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Geneva



# The largest drop in income inequality in the European Union during the Great Recession: Romania's puzzling case

Ciprian Domnisoru

**CONDITIONS OF WORK AND EMPLOYMENT SERIES No. 51**

INWORK

Inclusive Labour Markets, Labour Relations  
and Working Conditions Branch

***The largest drop in income inequality in the European Union during  
the Great Recession: Romania's puzzling case***

**Ciprian Domnisoru \***

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### *Cataloguing in Publication Data*

Domnisoru, Ciprian

The largest drop in income inequality in the European Union during the Great Recession: Romania's puzzling case / Ciprian Domnisoru ; International Labour Office, Inclusive Labour Markets, Labour Relations and Working Conditions Branch. - Geneva: ILO, 2014

Conditions of work and employment series ; No. 51, ISSN: 2226-8944 ; 2226-8952 (web pdf)

International Labour Office Inclusive Labour Markets, Labour Relations and Working Conditions Branch.

income distribution / wage differential / social insurance / social protection / economic recession / case study / Romania / EU

03 03 1

*First published 2014*

*Cover: DTP/Design Unit, ILO*

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## Abstract

The largest decrease in income inequality among EU member states in the recent recession was registered in Romania, a 4.5 point drop in the Gini coefficient between 2007 and 2010. The country experienced a severe economic downturn and some of the toughest austerity measures among EU member states. I explain the drop in inequality by analysing the gap between wage earners and individuals who are self-employed or contributing family workers. Austerity cuts compressed top wages in the public sector, while some categories of low income earners saw modest increases in welfare payments. The drop in inequality thus reflects the austerity cuts at the top of the income distribution and only modest gains for low income households. Using 2011 Romanian Household Budget Survey data, I show the impact of social insurance and social protection transfers on the Gini coefficient. Using the same dataset, I run a simulation of how a set of redistributive policies would achieve a further reduction in income inequality, to levels below the EU27 average. Throughout the analysis, I highlight methodological difficulties in measuring income inequality in Romania. In particular, I show how the widespread imputation of own production of agricultural products in Romanian household income surveys significantly decreases income inequality indicators.

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# 1. Introduction

Romania experienced one of the worst economic downturns in the EU following the economic crisis that began in 2008. It implemented very strict austerity measures, including a 25 per cent wage cut for public sector employees. Sharp declines in economic activity and austerity measures leading to budget cuts could theoretically widen the differences between employed and unemployed, high and low income groups, leading to an increase in income inequality. On the other hand, social protection measures, particularly inflation indexed benefits may lead to rising and more stable income on the lower end of the distribution, and to an overall decline in income inequality. Most EU member states experienced either small declines or small increases in the Gini coefficient between 2007 and 2012. But Romania experienced a significant drop in income inequality: the Romanian Gini coefficient decreased by 4.5 points between 2007 and 2012, from 37.8 to 33.3, the largest decrease of any EU member state.<sup>1</sup>

This paper seeks to explain why income inequality declined so much in Romania during the recent recession. To what extent was the decline linked to austerity measures and to changes in labour and social protection legislation? In answering these questions, I present an overview of how labour market institutions affect wage and income inequality in Romania. The country recently revamped its Labour Code and collective bargaining legislation under a right wing government that explicitly sought to make labour legislation more flexible and reduce firing and hiring costs. The changes also led to an erosion of collective bargaining and union representation rights.

I find that austerity cuts lowered economic inequality as they mainly impacted waged employment in the public sector. The fundamental driver of income inequality in Romania is the gap between wage earners and individuals who are self-employed or contributing family workers. The income distribution compressed at the top, as public sector employees saw significant wage cuts. The austerity cuts in the public sector also exerted downward pressure on private sector wages. On the bottom of the income distribution, the right wing government's austerity measures targeted reducing welfare cash payments and other unearned income through tougher conditionalities. However, the introduction of a minimum guaranteed pension countered these pressures on household income at the bottom of the distribution.

The paper is structured as follows. In section 2, I present an overview of the Romanian economy, highlighting structural developments that have been driving economic inequality since the fall of communism. Section 3 addresses the functional distribution of income in Romania and the collective bargaining and minimum wage setting mechanisms. I analyse the primary distribution of income in section 4, focusing on how the recent recession impacted different categories of workers. I discuss differences in earnings by sector, gender, ethnicity, region, metropolitan status and education. I show how low tertiary educational attainment leads to significant wage gaps along education lines, as Romania has the highest ratio between wages of college and high school graduates in the EU27. I also show how informal, part-time

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<sup>1</sup> According to Eurostat, the Gini coefficient saw smaller decreases in Portugal (-2.3 points), Netherlands (-2.2 points), Germany (-2.1 points), Lithuania (-1.8 points), Bulgaria (-1.7 points), with the rest of EU members registering either very small decreases or increases in the Gini coefficient, up to 3.1 points in Spain and 3.9 points in France.



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and temporary employments are associated with in work poverty and increasing income inequalities. Section 5 presents the Romanian social insurance and social protection systems. Using data from the 2011 Romanian Household Budget Survey, I measure the impact of transfers, taxes and contributions on the Gini coefficient. I also discuss the governmental response to the increase in unemployment and poverty experienced during the recent recession by analysing policy changes to the main social insurance and protection mechanisms: pensions, unemployment benefits, parental leave allowances. Section 6 presents a set of policy scenarios targeting the reduction of income inequality. Using the same dataset, I conduct a simulation and show how such redistributive policies would significantly reduce the Gini coefficient, to levels below the EU27 average. I also address the political feasibility of implementing such redistributive policies: as tax increases are unlikely in the current political environment, I present policy options to increase tax collection and reduce informal work, leading to an increase in governmental revenue necessary to finance further redistribution.

Throughout the paper, I highlight statistical difficulties arising from survey non-response and low response rates for top earners or workers in the informal economy. Measuring income inequality in Romania is fraught with difficulties because of high tax evasion, the high share of employment in the informal economy, significant migration flows and a high share of own production in household income. In particular, I show how imputation of own production of agricultural products in surveys has a significant impact on income inequality indicators.

## 2. Structure of the Romanian economy

Romania is one of the poorest and most unequal societies in the EU27, with the second lowest GDP per capita and one of the highest Gini coefficients.<sup>2</sup> Economic inequality is fundamentally driven by an urban-rural divide: Romania has the highest share of employment in agriculture in the EU27 and a highly fragmented agricultural sector, with the largest number of farms under 2 ha in the EU. The Romanian export-oriented manufacturing sector has seen fast growth in the past decade,<sup>3</sup> helped by foreign investment and Romania's accession to the EU27. However, the labour content of exported goods remains high, and Romania's competitiveness largely rests on low labour costs. Romania's minimum wage is second lowest in Europe and the prevalence of low and minimum wages is particularly high. Section 3 analyses the institutional and policy factors that lead to the prevalence of low wages.

Despite significant economic growth in the past decade, the employment rate saw very small increases.<sup>4</sup> Rather than seeking employment in Romania, an estimated 10 per cent of the country's population were working abroad in 2007 (International Organization for Migration, 2008). Moreover, the formal employment rate remains low, as an estimated 35.3 per cent of employees work in the informal economy (Romanian Fiscal Council, 2011).

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<sup>2</sup> Eurostat data show GDP per capita in Romania to represent only 49 per cent of the EU27 average in Purchasing Power Standards (PPS). The Gini coefficient in Romania was highest in the EU27 in 2007, at 37.8, and was sixth highest in 2011, at 33.2.

<sup>3</sup> Between 1999 and 2012 Romania saw a 41 per cent increase in exports (European Commission, 2013a).

<sup>4</sup> The Romanian employment rate was 63.8 per cent in 2003 and 62.6 per cent in 2011 (European Commission, 2013a).

Compared to other EU member states, Romania has the lowest level of employment in the service sector (43 per cent) and by far the highest level of employment in agriculture, at 29 per cent (more than twice that of second ranked Poland, 12.7 per cent).<sup>5</sup>

Self-employed individuals and contributing family workers represent over 90 per cent of employment in agriculture (52.9 per cent and 41.6 per cent, respectively) (Albu et al, 2012). Employees accounted for only 5.2 per cent of employment in agriculture in 2010. Because of the high share of agriculture in the workforce, employees account for only 67.3 per cent of the national workforce (Table 1). Section 3 shows how the low incomes of contributing family workers and of the self-employed are fundamental drivers of economic inequality in Romania.

**Table 1. Distribution of the working population by employment status, 2011**

		Total	Men	Women	Urban	Rural
		-% of total-				
Employees	6,149,000*	67.3	67.3	67.4	91.3	37.5
Entrepreneurs	110,000	1.2	1.5	0.7	1.6	0.6
Self employed	1,717,000	18.8	24.1	12.3	6.1	34.6
Contributing family workers	1,160,000	12.7	7.1	19.6	1.0	27.3

Note: \*Values are rounded.

Source: Romanian National Statistics Institute, 2012b.

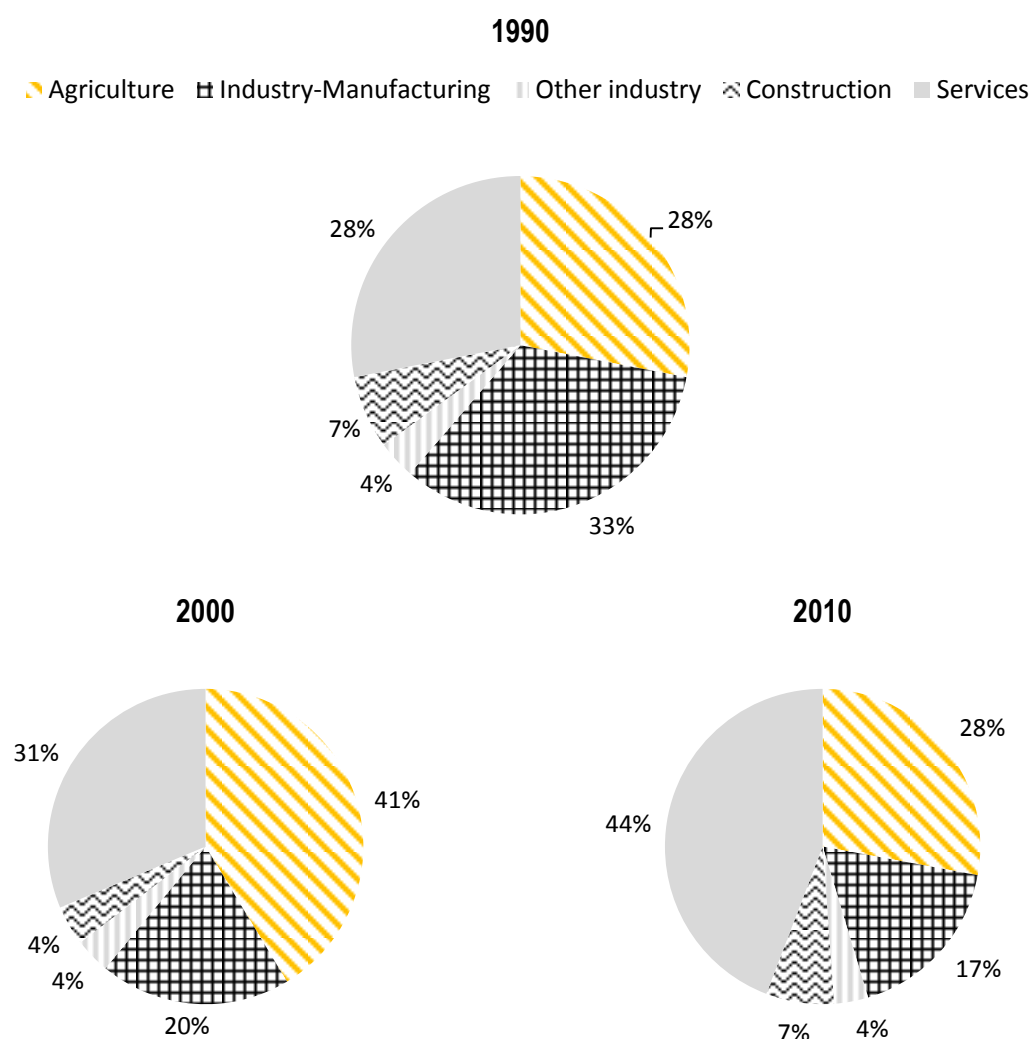
While other Eastern European countries have seen a significant decrease in the share of employment in agriculture, Romania's remained particularly high and even increased during the process of transitioning to a market economy. According to World Bank data,<sup>6</sup> Romania's share of employment in agriculture was 29 per cent in 1983, equal to that of Poland and higher than in neighbouring Hungary (22 per cent) or Bulgaria (22 per cent). In 2011, Romania's rate of employment in agriculture had barely changed, standing at 28.3 per cent, while it had substantially decreased in Poland (12.7 per cent), Bulgaria (6.8 per cent) and Hungary (4.8 per cent). In fact, Figure 1 shows that the share of employment in agriculture increased substantially from 1990 to 2000, while employment in manufacturing and construction decreased.

<sup>5</sup> Eurostat News Release, 142/2012 - 5 October 2012, available at:

[http://epp.eurostat.ec.europa.eu/cache/ITY\\_PUBLIC/3-05102012-AP/EN/3-05102012-AP-EN.PDF](http://epp.eurostat.ec.europa.eu/cache/ITY_PUBLIC/3-05102012-AP/EN/3-05102012-AP-EN.PDF) [March 15, 2014]

<sup>6</sup> World Bank, Employment in agriculture (per cent of total employment), available at <http://data.worldbank.org/indicator/SL.AGR.EMPL.ZS?page=5> [March 15, 2014]

**Figure 1. Employment by sector in Romania, 1990-2010**



Source: National Statistics Institute, 2012 a

The high share of employment in agriculture is a consequence of a slow and relatively unsuccessful process of transition to a market economy. An overwhelmingly rural society before World War II, Romania underwent a process of centrally planned rapid industrialization under communism. The command economy ensured virtually full employment in urban areas. The restructuring and privatization processes that followed the fall of communism led to plant closings, mass layoffs, and increasing unemployment. The Romanian economy lost 1.9 million jobs in manufacturing between 1990 and 2000, and the share of manufacturing in total employment decreased from 33 to 20 per cent (Figure 1). Employment in agriculture increased by 0,5 million from 1990 to 2000. Most Romanian industrial workers were first or second generation city dwellers and kept strong ties with family members living in rural areas. Many of the unemployed proceeded to move to rural areas and make a living off of subsistence farming on family plots.

Before 1990, agricultural sector employment was concentrated in state owned cooperatives which had pooled individual farms under a process of (often forced) collectivization. When private property rights on agricultural land were reinstated after the fall of communism, many rural cooperatives were closed and rural inhabitants regained property rights over small plots and proceeded to small scale, mostly

subsistence farming. The productivity of these plots is low, and overall agricultural productivity in Romania was only 20.6 per cent of the economy-wide productivity (by comparison, French agricultural productivity is 69 per cent of average productivity) (Albu et al 2012, p.19).

Exports account for a small share of Romania's GDP: 22 per cent in 2011, compared to 42 per cent in Poland and 67 per cent in Bulgaria, according to World Bank data. Romanian exports remained particularly labour intensive during the 2000s (Table 2), while the labour content decreased in other Eastern European states. Between 2002 and 2009, Romania was a net exporter of textiles, furniture and leather goods, and registering commercial deficits in most other product groups. Since 2009, Romania is also a net exporter of cars and car parts and since 2010 also of vegetable products (Romanian Fiscal Council, 2012). Romania's main exports in 2010 were Cars (5.6 per cent), Parts and accessories of motor vehicles (5.05 per cent), Transmission apparatus for radio, telephone and TV (4.93 per cent) and Insulated wire; optical fibre cables (5.25 per cent).

**Table 2. Intensity structure of manufacturing exports of goods (percentage labour intensive)**

	1995	2000	2007
<b>Czech Republic</b>	18.8	17.6	12.7
<b>Hungary</b>	19.1	11.0	8.2
<b>Poland</b>	33.0	27.4	19.4
<b>Romania</b>	33.0	38.2	29.7
<b>Germany</b>	10.8	9.3	9.6

Source: Munkacsi, 2009.

The Romanian manufacturing sector employed 1.196 million in 2010, the sixth largest manufacturing labour force in the EU27.<sup>7</sup> This figure however represents a substantial decrease since 1990, when Romania employed 3.6 million workers in the manufacturing sector. Along with the restructuring and privatization of the command economy, Romania lost many of its export markets in Africa and Arab countries and weakened its commercial ties with former Soviet countries, China, and other emerging economies. These commercial ties had been facilitated by political agreements signed by the communist government and had been implemented by state owned enterprises. In the process of privatization, the commercial ties of state enterprises were largely replaced by the commercial ties to EU member states of the new private investors. As Romania was preparing to join the EU, manufacturing foreign investment originated mostly from EU countries. The share of exports to EU member states increased from 44 per cent in 1991 to over 70 per cent in recent years. Only three of Romania's top exporters are Romanian companies<sup>8</sup> and the top 100 exporters concentrate more than

<sup>7</sup> Eurostat, Manufacturing Statistics:

[http://epp.eurostat.ec.europa.eu/statistics\\_explained/index.php/Manufacturing\\_statistics\\_-\\_NACE\\_Rev.\\_2](http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Manufacturing_statistics_-_NACE_Rev._2)

<sup>8</sup> Gandul, November 11, 2012, The evolution of Romanian exports in the past 21 years, <http://www.gandul.info/financiar/infograficul-zilei-cum-au-evoluat-exporturile-romaniei-in-ultimii-21-de-ani-10337786> [March 15, 2014]

half of Romanian exports.<sup>9</sup> Romania's export volumes thus largely remains exposed to economic conditions in the EU and Romania's export markets and volumes are largely under the control of multinational companies.

To achieve increases in formal employment, Romania needs to further the development of the services sector and increase export-oriented manufacturing. These increases would require a transition to waged employment for the high number of self-employed and contributing family workers currently engaged in (subsistence) farming. But many Romanians prefer to migrate to Western European countries, in search of higher paying jobs, than to seek low paying waged employment at home. These migration flows are so significant that Romanian employers experienced staff shortages at the height of the economic growth period. An estimated 10 per cent of the country's population were working abroad in 2007 (IOM, 2008) and the latest census estimates show a decrease in the permanent population from 21.6 to 19 million between 2002 and 2012.

