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Operationalizing Pro-Poor Growth

Case of Romania

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EXECUTIVE SUMMARY

This report discusses options that should be helpful in designing pro-poor growth policies in Romania. It concludes that the creation of productive jobs for the unskilled, the emergence of non-agricultural sectors in rural areas and improvements in the education system are essential elements of any poverty reduction strategy. This conclusion is underpinned by a detailed investigation of Romanian economic development in recent years, with special attention paid to growth and its poverty impact through the channel of the labor market and on the results of selected simulations of macro-policy options.

Patterns of economic growth

Romania is a medium sized Eastern European country, belonging to the group of lower middle income economies. At the beginning of the 1990s, soon after the collapse of the communist regime, Romania undertook political and economic reforms intended to transform the economy ‘from plan to market’. The transformation process heavily influenced the country’s economic and social arenas for the whole decade.

On the eve of the transition period a slowdown in economic growth turned into a deep-seated adaptation output decline in 1989 and the in early years after the fall of communism. Between 1988 and 1992 real GDP declined by 30%. The rest of the 1990s was characterized by an uneven growth pattern with a short-lived early rebound followed by the 1997-99 recession. Relatively robust economic growth started as late as 2000 and averaged 4.4% annually over 2000-2003. Under the assumption that an adequate macroeconomic policy mix will be pursued various estimates point to around 4-5% growth potential per annum over the next few years.

Overall, between 1990 and 2002 gross value added declined by 5.6% as a result of the 19.4% fall in agricultural value added, the 7.3% decline in industry and the 7.2% increase in the services sector. The transformation of the economic structure was thus slower than in most other post-communist economies. Agriculture accounted for around 17% of gross value added in 1990 and by 2002 its share was still at the rather high level of 14.6%. The share of industry was virtually unchanged at around 38%, whereas services increased from 43% to 49%. Changes in the composition of overall investment were more visible: the share of agriculture declined from 25% in 1990 to 5-6% in 1999-2001 and the share of services increased from around 20% in 1990-1992 to close to 50% in 2000-2001.

Value added and investment sectoral trends have not been reflected in employment reallocations. In fact, labor resources have moved from industry to agriculture, with services employing a largely stagnant share of all employed. As a result, over the last decade the capital/labor ratio has dropped dramatically in agriculture and increased visibly in the services sector. This has happened because the agricultural sector (and rural areas) have acted as a kind of buffer, absorbing people who have lost jobs in industry and haven’t been able to find employment in the developing service sector due to lack of suitable skills, regional inequalities and institutional rigidities including those on the labor market itself.

The impact of growth on poverty

Poverty changes in Romania have mirrored relatively closely both GDP and consumption growth, with high, although volatile, income elasticity of poverty. The early transition years witnessed a major rise in poverty, which has remained high to the present day, with the extreme poverty headcount at around 10% and medium poverty around 30% in 2002. According to all indices used, poverty increased during the economic recession (1996-1999), reaching its peak in 2000, before slowly declining during the recovery period (2000-2002). Inequality remains rather low, with Gini coefficients fluctuating below 0.30. In contrast to the poverty level, inequality declined during the period of economic recession and somewhat increased during recovery. Therefore, in both cases it muted the impact of growth on poverty. This picture is confirmed when we decompose poverty growth (be it positive or negative) into its constituent components corresponding to overall consumption growth and changes in inequality. Growth incidence curves also show that while the poor were hit by losses relatively less than other groups during the recession, they also benefited less from the subsequent economic recovery.

Increasing inter-group inequality suggests that there are sub-populations in society partly excluded from the benefits of economic growth. A more disaggregated analysis shows that this exclusion is strongly linked to the education and labor market status of household head. Households headed by those self-employed in agriculture and unemployed were most vulnerable to pauperization. In 2002, the poverty headcount among unemployed headed households was 50% or over 22 percentage points higher than the national average. The situation was even worse among households headed by agricultural self-employed, with the poverty headcount reaching 60%. Unsurprisingly, education also played a decisive role in vulnerability to poverty. The highest poverty levels were noted in households led by uneducated individuals, while post-secondary and higher education of household head almost were fully absent from the poverty figures. Consequently, in rural areas, where skills are lower on average and self-employment in agriculture dominates, poverty incidence was almost three times higher than in urban areas.

Looking at the total population of poor households, the following picture emerges:

- i) two thirds of the (medium) poor live in rural areas;
- ii) apart from the 40% of all poor who live in households headed by pensioners, the second largest group (nearly one quarter of all poor) are those living in households headed by individuals self-employed in agriculture;
- iii) the vast majority of poor have low skills, as indicated by educational background (87% of heads of poor households have not completed secondary education).

The extremely poor population fits these characteristics even more closely, i.e. the share of households living in rural areas, headed by uneducated self-employed in agriculture is even higher.

All evidence suggests that small-scale farming, while having some role in alleviating rural poverty, is definitely not a source of economic well-being. Examination of growth incidence curves confirms that while agriculture provides a cushion against the negative impact of economic restructuring those employed in the agricultural sector are largely excluded from the benefits of growth. On average, the rural population was less influenced by economic recession, but the urban population gained more from economic revival. Skilled self-employed and employees in industry and services benefited the most. Polarization across socio-economic subpopulations appears to increase during growth periods. This suggests that a strong poverty impact of growth in the longer run cannot be expected unless non-farming employment opportunities are created for the unskilled living in rural areas.

Institutional and structural barriers to job creation

Job creation, and particularly job creation for the poor, is conditioned by the fast development of small and medium sized enterprises. Barriers to this development include corruption, excessive bureaucracy and volatility of the legal system related to the legacy of communism and erratic transition process. For instance, according to the Transparency International 2003 Corruption Perception Index, Romania is ranked 83-85 out of the 133 countries surveyed. Unequal competition from highly subsidized state-owned enterprises has limited the development of a competitive enterprise sector. In 2002, for instance, tax arrears amounted to nearly one third of total SOE assets.

Labor market regulations, such as a minimum wage, excessively generous unemployment benefits system, a high tax burden and rigid labor code are among other factors seriously hindering job creation. However, these very factors have also facilitated the development of the shadow economy. Estimated employment in the shadow economy reached 12% of total employment in 2001. In 2003, the share of workers paid the minimum wage was as high as 30% of total employment. One should take note of the fact that payroll taxes are among the highest in Europe, with the overall tax burden on labor for low wage earners at 45.2%.

Very recently the government has undertaken several steps to reduce institutional barriers to job creation. An anti-corruption campaign was initiated, labor market regulations liberalized and the generosity of the benefits system curtailed somewhat. The restructuring of SOEs, however, remains a largely unresolved problem even on the eve of EU accession.

Since the agriculture sector has become a sort of poverty trap, economic growth can be only truly be pro-poor if it creates opportunities for productive employment for the rural population, both working in and outside agriculture. Productivity improvements in agriculture should build on achievements, but also on the correction of imperfections of the 1991 land reform. Currently, 4.17 million households own about 10.3 million hectares of agricultural land and the average area of the family farm is only 2.47 hectares. Hence, increasing farming productivity cannot happen without massive flows of abundant labor from agriculture into non-agricultural activities. This would require the development of the land market, improving administrative conditions for the development of SMEs and, last but not least, serious investment in underdeveloped and/or run-down rural infrastructure, including health and education facilities.

An effective, high quality and widely and uniformly accessible educational system is one of main prerequisites for increasing employability and preventing poverty. Quality of and access to education have been, unfortunately, declining during the transition period and differ considerably between urban and rural areas. The gap is visible already in the primary education enrollment rate: the 86% in rural areas is well below the 98% in urban areas. Quality of education also varies considerably. Only 72% of rural teachers are qualified, compared to 88% of those working in urban areas and rural school buildings are often dilapidated and lack sufficient equipment.

The poverty impact of growth and labor market policies: simulation results

Simulation of the key trade-offs in poverty reduction strategies has been based on a simplified version of the Poverty Analysis Macroeconomic Simulator (PAMS), developed especially for this purpose. The analysis covers the period 2003-2010 broken down into two four-year sub-periods (2003-2006 and 2007-2010). Eight scenarios, differing with respect to the relative role of growth, redistribution and educational policies, as well as migration (rural-urban) trends, were simulated.

The simple model-based exercise showed that sustaining economic growth momentum is a main precondition for any efficient poverty reduction strategy. Redistribution policies, as well as promoting higher wages for the poor, appear more likely to aggravate rather than to reduce poverty among the unskilled. Nevertheless, even fast growth concentrated in urban areas does not solve the problem automatically, with rural job creation in non-agriculture sectors emerging as a key element of the strategy. Productivity improvements in agriculture are important; although it is difficult to expect large poverty reductions from this process alone. Educational and training systems also turn out to impact poverty trends positively, but only if coupled with concomitant generation of productive jobs. Educational policies today will clearly have an impact on poverty trends beyond the medium-term horizon (2010), something that was taken into account in this study. The importance of investment in and reforms of the educational system should not be underestimated by focusing on short-term perspectives.

Conclusions and recommendations

As only job creation for the unskilled can make growth in Romania strongly pro-poor, a well-functioning labor market is an essential element of any poverty reduction strategy. Specifically, the minimum wage should be maintained at sufficiently low levels and excessively generous unemployment benefits and restrictive labor regulation need to be avoided. The tax wedge, already at a very high level in Romania, even by European standards, should not be increased. Additional increases in the tax wedge may lead to employment reductions. Any increases in social spending that might improve the poverty outcomes of non-active groups of the population should be cautiously weighted against their possible employment demand reduction effects. Also, taking into account the important role of income tax in the total tax wedge for the unskilled, any lowering of the effective rates for this group could be considered a potentially attractive policy option.

Rising the skills of the labor force is another essential direction for policies and leads to important poverty reductions. Not only does skill enhancement have a positive impact on economic growth but it also increases its pro-poor character. Public expenditures on education (as a % of GDP) in Romania are below levels in other Central and Eastern European countries. However, boosting funding to education should be accompanied by reform measures to improve the quality of education and, in particular, to correct the mismatch between skills that are taught and those that are needed in the labor market.

The development of the agricultural sector leading to an increase in productivity and consequently to rising incomes of agricultural workers could also help in reducing rural poverty. Indeed, given Romania's natural resources, the country has great potential in the agricultural sector, in particular after EU accession. For this potential to be utilized, existing obstacles to agricultural productivity should be removed. For instance the government should develop policies to overcome the negative effects of agricultural reform undertaken at the beginning of the 1990s. Without land concentration,

agricultural workers in Romania will not be able to engage in modern mechanized farming or gain access to large scale market and credits.

Job creation in the economy will be impossible without development of domestic entrepreneurship and the attraction of foreign investment. In order to achieve these goals serious reforms should be undertaken in the institutional economic environment. Ensuing recommendations in this sphere are quite straightforward, though their successful implementation would clearly be an extremely difficult task. Our analysis paid special attention to the bureaucratic burden and weak judicial system, often leading to corruption, which is perceived both by the general public and entrepreneurs as one of the main obstacles for business development in Romania. Simplification of legislative regulations are one avenue promising improvement in this respect and indeed some recent reforms in this direction should be followed up. Also, one would want more stability in legislation. In order to achieve this, the quality of legislative work needs to be improved.

Policies with regard to state-owned enterprises are a sphere of particular importance for overall economic performance prospects in Romania. Our analysis did not attempt to model complex trade-offs between the speed of restructuring and privatization versus ensuing unemployment. It is nevertheless clear that slow progress in restructuring of the large state-owned sector implies substantial fiscal costs and impedes the functioning of other branches of the economy, thus risking hindering growth potential over the medium to long term.

Introduction

Economic growth that brings benefits to the poor should be one of the main objectives of economic and social policies in Romania. This report discusses various options that might help in designing such policies and concludes that the creation of productive jobs for the unskilled, the emergence of non-agriculture sectors in rural areas and improvements in the education system are essential elements of a strategy for growth that benefits the poor, or what are referred to as ‘pro-poor growth’ strategies.

The report is organized as follows. Section one presents the political and economic contexts within which poverty has changed in Romania, with the focus on the period following the fall of communism in 1990. The next section analyzes links between poverty dynamics and macroeconomic, as well as labor market, developments. Section three deals with the major institutional and structural obstacles for designing pro-poor growth strategies in Romania. Section four simulates the medium-term impact on poverty of different policies and growth patterns. Section five concludes and provides some policy recommendations.

1. Country context

Understanding the current policy dilemmas in designing pro-poor growth strategies in Romania requires recognition of the particularities of political and economic developments in this country. Romania is a medium size Eastern European country with a population of close to 22 million. With per capita GNI equal to \$PPP 6490 (2002), it belongs to the group of lower middle income economies, lagging behind most other European countries and in particular all the countries of the European Union, which Romania is hoping to join in 2007¹. Romania continues to implement reforms intended to transform its economy ‘from plan to market’. The transition started at the beginning of the 1990s with the collapse of the Ceausescu communist regime and has subsequently brought the introduction of political freedoms. However, initial efforts to gradually reform the economic system were not particularly successful and brought economic hardship to large strata of the population. Stronger and more sustainable improvements in the standard of living have been visible only in the last few years, with robust economic growth averaging 4.4% in 2000-2003². However, inflation is still high (15.3% in 2003) and the overall standard of living remains low in comparison with other European countries. This refers to various social indicators, including the poverty rate, which accounted for almost 30% of the population, or 6.5 million people, in 2002.

¹ Data are from World Bank WDI database, April 2004. Romania ranks 93rd (of 208 countries) in terms of GNI per capita measured at purchasing power parity. According to the Atlas methodology, Romania is ranked 108th, with GNI per capita at US\$1870 in 2002. Another interesting comparison is with current and potential EU economies. According to Eurostat’s Structural Indicators database (Spring 2004 edition), Romania’s 2003 GDP per capita in Purchasing Power Standards (PPS) was 28% of the EU-15 average, similar to the levels for Bulgaria and Turkey, but well below any of the EU-25 member states (apart from Latvia all other countries were above 40% of the EU-15 average). (<http://forum.europa.eu.int/irc/dsis/structind/info/data/index.htm>)

² Main economic indicators are presented in Annex 1.

Box 1. Romania – basic information

Population: 21.7 million (2002)
Population per sq. km: 91
Average annual population growth rate (1980-2002): 0.0%

Gross National Income (Atlas method): 41.7 bln USD (2002)
GNI per capita (Atlas method): 1,870 USD (2002)
PPP GNI per capita: 6,490 USD (2002)
PPS GDP per capita: 28% of the EU-15 average (2003)

Average GDP growth rate 2000-2003: 4.4%

Employment: 4,384,000 (2003)
Net monthly average wage: 130 EUR, 147 USD (2003)
Poverty headcount (national poverty line): 29% (2002)
Gini inequality index: 0.288 (2002)

Sources: National Institute of Statistics, National Bank of Romania, World Bank WDI 2004

1.1 Transition to a market economy

Romania's experience under the communist regime shared several characteristics with other Central and Eastern European countries, but there were also some peculiarities specific to Romania due to character of domestic policies carried out by Nicolae Ceausescu from the late 1970s onwards³. The tight centralized management of economic activity, ill-targeted goals of self-sufficiency, autarkic policies and ill-motivated huge infrastructural projects, as well as debt-repayment programs, all had a devastating impact on the Romanian economy and society. As a result, Romania had some of the worst starting conditions of the European transition economies (IMF, 2004). The high level of distortions led to a severe adaptive recession that took a heavy toll on the poor.

Moreover, at the outset of the transition (1990 – 1993), Romania was lacking the political forces able to develop and implement a consistent economic policy reform package. Domestic political developments resulted in little effort being made to liberalize the economy in a coherent manner and to ensure macroeconomic stability. Even less was done on the privatization front or in restructuring the state sector, thus putting further pressure on the macroeconomic environment. Tolerating soft budget constraints, providing support to state owned enterprises, exchange rate policies driven largely by the interests of industrial sectors, etc. all endangered macroeconomic stability. Average annual CPI inflation remained in the three digit territory. The window of opportunity for decisive reforms was missed and general disappointment with the outcomes of gradual and erratic economic reforms was an important factor shaping the political scene and policy choices in the following years.

³ See Maniu et al (2001) for a more detailed discussion.

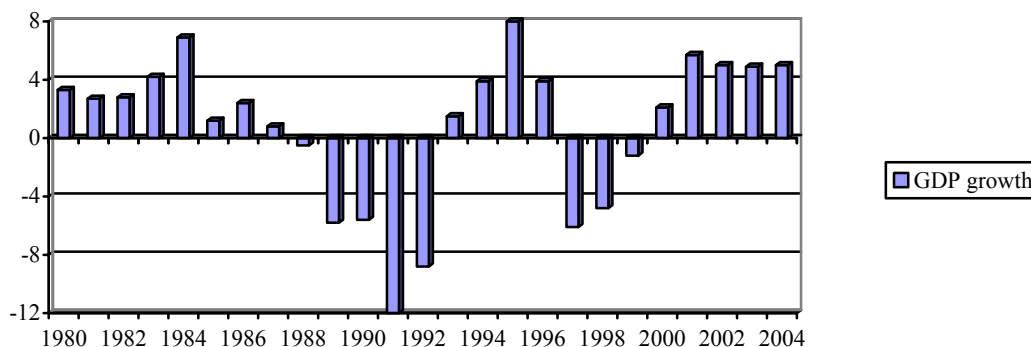
Romania made a first attempt at a more consistent economic program in 1994 with some tightening of fiscal and monetary policies, liberalization of the foreign exchange market, opening to foreign investment and accelerated privatization. However, political considerations, due to the upcoming 1996 elections, resulted in the return to an expansionary macroeconomic stance. The ensuing inflationary pressures and macroeconomic imbalances (e.g. overvaluation of the leu engineered to protect energy intensive enterprises) were mainly addressed by administrative price controls and exchange rate market controls. The new government that came to power in 1997 returned to liberalization policies, but, due to a combination of inconsistencies in implementation of such policies and external shocks, the period 1997-1999 was characterized by declining economic activity and falling real incomes of the population.

It was only in 2000 that Romania finally started to implement a more coherent mix of basic policies: prudent fiscal policy, a somewhat tighter monetary stance, stricter control of wage growth and some progress in structural reforms. A pattern of more sustained growth emerged in 2001-2004, characterized by relatively robust GDP expansion (around 5% per annum), gradual disinflation (down to 15% in 2003) and a reduction of the budget deficit to 2.7% of GDP in 2002 and 2.6% of GDP in 2003. Nevertheless, Romania still faces several policy challenges in the near and medium term. Items on the reform agenda that are most important for promoting pro-poor growth are analyzed throughout this report.

1.2 Growth performance

In the early 1980s growth was statistically strong but heavily distorted by forced industrialization and the command economic system run by a totalitarian regime. The second half of the decade saw a slowdown that turned into a deep adaptation output decline in 1989 and the first years after the fall of communism (see Figure 1). Between 1988 and 1992 real GDP declined by 30%. The rest of the 1990s was characterized by an uneven growth pattern, with a short-lived early rebound followed by a recession in 1997-99. Relatively robust economic growth started as late as 2000 and averaged 4.4% annually in 2000-2003. Assuming an adequate response to the above-mentioned challenges from the government's macroeconomic policy mix, various estimates of growth potential point to around 4-5% per annum over the next few years (IMF, 2003, Romanian Government, 2003).

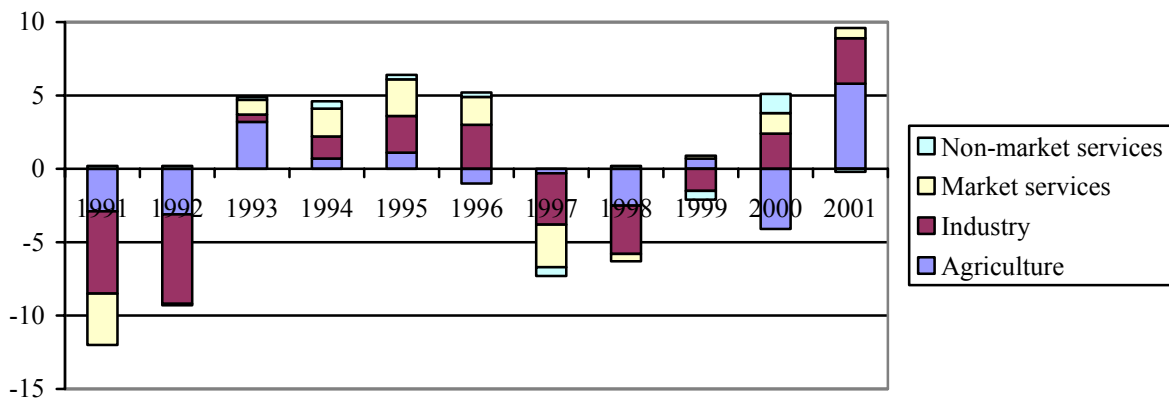
Figure 1. GDP growth dynamics, 1980-2004 (% change)



Notes: 2004 figures are IMF forecasts.
 GDP per capita dynamics closely mirrored overall GDP.
 Source: IMF, World Economic Outlook database, April 2004.

The impact of output recessions and recoveries on poverty depends strongly on their sectoral distribution. Uneven growth patterns in the 1990s were observed in virtually all sectors of the economy. Indices of market services and industry were the most volatile. During the initial adaptive recession between 1989 and 1992, value added fell uniformly in all sectors, with the exception of the public services sector. The short-lived rebound in 1993-1996 was initially driven by agriculture and later by relatively strong gains made in industry and market services. The recession of 1997-1999 was characterized by a particularly deep weakening of industry, which then became the driving force of the 2000-2002 economic surge (details in Figure 2).

