

UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE



**THE UNECE REPORT
ON ACHIEVING THE
MILLENNIUM
DEVELOPMENT
GOALS
IN EUROPE AND CENTRAL ASIA, 2011**



UNITED NATIONS

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ABBREVIATIONS

Subregions of the UNECE region

South-Eastern Europe (SEE)

Albania	Montenegro
Bosnia and Herzegovina	Serbia
Croatia	Turkey
The former Yugoslav Republic of Macedonia	

Eastern Europe, Caucasus, and Central Asia (EECCA)

Armenia	Republic of Moldova
Azerbaijan	Russian Federation
Belarus	Tajikistan
Georgia	Turkmenistan
Kazakhstan	Ukraine
Kyrgyzstan	Uzbekistan

New EU post-transition member States (NMS)

Bulgaria	Lithuania
Czech Republic	Poland
Estonia	Romania
Hungary	Slovakia
Latvia	Slovenia

Emerging Europe and Central Asia (ECA) = EECCA + SEE + NMS

Economies in Transition (EiT) = EECCA + SEE

Advanced ECE Economies (EAE)

Andorra	Liechtenstein
Austria	Luxembourg
Belgium	Malta
Canada	Monaco
Cyprus	Netherlands
Denmark	Norway
Finland	Portugal
France	San Marino
Germany	Spain
Greece	Sweden
Iceland	Switzerland
Ireland	United Kingdom
Israel	United States
Italy	

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EXECUTIVE SUMMARY

MDG performance

This report focuses on the Millennium Development Goals (MDGs) in 29 emerging economies in the ECE region. This group is quite heterogeneous in terms of the level of development, gathering 10 post-transition EU member States (NMS) as well as 12 post-Soviet republics in Eastern Europe, Caucasus and Central Asia (EECCA) and 7 countries in South-Eastern Europe (SEE).¹ Some 472 million people live in the three sub-regions, including 102 million in the NMS (including 38 million in Poland), 276 million in the EECCA (of which 142 million live in Russia), and about 94 million in the SEE (including 72 million in Turkey). The region as a whole is characterized by high levels of economic and human development. However, the regional averages on MDG progress mask considerable disparities between countries and within countries. Therefore, making economic growth more inclusive and sustainable, and adopting social protection systems and policies that reduce social and economic gaps is an imperative for all countries of the region.

The report's findings show that policies for an acceleration of MDG progress are particularly relevant for the EECCA and SEE countries. While the report concentrates on the MDG progress in the ECE emerging markets, it also provides, where relevant, brief assessments of progress in high-income economies of Western Europe and North America. There are only a few MDG targets that apply to high-income economies, particularly in the areas of gender equality (MDG 3), environmental sustainability (MDG 7) and, to a lesser degree, poverty (MDG 1). In addition, these countries have also made a global commitment to help the developing world achieve its targets through financing for development, including ODA, and improving the world trading system (MDG 8).

The progress toward individual MDGs can be summarized as follows.

MDG 1. In all of the ECE economies there are vulnerable population groups living in extreme poverty. The incidence of abject poverty is more frequent in rural areas than in cities. It is usually found among the long-term unemployed, disadvantaged ethnic minorities, indigenous peoples, single parent households and persons with chronic health problems. Nevertheless, the problem of poverty (target 1.A), when defined in an absolute sense, is mostly restricted to the low-income and lower middle-income EECCA countries. The 2007 – 2009 economic crisis known as the Great Recession had a significant negative impact on the livelihood in the region, including the most advanced economies, and is endangering the progress achieved in a number of EECCA and SEE countries and in some of the NMS. In particular, the adjustment strategies of low-income households saw cuts in discretionary spending on medical services and medicines. This trend is particularly worrisome in the MDG context. Target 1.B on decent work continues to be difficult to achieve in all sub-regions due to structural labour-market problems that have been exacerbated by the Great Recession. These problems are reflected in the high share of vulnerable and informal employment, as well as the extremely high unemployment rates for youth and disadvantaged minorities. The problem of high informal employment is particularly severe in rural areas of the Caucasus and Central Asia. Malnourishment (target 1.C) is low to negligible in most countries of the region, with the exception of four Central Asian countries (Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan) where some six million people have continued to suffer from pervasive poverty.

¹ The countries in each of the ECE sub-regions are listed on the preceding page.

MDG 2. Not surprisingly, the best outcomes are in the areas of school enrollment and gender equality in schools because of the region's tradition of mandatory school attendance and equal access. However, the quality of education and educational equity remain unsatisfactory in a number of countries. Another problem is posed by high dropout rates of students from disadvantaged minority backgrounds.

MDG 3. Throughout the region, despite women's high education level, severe problems remain with respect to their labour market participation, especially in some EECCA and SEE countries. The majority of women still occupy lower-paid and unstable jobs at the lower end of the career ladder. Moreover, wage differentials remain a resilient challenge to equality in the region, ranging from an average of 20 per cent in the EU to between 40 and 50 per cent in the Caucasus and Central Asia. The unequal position of women is reflected in their low political representation. With the exception of the Scandinavian countries, women continue to be strongly underrepresented in both political and economic decision-making positions.

MDG 4. Child mortality in the ECE region is the lowest in the world, and there is an overall trend towards achieving target 4.A in the ECE emerging economies. In the EECCA countries the mortality rate has fallen in some cases by as much as 50 per cent over the last decade. Nevertheless, child mortality in these countries is still relatively high, and some of them might not reach the target. Furthermore, strong disparities in health outcomes within countries have continued to persist in Central Asia, Eastern and South-Eastern Europe and even in some of the NMS.

MDG 5. Similar to child mortality, only a few countries in the EECCA region are not on track to reach the target on maternal mortality. However, the widespread use of abortion as an alternative to contraception and the high rate of adolescent pregnancies still affect a number of countries with transition economies.

MDG 6. By contrast, this MDG represents the largest challenge for many economies in transition, with HIV/AIDS and tuberculosis emerging as particular concerns. Not only is the HIV/AIDS infection rate high with its epicenter in the EECCA sub-region, but also in virtually none of the EECCA countries is there adequate antiretroviral treatment coverage for the infected although it has been increasing rapidly. The spread of tuberculosis, a disease linked to poverty, is also of concern as its incidence has doubled since 1990 in the EECCA region.

MDG 7. In spite of the significant decline in GHG emissions since 1990, MDG 7 remains a concern for the ECE region, especially because of the poor energy efficiency in a number of transition economies and the need in the coming years for greater improvements. Moreover, the increases of emissions per capita and the limited progress in improving energy efficiency over the last decade suggest that a number of countries are not on a sustainable path. Lack of access to safe drinking water and proper sanitation remain serious problems in many of the transition economies. This is primarily a problem in the poorest economies of the EECCA and SEE sub-regions, but is also a concern in rural areas of some of the NMS. Large segments of the population in the areas affected by armed conflicts in the former Soviet Union and former Yugoslavia continue to live in substandard informal housing, without any secured property rights.

MDG 8. The advanced economies which are able to provide ODA are primarily located in the ECE region. Unfortunately major donors did not meet the 2010 ODA/GNI targets they committed to at the Gleneagles G8 summit in 2005. The continuing economic problems and fiscal pressures in the advanced economies have made significant increases in ODA unlikely over the next few years. Concerning international trade, while the NMS and to a lesser degree SEE

countries have now become reasonably integrated into the world economy, the EECCA economies have performed less well in this area, due to the limited progress achieved in diversifying their output and exports especially regarding manufactures. Another important factor limiting the integration of the transition economies into the world economy is the fact that a number of them have not yet acceded to the WTO. Landlocked EECCA and SEE countries need also to address a number of additional obstacles to trade with measures like improvement of regional transport infrastructure, simplification of border-crossing and transit procedures and harmonization of product and regulatory standards.

Conclusions

With respect to the MDG progress, this report arrives at three principal conclusions. First, the MDG performance has continued to be highly uneven in the ECE emerging economies. Basically, two groups of countries can be identified on the basis of MDG indicators. The first group consists of middle and upper middle-income countries that have eliminated extreme poverty to a large extent and are likely to achieve most MDG objectives. This group is dominated by the new EU member States from Central Europe and EU candidate countries from South-Eastern Europe, i.e. by countries that have been relatively successful in their institutional transition to a society characterized by competitive markets and free elections. The second group includes mainly the lower middle and low income countries from Eastern Europe, Caucasus and Central Asia as well as the relatively less advanced transition economies of South-Eastern Europe. These countries, characterized by a more or less delayed economic and political transition, have been less successful in the pursuit of the MDGs.

The second major conclusion of this report is that the Great Recession has continued to have a strong negative effect on the achievement of the MDGs in most countries of Emerging Europe and Central Asia. Higher unemployment and/or lower incomes have forced households to economize not only on luxuries and conveniences but also on necessities. This adjustment has been especially regressive in the health sector because governments in a number of countries have reduced public spending or restricted access in this area while low-income families have cut out-of-pocket expenditures on medical care and pharmaceutical products. Only a handful of countries have attempted to compensate the poor for reduced access to healthcare. The education expenditure, both public and private, has been better protected, at least to date.

Finally, it needs to be emphasized that marginalized groups have been hit harder by unemployment, income losses and reduced accessibility of health services than the majority population. Such groups include disadvantaged ethnic minorities, indigenous peoples and migrants. MDG progress could be accelerated at minimal cost if the social and economic policies of governments would focus on improving the living standards of these disadvantaged groups.

