

# 1. POVERTY LEVELS AND TRENDS

*Croatia's economy has performed moderately well in recent years, enabling a gradual narrowing of the income gap with the European Union. But significant structural challenges remain, in particular that of raising employment. Performance has varied among regions, reflecting variations in the growth of different sectors of the economy and, possibly, employment creation patterns. Using a cost-of-basic needs poverty line specially derived for Croatia, we find poverty in Croatia to be quite limited and shallow. Estimates of poverty based on consumption per adult-equivalent have remained virtually unchanged in recent years, but estimates based on income per adult-equivalent suggest that poverty has declined, and the latter trend is more plausible. Using an international poverty line to compare countries in the Europe and Central Asia region, we find poverty in Croatia to be lower than in most of the other middle-income countries of the region. But demographic trends suggest that sustaining the convergence with average income in the 25 member states of the enlarged European Union will be challenging, requiring substantial improvements in both employment rates and labor productivity.*

1.1 As Croatia prepares to join the European Union, the Government is working on (1) a joint inclusion memorandum<sup>7</sup>, and (2) a regional development strategy outlining plans for reducing internal disparities, for which substantial structural funds will be available from the EU. This report offers data and analysis relevant for both these tasks, shedding light on the strategic priorities facing the government and some of the main trade-offs involved. Six background papers, issued as Volume 2 of the report, analyze selected issues related to these topics (Box 1-1).

## **Box 1-1: Main Topics Covered in the Background Papers**

1. *Poverty Estimation for Croatia: Methods and Measurement Issues*: Discusses the methodological steps involved in estimating poverty rates for Croatia on the basis of the 2004 Household Budget Survey (HBS).
2. *Poverty Comparisons for Croatia: 2002-2004*: Presents poverty comparisons for Croatia over time, across regions, and across counties using data for 2002-04 HBS series.
3. *A Poverty Profile for Croatia*: Develops a profile of the poor and the micro-determinants of poverty using data from the 2004 HBS.
4. *Regional Development and Social Indicators in Croatia*: Provides a comprehensive profile of social and economic characteristics of Croatia's regions at the NUTS III level (and also the five main analytic regions used in other background papers). The paper includes two appendices: (1) presents regional GDP by counties for 2001-03, and (2) provides preliminary data on gross disposable income of the household sector in Croatia.
5. *Regional Disparities in Labor Market Performance in Croatia*: Reviews the labor market performance in Croatia in 2002-04 using data from the Labor Force Survey series.
6. *Assessing the Flexibility of the Croatian Labor Market*: The paper review key labor market institutions in Croatia, and uses data from the Financial Agency to prepare a profile of labor market dynamics in the country in recent years.

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<sup>7</sup> As required by the EC, the joint inclusion memorandum outlines the principle challenges facing a prospective EU member state in terms of poverty and social exclusion, presents the major policy measures taken by the prospective member to start translating the EU's common objectives on poverty and social exclusion into national policies, and identifies the key policy issues for future monitoring and policy review.

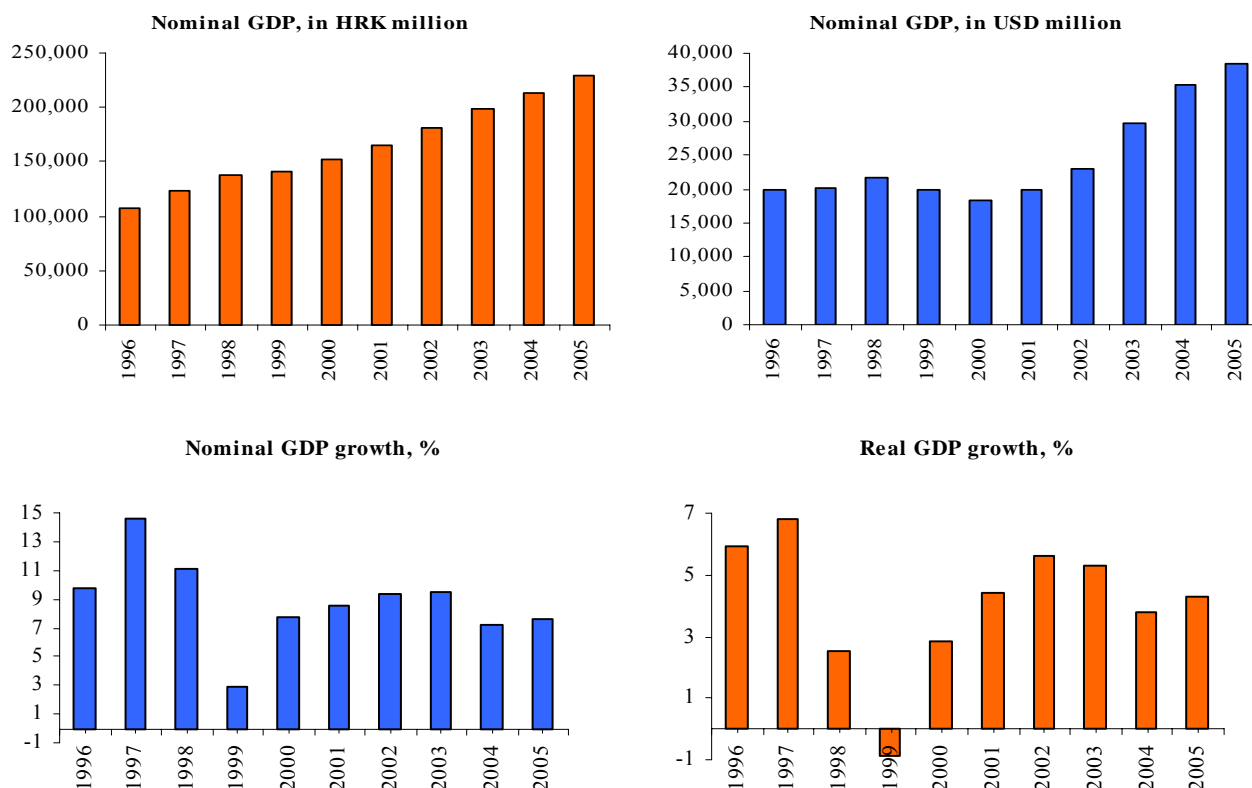
As a contribution to the improvement of data in Croatia, the report presents disaggregated statistics collated from a variety of sources. In particular, data from several rounds of the Household Budget Survey (HBS) and Labor Force Survey (LFS), including the latest, are pooled together to obtain new relatively precise estimates of key indicators of living standards at the regional and county levels.<sup>8</sup> A comprehensive list of the indicators prepared, tables presenting these indicators at the county and regional level, and maps illustrating the spatial variation in these indicators are presented in the Appendix.

1.2 Using the latest available data we derive a poverty line for Croatia based on the cost of basic needs. We hope that both the poverty line and the methodology for deriving regional and county-level estimates of key indicators of living standards will prove of continuing usefulness to the Croatian authorities.

### 1.1 RECENT ECONOMIC DEVELOPMENTS AND CHALLENGES

1.3 The Croatian economy has performed quite well over the past decade (Figure 1-1), driven by generally strong domestic demand. Real GDP per capita increased by more than 40 percent between 1996 and 2005. Exports of goods and services recorded healthy growth over this period, and rose from 46 to 49 percent of GDP between 2000 and 2005 (Table 1-1).

**Figure 1-1: Good economic performance over the past decade**



Source: Central Bureau of Statistics, Croatia.