Figure 2. Value added growth – decomposition by economic sector, 1991-2001 (percentage points)

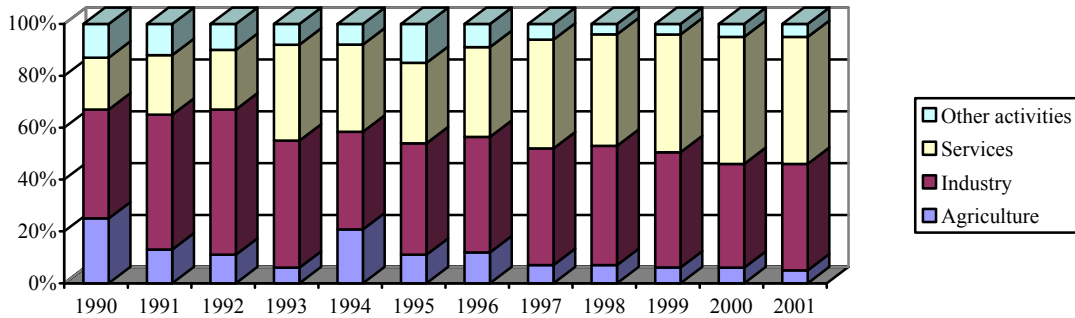


Note: Numbers do not add up to total value added growth figures due to non-additivity of deflators, rounding, the methodological change in calculating national accounts in 1998 and possibly other data problems.
 Source: Own calculations based on NIS statistics.

Overall, between 1990 and 2002 gross value added declined by 5.6% as a result of the 19.4% fall in agricultural value added, the 7.3% decline in industry and the 7.2% increase in the services sector. The transformation of the economic structure was thus slower than in most other post-communist economies. Agriculture accounted for around 17% of gross value added in 1990 and by 2002 its share was still at the rather high level of 14.6%. The share of industry was virtually unchanged, at around 38%, whereas services increased from 43% to 49%. Diverging sectoral patterns are also visible in investment dynamics, which are the best predictors of sectoral growth potential. Over the whole period, investment in the services sector was rising particularly strongly accompanied by gradually declining investment in the agricultural sector. As a result, the composition of overall investment has changed substantially over the last decade, with the share of agriculture declining from 25% in 1990 to 5-6% in 1999-2001. At the same time services increased its share from around 20% in 1990-1992 to close to 50% in 2000-2001 (see Figure 3). The slow sectoral transformation and particularly bad performance of agriculture have turned out to be the crucial factors shaping poverty dynamics. Firstly, in the absence of development of rural non-farming activities, a large part of the rural population has found itself excluded from the benefits of economic growth.

Secondly, constraints on job creation for unskilled labor in the small and medium enterprise sector have reduced the employment impact of expansion in services.

Figure 3. Total investment outlays – shares of economic sectors in total investments, 1990-2001 (percentage points; total investments = 100%)

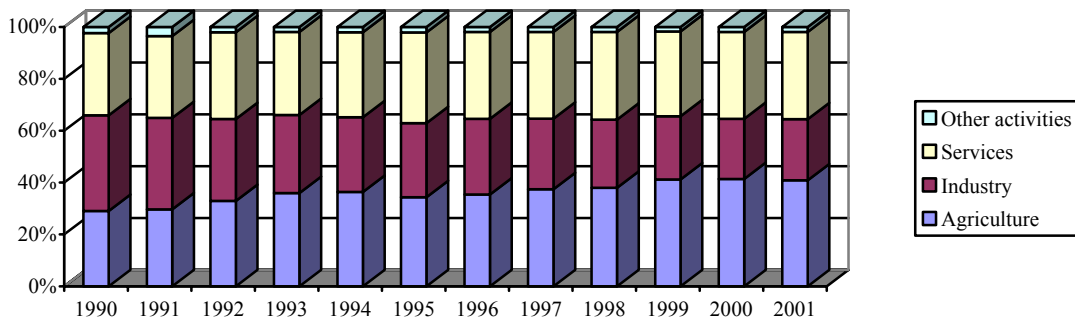


Source: Own calculations based on NIS statistics.

1.3. Labor market developments

Surprisingly, labor market developments have stood in sharp contrast to what has been happening in the structure of aggregate output and investment (Figure 4). Labor resources have been shifting – rather unusually for a European country in the process of post-communist transformation – from industry to agriculture, with services employing a largely stagnant share of all employed. The share of market services in total employment actually declined between the early 1990s and 1999-2001. As a result, over the last decade the capital/labor ratio has dropped dramatically in agriculture and increased visibly in the services sector.

Figure 4. Employment by economic sector, 1990-2001 (percentage points; total employment = 100%)



Source: Own calculations based on NIS statistics.

As is evident from other data pertaining to the agricultural sector discussed later in this report, the shift in labor towards agriculture cannot be justified in terms of allocative efficiency, but rather in terms of the agricultural sector (and rural areas more widely) acting as a buffer, absorbing people who have lost jobs in industry and haven't been able to find employment in the developing service

sector due to rigidities of the labor market. As a result, there appears to be little relationship between economic growth and employment. The measured employment rate was close to 70% in rural areas and below 50% in urban areas in 2000-2001, with unemployment rates at around 3% and above 10%, respectively. Relatively high employment in rural areas masks large hidden unemployment in agriculture, however. The poverty implications of this apparently strange flow towards employment in agriculture and limited job creation in other sectors of economy are presented in the next section.

2. The impact of growth on poverty

The transformations in Romania's politics and economics have had a clear impact on the population's standard of living, including poverty and inequality. On the eve of the transformation (late 1980s), a very egalitarian distribution of household incomes and consumption resulted in relatively low poverty rates in Romania, despite rather harsh economic conditions. The early transition years witnessed a major rise in poverty. Using 1993 consumption of 20% of the poorest as a poverty line, one can observe a rise in poverty from 4% in 1989 to 20% in 1993 (World Bank, 1997). These developments are explained by a large drop in GDP and (unsurprising, given the starting conditions) a rise in inequality. However, given the data available, detailed analysis of the impact of growth on poverty in this report is restricted to the period beginning 1996. Poverty is evaluated according to two national poverty lines, which, in turn, are evaluated against household equivalent consumption.⁴ The lines are established in relation to median consumption of the base year (1996) and kept constant in real terms in the following years. Thus, the level of the extreme poverty line is set at 45% of the median equivalent 1996 consumption (1064211 ROL per month) and the level of medium poverty at 65% of this median (1537193 ROL per month).⁵

This subsection is organized in the following way. Firstly, major trends in poverty and inequality are presented, including the decomposition of poverty changes into growth and inequality components. Secondly, income elasticity of poverty is characterized. Thirdly, the rate of pro-poor growth is calculated and is illustrated with the use of growth incidence curves. Fourthly, a more disaggregated analysis of the impact on poverty is provided by a special focus on labor market status as a key determinant of participation in the benefits of growth. Evidence points to the conclusion that enhancing skills and promoting job creation should be the main policy instrument for accelerating pro-poor growth in Romania.

2.1. Main poverty and inequality trends

The main inequality and poverty trends in 1996 – 2002 are summarized in Table 1. Inequality remains rather low in Romania, with Gini coefficients fluctuating below 0.30. During the period of

⁴ See Annex 2 for information on data sources and methodology.

⁵ This method for setting the poverty line is justified on the following grounds. Firstly, a similar approach is typically applied across most European social exclusion and poverty research. Secondly, this procedure is recommended by national experts. Thirdly, it ensures comparability with previous poverty analysis (World Bank, 2003). The choice of 1996 as a base year reflects poverty and GDP developments. In 1996, Romania witnessed the lowest poverty level in the whole period under investigation. It was also the last year before the 1997-1999 recession and thus could have been perceived as a natural benchmark for households' perceptions of their economic status. One should, however, be aware that some of the improvement in the standard of living during 1996 was due to unsustainable pre-election policies.

economic recession inequality declined and increased a little during the recovery period, but did not regain its pre-recession level. In contrast to the inequality level, poverty remains high in Romania, with extreme poverty headcounts above 10%, and medium poverty headcounts above 30%.⁶ According to all indices used, poverty increased during the period of economic recession (1996-1999), reaching its peak in 2000, before slowly declining subsequently.

Table 1. Poverty and inequality trends, 1996 – 2002

Year	Extreme poverty				Medium poverty				Inequality	
	Head count	Poverty gap	Poverty severity	Watts index	Head Count	Poverty gap	Poverty severity	Watts Index	Gini	Theil T(0)
1996	6.3	1.22	0.37	1.49	20.1	4.79	1.70	6.05	0.308	0.158
1997	11.3	2.49	0.84	3.12	30.3	7.95	3.08	10.35	0.296	0.147
1998	11.4	2.44	0.83	3.06	30.9	8.00	3.07	10.39	0.293	0.144
1999	12.6	2.86	0.98	3.59	33.3	8.83	3.47	11.54	0.286	0.136
2000	13.9	3.05	1.03	3.81	35.9	9.60	3.74	12.51	0.280	0.131
2001	11.5	2.50	0.83	3.10	30.7	7.94	3.07	10.31	0.284	0.134
2002	11.0	2.42	0.82	3.02	29.0	7.61	2.96	9.92	0.288	0.138

Note. All indices are calculated using the official STATA poverty toolkit. Weights = individuals. All poverty indices are in per cent. Source: Authors' calculations based on Romanian HBSs (edited by the World Bank staff).

Similar observations are provided by the decomposition of poverty growth (be it positive or negative) into components corresponding to overall consumption growth and changes in inequality.⁷ Two three-year sub-periods have been chosen for this analysis: 1996-1999 and 1999-2002. The first roughly coincides with the recession, while the second sub-period encompasses the rebound in economic activity that has subsequently continued to the present day. Consequently, we can investigate whether recession and recovery in Romania have had similar impacts on poverty.

In the first sub-period under investigation, falling consumption resulted in a rising medium poverty headcount, but this increase was muted by a decline in inequality (Table 2). Such trends were reversed in the next sub-period (1999-2002), when the decrease in the poverty headcount would have been greater if inequality had stayed constant. Results of the decomposition for extreme poverty reveal a similar picture. Nationwide, in the first sub-period, the impact on poverty of declining consumption was muted by pro-poor distributional changes, while in the second period, gains from a revival were somewhat subdued by rising inequalities.

Table 2. Growth-inequality decomposition of changes in medium poverty, two sub-periods

	Extreme poverty				Medium poverty			
	Change of	Growth	Inequality		Change of	Growth	Inequality	Residual

⁶ Headcounts in 1996 were lower. However, this year was exceptional (election year).

⁷ For methodology, see Datt and Ravallion, 1992.

	headcount	component	component	Residual	headcount	component	component	
1996 – 1999	0.131	0.162	-0.027	-0.004	0,063	0,083	-0,009	-0,011
1999 – 2002	-0.043	-0.050	0.006	0.001	-0,016	-0,023	0,006	0,001

Note: All changes are relative to the base year (1996 and 1999, respectively).

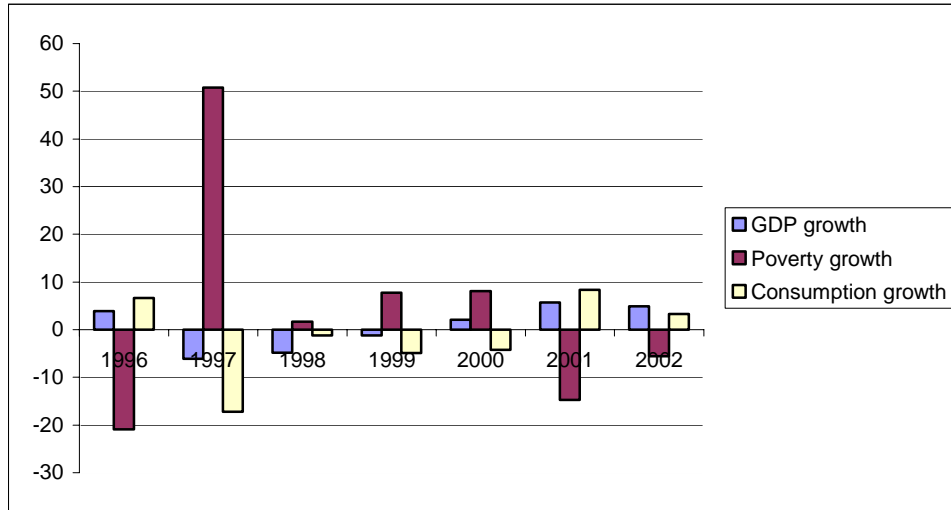
2.2. Poverty elasticity to growth

Investigation of the growth-poverty nexus reveals that poverty changes in Romania have tended to mirror quite closely both GDP and consumption growth (Figure 5). This confirms the widely held belief that economic growth is one of the major factors influencing changes of poverty (cf. Dollar and Kraay, 2002, Foster and Szekely, 2000). In 1997-1999, output decline in Romania was accompanied by a widening of poverty, while robust GDP expansion in 1996 (an election year) and the recent rebound that started in 2000 were accompanied by reductions in poverty. Poverty changes followed even more closely aggregate consumption fluctuations. Clearly, in periods when consumption increased poverty decreased and the decline in consumption resulted in a rise in poverty, with the particularly harsh example of 1997. A major rise in inflation in this year (from below 40% in 1996 to over 150% in 1997) apparently played a role in this process⁸. As for GDP, there have been years (2000, for example) when GDP and poverty both rose. This weaker, and to a certain extent erratic, reaction of poverty to GDP growth is confirmed by the volatile behavior of calculated poverty elasticity to economic growth⁹ (Annex 3, Table A12).

Figure 5. GDP, consumption and poverty dynamics, 1996 – 2002

⁸ We have not carried out in-depth studies of this episode in recent Romanian history. The suggested causal link is based on the concurrence of the particularly high jump in inflation and in the incidence of poverty in 1997 and empirical evidence from other countries indicating that rising inflation hits real incomes and usually negatively affects the poorer strata of the population disproportionately compared to more affluent households - Easterly and Stanley (2001), Braumann (2004), Cardoso (1992).

⁹ Poverty elasticity to consumption (or to GDP) growth for a given year has been computed as a ratio of the relative annual change of the poverty index to the relative annual change of the average household consumption (or GDP).

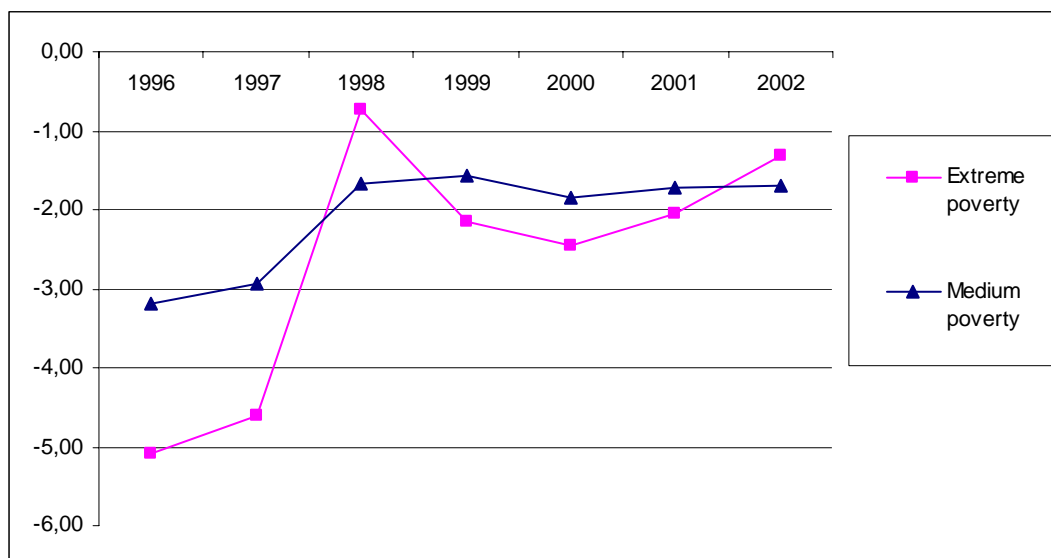


Note: Based on medium poverty line. Poverty growth is the percentage change of a headcount.
Source: Authors' calculations based on Romanian HBSs (edited by the World Bank staff).

Elasticity of the poverty headcount to consumption growth was high in 1996 - 1997, when consumption decreased and poverty increased dramatically, by 50%. In the following years, however, poverty elasticity stabilized at a moderate level (ca. 2 in absolute terms¹⁰) as illustrated in Figure 6. Generally, extreme poverty was more sensitive to changes in consumption levels, with elasticity oscillating from -5 to less than -1 (headcount index), while elasticity for medium poverty was much more stable. This indicates that the extreme poor were more vulnerable to changes in the overall standard of living. It also suggests a high concentration of population around the extreme poverty line. A similar trend in poverty elasticity is found for the Watts index, which, however, is on average more sensitive to changes in consumption (Annex 3, Figure A8). This can be explained by the inequality component incorporated in the Watts index. Both extreme and medium poverty, after the period of high poverty to growth elasticity in 1996 and 1997 and non-stabilized shifts in the first years of economic recession, stabilized in 2000 at a level similar to the headcount elasticity.

Figure 6. Poverty elasticity to consumption growth, 1996 – 2002 (headcount index)

¹⁰ See also World Bank (2003).



Source: Authors' calculations based on Romanian HBSs (edited by the World Bank staff).

2.3. Pro-poor growth and growth incidence curves

The analysis already presented reveals a volatile pattern of GDP dynamics in the last decade, with large swings to both sides and a rather strong pass-through into poverty. Here we measure in more detail how much the poor and the poorest have benefited from growth. For the purpose of measuring the rate of consumption growth of the population by each percentile, Table 3 displays annual rates of the mean consumption percentile growth for the poorest population (pro-poor growth rates), for each sub-period separately. In the first period we identify groups of population that suffered most/least from the economic recession and consumption decrease. In the second sub-period we identify groups that benefited (or not) from growth. Figures 7 and 8 represent the rates of consumption growth for all percentiles, thus showing growth incidence curves.¹¹

Table 3. Rate of pro-poor growth, two sub-periods, nationwide (annual change, %)

1996 – 1999		1999 – 2002	
Growth rate in mean	= -8.04	Growth rate in mean	= 2.35
Growth rate at median	= -7.07	Growth rate at median	= 2.61
Mean percentile growth rate	= -7.33	Mean percentile growth rate	= 2.31
Headcount index (%)	Rate of pro-poor growth	Headcount index (%)	Rate of pro-poor growth
10	-7.14	10	1.69
15	-6.92	15	1.69
20 (1 st quintile)	-6.79	20 (1 st quintile)	1.73

¹¹ See Ravallion and Chen (2003) and Ravallion (2004) for concept and methodology.

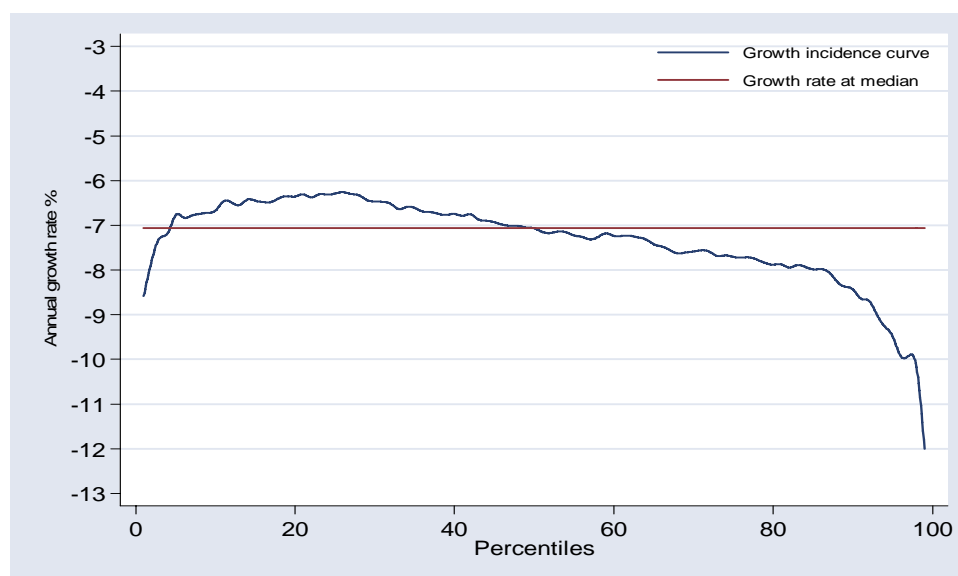
25	-6.70	25	1.74
30	-6.64	30	1.78
Extreme poverty line	-7.41	Extreme poverty line	1.67
Medium poverty line	-6.79	Medium poverty line	1.80

Note: The rate of pro-poor growth is the arithmetic mean of the (annualized) change of percentile consumption, up to the indicated level. Growth rates in mean and at median are computed at the indicated level. Rates of pro-poor growth in 1999 – 2002 have been calculated using the WB “poverty dynamics” toolkit. Results for 1996 -1999 have been adjusted.

Source: Authors' calculations based on Romanian HBSs (edited by the World Bank staff).

In 1996-1999, all consumption groups experienced losses due to the economic recession. Overall consumption decreased at an annual rate of over 7%, while mean consumption declined by more than 8% per annum (Table 3). However, the lower tail of the consumption distribution lost relatively less than the upper tail (Figure 7). The exception includes the very first decile group for which the (negative) growth rate was slightly below that at median. However, it was still above the rate of the last two decile groups. In general, economic recession and consumption decrease hit the upper strata (above the fifth decile) most.

Figure 7. Growth incidence curve, 1996 – 1999, nationwide

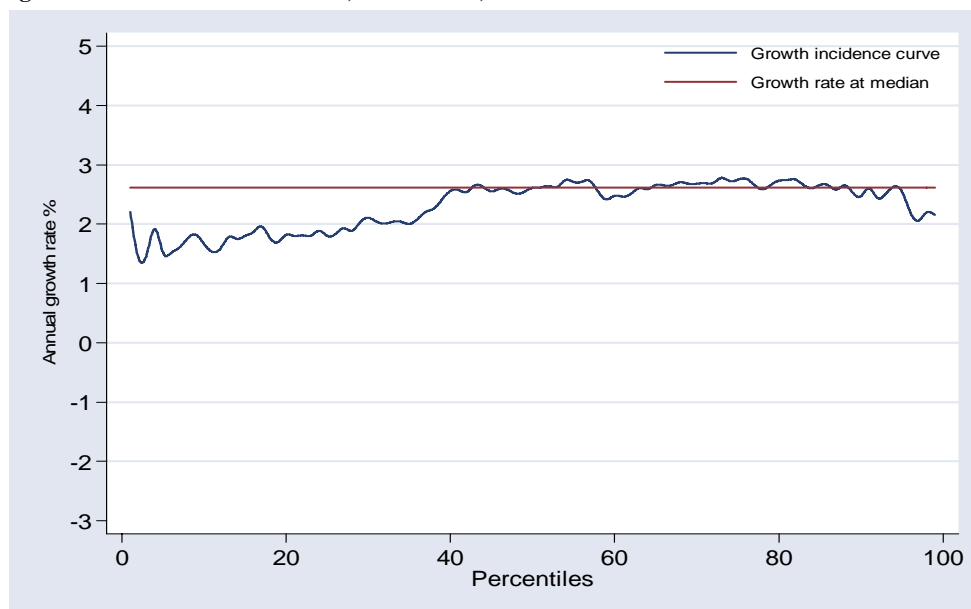


Source: Authors' calculations based on Romanian HBSs (edited by the World Bank staff).