I. OVERVIEW

This report, prepared by the United Nations Economic Commission for Europe (UNECE), takes stock of the progress made in reaching the MDGs in the emerging economies of Europe and Central Asia. In addition to reviewing national MDG trends, the report provides a brief overview of specific human development challenges in these economies, describes the changing macroeconomic context in which their governments have to operate, discusses key data issues and presents a special chapter on the plight of the Romani (Gypsy) population in Central and South-Eastern Europe. The final part of the report consists of the data annex with key MDG indicators.

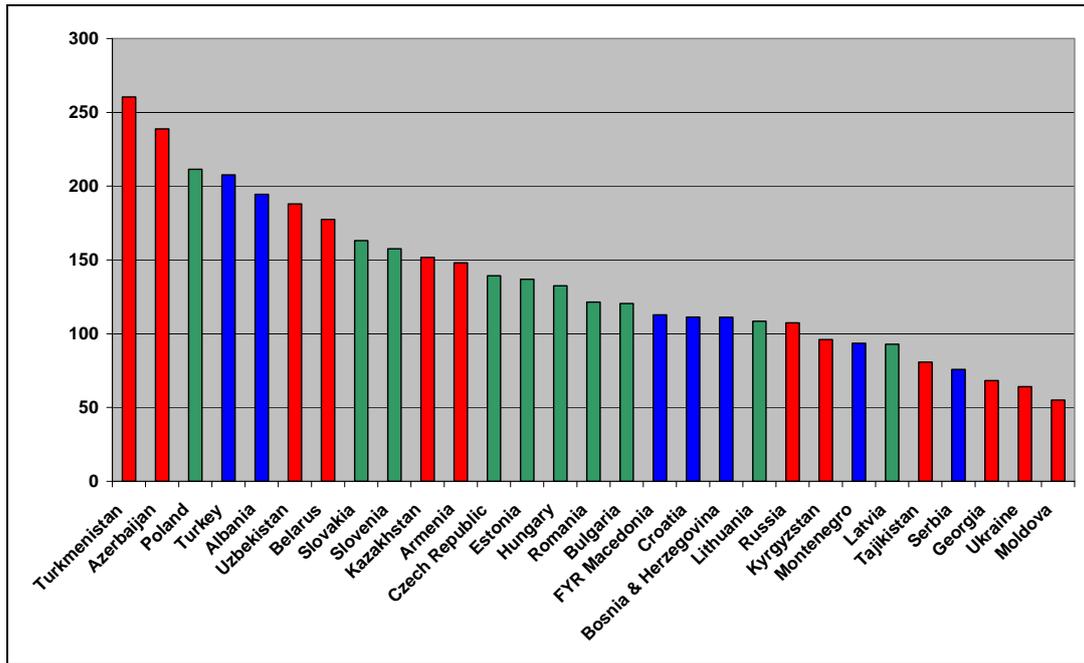
The 2010 inter-agency report on the MDGs in Europe and Central Asia noted that these goals were mainly intended for addressing the challenges facing countries moving up from massive poverty and low stages of industrial development. The ECE emerging economies are not in this situation. They entered the 1990s with relatively high levels of industrialization and human development, as measured by the Human Development Index (HDI). However, for a number of former communist countries, the economic transition to a market economy has led to setbacks in development, causing serious hardship, displacement and social stress. A critical aspect has been the more or less rapid removal of structures and institutions that governed economic and social activity without the sufficient administrative capacity and social cohesion for the creation of new structures that would underpin long-term sustainable growth.²

Countries with transition economies experienced a major collapse in economic activity in the early 1990. In addition, rising unemployment reduced the effectiveness of social safety nets which had been based on mandatory full employment during the period of communist rule. Also, almost one half of the transition economies became involved in some form of national or international conflict during the 1990s. By the middle of that decade the Baltic and South-Eastern European economies had experienced GDP declines in the range of 30 to 40 per cent while in the EECCA region the declines were in the 40 to 60 per cent range. Near the end of the decade most of these economies were able to establish market based institutions and were able to regain some degree of growth. Output recovery gathered pace in the 2000s when the ECE emerging markets grew faster than the advanced economies in North America and Western Europe.

By 2010, two decades after the beginning of transition, aggregate labour productivity in Emerging Europe and Central Asia (ECA) was some 50 per cent above the 1990 level. The subregional labour productivity growth over this time period amounted to approximately 33 per cent in the EECCA, 67 per cent in the SEE and 62 per cent in the NMS. However, the output levels remained subdued in a number of countries. Some (the energy-rich Central Asian countries, the Central European NMS) had increased their national incomes approximately 50 per cent above their 1990 levels, but many (Eastern Europe and the Caucasus, the former Yugoslav republics, and the Baltics) had only returned to something similar to the 1990 level while a few economies (Georgia, Moldova, Serbia, Tajikistan, and Ukraine) remained 20 per cent or more below this earlier level. Turkey, which did not have to go through the transition process but still had a severe currency crisis in 2000 and 2001, more than doubled its real GDP since 1990. Poland, an early starter in the transition process, managed a similar performance. Figure 1.1 shows the level of real GDP in 2010 as compared to the level in 1990 (the EECCA region is in red, NMS in green, and SEE in blue).

² See UNECE (2010), *The MDGs in Europe and Central Asia: Achievements, Challenges and the Way Forward*. New York and Geneva.

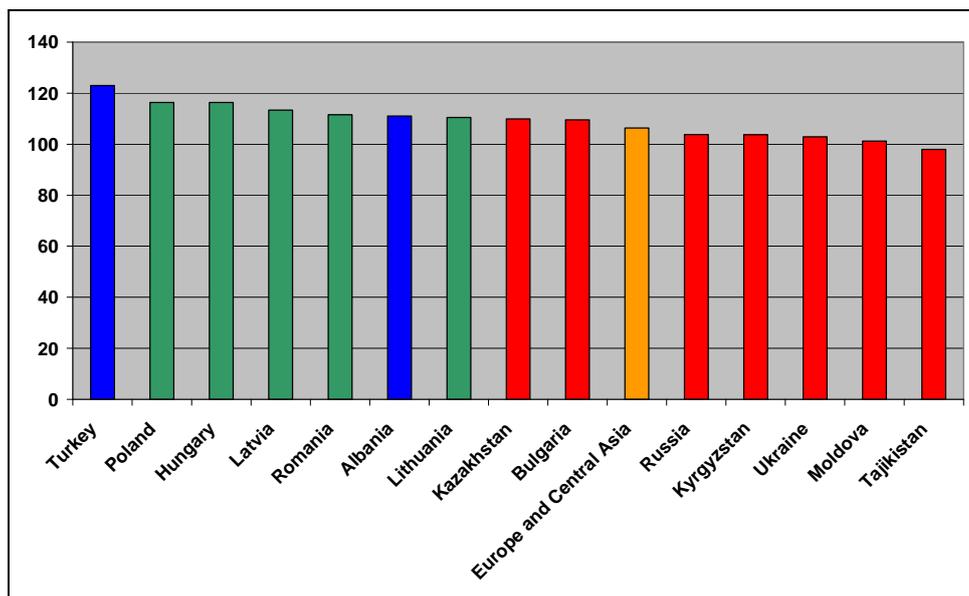
Figure 1.1
Real GDP in 2010 Compared to 1990 (1990 = 100)



Source: ECE calculations based on EBRD and IMF data.

Human development levels, measured by the Human Development Index (HDI), changed less spectacularly than real output levels over the last two decades. The HDI components include GNI per capita, years of schooling and life expectancy. Figure 1.2 shows that HDI increased moderately in the region and most ECE emerging economies with comparable data for this time period, with the exception of Tajikistan where it declined. Turkey registered the greatest HDI growth in Emerging Europe and Central Asia (ECA) since 1990. It is remarkable that some transition economies (Kyrgyzstan, Moldova and Ukraine) achieved modest HDI growth even though their national income in 2010 was lower than in 1990.

Figure 1.2
HDI in 2010 Compared to 1990 (1990 = 100)



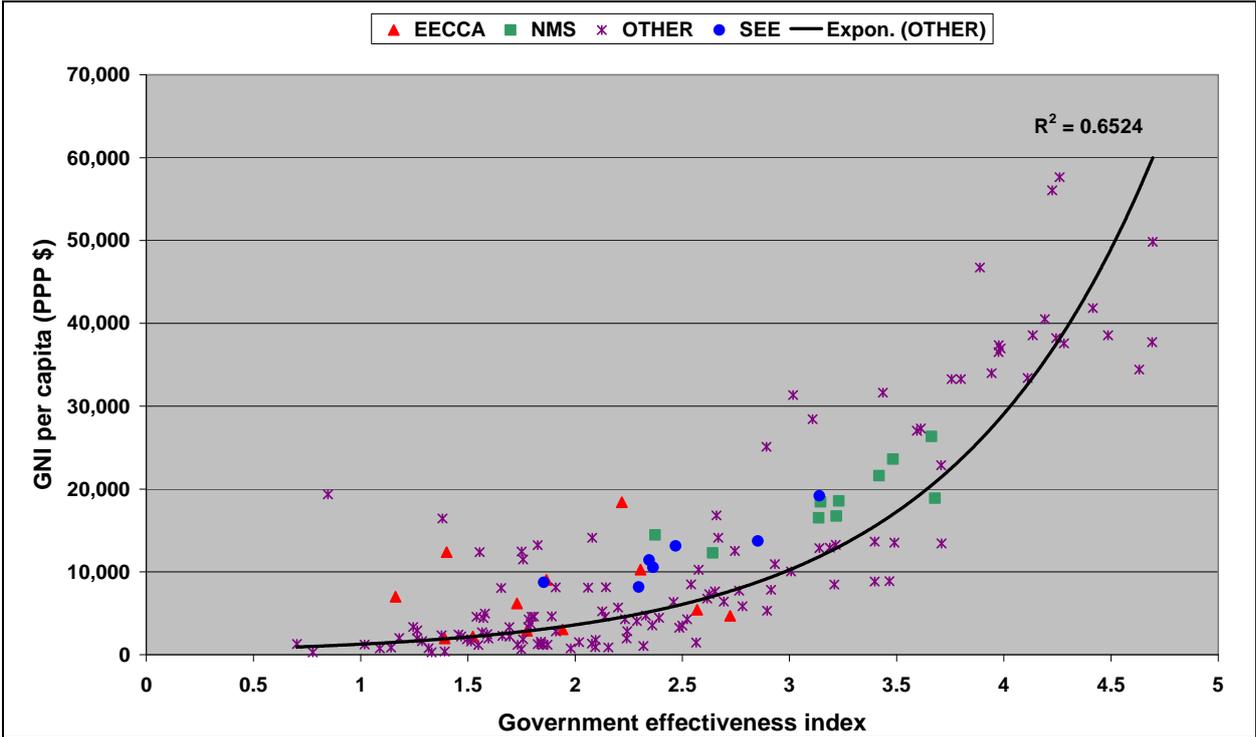
Source: ECE calculations based on UNDP data.