### 3. Functional distribution of income

The unadjusted wage share (total compensation of employees divided by GDP) decreased in recent years from 47.8 per cent to 41.9 per cent (Table 3). The adjusted wage share is considerably higher, but saw a similar decrease in the recent recession. The self-employment adjustment increases the unadjusted wage share by 50 per cent (Table 3). The magnitude of this adjustment became particularly salient when a change in the Romanian Statistics Institute's definition of self-employment led to a drop in the wage share from 84 per cent in 2001 to 64 per cent in 2002 (Figure 2). Moreover, the assumption that self-employment income equal waged employment income is particularly unrealistic in the Romanian case, as wages far exceed self-employment income (see Section 4, Table 7).

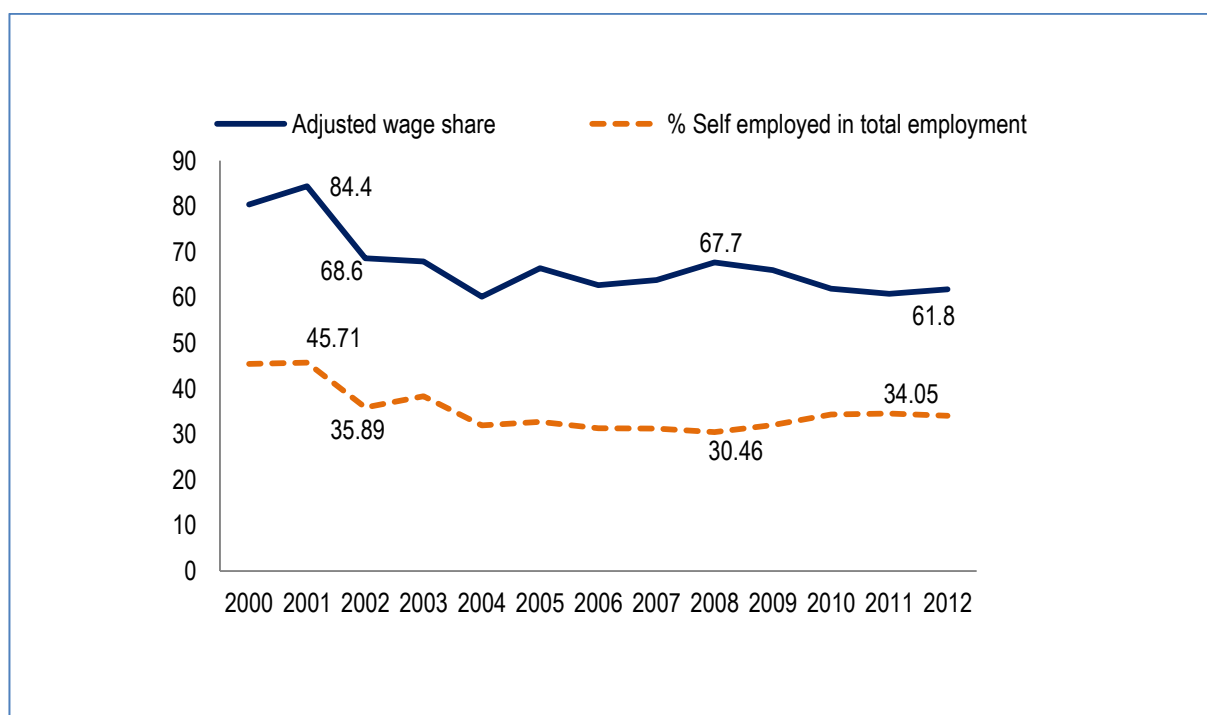
**Table 3. Adjusted and unadjusted wage share in Romania, 2008-2012**

	2008	2009	2010	2011	2012
<b>Adjusted wage share</b>	67.7	66	67.4	64.8	61.8
<b>Unadjusted wage share</b>	47.8	45.8	44.9	43.2	41.9

Notes: Unadjusted wage share computed as Total compensation of employees/ Gross value added. *Sources: Adjusted wage share: Eurostat, Aggregates by branch - quarterly data [ei\_naag\_q]; adjusted wage share: Statistical Annex of the European Economy, autumn 2013.*

<sup>9</sup> Ziarul Financiar, December 21, 2011. How did the crisis change the structure of Romanian exports and the exporters' top. <http://www.zf.ro/special/cum-a-schimbata-structura-exporturilor-romanesti-si-topul-exportatorilor-9078964> [March 15, 2014]

**Figure 2. Adjusted wage share and self-employment, 2000-2012**

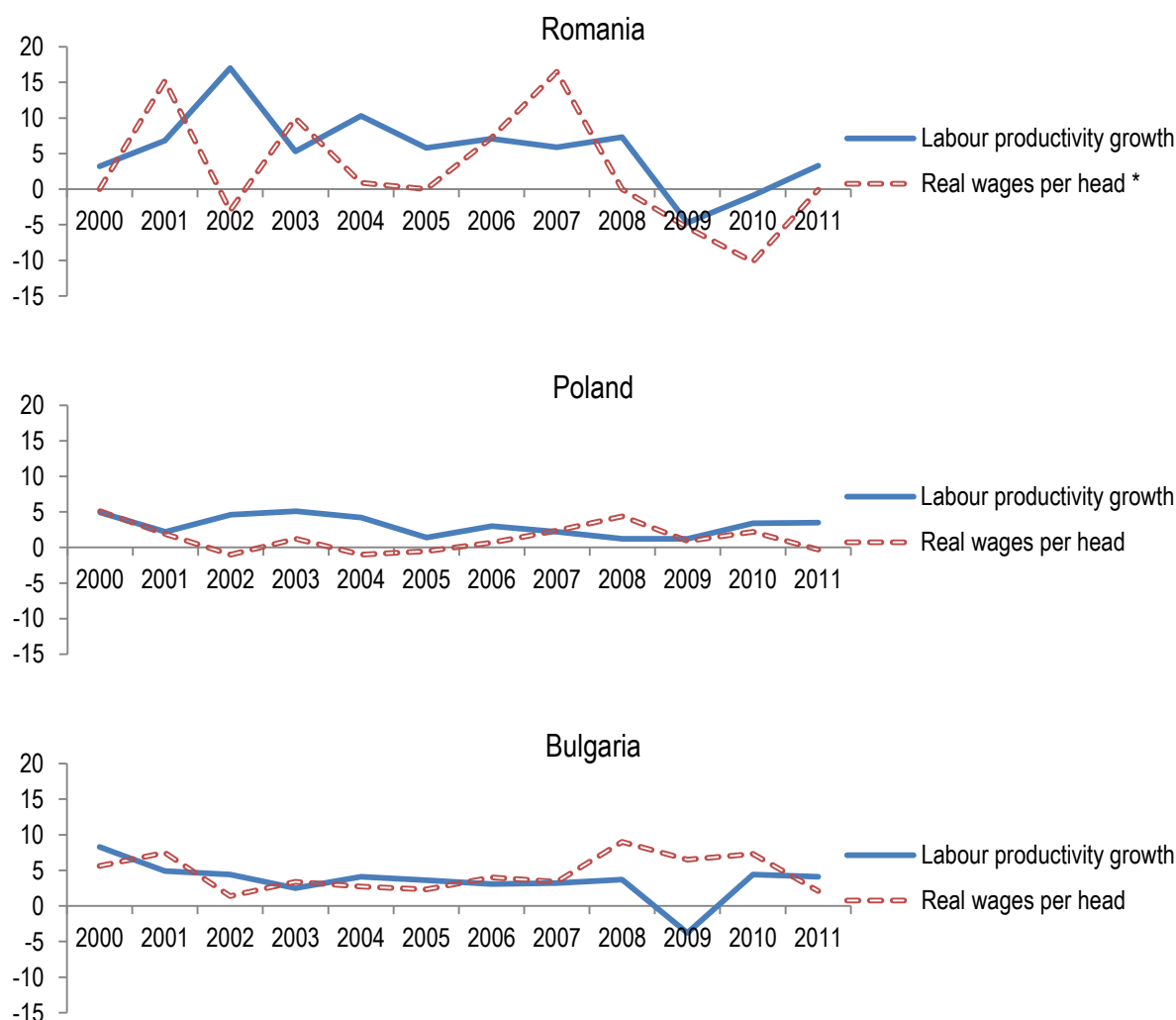


Sources: Self-employment: Eurostat, Aggregates by branch - quarterly data [ei\_naag\_q]; ; Adjusted wage share: Statistical Annex of the European Economy, Autumn 2013

The drop in the wage share can be explained by the evolution of the real wage and productivity profile before and during the recession. Real wage increases significantly exceeded labour productivity growth just before 2008, and saw a considerable adjustment below labour productivity growth throughout the recession. The drastic austerity measures, which included a 25 per cent cut in public sector wages also contributed to the wage share decline, as public employees account for a large share of formal employment.

The real wage - productivity profile has been particularly spiky and erratic in Romania over the 2000s, when compared to the Polish or Bulgarian economies (Figure 3). Significant increases in real wages in the early 2000s can be attributed to a catching up process, after a three year recession Romania experienced following the Russian financial crisis of 1998. Real wages also significantly exceeded productivity growth in 2007. The real wage spike at the end of the growth cycle (2006-2007) may be linked to tight labour market conditions. As Romania became an EU member on January 1, 2007, visa requirements for Romanian citizens were dropped. The labour market was particularly tight for skilled and educated workers as well as for low-skilled workers in agriculture, construction and hospitality, who preferred to migrate to Western Europe in search of better paying jobs.

**Figure 3. Labour productivity and real wage growth in Romania, Poland and Bulgaria, 2000-2011**



Note: Private consumption deflator.

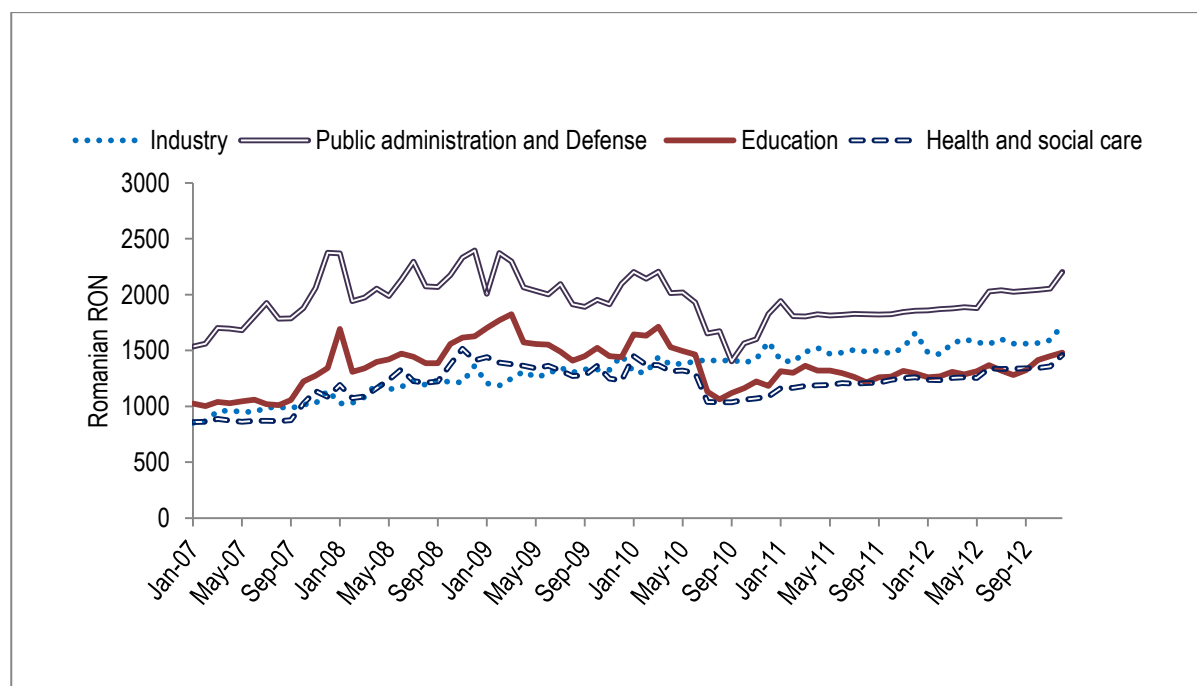
Source: European Commission. Statistical Annex of the European Economy, Oct 2013

The IMF also attributed the spike in real wages to lack of wage moderation in the public sector, noting that “Since end-2004, wage increases in the government sector have considerably outpaced ones in the private sector (IMF, 2007, p.36). The Romanian government addressed these concerns by targeting austerity measures at public sector employees, who had seen faster wage growth than the private sector. Figure 4 shows a significant drop in nominal net earnings for public administration employees, and in the education, health and social care sectors (which are mostly public) around July 1, 2010, when the 25 per cent wage cut was implemented in the public sector. Wages in industry (including manufacturing) were relatively stable over the period, their modest increase followed changes in the inflation rate.<sup>10</sup> Figure 4 shows that bonuses in the public sector had made the public wage bill particularly volatile before 2010. A smoothing process for public sector wages began after 2010,

<sup>10</sup> According to the Romanian Statistics Institute, net wages in industry increased in nominal terms by 7.9 per cent in 2009 compared to a 5.59 inflation rate, a 6.3 per cent increase in 2010 compared to the 6.09 inflation rate, 5.22 per cent increase in 2011 compared to a 5.79 per cent inflation rate.

as the government also implemented a freeze in bonuses and cut the thirteenth month payment and other non-wage compensation. The public sector wage premium decreased from 44.5 per cent in 2009 to -15.6 per cent in 2010, a staggering loss of 60.1 per cent (European Commission, 2013b). According to the Romanian Statistics Institute, the 1.2 million public employees represented 19.5 per cent of waged employment in the economy in 2011. The drastic adjustment of the public wage bill had a significant contribution to the decline in the overall wage share.

**Figure 4. Monthly nominal net wages in selected sectors of the Romanian economy, 2007-2012**



Source: Romanian Statistics Institute, Tempo Time series

The IMF saw the public wage spill over effects on private sector wages as a threat to Romania's export competitiveness.<sup>11</sup> The IMF also commented on the effects of pressures from the unions on wages, particularly in the education sector: "loose government-wage policy has been greatly influenced by strong labour unions (particularly in the education sector), in the context of a tense political environment" (IMF, 2007, p.31). The next section shows how the government addressed the IMF concerns on wage growth by changing the collective bargaining legislation in 2011, seeking to reduce union power and limit public wage increases.

Despite the IMF's concerns for wage pressure effects on competitiveness, according to UNECE data, Romania had lower average wages in 2009 than Serbia, Turkey or Bosnia and Herzegovina, despite being a member of the EU27. Moreover, the average hourly labour costs in manufacturing were lower in 2007 in Romania than in Russia, Mexico or Brazil (Domnisoru, 2012), while Romania fully enjoyed the economic advantages of EU membership and about 70 per cent of its exports targeted EU markets.

<sup>11</sup> "By keeping a lid on public-sector wage increases [...] and approving modest increases in the minimum wage, the growth in the economy-wide real wage has been moderate. This has contributed to modest increases in unit labour costs which have been below productivity gains for most of Romania's recent history" (IMF, 2007)



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## Collective bargaining and minimum wage setting

Before 1990, despite high official union membership, social dialogue and union activity were limited by the tight political control of the Communist Party. After the 1989 Revolution, which marked the beginning of the transition to a market economy, social dialogue was gradually reorganized, first under a Tripartite Secretariat for Social Dialogue in 1993, and, since 1997, under a Social and Economic Council.

Between 1991 and 2011, Romania had a three-tiered (national, sector, enterprise) collective bargaining process. Mandatory collective bargaining and extension legislation resulted in a high level of collective bargaining coverage. While Romania “inherited” virtually universal union coverage from the communist period, union density decreased in the 1990s as large state owned enterprises were privatized and many new, ununionized small enterprises created.

The decrease in union activity slowed down after 2000. The latest Industrial Relations in Europe report (European Commission, 2013b) noted a drop in membership of 420,000 in Romania between 2000 to 2008 (also see Table 4) but Romanian trade union estimates actually point to an increase in membership between 2003 and 2011 (Table 5). Regardless of the trend, Romania still maintains one of the highest union density rates in the EU27: 33 per cent in 2012, the highest level of any Eastern European country. By comparison, Bulgaria had a union density rate of 20 per cent, Hungary 17 per cent, Slovakia 17 per cent and Poland 15 per cent.

The relatively high rate can be explained considering the slow process of restructuring of state enterprises. There are still about 1,000 state and municipality owned companies and the Romanian government owns the majority stake in 240 medium and large state enterprises. State companies employ 10 per cent of the workforce and produce nine per cent of the added value in the economy (IMF, 2012a). Union membership is particularly important for employees in state-owned companies, as it ensures protection from (unfair) dismissal, better severance packages and access to mutual support schemes such as low-interest loans and reimbursement of expenses in case of special medical problems (Trif, 2005).

**Table 4. Union density in Romania, 1998-2008**

	1998	2002	2003	2006	2008
<b>Union density</b>	45.1	36.1	38.3	34.4	32.8

Source: Jelle Visser, Amsterdam Institute for Advanced Labour Studies (AIAS) ICTWSS database.

