relationship between the parameters considered. An increase in FDI volume with 1 million euro causes a decrease in the unemployment rate in the average by 0.500% in Romania. The significance of the test student for each variable is \( \text{Sig t} < \alpha = 0.05 \), that leads to the decision of rejecting the null hypothesis with a 95% probability and of confirming the fact that the model parameters are significantly different from the 0, which means that the independent variable FDI has a strong influence on the unemployment rate.

The value of the statistic \( F = 10.793 \) in the ANOVA table shows that the independent variable – FDI explains the variation of the dependent variable – unemployment rate, because \( \text{sig} = 0.004 < \alpha = 0.05 \), proving that the unemployment level in Romania is significantly influenced by the volume of attracted FDI. With a probability of 95% the null hypothesis is rejected and guarantees that the linear regression model is statistically significant in explaining the dependency among variables.

The determination coefficient \( R^2 = 0.375 \) highlights the fact that 37.5% of the unemployment variation is explained by the variation of the independent variable, foreign direct investment.

5. Conclusions

FDI flows are recognized for the benefits they generate on host country economic growth and on the evolution of national macroeconomic indicators. The analysis performed on CEECs reflects the impact exerted by the worldwide economic crisis on beneficiary country characteristics, emphasized through the
decrease of the economic growth, employed population and an accelerated increase of the unemployment rate.

The economic imbalances determined transnational corporations to limit their activities, to quit their business expansion plans, their decisions influencing the workforce employment, the total and structural (by gender and youth) unemployment rates.

The econometric analysis performed emphasizes the strong correlation between FDI and unemployment rate dynamic in the host country, revealing the favorable impact exerted by foreign capital on the dependent variable.

The labor market and dynamic of FDI flows are significantly influenced by the current economic crisis in terms of characteristics deterioration, highlighting a considerable decrease of foreign capitals through worsening evolution of employment indicators. Aware of the importance of FDI flows on employment in the host economy, the authorities adopt tactics to attract multinational companies encouraging them to extend or to implement businesses on their territory, leading to obtaining a sustainable economic growth and a favorable trend of the relevant indicators concerning occupancy, along with macroeconomic policies destined to improve the work environment, market and labor access and enhancing productivity.

6. References


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