While providing a multidimensional measure of human development at country level, national HDI values mask discrepancies in social welfare *within* countries. Recent HDI estimates for households indicate that households with low education have consistently lower HDI scores than households with higher educational attainment because the former also tend to have lower levels of income and life expectancy. For instance, the HDI for the Romani population in Romania is significantly lower than the national average and similar to the level of HDI for Botswana, a country with a considerably lower HDI ranking than Romania.³

The inter-agency report mentioned above noted that ECA economies suffer from surprisingly poor governance, given their per capita income levels. Governance refers to the capacity of governments to formulate and implement sound policies as well as to the capacity of society to monitor government performance and hold governments accountable. The former aspect of governance can be assessed with the aid of government effectiveness indicators while free press is viewed as a precondition for meaningful performance monitoring and accountability.

Figure 1.3 illustrates the relationship between per capita income and government effectiveness. Dots above the regression curve indicate that government effectiveness is below the level implied by per capita national income, and conversely.

Figure 1.3
Per capita income and government effectiveness, late 2000s



Source: ECE calculations based on World Bank data.

Note: Government effectiveness index captures perceptions of the quality of the quality of public services, civil service, policy formulation and implementation. The index was rescaled to run from 0 (lowest) to 5 (highest).

The figure shows that government effectiveness tends to be higher in the NMS than SEE economies. All of these countries, with the exception of Estonia, are however characterized by the

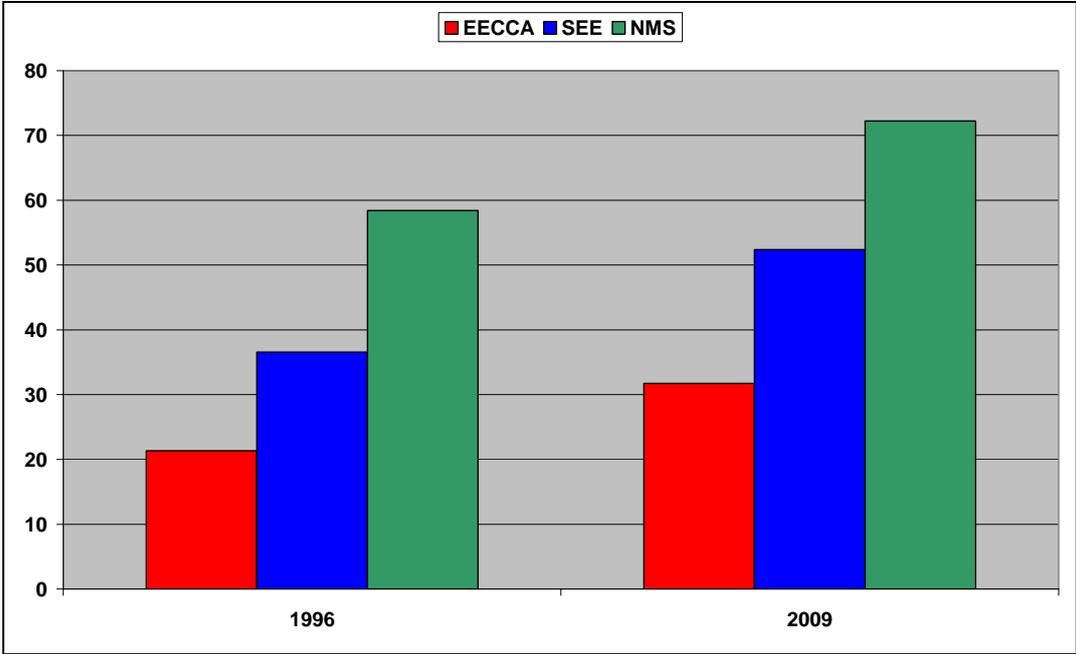
³ See UNDP (2010), The Real Wealth of Nations: Pathways to Human Development. Human Development Report 2010, New York.

level of government effectiveness index that is lower than that implied by their respective per capita incomes. In the EECCA subregion, the government effectiveness index tends to be commensurate with per capita income in resource poor-economies with the exception of Armenia and Georgia that have better levels of governance than expected. By contrast, Belarus as well as Russia and resource-based economies of the Caucasus and Central Asia are characterized by significantly lower than expected values of the government effectiveness index.

The initial collapse of government capacity was apparently associated with the chaos prevailing in early phases of transition, especially in the countries that experienced violent ethnic confrontations and armed conflicts over disputed territories. In addition, a number of newly emerged countries had to set up central government institutions from scratch. However, according to the World Bank’s governance indicators, government effectiveness has improved in all sub-regions since the mid-1990s (figure 1.4). These indicators are based on perceptions-based data that include surveys of firms and households, as well as expert assessments of commercial information providers, non-governmental organizations, multilateral organizations and other public-sector bodies.⁴

Figure 1.4 implies that government effectiveness in EECCA countries has continued to lag behind other transition economies. Because governance cannot be measured directly and the World Bank indices are based on surveyed perceptions, some economists have suggested that one should use more ‘objective’ indicators, e.g. the homicide rate. This indicator is supposed to reflect the degree of effective government control.

Figure 1.4
Government effectiveness by sub-region
Percentile rank (average)



Source: ECE calculations based on World Bank data.

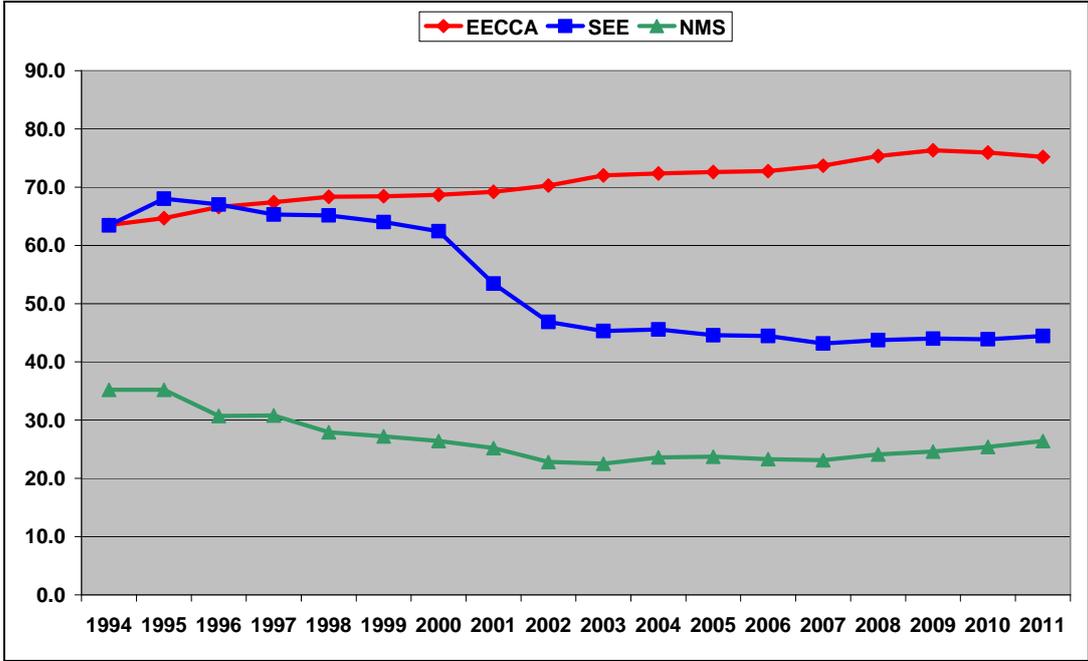
Note: Percentile rank indicates the percentage of countries worldwide that rate below the selected country. Higher values indicate better governance ratings. Confidence level equals 90%.

⁴ For details, see D. Kaufmann et al (2010), “The worldwide governance indicators: Methodology and analytical issues.” World Bank Policy Research Working Papers, no. 5430.