Note: Data for Romania are available only until 2008

**Table 5. Main Romanian trade unions and reported number of members, 2003-2011**

	2003	2008	2011 Romanian trade union data	2011 ITUC data
<b>CNSLR Frăția</b>	800,000	800,000	800,000	520,000
<b>Cartel Alfa</b>	325,000	400,000	800,000	1,000,000
<b>BNS</b>	375,000	375,000	270,000	150,000
<b>CSDR</b>	345,000	345,000	300,000	101,000
<b>CSN Meridian</b>	170,000	170,000	170,000	NA
<b>Others</b>	20,000	30,000		
<b>Total</b>	2,035,000	2,120,000	2,340,000	

Notes: National Confederation of Free Trade Unions of Romania ‘Brotherhood’ (Confederația Națională a Sindicatelor Libere din România Frăția, CNSLR Frăția) National Trade Union Confederation Cartel Alfa (Confederația Națională Sindicală Cartel Alfa, Cartel Alfa) National Trade Union Bloc (Blocul Național Sindical, BNS) Democratic Trade Union Confederation of Romania (Confederația Sindicatelor Democratice din România, CSDR) National Trade Union Confederation Meridian (Confederația Sindicală Națională Meridian, CSN Meridian)

Sources: Jelle Visser, Amsterdam Institute for Advanced Labour Studies (AIAS) ICTWSS database, <http://www.uva-aiaas.net/208>; Friedrich Ebert Stiftung. Annual Review of Labour Relations and Social Dialogue in South East Europe: Romania, January 2012. European Industrial Relations Observatory On-line, Trade union membership 2003-2008 <http://www.eurofound.europa.eu/eiro/studies/tn0904019s/tn0904019s.htm>

When the 2008 recession hit, Romania had the fourth largest fiscal deficit as percentage of GDP in the EU. Faced with high borrowing costs and a drop in foreign investment and remittance flows, in May 2009 the Romanian government entered a two year stand-by agreement with the IMF for €12.95 billion, with the EU, World Bank and European Bank for Reconstruction and Development (EBRD) contributing more funds for a total of €19.95 billion. As part of the stand-by agreement with the IMF, the Romanian government pledged to change the Labour Code and social dialogue legislation to increase labour market flexibility.<sup>12</sup>

The 2011 changes abolished the national collective labour agreement which ensured 100 per cent collective bargaining coverage. Consequently, sector level agreements became the highest level of collective bargaining and the national minimum wage was to be set by the government and no longer be a provision of the national labour agreement. The changes also hindered union formation and activity and made collective bargaining more difficult, prompting the recommendation of the ILO Committee on the Application on Standards that the legislation on collective

<sup>12</sup> In the context of the rising public sector wage bill, the high level of collective bargaining coverage came under criticism from the IMF (2008): “in some countries collective bargaining at the national level may set by law the minimum conditions for all of the economy, therefore generating a wage-push effect originating from the public sector.” The IMF (2008) also remarked that “Romania stands out from the other NMS for the highest union density” and that “national level agreements cover all employees –implying collective bargaining coverage of 100 per cent”.

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bargaining be reviewed.<sup>13</sup> In September 2011, trade unions protested the changes and refused to participate in meetings of the Romanian Social and Economic Council. Social dialogue was reopened when the government set up a National Tripartite Council in October 2011. The legal changes introduced restrictive criteria for collective bargaining which deeply disrupted firm and sector level collective bargaining, and only one non-public sector collective agreement was signed in the year following the reforms (Chivu et al, 2012).

The new social-liberal government in power since May 2012 appointed a special minister for social dialogue and announced plans to rescind some of the changes to the labour legislation. A tripartite working group has been set up to analyse proposed changes to the legislation and is still holding meetings in 2014. Negotiations are stalling, as employers' associations resist changes, while trade unions argue collective bargaining has been severely hindered by the procedural deadlock in establishing sectoral level agreements and are asking for the reinstatement of the national collective bargaining agreement.<sup>14</sup>

Until 2011, **minimum wage setting** had been conducted in the context of the national collective labour agreement but also in sector labour agreements, where minimum wages were often set as multiples of the national minimum wage. Under the recently modified legislation, the national minimum wage is set by the government. Despite the strong collective bargaining coverage and the criticism on high union bargaining power coming from the IMF, the minimum wage remained particularly low in Romania throughout the 2000s, compared to other EU countries (Figure 4) and Romanian average wages (Figure 5). Between 2005 and 2010, the Romanian minimum wage as a proportion of average wages was lowest of all European countries setting a national minimum wage (in 2010, 32.3 per cent in Romania compared to an average of 40.45 per cent across EU countries setting a minimum wage). Throughout the 2000s, unemployment and welfare benefits were linked to the value of the minimum wage. Any potential minimum wage increase was thus made more difficult as it raised concerns about budget deficits in the social protection system.

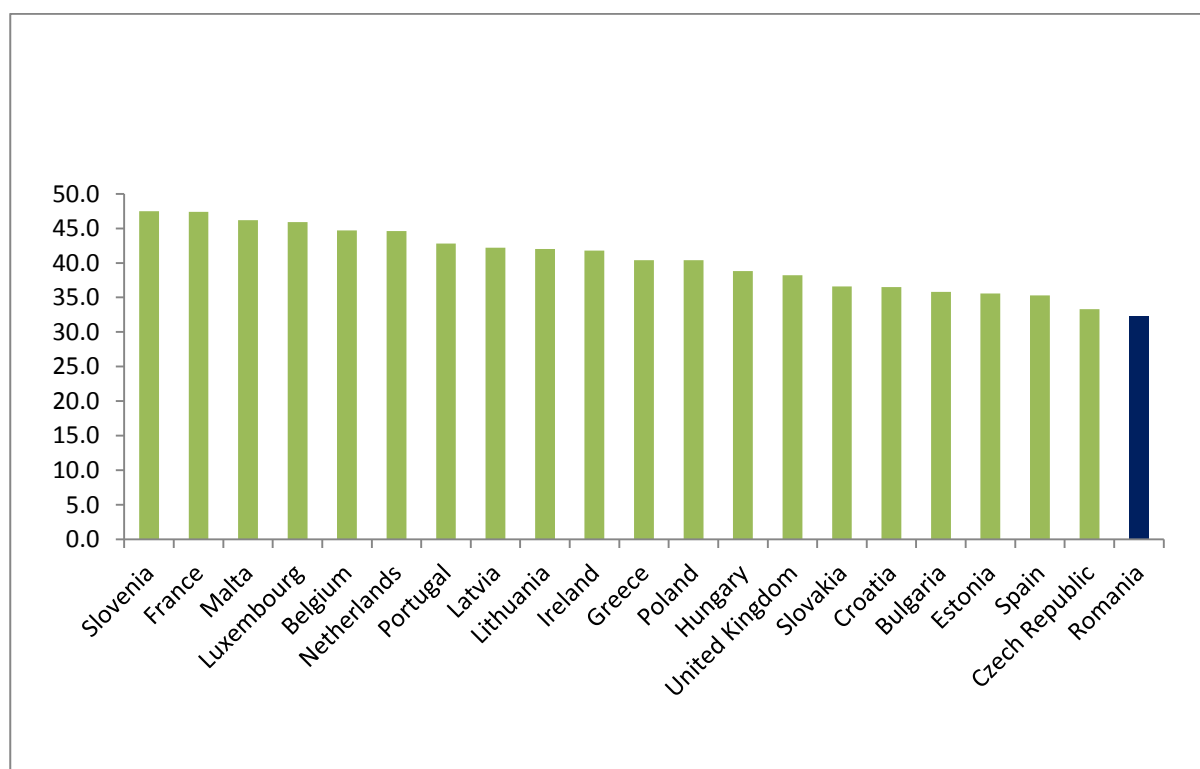
Under the current stalemate in collective bargaining at the sector level, trade unions and employers cannot conclude negotiations on sector specific minimum wages. This situation is likely to result in downward pressure on wages, because under the previous legislation sector level minimum wages were often larger than the national level minimum wage. In the recent recession, the minimum wage was not indexed in 2010, but an 11 per cent increase in 2011 that accounted for inflation since the previous change led to an increase of the Kaitz index to 35.7 (Figure 5), as the economy wide average wage saw only a 4.4 per cent increase in 2011, below the inflation rate of 5.79.

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<sup>13</sup> International Labour Conference, 100th Session, Geneva, June 2011, Provisional Record 18 Part Two, Report on the Committee on the Application of Standards. Available at: [http://www.ilo.org/wcmsp5/groups/public/@ed\\_norm/@relconf/documents/meetingdocument/wcms\\_157818.pdf](http://www.ilo.org/wcmsp5/groups/public/@ed_norm/@relconf/documents/meetingdocument/wcms_157818.pdf) [22 Aug. 2011]

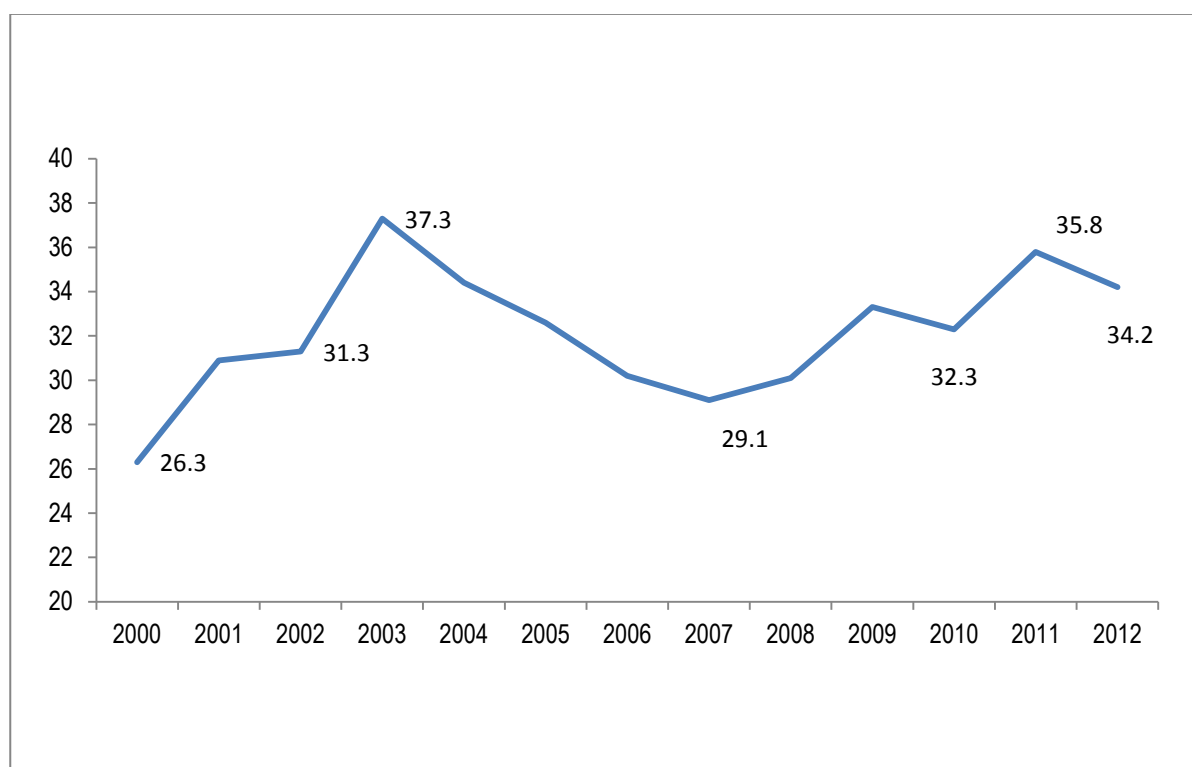
<sup>14</sup> Minutes of the meetings are available in Romanian on the website of the Romanian Labour Ministry, [http://www.mmuncii.ro/j33/index.php/ro/dialog-social/info/protectie-sociala/dialog-social/3290-GL\\_Legea\\_62-2011](http://www.mmuncii.ro/j33/index.php/ro/dialog-social/info/protectie-sociala/dialog-social/3290-GL_Legea_62-2011)

**Figure 5. Minimum wage as percentage of average monthly earnings in EU countries, 2010**



Source: Eurostat, NACE Rev2, [earn\_mw\_avgr2]

**Figure 6. Minimum wage as a proportion of monthly average earnings in Romania, 2000-2012**



Source: Eurostat, [earn\_mw\_avgr1] and [earn\_mw\_avgr2]

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## 4. Income distribution

At the height of the economic growth cycle in 2007, Romania had the highest Gini coefficient in the EU27, at 37.8. In 2011, the Romanian Gini coefficient was 33.2, sixth highest. However, comparing Romanian income inequality indicators with EU27 indicators may be a misleading exercise because of differences in household own production reporting between Romanian surveys and those of other EU member states. The Romanian EU-SILC (“Survey of Income and Living Conditions”) and the Household Budget Survey<sup>15</sup> (HBS) provide information on income inequality in Romania. In both surveys, a large share of the household income of lower deciles is in fact the imputed value of own production<sup>16</sup> (Figure 7). Income from household production represented 18.3 per cent of household income on average in the 2011 HBS<sup>17</sup> (16.1 per cent in the 2010 HBS), and as much as 49.7 per cent of the income of the poorest decile.

Commenting on the Romanian EU-SILC own production income imputation, Eurostat (2010, p.184) noted that “few questions have been used” and “No information is available for assessing the method used in the case of Romania.” Almost 100 per cent of households included in the Romanian SILC derived income from own production. The Romanian case was exceptional, as in most other Eastern European countries only between 30 and 50 per cent of households reported own production. Eurostat (2010) also noted that in Romania, income from own production represents about 18 per cent of total income- a figure consistent with Romanian HBS estimates – “while in Bulgaria, Latvia and Lithuania this proportion is about two per cent and in all other countries one per cent or less.”

Given its high share in household income, own production income plays a significant role in reducing poverty: “In Romania, the at-risk-poverty rate decreases significantly when income derived from own-produced consumption is taken into account. In all other countries the decrease is much smaller or (most often) totally non-existent” (Eurostat, 2010: 188). Own production has a similar effect in reducing income inequality (e.g. the S80/S20 ratio) and in-work at risk of poverty indicators published by Eurostat. Moreover, Eurostat noted that the effect of own production imputation changed the economic inequality ranking of Romania when compared to Portugal and Greece. Reviewing the methodological differences in own production imputation, Eurostat (2010) recommended that own production questions be excluded from further SILC questionnaires. Any such change in the Romanian case would represent a break in series and lead to a sharp increase in income inequality.

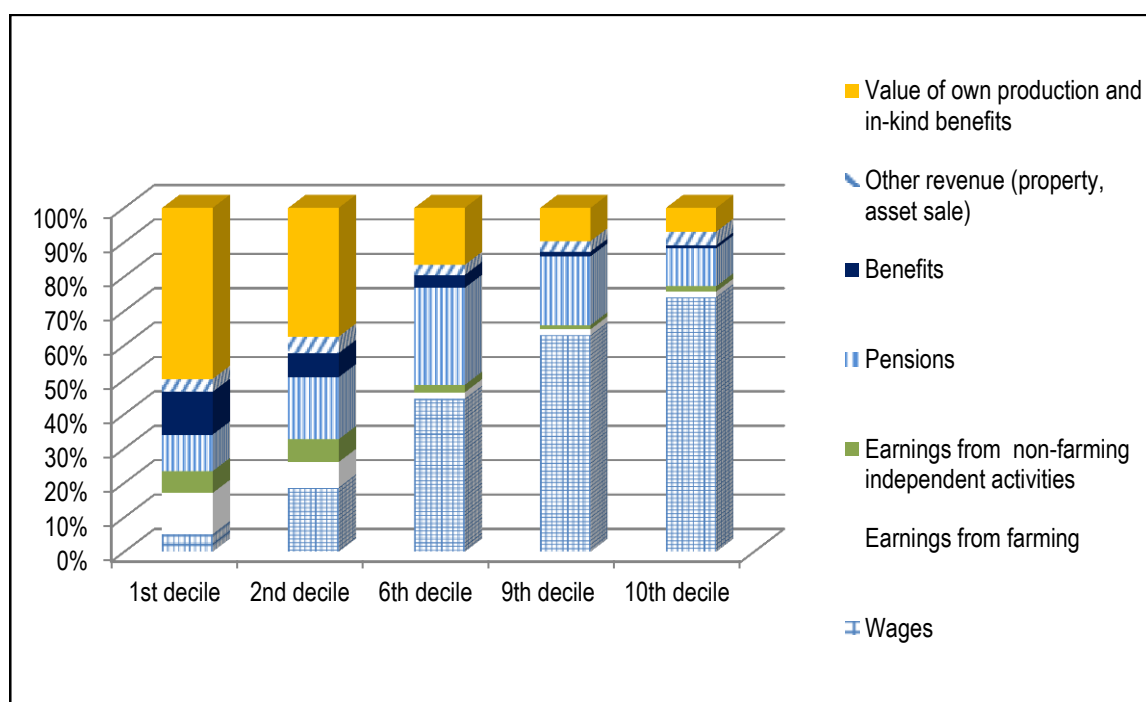
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<sup>15</sup> In Romanian “Ancheta Bugetelor de Familie”

<sup>16</sup> Agricultural products from own consumption which are consumed in the household are imputed at market prices using consumption diaries and regional prices in the HBS.

<sup>17</sup> The data used in this analysis comes from a nationally representative sample of the Romanian Family Budget Survey (Ancheta Bugetelor de Familie) 2011. The data corresponds to the first wave of the survey and tracks monthly independent subsamples of 3,120 households. The 2011 survey had a response rate of 81.6per cent (75.1per cent in urban areas and 89.5per cent in rural areas). In total, we observe 30,784 households reporting income information in 2011.

**Figure 7. Sources of household earnings by decile, 2011**



Source: National Statistics Institute, 2012c

Even when taking into account household own production, Romania is one of Europe's most unequal societies, with D9/D1 ratios well above those found in other new member states or in the EU-15 (Table 6). As argued above, wage compression at the top of the income distribution and modest monetary increases for the bottom decile led to a decrease in the D9/D1 ratio in Romania between 2007 and 2011 (Table 6), while other New Member States (NMS) or EU-15 countries did not see such changes.

High income inequality in Romania is driven by monetary inequality between wage earners and those self-employed in agriculture or contributing as household members of subsistence farming households. Only 37.5 per cent of individuals living in rural areas are employed, while 34.6 per cent are self-employed and a further 27.3 per cent are contributing family workers. Underemployment in rural areas is a key driver of economic inequality in Romania, as rural inhabitants' mix subsistence farming, various forms of self-employment, informal employment as well as cyclical employment abroad to supplement their income. These unstable and often informal and undeclared forms of income are likely to be underreported.