In 1999-2002, consumption was on the rise and, again, changes were most pronounced in the upper strata of income distribution, while individuals in the two bottom quintiles gained slightly less (see Figure 8). Overall, this suggests that consumption in the upper deciles is slightly more sensitive to changes in growth. Thus, while consumption change (a decrease) in the recession period worked relatively in favor of the poor, as they were hit by losses in consumption to a relatively lesser extent than other groups, the economic recovery in recent years was accompanied by distributional changes that limited gains from growth to the poor. These results are therefore in line with the evolution of Gini coefficients discussed earlier. This consistent evidence may suggest that there are groups in Romanian society that are somewhat cushioned from developments in the wider

economy. They appear to fare relatively better during recession, but also do not fully benefit from growth. We try to identify these groups in the next subsection.

Figure 8. Growth incidence curve, 1999 – 2002, nationwide



Source: Authors' calculations based on Romanian HBSs (edited by the World Bank staff).

2.4. Groups with weak links to growth

Aggregate growth incidence curves mask the fact that over the whole period the impact of growth on poverty was strongly differentiated by household type. Focusing on the question as to which groups benefited most and least from growth we start with the 2002 poverty profile. This profile, covering the main socio-economic categories, is displayed in Table A9 (Annex 3). Poverty incidence turned out strictly related to the education and labor market status of household heads.¹² Households headed by people self-employed in agriculture and unemployed appeared most vulnerable to pauperization. In 2002, the poverty headcount among the unemployed was 50%, or 22 percentage points higher than the national average. The situation was even worse among households headed by agricultural self-employed persons, with the poverty headcount reaching 60%. From the perspective of educational qualifications, the highest poverty levels were faced by households headed by people without much formal education, while households with post-secondary and higher education of household head were almost fully immune from poverty.

Another finding is that poverty is also highly linked to place of residence. In rural areas, poverty incidence was almost three times higher than in urban areas. Moreover, land ownership also significantly impacts on poverty incidence. Over 20% of all households own very small plots of land (up to 1 ha), which cannot be efficient. In fact, poverty incidence among these households is higher than among those owning larger plots. Small-scale farming, while having some role in

¹² Other key factors included nationality, number of children, sex and age of household head – Roma households, those headed by women, elderly persons and households with many children were more affected by poverty.

alleviating rural poverty, is definitely not a source of economic well-being. The level and severance of poverty is also not uniform by region (see also Annex 4). However, the regional poverty map is strictly correlated with the share of agricultural output and employment in the regional economy¹³. The highest level of poverty is faced by populations living in the North-East, South-East and South-West. These regions are predominantly rural, with large Roma populations in the South-East and South-West. Poverty problems are least severe in the capital, Bucharest, with only 11% of residents under the medium poverty line.

Looking at the total population of poor households the following picture emerges (Annex 3, Table A9, first columns):

- iv) two thirds of the (medium) poor live in rural areas;
- v) apart from the 40% of all poor who live in households headed by pensioners, the second largest group (nearly one quarter of all poor) are those living in households headed by individuals self-employed in agriculture;
- vi) the vast majority of poor have low skills, as indicated by educational background (87% of heads of poor households have not completed secondary education).

The extremely poor population fits these characteristics even more closely, i.e. the share of households living in rural areas, headed by uneducated self-employed in agriculture is even higher. It is worth noting that such a picture should not be too surprising given the sectoral output and employment trends discussed in the first section.

Moreover, examination of growth incidence curves confirms that while agriculture provided the cushion against the negative impact of economic restructuring – at least for the medium poor – it also led to exclusion from growth benefits. On average, the rural population was less influenced by economic recession (Annex 3, Table A13 & Figures A3, A4) and the urban population gained more from the revival in economic growth. Disaggregating growth incidence curves by economic activity of household head (Annex 3, Figures A5, A6, A7) revealed that self-employed persons outside agriculture and employers reaped most of the gains from recovery, while neither transfer recipients nor those employed in agriculture benefited significantly from growth. On the other hand, growth incidence curves for the entire 1996-2002 period reveal relatively uniform distributions of consumption gains and losses. This holds true for rural as well as urban areas (Annex 3, Figures A1 and A2).

Finally, there is some evidence of polarization across socio-economic subpopulations, while intra-group relative inequality remained relatively stable (Annex 3, Table A1). For instance, Gini indices in rural and urban areas were consistently very similar, although declined faster for the rural population. As might have been expected, inequality among households headed by employers / self-employed in non-agriculture has been always the highest, while among pensioner-led households it has always been the lowest. At the same time, the role of inter-group inequality became more important, as indicated by the Theil T(0) index decomposition (Annex 3, Table A8). Although a slight decline in the share of inter-group inequality may be found in the recession period, this was overridden by the noticeable increase in this share during the period of economic recovery. This polarization points to the increasing relative vulnerability of certain labor-market groups to trends that diverge from general poverty reduction trends.

¹³ See Annex 4 for detailed discussion of regional aspects of economic development and poverty in Romania

2.5. The labor market as a key transmission mechanism

Previous subsections suggest that the low skilled workforce in rural areas, those without opportunities for non-agriculture employment, constitute the key, and stagnant, pool of poverty in Romania. This would confirm the essential role played by labor market developments in terms of the prospects of reducing poverty. One should, therefore, examine poverty-labor market links in more detail. Table 4 presents the relationship between labor demand changes (expressed as dynamics of the real wage bill and employment) in economic sectors and medium poverty headcounts for selected groups of the population in 1996-2001.

Table 4. Poverty, wage bill and employment changes by sector, 1996 – 2001

	1996	1999	2001
Poverty headcount (medium poverty)			
Urban skilled	5.12	10.59	8.71
Urban unskilled	19.27	33.91	29.67
Rural skilled	16.31	30.39	24.07
Rural unskilled	31.84	49.72	48.38
Real Wage Bill Changes by sectors (1996 = 100)			
Agriculture	100	77.9	80.5
Industry	100	53.3	57.8
Services	100	79.1	95.3
Employment Changes by sectors (1996=100)			
Agriculture	100	104.4	105.3
Industry	100	74.4	73.3
Services	100	90.1	95.2

Source: Authors' calculations based on HBS 1996-2002 data and Statistical Yearbook for Romania 2002.

The drastic fall in total labor demand in the second half of the 1990s, when the total wage bill in the economy fell by 40.6% and total employment by 20.2%, resulted in a massive rise of poverty headcounts across all population groups. Industry was most severely hit since total economic slowdown at that time was strictly related to the start of second wave of restructuring of large state-owned enterprises, which had been earlier heavily subsidized by the government. It seems that this industrial shrinkage might have played an important role in the poverty increase, especially among urban unskilled labor, but it may possibly have hit other population subgroups as well. It has also resulted in a perverse employment increase in agriculture¹⁴, leading to additional losses in real work incomes in this sector and an even larger poverty increase, especially among the unskilled.

During the period of economic recovery it was mainly skilled groups that benefited from growth. The increasing wage bill and on-going employment falls in industry indicate that wage increases have acted as a reward for increasing productivity. Part of the unskilled urban labor force most probably managed to find jobs in the booming service sector, which also led to a slight improvement in the poverty headcount of this group. On the other hand, the rural unskilled labor force was unable to benefit from economic growth as it was largely stuck in weakly growing and unproductive subsistence agriculture.

¹⁴ Also resulting from urban-rural migration, see section 3.3

A more detailed categorization of households allows for a more precise description of poverty and employment correlations. For this purpose, twenty-one groups of households, based on place of residence, skills and employment sector of the household head, have been chosen.¹⁵ Descriptive statistics are provided in Table A11 (Annex 3). This clearly shows that the poverty headcount among unskilled agricultural workers fell only slightly between 1999 and 2002 (from 51.7% to 49.7% in rural areas and from 44.8% to 40.4% in urban areas). In the same period the poverty reduction figure was very similar for households headed by unskilled unemployed persons (53% to 50.2% in rural areas and 40.5% to 36.9% in urban areas). At the same time those unskilled who kept or found jobs in industry, regardless of place of residence, were among the clear beneficiaries of economic revival, with its poverty headcount falling from 42.3% to 28.5% in rural areas and from 27% to 20.1% in urban areas. Development of the market services sector boosted incomes of households headed by the service sector unskilled employees living in urban areas (poverty headcount fell from 28.2% to 17.9% between 1999 and 2002) and slightly less of those living in rural areas (reduction from 44.4% to 38.8%), but even for this group resulted in a comparatively high reduction in the poverty gap (from 13.9% to 11%). Households led by skilled and working persons, irrespective of employment sector¹⁶, were among the clear beneficiaries of the 1999-2002 economic recovery, with one of the sharpest declines of poverty headcounts among rural skilled industrial workers (from 21.7% to 13%).

The results presented in Table A5 are consistent with the sectoral and labor market developments described in section 1 and Table 4, with ineffective under-invested agriculture, restructuring industry and booming (although thus far mainly in urban areas) services. They also suggest, once again, that development of non-agricultural jobs for the rural unskilled should be a necessary component of any effective anti-poverty campaign.

3. Factors affecting job creation for the poor

Analysis from sections 1 and 2 strongly suggests that the labor market is the most important transmission channel between economic growth and poverty in Romania. Although growth seems to be generally pro-poor, distribution of growth benefits is not equal across various population groups, in particular due to unequal distribution of productive employment opportunities. Analysis of poverty incidence illustrates that it is concentrated on three types of households: those headed by pensioners, self-employed in agriculture and the unemployed. In 2002, these households accounted for 75% of all poor (and 80% of those living in extreme poverty). Given the situation in the agricultural sector (an already overly high employment level) and the clear poverty reducing impact of non-agricultural jobs and limited options for a substantial increase in pensions and other social benefits, it appears evident that only additional non-farming labor income can help households escape from poverty. However, the recent revival of output in industry and services has resulted primarily in real wage increases that have benefited skilled labor. Wage or especially employment gains for the unskilled have remained limited and infrequent. This has resulted in increasing inequality, with stagnating living conditions of the unskilled, especially in rural areas. The aim of this section, therefore, is to characterize the main institutional and structural barriers for wider job

¹⁵ This categorization is further used in our simulations of alternative future scenarios that are discussed in section four.

¹⁶ Urban, skilled workers in the agricultural sector are the exception here, but due to the very small size of this group (only 161 household in HBS 2002) any statistical inference here may be strongly biased. The same applies to skilled rural workers in market services.

creation. We consider identification of such barriers crucial from the policy making point of view, since job creation for unskilled will ultimately determine the future pro-poor impact of economic development.

In the first subsection we discuss institutional obstacles to investment and the emergence of the labor-intensive sector of small and medium enterprises: corruption, the administrative burden, legal instability and insufficient pace of restructuring of large state-owned enterprises (SOE). In the second subsection we analyze labor market regulations, which have a substantial influence on pro-poor job creation, such as the minimum wage, unemployment benefits, restrictiveness of the labor code and the emergence of the shadow economy. In the third subsection, we discuss prospects for improving productivity in agriculture and the emergence of non-farming sectors that could reduce poverty among the rural population. Analysis of the consequences of public expenditure on employability can be found in the fourth subsection. In the fifth subsection, we look at the main features of ethnic and gender inequalities, primarily related to access to employment opportunities.

3.1 Institutional barriers to entrepreneurship

Job creation and particularly job creation for the poor in Romania have been largely conditioned by the fast development of the small and medium enterprises (SME). The importance of SMEs for job creation is best illustrated by their share of total employment, which increased from 12.3% in 1992 to 29% in 1997 and 50.7% in 2002¹⁷. In absolute terms, the SME sector added 1.5 million jobs in those ten years. However, the growth of the SME sector could have been even higher without various institutional barriers¹⁸. These barriers include corruption, excessive bureaucracy and the volatility of the legal system related to the legacy of communism and erratic transition process. This situation is common for many countries with a communist past, although the intensity of some problems marks Romania out from other transition countries.

Corruption is perhaps the most important of these problems. According to the Corruption Perceptions Index 2003 (Transparency International, 2003), Romania is ranked 83-85 out of the 133 countries surveyed, far behind other CEE countries. The Global Competitiveness Report 2003-2004 placed Romania in 86th position out of 102 countries with respect to corruption. The perception that corruption impairs the emergence of job creating SMEs is confirmed by a survey conducted among owners and managers (OECD and EBRD, 2004). The negative impact of corruption on SMEs is easy to understand. Petty corruption takes place mainly through abuse of administrative controls placed on company operations. This is most clearly illustrated in the frequency with which controls are imposed and the amount of red tape – measured in terms of time spent with officials and filling in forms and complaints about discretionary decisions (IRIS, 2000). Many of these issues have been addressed recently and partly resolved by the introduction of legislation in 2002 reducing the bureaucratic burden. The most visible changes include the creation of the ‘one-stop-shop’ system, the introduction of the silent consent procedure and self-certification and improved clarity of the set of rules for clerks and inspection staff. As a result, the cost and duration of setting up a new company in Romania are currently among the lowest in the CEE region and below the European average. In 2004, the estimated average duration of setting up a new company in Romania was 28

¹⁷ For international evidence on job creation potential of SMEs see e.g. Schreyer (1996), Bilsen and Konings (1998) and Drnovsek (2004).

¹⁸ See OECD (2002) for a review of the SME situation in Romania.

days, close to the 25 day average in high income OECD economies (Doingbusiness, 2004 using methodology of Djankov et al., 2002). Barriers generated by inoperable bankruptcy procedures have also been reduced by the new legislation. Simplification and reduction of the administrative burden has been acknowledged as one of the most important achievements in Romanian public policy in recent years (European Commission, 2003). These positive changes, furthermore, allow for expectations of even more rapid growth of the SME sector, with a higher rate of job creation for the unskilled.

Another factor discouraging market entry, and therefore job creation, is high legislative and institutional volatility, contributing substantially to uncertainty and high business risk perception. For instance, there have been amendments to legislation on commercial companies, VAT and privatization, respectively, 23, 23 and 51 times (Bogdan, 2003). While the transition process arguably requires continuous improvements in the legislative base, the stability of existing law should not be underestimated as decisions to invest and to take on new labor require a strong measure of certainty regarding the future legislative environment.

Finally, an important issue affecting entrepreneurship and job creation is related to the delayed restructuring of state-owned enterprises. The initial conditions in Romania were particularly difficult compared to other transition economies and delays in restructuring and privatization during the 1990s left the country with a larger number of enterprises to be privatized or liquidated than in all of the other CEEC countries combined (World Bank, 2004)¹⁹. Such a huge scale of the largely non-competitive state-owned sector, in many cases is supported by various forms of quasi subsidies, negatively affects the prospects of newly emerging companies. The channels for the relay of such negative impacts include the labor market (until recently wages were growing strongly in SOEs), access to financing, unfair competition due to tolerance of tax and other payment arrears in SOEs (for example, in 2002, tax arrears amounted to nearly one third of total assets held by SOEs – World Bank, 2004) and increased corruption, resulting from non-transparent links between public officials and SOEs. The authorities, under constant political pressure, are not able to restrict these practices, even on the eve of EU accession. From the poverty perspective there is a clear trade-off, as more job losses in SOEs induces, at least temporarily, a hike in unemployment. Nevertheless, while the design of particular policies to best manage the restructuring and privatization process can be debated there is little doubt that speeding up of the process is a necessary element of successful restructuring of the economy and longer term pro-poor growth strategies.

3.2 Labor market institutions, hidden unemployment and shadow employment

Labor market regulations such as the minimum wage, unemployment benefits system, size of the tax-wedge and rigidity of the labor code are considered to play an important role in job creation. Vast employment in the shadow economy is both the result of rigid regulations and an important obstacle to raising legal employment since both employers and employees already engaged in the shadow economy are less willing to legalize their employment relationship. We see job creation for unskilled and therefore low-paid workers as an important driver of pro-poor growth. Empirical evidence from other countries (Urban Institute (1999), CERC (1999) OECD (1998), Deere, Murphy, and Welch (1995)) suggests that there are strong links between regulations pertaining, for example, to the minimum wage and unemployment benefits and the incentives for the low-skilled to

¹⁹ See also Box 2.

seek employment and for entrepreneurs to create jobs in this segment. As such, this part of our analysis is devoted to both labor market institutions and shadow employment in Romania.

Box 2. The political economy of SOE restructuring and labor market reform

After the 1989 revolution the ad-hoc transitional authority (the National Salvation Front) transformed itself into a political party and, with the exception of 1996, has won all national elections since then. At the beginning its credibility was based more on public acceptance than any coherent economic strategy. Largely as a consequence of this social security, and especially job protection measures, have become a key political issue. This has been reflected in delayed restructuring and the generous unemployment and social benefits system. The opposition, formed mainly by conservative parties, is widely seen as backward-looking and oriented towards models taken from as far back as the inter-war period (monarchy and large property owners). Consequently, popular fear of large-scale property restoration became an important issue influencing both land reform and privatization of the state-owned enterprises. Hence, the first land law (1991) limited returned property to 10 hectares per family. It was only in 2000 that this was increased to 50 hectares. Land sales were also restricted until 1998. The SOE privatization process reflected the same pressures for egalitarianism. Voucher privatization and MEBO (management employee buy-outs) were thus the main methods of privatization in the early transition years. Both methods, resulting in a diffusion of ownership and privatization to strategic investors, only really started as late as in 1998.

Labor unions have become very strong since the very beginning of transition and mining unions from Valea Jiului have been particularly powerful. They supported several violent demonstrations of miners in Bucharest in protecting SOE employees' interests, including one in 1991, which resulted in a change in prime minister. Unions strongly opposed liberalization of the labor code and limiting the generosity of the unemployment benefit system. Unions also played a decisive role in slowing down restructuring of the SOE sector. They were also often involved in privatization negotiations in large companies, several times blocking privatization.

Only after the gradual emergence of the private sector, leading to a reduced role of SOE-based labor unions on one side, and constraints imposed on candidate countries' policies imposed by the EU on the other side, have attempts been made to liberalize the labor code, reduce employment protection and has SOE restructuring become more feasible and started to bring successes.

The minimum wage in Romania started from an extremely high level of 65% of the average wage in 1989 and reached a minimum of 27% in 1999. In 2001, it constituted 32.5% (37% in 2003 and 34.7% in March 2004²⁰). This ratio between minimum and average wages is similar to the other transition economies of Central Europe and also to the OECD average. One has to remember, however, that most transition countries, and Romania in particular, have a large unskilled labor force that is characterized by low productivity, and minimum wage policies should be commensurate with this. According to NIS Statistical Information Series 2004, in 2001, as many as 6.7% of employees were paid at the level of the minimum wage or even slightly below and 15% were paid on the vicinity of minimum wage. Most recently, following the 43% increase in the

²⁰ This followed the decision to increase the minimum wage by almost 43% in January 2003, growth that took some time to propagate towards the upper layers of the wage distribution curve: while in January 2003 the ratio of minimum wage to the average gross wage was 38.4%, this ratio dropped to 31% by the end of the year.

minimum wage in January 2003 (IMF, 2004), and following the introduction of the New Labor Code, the share of employed persons paid (officially) at the level of the minimum wage has increased, according to some estimates to as much as 30% of total employment (estimates from the Romanian Chamber of Commerce, National Council of SMEs). This suggests important downward wage compression that may pose an additional barrier to employment of the unskilled.

The unemployment benefit system in Romania was extremely generous throughout the 1990s. In 1991, unemployment benefits stood at 43% of the net average wage, falling slightly to 31% in 2000. Strikingly, in 2000 this was actually above the minimum wage. The average duration of benefits was 9 months, a very long period when one takes into account the relatively large size of the benefits. Additionally, income support for the unemployed was then continued for the following 18 months in the form of a so-called 'unemployment allowance', amounting to 60% of previously paid unemployment benefits. System reach was also very wide compared to other transition countries (Vodopivec et al, 2003). The share of benefit recipients in the total number of unemployed was as high as 73.9% in 2000. In 2002 this share decreased to 47.2% as a consequence of increased registration in unemployment offices due to the new Minimum Guaranteed Income legislation that made registration in employment offices compulsory for receiving benefits. In February 2002, however, a new Law on the Unemployment Insurance System and Employment Stimulation was issued. Unemployment benefits were reduced to 75% of the minimum wage and the duration of benefits now depends on individuals' contribution periods.

Payroll taxes in Romania are among the highest in Europe. The total tax burden on labor for low wage earners in Romania currently (2004) stands at 45.2%, similar to Belgium, Germany, Sweden and Italy, while the European average is around 38% and in countries such as Ireland, Cyprus and Malta it is below 20% (European Commission, 2003). The effect of leveraging such a large tax-burden is especially perverse in the case of low-skilled and low-productivity workers. These groups are characterized by relatively elastic labor supply and in this situation even minor shifts in labor demand (and the tax-wedge can be interpreted as a downward shift in the labor demand curve) result in considerable employment effects. Pension funds are the most important contributor to the total wedge, constituting as much as 46.7% of the total. Taking into account political limitations and also the long-term stability of the pension system this may not be easy to reform. Personal Income Tax (PIT) is the second largest contributor, constituting 12% of the total tax burden even for low wage earners. Reform of the tax system, therefore, which would lead to a serious real tax decrease for low wage earners may be a policy option worth considering.