The available homicide statistics confirm the existence of a large divide between EECCA and the other two sub-regions. Russia has the highest homicide rate in the region. However, following a sharp increase in the 1990s, the number of homicides in this country declined steadily until 2009 when it was 13 per cent over the 1990 level. The downward trend is consistent with a gradual improvement of socio-economic conditions and government effectiveness.⁵

Free press, or more generally independent media, provides society with the access to uncensored information that enables it to hold governments accountable for their actions. It is also considered to be a universal human right that should be respected by all UN member States.⁶ The path-breaking *Human Development Report* of 1990 began with a definition of human development as a process of “enlarging people’s choices.” Such choices should be informed. The collapse of communism meant initially the collapse of press censorship and other means of government control over the access to information. Since the early 1990s, the culture of press freedom has developed unevenly in the ECE emerging economies (figure 1.5). While improving somewhat since the early 1990s in the NMS and South-Eastern Europe, the freedom of the press has deteriorated in Eastern Europe, the Caucasus and Central Asia.

Figure 1.5
Index of the freedom of the press, 1994 - 2011



Source: ECE calculations based on Freedom House data.

Note: The index of the freedom of the press provides numerical ratings for 196 countries and territories. Countries are given a score from 0 (best) to 100 (worst). The status of press freedom is considered to be free, partly free or not free if the index ranges between 0-30, 31-60 and 61-100 respectively.

⁵ A significant rise in homicides in early 1990s, followed by partial declines occurred in most former Soviet republics, except in Turkmenistan and Uzbekistan. See World Bank (2011), *World Development Report 2011*, Washington, D.C., p. 102.

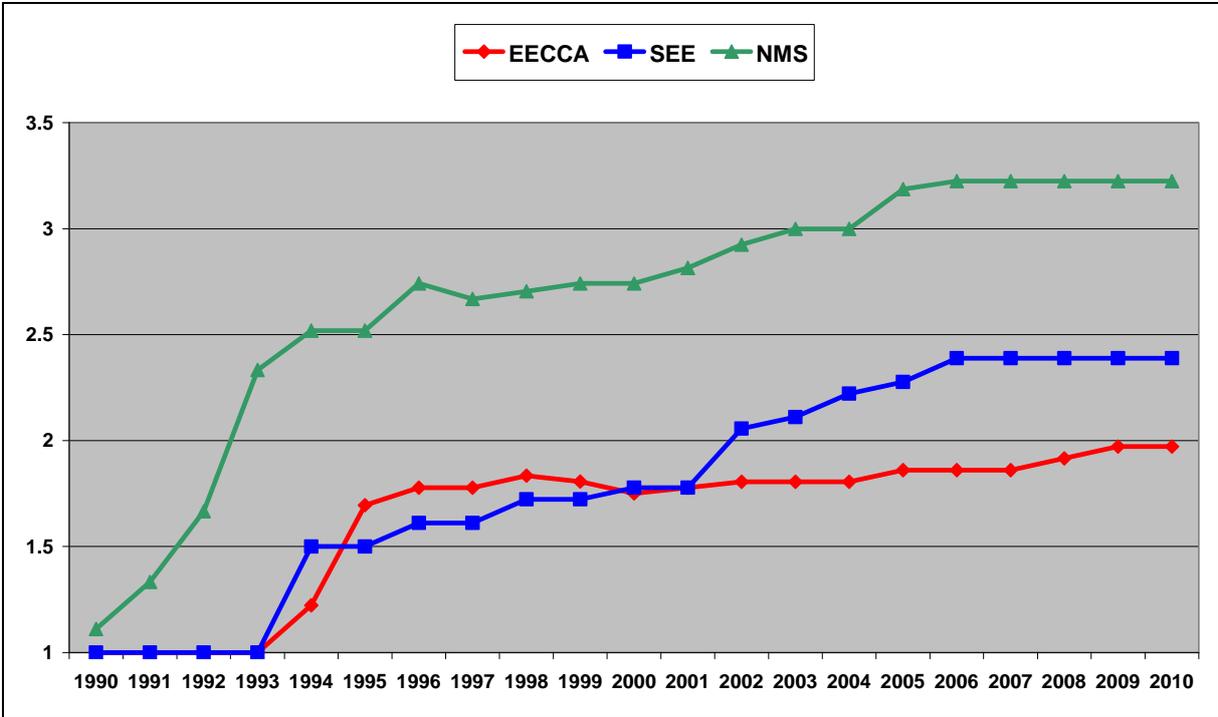
⁶ Article 19 of the Universal Declaration of Human Rights states that everyone has the right to freedom of opinion and expression; this right includes freedom to hold opinions without interference and to seek, receive and impart information and ideas through any media and regardless of frontiers.

In fact, three EECCA countries (Belarus, Uzbekistan and Turkmenistan) are among the ten worst performers in the world. On the other hand, three EECCA countries with partly free press (Georgia, Moldova and Ukraine) have press freedom scores that are closer to the SEE average than the EECCA average and place them in the same category as Bulgaria, Italy or Romania. The best NMS performer, Estonia, shares the twenty-third place in the most recent press freedom ranking with Costa Rica and Jamaica. The top three press freedom performers are Finland, Norway and Sweden, high-income Scandinavian countries with high HDI scores.

The economic restructuring in transition economies has correlated with the institutional changes described above. Generally, enterprise reforms have started earlier in the NMS than in the EECCA and SEE countries (figure 1.6). Since the mid-1990s, the enterprise restructuring index trended upwards in all three sub-regions. In the early 2000s, the pace of restructuring in the SEE picked up while remaining moderate in EECCA countries. Since the mid-2000s, the business governance gaps between the three sub-regions have remained quasi-constant. Other indices of economic restructuring, compiled by the European Bank for Reconstruction and Development (EBRD) to measure the progress of reforms in product markets, foreign trade and major infrastructure sectors, show similar trends.

The continued enterprise restructuring as well as continued improvements in governance are needed for further MDG progress in the region. Recent revolutions in Arab countries demonstrate that MDG progress without government accountability does not guarantee social stability. A genuine freedom of the press seems to be a necessary condition for sustaining this progress and reaching high levels of human development.

Figure 1.6
Index of enterprise restructuring



Source: ECE calculations based on EBRD data.

Note: The enterprise restructuring index ranges from 1 (soft budget constraints) to 4+ (standards and performance typical of advanced industrial economies). The SEE sub-region does not include Turkey. The NMS sub-region does not include the Czech Republic.

The development agenda beyond 2015 is likely to surpass the MDG framework. This framework has provided a set of globally agreed goals forming a clear, simple, prioritized and feasible agenda for action. However, the MDG project does not comprise the full spectrum of development, focusing instead on critical aspects of social welfare and aiming at overcoming the most acute forms of deprivation embracing both income and other human development dimensions.

A number of gaps in the set of MDGs have become obvious with the assessment of their progress and of the impact of new challenges on global development. Increasing realization of the threats to humankind posed by climate change necessitates more urgent action to mitigate the impact of human activity on environment and to design climate resilient development models. In addition, human development goals will need to be formulated in terms of sustainably attaining certain levels, rather than reaching them by 2015.

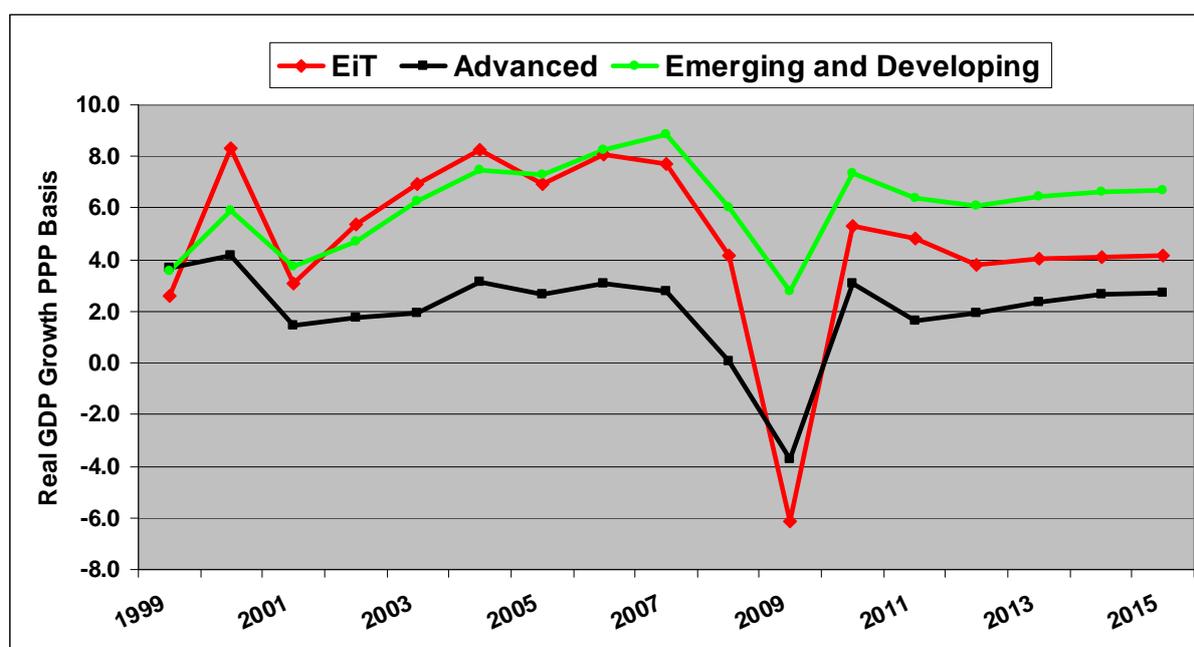
Middle-income countries account for more than 80 per cent of population in the 29 ECE emerging economies. Following the most recent World Bank classification, middle-income countries can be defined as those with per capital gross national income (GNI) in the range of \$1,006 to \$12,275. Only two ECE countries (Kyrgyzstan and Tajikistan) have per capita GNI below the middle-income threshold. This report shows that progress towards MDGs has been particularly fragile in these two low-income countries and also in another six lower middle-income countries of the region (Armenia, Georgia, Moldova, Turkmenistan, Ukraine and Uzbekistan). By contrast, seven ECE countries, including six NMS and Croatia, have per capita GNI above \$12,275 and can be considered high-income countries that have achieved or are close to achieving most of the MDG targets.