**Table 6. D9/D1, D9/D5 and D5/D1 measures in Romania, EU-15 and New Member States, 2007-2011**

		2007	2008	2009	2010	2011
<b>Romania</b>	D9/D1	6.2	5.8	5.4	5.0	5.2
	D9/D5	2.2	2.2	2.1	2.1	2.0
	D5/D1	2.8	2.7	2.6	2.5	2.6
<b>NMS</b>	D9/D1	3.8	3.7	3.7	3.7	3.7
	D9/D5	1.9	1.9	1.9	1.9	1.9
	D5/D1	2.0	2.0	1.9	2.0	2.0
<b>EU-15</b>	D9/D1	3.7	3.7	3.7	3.7	3.7
	D9/D5	1.9	1.9	1.9	1.9	1.9
	D5/D1	2.0	1.9	1.9	2.0	2.0

Source: Eurostat, Distribution of income by quantiles, SILC, [ilc\_di01]

Economic inequality estimates are thus driven by permanent employment income. Wage income in the tenth decile is 57 times higher than average wage income in the first decile while money (non-imputed) income from self-employment in agriculture accounts for only 11 per cent of monetary revenue in the first decile (National Statistics Institute, 2012c).

Underreporting of monetary income at the bottom and top of the distribution should be of particular concern when evaluating monetary inequality in Romania. Reporting of self-employment income may be particularly unlikely considering the high rate of tax evasion and the large size of the informal economy. The Romanian Fiscal Council (2011) estimated that tax evasion<sup>18</sup> represented 10.3 per cent of GDP in 2010 and that 35.3 per cent of employees were working without legal forms. When computing national accounts, the National Statistics Institute uses an imputation methodology for non-reported income of the self-employed, given the high level of tax evasion. Household surveys measuring income inequality do not however take into account such imputations. Table 7 below shows that underreporting of income in the case of business owners may be of particular concern. The household income of entrepreneurs and business owners is only slightly higher than that of employees. This small difference may be unreliable and could be caused by the low response rate to the household budget survey in urban areas (75.1 per cent in urban areas in 2011 compared to 89.5 per cent in rural areas), as business owner and wealthy households (more likely to reside in urban areas) are less likely to agree to take part in the survey.

Evidence that Romanian surveys underestimate top incomes comes from contradictions between different studies of the Romanian National Statistics Institute. The 2011 HBS survey reports an average income of the top one per cent of households at € 2,173, or € 1,052 in equivalent adult earnings. This is clearly an underestimate of the incomes of top earners, as the October 2011 wage survey (National Statistics Institute, 2012f) notes that there were 190,000 employees, roughly one percentile of the population, whose gross wages exceeded RON 5,000 (€1,121). The number of

<sup>18</sup> Defined here as underreporting or non-reporting for VAT, mandatory social contributions and income taxes.

gross wages above RON 5,000 may actually be higher than 190,000, as the October survey does not include the Armed Forces and Defence and Intelligence institutions, where average wages are above the economy average.

As mentioned in Section 3, equating the reported monetary- income of the self-employed with those of waged employees to compute the adjusted wage share leads to a significant upward bias in the wage share. Table 7 below shows that non-farming self-employment income is only 55 per cent of the average income of employee households while self-employment in agriculture only 36 per cent.

**Table 7. Household monetary income by main occupational status of the head of household**

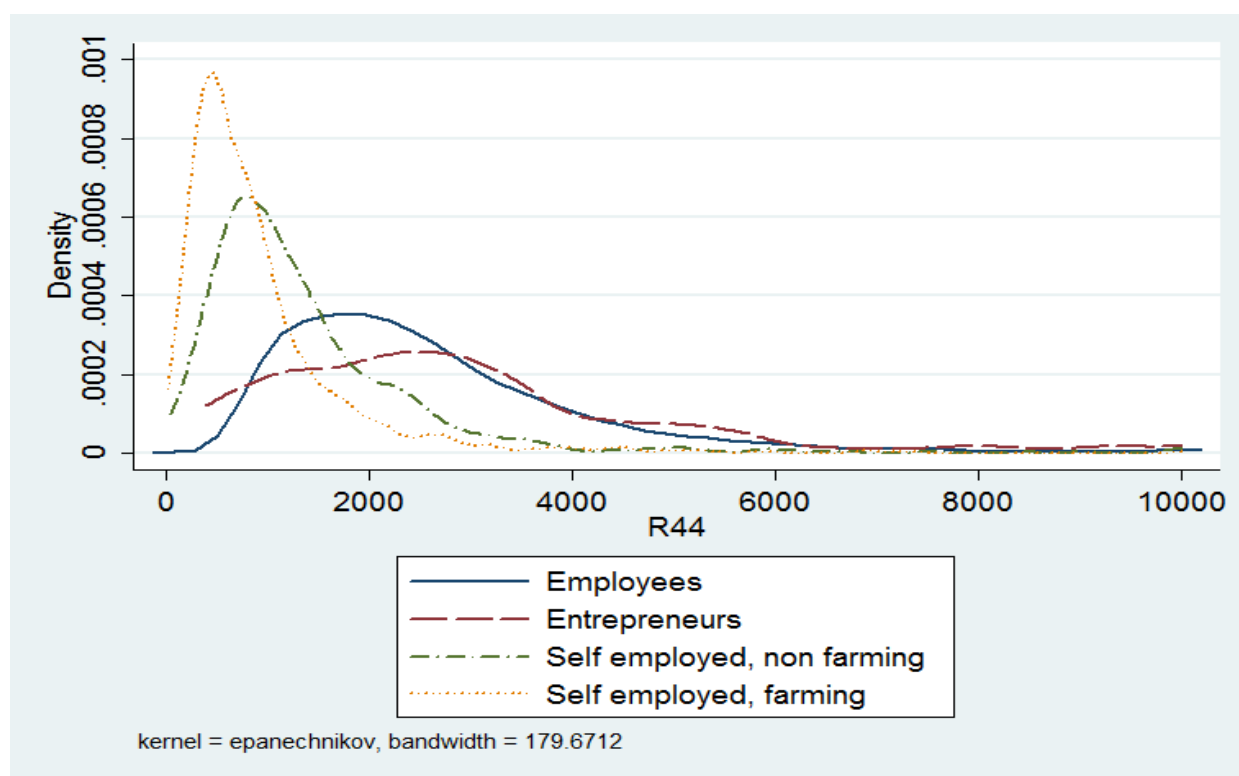
<b>Occupational status</b>	<b>Household income (RON)</b>
<b>Employee</b>	2,870
<b>Employer/Business owner</b>	3,194
<b>Self-employed, non-agricultural</b>	1,593
<b>Self-employed, agriculture</b>	1,047
<b>Unemployed</b>	1,336
<b>Pensioner</b>	1,615

Source: Author's calculations, 2011 HBS Microdata

Figures 8 and 9 show kernel density estimates of household earnings broken down by the occupational status of the head of the household. There were 6.14 million employees in Romania in 2011, 1.17 million self-employed and 1.16 million contributing family workers (see Table 1). Self-employment in farming shows a particularly skewed distribution with a concentration of low monetary household income. This distribution reflects the low concentration of farming land and the high number of subsistence farming households.



**Figure 8. Kernel density estimates of household earnings by main occupation of the head of household (all categories)**

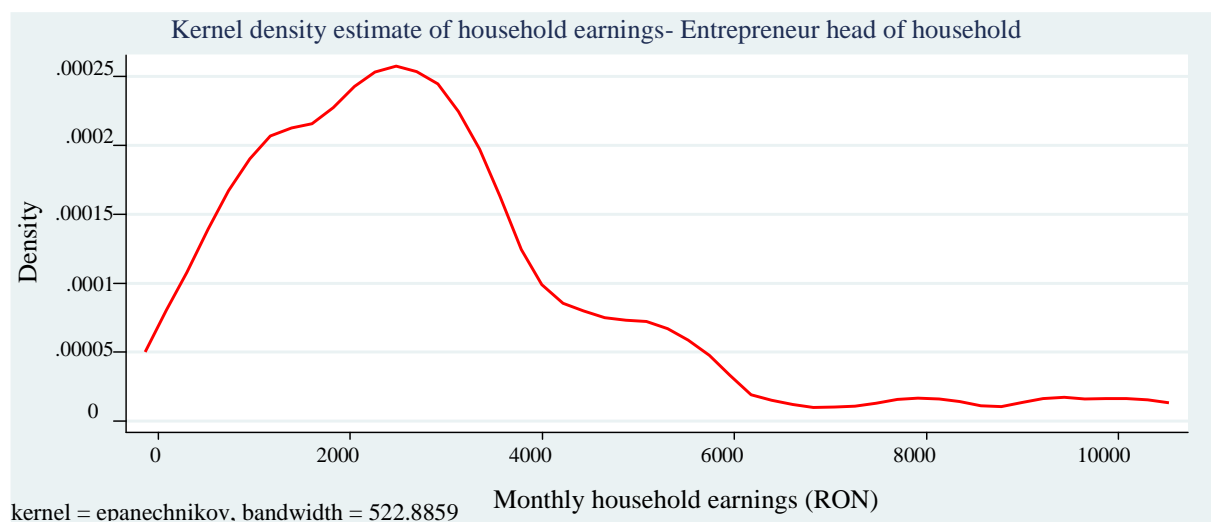
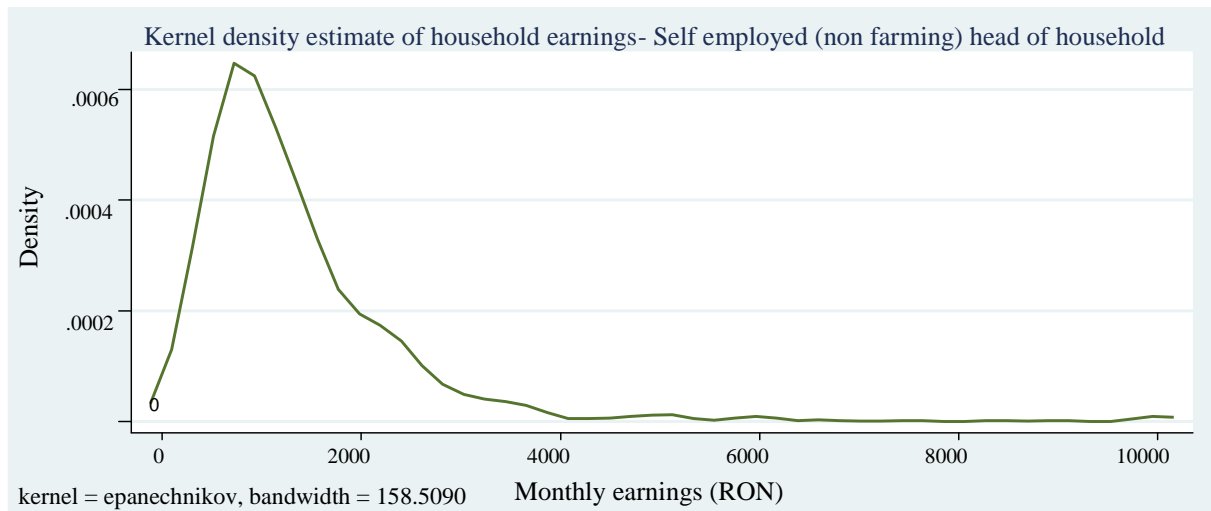
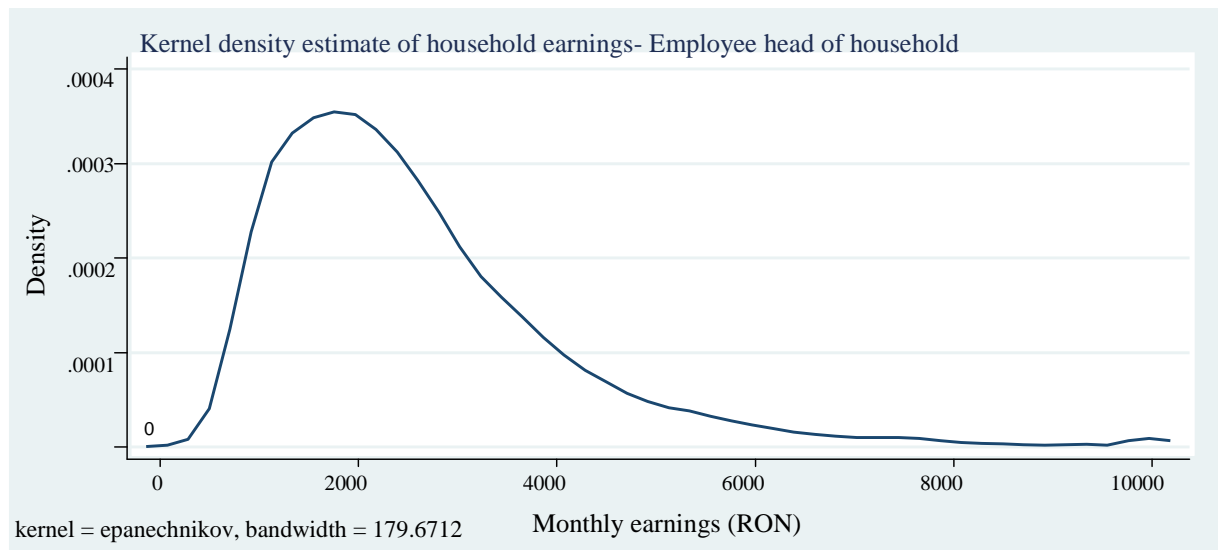


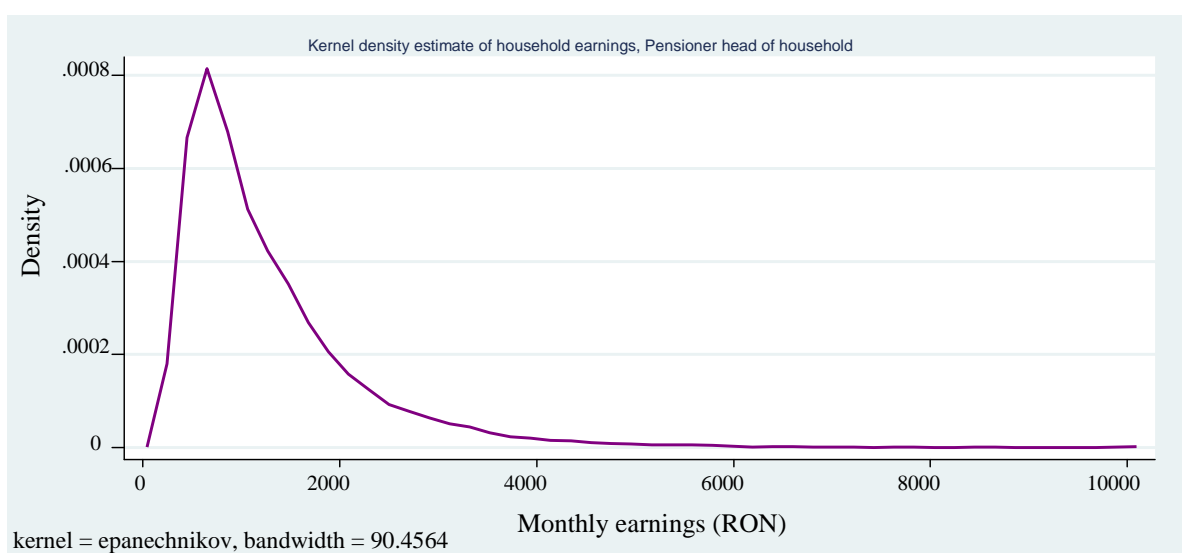
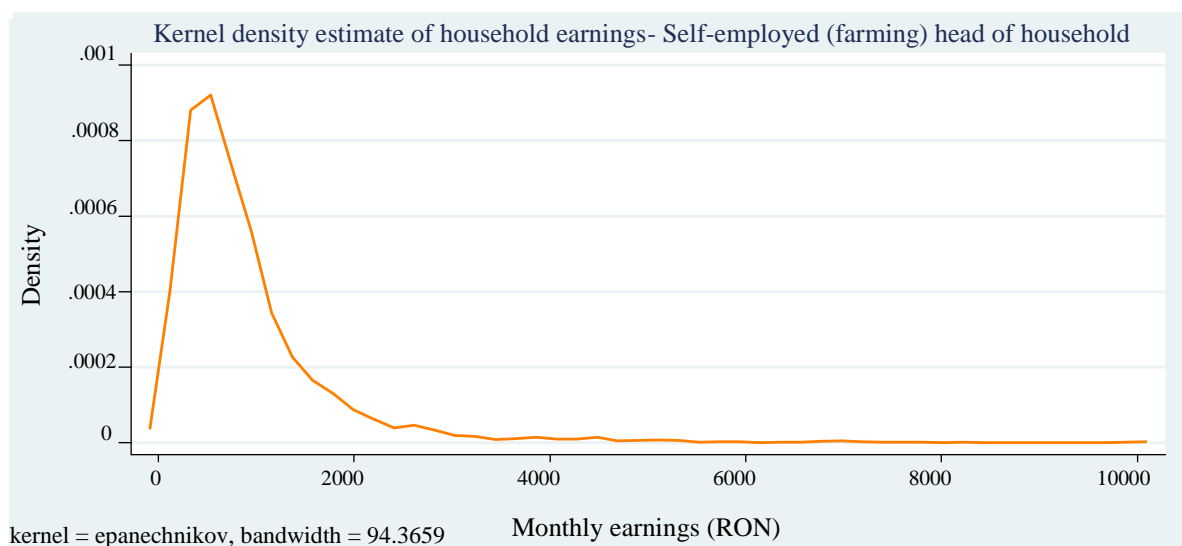
Source: Author's analysis of 2011 HBS microdata

Note: Top earnings capped at RON 10,000.

The distribution of wages is skewed (Figure 10), with a high share of workers earning the minimum wage. According to the yearly survey on gross wages in companies with more than four employees (National Statistics Institute, 2012f), in October 2011 about 4.9 per cent of full time workers were paid the minimum wage of RON 670 (€ 150) while a further 50.3 per cent of workers were paid under RON 1,500 (€ 336). Figure 10 seems to suggest full compliance with minimum wage legislation. However, compliance with minimum wages may be imperfect in companies with less than four employees. There is however little evidence of widespread practices of employers paying subminimum wages. According to its yearly report, the Labour Inspection institution only administered six fines for noncompliance with minimum wage legislation in 2013 (out of a total of 58,000 sanctions for any violations of employment legislation).