The new labor code replaced the 30 year-old law on 1 March 2003. While it generally meets the demand of the European Union model, different stakeholders, including the Romanian Council of Foreign Investors (CIS) have raised serious concerns. Various provisions, like the obligation to set up a wage guaranty fund, increasing the complexity of recruitment and dismissal procedures and excessive requirements regarding employees' rights to annual training were particularly criticized as not being matched with the specific needs of the Romanian labor market. Company employment restructuring may be additionally hampered by the generous size of severance payments (6-12 net average monthly wages, depending on job tenure) for those losing their jobs due to collective layoffs (World Bank 2004).

The high tax wedge, rigid labor market regulations and cumbersome bureaucracy are three of the main factors driving the development of the widespread shadow economy in Romania. Stanculescu and Ilie (2001) have showed that, irrespective of the economic standard, in 1998, 68% of

households in Romania earned cash incomes in the informal sector (23%) and/or products from agriculture (61%)²¹. A comparative analysis (Stanculescu, 2004²²), shows that the share of Romanian shadow employment is high compared to other countries of the region. Thus, in spring 2001, of all employed aged 18-65, 12% did informal work without a work contract, 23% were self-employment and about 10% combined formal activity with additional informal work. Informal workers belong mainly to households with a significantly larger number of children. As in other countries, informal workers in Romania tend to be concentrated among the 20% of the country's poorest employed. The lowest incomes are also characteristic of self-employed in agriculture. The phenomenon of high self-employment is, therefore, linked to insufficient pensions or disguised unemployment rather than entrepreneurship. Kollo and Vincze (1999), looking at the period 1993-1996, and Ciupagea (2000), looking at 1993 and 1998, have both revealed larger flows into self-employment, subsistence farming and the black market in regions hit hard by transition shock. At the same time, no net flows from self-employment back to paid work have been observed in the few Romanian regions where the demand for labor was rising. This indicates that both agricultural self-employment and the shadow economy can be considered as traps where, once locked in, one finds it very hard to escape back into open market economic activities.

Rural areas of the country are abundant with poorly skilled and low productivity workers. However, minimum wage regulations, high payroll taxes and the excessively rigid labor code limit the employment possibilities of this group. The generous system of unemployment benefits (especially before the 2002 reforms) may additionally raise their reservation wage. As a consequence, non-employed people often engage in subsistence farming as self-employed in agriculture or work in the informal sector. Both options can be considered economic niches enabling such unskilled groups of the labor force to survive. On the other hand, however, both lead to a deterioration in skills and/or motivation, further lowering any chances of re-entering the regular labor market. Since these activities serve mainly to meet basic subsistence needs and not to bring long-term improvements in living conditions they should be treated as a form of hidden unemployment.

3.3 Obstacles to rural development

The rural population employed in the agricultural sector appears largely excluded from the positive effects of growth (but also insulated against the negative effects of recession). Poverty is also concentrated among the unskilled in rural areas. As the agriculture sector has become a sort of poverty trap, economic growth can therefore be genuinely pro-poor only if it creates opportunities for the productive employment of this rural population. This can be achieved through a combination of increases in productivity in agriculture (which increases incomes in this sector) and the emergence of non-agricultural sectors (to absorb labor released from restructuring agriculture). This process needs to be supported by upgrading the skills of the rural population, facilitating migration and commuting to urban areas and investment in rural infrastructure.

Productivity improvements in agriculture should be build on the achievements, as well as the corrected imperfections, of the 1991 land reform. This reform, one of the most decisive factors influencing current rural development in Romania, returned most non-private agricultural land to its

²¹ The analysis includes only incomes obtained from 'grey' activities and not 'black' activities.

²² See also Wallace (2003).

former owners, who, back in 1948-1962, were forced to join socialist agricultural co-operatives, or to the heirs of former landowners. Thus, by design, the reform transferred two thirds of the land to elderly farmers and only one third to rural youth. As most of the former landowners had several children who claimed ownership rights, by the end of the reform process the land ownership structure was more fragmented than before the start of the process of forced socialist collectivization. Currently, 4.17 million households own about 10.3 million hectares of agricultural land. Consequently, the average operated area per rural household is extremely low, at 2.47 hectares. The structure of farming is, however, less fragmented than ownership. According to various estimates, 30-40% of agricultural land was transferred to city dwellers, wage-earners or rural pensioners who have no interest in farming. Consequently, Romania's farming sector is divided into two extremes: a very small number of large commercial farms – 0.5% of farms with an average size of 270 hectares – and an extremely fragmented sector of 4.2 million households with an average of less than 1.6 hectares each. Increasing farming productivity would require the transfer of abundant labor from agriculture into non-agricultural activities. This could only happen if the land market was sufficiently developed and, unfortunately, it is not. Although the legislative basis for the functioning of the land market was established in 1999, only 2.7% of agricultural land was subject to trade between 1999 and 2002. In the light of European integration, this situation raises serious problems for implementation of the CAP (Common Agricultural Policy).

Another weakness of the agriculture sector in Romania is the shortage of agricultural machinery and equipment (Tesliuc, 1999). Most rural households have little or no productive farm equipment. Hence, the overwhelming majority of rural households have no choice but to turn to animal-drawn equipment, with a small minority hiring mechanical services. As most of the land was reinstated to an elderly class lacking adequate labor resources, the productivity of farming is very low. Poorly developed input and output marketing systems add to the above-mentioned problems. Accordingly, the new class of farmers, poorly equipped with physical agricultural resources, lacking modern agronomic knowledge and cash-constrained, have tended to 'choose' a low-risk / low-return production strategy, switched their production mix away from modern toward traditional crop / technologies and reduced their transactions to a minimum in favor of an autarkic production system.

It is possible that the age structure of the farmers population may help to resolve some part of the restructuring problem in Romanian agriculture. The rural employment, similar to the entire rural population, is relatively old. Due to the low pensions, a large proportion of the aged rural population continues subsistence agricultural activities resulting in more than one million people over 60 years being employed in agriculture. Therefore, various authors (Dumitru et al., 2004) emphasize that part of the problem of necessary reduction of agricultural employment is solely a social problem. The replacement of existing subventions for individual farmers with an appropriate retirement scheme for people over 60 years could possibly reduce employment in agriculture to (a still high) 26% of total employment. According to Dumitru et al. (2004), the new retirement scheme should increase (former) farmers' pensions but should require that a pensioner sells the land to active farmers. The retirement scheme would have to take into consideration the fact that subsistence agriculture (which needs to be replaced) accounts for 58% of households' total consumption, while existing pensions cover on average only 30% of it. Any reform of the farmers' pension system should, however, take into account the currently low proportion of farmers paying social contributions.

The aging rural population is, however, only a part of the story, as agriculture and farming also became an occupational buffer during the transition process. It partly absorbed the rural unemployed, returning migrants and many of those who could not otherwise find formal employment. While between 1978 and 1991, 2.3 million persons migrated from rural to urban areas (Rotariu and Mezei, 1999), these migrations have continuously diminished since the fall of communism. At the same time, the urban-rural flow has grown, and has become dominant since 1997 for the first time in the country's history. The social effects of such internal migration dynamics are highly debated. Positive effects include 'rejuvenation' of the rural population (Ghetau, 1997, Rotariu and Mezei, 1999), while yet higher employment in agriculture is widely seen as the major negative effect. As a consequence, farming absorbed too much labor, which led to severe over-employment (Tesliuc, 1999). The small farm sector tends to produce for its own needs and while its production patterns help owners escape extreme poverty, it fails to create adequate income or output growth. Reversing these negative trends will not be easy and would probably require substantial government intervention.

The labor released from the agriculture sector needs to be able to find alternative employment in non-traditional sectors. Growth in these sectors has been very slow to date, however. The government has an important role to play in stimulating this process by improving the overall administrative climate for SMEs, as discussed earlier, but also by putting much greater stress on the development of rural infrastructure and in particular transport and telecommunication links. Rural areas are currently clearly disadvantaged with respect to infrastructure and living conditions. The condition of local roads is poor in most rural areas and many roads are impassable at certain times of the year. Only 24% of Romanian villages have running water system (although it is being continuously expanded), about 4% have access to a sewage system and under 7% have gas provisioning (NIS, 2003). These infrastructure impediments add to the lower quality of the labor force and negatively influence investment attractiveness and therefore also economic and employment possibilities in rural areas. As a way of providing the rural population with more productive job opportunities, policies that promote migration and, even more importantly, commuting to urban areas, should be implemented. Again, this would require reversing trends from most recent years.

However, the most important prerequisite for the development of non-agriculture sectors in rural areas and migration and commuting to urban areas is the enhancement of skills among the rural population that would make them more attractive to potential employers. If, before 1990, the urban-rural education gap was on the decline, after 1990 the trend was reversed and subsequently widened. The rural workforce is mainly unskilled and poorly educated. Nearly a quarter have less than primary education, a further one third completed the first stage of secondary education (with no qualifications), while only 2% have higher education. The situation looks much better in the cities. About 2/3 of the urban workforce completed secondary education and 16% higher education. The reasons for these discrepancies are obvious. The lower quality of primary education and scarcity of financial resources impede access of rural youth to further education, as most of the vocational and high schools are located in cities. The problems of providing quality education to the rural population is discussed in the next section.

Box 3. Rural development and EU accession: the Polish experience

The scale and scope of the challenges facing rural development are so large that the government of Romania is currently unable to finance even a fraction of the necessary costs. However, the availability of funds may improve dramatically after Romania's accession to the EU. Here, the experience of Poland, another Central and Eastern European country with high share of labor in agriculture, which joined the EU in 2004, might offer some insights. The **direct impact** of EU accession affects Polish agriculture and rural areas via three main channels: (i) market mechanisms, such as trade and financial liberalization (Polish agriculture, after being the most protected sector in the economy over the last decade, became integrated with the EU's Common Market), (ii) policy instruments of the Common Agricultural Policy (price support, direct payments, II-pillar programs), Structural Funds for rural development, and (iii) harmonization of law (introduction of *acquis communautaire*). **Indirectly**, the sector is affected by changes resulting from the impact of EU entry on other sectors of the economy.

Effects on the rural labor market. The share of the Polish agricultural sector in GDP has already fallen to the EU level (from 8% in 1990 to 2.7% in 2002), although its share in total employment has remained much higher, at above 20%. Besides, some 1 million farmers can be termed 'hidden unemployed', while another 1.5 million people living in rural areas are unemployed officially, and most long-term. EU accession the short run, however, is unlikely to help resolving the accumulated and complex socio-economic problem of oversupplied low-skilled labor force, for the following reasons.

Firstly, the EU requirements of the *acquis communautaire* are focused on modernization of farms and the processing industry, which means introduction of capital-intensive technologies. Substitution of labor by capital is especially concentrated in the traditionally labor-intensive sectors (like milk or cattle), which causes a decline in demand for farm labor. In addition, new technologies usually require a larger scale of production, which means concentration of land in larger farms and liquidation of some small farms, which additionally intensifies the problem.

Secondly, financial liberalization and introduction of EU programs has caused changes in the relative prices of production inputs. While the costs of land has been increasing (mainly due to direct payments per hectare of arable soil), the costs of capital for farmers and processing industries has declined and credit accessibility improved. EU programs offer even up to 50% co-financing for investments in the sector. Besides, convergence of interest rates has resulted in declining cost of credits anyway. This has accelerated the replacement of labor by capital. On the other hand, easier inflow of capital may contribute to job creation, as FDI allocated in Polish processing industries and farms are more likely to be 'green-field' investments, after the privatization processes has been mostly finished.

Thirdly, EU programs addressed to agriculture and rural areas were designed according to the needs of the old EU members, so only partially address the problems of rural oversupply of the labor force in Poland. Of all the programs under the II-pillar of CAP (from which Polish agriculture will benefit about EUR 1 billion annually in 2004-2006) only one program is devoted to the labor market, so-called 'structural rents', which is an early retirement scheme for farmers, though its scale is small due to specific requirements. More programs are available under Structural Funds (all funds reserved under the Structural Operational Program for agriculture amount to about EUR 2 billion in 2004-2006), however only EUR 0.3 billion is devoted to the priority 'Sustainable development of rural areas'. This includes instruments such as: diversification of agricultural activities and creation of alternative incomes; development and improvement of infrastructure in rural areas; rural renewal and preservation of cultural heritage. It has to be remembered, however, that the strength and peace

of the programs are conditioned by Poland's abilities to absorb the newly available funds, which is fulfillment of the EU's technical and financial requirements, preparation of the institutions, etc.

In the short run, EU accession is expected to help in the modernization of the agricultural sector but not in resolving the problem of its over-supplied labor force. **In the longer run**, however, the prospects are better. Firstly, the CAP is likely to undergo fundamental reforms leading to: a steady shift of funds from agricultural support to rural development (from 1% in 2006 up to 6% in 2011), the creation of new instruments supporting non-agricultural forms of rural occupation (multi-functionality of rural areas) and more investments in infrastructure (increasing attractiveness for investors). Secondly, expected increase in economic growth should result in higher demand for labor, including the non-skilled labor.

3.4 Public spending and its impact

Public spending can contribute to poverty reduction in two ways²³. Firstly, it can have a direct poverty reduction impact via redistribution. The social assistance system in Romania has a good targeting well targets lower income quintiles, but has somewhat modest coverage (for detailed analysis see Annex 6). While resources to increase the scale of the social benefits programs are limited, it is unlikely that they can lead to a further reduction of poverty rates. Additionally, increasing the level of redistribution also implies a higher tax wedge, which in turn could have a negative impact on the employability of the poor. Our earlier analysis indicates that job creation for the poor is an important channel for poverty reduction in the medium term. What seems to be of particular importance is enhancement of the skills level of the poor and reductions in human capital discrepancies between rural and urban areas. Unfortunately there are major problems in realizing those two goals.

An effective, high quality and widely and uniformly accessible educational system is one of the main prerequisites for increasing employability and preventing poverty. Quality and access to education have been, unfortunately, declining during the transition period and differ considerably between urban and rural areas. The number of school units, as well as the number of teachers and auxiliary staff employed in pre-university education, declined during the 1990s. There are also significant regional disparities between the central and western regions and the southern and eastern regions. The major problem is a severe drop in the enrollment rate in secondary education, from more than 90% in the school year 1990/91 to 74% in 2002/03. In rural areas the problem of dropping enrolment rates is particularly acute. It is striking even at the level of primary education, with the rural area rate of 86% compared to 98% in urban areas. The discrepancy widens further the higher up the system you one goes. Only 10% of university students, 20% of the post-high school students, 25% of the high school students and 37% of the vocational school students come from rural areas. Furthermore only 72% of rural teachers are qualified, compared to 88% of those working in urban areas, and rural school buildings are often dilapidated and lack sufficient equipment. All these factors tend to lower the school performance of rural students (for details see MECY, 2002). Current rural education trends, furthermore, lead to an even further widening of the

²³ Composition of public spending in Romania is presented in Annex 5.

gap between the countryside and the towns and cities. In response to these challenges, since 2001 the Ministry for Education, Culture and Youth (MECY) has implemented a program of school consolidation and bus transportation to schools (partly financed from PHARE 2001, 2002 and World Bank loans). In April 2002, the Romanian government requested grant support from the World Bank to help it identify and prepare its Project for Rural Areas Education Development. The Commission against Poverty and for the Promotion of Social Integration included rural education in its Strategy for Poverty Reduction. The main problems addressed are: access to education, school abandonment, insufficiently qualified teachers, lack of professional guidance and low value placed on education.

There are also several problems in access of the poor to the health care system, particularly in rural areas. Despite visible improvement in many health indicators since 1990, Romania remains close to the bottom of the respective European rankings. The Commission against Poverty and for the Promotion of Social Integration recently indicated that the high costs of medicines resulting from prevailing tax policy cannot be covered by the poor (CAPSIP, 2002). It also pointed to the limited access to health insurance of persons with a high risk of poverty, particularly from rural areas, and break-up of the territorial-base of the health care system. In the less developed North-East and southern regions many villages lack their own health units and family physicians. Consequently, statistics show a sharp decrease in health services delivered to the population (treatments, vaccinations, hospitalizations) during 1989-2002 (NIS, 2003). Additionally, the large majority of the population perceives the system as ‘corrupt’, ineffective and has registered its ‘dissatisfaction’ with government actions in the health sector (Public Opinion Barometer, Open Society Foundation, 1996-2003).

3.5 Ethnic and gender inequality

Ethnicity remained a strong correlate of unemployment, and therefore poverty, in Romania during the transition (see Annex 3, Table A9). Roma²⁴ unemployment and poverty were growing and deepening faster than in the case of any other ethnic groups. The level of illiteracy among the Roma population is extremely high. Some 18% of adult Roma men and 28% of adult women cannot read. Only 5% of Roma adults have attended high school or college, while only about half of 7-18 year-olds are enrolled in schools. As a result, their educational skill levels are extremely low. Lack of qualifications, combined with discriminatory stereotypes – Roma are ‘the last to be hired and the first to be fired’ – has caused a very precarious employment situation. In 1998, only 13% of the total Roma population over 16 years was employed and 34% was self-employed. Consequently, unemployment in the Roma population is considerably higher than elsewhere and it is mostly chronic (Cace, 2002).

Only approximately 15% of the predominantly rural Roma households own land (as shown by both 1992 and 1998 surveys). Most own plots smaller than half a hectare. Many Roma have claimed that due to the discriminatory restitution procedures applied by local authorities the land they have received is in bad locations and of poor quality. The local authorities say many Roma, particularly the poorer members of the community, have sold part of their land and most do not cultivate what land they have.

²⁴ There are more than 17 ethnic groups living in Romania, among which the biggest three are: Romanians (89.5%), Hungarians (6.6%) and Roma (2.5%). (*Population and Dwellings Census 2002*, NIS)

In 2001, the Romanian government adopted The National Strategy for Improving the Situation for the Roma, as well as implementing methodology for the specific actions and measures outlined in this strategy. Roma problems are also integrated with other strategies, mainly the Strategy for Developing Pre-University Education. Since 2001, the National Agency for Employment has made the Roma population a target group in its annual action program for boosting employment. Various projects and insertion programs have also been implemented by governmental and non-governmental organizations, mostly with external support and assistance. At the institutional level a Ministerial Commission for Roma was set up within the Ministry of Labor, Social Solidarity and Family to implement a strategy for improving the Roma situation.

Throughout the period 1995-2002 no differences in the incidence of poverty by gender was recorded at the individual level. Nonetheless, female-headed households face higher risks of poverty and lower chances of escaping poverty, compared to male-headed households (World Bank, 2003). Women are therefore not more likely to be poor, except in the case of women who head households, particularly single-mothers and elderly widows. Gender disparities in education and in the labor market are clearer. Women are three times more likely than men not to graduate from primary school. Women represent three quarters of all illiterate people: the national illiteracy rate is 2.6%, whereas the rate for elder women from rural areas is 6% (2002 Census, NIS). However, this gender gap tends to diminish over time since enrolment levels are higher among women than men. In 2002, women accounted for 54% of college and university students, 65% of post-high school students and 53% of high school students. Between 1992 and 2002 the enrolment rate of women increased significantly. By 2002 the enrolment rate of the population aged 6-24 had reached 65% for women compared to 63% of men. However, women are much less active on the labor market. The activity rate for women aged 15-64 is 50%, significantly below men's 67%. The employment rate follows a similar pattern: 45% for women and 58% for men. There is also a wage gap, with the average salary for women 13% below men's average. Summing up, while there does not seem to be a direct link between gender and poverty, women have fewer job opportunities and are therefore more likely to fall into poverty in the event of loss of spouse.

4. Options and key trade-offs in poverty reduction

This section illustrates the relative roles of growth, job creation and redistribution policies under various economic growth scenarios, migration trends and educational policies. In order to provide quantitative descriptions of various macroeconomic and policy scenarios for poverty alleviation, simulation techniques are used. The tool applied for this analysis is a simplified version of the Poverty Analysis Macroeconomic Simulator (PAMS) for Romania. It was developed especially for this purpose, incorporating historical macroeconomic data and data from household budget surveys²⁵. The analysis covers the period 2003-2010, broken down into two four-year sub-periods (2003-2006 and 2007-2010)²⁶.

Box 4. Main characteristics of PAMS

²⁵ For a detailed description of the PAMS approach see Pereira da Silva, Essama-Nssah and Samake (2002) & (2003) and Annex 7 of this report.

²⁶ The most recent household survey that was available came from 2002, thus marking the starting point of our analysis.

PAMS is a relatively simple model comprising three main elements: a macroeconomic module, used to project sectoral patterns of GDP growth, a labor market module breaking down labor categories by selected characteristics and a poverty module linking the labor model results for each labor category to simulate the income and consumption paths for each individual across deciles within each group. The main simplification that we introduced to the typical PAMS framework was in the macroeconomic module where we did not have access to any well-calibrated and fully consistent macroeconomic model of the Romanian economy (such as e.g. RMSM-X). We decided instead to base the relationships in our macroeconomic module on observed historical trends and IMF estimates of realistic macroeconomic scenarios for the next few years (IMF, 2003). In this way we are able to assure consistency of our scenarios.

In the labor market module we distinguish between as many as 21 labor household groups (classified by the status of household head). These groups reflect firstly, binary classification (rural/urban and skilled/unskilled) and secondly, occupational categories (agriculture / industry /market services / non-market services / non-employed). The last, 21st group, comprises households headed by individuals that are non-working and not in the 15-64 age group. Individuals belonging to different clusters are assumed to have various characteristics resulting in the divergence in their chances in the labor market. It is assumed that wages of the unskilled workers are rigid downwards as these workers command wages close to their reservation wages determining their participation in the labor market. Firms find it relatively easy to substitute other factors of production for unskilled labor. As a result, the employment rate among unskilled laborers is volatile. On the other hand, wages of skilled workers are more flexible and adjust rapidly to keep the employment rate relatively constant.

In addition to the wage income, the poverty module accounts for non-wage sources of household income. In our specification, the total amount of social transfers per household (comprising all social assistance transfers as well as pensions, etc.) is dependent on the wage bill in the economy and on the implicit payroll tax rate. The impact of higher redistribution and/or better targeting of social transfers can therefore be analyzed. Adding the total household income separately for each of 21 household categories (i.e. for representative household in each category) allows one to calculate consumption per adult equivalent (under assumptions of an unchanged relationship between total income and total consumption). By assuming unchanged consumption distribution by decile within each labor category it is then possible to calculate poverty indices and other relevant figures such as unemployment.