At its sixty-fourth session in 2009, the UN General Assembly recognized that middle-income countries still faced significant challenges in their efforts to achieve the internationally agreed development goals. A recent report of the Secretary-General on the development cooperation with middle-income countries (A/66/220) notes that despite the progress achieved on the MDG front, these countries “continue to face significant development and capacity challenges in such areas as governance, social inclusion, human rights violations, elimination of disparities, vulnerability of trade, external financing shocks, technology development and transfer, and adaptation and mitigation to tackle the challenges of climate change.” A coherent post-2015 development strategy of the United Nations system for middle-income countries remains to be elaborated in close cooperation with member States. The specific nature of development challenges in Emerging Europe and Central Asia, described in this report and other regional studies, implies that the strategy for middle-income countries should define regional strategic priorities and identify adequate means for achieving them.

II. THE MACROECONOMIC CONTEXT

The after-effects of the Great Recession of 2008-2009 continue to dominate the economic prospects of the pan-European region in 2011. By mid 2011, despite two years of economic recovery, national income levels in most of the ECA economies were only slightly above their peak levels (generally in 2008) prior to the crisis. The economic decline during the crisis varied considerably with the European emerging economies more seriously impacted than those in Central Asia; but overall the region was one the most negatively affected in the world. Essentially it has taken two years of fairly robust recovery in 2010 and 2011 to make up for the very large declines in 2009. As shown in figure 2.1 the EiT were growing as fast as the average of the world's developing and emerging economies and much faster than the advanced economies in the five year period prior to the Great Recession. However, the decline in GDP in 2009 was over twice that of the developing and emerging economies (about 14 percentage points compared to 5.5 percentage points). In addition the forecast for 2011 to 2015 is for the EiT to grow at only about half of their pre-crisis rates while the forecast for the developing and emerging economies is for only a small decline. The medium run decline in forecast growth in the EiT is due to reduced capital inflows which will result in a slower growth of the region's capital stock.

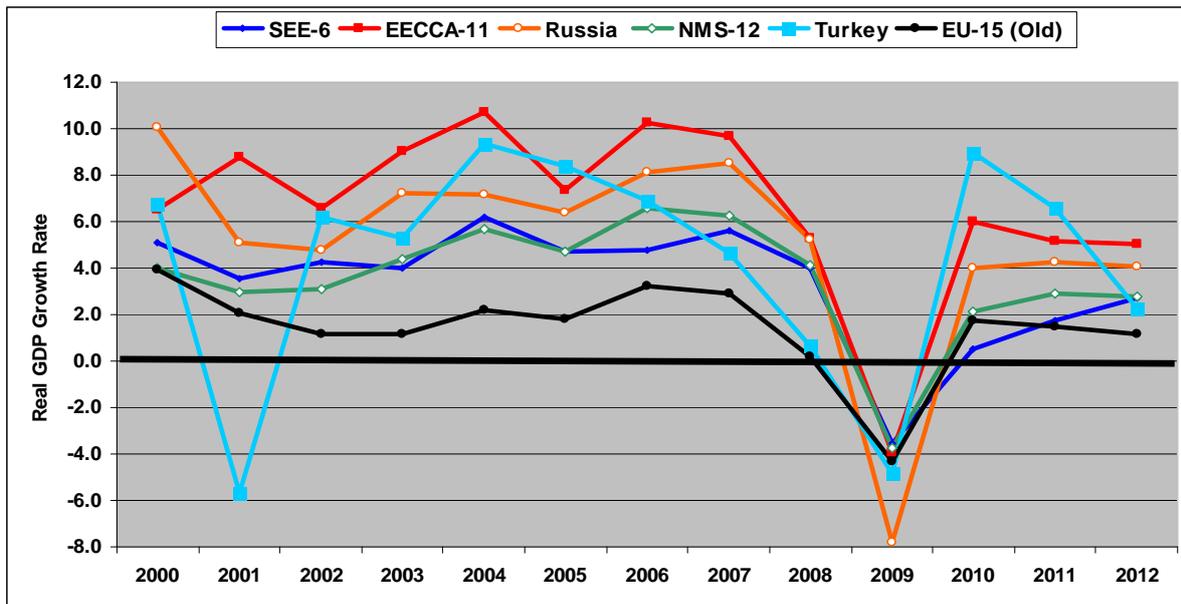
Figure 2.1
Real growth in major world regions 1999-2015



Source: ECE calculations based upon IMF WEO 2011 database.

Currently the growth performance of the world economy in 2011 can be roughly divided into three regions. The advanced economies of North America and Western Europe are growing at about 1.5 per cent, much of the rest of the world including Latin America, Africa, the Middle East, Central and South-Eastern Europe, and the EECCA are growing at about 5 per cent, and developing Asia at about 8 per cent. Perhaps a fourth region would be Japan which is likely to have negative growth in 2011. Thus at this very broad level, the ECA economies are performing at a level roughly similar to much of the rest of the developing world; their growth, however, is above that of the advanced economies but below that of the more dynamic Asian developing economies.

Figure 2.2
Real growth in the pan-European region



Source: ECE calculations based on data from the IMF WEO database.

In figure 2.2 the real growth rates of the major sub-regions of the pan-European area between 2000 and 2012 are provided; the rates for 2011 and 2012 represent the latest forecast. In the years prior to the crisis, the EECCA-11 (defined as EECCA minus Russia) was the fastest growing sub-region with an impressive average rate of almost nine per cent; the Russian Federation had a slower but still impressive rate of around seven per cent. Growth in the EU NMS and South-Eastern Europe was slower with each experiencing an average rate of over five per cent. The fact that they were growing at a roughly similar rate is somewhat surprising in that there may have been an expectation that EU membership would have provided more of a boost in growth for the NMS. Growth in Turkey was much more volatile during this period and it began the decade with a serious currency crisis. All of these emerging regions of the ECA, however, had much faster growth than the EU-15 (pre-2004 EU) which was one of the worst performing regions of the world during this period. The economic crisis reduced growth in all of these sub-regions in 2008 and all experienced significant negative growth in 2009. The strength of the recovery varied considerably in 2010 with the EECCA and Turkey bouncing back faster while South-Eastern Europe-6 (i.e. SEE minus Turkey) was barely able to achieve positive growth in 2010. In 2011 and 2012 the EECCA-11 are converging on growth of about five per cent while Russia is slightly lower at about four per cent. Growth in the NMS will be about a point lower at three per cent while South-Eastern Europe (without Turkey) growth will be even lower at about two per cent. Thus for each of these sub-regions growth in 2011 and 2012 is expected to be below the pre-crisis level. Therefore the crisis not only reduced the level of national income during the crisis but appears to also have reduced the annual growth rate after the crisis in all of the regions of the ECA. The EU-15 is also expected to have lower growth of under two per cent; in addition, its level of income also remains depressed from the pre-crisis trend.

Table 2.1
Growth comparison between the pre-crisis and crisis/recovery years

	2003-7 Annual Average	2007-2011 Annual Average	Total Growth 2007 to 2011	GDP Growth 2010	GDP Growth 2011
Turkey	7.3	2.6	10.8	8.9	6.1
SEE-6 (Ex Turkey)	5.5	1.0	9.4	0.6	2.3
EECCA-11	9.5	3.0	12.6	5.9	5.4
Russia	7.6	1.4	5.8	4.0	4.8
EiT	7.8	2.0	8.2	5.3	5.1
NMS-12	5.8	1.4	5.5	2.1	3.1
ECA	7.2	1.8	7.4	4.3	4.5
EU-15 (Old)	2.5	-0.2	-0.7	1.7	1.8
Emerging & Developing	8.0	5.6	24.5	7.3	6.5
World	5.0	2.9	12.1	5.0	4.4

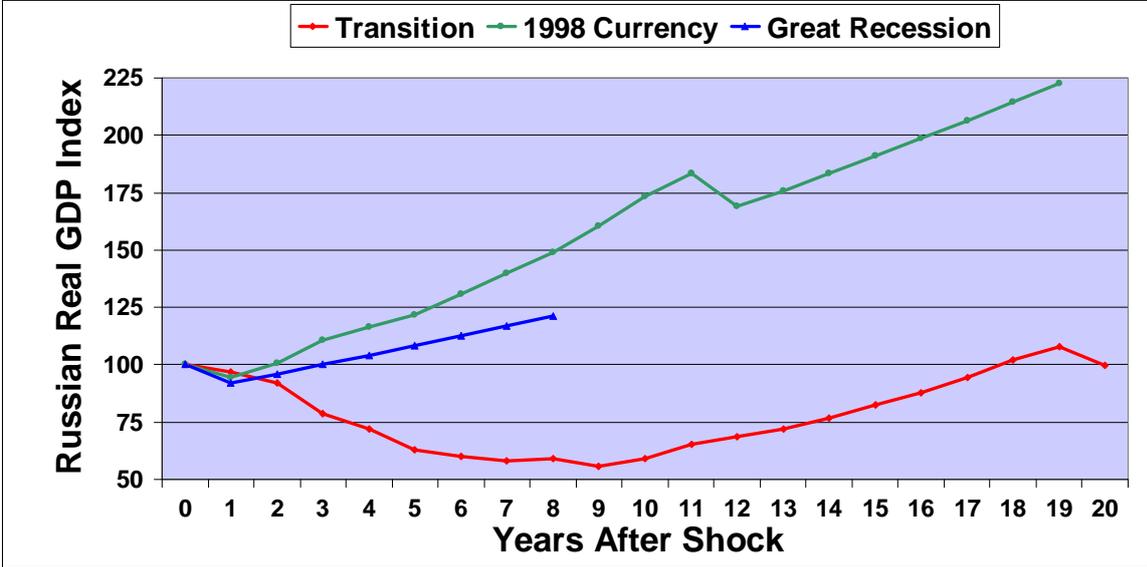
Source: ECE calculations based on data from the IMF WEO 2011 database.