**Figure 9. Kernel density estimates of household earnings by the occupation of the head of the household**

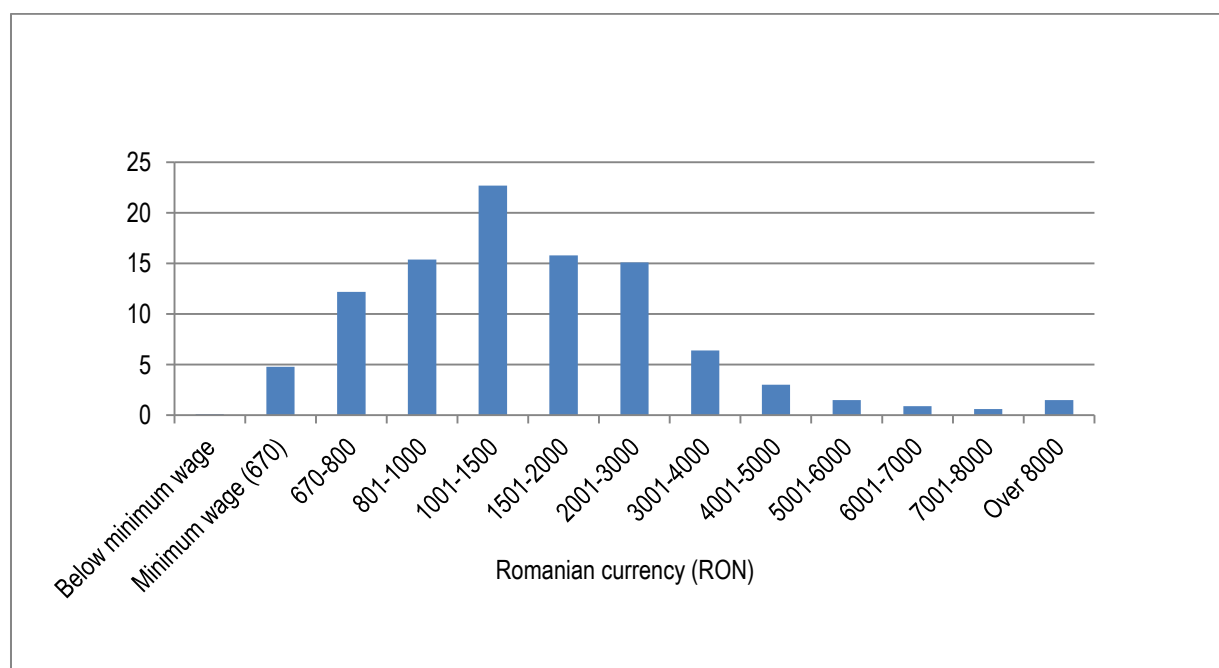




Sources: Source: Author's analysis of 2011 HBS microdata.

Note: Top earnings capped at RON 10,000

**Figure 10. Gross wage groups in Romanian enterprises with more than four employees, 2011**



Source: National Statistics Institute, Distribution of employees by salary groups, October 2011.

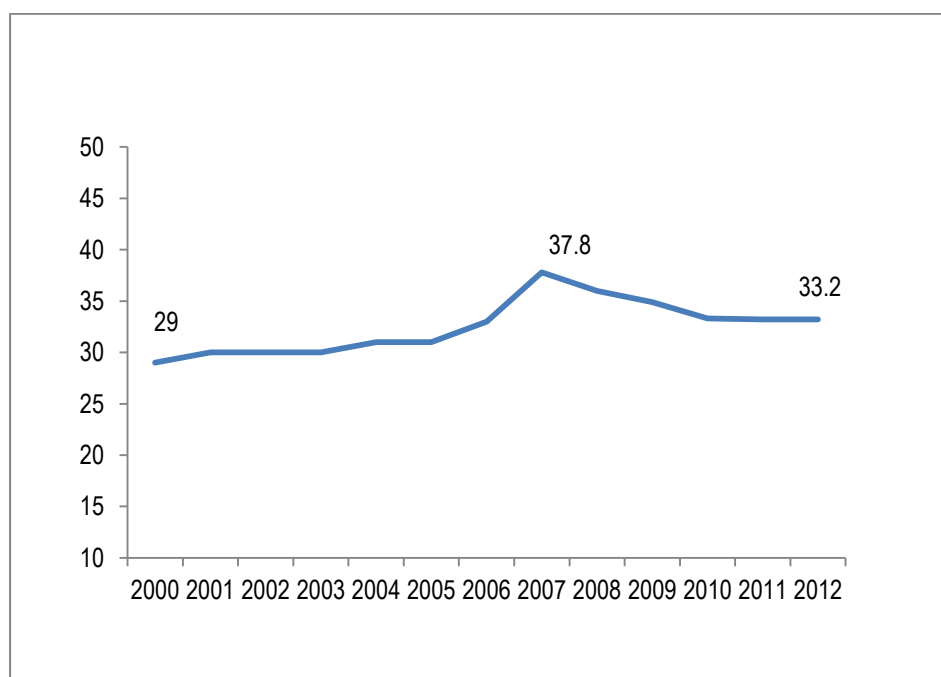
The October survey covers only enterprises with more than four employees, but minimum wage employees are more likely to work in small enterprises. According to the Labour Inspection General Employee Register, in April 2012, 631,761 out of 4,981,903 full time registered employees (12.68 per cent) were working for the minimum wage. The high number of minimum wage employees is a feature of the informal economy. To reduce their costs with social contributions, employers resort to making envelope payments to workers and only report minimum wages for fiscal purposes.

Overall income inequality - measured by the Gini coefficient - followed an upward trend until 2007 and decreased during the economic crisis (Figure 11). Economic developments in Romania are consistent with these evolutions: sharp real wage increases (Figure 3) and pension increases since 2005 (Figure 18, Section 5.1) coincided with the introduction of a flat tax of 16 per cent in 2005, which replaced a progressive system with a top rate of 35 per cent. These developments considerably increased the earnings gap between those self-employed in (subsistence) farming and urban wage earners.

The drastic cuts in public wages that put pressure on private sector pay reduced inequality, as they affected mostly upper income deciles (Table 8). The introduction of a minimum guaranteed pension<sup>19</sup> in 2009 led to a real increase in the incomes of the poorest households. Moreover, because a large share of the income of households in lower deciles is imputed as own production of foodstuff, these households generally also saw (imputed) income growth. Rising food prices during the recession thus had the effect of reducing inequality as the own production income of poor households is imputed at market prices.

<sup>19</sup> Many farmers who had been associated with state owned collective farms received very small pensions, particularly individuals who had been contributing family workers during the communist regime.

**Figure 11. Gini coefficient in Romania, 2000-2012**



Note: Break in series in 2007. Source: Eurostat, SILC

**Table 8. Equivalent adult earnings in Romania in euros, 2007-2011**

	2007	2008	2009	2010	2011	% Change 2007-2011
99 <sup>th</sup> percentile	711	644	673	674	610	-14
98 <sup>th</sup> percentile	556	530	568	548	515	-7
97 <sup>th</sup> percentile	484	463	505	495	462	-4
96 <sup>th</sup> percentile	436	427	463	457	432	-1
95 <sup>th</sup> percentile	399	393	440	424	407	2
9 <sup>th</sup> decile	307	312	346	348	341	11
8 <sup>th</sup> decile	233	238	269	277	269	15
7 <sup>th</sup> decile	164	169	193	198	194	18
Median	141	144	168	170	167	19
4 <sup>th</sup> decile	116	123	142	145	143	23
2 <sup>nd</sup> decile	73	79	93	99	94	28
1 <sup>st</sup> decile	50	54	64	69	65	31
5 <sup>th</sup> percentile	34	39	44	47	44	30
4 <sup>th</sup> percentile	30	34	38	43	40	34
3 <sup>rd</sup> percentile	27	28	33	38	34	28
2 <sup>nd</sup> percentile	23	24	26	35	26	13
1 <sup>st</sup> percentile	17	16	19	27	15	-9

Note: Figures at July 2012 prices and July 2012 EUR exchange rate Source: Eurostat, SILC, Distribution of income by quantiles, lc\_di01.

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## 4.1 Sector of the economy

As the Romanian economy received more export-oriented foreign direct investment, pressures on wages in industry and manufacturing became stronger. While the private, export oriented sector saw employment growth as Romanian exports increased, large industrial (state-owned) facilities were undergoing a delayed restructuring and privatization process that led to job losses. The combined effect was a gradual erosion of wages in industry, which decreased from 109 per cent to 94 per cent of the national average wage (Table 9).

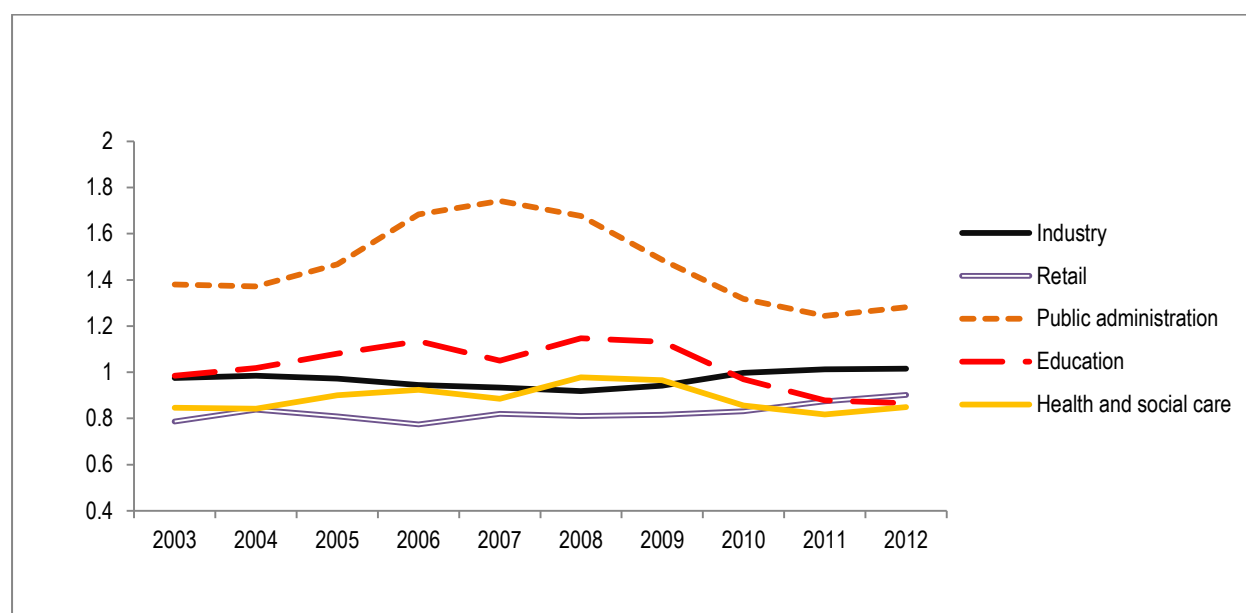
**Table 9. Gross wages by sector, in per cent of the economy-wide average wage**

	Industry	Construction	Public administration	Education	Health
<b>1997</b>	109	97	90	83	72
<b>2000</b>	101	86	135	95	86
<b>2003</b>	96	88	144	98	83
<b>2006</b>	94	82	172	116	93

Source: IMF, 2007:41

The significant increase in public administration wages until 2006 was drastically corrected in the recent recession by the austerity pay cuts. But wage increases in the mostly public sectors of Education and Healthcare were also curbed as part of the austerity cuts, although these sectors had seen a more modest evolution compared to the average wage. Because of austerity measures targeting the public sector, average wages in education and healthcare have decreased below average wages in industry (including manufacturing) in 2010 (Figure 12).

**Figure 12. Wages in selected sectors of the Romanian economy as % of average economy-wide wage**



Source: Romanian Statistics Institute, Tempo Time series

In the past decade, wage differences across sectors have also been driven by the minimum wage and pay scale coefficients in the sector-level collective agreements. For example, the minimum gross wage in the mining sector was set at 150 per cent of the minimum economy-wide average wage in the 2008-2012 collective labour agreement while the agreement for 2010-2011 in agriculture provided a minimum wage of RON 725, slightly above the national minimum wage. Each sector level agreement provided different minimum wages and sometimes different coefficients for minimum wages of skilled workers. These differences are a reflection of the power of the trade unions negotiating the agreements and the share of public and private companies in those sectors. As the national collective labour agreement was abolished under the 2011 new social dialogue law, sector-level agreements will become more important in the wage setting process, further fuelling differences between sectors.

## 4.2 Informal economy

In the 2007 Euro barometer, 23 per cent of Romanian workers admitted to receiving some form of envelope payment<sup>20</sup> and the Romanian Fiscal Council (2011) estimated that 35.3 per cent of employees were working in the informal economy. The official methodology used to correct tax evasion in national accounts assumes that the revenues of self-employed individuals not reporting wage information is not lower than the average of the earnings of employees in small enterprises in the same sector (Romanian Fiscal Council, 2011, p. 76). Such an assumption ignores the possibility

<sup>20</sup> Romania's was the highest percentage in the EU27. Moreover, 31 per cent of respondents refused to answer the question, again the highest percentage of non-responses in the EU27.

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that individuals accept lower wages in the informal sector because of a lack of formal employment opportunities.

The Romanian household budget survey may be under-representing households where members work in the informal economy. The survey asks respondents whether they were working without a legal contract. Only 0.29 per cent of respondents admit to doing so, considerably below the latest governmental estimate of 35.3 per cent. If informal sector benefits and wages are lower than in the formal sector, the HBS may be poorly capturing economic inequalities, considering that informal sector households are underrepresented in the survey. The large informal economy fuels economic inequality not only through the wage penalty that informal workers may take compared to formal employees, but also through the increased instability and diminished prospects for an adequate pension or healthcare coverage.

### **4.3 Part-time and temporary contract employment**

The part-time work rate in Romania is low compared to the EU average (about 9 per cent in Q1 2012 compared to 19.3 per cent in the EU27). While in most EU countries the rate for women is much higher than that for men, in Romania the difference is very small (9.4 per cent compared to 8.7 per cent in Q1 2012).

Part-time work is concentrated in small enterprises, as a 2010 survey (National Statistics Institute, 2012c) found that part time work schedules applied to only 2.61 per cent of employees in companies with more 10 employees. In these firms, women were slightly more likely to work part-time: 2.82 per cent compared to 2.43 per cent for men. Hourly earnings of men working part-time represented only 68.5 per cent of hourly earnings of full-time employees. The gap was narrower for women, as the average part-time hourly wage was 82.6 per cent of the full-time wage.

In official statistics, the temporary employment rate is particularly low, at 1.5 per cent of the total number of employees, the lowest percentage in the EU27. This indicator should however be understood in the context of a large informal economy, where employment without legal forms is by its very nature temporary. Thus the actual temporary employment rate may be much higher.

In the 2011 HBS, the average wage income for households where the head reported working on a temporary contract was 65 per cent of the wage income of households where the household head had a permanent contract (Table 7).

Part-time and temporary contract works are particularly precarious forms of employment in Romania, when comparing earnings to those of regular employees. Eurostat reports that the in-work poverty rate was 19 per cent in 2011 in Romania, the highest in the EU27. This rate was 15.3 per cent for individuals working full time and 58 per cent for part-time workers. The average part-time in-work poverty rate in the EU27 was 12.4 per cent. Given the low wages and the pay gap between full time and part time employees, part-time employment is thus a poor option for most Romanians. In a 2011 Eurostat survey, 80 per cent of Romanians working with a temporary contract said the reason for their form of employment was that they could not find permanent employment.



The World Bank (2008) recommended changes to labour market legislation to facilitate part-time and temporary employment. These recommendations were made in the context of policies to raise the employment rate but were ultimately adopted in 2011 in the context of changes to labour legislation to counter rising unemployment. The maximum duration of a temporary contract was extended from 24 to 36 months. The activity of temporary employment agencies was also facilitated, as the maximum period under which they could place a worker was increased from 12 to 24 months. The previous legislation also provided that part-time workers hired through placement agencies could not be paid less than full time workers doing similar jobs. The new Labour Code changed this provision, letting the pay of part-time workers be freely negotiated. This latter change opens the way for further increases in the pay gap between temporary and standard employment.

The changes that reduced the protections afforded to part time and temporary employees were supposed to protect them from the prospect of job loss, as they would have allowed employers to switch to non-standard forms of employment rather than resort to redundancies. However, Table 10 shows that the 2011 changes to facilitate temporary and part-time employment followed rather than preceded an increase in such forms of employment. If left unchanged, these provisions may actually produce their full effect in the next economic downturn.