As the analysis of sections 1 and 2 has illustrated, economic growth has been a major determinant of poverty trends in Romania. It thus comes as no surprise that we can observe the same mechanisms in our simulations. In the baseline scenario an average 3.7% annual GDP growth was assumed, consistent with various estimates of growth potential (e.g. IMF, 2003) and in line with the past experience of Romania. With other parameters set at realistic values, consistent with the historical record and/or with coherent macroeconomic policy, the model predicts an overall reduction in the poverty rate in 2003-2010 by nearly one third and a smaller, but nevertheless substantial, reduction in poverty in more vulnerable rural areas (Table 5; see also Annex 7 for a more detailed description of the model's assumptions and parameters for various scenarios that have been considered).

The simulations indicate that poverty among working age individuals in rural areas is the key determinant of the overall poverty rate. Under the baseline scenario, a reduction in poverty incidence among the rural unskilled population is not satisfactory - poverty incidence in this category is still very high and close to 40% in 2010. This rate is twice as high as in the case of skilled workers in rural areas and higher than for the group of unskilled workers in urban areas. However, we also note that the poverty rate among the rural skilled is actually increasing - there is not enough growth in rural area to provide productive employment for the gradually growing number of skilled rural workers.

Table 5. Poverty rates under the baseline scenario, 2002-2010

	2002	2006	2010	Change, pp. 2002-2010
Overall	30.0%	23.2%	20.7%	-9.3
Working age, o/w:	30.0%	23.9%	20.9%	-9.1
<i>Rural, o/w:</i>	43.3%	40.1%	34.6%	-8.7
Skilled	14.7%	18.2%	18.2%	3.5
Unskilled	47.5%	44.3%	38.6%	-8.9
<i>Urban, o/w.</i>	19.2%	11.0%	10.0%	-9.3
Skilled	10.3%	2.7%	2.7%	-7.5
Unskilled	30.1%	21.8%	20.4%	-9.7
Non-working age	30.0%	20.0%	20.0%	-10.0

Note: Baseline scenario is defined by the following parameters:

Average annual aggregate, urban and urban GDP growth of 3.7%; by sectors: agriculture 0.4%, industry 3.6%, market services 4.8%, non-market services 3.2%.

Constant non-skilled real wages over the whole period (unless labor shortages in which case growth rate in the sector is 3%).

Average annual skills upgrading – 1% of the unskilled population.

Average annual net migration from rural to urban areas - 0.1% of rural population.

Implicit payroll tax rate – 36%.

Source: Authors' calculations using PAMS model for Romania.

Below, we investigate scenarios that could potentially lead to the further reduction in poverty, especially among groups particularly vulnerable to poverty incidence, as of 2002. This analysis provides some directions for policies aimed at poverty eradication and, importantly, reveals some important trade-offs in designing these policies.

Figure 9 compares the likely poverty outcomes of different policy scenarios. It presents percentage point changes in poverty rates relative to the baseline scenario, as of 2010. The first scenario for poverty eradication involves increased redistribution. Our results confirm, however, that an increase in the tax wedge imposes additional distortions in the labor market. As the implicit tax rate increases (from 36% to 42% of the wage bill in our example), many unskilled workers lose employment opportunities. The overall impact of higher direct income support at the cost of reduced employment is ambiguous and under our calibration of labor market elasticities, is negative (i.e. poverty by 2010 would be expected to be higher than in the baseline case). This result implies, at the very least, that there are important risks related to increased redistribution and all policy

actions should be carefully evaluated taking into account the trade-off between enhanced assistance and higher wage costs.

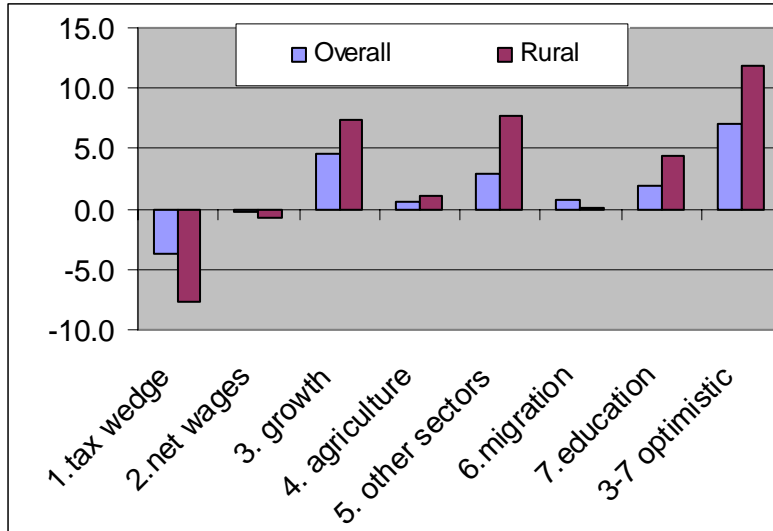
A similar trade-off is inherent in the second scenario analyzed in our model, characterized by a trend towards faster growth in real wages of unskilled workers. In policy terms, such a trend might be due to choices made in the restructuring of state-owned enterprises, labor union pressures, employment protection, policies that reduce incentives to work (including availability and level of social benefits), as well as public perceptions and the low esteem of low-wage jobs. While the combined effect of higher wages and lower employment among the unskilled is generally ambiguous, our results suggest that even a moderate rise in unskilled real wages (an annual increase of 2% instead of 0% in the baseline scenario) can minimally hinder reduction of poverty rates. Further experiments show that a more substantial surge in unskilled wages might lead to a significant worsening in poverty rates. Policies protecting unskilled jobs and promoting faster wage growth might well be counterproductive. Given the prospect of integrating the Romanian economy into the European economy, it would appear that holding real wages in check would be a necessary condition for pro-poor growth. This is also confirmed by the experiences of other countries. In the words of Blanchard (2002): ‘In an economy (...) open in trade, capital, and most importantly in labor markets, wage explosions can kill; on the other hand, wage moderation can do miracles’.

Successful fostering of faster aggregate economic growth (5.6% annually) with the same structure as in the baseline scenario is the third analyzed case and, unsurprisingly, it brings unambiguous poverty eradication benefits. However, below we focus on the importance of sectoral and regional patterns of economic growth rather than on its aggregate value. Under the fourth scenario, the aggregate growth is again at the level of 3.7% annually as in the baseline scenario; but the growth rate in the agriculture sector is increased from 0.5% to 2.3% at the expense of other sectors of the economy. It is clear that the gains are rather limited even in the case of rural poverty – agriculture does not generate jobs that are productive enough to guarantee an escape from poverty. In the fifth scenario, we analyze what happens if much faster growth takes place in non-agriculture sectors of the rural economy (7.1% compared to 4.0% in the baseline scenario), while aggregate growth is still set at baseline 3.7%. Non-agricultural rural growth rates at such levels do not appear excessive (overall rural GDP growth would then be 4.3%) if a very low starting point is taken into account and more aggressive policies for rural diversification are implemented. In our model, such a policy proves extremely effective in rural and overall poverty reduction.

As poverty is concentrated among the unskilled in rural areas, it seems reasonable to look at the impact on poverty of measures that can affect skills and where people live and seek work. Potential determinants of migration flows or commuting to work from place of residence are many and can be affected by numerous state policies (such as promotion of development of transportation infrastructure, legal issues in the real estate market, etc.). However, migrations are long-term processes and even the very substantial increase in the rural-urban migration rate – from 0.1% observed over the last few years (that is assumed in the baseline case) up to 1% annually in the sixth scenario – has a limited impact on poverty trends to 2010. We suspect that skills upgrading might turn out a more important determinant of poverty trends. Skill upgrading itself can be affected by policies determining effectiveness and availability of education for youth and adults from various backgrounds (in particular the rural population). In the seventh scenario, improvement in skills is assumed to be twice as fast as in the baseline scenario. The impact on rural poverty comes out surprisingly small – it turns out that increasing the pool of skilled workers in rural areas does not

automatically translate into higher standards of living unless accompanied by the emergence of non-agriculture sectors.

Figure 9. Additional reduction in poverty rates in 2010 as compared to the baseline scenario (percentage points)



Notes: Positive values indicate lower 2010 poverty rate (compared to baseline).

All scenarios defined relative to baseline:

1 – implicit tax wedge increases from 36% to 42% after 2004.

2 – net wage among unskilled grows by 2% annually

3 – aggregate GDP growth increased from 3.7% to 5.6% with the same structure as baseline

4 – agriculture growth is 2.3% annually, aggregate GDP growth as in baseline, i.e. 3.7%

5 – non-agriculture growth is 7.1% annually, aggregate GDP growth as in baseline, 3.7%

6- Average annual net migration from rural to urban areas - 1% of the rural population.

7- Average annual skills upgrading – 2% of the unskilled population.

3-7 – optimistic: combination of scenarios 3-7 (overall growth 5.6%).

Source: Authors' calculations using PAMS model for Romania.

To conclude our results we present an optimistic scenario, #8, in which the emergence of the non-agricultural sector in an environment of strong 5.6% annual GDP growth is concomitant with increasing productivity in agriculture, fast skill accumulation and increased migration. This scenario is therefore the combination of key characteristics of scenarios 3-7. It is instructive to look at a comparison with the third scenario, where the overall economic growth rate was the same. It turns out that a combination of other factors, as specified in the last optimistic scenario, allows for a further lowering of the rural poverty rate by 4.4 percentage points and overall rate by 2.5 percentage points relative to scenario #3 (Table 6). This confirms the importance of the structure of growth for poverty reduction.

Table 6. Poverty rates under optimistic scenario (#8), 2002-2010

	2002	2006	2010	Change, pp. 2002-2010
Overall	30.0%	20.5%	13.7%	-16.3
Working age, o/w:	30.0%	20.6%	14.6%	-15.4
Rural, o/w:	43.3%	34.1%	22.8%	-20.5

Skilled	14.7%	16.1%	14.0%	-0.7
Unskilled	47.5%	38.4%	25.9%	-21.5
<i>Urban, o/w.</i>	19.2%	10.5%	8.8%	-10.4
Skilled	10.3%	2.7%	2.7%	-7.5
Unskilled	30.1%	21.2%	18.6%	-11.5
Non-working age	30.0%	20.0%	10.0%	-20.0

Note: The optimistic scenario is the same as the baseline with the following changes:

Average annual aggregate (urban, rural) GDP growth of 5.6% (5.1%, 7.2%); by sectors: agriculture 2.6% (0.5%, 3.0%), industry 5.3% (4.5%, 9.0%), market services 6.9% (6.0%, 12.1%), non-market services 4.7% (4.0%, 8.0%).

Average annual skills upgrading – 2% of the unskilled population.

Average annual net migration from rural to urban areas - 1% of rural population.

Source: Authors' calculations using PAMS model for Romania.

The simple model-based exercise has shown that sustaining economic growth momentum is a key precondition for any efficient poverty reduction strategy. Redistribution policies as well as promoting higher wages for the poor appear more likely to aggravate rather than to reduce poverty among the unskilled. Nevertheless, even fast growth that is concentrated in urban areas does not solve the problem automatically, with rural job creation in the non-agriculture sectors emerging as a key element of the strategy. Productivity improvements in agriculture are important. However, it is difficult to expect large poverty reductions due to this process. Also, educational and training systems impact poverty trends positively though only if coupled with a concomitant generation of productive jobs. Educational policies today will clearly have an impact on poverty trends beyond the medium-term horizon (2010) used in this study. The importance of investments in and reforms of the educational and training system should not be underestimated by taking the short-term perspective only. Besides, our modeling framework is clearly too simplistic to be relied upon in guiding educational policies. For instance it does not incorporate links from skills level among the labor force to labor productivity and quality of production.

There are no easy solutions that could quickly and substantially lessen poverty rates in Romania. This is what one should expect given the experience of some other transition countries with substantial rural populations working in the agricultural sector. A reduction in poverty incidence is nevertheless possible provided that certain conditions are met. Creating a supportive environment for growth, implementing aggressive policies for rural diversification and skill improvements emerge as the difficult but necessary package for relatively fast and significant reduction of poverty rates in Romania.

5. Conclusions and recommendations

Labor intensive growth that creates jobs for high poverty risk groups is the key to poverty reduction in Romania. Although growth seems to be generally pro-poor in Romania the distribution of growth benefits is not spread equally across all population groups, in particular due to unequal distribution of productive employment opportunities. This should not be viewed as surprising, given the experience of several other economies. However, it is also clear than appropriately designed policies can – at least to some extent – prevent the further widening of inequalities. Our analysis from sections 2 and 4 indicates that job creation for the unskilled labor force currently unemployed

or employed in agriculture should be the main policy objective for transmitting economic growth into poverty reduction. Using the simple PAMS framework in chapter 4 we indicated the special role for real wage moderation, especially for the unskilled part of the labor force as the key factor determining the pace of job creation outside the agricultural sector.

In our simple model, the main channel through which wage developments affect poverty was via employment creation. It is, however, worth taking a slightly broader view of the role of wage moderation in the development prospects of economies in the process of economic integration. An interesting example that might be relevant for Romania is provided by the Irish experience from the mid-1980s to 2000²⁷. Lane (1998) documents a major shift of income share from labor to capital in the period of rapid growth rebound in Ireland that eventually brought one of the once poorest EU economies to the position of one of the richest countries in the EU. In Ireland, this shift in profit share was accompanied by an employment boom and, as Lane argues, it brought benefits such as a high profitability environment, increased capital inflows and improved and faster output growth. To see the scale of the employment effect one can note that since 1985 annual employment growth in Ireland has averaged at impressive 2.7% (Blanchard, 2002). The importance of wage moderation in Romania is also highlighted by World Bank (2004) analyses, which document a shift to a ‘wage preservation’ strategy during 1995-2001. Among beneficiaries of this policy one should mention employees of state owned enterprises, many of them loss-making.

Wage moderation in itself may not be sufficient to assure employment growth eventually leading to a decline in poverty. Blanchard (2004) surveys some recent work seeking to explain unemployment trends in Europe. He points to the role of labor market institutions – at the least they appear to matter in affecting employment trends in response to shocks, he suggests. For this reason, in Section 3, we have analyzed selected institutional issues. We highlighted the importance of keeping the minimum wage at sufficiently low levels and avoiding over-generous unemployment benefits. We also expressed caution concerning some measures introduced in the newly adopted Labor Code.

The tax burden, already at very high level even by European standards, should not be increased. Additional increases in the tax wedge may lead to employment reductions. Also, there appear to be linkages between a socially acceptable pace of wage growth and labor taxation. Lane (1998) presents evidence that in Ireland during the period 1986-1997 moderation of pre-tax wages was in part made acceptable to workers’ representatives by labor tax reductions. Therefore any increases in social spending that could improve the poverty outcomes of non-active groups of the population should be cautiously weighted against their possible employment demand reduction effects. Also, taking into account the important role of income tax in the total tax wedge for the unskilled, lowering effective rates for this group could be considered a potentially attractive policy option.

Raising the skills of the labor force leads to important poverty reductions via two channels: skill enhancement has a positive impact on economic growth, but also increases its pro-poor character. A more in-depth analysis is provided by the World Bank (2004). One important argument put forward there is that the strong export performance of the last few years was largely due to a boom in unskilled labor intensive sectors. Given on-going integration with the EU and changes in the global trade regime (for example related to trade in textiles – an end to quantitative import restriction on the side of the EU from January 2005) Romania can only maintain its trade competitiveness over a

²⁷ A careful analysis is provided by e.g. Lane (1998), Honohan and Walsh (2002) and Blanchard (2002).

longer horizon if it successfully moves towards production of more skilled intensive products. The importance of availability of a well-trained labor force to fulfill this goal is obvious. The World Bank (2004) notes that public expenditures on education (as a % of GDP) in Romania are below levels in other Central and East European countries. However, boosting funding for education should be accompanied by reform measures to improve the quality of education and in particular to correct the mismatch between skills that are taught and those that are needed in the labor market.

Migration of the labor force from rural to urban areas and increased commuting to work in urban areas could also improve poverty outcomes. These, however, must not necessarily mean that inhabitants of rural areas have to move to cities. It might also be interpreted as an “urbanization” of rural areas – meaning the physical infrastructure, education outcomes and access to health care as the result of public investments. It seems that equalization the education opportunities of Romania’s rural youth should be a main element of government policy in this field.

However, the migration of rural workers out of agriculture is not the only important factor leading to poverty reduction. Development of the agricultural sector leading to an increase in productivity and consequently to the rising incomes of agricultural workers could also help in reducing rural poverty in Romania. Indeed, given Romania’s natural condition the country has a great potential in the agricultural sector, in particular after EU accession. For this potential to be utilized, existing obstacles to agricultural productivity should be removed. For instance, the government should develop policies aimed at overcoming the negative effects of agricultural reforms undertaken at the beginning of the 1990s. Without land concentration agricultural workers in Romania will not be able to engage in modern mechanized farming or gain access to large-scale market and credits. The World Bank (2004) provides a more in-depth analysis of the situation in the sector and offers a series of recommendations. Firstly, one should rely on market mechanism to determine investments and production in the sector and concentrate on efficiency-enhancing rather than price-supporting policies. Secondly, reform of land market institutions and of taxation in the agricultural sector is a precondition of achieving land concentration. Thirdly, the food processing industry has to be further developed and modernized in order to make it competitive on the European market.

Job creation in the economy will be impossible without the development of domestic entrepreneurship and attraction of foreign investment. In order to achieve these goals serious reforms should be undertaken in the institutional economic environment. Ensuing recommendations in this sphere are quite straightforward, though their successful implementation would clearly be an extremely difficult task. Our analysis has paid special attention to bureaucratic burdens and weak judicial system leading to corruption, which is perceived both by the general public and entrepreneurs as one of the main obstacles to business development in Romania. Simplification of legislative regulations are one avenue that promise an improvement in this respect and indeed some recent reforms in this direction should be followed up. Also, greater stability in legislation would be called for. In order to achieve this, the quality of legislative work needs to be improved.

Policies with regard to state-owned enterprises are a sphere particularly important for overall economic performance prospects in Romania. In our analysis we did not attempt to model complex trade-offs in the speed of restructuring and privatization versus ensuing unemployment. It is nevertheless clear that slow progress in restructuring the large state-owned sector implies substantial fiscal costs on the one side and on the other impedes the functioning of other branches of the economy, thus risking hindering growth potential over the medium to long term.

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Annex 1. Selected economic indicators

Table A 1. GDP, inflation and consolidated budget balance, 1993-2003

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
GDP, % change	1.5	3.9	8.0	3.9	-6.1	-4.8	-1.2	2.1	5.7	5.0	4.9
Inflation, annual average, % change	256	137	32	39	155	59	46	46	34	22.5	15.3
Budget balance (% of GDP)	-0.4	-2.2	-3.4	-4.8	-5.2	-5.4	-3.6	-4.0	-3.2	-2.6	-2.3

Sources: IMF, WEO database April 2004 & IMF, Romania: Country Report 04/220.

Table A 2. Population, labor force and employment trends, 1993-2002

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Population	22,748	22,712	22,656	22,582	22,526	22,489	22,456	22,431	22,392	21,773
Labor force	10,245	10,242	9,513	9,049	8,927	8,869	8,578	8,669	8,427	8,148
Total employment	10,062	10,011	9,493	9,379	9,023	8,813	8,420	8,629	8,563	8,329
Employment in state & coop. sector, %	56.3	50.8	49.3	48.5	42.5	38.2	33.3	29.6	27.4	26.1
Labor force participation rate, %	78.1	77.7	71.9	68.1	67.0	66.4	64.1	64.5	61.2	60.7

Source: IMF, Romania: Country Report 04/220.

Table A 3. GDP by origin – sectoral shares, 1993-2001 (% of GDP)

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Agriculture & forestry	21.0	19.9	19.8	19.2	18.0	14.4	13.3	11.1	13.4	11.3	11.7
Industry	33.8	36.2	32.9	33.2	30.9	26.3	24.8	27.3	27.7	28.3	28.4
Construction	5.2	6.5	6.6	6.5	5.2	5.1	5.0	4.9	5.3	5.6	5.7
Trade	8.5	6.8	8.6	9.2	9.0	10.9	11.2	10.2	9.1	9.2	43.7
Other	31.5	30.6	32.1	31.9	36.9	43.3	45.7	46.5	44.5	45.6	10.5

Note: ESA 79 methodology in 1993-97, ESA 95 methodology in 1998-2003.

Sources: IMF, Romania: Country Report 04/220.

Table A 4. Gross value added dynamics, by sector, 1993-2001 (% change yoy)

	1993	1994	1995	1996	1997	1998	1999	2000	2001	average 1990- 2001
Total	3.3	4.2	6.8	3.9	-7.3	-5.4	-0.5	2.2	6.3	-0.9
Agriculture	13.6	2.9	4.6	-4.2	-1.3	-10.4	3.3	-18.1	25.2	-1.6
Industry	3.9	7.0	5.8	5.8	-9.9	-5.1	-1.7	6.0	7.4	-1.0
Services (total market & non- market)	-2.3	2.2	8.2	5.5	-10.2	-0.7	-0.6	5.5	0.8	0.1

Source: Own calculations based on NIS statistics.

Table A 5. Investment dynamics, by sector, 1993-2001 (% change yoy)

	1993	1994	1995	1996	1997	1998	1999	2000	2001	average 1990- 2001
Total	8.4	26.4	10.7	3.1	-5.4	-4.1	-5.9	3.5	9.6	1.0
Agriculture	-36.1	304.7	-39.7	7.9	-47.0	-1.5	-16.2	10.2	-12.6	-12.5
Industry	-5.4	-2.2	25.4	8.1	-5.7	-2.2	-8.2	-7.7	13.1	0.7
Services (total market & non- market)	68.9	17.1	1.2	16.4	14.9	-2.4	-0.9	11.7	9.1	9.3

Source: Own calculations based on NIS statistics.

Table A 6. Employment dynamics by sector, 1993-2001 (% change yoy)

	1993	1994	1995	1996	1997	1998	1999	2000	2001	average 1990- 2001
Total	-3.8	-0.5	-5.2	-1.2	-3.8	-2.3	-4.5	2.5	-0.8	-2.1
Agriculture	1.9	7.4	5.0	0.9	-10.5	1.7	1.9	-1.0	3.5	1.0
Industry	-5.0	-13.2	-8.2	-4.9	-5.8	1.0	-10.6	-5.4	-11.4	-6.0
Services (total market & non- market)	-1.0	3.0	-8.1	1.9	1.1	-5.4	-3.9	-1.3	-7.6	-1.6

Source: Own calculations based on NIS statistics.