<sup>8</sup> For a more detailed description and rationale of the pooling procedure, see Background Paper No. 5.

1.4 Croatia's economic recovery since the 1999 recession has been accompanied by a high external account deficit. While exports of services (in particular tourism and transport – see Box 1-2) recorded strong growth, this was not enough to outweigh the rise in merchandise imports that was spurred by high public investments. The high external account deficit in turn has pushed up the external debt. Despite significant inflows of foreign direct investment, Croatia's external debt, presented in Euro terms, rose from 60.6 percent of GDP in 2000 to 80.2 percent in 2004 (or in USD terms, rose from 61.2 percent to 87.9 percent of GDP during the same period).

**Box 1-2: Tourism in Croatia**

Given Croatia's favorable natural endowment, of an extensive coastline with warm Mediterranean climate and numerous scenic islands, tourism is one of the most important sectors of the economy, providing an estimated 317,000 jobs in 2004, or around 14 percent of total employment, and contributing indirectly to about one-quarter of GDP. In 2003, four-fifths of Croatia's deficit in goods exchange in the current account was covered by tourism receipts. Investments in this sector have intensified over the past three years, primarily towards the hotel industry (e.g. refurbishing and modernizing existing hotels and tourist settlements).

Over the next ten years, tourism is expected to grow at about 6.6 percent annually in real terms. Key challenges in this regard will be to continue to increase the total number of arrivals while attracting a more up-market clientele. The Central Bureau of Statistics estimates that the number of foreign overnight stays in Croatia increased from around 16.5 in 1996 to 41.3 million in 2003; however this is still well short of the 1989 level of 54.5 million.

*Sources:* Government Pre-Accession Economic Program 2005-2007, IMF Selected Issues

**Table 1-1: Croatia: Key economic indicators**

|  | 2000 | 2001 | 2002                     | 2003 | 2004 | 2005 |
|--|------|------|--------------------------|------|------|------|
| <b>Real Sector</b>   |      |      | <b>percentage change</b> |      |      |      |
| Real GDP   | 2.9  | 4.4  | 5.6                      | 5.3  | 3.8  | 4.3  |
| Exports of goods and services                                | 12.0 | 8.1  | 1.2                      | 11.4 | 5.4  | 4.6  |
| Imports of goods and services                                | 13.4 | 15.9 | 14.0                     | 10.0 | 6.7  | 7.9  |
| Fixed investment   | 3.7  | 9.8  | 13.4                     | 12.1 | 3.5  | 3.5  |
| Private consumption  | 4.2  | 4.5  | 7.7                      | 4.6  | 3.9  | 3.4  |
| Average CPI inflation  | 4.6  | 3.8  | 1.7                      | 1.8  | 2.1  | 3.3  |
| Gross wages  | 7.0  | 3.9  | 6.0                      | 4.8  | 6.4  | 4.4  |
| Unemployment rate (ILO)                                      | 16.1 | 15.8 | 14.8                     | 14.3 | 13.8 | 12.7 |
|  |      |      | <b>as % of GDP</b>       |      |      |      |
| <b>Trade of goods and services</b>                           |      |      |                          |      |      |      |
| Exports of goods and services (in US\$)                      | 46.9 | 48.5 | 45.9                     | 50.2 | 49.9 | 49.0 |
| Imports of goods and services (in US\$)                      | 52.1 | 54.4 | 56.7                     | 58.1 | 57.1 | 56.4 |
| <b>General Government</b>                                    |      |      |                          |      |      |      |
| Fiscal deficit*  | -6.5 | -6.8 | -4.9                     | -6.2 | -4.9 | -4.1 |
| Quasi fiscal deficit (HBOR)                                  | ...  | ...  | ...                      | -0.6 | -0.4 | -0.1 |
| Overall deficit  | -6.5 | -6.8 | -4.9                     | -6.8 | -5.3 | -4.2 |
| Overall public sector debt, including contingent liabilities | 49.5 | 51.1 | 50.7                     | 51.1 | 52.1 | 52.8 |
| <b>External accounts (in US\$)</b>                           |      |      |                          |      |      |      |
| Current account balance                                      | -2.5 | -3.7 | -8.3                     | -7.2 | -5.2 | -6.7 |
| FDI  | 5.9  | 6.0  | 2.5                      | 6.5  | 2.5  | 4.0  |
| Reserves (months of imports)                                 | 4.4  | 5.2  | 5.4                      | 5.7  | 5.2  | 4.9  |

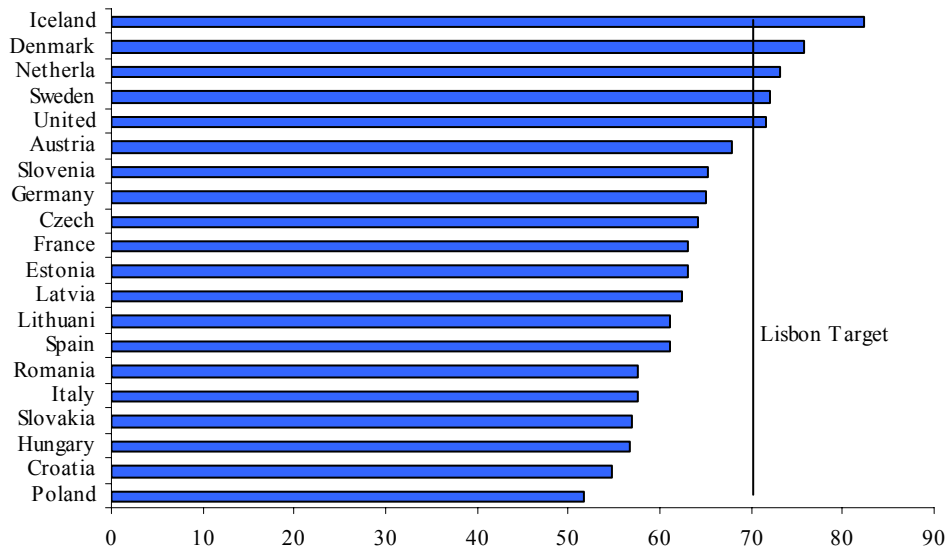
\*General Government deficit including only 53 local government units.

*Sources:* CBS, Croatian National Bank and Ministry of Finance, WB staff calculations.

1.5 The Central Bank has pursued a relatively tight monetary policy to partly compensate for the government’s loose fiscal stance, and inflation has therefore remained generally low. In addition, the government has responded to the rising external debt and vulnerability by reducing the deficit from 5.6 percent in 2003 to 3.6 percent in 2005 through slower wage bill growth, lower transfers and public investment, and structural reforms (Table 1-1).<sup>9</sup>

1.6 One of Croatia’s biggest challenges is to boost employment. Croatia has one of the lowest employment rates in Europe, at only 54.7 percent, well below the so-called Lisbon employment rate target of 70 percent set by the European Commission (EC) for the year 2010 (Figure 1-2).<sup>10</sup> Croatia’s unemployment rate is higher than the EU25 average (around 14 percent versus 9 percent respectively in 2004) and its labor force participation rate is lower.