**Table 10. Part time and temporary employment rates, 2006-2013**

	2006	2007	2008	2009	2010	2011	2012	2013
<b>Part time employment rate</b>	8.6	8.6	8.6	8.5	9.7	9.3	9.1	8.8
<b>Temporary contracts as % of all contracts</b>	1.8	1.6	1.3	1.0	1.1	1.5	1.7	1.5
<b>Unemployment rate</b>	7.3	6.4	5.8	6.9	7.3	7.4	7.0	7.3

Source: Eurostat

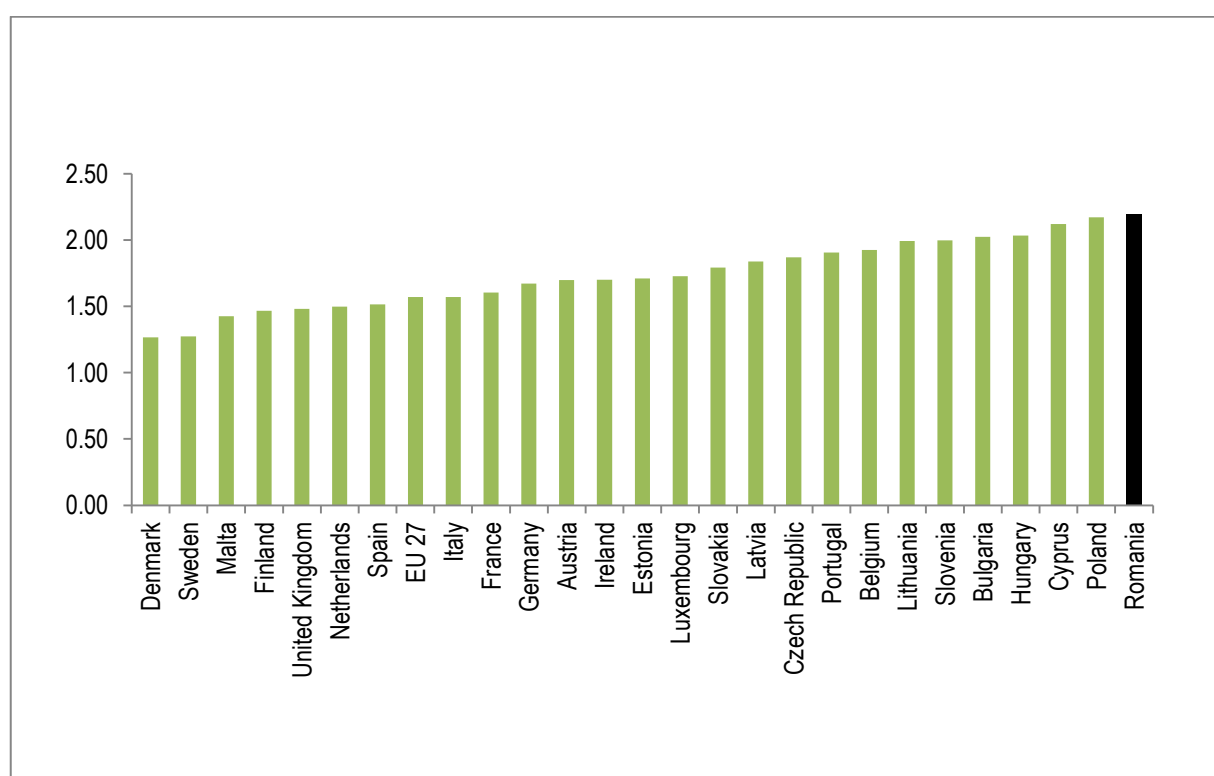
Table 10 also shows that part time employment rates are decreasing to pre-recession levels. Recommendations from the World Bank and IMF to facilitate part time and temporary employment to boost overall employment ignored structural and contextual reasons that hinder the growth these forms of employment in Romania. In particular, Domnisoru (2012) shows workers do not seek part time positions as wages often fall below subsistence levels. Also, tight labour market conditions in sectors where the workforce can easily migrate (agriculture, hospitality, construction) make Romanian employers more interested in permanent, full time contracts.

While non-standard forms of employment fuel economic inequality because of the gap in earnings, they may be poorly captured by Romanian household budget surveys: only 0.82 per cent of employees in the 2011 HBS reported working part-time (while the Eurostat data show the figure to be about 9 per cent). Given the underrepresentation of part-time workers and their lower pay, the HBS may underestimate economic inequality.

## 4.4 Different levels of educational attainment

Wage differences along educational lines are particularly high in Romania. Figure 13 shows Romania has the highest difference between the earnings of college and high school educated workers in the EU27. The gaps are considerable at other education levels as well (Table 11). These large differences may be explained by supply and demand factors on the market for college educated workers. While Romania has the lowest share of college educated citizens in the 25-64 age group in the EU27 (14 per cent), demand for tertiary education graduates has increased in recent years<sup>21</sup> while migration of highly skilled individuals continued. The percentage of college educated employees increased from 18.7 per cent in 2002 to 22.2 per cent in 2006 and 29.1 per cent in 2010 (National Statistics Institute, 2012i).

**Figure 13. Ratio of hourly earnings between tertiary and upper secondary education graduates\* in 2010**



Notes: \*Ratio between earnings of ISCED level 5A graduates (First stage of tertiary education, programmes that are theoretically based/research preparatory or giving access to professions with high skills requirements) and ISCED levels 3 and 4 graduates (Upper secondary and post-secondary non-tertiary education)

Sources: Eurostat, *Structure of earnings survey 2010*

<sup>21</sup> Between 2005 and 2010, financial intermediation employment increased by 43,000, healthcare by 36,000 and IT&C was one of the few sectors not to shed jobs during the recession.

**Table 11. Differences in earnings by education level, Romania and Eurozone (2010)**

Education level	Romania	Eurozone
<i>% of wages of first stage tertiary education graduates</i>		
Pre-primary and primary	33.3	43.5
Lower secondary	35.1	46.5
Upper secondary and post-secondary non-tertiary	45.6	65.5

Source: Eurostat, 2010 Structure of earnings survey

Differences in income by education level also increased because of policy and institutional factors. While the gap in wages was maintained at low levels under communism for ideological reasons, the restructuring process put downward pressure on workers' wages while public sector pay for college degree holders increased. National and sector level collective agreements provide minimum wage coefficients differentiated by levels of education. These coefficients changed in 2007 in the national level agreement to ensure higher minimum wages for skilled workers and individuals with a college education (Table 12). The 2007 change in the minimum wage for employees with higher education reflected a change of perspective on how education is valued in the Romanian society. The change in skill pay coefficients did not, however, lead to increases in economic inequality but remained largely symbolic, as few college educated workers would have been impacted by the minimum wage provision. Also, as many college educated employees work in the public sector, any increase resulting from the skill pay coefficients would have been corrected by the drastic austerity cuts.

**Table 12. Skill pay coefficients in national/sector-level agreements**

Skill level	1999-2006	2007-2010
Unskilled	1	1
Skilled	1.2	1.2
Administrative staff- high school education	1.1	1.2
Foremen	1.3	1.3
Short-term higher education	-	1.5
Higher education	1.5	2

Notes: 1999-2006 refers to a series of collective labour agreements: 1990-2000, 2000, 2001, 2002-2003, 2003, 2005-2006.  
Source: Selected national and collective labour agreements, 1999-2010

## 4.5 Gender gap

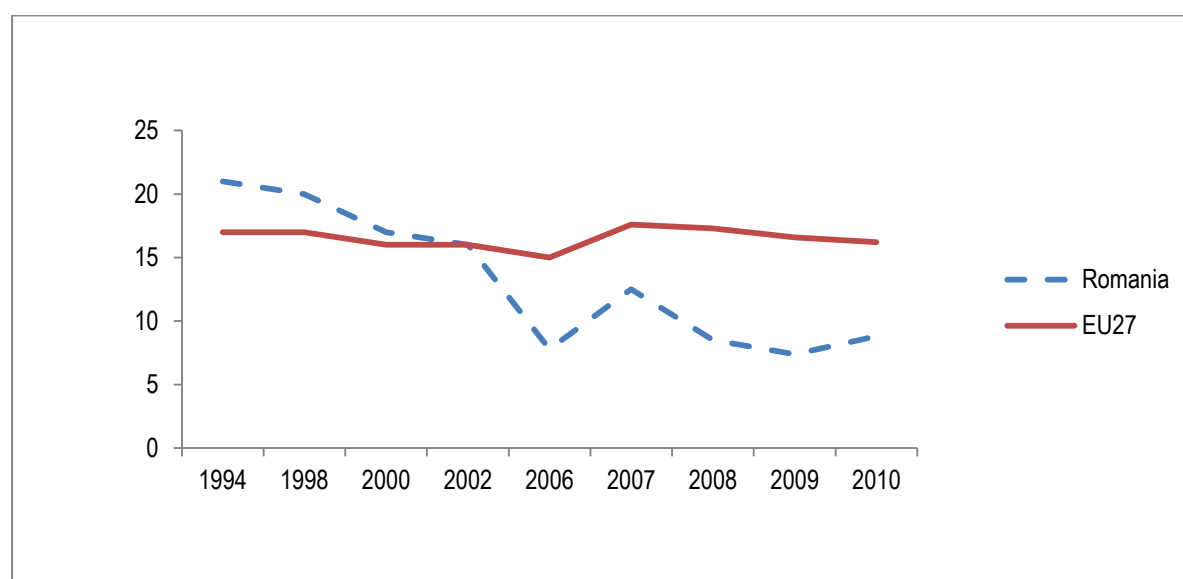
The gender pay gap has narrowed considerably in Romania since the 1990s (Figure 14) and is now among the lowest in the EU27. The average gross wages of women were 88.2 per cent of male wages in the October 2011 survey of enterprises with more than four employees (NSI, 2012f). Women were more likely to be in the low wage group: 58.1 per cent of women employees made less than RON 1,500, compared to 52.5 per cent of men (NSI, 2012f).

The widest male-female wage gaps are in financial services (28.8 per cent) and manufacturing (24.6 per cent). The difference in gross hourly wages was largest for professionals and crafts and related trade workers (National Statistics Institute, 2012i). Male wages were particularly more likely to exceed female wages in companies with more than 250 employees, where women made only 82.6 per cent of male wages. The wage gap is almost absent in the private sector (with equal per hour average wages) but it persists in the public sector (with a 1.91 RON/hour gap) (National Statistics Institute, 2012i).

The narrowing of the gender pay gap has tracked advances in women's educational attainment, as the female tertiary educational attainment surpassed that of men in 2008 (Figure 15). The 2010 employment survey (NSI, 2012i) shows that women's educational advantage has widened considerably: in the 25-54 age group in enterprises with more than 10 employees, 34.9 per cent of women had college degrees, compared to only 23.7 per cent of men.

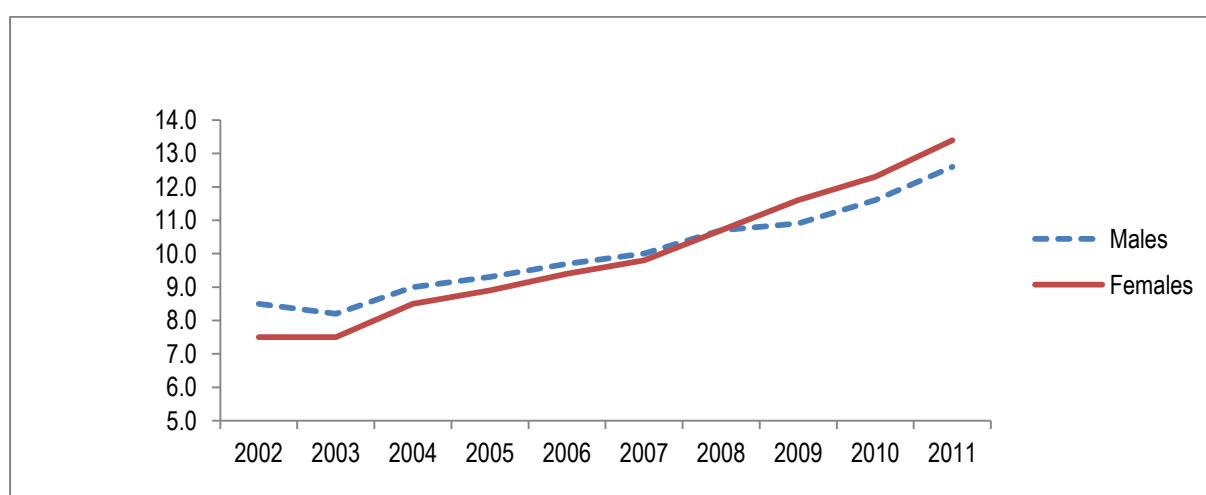
Despite the higher tertiary educational participation and narrowing of the pay gap, the female employment rate in the age 25-64 increased only slightly, from 66 per cent in 2003 (compared to 80.1 per cent for men) to 67.4 per cent in 2011 (compared to 80.7 per cent for men) and remains one of the lowest in the EU27.

**Figure 14. Evolution of the gender wage gap, 1994-2010, Romania and EU27**



Source: Eurostat, Gender pay gap in unadjusted form (earn\_grpgg)

**Figure 15. Romania - Tertiary education attainment as percentage of the 15 to 64 age group**



Source: Eurostat, Educational attainment (edatm1)

## 4.6 Urban-rural and regional differences

In 2011, average income for urban households was 33.4 per cent higher than that of rural households (Table 13). This gap is a consequence of differences in employment opportunities: 62.3 per cent of households in urban areas had an employee as a head of the household, compared to 26.5 per cent in rural areas (NSI, 2012f). Differences in employment also explain a large share of regional differences, as the percentage of employee households ranges from 28 per cent to 55 per cent across regions. These gaps would be even wider if household income did not take into account own production, which is a higher share of household income in poorer regions. The inter-regional gaps are likely to widen as Romania continues to move from its centralized and redistributive institutions (mostly established under the communist regime) towards greater fiscal and administrative decentralization.

**Table 13. Household income differences across geographical regions**

Region	Average household income (RON)	Per household % of average national income	Per person
Northeast	2174	90	86.7
Southeast	2178	90	90.2
South(Muntenia)	2337	96.7	95.4
SouthWest	2159	89.3	88.3
West	2541	105.2	107.3
Northwest	2511	103.9	102.6
Center	2478	102.5	102.9
Bucharest	3121	129.1	140
Urban	2633	108.9	112.8
Rural	2133	88.3	84.5

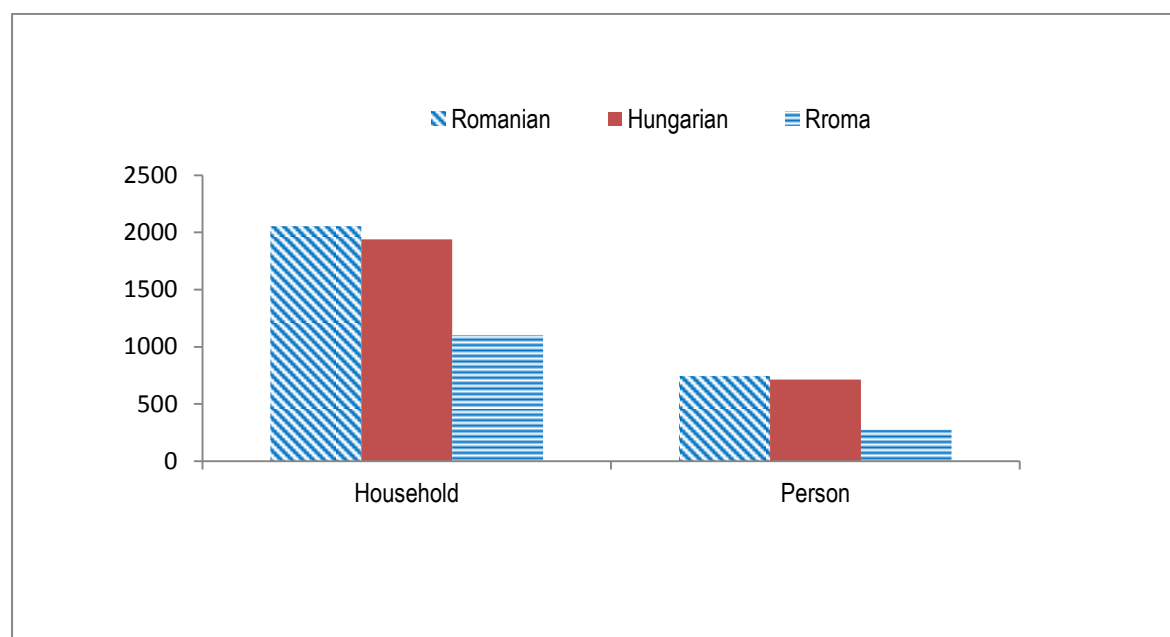
Source: National Statistics Institute, 2012c

## 4.7 Ethnic differences

Romania has a sizeable Roma population. The 2011 Household Budget Survey records 2.28 per cent of household heads to be of Roma origin and 3.29 per cent of the population to be Roma (a percentage that matches 2011 Census estimates). Figure 16 shows the significant gap in earnings for Roma households compared to other ethnic groups. This gap is particularly salient in the case of per capita income, as Roma households have more members on average (5.34 in the 2011 HBS compared to 3.62 for Romanian households). Figure 17 shows a particularly skewed distribution of earnings for the Roma, reflecting the large share of Roma households with very low incomes.

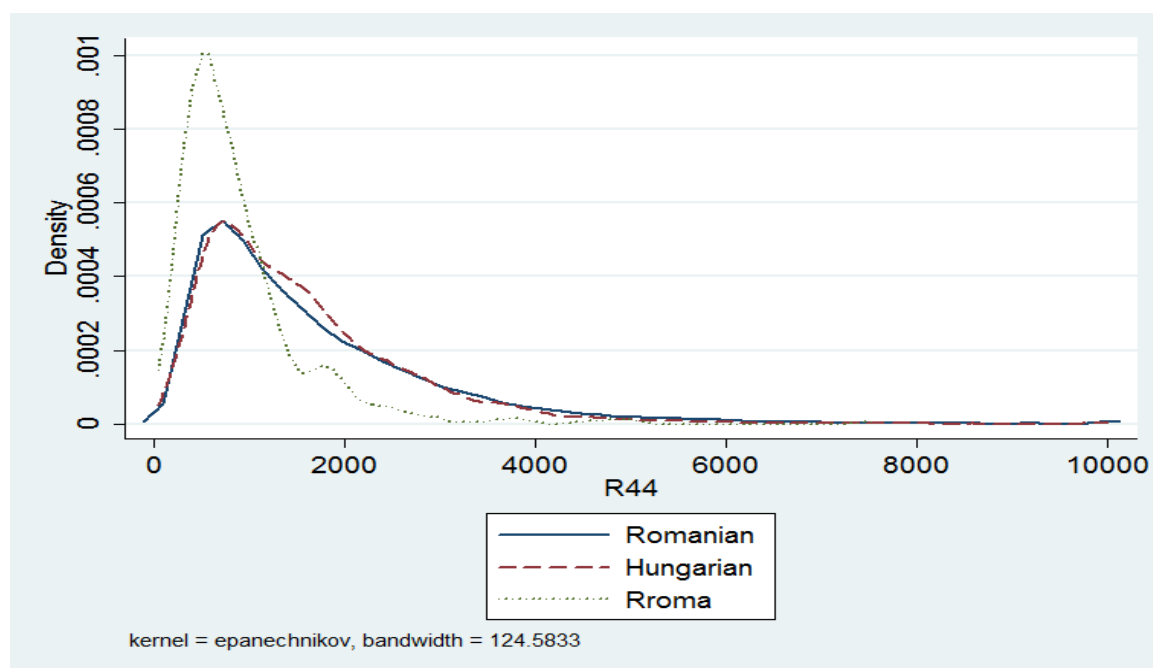
Even these significant differences in earnings may understate the true extent of the social inequalities between the Roma and the majority population along the lines of education, employment and social protection coverage. While the Romanian government maintains a discourse on social inclusion of the Roma, in recent years the mayors of Baia Mare and Cluj have relocated groups of Roma to special camps at the outskirts of cities- in the case of Baia Mare, after initially building a wall around the Roma settlement. Such overt segregation indicates that income inequalities may be driven by discrimination. Although there is evidence that the ethnic Roma face unique inequalities in terms of income, living conditions and access to health care and social services, the Romanian Statistics Institute does not provide information on ethnicity in its reports on social inclusion or living conditions (National Statistics Institute, 2012g). Designing effective social policies to promote social inclusion of the Roma is made difficult by such lack of data broken down by ethnicity. Roma citizens may have low social protection coverage as they often lack the documents necessary to apply for means tested benefits and are more likely to work without a work contract (Rat, 2005).