Annex 2. Poverty measurement: data source and methods

Poverty and inequality measures are derived from household nationally representative surveys: the Integrated Household Budget Survey for the period 1995-1999 and the Romanian Household Budget Survey for the period 2000-2002. Both types of surveys are Living Standard Measurement Surveys. Each survey collects data on a monthly basis and consists of a household questionnaire complemented by a diary reporting household cash flows: incomes, expenditures and savings. An annual sample is of about 36000 households, about 3000 households per month. During the described period the non-response rate was at a level of 7-14%. Surveys collect detailed information on household purchases of food, non-food, services and consumption of own production, though RHBS collects more disaggregated consumption information. In this report, we pay special attention to three years, namely 1996, 1999 and 2002, and we notice that both surveys (IHBS and RHBS) are comparable as they are based on similar methodology and include almost the same primary questionnaire information, household diary and sampling design.

Individual living standards are measured using household equivalent consumption. Consumption aggregate for each year, reflecting in principle the flow approach, was calculated by World Bank staff for the purpose of the Romanian Poverty Assessment (World Bank 2003). This aggregate covers food consumption (including consumption of household own production), as well as non-food, services, and selected durables²⁸. All consumption aggregates are expressed in real terms with the use of relevant price indices. To account for differences between rural and urban areas the Laspeyres rural – urban price index is used. The index is constructed from the unit-value information collected in the survey. Also, seasonality indices are used for smoothing monthly seasonal fluctuations of consumption.

Consumption is made equivalent using Romanian specific equivalence scales (World Bank, 2003)²⁹. They account for the lower cost of child consumption in relation to the cost of adult household members and economies of scale at the household level. The child cost is estimated similarly to the modified OECD scale, as 50% of the adult consumption cost, while the economies of scale parameter equals $\theta = 0.90$. Thus the formula for the number of adult equivalents (AE) is: $AE = (A + 0.5C)^{0.90}$, where A stands for the number of adults and C for the number of children.

²⁸ The consumption aggregate does not include consumption generated by household production of non-food and services as well as housing costs. World Bank 2003, vol.2: 3-4; by Tesliuc, Pop and Panduru (2003).

²⁹ One might have opted to use OECD scales or a per capita approach. But keeping these specific Romanian scales allows for full comparability of the results presented in this report with the previous ones. Moreover, it was found that poverty trends and profiles do not depend in any significant way on the scales adopted (World Bank, 2003, vol.2: 56 and Figures 12, 13 in Appendix; by Gatti, 2003).

Annex 3. Poverty profile and poverty dynamics – selected results

Table A 7. Inequality by selected household categories, 1995 - 2002

Categorization	Gini coefficient							
	1995	1996	1997	1998	1999	2000	2001	2002
Overall	0.316	0.308	0.296	0.293	0.286	0.280	0.284	0.288
<i>By place of residence</i>								
Urban	0.298	0.298	0.285	0.282	0.273	0.274	0.269	0.274
Rural	0.302	0.289	0.280	0.279	0.273	0.262	0.264	0.265
<i>By education of the household head</i>								
No formal schooling	0.287	0.281	0.289	0.273	0.277	0.284	0.280	0.273
Primary (grades 1-4)	0.291	0.282	0.260	0.260	0.254	0.247	0.252	0.246
Middle (grades 5-8)	0.285	0.268	0.275	0.258	0.252	0.250	0.246	0.251
Vocational	0.270	0.267	0.255	0.250	0.249	0.235	0.234	0.242
Secondary	0.283	0.278	0.274	0.263	0.258	0.255	0.247	0.248
Post-secondary	0.252	0.267	0.244	0.245	0.234	0.233	0.231	0.226
University	0.263	0.287	0.251	0.269	0.238	0.244	0.237	0.237
<i>By economic activity of the household head</i>								
Employee	0.293	0.290	0.274	0.278	0.264	0.260	0.257	0.258
Employer and self-employed non agriculture	0.411	0.411	0.392	0.367	0.360	0.355	0.356	0.351
Self-employed agriculture	0.316	0.293	0.308	0.288	0.282	0.271	0.268	0.269
Unemployed	0.309	0.298	0.314	0.279	0.276	0.278	0.267	0.275
Pensioner	0.285	0.282	0.266	0.260	0.257	0.249	0.248	0.252
Other	0.416	0.363	0.387	0.343	0.357	0.344	0.377	0.374

Note: Ginis are for equivalent consumption, weighted with the population weights.

Source: Authors' calculations based on Romanian HBSs (edited by the World Bank staff).

Table A 8. Inter-group inequality as percent of total inequality, 1995 - 2002

Criterion	1995	1996	1997	1998	1999	2000	2001	2002
Place of residence (rural-urban)	9.9	8.7	8.7	8.2	8.4	7.8	11.3	12.0
Education of the household head	22.1	20.6	20.0	22.3	22.0	22.5	26.2	27.2
Economic activity of the hh head	9.7	8.7	8.5	9.9	10.6	11.0	14.6	15.8

Note: Based on Theil mean log deviation [T(0)] decomposition.

Source: Authors' calculations based on Romanian HBSs (edited by the World Bank staff).

Table A 9. Poverty profile, 2002

Categorization	Composition of the population (%)			Headcount (%)		Watts index (%)	
	Overall	Extreme	Medium	Extreme	Medium	Extreme	Medium
<i>By sex of the household head</i>							
Male	82.4	79.2	79.4	10.58	27.94	2.77	9.43
Female	17.6	20.9	20.6	13.05	33.87	4.18	12.18
<i>By age of the household head</i>							
16-24	1.0	1.3	0.9	14.68	26.08	4.89	12.13
25-34	15.1	12.4	11.5	9.02	22.18	2.38	7.79
35-44	20.8	21.1	20.2	11.17	28.25	2.95	9.74
45-64	43.2	46.6	44.7	11.85	30.00	3.49	10.78
65+	19.9	18.8	22.6	10.39	32.83	2.48	9.73
<i>By number of children</i>							
No children	51.0	35.4	42.3	7.64	24.04	1.94	7.31
1	26.6	23.7	24.6	9.81	26.91	2.54	8.85
2-4	20.8	32.6	29.0	17.22	40.47	4.27	14.35
5 or more	1.6	8.5	4.0	57.36	70.93	28.46	52.27
<i>By nationality of the household head</i>							
Romanian	90.3	82.5	87.4	10.05	28.07	2.51	9.04
Hungarian	5.9	4.4	4.7	8.24	22.76	2.07	7.11
Roma	2.5	12.6	6.8	55.52	79.60	24.75	50.03
Other	1.3	0.6	1.1	5.23	24.07	0.91	6.45
<i>By place of residence</i>							
Urban	54.4	26.8	33.2	5.42	17.69	1.54	5.42
Rural	45.6	73.3	66.7	17.71	42.48	4.79	15.29
<i>By region</i>							
North-East	17.2	30.7	25.3	19.60	42.57	6.21	17.20
South-East	13.1	14.6	14.7	12.25	32.45	3.29	11.14
South	15.5	16.9	17.7	11.99	33.24	2.80	10.62
South-West	10.7	11.3	12.1	11.58	32.60	2.74	10.35
West	9.0	5.9	6.9	7.18	22.30	1.98	7.06
North-West	12.6	9.4	10.1	8.21	23.10	2.33	7.59
Centre	11.8	9.2	9.5	8.61	23.47	2.34	7.76
Bucharest	10.0	2.2	3.7	2.43	10.63	0.42	2.31
<i>By education of the household head</i>							
No formal schooling	2.8	10.3	6.6	40.01	67.03	13.50	33.12
Primary (grades 1-4)	15.0	28.5	26.1	20.94	50.62	6.60	19.14
Middle (grades 5-8)	20.8	31.7	29.1	16.79	40.62	4.36	14.34
Vocational	26.7	21.9	25.5	9.03	27.70	2.06	8.20
Secondary	20.3	6.8	10.6	3.69	15.08	0.90	4.04
Post-secondary	6.0	0.7	1.6	1.31	7.93	0.20	1.59
University	8.5	0.1	0.4	0.19	1.51	0.04	0.27
<i>By economic activity of the household head</i>							
Employee	36.9	9.0	16.4	2.70	12.94	0.50	2.96
Employer & self-employed	4.7	5.7	5.0	13.31	31.04	4.12	11.93
Self-employed in agriculture	11.6	32.7	24.0	30.91	59.77	8.97	25.45
Unemployed	6.3	14.0	11.0	24.34	50.18	6.64	20.12
Pensioner	38.8	33.4	40.3	9.47	30.12	2.25	8.88
Other	1.7	5.3	3.2	34.99	56.11	18.26	35.19
<i>By the size of land owned, 2000</i>							
No land owned	53.5	42.8	42.3	11.14	28.46	3.43	10.28
up to 1 ha	20.9	31.2	28.6	20.78	49.02	5.67	18.09
1 – 4.99 ha	22.9	24.1	26.9	14.64	42.13	3.26	13.07

5+ ha	2.7	1.9	2.2	10.06	30.20	1.49	8.62
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Source: Authors' calculations based on Romanian HBSs (edited by the World Bank staff).

Table A 10. Poverty by selected labor market groups, 2002

Group	Headcount (%)		Poverty Gap (%)		Poverty Severity (%)		Watts index (%)	
	Extreme	Medium	Extreme	Medium	Extreme	Medium	Extreme	Medium
Rural, skilled, agriculture	4.77	23.65	0.82	4.70	0.21	1.41	0.96	5.68
Rural, skilled, industry	2.79	12.97	0.30	2.17	0.12	0.62	0.40	2.63
Rural, skilled, market services	0.86	4.30	0.12	0.60	0.02	0.17	0.13	0.71
Rural, skilled, non-market services	0.26	6.61	0.03	0.97	0.00	0.20	0.03	1.09
Rural, skilled, non-employed	6.98	21.67	1.75	5.22	0.50	1.96	2.08	6.68
Rural, unskilled, agriculture	21.61	49.66	4.61	13.95	1.51	5.54	5.67	18.20
Rural, unskilled, industry	9.35	28.48	1.97	6.70	0.60	2.48	2.38	8.56
Rural, unskilled, market services	17.90	38.75	4.23	10.95	1.58	4.70	5.43	14.79
Rural, unskilled, non-market serv	9.83	35.20	2.19	8.14	0.61	2.80	2.59	10.17
Rural, unskilled, non-employed	24.43	50.27	6.01	15.85	2.15	6.80	7.59	21.28
Urban, skilled, agriculture	2.14	8.69	0.74	2.26	0.36	0.92	1.05	3.06
Urban, skilled, industry	0.42	5.67	0.08	0.87	0.02	0.20	0.09	1.00
Urban, skilled, market services	0.55	5.06	0.05	0.76	0.01	0.18	0.06	0.88
Urban, skilled, non-market services	0.77	3.98	0.13	0.70	0.03	0.21	0.15	0.85
Urban, skilled, non-employed	3.97	16.01	0.77	3.51	0.23	1.17	0.93	4.36
Urban, unskilled, agriculture	16.45	40.43	3.30	11.00	1.30	4.34	4.40	14.56
Urban, unskilled, industry	5.11	20.93	0.96	4.48	0.29	1.48	1.16	5.55
Urban, unskilled, market services	7.70	17.90	1.26	4.20	0.39	1.54	1.53	5.36
Urban, unskilled, non-market serv	9.40	28.10	1.33	6.39	0.33	2.10	1.55	7.86
Urban, unskilled, non-employed	15.39	36.90	4.00	10.53	1.63	4.53	5.34	14.36
Non-employed, non-working age	9.62	29.52	2.00	7.05	0.62	2.58	2.45	9.00

Source: Authors' calculations based on Romanian HBSs (edited by the World Bank staff).

Table A 11. Medium poverty of selected labor market groups, 1999 and 2002

Labour Market Groups	Poverty Headcount (%)		Poverty Gap (%)	
	1999	2002	1999	2002
Rural, unskilled, non-employed	52.98	50.27	16.42	15.86
Rural, unskilled, agriculture	51.68	49.66	14.77	13.95
Urban, unskilled, agriculture	44.78	40.43	12.24	11.00
Rural, unskilled, market services	44.44	38.75	13.92	10.95
Rural, unskilled, industry	42.28	28.49	9.47	6.71
Urban, unskilled, non-employed	40.49	36.90	11.06	10.53
Rural, unskilled, non-market serv	39.80	35.20	9.48	8.14
Non-employed, non-working age	34.81	29.52	8.53	7.05
Overall population	33.29	28.99	8.83	7.62
Urban, unskilled, non-market serv	32.65	28.10	7.97	6.39
Rural, skilled, agriculture	31.37	23.66	7.96	4.71
Urban, unskilled, market services	28.21	17.91	8.71	4.20
Urban, unskilled, industry	26.95	20.93	5.89	4.48
Rural, skilled, non-employed	26.39	21.68	6.97	5.22
Rural, skilled, industry	21.70	12.97	4.19	2.17
Urban, skilled, non-employed	17.17	16.01	3.70	3.51
Rural, skilled, market services	16.47	4.30	2.71	0.60
Rural, skilled, non-market services	10.91	6.61	1.68	0.97
Urban, skilled, industry	7.94	5.67	1.36	0.87
Urban, skilled, market services	6.16	5.06	1.30	0.76
Urban, skilled, agriculture	6.11	8.69	1.53	2.26
Urban, skilled, non-market services	6.02	3.98	1.06	0.70

Note: Ranked by 1999 headcounts.

Source: Authors' calculations based on Romanian HBSs (edited by the World Bank staff).

Table A 12. Elasticity of poverty to consumption growth and to GDP growth, 1996 - 2002

Elasticity of poverty to consumption growth								
Year	Extreme Poverty				Medium Poverty			
	Headcount	Poverty gap	Poverty severity	Watts index	Headcount	Poverty gap	Poverty severity	Watts index
1996	-5.09	-6.46	-7.47	-6.57	-3.20	-4.40	1.59	-4.67
1997	-4.61	-6.09	-7.28	-6.35	-2.95	-3.84	1.56	-4.13
1998	-0.75	1.93	1.60	1.62	-1.67	-0.50	0.45	-0.29
1999	-2.14	-3.53	-3.90	-3.48	-1.58	-2.11	1.36	-2.26
2000	-2.45	-1.62	-0.94	-1.46	-1.85	-2.08	1.32	-1.99
2001	-2.06	-2.16	-2.27	-2.21	-1.73	-2.06	1.19	-2.10
2002	-1.32	-1.02	-0.37	-0.82	-1.69	-1.26	0.79	-1.16
Elasticity of poverty to GDP growth								
1996	-8.64	-10.95	-12.82	-11.17	-5.43	-7.45	-9.07	-7.93
1997	-13.01	-17.07	-20.82	-17.93	-8.32	-10.81	-13.31	-11.65
1998	-0.18	0.42	0.25	0.40	-0.41	-0.13	0.07	-0.08
1999	-8.77	-14.34	-15.06	-14.43	-6.47	-8.65	-10.86	-9.22
2000	4.91	3.16	2.43	2.92	3.72	4.15	3.71	4.00
2001	-3.03	-3.16	-3.41	-3.27	-2.54	-3.03	-3.14	-3.09
2002	-0.87	-0.64	-0.24	-0.52	-1.11	-0.83	-0.72	-0.76

Source: Authors' calculations based on Romanian HBSs (edited by the World Bank staff) and IMF website (for GDP growth).

Table A 13. Rate of pro-poor growth by place of residence, two sub-periods

1996 - 1999			1999 - 2002		
Headcount (%)	Rate of pro-poor growth		Headcount (%)	Rate of pro-poor growth	
	Urban	Rural		Urban	Rural
10	-6.77	-7.41	10	2.89	1.50
15	-6.67	-7.18	15	2.89	1.38
20 (1 st quintile)	-6.62	-7.02	20 (1 st quintile)	2.83	1.25
25	-6.62	-6.90	25	2.84	1.20
30	-6.66	-6.81	30	2.90	1.19

Note: Rate of pro-poor growth is the arithmetic mean of the (annualized) change of percentile consumption, up to the indicated level. Rates of pro-poor growth in 1999 – 2002 have been calculated using WB “poverty dynamics” toolkit. Results for 1996 -1999 have been adjusted.

Source: Authors' calculations based on Romanian HBSs (edited by the World Bank staff).

Figure A 1. Growth incidence curve, 1996 – 2002. Annual growth in consumption nationwide

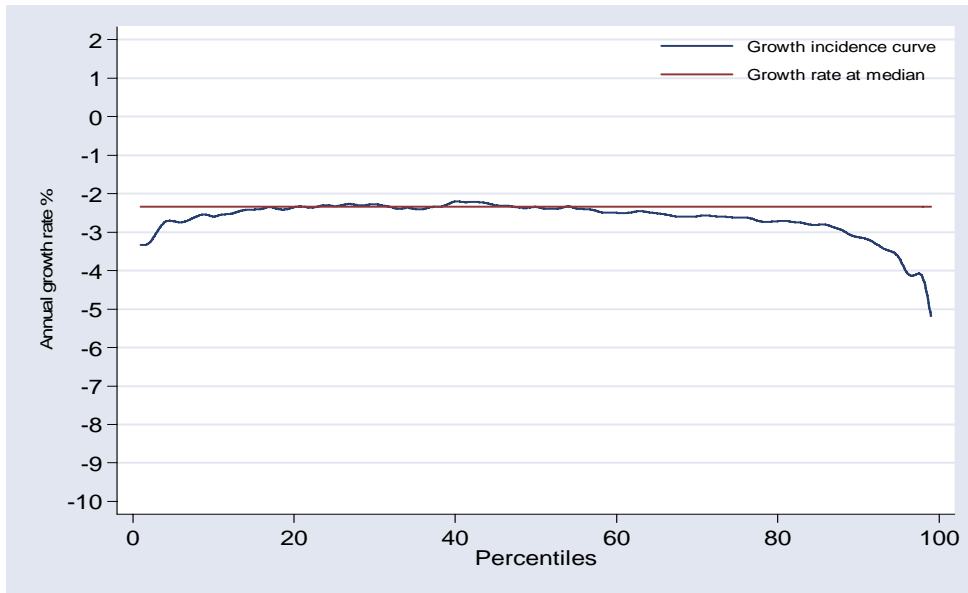


Figure A 2. Growth incidence curves, 1996 – 2002. Annual growth in consumption by place of residence

Figure A2.1 Rural

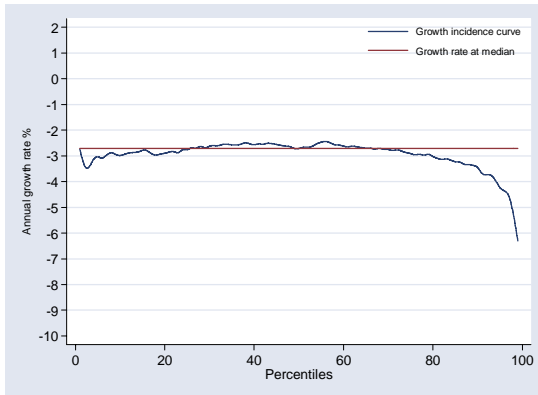


Figure A2.2 Urban

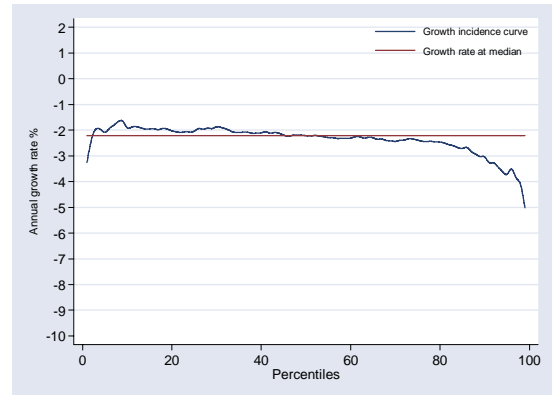


Figure A 3. Growth incidence curves, 1996-1999. Annual growth in consumption by place of residence

Figure A3.1 Rural

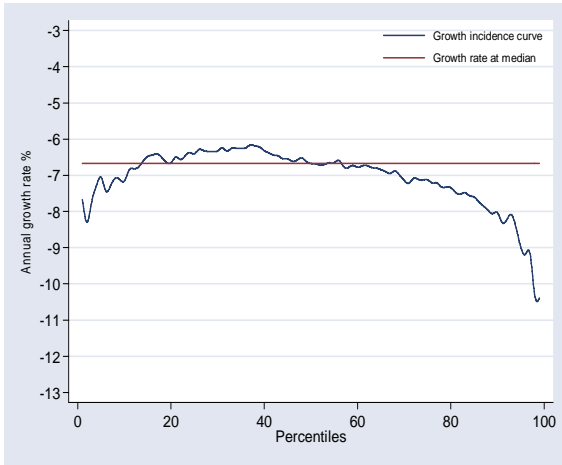


Figure A3.2 Urban

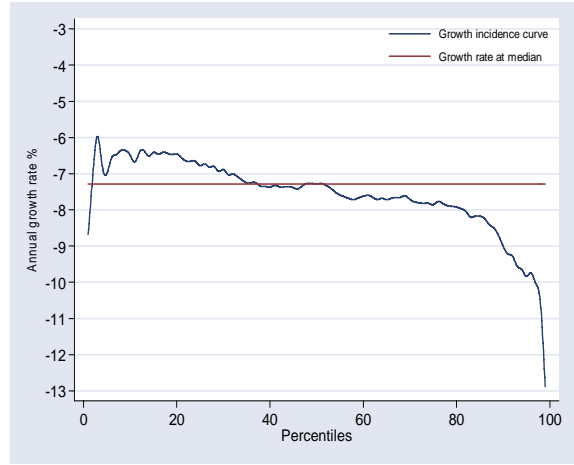


Figure A 4. Growth incidence curves, 1999-2002. Annual growth in consumption by place of residence