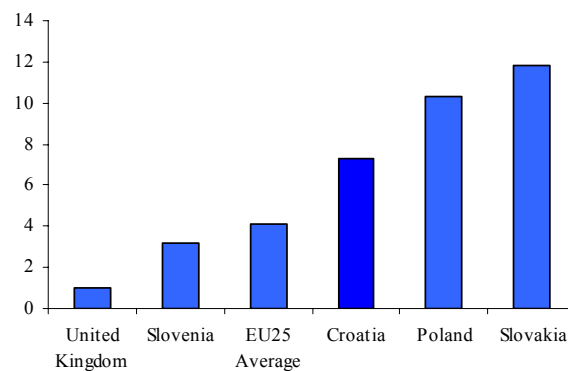
**Figure 1-2: Total employment rate in Croatia falls well short of the Lisbon target**



Source: Eurostat. Data for all countries are for 2004, and rates shown are for ages 15-64 yrs.

1.7 The proportion of long-term unemployed—workers without jobs for 12 months or longer—is higher than in all EU countries except Poland and Slovakia (Figure 1-3). Long-term unemployment is generally much more difficult to address than frictional unemployment. It is often concentrated in specific groups such as those with fewer skills and little education, and among young people, and often can lead to profound economic and social problems.

**Figure 1-3: High Long-term Unemployment**



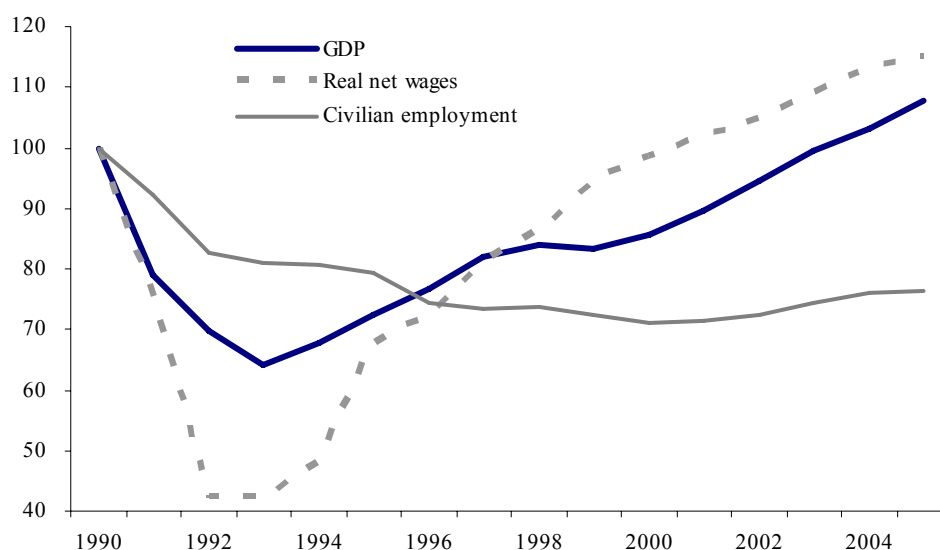
Source: Eurostat. Data are for 2004.

<sup>9</sup> IMF Country Report No. 06/128, Washington DC. March, 2006.

<sup>10</sup> The employment rate in this instance is defined as the share of the country’s total population aged 15 – 64 that was working when the survey was fielded.

1.8 As in other countries in Central and Eastern Europe, employment in Croatia fell quite rapidly during the early years of transition in the early 1990s, when the total output of the economy fell substantially in real terms (Figure 1-4). The decline in employment slowed down somewhat after an economic upturn in 1994, but job creation in the expanding economy has generally remained slow; CBS data show an expansion only from 1.35 million in 1999 to 1.4 million in 2003.

**Figure 1-4: Growth in total employment in Croatia has lagged behind GDP growth and wages**



Source: Central Bureau of Statistics. Index, 1990=100.

Data from various labor force surveys show virtually no change in the participation rate in recent years (Table 1-2).

**Table 1-2: Key labor force indicators for Croatia: 2000 - 04**

|                    | Percent |      |      |      |      |
|--------------------|---------|------|------|------|------|
|                    | 2000    | 2001 | 2002 | 2003 | 2004 |
| Participation Rate | 50.8    | 49.7 | 50.9 | 50.3 | 50.5 |
| Employment Rate    | 42.6    | 41.8 | 43.3 | 43.1 | 43.5 |
| Unemployment Rate  | 16.1    | 15.8 | 14.8 | 14.3 | 13.8 |

Source: Published LFS data; data are for population aged 15 yrs and older.

1.9 Higher economic output in recent years has benefited workers less through job growth than through higher wages. Labor productivity per person employed in Croatia has risen considerably in the past decade relative to the EU average and has been reflected in rising wages over the period 2001-03.

## 1.2 SECTORAL AND REGIONAL TRENDS IN OUTPUT, INCOME, AND EMPLOYMENT

Overall, the services sector is the biggest and most dynamic sector of Croatia's economy. Regional inequality has risen somewhat in recent years, reflecting differences in the growth of output and, possibly in rates of job creation and destruction.

1.10 Output, income, and employment patterns differ significantly across the regions of Croatia. The differences reflect diverse factors such as the impact of the recent war, varied geographic terrain, and special problems faced by those regions with a higher concentration of traditional industries currently facing problems. Following the same analytical regional classification used in the World Bank's earlier poverty assessment to maintain comparability, this report uses a breakdown of five main geographic regions (Table 1-3) to examine the variations.<sup>11</sup>

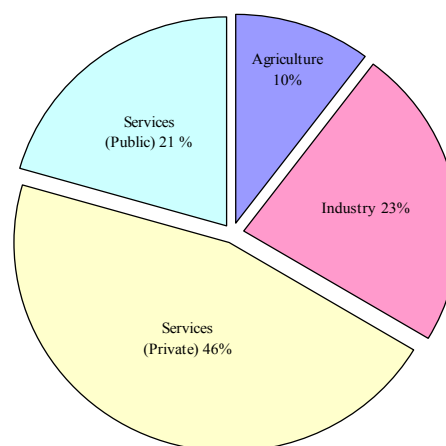
**Table 1-3: Regional classification of counties in Croatia**

| Analytical Region | Counties included in the Region  |
|-------------------|--|
| Zagreb            | Zagreb County and Zagreb City.   |
| Central           | Krapina-Zagorje, Sisak-Moslavina, Karlovac, Varazdin, Koprivnica-Krizevci, Bjelovar-Bilogora, and Medimurje. |
| Eastern           | Virovitica-Podravina, Pozeza-Slavonia, Slav. Brod-Posavina, Osijek-Baranja, and Vukovar-Sirmium.             |
| Adriatic North    | Primorje-Gorski Kotar, Lika-Senj, and Istria.  |
| Adriatic South    | Zadar, Sibenik-Knin, Split-Dalmatia and Dubrovnik-Neretva.   |

1.11 As in other developed economies, the services sector makes the largest contribution to output and employment in Croatia, though there are important differences across regions. The smallest share of employment is in agriculture (Figure 1-5).

1.12 *Agriculture:* The agriculture sector in Croatia is small compared to that in other countries with similar income levels in the region, and three-quarters of the workers it employs are self-employed farmers. The sector is quite varied, reflecting the country's geographic diversity, with cultivated lowland regions, mountainous regions where pastures predominate, and coastal areas where viticulture, fruit, and olive production are prominent. Agriculture provides the largest share of total employment in the Central and Eastern regions (19 – 20 percent), while in other regions it constitutes only 4 – 5 percent.

**Figure 1-5: Total employment by sector, 2003**



Source: Data from CBS.

<sup>11</sup> While representing only one of several possible regional classification schemes, this grouping provides a useful summary of regional variation in Croatia, but at the same time also ensuring that the survey sample size in each group is large enough to permit reasonable statistical accuracy.