Given that ECA economies entered the crisis at slightly different times, experienced it in different degrees of intensity and have had different recoveries, it is useful to have some summary measure to assess the overall effect of the crisis on these economies. In table 2.1 the average (using the compound growth rate) annual growth rate for the four years prior to the crisis (2003 to 2007) is compared to the four year crisis and recovery period (2007 to 2011); in addition the third column provides the total change in GDP over the last four years. Although there is some variation for the sub-regions of the ECA, the average annual growth rate during the crisis recovery period was only about one-fourth of what it was in the four years prior to the crisis. Thus the growth over the four year crisis period only amounts to about what growth averaged annually prior to the crisis. For instance, the ECA had grown at an average annual rate of 7.2 per cent during 2003-2007 but only grew that much over the entire 2007-2011 period. One way to look at this is that these economies have an income in 2011 at about the level they would have had in 2008 had the crisis never occurred. In this sense it is possible to conclude that these countries have "lost" three years of progress because of the crisis. For the world's emerging and developing countries overall, they had in 2011 the income that would have been expected in 2010 without the crisis. Thus they lost only one year. Therefore by this measure, the crisis was three times as severe in the ECA as it was on average in the world's emerging and developing countries. Overall the world lost a year and a half or only one-half of what the ECA lost. Note that for comparison purposes the EU-15 has yet to return to its 2007 level and is being forecast to do so only in 2012 so that it will lose five years of growth. Also note that in all five of the sub-regions of the ECA the recovery is not particularly robust as growth in 2011 is likely to be below the average for 2003-2007.

Figure 2.3 attempts to compare the extent of the Great Recession of 2008-2009 (in blue) with two other crises that have affected many of the transition economies over the last two decades. These two other crises were the transition recession of the 1990s (in red) and the Russian currency and sovereign crisis of 1998 (in green). The GDP of Russia is calculated as an index of 100 just prior to each crisis and the income in the years following the crisis is plotted out in the figure. As discussed above, it has taken three years for GDP to return to that prior to the

crisis following the Great Recession. As is clear from the table the Great Recession has been more severe than the Russian currency crisis of 1998 but not as catastrophic as the transition recession of the 1990s.⁷

Figure 2.3
Comparison of three Russian crises



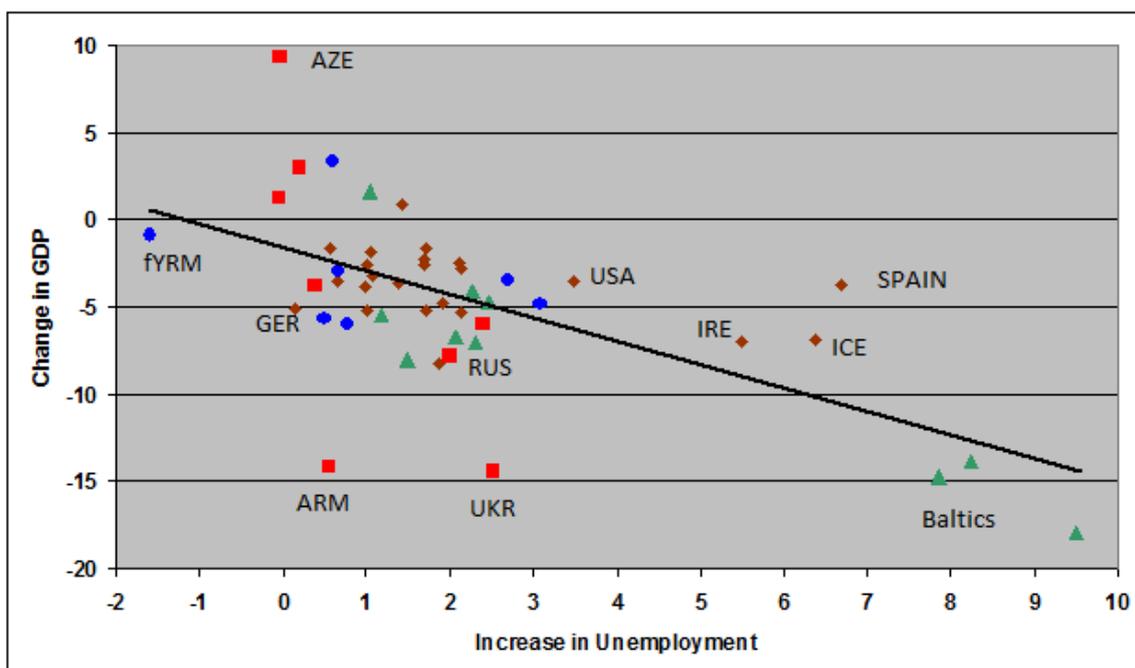
Source: ECE calculations based upon IMF WEO 2011 database.

There are two aspects to the crisis that are particularly important in ascertaining how it will impact the ECA countries' ability to achieve the MDGs over the next several years. Firstly if unemployment remains above pre-crisis levels despite GDP growth, then achievement of the goals could be impeded. The actual increases in unemployment during the peak of the crisis were not closely correlated with the declines in GDP. Figure 2.4 plots the increase in unemployment between 2008 and 2009 with the change in GDP over the same period for the pan-European economies. Clearly the Baltic economies suffered the largest declines in GDP and experienced the largest increases in unemployment. However there were some economies such as Armenia, Ukraine and Russia where the increases in unemployment were quite moderate given the large declines in GDP. This is the result of various labor market policies or characteristics of these economies and is discussed in more detail in chapter III. This tendency for unemployment to be less than what might be expected remains true as unemployment in many of the EiT economies has returned to pre-crisis levels although the level of income remains significantly depressed;⁸ this contrast with the situation in the advanced economies where lower national incomes are associated with significantly higher unemployment rates. Clearly the limited increase in unemployment has contributed significantly to limiting the impact of the crisis on poverty throughout the region.

⁷ Note that the current GDP forecast for years 2012-2016 is used to extend the Great Recession (in blue) line.

⁸ This is not to say that unemployment is low, in fact in many cases they are relatively high; however, they are not substantially higher than prior to the crisis.

Figure 2.4
Relationship between the change in GDP and unemployment during the crisis

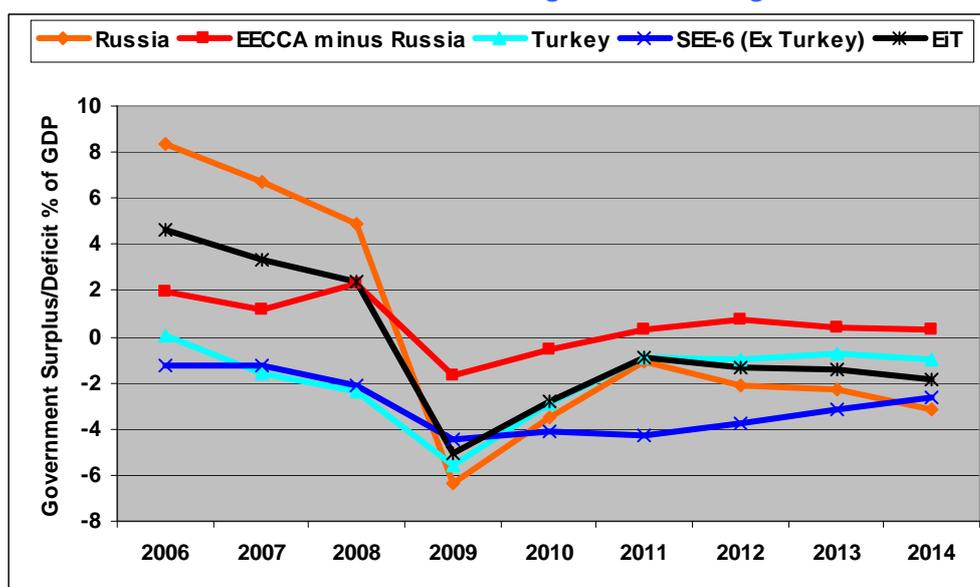


Source: ECE calculations based upon data from the IMF WEO September 2011 database.

Many of the ECA have had a problem with relatively high unemployment for a considerable period of time. Although the crisis increased unemployment in many cases these cyclical increases have been largely reversed by 2011. Given the importance of unemployment in affecting poverty as well as all of the goals, it has been given a specific target (1B) in the MDG framework and is therefore addressed in more detail in the next section under that target. The second factor concerns the degree to which the budget positions of the governments of these economies have been impacted by the crisis. The provision of social safety nets, education, public health, and low-cost housing, etc. are substantially dependent on governmental provision and a deteriorating budget position will likely reduce the degree to which these social objectives can be funded or at least the degree to which existing programs can be expanded or new initiatives undertaken.