Figure A4.1 Rural

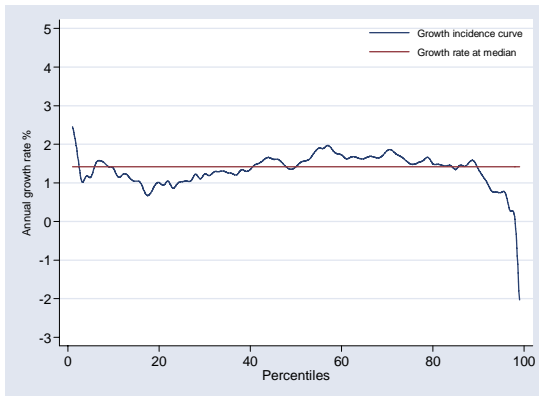


Figure A4.2 Urban

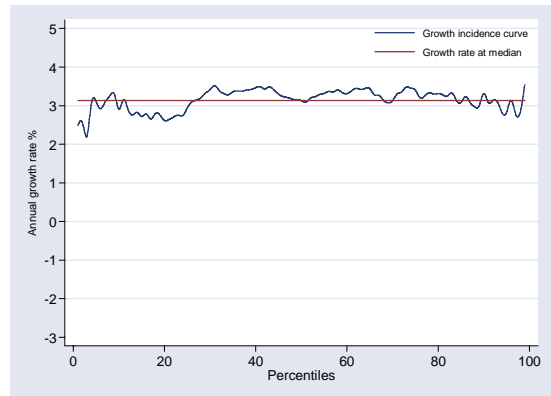


Figure A 5. Growth incidence curves, 1996 – 2002. Annual growth in consumption by economic activity of a households head

Figure A5.1 Employee

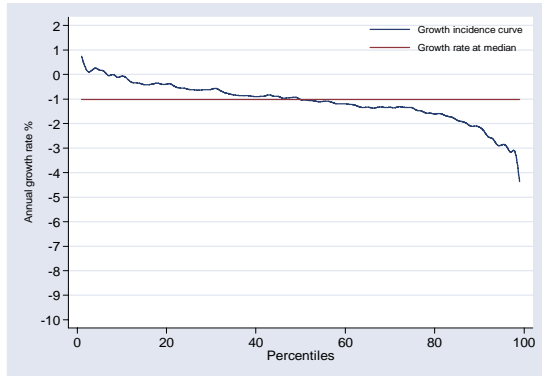


Figure A5.2 Employer and self-employed

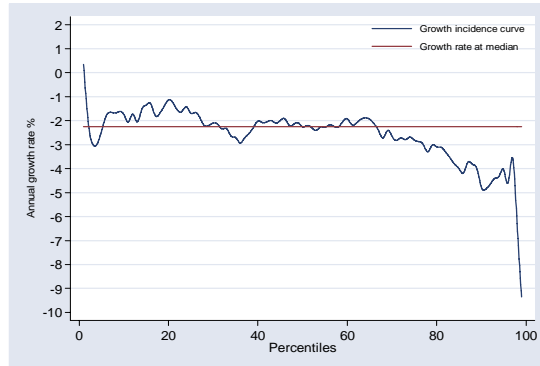


Figure A5.3 Self-employed in agriculture

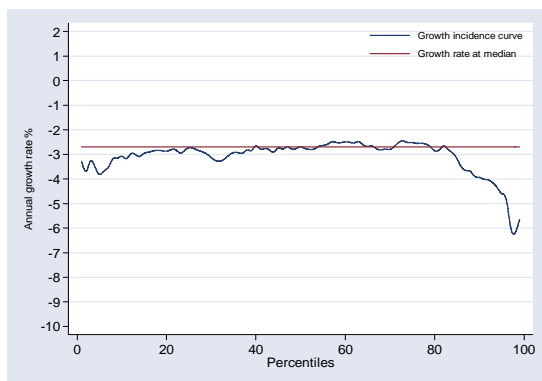


Figure A5.4 Unemployed

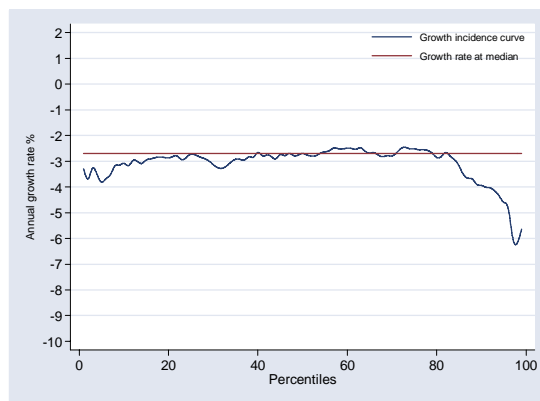


Figure A5.5 Pensioners

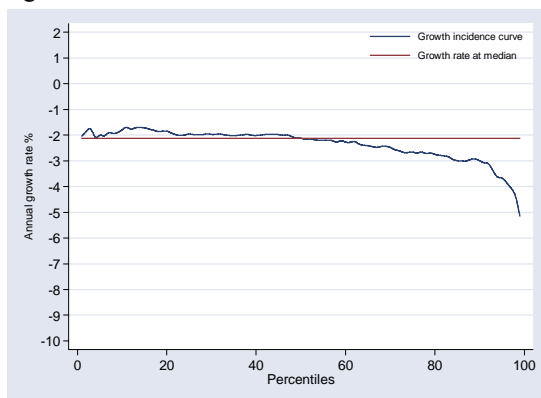


Figure A 6. Growth incidence curves, 1996–1999. Annual growth in consumption by economic activity of a household head

Figure A6.1. Employee

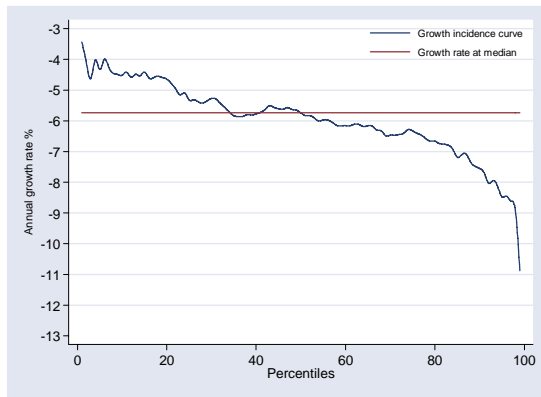


Figure A6.2. Employer and self-employed

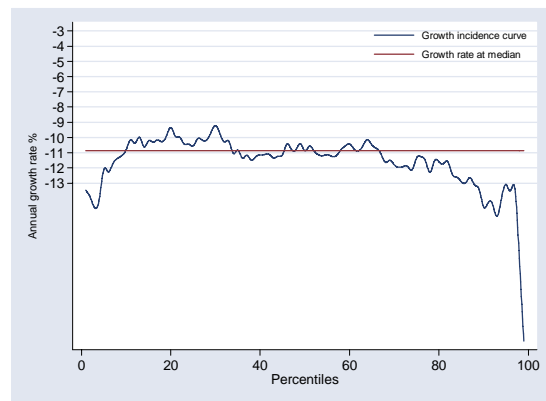


Figure A6.3. Self-employed in agriculture

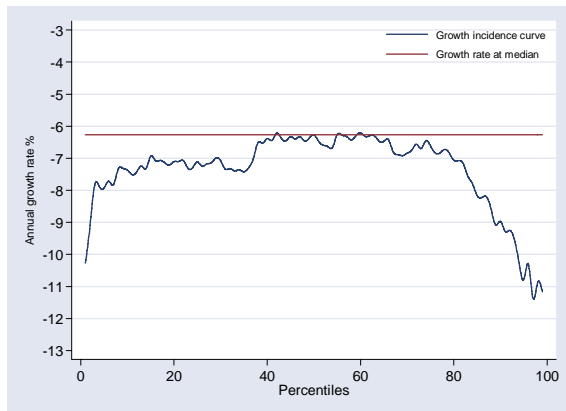


Figure A6.4. Unemployed

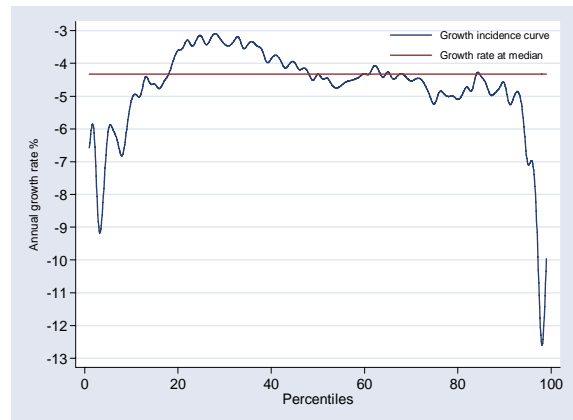


Figure A6.5. Pensioners

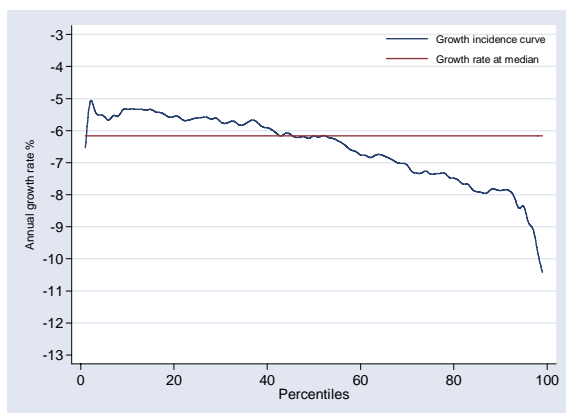


Figure A 7. Growth incidence curves, 1999–2002. Annual growth in consumption by economic activity of a household head

Figure A7.1. Employee

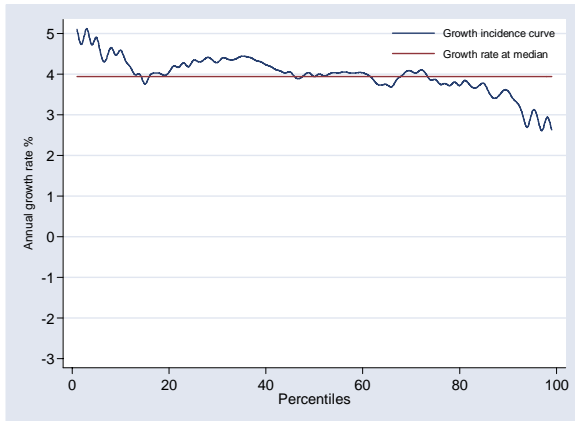


Figure A7.2. Employer and self-employed

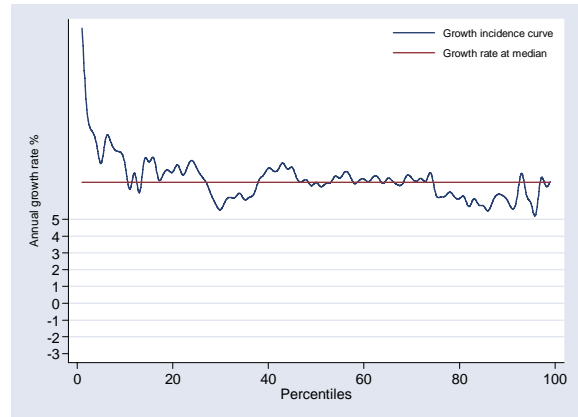


Figure A7.3. Self-employed in agriculture

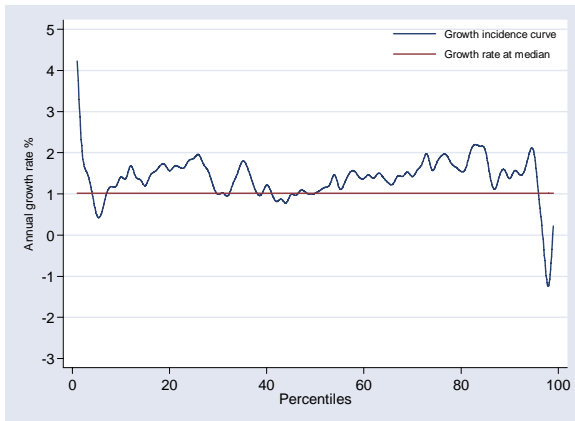


Figure A7.4. Unemployed

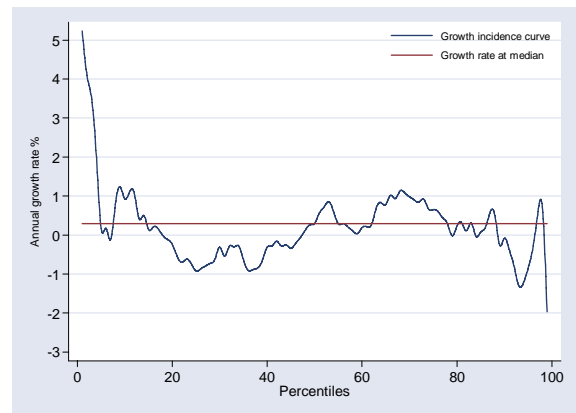


Figure A7.5. Pensioners

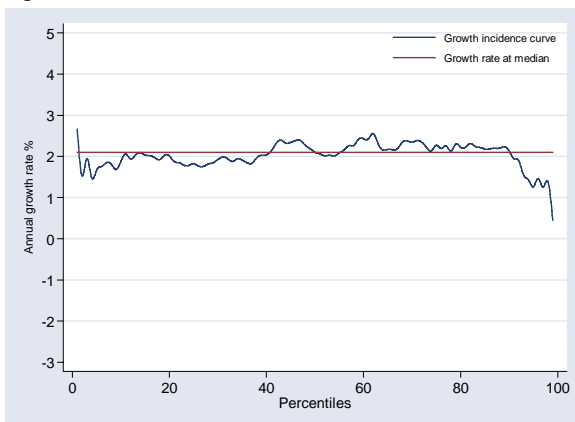


Table A 14. Growth-Inequality Decomposition of Changes in Medium Poverty

Sub-population	1996 - 1999				1999 - 2002			
	Change of headcount	Components			Change of headcount	Components		
		growth	inequality	residual		growth	inequality	residual
Nationwide	0.131	0.162	-0.027	-0.004	-0.043	-0.050	0.006	0.001
<i>By residence</i>								
Rural area	0.171	0.194	-0.030	0.008	-0.039	-0.027	-0.016	0.004
Urban area	0.098	0.135	-0.018	-0.019	-0.046	-0.051	0.008	-0.003
<i>By economic activity of HH head</i>								
Employee	0.073	0.108	-0.028	-0.007	-0.064	-0.062	-0.004	0.001
Employer, self-employed	0.193	0.245	-0.050	-0.003	-0.130	-0.142	-0.019	0.032
Self-employed in agriculture	0.173	0.199	-0.037	0.011	-0.035	-0.020	-0.017	0.003
Unemployed	0.111	0.136	-0.043	0.018	-0.012	-0.002	-0.010	-0.001
Pensioner	0.134	0.173	-0.035	-0.005	-0.046	-0.045	-0.002	0.001

Note: All changes are relative to the base year (1996 and 1999, respectively).

Source: Authors' calculations based on Romanian HBSs (edited by the World Bank staff).

Table A 15. Growth-Inequality Decomposition of Changes in Extreme Poverty

Sub-population	1996 - 1999				1999 - 2002			
	Change of headcount	Components**			Change of headcount	Components**		
		growth	inequality	residual		growth	inequality	residual
Nationwide	0,063	0,083	-0,009	-0,011	-0,016	-0,023	0,006	0,001
<i>By residence</i>								
Rural area	0,091	0,105	-0,004	-0,011	-0,012	-0,015	0,001	0,002
Urban area	0,039	0,058	-0,008	-0,010	-0,020	-0,019	0,000	0,000
<i>By economic activity of HH head</i>								
Employee	0,023	0,042	-0,009	-0,010	-0,024	-0,018	-0,006	0,001
Employer, self-employed	0,128	0,180	-0,017	-0,035	-0,098	-0,083	-0,019	0,004
Self-employed in agric	0,150	0,153	-0,007	0,004	-0,025	-0,021	-0,011	0,007
Unemployed	0,066	0,110	-0,017	-0,026	0,019	-0,002	0,019	0,001
Pensioner	0,053	0,078	-0,011	-0,014	-0,020	-0,019	-0,002	0,001

Note: All changes are relative to the base year (1996 and 1999, respectively).

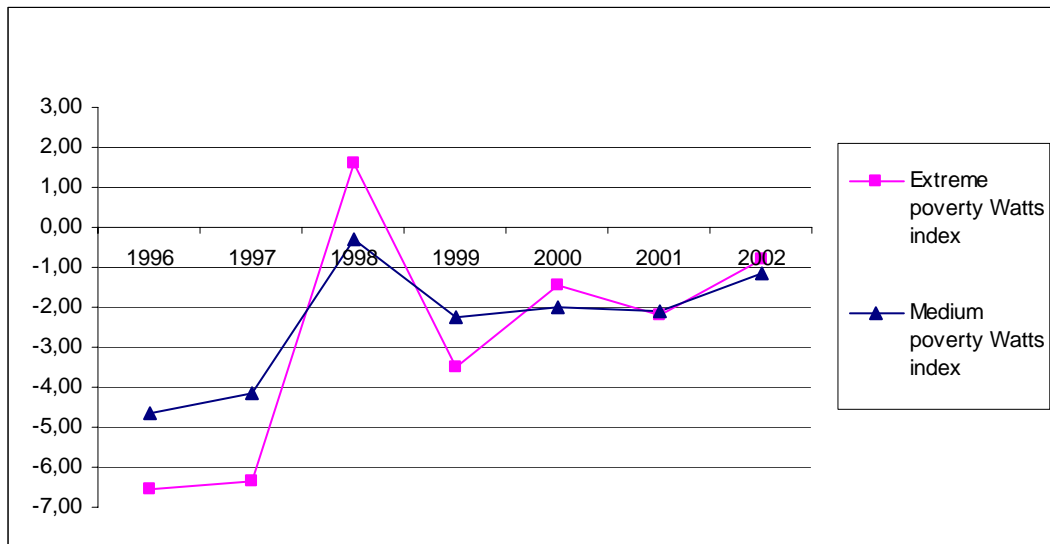
Source: Authors' calculations based on Romanian HBSs (edited by the World Bank staff).

Table A 16. Relative poverty headcounts for population groups by skills and place of residence, 1995-2002

	1995	1996	1997	1998	1999	2000	2001	2002
Total poverty headcount	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Urban skilled	23.1%	25.5%	33.1%	33.4%	31.8%	36.4%	28.4%	28.2%
Urban unskilled	90.3%	95.9%	99.9%	100.6%	101.8%	108.6%	96.6%	96.2%
Rural skilled	66.8%	81.1%	88.0%	92.5%	91.3%	92.6%	78.4%	71.6%
Rural unskilled	161.2%	158.4%	150.4%	149.6%	149.3%	141.9%	157.6%	159.1%

Source: Authors' calculation based on HBS 1995-2002

Figure A 8. Poverty elasticity to consumption growth, 1996 – 2002 (Watts index)



Source: Authors' calculations based on Romanian HBSs (edited by the World Bank staff).

Annex 4. Regional and local aspects of economic development and poverty in Romania

Regional disequilibria in Romania are a legacy of the inter-war period when industrial activity was concentrated in a small number of areas with higher accessibility of mineral and energy resources and favorable locations in terms of main transportation flows. During the communist period, the "forced industrialization and urbanization" policy aimed to balance territorial development. As a result some areas that were deemed to be lagging behind were "artificially" developed (Pascariu, 2003). It is particularly these areas that after 1989 were the first to be affected by the economic restructuring processes. As such, today the least developed areas in Romania are still situated in Moldavia (North-East) and in the South-East of the Romanian Plain, while relatively more developed areas around Bucharest and in the Western and Central regions of the country (Transylvania and Banat). However, most studies emphasize that the intra-regional disparities (between counties, communes and towns) and particularly disparities between urban and rural areas are much more considerable compared to inter-regional ones.

GDP figures computed for 1993-2000 indicate a trend towards widening the gap between the most developed and the less developed regions. In 2000, in terms of GDP per capita (at PPP) the poorest Romanian region, North-East (Moldavia), represented only 19% of the average EU value and the richest region, Bucharest-Ilfov, only 35%.³⁰ Moreover, the poorest four Romanian regions in terms of GDP per capita were in the last four positions among all CEEC (Eurostat, 1999). In Romania, gross regional product per capita is strongly correlated with: the employment structure by sector (the higher the employment in agriculture the lower output per capita), the extent of innovative activity, regional transport infrastructure and the education level of the workforce (the lower the human capital the lower the regional product per capita). Underdevelopment also appears to be correlated with unemployment and the importance of rural activities, as well as with FDI attraction capacity (Table A17). In addition, one-factory towns, mono-industrial areas, poor town planning, and underdeveloped infrastructure characterize the less developed regions.

Table A 17. Indicators of regional development in Romania (national average = 100%)

Region	Unemployment		FDI per capita		SMEs per capita		Rural population	
	1998	2001	1998	2001	1998	2001	1998	2001
1. North-East	133.7	120.5	15,3	14.9	68.7	68.3	123.9	124.7
2. South-East	112.5	111.4	42,7	74.6	102.5	101.5	94.7	95.4
3. South-Muntenia	97.1	101.1	65,5	69.9	78.1	74.4	129.0	128.6
4. South-West Oltenia	104.8	118.2	11,9	34.1	92.3	85.0	120.8	120.3
5. West-Romania	101.9	108.0	99,1	98.6	86.7	95.9	83.8	82.4
6. North-West	84.6	77.3	41.91	55.6	107.1	107.8	104.9	104.2
7. Centre	98.1	97.7	87,7	57.8	99.2	102.7	87.1	87.7
8. Bucharest	47.1	53.4	598,3	503.5	195.3	197.1	24.8	23.8

Source: National Development Plan 2004-2006: 167. Data from Statistical Yearbook of Romania, National Office of Trade Register.

³⁰ European Commission, 2002, *The first report on economic and social cohesion*, cited in the *National Development Plan 2004-2006*: 166.

As a consequence, in underdeveloped regions wages are significantly lower than in the developed regions. Thus, between 1995 and 2000 (RHIS data), in the Bucharest-Ilfov region wages were up to 25% higher than in the North-East region (Păuna and Păuna, 2003: 501).