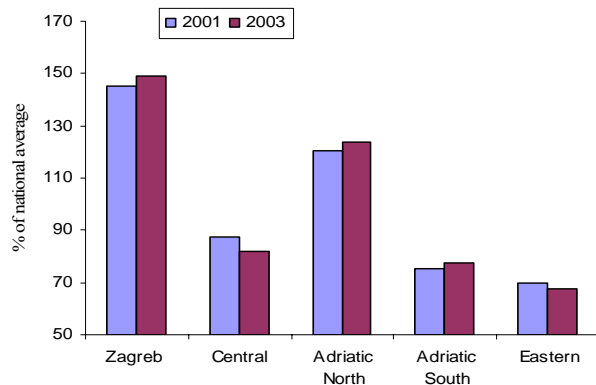
1.13 *Industry:* Industry supplies a relatively large share of jobs in Central Croatia (30 percent), particularly in the counties of Varaždin and Sisak-Moslavina, while in other regions it contributes only about 19 – 23 percent. Croatia’s main industries are foods and beverages, petroleum, chemicals, electrical manufacturing, paper, printing and publishing, and shipbuilding. The sector is diverse, including rapidly growing industries such as publishing and some capital goods manufacturing, alongside activities such as textiles or metal industries that face increased international competition. A sizeable share of output is still produced in state-owned companies that have not yet been fully restructured.

1.14 *Services jobs in the private sector* predominate in the Zagreb and Adriatic regions (particularly in the counties of Zagreb and Dubrovnik) and provide more than half of the total employment in these regions, compared to considerably smaller shares in the Central and Eastern regions (31 percent and 37 percent respectively). *Public sector jobs*, by contrast, are fairly evenly distributed across all regions, comprising about 18 – 23 percent of total employment, depending on the region.

1.15 The tertiary sector has achieved the fastest growth in output, while the output of farming and fisheries has declined.<sup>12</sup> Thus, in Zagreb as well as the Adriatic regions, where the tertiary sub-sector accounts for a larger share of the overall economy, per capita GDP grew faster than in the Central and Eastern regions.

1.16 Trends in per capita GDP show a small rise in inequality at the regional level in Croatia between 2001 and 2003 (Figure 1-6). The ratio between GDP per capita in the highest and lowest ranked region rose from 2.1 to 2.2 during these two years. This is a short period over which to measure a trend, but such a rise would be consistent with what has taken place in many of the EU new member states, as discussed further in Chapter 4.

**Figure 1-6: Rising regional inequality in GDP per capita**



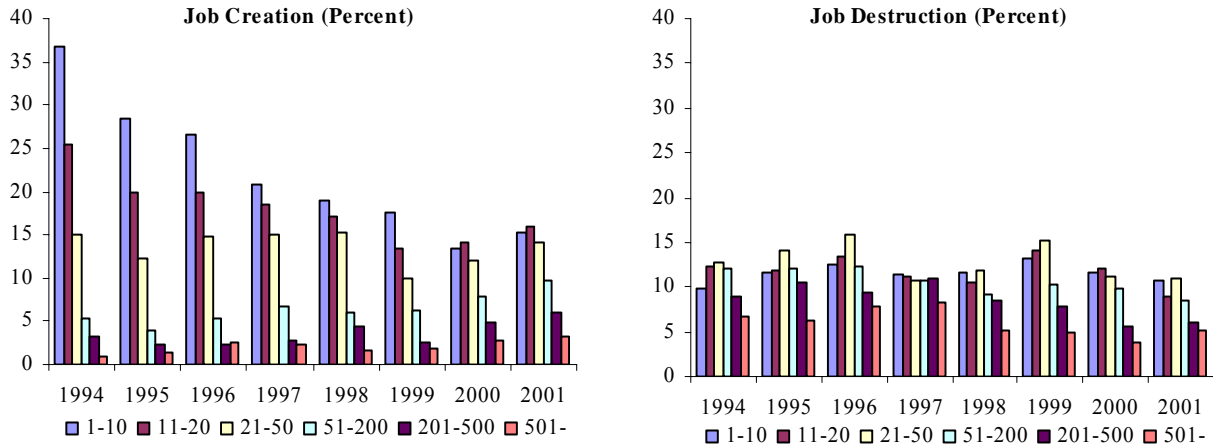
Source: World Bank estimates.

1.17 It is possible that rising interregional inequality may be linked to differential patterns of job creation and destruction at the regional level. Those of Croatia’s regions that have achieved the best economic performance have a dynamic small and medium enterprise sector and a relatively large share of newly created private firms. Since the mid-1990s these firms have had considerably higher rates of job creation and destruction than other types of firms (Figure 1-7).<sup>13</sup>

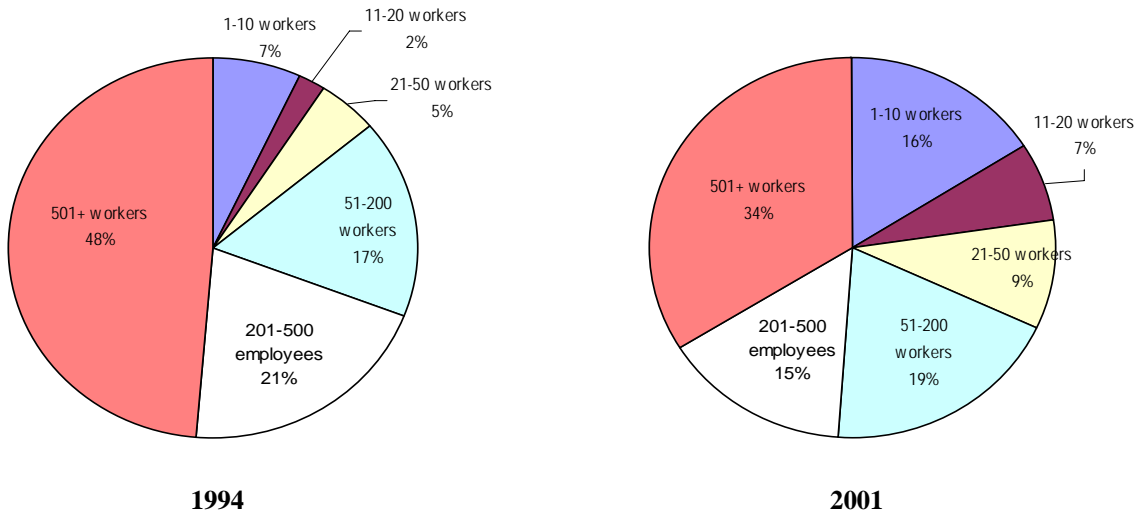
<sup>12</sup> This pattern of differential growth across sectors is in line with the experience of new member states (NMS) just before their EU accession; regions with a higher share of the tertiary sector (excluding the public sector) grew faster than others. In the case of the industrial sector, internal structure (e.g. export orientation, technology transfer, etc.) seemed to matter more than total share in the economy. By contrast, regions with a large share of agriculture and public sector activity tended to experience slower than average growth. For more details, see Background Paper No. 4.

<sup>13</sup> The firm-level data on job flows are from FINA (Croatia’s financial agency). For more details of this analysis, see Background Paper No. 6.