**Figure 16. Average monthly income by ethnicity of the head of household**



Source: Author's calculations, Household budget survey 2011 microdata

**Figure 17. Kernel density estimates of household earnings by ethnicity of the head of the household, 2011**



Source: Author's analysis of 2011 HBS micro data.

Note: Top earnings capped at RON 10,000

## 5. Social insurance and social protection

Romania has the lowest level of spending on social protection per capita as a ratio of GDP in the EU27, 17.6 per cent of GDP in 2010, compared to the EU27 average of 29.4 per cent. The low level of spending is correlated with the low level of government revenue as a percentage of GDP, in turn driven down by low levels of corporate and income taxes, which are set at a flat 16 per cent. Despite the relatively low levels of spending, fiscal sustainability has become an increasingly greater problem. The high levels of tax evasion and the size of the informal economy are putting pressure on social insurance budgets that are financed from employee and employer contributions. The Romanian Fiscal Council (2011) estimated that tax evasion reduces government revenue by 10.3 per cent of GDP. The pension budget is operating at a considerable deficit and needs inflows of non-contributory funds every year to meet obligations. A transition to a three tiered pension system also diverts a share of current contributions to private pension funds, further increasing the deficit in the pay-as-you-go system.

The large informal economy creates inequalities in social protection coverage. Workers in the informal economy - for whom employers do not pay contributions - are not eligible for pension, healthcare and unemployment benefits unless they choose to pay these contributions on their own.

Because of the low level of spending and inequality in coverage caused by informal work, the Romanian social protection system achieves a low reduction in poverty after transfers (Table 14).

**Table 14. Impact of transfers on the at risk of poverty rate, Romania, EU15 and New Member States, 2007-2011**

		2007	2008	2009	2010	2011
<b>EU15</b>	<b>At risk of poverty after transfers</b>	16	16.2	16.1	16.2	16.7
	<b>Reduction in at risk of poverty rate</b>	<b>9.7</b>	<b>8.7</b>	<b>9.1</b>	<b>9.9</b>	<b>9.7</b>
<b>New member states</b>	<b>At risk of poverty after transfers</b>	18.2	17.3	17.1	16.9	17.5
	<b>Reduction in at risk of poverty rate</b>	<b>8.2</b>	<b>8.9</b>	<b>7.8</b>	<b>8.2</b>	<b>7.8</b>
<b>Romania</b>	<b>At risk of poverty after transfers</b>	24.8	23.4	22.4	21.1	22.2
	<b>Reduction in at risk of poverty rate</b>	<b>6.1</b>	<b>7.3</b>	<b>6.7</b>	<b>6.4</b>	<b>6.9</b>

Notes: Percentage of population below 60 per cent of median equivalised income after social transfers.

Source: Eurostat, At-risk-of-poverty rate by poverty threshold, age and sex (Source: SILC) [ilc\_li02]

As discussed in Section 3, household own production plays a significant role in reducing poverty and income inequality. When considering only market income (excluding own production imputations), Table 15 shows that the reduction in the Gini coefficient (for equivalent income per household member) achieved by transfers, taxes and contributions is 20.7 points, from 0.54 to 0.33. This decrease in the Gini coefficient is higher than the OECD average of 14.3 point drop after taxes, transfers and contributions or that in other Eastern European countries (19.4 in Hungary, 16.5 in Poland and 15.9 in the Slovak Republic).<sup>22</sup> The high impact of redistribution is largely due to pensions, which lead to a decrease in the Gini coefficient from 0.54 to 0.43. Other transfers reduce the Gini coefficient by a further seven points, from 0.43 to 0.35, while the combined effect of taxes and contributions is to reduce the Gini from 0.36 to 0.33. The small impact of taxes and contributions on economic inequality is not surprising, given that Romanian income taxes are a flat 16 per cent. Moreover, contributions are capped for top earners and there are fiscal deductibilities for private healthcare plans, which reduce the redistributive impact of healthcare social contributions on the incomes of top earners.

The high impact of pensions and other benefits is due to the fact that for many individuals, these transfers are the only source of monetary income. This is particularly true for retired farmers who were former employees of collective farms as well as for most rural inhabitants making a living out of subsistence farming. The analysis presented here does not take into account own production imputations.<sup>23</sup> If it did, measures of economic inequality would be lower, and monetary transfers would have a lower impact on the Gini coefficient, as discussed in Section 3.

<sup>22</sup> OECD Stat, Income distribution - Inequality, data extracted on 10 Jan 2013.

<sup>23</sup> The Romanian National Statistics Institute could not provide a single measure of own production imputations by household.



**Table 15. Impact on transfers, taxes and contributions on the Gini coefficient, D9/D11 and D9/D5**

	<b>D9/D1</b>	<b>D9/D5</b>	<b>Gini coefficient</b>
Household income before transfers, taxes and contributions	38.05*	2.624	0.4547
Household income after transfers and before taxes and contributions	7.098	2.426	0.390
Household income after transfers and taxes, before contributions	6.529	2.329	0.3746
Household income after transfers, taxes and contributions	5.595	2.182	0.3548
<i>Equivalent income per household member</i>			
	<b>D9/D1</b>	<b>D9/D5</b>	<b>Gini coefficient</b>
Equivalised income before transfers, taxes and contributions	-.**	3.092	0.5368
Equivalised income before transfers (excluding contributory pensions), taxes and contributions	16.474	2.402	0.4343
Equivalised income after transfers and before taxes and contributions	6.069	2.194	0.3641
Equivalised income after transfers and taxes, before contributions	5.545	2.092	0.3482
Equivalised income after transfers, taxes and contributions	4.912	1.992	0.3296

Notes: for each individual, equivalised income is defined as total household income divided by equivalised household size, where the equivalised household size is computed according to the modified OECD scale, with a weight of 1 for the first adult, 0.5 for other household members aged 14 or over and 0.3 for household members aged less than 14.

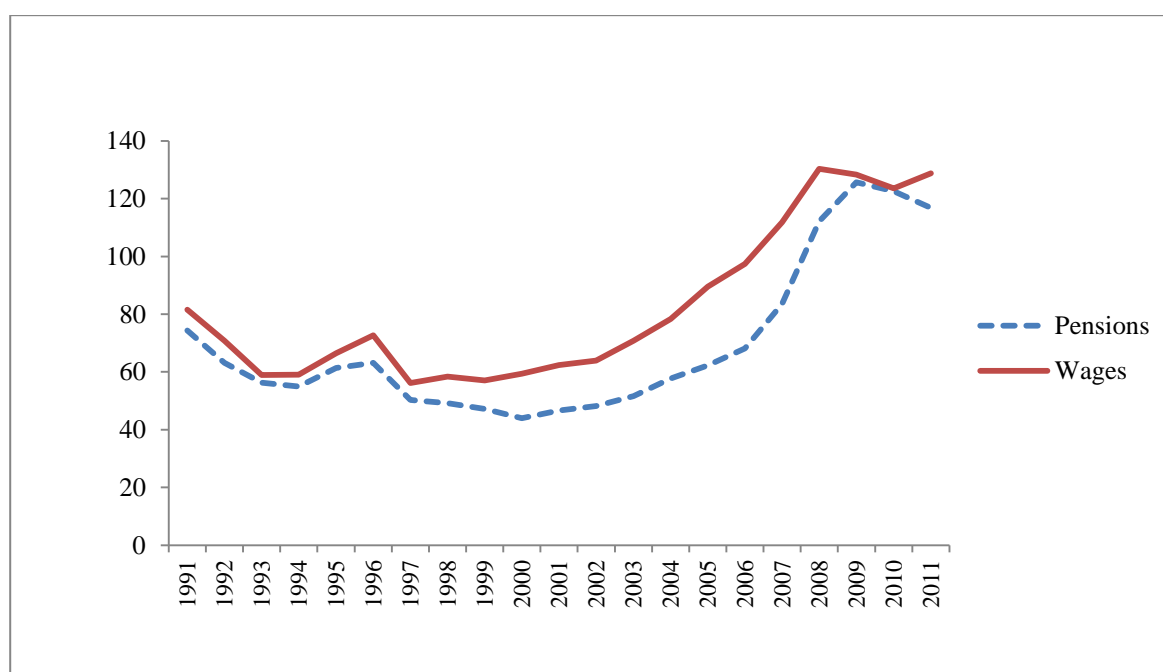
\*The high value of this indicator is a consequence of the high number of households reporting zero or very low income in the absence of any transfers \*\*Incomes of households reporting 0 income in the absence of transfers were equated to 0.01 RON in order to include these households in calculations of Gini coefficients. Source: Author's calculations, 2011 Household Budget Survey micro data not taking into account household own production income.

## 5.1 Social insurance – Pensions

During the 2000s, Romania started replacing its defined benefit, pay as you go system with a defined contribution + voluntary pillar system by diverting 2 percentage points of the incoming social security contributions to the defined contribution system. Balancing the social security budget proved particularly difficult for Romanian authorities: after many years when pension growth lagged behind real wage growth (Figure 18), the Romanian government recalculated pensions in 2005. The resulting sharp increase in real pensions over the next few years increased the pension's budget deficit considerably. Romania entered the 2008 recession with the one of the largest budget deficits in the EU27 (5.4 per cent of GDP in 2008). Faced with deficit financing pressures, the Romanian government attempted to cut pensions by 15 per cent. The governmental decision was overruled by the Constitutional Court, which argued that pensions were an entitlement. Instead, the government delayed plans to increase the share of contributions going to the private, defined contribution pillar, and targeted austerity measures at high income pensioners. It introduced an interdiction for retired individuals to receive both a pay check and a state pension. Pensioners were also required to begin paying health contributions of 5.5 per cent for pension income that exceeded RON 740.

Pension income growth was one of the factors leading to rising income inequality in 2007 and 2008. Pension inequality is driven by a history of conflicting and overlapping legislation on retirement. Several ministries (Justice, Defence, Interior) operate their own fully funded pension schemes. During the transition process, provisions for early retirement under favourable conditions were meant to ease the restructuring process in state owned enterprises and the armed forces. While some Army and public enterprise pensioners received generous retirement packages in the 1990s, retirement conditions became tighter for those retiring in the 2000s. On the lower end of the pension income distribution, pensioners who had worked for a state-owned farm received pensions below the poverty threshold. The government attempted to address these inequalities by introducing a minimum guaranteed pension of RON 300.

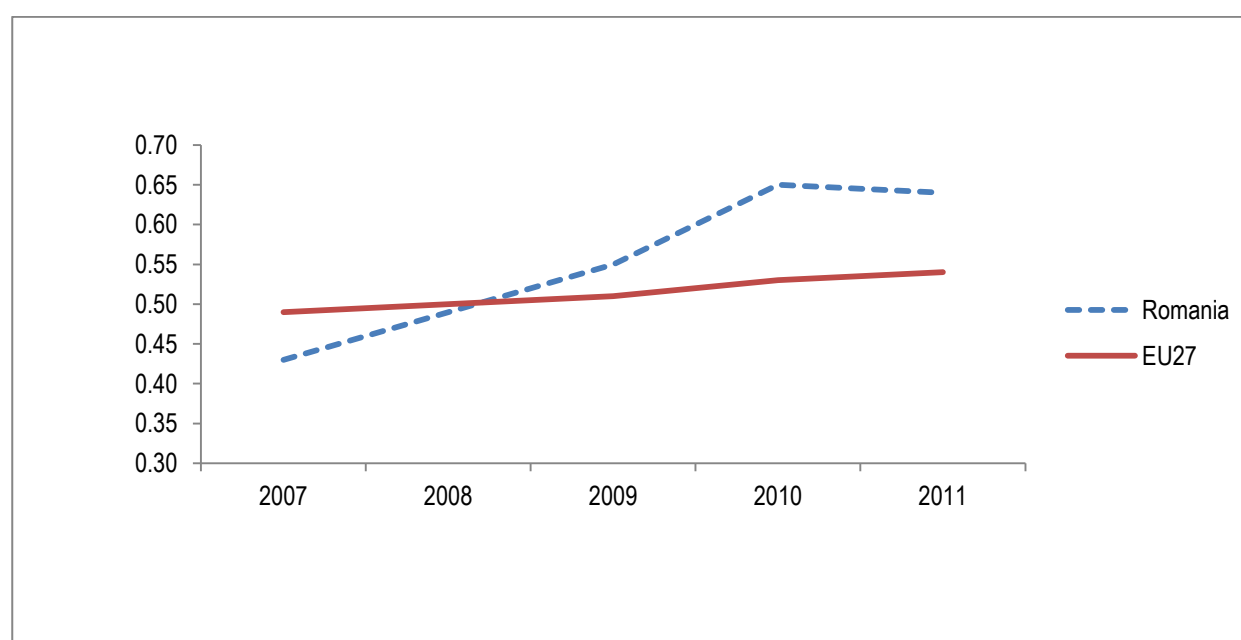
**Figure 18. Real average pension and wage indices (1990=100)**



Source: National Statistics Institute, 2012a; 2012j

Overall, between 2007 and 2011, Romania went from having one of the lowest aggregate replacement ratios in the EU27 to having the third highest one (after Sweden and France) (Figure 19). This puzzling development is the result of the design of Romanian austerity measures: while pension income was safeguarded by Constitutional Court rulings, public wages saw a 25 per cent cut. Moreover, the social minimum pension of RON 300 increased the incomes of the poorest pensioners, reducing overall inequality.

**Figure 19. Aggregate replacement ratio\*, 2007-2011**



Notes: \*Ratio of income from pensions of persons aged between 65 and 74 years and income from work of persons aged between 50 and 59 years.

Source: Eurostat, Aggregate replacement ratio SILC

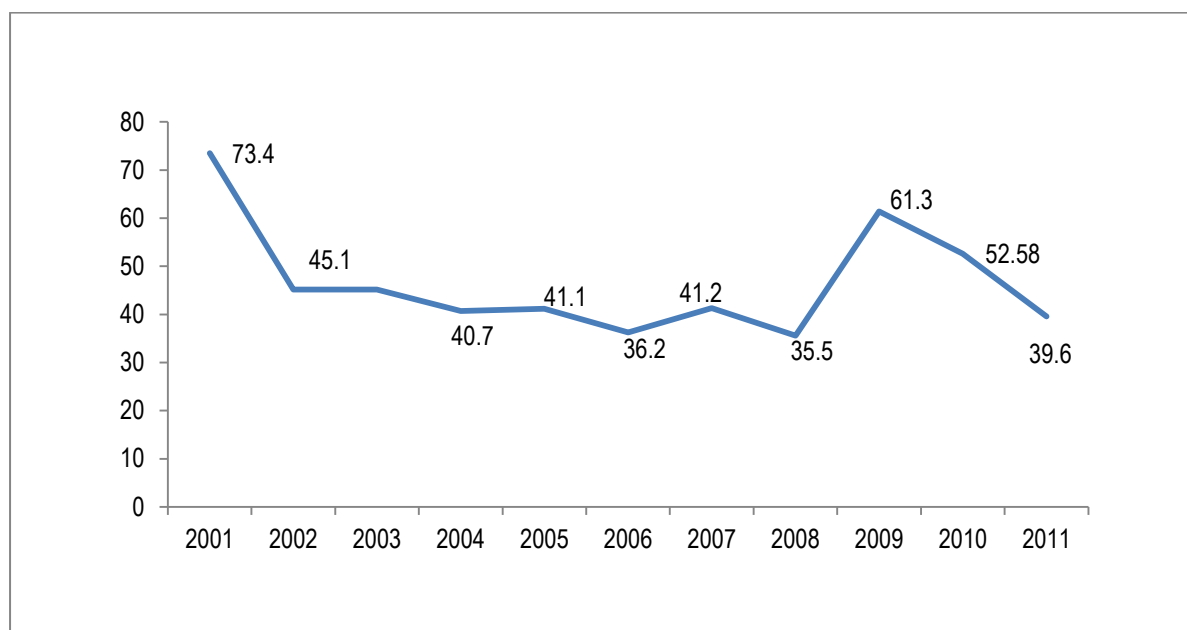
While the government could not cut pensions, it let real pension income drift downwards, starting 2009. The outlook for real pension growth in Romania is negative, as the new centre-left government announced plans to cut employer social contribution rates in 2014, putting further pressure on the pension's budget. Moreover, plans to divert contributions to the mandatory private pension pillar will further weaken the sustainability of the pay as you go system.

## 5.2 Social insurance – Unemployment benefits

Both in terms of coverage and level, Romanian unemployment benefits fuel income inequality, as they offer little income smoothing for displaced workers. Benefits have been low throughout the 2000s as they were tied to the value of the minimum wage, which remained one of the lowest in the EU. When the unemployment insurance budget was registering a surplus in 2006-2007 on the background of high economic growth, the government decided to reduce contributions to one percentage. Faced with budget deficits in the unemployment benefit system only two years later, in 2009, the Romanian government resorted to a series of cuts in unemployment benefits and made eligibility criteria stricter.