Nearly half of the Romanian population lives in rural areas (47% at the 2002 Census, NIS). As a rule, the larger the share of rural population, the more severe the poverty of the region/county. After 1989, within the context of structural changes, the urban-rural gap widened, rural areas being clearly at a disadvantage with respect to infrastructure and living conditions. The condition of local roads is poor in rural areas and most roads are impassable at certain times of the year. Dwelling comfort is also much lower in rural areas. Only 24% of Romanian villages have a running water system (though it has been continuously expanded), about 4% have a sewage system and almost 7% have gas provisioning (NIS, 2003). Rural households are also much less likely to be endowed with durable goods. In 1997, only 25% had a washing machine, only 52% a refrigerator, only 77% a TV set and a mere 11.3% owned a car, compared to 60%, 89%, 101% and 26%, respectively, in urban households (Chircă and Teșliuc, 1999). Nevertheless, the majority of the rural population say they are satisfied with their living conditions. Among the rural population only jobs and roads tend to be perceived as ‘community problems’ (Rural EuroBarometer, 2002).

Romanian rural areas are extremely heterogeneous. They consists of 2,686 communes (clusters of villages) that include 12,738 villages out of which approximately 15% have less than 50 households, while about 10% have more than 650 households (2002 Census, NIS). The main differentiation criteria of Romanian villages are: geography, population size, accessibility (distance to the nearest town or city), and type (central versus peripheral). For instance, smaller villages tend to have aged populations with low fertility, be poorly educated and with low participation rates and tend to be remote.

Nearly all communes (92%) are made up of at least two villages, one central and one or more peripheral villages. The rural population is divided almost equally between central and peripheral villages. However, central villages tend to concentrate the administrative and institutional resources of communes. The central village is the locus for the municipality, postal unit, health unit, church, coordinating school, police and cultural center. In contrast, in most peripheral villages there are only two institutions, a church and a school. Furthermore, the public infrastructure, little modernized across Romania’s rural areas, is significantly poorer in the peripheral villages (dirt roads, lack of running water, lack of communications, etc.). The most well-off villages are central villages located close to cities (the larger and better developed the more improved the village infrastructure). The worst are peripheral villages far from cities (Table A18).

Table A 18. Central and peripheral villages, Romania, 1998

Village development indicators (average values per village)	Central villages		Peripheral villages		All villages larger than 20 people
	close to city	far from city	close to city	far from city	
Village population, estimation by 1998	1993.0	1544.5	615.1	448.1	813.4
% persons of more than 60 years old	21.8	24.5	25.5	28.3	26.0
% persons of no more than primary education	36.6	41.8	41.4	47.8	43.2
% population employed in agriculture	39.3	54.1	46.8	62.9	52.5
% dwellings of adobe	37.4	46.4	34.8	42.4	39.0
% dwellings with running water system	14.8	11.1	7.5	5.2	7.9

Note: A village is considered far from a city if it is located at more than 20 km away.

Source: D.Sandu (coord) *Social Assessment for Rural Development Project. Social Needs and Actions in Romanian Villages*, World Bank, Bucharest, 2000. Data: Household Integrated Survey 1999 and Census 1992, NIS.

The maps of rural community poverty drawn using various indicators³¹ at the commune or village level (World Bank 1998, 1999, 2000 and UNDP 1999) show that an arc of poor villages runs along the Carpathian Mountains. Whereas in Moldavia (North-East) region rural community poverty seems to cover the whole territory, in the Central regions there are only isolated islands of poor communes. Moldavia region (followed by the Southern regions) has the most extensive and deep-seated poverty, the lowest human capital, extremely poor infrastructure and housing conditions, a low degree of urbanization (Sandu, 1999) and the largest share of “losers” from the employment point of view – that is people who lost jobs and retreated into agriculture or those who never entered the official labor market but make a living in subsistence agriculture (Daianu, 2001). At the other extreme are Bucharest and the Transylvania region. On the other hand, most poor communes/villages are located far from cities and have a virtually non-existent private non-agricultural sector, agriculture representing the main means of livelihood. Rural community poverty also has a peripheral character. That is to say, poor communes are mostly grouped along country and county borders; poor villages have a peripheral nature within the commune to which they belong as well. Thus, imbalanced policy and distorted distribution of administrative and budgetary resources are also causes of the rural poverty.

Social transfers represent the main source of cash income for most rural households. A half of all rural households rely on pensions as the main source of income, 24% on wages and only 7% on earnings from agriculture. In fact, a minority of 17% of the households sell agricultural products and only 4% sell more than half of their production. More than a half of the rural population self-assess their household income as ‘insufficient for bare necessities (food and housing)’ and another 38% consider those as ‘enough just for bare necessities’ (Rural EuroBarometer, 2002).

Wages represent the main source of income for such a small share of rural households, on the one hand due to the low number (and share) of employees and on the other hand because the rural average wage is very low. In the large cities wages are considerable higher than in small towns and cities, whereas wages in rural areas are the lowest. For instance, by moving to a small city (of 15-50 thousand inhabitants) a rural resident might expect a raise of 17%, or 33% by moving to Bucharest (Păuna and Păuna, 2003).

The large majority of rural households heavily rely on subsistence agriculture. The considerable small-scale subsistence farm sector accounts for about 60% of total agriculture land and the country’s livestock herd. Subsistence agriculture is a traditional source of income for Romanian households. During the former regime it was widely practiced as well, representing an additional source as well as a secure formal job. The self-provisioning economy was the main means of coping with the “shortage economy”. The larger the number of people losing formal jobs the greater the number of households for which self-provisioning has become a main source of livelihood. At present, as Tesliuc (1999) suggests, a large portion of non-marketed agricultural output, mirrored by the large share of self-consumption in household consumption, is specific to Romania. The average family consumes half of its food from its own production. For farmer-headed households, this

³¹ Regarding the community capitals: human (education stock, employees to 1,000 inhabitants, share of employment in agriculture in total employment), economic (housing indicators), vital (demographic indicators), and accessibility.

figure reaches 80%. Furthermore, as Stănculescu and Ilie (2001³²) have showed, combining subsistence farming with informal cash activities has represented the most effective economic strategy in saving households from poverty, as within the group of households pursuing this strategy these additional incomes reduce the share of the severely poor households sixfold.

Consequently, in Romania's rural areas the poverty rate (estimates based on consumption per adult equivalent), although having declined still represents 42% of the population compared to 18% of the urban population (Teșliuc, Pop, Panduru, 2003).

Consumption of rural households is largely determined by household capital stocks. Results are confirmed both for total household expenditures (Sandu, 1999b) and for total household consumption per adult equivalent (Chircă and Teșliuc, 1999). Both cited studies used RHIS data for 1996 and applied multilevel models combining household with community characteristics. Among the household characteristics, only the following factors appeared to be highly influential: adult members' education, number of employees, number of pensioners, cattle stock and quantity of owned land (in hectares). Factors at the community level also proved to be significant in determining rural household consumption. Thus, for two households otherwise similar, one located in a commune near to a large city, from a developed county and with a low infant mortality rate and the other located in a remote commune, from an underdeveloped county and with high infant mortality rate the consumption of the first household would be significantly higher compared to the consumption of the second. The explanation lies in terms of higher access of the former to the urban peasant markets, thus larger opportunities to sell their agricultural products (Chircă and Teșliuc, 1999: 53-66).

According to Sandu (1999b: 57), 'rural consumption poverty is maximum in households made up only of farmers, with a low level of education, widowed or divorced, women-headed, orientated in particular towards cereal cultivation and with small plots of land.' The author also tested the importance of community characteristics. Besides the three indicators above mentioned - county development level, location of the commune proximity to an urban area and infant mortality – the author used three other indicators related to the type of commune and to the social infrastructure, namely number of physicians and teaching staff per thousand inhabitants. All these variables were found to be significant regarding the level of rural household consumption. The author underlines that all these community indicators reflect 'community poverty', therefore in the rural area the highest probability is to find 'poor people in poor communities', and not 'poor people in rich communities'. This is evidence in favor of a concentration of rural poverty in certain areas.

³² The analysis includes only incomes obtained from "grey" activities and not the "black" ones. Social Problems, Living Standard and Informal Economy, 1998, RIQL database, N=1,150. The methodology used to assess poverty is the NIS version of the relative method adapted for Romania.

Annex 5. Structure of public spending in Romania

Table A 19. Consolidated general government expenditures, 1993-2003 (% of GDP)

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Total expenditures	33.8	33.4	34.7	33.8	33.9	35.1	35.5	35.3	33.4	32.3	32.3
General public services	1.6	1.0	1.3	0.7	0.7	1.0	1.0	1.5	1.5	1.5	1.7
Defense affairs	2.1	2.4	2.1	1.9	2.3	2.3	1.5	1.6	1.5	1.5	1.4
Public order and safety affairs	1.2	1.6	1.5	1.5	1.1	1.5	1.4	2.0	1.8	1.7	1.8
Education affairs	3.2	3.1	3.4	3.6	3.3	3.2	3.0	3.1	3.2	3.2	3.1
Health affairs	2.7	3.1	2.9	2.8	2.5	3.0	3.5	3.9	4.0	3.8	3.8
Recreational, cultural affairs	0.3	0.4	0.5	0.5	0.5	0.6	0.5	0.6	0.5	0.5	0.6
Social security and welfare	9.1	9.0	9.3	8.9	9.6	10.5	10.8	9.7	9.8	9.9	9.6
Housing and community services	1.8	1.8	2.0	1.9	1.8	1.7	1.7	1.9	1.9	1.9	2.3
Research affairs	0.0	0.7	0.5	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2
Interest payments	0.9	1.4	1.4	1.7	3.4	4.5	5.0	4.5	3.5	2.7	1.8

Sources: IMF, Romania: Country Report 04/220.

Annex 6. Evolution of the social assistance system in Romania

Social assistance, rapidly developed after 1990, had a fragmented character, built especially around crisis situations. After a series of changes in 2001 a set of laws were adopted which outlined the present legal framework for the national system for social assistance. The key law in this set is Law no.705/2001 regarding the national social assistance system. According to this law, social assistance includes social allowances, benefits granted in cash or in kind, as well as social services. The social assistance system is complementary to the social security system. The social benefits granted in cash or in kind are sustained through financial redistribution measures and include indemnities, social aid and special benefits to persons according to their needs and earnings. Social services represent the complex of measures and actions taken in order to respond to individual, family or group needs, to overcome difficult situations, to preserve individual autonomy and protection, to prevent social marginalization and exclusion and to promote social inclusion.

The main allowances, benefits and supports provided by law include: state benefits for children (Law no. 61/1993) granted to all children aged up to 16 or 18 if they are integrated in one of the education forms stipulated by law; supplementary allowances for families with two or more children (Law no. 119/1997); meals provided by a social canteen (Law no.208/1997); family placement allowance (Law no. 108/1998); social aid and other benefits provided based on Law no. 416/2001 on minimum guaranteed income; milk and bread products provided to all the pupils and pre-school children between 4-10 years; refugee allowances; social allowances for disabled people and, starting from 2004, a complementary allowance and a single parent allowance for families with children will be introduced.

Social aid (means-tested benefits directed to support the poorest families) was introduced at the end of 1995 and was highly ineffective. Beginning in 1996 financial responsibility was transferred to local city governments and in 2000 the system crashed (expenditures on social aid in 2000 represented only 6% of those from the first months after the benefit law was passed in 1995). In January 2002 this was replaced by a guaranteed minimum income (based on Law no. 416/2001). This system integrates income support, burial support and emergency relief, funded from local budgets, and child allowance, school allowance and aid for the wives of conscripts, funded from the central budget. Additionally, there is a supplementary heating allowance for income support beneficiaries and other goods (e.g. school supplies) and services might be included. Thus, it combines cash benefits with in-kind benefits and special measures for high-risk social groups (e.g. Roma). Minimum income guaranteed provisioning includes safeguards against disincentives to work. Social aid is meant to be the ultimate safety net for people in temporary economic crisis. Eligibility criteria include obligation for the able-bodied to work, registration at employment offices and acceptance of work training that is offered. Exceptions are made for persons who are ill, disabled, retired or with mental problems. Beneficiaries have the obligation to work 72 hours a month, in the community interest at the request of the mayor. To encourage unemployed persons to find a job the law established an increase with 15% of the minimum guaranteed income level if one family member is working under a labor contract.

The major shortcomings in this area are high financial demands, insufficient collaboration between Labor Offices and Social Assistance Public Services, insufficient possibilities for checking data

when evaluating incomes and the property of an applicant for benefits and non-existence of a computerized system (NDP 2004-2006).

In 2002, 5.4% of the population benefited of minimum guarantee income, with large regional discrepancies, from 0.6% of the population in Bucharest-Ilfov (the best developed region) to 7.4% in Moldavia (the poorest region). In addition, about 600,000 families were assisted every winter month with aid for heating (data from MLSSF, 2003).

The community services achieved in partnership by NGO's and local councils grant social, medical and legal assistance to families, children, youth, other categories of disadvantaged persons, in day care centers or centers specially organized at the domicile of the beneficiaries. Romanian associations and foundations with a legal personality that set up and manage social assistance units can benefit from granting of subsidies from the state budget or from local budgets (Law no. 34/1998).

Until 2000, despite the large number of social assistance programs, the number of beneficiaries was low and most corresponding social benefits were paid rather sporadically due to the financial problems of local councils. Fiscal decentralizations have generated new inequalities. People in the same situation have been differently granted social assistance according to residency (in poor rural communes and in most depressed towns few of these programs function). However, social assistance benefits play an insignificant role in the population's budget as they are low-level and highly irregular (Tesliuc, Pop, Tesliuc, 2001: 88, 146).

To coordinate the various anti-poverty programs developed by institutions from central and local government and civil society, the Governmental Commission against Poverty and for the Promotion of Social Inclusion (CAPSIP) was set up – a governmental body under the direct coordination of the prime minister. Members of CAPSIP are representatives of ministers and governmental agencies, EU representatives in Romania, as well as institutions such as World Bank, UNDP and UNICEF, representatives of trade unions, employers unions and local authorities, academic specialists, as well as representatives of civil society. CAPSIP operates on the basis of the GD no. 705/2002. The main objectives of CAPSIP are the preparation of the National Anti-Poverty and Pro-Social Inclusion Promotion Plan (approved by the GD no. 829/2002) and its implementation, monitoring the dynamics of poverty, assessment of the anti-poverty effects of the social policy measures promoted, as well as developing the capacity of identifying and solving priorities in the social field.

The overall level of public social expenditures (18.9% of GDP in 2003) is low by European standards, where public social expenditure vary between 18% of GDP in Portugal and 31% of GDP in Sweden (OECD 1998). Nevertheless, as several studies (Dhanji et al., 1999, Tesliuc and Pop, 1999 and Tesliuc, Pop and Tesliuc, 2001) show, the system of social cash transfers considerably reduces poverty. For instance, a pre-transfer (excluding pensions) poverty headcount of 30.4% decreases to a post-transfer poverty headcount of 25.3% of the population in 1995; corresponding values for 1998 were 40.3% (pre-transfer) and 33.8% (post-transfer). Of all the cash programs, excluding pensions, child allowance and unemployment benefits have the largest impact on poverty alleviation. In 1997, an upward adjustment in the child allowance resulted in an increased contribution of this instrument to poverty alleviation.

The Romanian safety net is highly redistributive. Total government tax collection amounted to 189% of net tax, with 89% being subsequently redistributed from the four richest deciles to the

three poorest ones (Dhanji et al., 1999, Tesliuc and Pop, 1999 and Tesliuc, Pop and Tesliuc, 2001). Most of this redistribution occurs to the first (58% out of 89%) and the second decile (21% of 89%). In aggregate, the government levied from households the equivalent of 52% of their consumption and transferred back 46% of the same consumption figure. It seems therefore that the Romanian safety net is well targeted towards lower income quintiles (except from scholarships and some merit based benefits), but has modest coverage. This is particularly the case for Minimum Income Guarantee, where 62% of the funds are redistributed to the first and 21% to the second income quintile (World Bank 2003). However well targeted to the poor, MIG has low coverage. Better coverage is assured by child allowances. Minimum Income Guarantee also includes safeguards against disincentives to work. Eligibility criteria include obligations for the able-bodied to work, registration at employment offices and acceptance of work training that is offered. Exceptions are made for persons who are ill, disabled or retired. Beneficiaries have an obligation to work 72 hours a month in the community interest if asked by local authorities. In order to encourage unemployed persons to search for jobs, the law establishes a 15% increase of the minimum guaranteed income level if one of the family members is working under a labor contract.

Social welfare and child allowances and pensions represent the largest category of budgetary expenses measured in relation to GDP. This category includes social insurance (pensions, unemployment, redundancy payments and child care leave) as well as social assistance (MIG, child allowances and heating subsidy). These programs are financed jointly from the state budget in the case of non-contributory allowances, local budgets, social insurance and unemployment funds. The highest share among social expenditure is constituted by social insurance and unemployment expenditure, while social assistance and family allowance constitute only 1% of GDP (World Bank 2003). The child allowances are yearly indexed, but in 2003 reached only 5.6 euro per month. As regards pensions, a process of re-correlation (meaning closing the gap between pensions calculated for similar work in different generations of pensioners) was started in 2001 and will be finalized by the end of 2004. In 2004, budgetary proposals also include resources for doubling the pensions of farmers

Annex 7. Description of the poverty simulation model

The simplified version of the Poverty Analysis Macroeconomic Simulator (PAMS) was implemented to provide quantitative assessments of alternative macroeconomic and policy scenarios that underpin discussion on the relative roles of growth, job creation and redistribution for poverty reduction in Romania presented in Section 4 of this report. PAMS, which was constructed especially for this project, is a relatively simple model comprising three main elements: a macroeconomic module, used to project sectoral patterns of GDP growth, a labor market module breaking down labor categories by chosen characteristics, and a poverty module linking the labor model results for each labor category to simulate income and consumption paths for each individual across deciles within each group.

The main simplification that we introduced to the typical PAMS framework was in the macroeconomic module, where we did not have access to already developed well-calibrated and fully consistent macroeconomic model of the Romanian economy (such as e.g. RMSM-X). We decided instead to base the relationships in our macroeconomic module on observed historical trends and IMF estimates of realistic macroeconomic scenarios for the next few years (IMF, 2003) and in this way we are able to assure consistency of our scenarios. In order to achieve the minimum necessary level of detail, we project output growth in four main sectors of the economy: agriculture, industry and market and non-market services. Further on, we decided to project output by main economic sectors for rural and urban arrears separately, reflecting the low integration and distinct features of rural and urban economies as well as concentration of poverty in the rural areas. Given the scarce statistical data on the spatial aspects of production, we had to proxy the urban/rural division of sectoral output by respective urban/rural shares of total work income derived from the Household Budget Survey. This approach is acceptable and consistent with the observation that the main link between output and poverty is due to labor market improvements. The derived structure of Romanian output in 2002 is presented in Table A20. The rural economy is obviously strongly dependent on agriculture, while sectors with the highest growth potential, industry and market services, are disproportionately concentrated in urban areas. In the baseline scenario, it is assumed that spatial distribution of activities will remain constant, therefore the overall growth rate in rural areas lags behind the aggregate figure. In some scenarios with a much stronger poverty reduction impact, it is assumed that non-agriculture sectors (notably food-processing) can grow more dynamically in rural areas due to the very low starting base.

Table A 20. Structure of Romanian output, 2002

	Urban	Rural	Total
Agriculture	2.2	10.7	13.0
Industry	31.7	6.0	37.7
Market services	35.4	4.7	40.1
Non-market services	8.0	1.3	9.3
Total	77.2	22.8	100.0

Source: Own estimation based on SNA and HBS.

In the labor market module we distinguish between as many as 21 labor household groups (classified by the status of household head). These groups reflect: firstly, binary classification (rural/urban and skilled/unskilled) and secondly, occupational categories (agriculture / industry /market services / non-market services / non-employed). The last, 21st, group comprises households headed by individuals that are non-working and not in the 15-64 age group. Individuals can move freely between employment in different sectors and unemployment, however the rate of spatial and skill mobility is limited and exogenously assumed. The initial work incomes were derived from the HBS and distribution of earning across groups is summarized in Table A21.

Table A 21. Income of work per household as the share of average households with employed head

	Urban		Rural	
	skilled	unskilled	skilled	unskilled
Agriculture	150.8	58.7	56.5	28.4
Industry	180.3	128.2	122.8	94.0
Market services	171.3	114.5	123.9	82.0
Non-market services	184.4	103.2	146.1	76.7

Source: Own estimation based on HBS.

In projection of future work incomes, it is assumed that the wages of unskilled workers are rigid downwards as these workers command wages close to their reservation wages determining their participation in the labor market. Firms find it relatively easy to substitute other factors of production for unskilled labor. As a result, the employment rate of the unskilled is volatile and depends on aggregate output in the given sector of the economy and gross wage dynamics. The latter is influenced by net wage dynamics and the size of the tax wedge. On the other hand, net wages of skilled workers are more flexible and adjust rapidly to keep the employment rate relatively constant in the event of labor demand shifts due to both changing growth dynamics and an increasing tax wedge. In other words, the labor supply curve of low skilled is very flat while the labor supply curve of skilled workers is very steep. The labor demand curve for both groups is rather flat with elasticity of substitution particularly high for unskilled workers whose work is more easily substituted with capital. As for results, the impact of output growth on poverty is quite different in the two skill groups. For unskilled labor, incomes increase as job opportunities become more abundant, while for the skilled labor, incomes increase as a result of real wages rises.

In addition to wage income, the poverty module accounts for non-wage sources of household income. In our specification, the total amount of social transfers per household (comprising all social assistance transfers as well as pensions, etc.) is dependent on the wage bill in the economy and on the implicit payroll tax rate. The impact of higher redistribution and/or better targeting of social transfers can therefore be analyzed. Summing up total household income separately for each of 21 household categories (i.e. for representative households in each category) allows one to calculate consumption per adult equivalent (under assumptions of an unchanged relationship between total income and total consumption). By assuming unchanged consumption distribution by decile within each labor category it is then possible to calculate reasonably precisely the number of households where the level of consumption is below the one associated with the given poverty line.