**Figure 1-7: Small firms in Croatia have been quite dynamic in job creation**



... and over time have increased their share in total employment

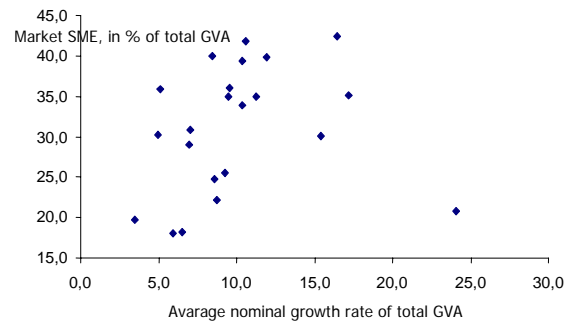


Source: World Bank estimates based on FINA data.

1.18 Analysis of the regional pattern of economic growth in Croatia shows a positive relationship between the proportion of market SMEs in total gross value added and economic growth rates at the county level (Figure 1-8).<sup>14</sup>

1.19 Looking ahead, the economies of Croatia's most developed counties—Zagreb, Istria, and Primorje-Gorski—have large tertiary sectors, active small and medium size enterprises, and large-scale entrepreneurs, and appear well positioned to continue growing rapidly. Counties in

**Figure 1-8: High county-level market SME shares were associated with higher growth in 2001-03**



<sup>14</sup> For details, see Background Paper No. 4.

1.20 Adriatic Croatia are similarly well positioned, with a dynamic SME sector, relatively large shares of people of working age and good educational qualifications within their populations, and they appear likely to benefit from continued rapid growth in tourism. By contrast, counties in Eastern and Central Croatia have relatively less favorable economic structure, and face a significant risk of lagging further behind.

### 1.3 CHANGES IN POVERTY AND INEQUALITY: 2002-04

*Poverty in Croatia is quite limited and shallow; some 11 percent of the population are poor and another 10 percent are vulnerable to falling into poverty. But some groups, numbering about 1 percent of the population, clearly face severe deprivation. Recent trends in absolute poverty are ambiguous but subjective measures of well being indicate some improvements*

1.21 To estimate poverty, this report uses a cost-of-basic needs method, whereby any household whose total welfare falls below the derived poverty line is considered poor (Box 1-3). Our preferred measure of welfare is consumption per adult-equivalent, as derived from data from Croatia's HBS series. To cross-check the robustness of the results obtained, income per adult - equivalent from the same data source is used as an alternative measure.

#### Box 1-3: Deriving an Absolute Poverty Line for Croatia

Following Ravallion (1994), a cost-of-basic needs poverty line is defined as the level of total consumption at which households spend just enough to achieve a minimum required energy intake and to meet basic non-food needs. The estimation of this line involves three main steps:

1. *Choice of the minimum food basket:* Food energy requirements for individuals of different age and sex were defined following the World Health Organization (1985) and FAO (2004) recommendations adapted to the Croatian context. A norm of 2,700 kcal per day per adult-equivalent was adopted. A minimum food basket was derived by averaging food consumption per adult-equivalent for households in the lowest quintile of the total equivalent consumption distribution in the HBS sample. The resulting quantities were transformed to calorie values by using conversion tables of the Croatian Institute for Public Health. Since the average calorie intake per adult-equivalent for this food basket was 2,859 kcal (i.e. higher than the norm), all food quantities were scaled-down (by 2,700/2,859) to get a food basket yielding 2,700 kcal per day.

2. *Cost of the minimum food basket (the food poverty line):* The prices of each food item needed to calculate the cost of the minimum food basket were obtained from the HBS data. Using the median unit values reported by households in the lowest quintile of equivalent consumption as reference prices, the cost of the minimum food basket turned out to be 529 *kunas* per month, or 6,348 *kunas* per adult-equivalent per year.

3. *Estimating the overall poverty line:* Finally, following the "cost-of-basic-need" approach, the (total) poverty line was then estimated by identifying those households for whom food expenditures were approximately equal to the cost of the minimum food bundle, and the total poverty line was calculated by averaging total household expenditures over this subset of households. The resulting poverty line is given in the table below, along with some illustrative values for different demographic groups of households.

| Total Poverty line ( <i>Kunas</i> per year in 2004 prices) |              |                     |                       |                      |   |
|--|--------------|---------------------|-----------------------|----------------------|---|
| .  | Single adult | Couple w/o children | 1 parent with 1 child | Couple w/ 2 children | . |
| .  | 22,145       | 33,217              | 28,788                | 46,504               | . |

Note: For more details on the estimation procedure, see Background Paper No. 1.

1.22 Both welfare measures show that poverty in Croatia is quite limited—depending on the measure used, only 10 – 11 percent (or fewer than half a million) of Croatia’s people consumed less than the 2004 poverty line of 22,145 *kunas* per adult-equivalent (Table 1-4).

**Table 1-4: Poverty in Croatia is quite limited and shallow**

| Poverty Measure (percent)   | Expenditures                                      | Income |
|-----------------------------|---|--------|
| Poverty line used           | 22,145 <i>kunas</i> per adult equivalent per year |        |
| Poverty headcount rate – P0 | 11.1%   | 10.4%  |
| Poverty gap – P1            | 2.6%  | 2.4%   |
| Squared poverty gap – P2    | 1.0%  | 0.9%   |

*Source:* World Bank estimates based on 2004 Household Budget Survey.

1.23 The poverty gap (P1) estimates how far below the poverty line the poor are on average as a proportion of that line. The squared poverty gap (P2) takes into account not only the distance separating the poor from the poverty line, but also inequality among the poor.

1.24 Both these distribution-sensitive poverty measures show that poverty in Croatia is quite shallow; on average the “depth of poverty” as measured by the poverty gap was only 2.6 percent.

1.25 Since the above broad categories of “poor” and “non-poor” may well conceal considerable inequalities within these groups, Table 1-5 provides a finer breakdown of these categories by level of welfare. Thus, within the overall 11.1 percent of the population classified as poor, some people are clearly considerably worse off than others—overall, about 40,000 people (one percent of the population) seem to be severely deprived, while another 140,000 consume at a level significantly below the national poverty line. An additional 10 percent of the country’s population are not poor but are vulnerable, with an average consumption level less than 25 percent above the poverty line.

**Table 1-5: About 1 in 20 Croatians consume well below the national poverty line**

| Welfare Level (Multiples of the Poverty Line)   | Population       | Share (%)    | Cum. (%)     |
|---|------------------|--------------|--------------|
| “Severe deprivation” (< 0.5 poverty line)       | 41,800           | 1.0          | 1.0          |
| “Also quite poor” (0.5 – 0.75 poverty line)     | 143,225          | 3.4          | 4.4          |
| Poor (0.75 – 1 poverty line)                    | 283,146          | 6.7          | 11.1         |
| “Vulnerable” to poverty (1 – 1.25 poverty line) | 447,178          | 10.6         | 21.7         |
| Moderately well-off (1.25 – 2 poverty line)     | 1,629,140        | 38.6         | 60.2         |
| Well-off (> 2 poverty line)                     | 1,682,511        | 39.8         | 100.0        |
| <b>Overall</b>                                  | <b>4,227,000</b> | <b>100.0</b> | <b>100.0</b> |

*Source:* World Bank estimates based on 2004 Household Budget Survey.

1.26 Trends in poverty over time were derived by first converting the 2004 poverty line (i.e. 22,145 *kunas*) into 2002 prices using the consumer price index to account for changes in the price level between 2002 and 2004. This yielded a poverty line of 21,390 *kunas* per adult-equivalent per year in 2002 prices. Data from the 2002 Household Budget Survey were then used to derive various poverty estimates based on the distribution of consumption and incomes per-adult equivalent.