The government fiscal positions for the five major sub-regions of the ECA for 2006 to 2014 are provided in figure 2.5; the values for 2011 to 2014 are current IMF forecasts. For the EiT overall the basic government balance has deteriorated from a surplus of over 4 per cent in 2006 to significant deficits in 2009 and 2010 and a forecast deficit of between one and two per cent over 2011-2014. This is driven largely by the deficits of the Russian Federation which had large surpluses prior to the crisis but is anticipating deficits of over two per cent of GDP for the next several years. The budget situation of the EECCA-11 has not changed appreciably as the small surpluses prior to the crisis are expected in the near term. The deficit of South-Eastern Europe is forecast to be slightly larger than before the crisis while Turkey's may be slightly smaller.

Figure 2.5
Effects of the economic crisis on the government budgets in the EiT



Source: ECE calculations based on data from the IMF WEO 2011 database.

Social programs and pensions in many of the EiT remain under pressure due to the need of governments to meet budget targets agreed to under IMF assistance programs. For instance, Serbia's deficit is currently significantly over its IMF target and this will constrain spending in the second half of 2011 although Serbia has already concluded its IMF program (in April 2011). Thus the governments' ability to finance new initiatives in Russia and South-Eastern Europe over the next several years will be constrained; however in the EECCA-11, which contains the region's poorest economies, governments may have some flexibility but in the two poorest economies, Tajikistan and Kyrgyzstan, government deficits will remain moderately large. However, in order to meet IMF commitments, the Ukrainian government will increase the retirement age for women from 55 to 60, increase the minimum number of employment years for pension eligibility from 20 to 30 years for women and 25 to 35 for men, and reduce the maximum pension from 12 times the official minimum wage to 10 times. Overall, although the budget situation is thus generally unfavorable for supporting significant new initiatives, it is also not so serious as to create a solvency issue that could lead to a crisis situation as currently in the periphery of the eurozone. However, for a few of the NMS and Turkey this conclusion must be qualified because of the short maturity structure of these countries' debt and their reliance on variable interest rates. This makes these countries vulnerable to a deterioration in the risk appetite in global capital markets; thus the budgetary flexibility of these governments is very dependent on the future stability of these markets. The major energy exporters remain overly dependent on historically high prices for energy exports for government finances as well as for the stability of their economies overall; thus they remain vulnerable to a negative terms of trade shock should world growth decline sufficiently to substantially depress global commodity prices. More generally, the deterioration in fiscal positions will lower the ability of these economies to respond to any global slowdown with addition fiscal expenditures; in this sense the region is more vulnerable to a global crisis than in 2008.

As the crisis of 2008-2009 demonstrated, the economic conditions in the advanced economies and the global economy more generally have a significant impact on the ECA economies. Global commodity prices are a major driver of growth in many of the EECCA and much of the ECA is dependent on access to and the stability of global capital markets. Thus the

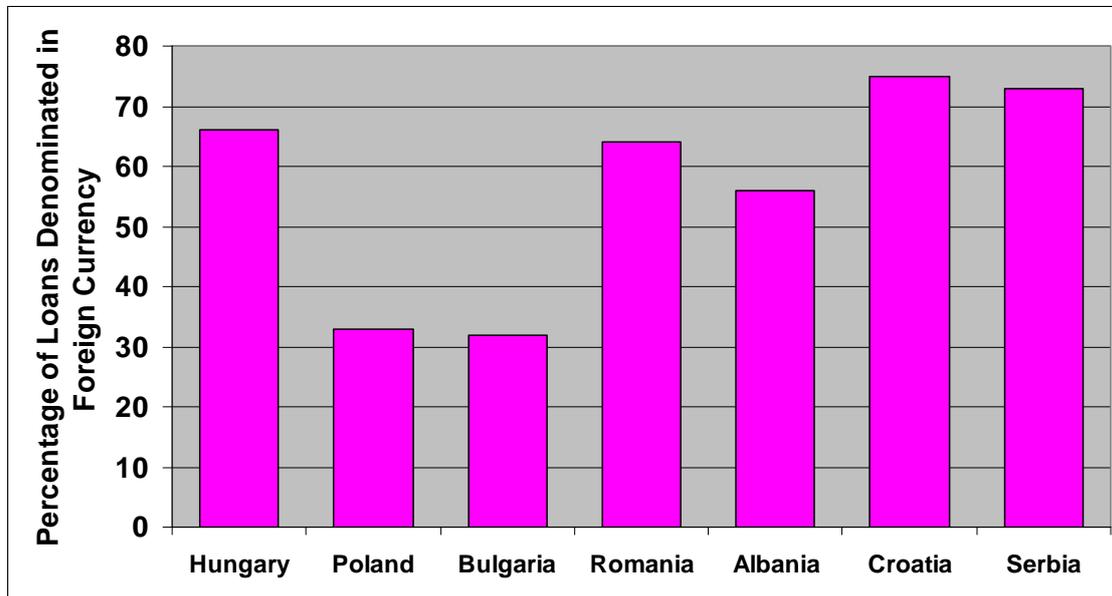
health of the ECA in 2012 and beyond will be substantially affected by the strength of the advanced economies and whether they can avoid a double-dip recession. Unfortunately economic policy in the advanced European economies and the United States has not been conducive to growth; in both cases policy makers appear to have replayed the mistakes of the 1930s as concerns about long-term debt levels took precedence over the need for short-run stimulus. What was needed was near-term stimulus combined with long-term consolidation but the political process was unable to generate this policy mix. In addition in the eurozone, policy makers have been reluctant to implement the policies and institutional arrangements necessary for a common monetary area and have been only willing to take the necessary minor expedient steps to avoid immediate disaster. As a result these economies have entered a vicious cycle where low growth has depressed tax revenues which has led to further consolidation and thus even lower growth. Although monetary policy has been expansionary, especially in the US, the advanced economies remain in a liquidity trap which has reduced the effectiveness of monetary policy. The subdued growth in the advanced economies has and will continue to impact the ECA through a number of channels. The low growth in Western Europe has reduced the growth of exports from the ECA as that is their largest export destination. However the debt concerns of the EU periphery economies tended to depreciate the euro or at least keep it from rising against the US dollar which was also under pressure to decline. This has impacted the ECA countries differently depending on their exchange rate policy and the degree to which it is fixed or linked to the euro. Nevertheless, if uncertainty in financial markets increases further in the eurozone it will have additional negative implications for the ability of European emerging economies to maintain capital inflows. This would have particularly negative implications for those economies (i.e., Hungary, Poland, Romania, and Turkey) with a high ratio of external debt to current account receipts. As concerns have increased about the solvency of eurozone periphery debt, concerns about the viability of Western European banks that hold much of this debt has also increased. This has led to a tightening of credit conditions which is further weakening these economies. As these banks have significant operations in some of the EiT credit conditions in these economies may also tighten in the last half of 2011. If sovereign defaults in one or more of the eurozone economies result in a financial crisis, a critical factor for affecting contagion to the ECA will be the degree to which parent banks in Western Europe support their subsidiary operations in Central and South-Eastern Europe and in several of the EECCA such as Ukraine. Unlike the situation in 2008-2009, the governments in Western Europe may not be in a financial position to provide assistance.

In a number of the economies in the NMS and SEE, foreign currency denominated loans account for a sizable percentage of loans; this presents a potential vulnerability if these foreign currencies should appreciate relative to their domestic currencies (see figure 2.6). These loans are particularly risky for unhedged households since unlike exporting businesses their income is usually denominated entirely in domestic currency; those with access to remittances from abroad being an exception. Several economies, mostly EU NMS, have been negatively affected by the steep appreciation of the Swiss franc which proved to be a safe-haven currency during the economic turmoil of 2011. In these economies there were a substantial number of foreign currency loans (especially mortgage loans); these had been taken out due to the fact that they had lower interest rates than domestic currency loans and residents anticipated (incorrectly in retrospect) that domestic currencies would appreciate against the euro and Swiss franc.⁹ The interest rates on Swiss franc loans were particularly low and as a result they were especially popular. Not only would monthly payments be lower for a given loan amount, but in addition this would allow the borrower to qualify for a larger mortgage. With the appreciation of the franc in

⁹ The banks also had some preference for issuing foreign currency denominated loans since they were obtaining their funds significantly from foreign sources and were thus able to transfer any exchange risks from themselves to their borrowers.

2011 the domestic currency value of these loans and the monthly payments have increased substantially.

Figure 2.6
Percentage of foreign currency denominated loans, 2010



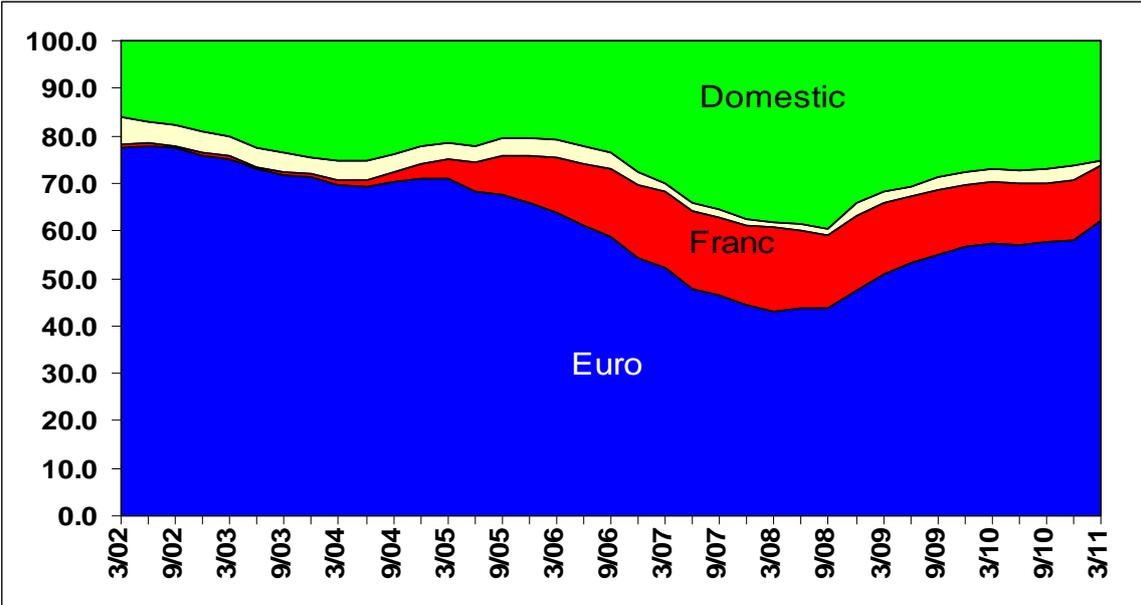
Source: Fidrmuc, Hake, and Stix, *Households Foreign Currency Borrowing in Central and Eastern Europe*, Oesterreichische Nationalbank Working Paper 171, September 2011.