Figure 20 shows the evolution of unemployment benefit coverage. In 2001, the coverage rate was very high as the unemployed were benefitting from extended severance payments meant to ease the process of restructuring of major state owned industrial and mining companies. Furthermore, the long term unemployed were receiving a "support allowance" after their benefits were exhausted. The role of the support allowance was partly taken by a new non-contributory benefit, the minimum guaranteed income. (See Section 5.4)

**Figure 20. Percentage of unemployed receiving benefits**



Source: Selected Romanian Ministry of Labor Statistical Bulletins, 2002-2012

### **5.3 Social protection - Family, parental and child benefits**

Child, parental and family benefits have come to represent a large share of the income of families in lower deciles. Targeting lower income families with such benefits could substantially reduce income inequality yet there is an on-going debate in Romania whether family benefits should ensure income redistribution or not.

Entering the recession, Romania had a relatively generous system of maternal leave which placed benefits at 85 per cent of earnings in the year before the birth, capped at RON 3,400 (approximately two times the average wage). Looking for solutions to reduce spending, the government considered introducing a fixed payment, regardless of prior income. While such a policy would have reduced inequalities in early childhood care and made the policy more progressive, the government faced staunch opposition and in the end opted for cutting the benefits to 75 per cent of prior earnings and creating incentives for beneficiaries to return to work sooner.

Legislative proposals to differentiate the state allowance for children to provide more support to low-income families were equally dismissed in parliamentary debates on the grounds that the state allowance is a universal entitlement.

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## 5.4 Social protection - Minimum Guaranteed Income

When the minimum guaranteed income was introduced in 2001, Romania had a very high poverty rate, after a three year recession and an erosion of real welfare benefits. The value of the minimum guaranteed income was set close to the absolute poverty threshold and in a few years the absolute poverty rate dropped substantially. While the minimum guaranteed income had been accompanied from the start by job search or community work requirements, local officials disbursing these funds did not strictly enforce the eligibility requirements. Looking to reduce the budget deficit, the government launched a benefit fraud check campaign in 2009 along with stricter means testing. Despite having been targeted as a strain on the budget, the coverage of the minimum guaranteed income is actually very low. The World Bank (2011) computed that the coverage ratio ensured by the minimum guaranteed income for the poorest quintile was about 13 per cent in Romania. Given the austerity measures to tighten eligibility, the coverage ratio did not increase during the recession, despite worsening economic circumstances and a higher number of unemployed not receiving benefits. The number of monthly benefits decreased from 223,777 in 2008 to 221,603 in 2009. In December 2011, the number of benefits was down to 199,471, after many had been suspended.

## 6. Policies to reduce income inequality

I present a series of simulations to show how adjustments in monetary social protection benefits would impact the Gini coefficient of income inequality. The scenarios presented in Table 16 are inspired by policies which have been under consideration in Romania in recent years. The 2011 Romanian Household Budget Survey provides information on all the monetary and in kind social protection benefits received by households. Benefits can thus be identified in exact amounts as part of the total household income. The various simulations are created by measuring the Gini coefficient with modified data, after the various social protection benefit amounts are changed to reflect different policy scenarios.

The first scenario presented in column 2 of Table 16 considers a minimum wage increase. The reported gross wage revenue for families reporting full time wages between RON 600 and RON 950 in the 2011 HBS is increased to RON 950 (€ 213). RON 950 is a figure close to the electoral pledges of the current government (RON 1,000 by 2016). The increase in wage income results in a 0.37 decrease in the Gini coefficient. This scenario is a crude estimate of the effects of a minimum wage increase as it does not consider wage increases throughout the distribution following a minimum wage increase.

In the second scenario, I consider a simplified progressive tax policy, which consists of taxing wage income above the 75<sup>th</sup> percentile<sup>24</sup> at 24 per cent instead of the current 16 per cent, and maintaining the current flat tax rate of 16 per cent for incomes below the current 75<sup>th</sup> percentile of wage income.<sup>25</sup> Such a simplified tax regime would lead to a reduction in the Gini coefficient of 1.42. As in the case of the increase in minimum wage income, this simulation does not consider general the equilibrium effects of a progressive tax, but only the short term change in income inequality resulting from an increase in taxes for the upper quartile of households in terms of wage income.

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<sup>24</sup> The 75th percentile of the household wage income in the 2011 HBS.

<sup>25</sup> Before introducing the flat tax in 2005, Romania had a progressive tax system with a top rate of 34 per cent.

In recent years, the Romanian Parliament voted against proposals to differentiate childcare allowances to target poor families and against a redistributive proposal to make child leave payments a flat amount. I simulate such policies by considering a doubling of childcare allowances for families reporting per person income below RON 870 (median per person income in the sample). I also consider the effect of a flat rate child leave payment of RON 800 instead of the various amounts reported by households. This leads to reductions in parental leave payments above RON800 and to small increases for the majority of mothers reporting child leave payments below RON 800. In 2011, median childcare payments in the HBS sample were RON 600, the ninth decile level was RON 1027 and the top (legal maximum) was RON 3400. The increase in childcare allowances has a sizeable impact, a 1.18 decrease in the Gini coefficient, while the flat parental leave payment has a modest effect, a 0.07 reduction in the Gini coefficient.

**Table 16. Impact of various social policy scenarios on the Gini coefficient**

	Actual data	Minimum wage increase to RON 950 <sup>a</sup>	Progressive tax <sup>b</sup>	Progressive childcare allowance <sup>c</sup>	Flat parental leave allowance RON 800 <sup>d</sup>	Increase in unemployment benefits <sup>e</sup>	Combined effect
Equivalised income before transfers, taxes and contributions	0.5368	0.5322	0.5368	0.5368	0.5359	0.5368	0.5312
Equivalised income before transfers (excluding contributory pensions), taxes and contributions	0.4343	0.4302	0.4343	0.4343	0.4334	0.4343	0.4294
Equivalised income after transfers and before taxes and contributions	0.3641	0.3609	0.3641	0.3540	0.3635	0.3627	0.3490
Equivalised income after transfers and taxes, before contributions	0.3482	0.3448	0.3493	0.3374	0.3475	0.3468	0.3196
Equivalised income after transfers, taxes and contributions	0.3296	0.3259	0.3154	0.3178	0.3289	0.3284	0.2983
Reduction in Gini coefficient	-	0.37	1.42	1.18	0.07	0.12	3.13

Source: Author's analysis, data from the 2011 Romanian Household Budget Survey.

Notes: a. Minimum wage increase. An increase in gross wage income to RON 950 for all families with incomes between RON 600 and RON 950. b. Progressive tax, a 50per cent increase in wage tax for income above the 75<sup>th</sup> percentile of household gross wage revenue.c. Progressive childcare allowance. A doubling of the childcare allowances for families with per person income below RON 870 (median per person income in the sample). d.Flat rate child leave payment of RON 800, currently median childcare payments at RON 600, ninth decile at RON 1027 and top (legal maximum) at RON 3400. e. A 50per cent increase in unemployment benefits for benefits under RON 540 (75per cent of cases), a 25per cent increase for benefits above RON 540 (up to RON 1563).

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The final scenario considers an increase in unemployment benefits, which were cut during the recession.<sup>26</sup> The scenario involves a 50 per cent increase in unemployment payments for households where the benefits are below RON 540 (75 per cent of cases in the dataset) and a 25 per cent increase for benefits above RON 540 (up to RON 1563, the remaining 25 per cent of the distribution). The unemployment benefit increase also has a modest effect on income inequality, a 0.12 reduction in the Gini coefficient.

The scenarios considered in Table 16 show that the Romanian government has many policy options to reduce income inequality from the current relatively high levels to below the EU27 average. The last column shows a scenario where all the previous policies are implemented simultaneously. The combined effect of these policies would be to reduce the Gini coefficient from 32.96 to 29.83 (the EU27 average in 2011 was 30.7).

The increases in transfers presented in the simulations above could be achieved under a progressive tax regime with a higher top rate. Such a policy is not under consideration by any parliamentary political party. The implementation of policies to reduce income inequality is thus dependent on increasing government revenues through better collection of taxes and reducing tax evasion and informal work. These are perennial stated goal of Romanian politicians, but little actual progress has been made.

I present three policy options to reduce tax evasion resulting from informal work and hence allow for greater redistribution:

**1) Increase the number of labour inspectors who verify and sanction cases of undeclared work.** In 2011 such an increase was achieved by transferring operational staff whose duties had been made obsolete by the implementation of an online employee database. In 2012, however, the number of labour inspectors decreased. According to the Labour Inspectorate 2011 Annual report, every year since 2007 the Labour Inspectorates have conducted about 100,000 employer inspections yet the number of employers found using undeclared work has been on the rise, from 7,700 in 2007 to 9,731 in 2011. In 2011 alone, 29,095 individuals were found working without legal forms. As the new Labour Code sanctions are stricter, fines for undeclared work doubled in 2011 to RON 105 million (€23 million). Given the persistence of tax evasion through undeclared work and the increasing revenue from fines, hiring and training more labour inspectors would pay for itself.

**2) Reanalyse undeclared work fines for employees and consider developing a whistleblowing system.** Under the new Labour Code, employees found working without legal forms are liable for fines along with their employers. This policy reduces the incentive of informal workers to file a complaint against their employer. In 2013, former Finance Minister Liviu Voinea suggested introducing rewards for fiscal whistleblowing, but the policy announcement was quickly scrapped being considered unpopular because of political sensitivities related to whistleblowing in Romania's recent communist past.

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<sup>26</sup> As discussed in Section 4.2, unemployment benefits were cut during the recent recession after the unemployment insurance budget saw deficits, as unemployment contribution rates had been cut prior to the recession from 3.5 per cent to 1 per cent.

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**3) Link benefits to formal work income under the form of earned income tax credits.** An example of such a policy would be increasing childcare allowances for working parents by disbursing increases in childcare allowances as tax credits. While tying benefits to formal work might be an administrative challenge, it could incentivize more individuals to formalize their employment. Under the current tax and contribution regime, employers and employees are financially better off in the short run by not paying taxes and contributions. Tying benefits to formal employment income may make employment contracts more valuable to employees and hence incentivize them to seek formal employment.

Given the low earnings of the self-employed and contributing family members in agriculture, structural changes in employment - from low productivity farming to services and manufacturing - would substantially drive down economic inequality. The Romanian government does little to facilitate this process, as its active labour market policy spending per capita remains the lowest in the EU27. Shifting employment from agriculture to services and manufacturing is also made difficult by the age structure of the population employed in farming. Over 45 year olds represent more than 50 per cent of the agricultural labour force (compared to 36.7 per cent nationally) and individuals over 64 account for about 15 per cent (compared to 4.5 per cent nationally) (Albu et al, 2012).

Because their skills sets are narrow or outdated, the self-employed or contributing family workers working in agriculture would have to settle for low or minimum wages if employed in manufacturing or services. It is not very clear, however, if minimum wages would actually exceed their current income from subsistence agriculture. The Romanian Statistics Institute (2012c) computes the subsistence farming income of the poorest decile: in 2011, the bottom decile had, on average, own production income of RON 620, monetary income from agriculture of RON 150 and monetary income from non-agricultural activities of RON 80. The sum of subsistence farming and self-employment income for the poorest decile is RON 950, more than the minimum wage. For a family with a single wage earner, the current minimum wage would fall below the subsistence farming income of RON 950. Moreover, if self-employed households shift from subsistence farming to employment in services or manufacturing, they can generally do so by migrating abroad, for average wages seven times higher than in Romania in the EU-15 member states. However, if we assume not all Romanians will choose to emigrate, setting the minimum wage to at least equal own production income and linking future increases in children benefits to wages may provide some incentive for transitions to waged employment in Romania. Thus, given the tight labour market conditions, higher minimum wages may actually increase employment through increased labour force participation.

The minimum wage is currently set by the government in consultation with social partners and is no longer a provision of the national collective labour agreement. However, although it had been negotiated in the collective national labour agreement, the minimum wage remained low throughout the 2000s. This was largely because sector level agreements provided higher minimum wages, as each sector applied a multiplier to the national minimum wage. Because sector level minimum wages are no longer set higher than the national one in the context of the collective bargaining stalemate following the 2011 changes in the social dialogue law, more and more Romanians will be paid the (low) national minimum wage. Relaunching



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collective bargaining at the sector level would thus result in higher minimum wages, as fewer companies would be bound just by the national (lower) minimum wage.

Promoting labour market flexibility to increase employment has been a low efficiency strategy in Romania. The domestic employment rate remained low throughout the 2000s despite strong economic growth until 2007 and recent changes in labour legislation had no discernible impact on the employment rate. As the massive migration flows have shown, Romanians can easily find higher paying jobs abroad. As demand will eventually pick up in the Eurozone, Romanian labour market conditions will resume their pre-crisis tightness. Increasing labour force participation will have to involve shifting workers from self-employment in agriculture to waged employment in manufacturing and services. But given that half of the agricultural workforce is over 45 and the young are more mobile and can easily migrate in search of better wages, simply creating more low paying (part-time or temporary) jobs will lead to modest increases in employment, as has been the case between 2000 and 2008, despite very high economic growth rates. Moreover, measures to promote labour market flexibility have eroded collective bargaining and employee rights, hindered union activity and risk increasing inequalities by stimulating new forms of precarious, temporary or part-time employment.

To facilitate the shift from agriculture to manufacturing and services employment, the Romanian authorities should increase funding for lifelong learning, retraining and career counselling, as active labour market spending per capita in Romania is lowest in the EU27. Such policies would involve a constructive policy approach to increasing employment, contrary to the passive and legalistic policies of recent years, which simply aimed at keeping wages low and facilitating firing and hiring. Even if such a constructive approach is adopted, there is limited administrative capacity for developing active labour market measures. EU structural Human Resource Development funding, which should have financed adult education and retraining are underused, and the European Commission has even temporarily halted their disbursement in 2012 to verify corruption issues.

What Romanian authorities have done successfully over the last decade has been to provide a favourable investment climate. The main beneficiaries of these facilities were companies from (or exporting to) EU member states. The result is a high exposure of Romanian exports and investment flows to economic conditions in the euro area. By diversifying its export markets, Romania could ensure less volatile manufacturing employment in the future. While Romanian authorities can do little to influence the export markets of multinationals operating in Romania, they could target attracting investors that would export to emerging markets. Romanian authorities should seek to offer more incentives for companies outside of the EU27 to open manufacturing facilities in rural areas or small Romanian cities, to attract self-employed or contributing family members with the option of waged employment while keeping some component of their rural household production. The Romanian government is currently adopting a passive stance about attracting foreign investment. The government should re-open a foreign investment agency<sup>27</sup> and focus on attracting manufacturing investment from emerging economies, by offering incentives for such investments to locate in rural areas and small towns.

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<sup>27</sup> Romania had a specialized Foreign Investment Agency (Agentia Romana pentru Investitii Straine ARIS) until 2009. When it was closed, the agency had only 23 employees providing technical assistance for foreign investments larger than one million euros. The budget of the institution was only 400,000 euros at the time. The activities of the agency were taken over by a department of the Ministry for Small and Medium Enterprises and the respective ministry eventually became itself a department of the Ministry of Economy.

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## 7. Conclusions

The drop in income inequality in Romania was considerably higher than in any other European country. The Romanian economy stands out in other respects as well: high shares of employment in agriculture, self-employment and a high number of individuals working as contributing family workers. Romanian austerity measures were amongst the most draconic in the EU27, including a 25 per cent pay cut for public sector employees. The public sector pay cut compressed the top of the wage distribution. For low income earners, austerity measures led to tightened eligibility for welfare benefits and cuts in unemployment benefits. However, the introduction of a minimum guaranteed pension countered the austerity cuts in social protection and raised income at the bottom of the distribution. The overall effect was a significant decrease in income inequality, as the public sector pay cut narrowed the gap between wage earners and those self-employed or working as contributing family members. Income inequality thus decreased considerably not because of generous social protection measures but because of a significant austerity public sector pay cut.

Given the high share of households reporting very low monetary income, the simulation using 2011 Household budget survey data has shown that even a modest set of redistributive policies involving increased monetary social protection benefits can significantly reduce income inequality in Romania. Many of the redistributive policy options suggested in the paper (higher childcare allowances for low income families, a rise in minimum wages and unemployment benefits) have been under consideration in Romania for some time. As Romanian authorities have little appetite for increasing taxes – if anything, they’re looking to cut taxes and social contributions further – the path to financing such redistributive policies is increasing budget revenue through better collection and reduced tax evasion. There is considerable scope for such measures, as 35 per cent of employees are working without legal forms and tax evasion accounts for 10.3 per cent of GDP, according to the Romanian Fiscal Council.

By stepping up the fight against informal employment and tax evasion, Romanian authorities could obtain the fiscal revenue to finance redistributive policies which could take levels of economic inequality in Romania below the EU27 average in a relatively short period of time. To achieve this increase in government revenue, I recommend a series of policy options: 1. Increasing the number of labour inspectors who verify and sanction cases of undeclared work; 2. Introducing a fiscal whistleblowing system; 3. Linking benefit increases to formal work income under the form of earned income tax credits.

In the long run, reducing income inequality in Romania involves engaging the self-employed and contributing family members working in agriculture in waged employment in services and manufacturing. The current approach to stimulate employment – labour market flexibility – is ineffective because Romanians prefer outmigration to miserly wages that are kept low to stimulate export competitiveness.

Increased spending on active labour market policies, lifelong learning and rural education, policy areas in which Romania spends very little, could speed up the transition process from subsistence agriculture to manufacturing or services employment. Another constructive approach to increase employment could involve attracting companies from emerging markets to set up manufacturing facilities in

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Romanian rural and small town areas with a goal of increasing exports to non-EU markets. Such employment would ensure income stability by decreasing Romanian export markets' exposure to economic circumstances in the European Union.

Throughout the analysis, I highlighted limitations of Romanian statistical information on household earnings. I have shown how the budget surveys used to measure income inequality systematically underrepresent part time and temporary employees, top earners, and workers without a formal contract. The direction of the bias from lack of representativeness is not clear, as both top and low income earners are underrepresented in surveys. Moreover, the frequent imputation of household own production in budget surveys also sets Romania apart in the EU. In the absence of these imputations, income inequality would be higher. In this sense, Romania is an interesting case study for survey methodology research on how the presence of a large informal economy and the inclusion of home production in household income can influence income inequality measures.

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