1.27 Recent trends in poverty are ambiguous. Depending on the welfare measure used, the poverty headcount rate in Croatia appears to have either stagnated (based on consumption per adult-equivalent), or else fallen at about 1 percent a year (based on income per adult-equivalent) between 2002 and 2004 (Table 1-6). Other distribution-sensitive measures of poverty (P1, P2) also point to a stagnation or decline in poverty, depending on the welfare measure used.

**Table 1-6: Poverty incidence in Croatia**

| Poverty Measure                                      | Consumption |        | Incomes |        |
|--|-------------|--------|---------|--------|
|  | 2002        | 2004   | 2002    | 2004   |
| Poverty line used<br>(per adult-equivalent per year) | 21,390      | 22,145 | 21,390  | 22,145 |
| Poverty headcount rate                               | 11.2%       | 11.1%  | 13.0%   | 10.4%  |
| Poverty gap – P1                                     | 2.6%        | 2.6%   | 3.2%    | 2.4%   |
| Poverty severity – P2                                | 1.0%        | 1.0%   | 1.2%    | 0.9%   |

*Source:* World Bank estimates based on 2002 and 2004 HBS.

1.28 Income grew much faster than consumption in 2002-04, as can be seen by examining the growth incidence curves—that is, the variation in growth rates over the distribution—for changes in consumption and incomes per adult-equivalent (Figure 1-9). The distribution of consumption per adult -equivalent was stagnant on average, as well as across most of the distribution except the left and right tails, which showed positive and negative growth respectively over this period. As a result, it is not surprising to see virtually no change in poverty rates over this period based on this welfare measure. By contrast, incomes per adult -equivalent grew by about 6 percent over this period, on average. While all income groups recorded positive real income growth, both the poor and the rich did quite well over this period relative to the middle class.

**Figure 1-9: Survey-based estimates show that income grew much faster than consumption**



*Source:* World Bank estimates based on 2002 and 2004 HBS. Straight line represents mean of growth rates.

1.29 Subjective measures of well being suggest some improvements have taken place. The Household Budget Survey asked sample households their opinions regarding their own living standards. While measures based on these responses are not necessarily comparable with the absolute poverty measures presented above, the responses provide some useful indications of perceptions of changes in living conditions. The proportion of the population reporting itself as living “with great difficulty” declined from 13 percent in 2002 to 10 percent two years later, while the proportion reporting itself as living “well” or “very well” rose from around 10 percent to more than 20 percent over the same period (Table 1-7).

**Table 1-7: Subjective welfare measures indicate improved living conditions**

| With its disposable monthly income, the household lives: | Percent of Respondents |              |
|--|------------------------|--------------|
|  | 2002                   | 2004         |
| With great difficulty                                    | 13.4                   | 10.0         |
| With difficulty  | 25.6                   | 22.7         |
| With some difficulty                                     | 29.5                   | 28.6         |
| Fairly well  | 21.8                   | 17.5         |
| Well   | 8.0                    | 19.1         |
| Very well  | 1.7                    | 2.1          |
| <b>Total</b>   | <b>100.0</b>           | <b>100.0</b> |

Source: World Bank estimates based on 2002 and 2004 HBS.

1.30 Inequality in both consumption and income has been quite stable in recent years. While income per adult-equivalent in both years was more unequally distributed than consumption, comparisons over time of both distributions show that inequality, as measured by the Gini coefficient and inter-decile ratios, remained fairly stable during 2002-04 (Table 1-8).

**Table 1-8: Income inequality remained fairly stable between 2002 and 2004**

| Inequality Measure                  | Consumption |       | Income |       |
|-------------------------------------|-------------|-------|--------|-------|
|                                     | 2002        | 2004  | 2002   | 2004  |
| Cons. share of the bottom decile    | 0.038       | 0.038 | 0.034  | 0.036 |
| Consumption share of the top decile | 0.210       | 0.204 | 0.211  | 0.218 |
| Decile ratio: (decile 9/decile 1)   | 3.181       | 3.182 | 3.592  | 3.553 |
| Gini coefficient                    | 0.258       | 0.253 | 0.270  | 0.275 |
| Theil entropy measure               | 0.123       | 0.107 | 0.122  | 0.127 |
| Mean log deviation                  | 0.116       | 0.109 | 0.126  | 0.128 |

Source: World Bank estimates based on 2002 and 2004 HBS.

#### 1.4 POVERTY IN CROATIA: AN INTERNATIONAL PERSPECTIVE

*Croatia's poverty rates are the lowest among the World Bank's client countries in the Europe and Central Asia region. But its social indicators are broadly in line with those in the upper middle-income countries of the region.*

1.31 This section compares poverty levels in Croatia with those in other middle-income countries in Europe and Central Asia, using the same PPP\$4.30 per capita per day international poverty lines used in a recent World Bank study on living conditions in the region.<sup>15</sup> We derive a welfare measure and poverty line in local currency for Croatia using as similar a method as possible to that used for the other countries in the regional study, so as to maximize the cross-country comparability of the estimates derived.

1.32 Croatia has the highest average per capita consumption among the countries of the region: some 20 percent higher than Latvia, and some 30 and 40 percent higher than Macedonia and Hungary, respectively (Table 1-9). The share of food in the consumption basket (around 40 percent) is somewhat large for a country at Croatia's income level. This is probably because food

<sup>15</sup> Alam, Murthi, Yemtsov, et al., 2005: *Growth, Poverty, and Inequality: Eastern Europe and the Former Soviet Union*. The World Bank, Washington DC.

prices in Croatia are relatively high compared to those of non-food items and also compared to food prices in other transition countries.

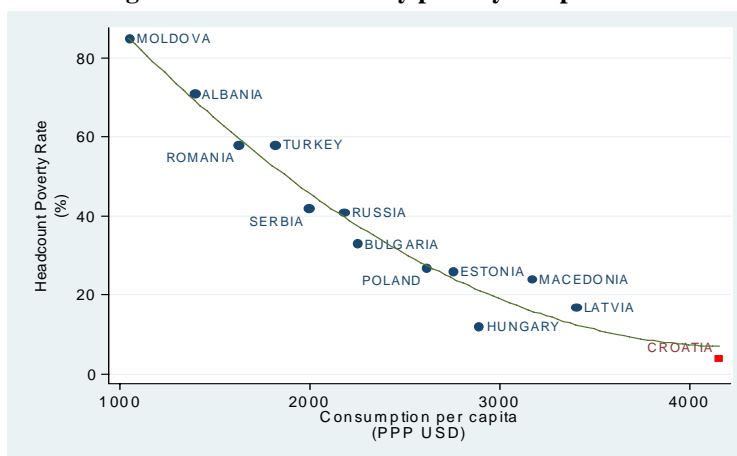
**Table 1-9: International comparisons of poverty and inequality**

|                | Year of Survey | Consumption Per Capita (PPP \$) | Food Share (%) | Poverty Rate (\$PPP 4.30/day Poverty Line) | Gini Coefficient (Per Capita) |
|----------------|----------------|---------------------------------|----------------|--|-------------------------------|
| <b>Croatia</b> | <b>2004</b>    | <b>4,156</b>                    | <b>41.6</b>    | <b>4</b>                                   | <b>0.264</b>                  |
| Hungary        | 2002           | 2,890                           | 38.7           | 12   | 0.250                         |
| Latvia         | 2003           | 3,401                           | 41.0           | 17   | 0.350                         |
| Belarus        | 2002           | 2,704                           | 68.1           | 21   | 0.292                         |
| Ukraine        | 2003           | 2,496                           | 72.2           | 22   | 0.268                         |
| Macedonia      | 2003           | 3,171                           | 54.2           | 24   | 0.373                         |
| Lithuania      | 2003           | 2,762                           | 44.5           | 24   | 0.325                         |
| Estonia        | 2003           | 2,753                           | 42.2           | 26   | 0.330                         |
| Poland         | 2002           | 2,611                           | 39.8           | 27   | 0.320                         |
| Bulgaria       | 2003           | 2,248                           | 58.7           | 33   | 0.277                         |
| Russia         | 2002           | 2,179                           | 55.8           | 41   | 0.338                         |
| Serbia         | 2002           | 1,993                           | 60.8           | 42   | 0.292                         |
| Turkey         | 2002           | 1,816                           | 38.8           | 58   | 0.393                         |
| Romania        | 2003           | 1,624                           | 57.8           | 58   | 0.288                         |
| Albania        | 2002           | 1,388                           | 61.7           | 71   | 0.319                         |
| Moldova        | 2003           | 1,046                           | 66.4           | 85   | 0.328                         |

Source: World Bank (2005); World Bank estimates based on 2004 HBS for Croatia.

1.33 Croatia's poverty rates are the lowest in the region. If the international poverty line of \$PPP 4.30 per day per person is applied, the poverty rate for Croatia is around 4 percent, much lower than in the other countries in the region for which data are available. Similarly, the Gini coefficient for Croatia is low compared to those for other countries in the region.

**Figure 1-10: Cross-country poverty comparisons**



Source: World Bank (2005) and HBS 2004.

1.34 The low rate of poverty in Croatia compared to other countries in the region is in line with what one might expect from Croatia's income level (Figure 1-10). The dotted line in the figure shows the estimated relationship between headcount poverty rate and income levels from a cross-country regression using a quadratic fit.

1.35 While poverty rates in Croatia are lower than elsewhere, other social indicators are more or less in line with those in other countries in the region. For instance, infant and child mortality rates in Croatia are lower than in Latvia or Hungary, but higher than in the Czech Republic or Slovenia (Table 1-10).

**Table 1-10: Key social indicators: cross-country comparison**

|                | Adult illiteracy (%) |            | Secondary school enrollment (Net, %) |      | Mortality rate, infant (per 1,000) |      | Mortality rate, under-5 (per 1,000) |      | Life expectancy at birth, total (years) |      |
|----------------|----------------------|------------|--------------------------------------|------|------------------------------------|------|-------------------------------------|------|---|------|
|                | 1990                 | 2004       | 1990                                 | 2003 | 1990                               | 2004 | 1990                                | 2004 | 1990                                    | 2004 |
| <b>Croatia</b> | <b>3</b>             | <b>1.9</b> | <b>63</b>                            | 85.0 | <b>12</b>                          | 6.3  | <b>13</b>                           | 6.3  | <b>72.2</b>                             | 75.4 |
| Bulgaria       | 2.8                  | 1.4        | 63                                   | 88.3 | 14.8                               | 12.3 | 16                                  | 12.3 | 71.3                                    | 72.4 |
| Czech Rep.     | ..                   | ..         | 86                                   | 90.4 | 10                                 | 3.9  | 11                                  | 3.9  | 71.7                                    | 75.7 |
| Estonia        | 0.2                  | 0.2        | 82                                   | 87.9 | 15                                 | 5.7  | 17                                  | 5.7  | 69.5                                    | 71.6 |
| Hungary        | 0.9                  | 0.7        | 75                                   | 91.6 | 15                                 | 7.2  | 16                                  | 7.2  | 69.3                                    | 72.6 |
| Latvia         | 0.2                  | 0.3        | 77                                   | 87.4 | 16                                 | 9.8  | 20                                  | 9.8  | 69.3                                    | 71.5 |
| Lithuania      | 0.7                  | 0.4        | 81                                   | 94.1 | 17                                 | 7.5  | 13                                  | 7.5  | 71.3                                    | 71.9 |
| Poland         | ..                   | 0.3        | 76                                   | 91.5 | 16                                 | 7.1  | 19                                  | 7.1  | 70.9                                    | 74.5 |
| Romania        | 2.9                  | 2.7        | 73                                   | 81.1 | 27                                 | 17.3 | 32                                  | 17.3 | 69.7                                    | 71.0 |
| Slovak Rep.    | ..                   | 0.3        | ..                                   | 88.0 | 14                                 | 6    | 15                                  | 6    | 70.9                                    | 74.0 |
| Slovenia       | 0.4                  | 0.3        | 89                                   | 95.3 | 8                                  | 4    | 9                                   | 4    | 73.3                                    | 76.6 |

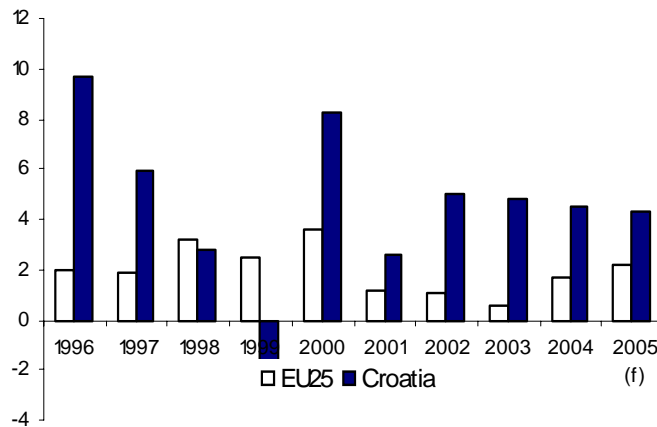
Sources: UNESCO, World Bank database (DDP).

### 1.5 THE CONVERGENCE CHALLENGE: REDUCING THE INCOME GAP WITH EUROPE

*Croatia has been narrowing the income gap with the European Union, but sustaining this trend will be challenging. Both the employment rate and labor productivity will need to rise substantially.*

1.36 Croatia's economic growth rate has exceeded the European Union average in eight of the past ten years (Figure 1-11). Between 1996 and 2005, Croatia's per capita GDP rose by 55 percent, or about 2.5 times faster than that of the European Union overall. In relation to the EU25 average, Croatia's per capita GDP rose from 37 percent in 1995 to 46 percent in 2004 (Figure 1-12).

**Figure 1-11: Growth in per capita GDP**

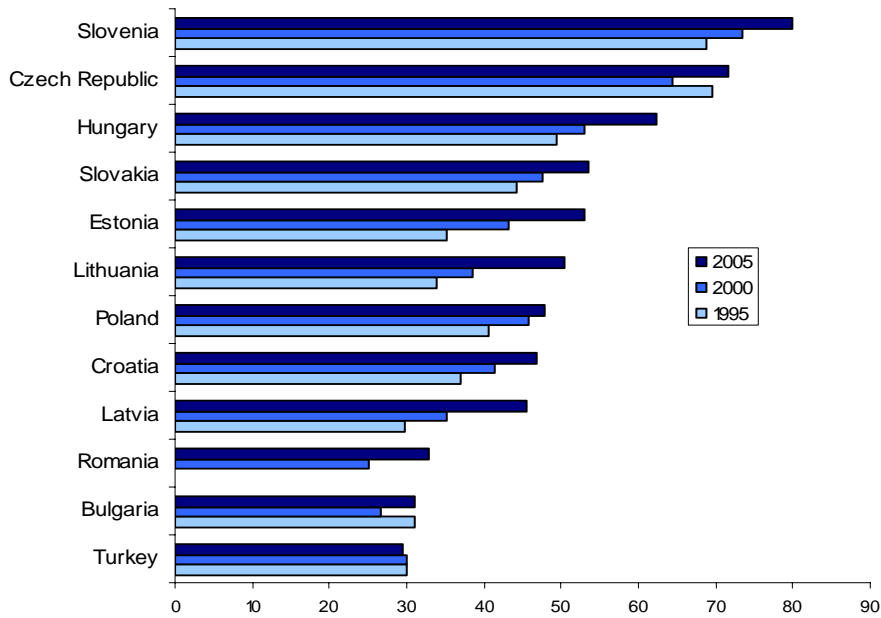


Source: Eurostat. Figures for 2005 are forecast.

1.37 The revised GDP series recently released by CBS shows that per capita GDP in Croatia in purchasing power parity terms is higher than the above numbers suggest. Methodological corrections taking into account possible under-estimation of GDP indicate that the gap between per capita GDP in Croatia and other EU countries may be 15 percent less than that indicated by these statistics.<sup>16</sup>

<sup>16</sup> Source: Ministry of Finance correspondence.

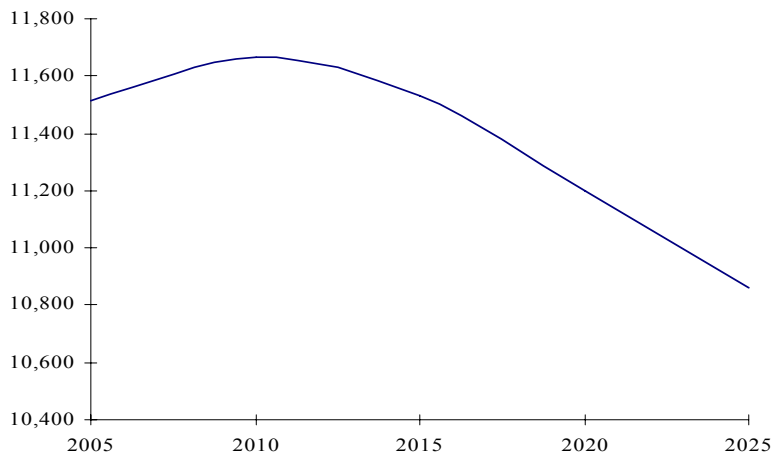
**Figure 1-12: GDP per capita: Croatia and selected EU countries**



Source: Eurostat. GDP per capita in Purchasing Power Standards; EU25=100.

1.38 Taking this cue, let us assume that per capita GDP in Croatia is now as high as 55 percent of the EU25 level. Does the past trend rate of convergence, of roughly one percentage point a year, imply that Croatia is well on track to attaining an average living standard of 75 percent of the EU25 average living standards by 2025? A likely decline in population and labor force suggests that closing the remaining income gap with the EU25 will be quite challenging. Demographic projections show that Croatia's population will start to fall by 2005, and that the size of the economically active age group will start to shrink by 2010. Figure 1-13 shows how GDP per capita in constant PPP US dollars of 2000 will evolve if it is driven solely by the decline in the labor force that will result from these demographic trends.

**Figure 1-13: Convergence and demographics**



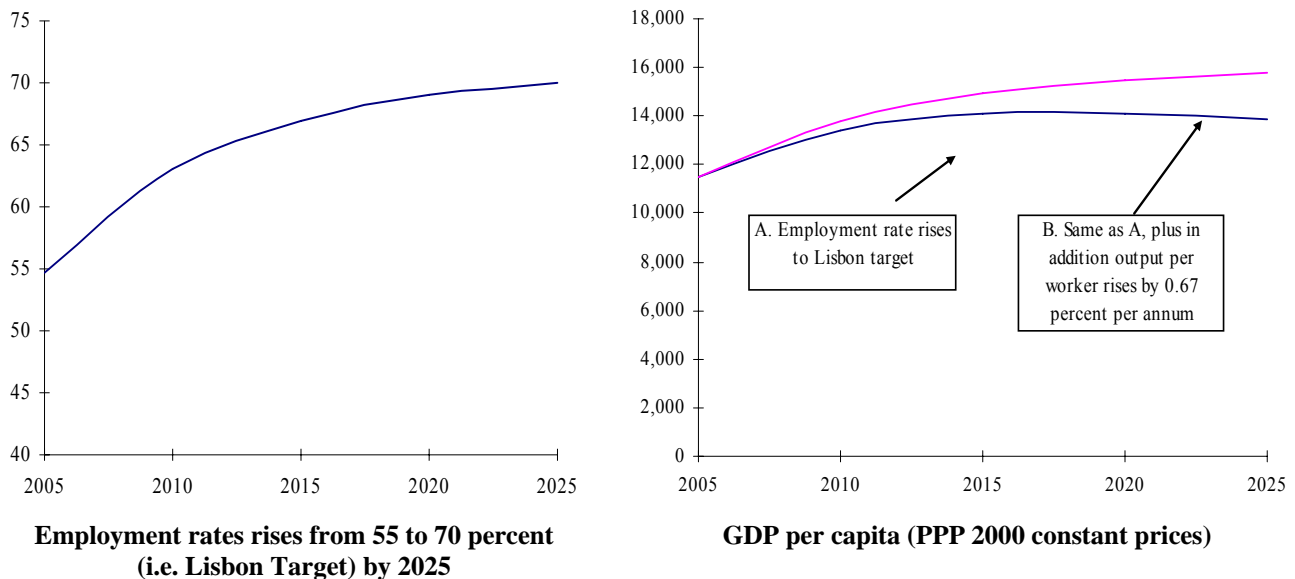
**GDP per capita (PPP 2000 prices) Trend due to smaller labor force**

Source: World Bank estimates based on population projections.

1.39 Far from continuing to rise, as it has during the past decade, GDP per capita will start to decline after 2010. As noted, these projections assume that GDP per capita growth is driven only by changes in labor force population dynamics. In what follows, we relax this assumption and extend the analysis in two respects.

1.40 We first analyze how GDP per capita would change if the employment rate were to rise to 70 percent by 2025<sup>17</sup>, rather than staying at its current level of around 55 percent of the working age population (Figure 1-14, left panel). Such an increase in employment, due to increased labor force participation, would be large enough to compensate for the adverse impact of the decline in the working-age population. But by itself, the higher employment rate would not raise Croatia’s per capita GDP to three-quarters of the average EU25 per capita GDP by 2025 (Figure 1-14, right panel, scenario A). To meet this income target, not only would employment need to rise to 70 percent, but output per worker would also need to rise—by about 0.67 percent per year (Figure 1-14, right panel, scenario B).

**Figure 1-14: Convergence, labor market participation, and productivity**



Source: World Bank estimates based on databases of the World Bank and World Bank population projections.

1.41 To sum up, even though average standards of living in Croatia have been converging with those of the EU25, our analysis suggests that a substantial gap still remains, and that continuing to close this gap will not be easy. Rather, it will require implementing a comprehensive reform agenda aimed at sustaining high per capita GDP growth through increased employment and rising worker productivity.

<sup>17</sup> This percentage is the so-called Lisbon target, which was originally set for the year 2010.