For example in Hungary in 2005, the Swiss franc rate for a home equity loan was 4.8 per cent while it was 17.6 per cent in Hungarian forint. As a result between January 2006 and January 2009 all of the net increase in Hungarian mortgages was in foreign currency. By 2011, approximately one million or well over one-half of all mortgages in Hungary were in francs and private sector franc loans were equivalent to 20 per cent of GDP. Due significantly to franc appreciation, by November 2011 approximately 100,000 households were 3 or more months behind in their mortgage payments. In Poland 700,000 or over half of total mortgage loans outstanding were denominated in francs and as a result over a quarter of these loans (or one half of those issued in 2006-2008) were underwater in 2011. In Croatia three-quarters of all loans are denominated in foreign currency and over 40 per cent of housing mortgages and almost 50 per cent percent of car loans are pegged to the Swiss currency (figure 2.7). In some economies foreign currency loans are also widespread for commercial loans and in some cases even local government loans. The appreciated Swiss franc has dampened household spending through wealth effects and by draining spending power from households who must pay higher monthly payments in domestic currency; this has reduced aggregate demand at a time when unemployment is already high. In Hungary the government has felt compelled to assist home owners with foreign currency loans. Since government financial assistance would have worsen their already precarious fiscal position a decision was made to allow the lenders to pay back their loans at below market exchange rates (180 forints to the franc versus the market rate which was about 235 in the fall of 2011) and force the banks to accept the losses.¹⁰ In October 2011 alone, over 29,000 mortgage holders took this option and it is anticipated that several hundred thousand more will do so by the end of the program in February 2012. Requiring banks (including several foreign ones) to accept losses estimated to be of several hundred million dollars will undoubtedly reduce the investment climate and potentially reduce Hungarian growth in the future. The

¹⁰ A similar option was made available for those with euro (250 forint/euro) and yen (2 forint/yen) denominated loans.

European Central Bank has concluded that this program could potentially weaken the stability of the banking system; and in light of the fact that 60 per cent of the Hungarian banking system is foreign owned, the legality of the law under EU rules was also raised.¹¹ In addition, for those economies with flexible exchange rates, the existence of large numbers of foreign currency denominated loans limits significantly their ability to depreciate their exchange rates; depreciation could provide an important mechanism to stimulate their economies.

Figure 2.7
Foreign currency loans in Croatia, 2002-2011



Source: Data from the Croatian National Bank.

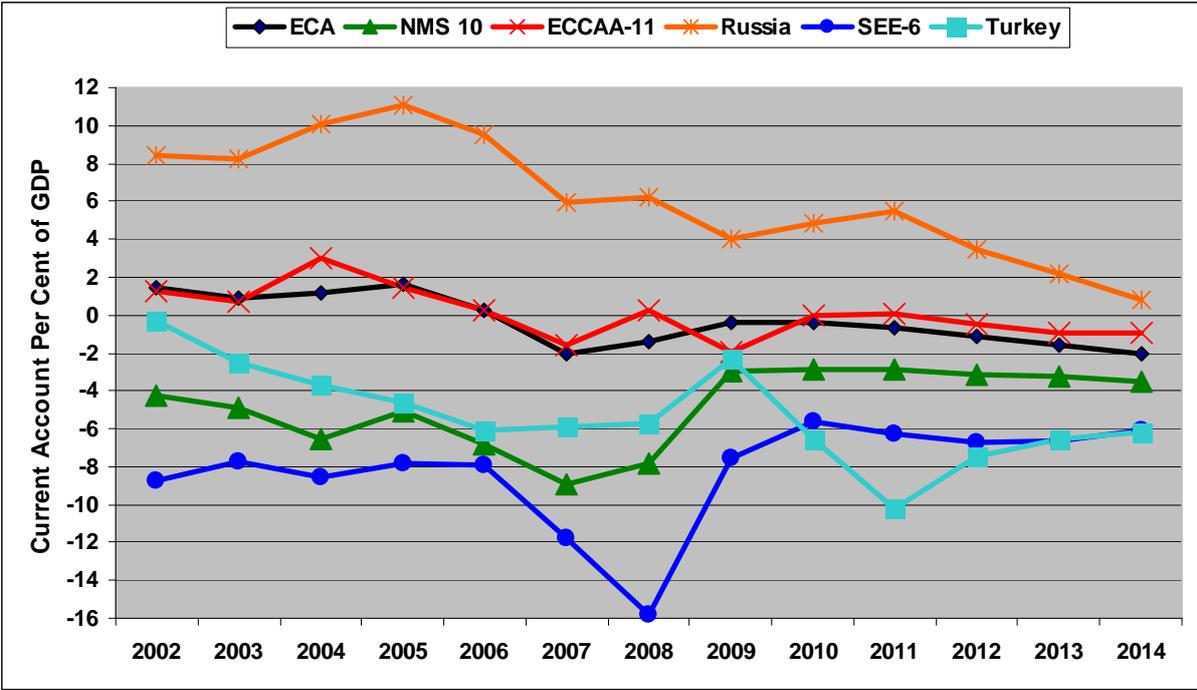
Despite these risks associated with foreign currency loans, a number of the economies in the region have continued to increase their degree of dollarization (or euroization). For example, the share of total foreign currency deposits of total deposits in the domestic banking system was higher in 2010 than in 2007 in Hungary and Romania and about the same in Russia. Although many (but not Russia) of the countries have increased their international reserves relative to their levels in 2007, it is also the case that the ratio of foreign currency deposits to foreign exchange assets (official foreign exchange reserves and foreign assets of domestic banks) has increased; thus this vulnerability is greater today than even before the crisis. Also, Turkey's current (2010) ratio of external debt to current account receipts of almost 185 per cent is particularly large by international standards and thus worrying.

One of the major vulnerabilities of this region prior to the 2008 crisis was its dependence on foreign capital for financing its development; this was the key reason the region was the most negatively impacted in the world by the crisis. During the crisis, capital inflows, even FDI inflows fell significantly and they have not recovered nor are they expected to recover to their pre-crisis levels for several more years. The policy response to the decline in capital inflows was also significant in explaining the severity of the crisis. Those economies that allowed their exchange rates to depreciate were able to mitigate some of the demand shortfall with larger exports. Those that maintained their exchange rates did not get this demand boost; of this group, those that had

¹¹ European Central Bank, *Opinion of the European Central Bank on foreign currency mortgages and residential property agreements*, (CON/2011/87), November 4, 2011. Although the ECB raised the issue of the program's legality, it concluded it was not its jurisdiction to make such a determination.

abundant international reserve assets (or were able to borrow new reserves from the IMF) were able to limit the degree to which income had to be reduced to balance the trade account. Those fixed exchange rate economies with minimal reserves or those with currency boards were forced to further contract their economies and were therefore the most severely impacted. As discussed, those flexible exchange rate economies with sizable amounts of foreign currency denominated loans were generally not able to take advantage of their currency flexibility.

Figure 2.8
Current account positions in the ECA as a percentage of GDP



Source: ECE calculations based on data from the IMF WEO 2011 database.

Capital inflows including net FDI remain depressed in the region (see the discussion under Goal 8). For example the ratio of net FDI to GDP has fallen from over 4 per cent in Poland in 2007 to only one percent in 2010; from over 2 per cent in Hungary to essentially zero, from just 5 per cent in the Czech Republic to just over 3 per cent, from 5.5 per cent in Romania to slightly over 3 per cent, from 0.5 per cent in Russia to zero, and from over 3 per cent in Turkey to 1 per cent (over the same years). As a result one of the main drivers of growth for the region is significantly subdued from recent historical experience. Therefore the region will be dependent on finding alternative drivers for growth in the coming years. Clearly increased exports will have to replace foreign financed domestic investment. As shown in figure 2.8, although the large current account deficits of the region prior to the crisis have been significantly reduced (as this is the flipside of reduced capital inflows) especially in the NMS, they remain excessively large in a few economies such as Montenegro which had a current account deficit of almost 25 per cent of GDP in 2010 and it is expected to stay large for the next several years. In addition, in many cases the current account adjustment has come from income reducing policies and not from income switching policies, thus the deficits could reappear once the recoveries are more firmly established. Therefore unit labor costs will need to be reduced in order to restore competitiveness; where possible this can be achieved through exchange rate adjustments but mostly it will depend on wages growing slower than productivity.

Given that the ECA was so negatively impacted during the Great Recession of 2008-2009, it is to be expected that the region would have relied heavily on assistance from multilateral financial institutions for support. As of July 31, 2011 the ECA economies had a credit outstanding balance of over 37.3 billion SDRs (\$59.7 billion or €41.8 billion) with the IMF. This represents almost half (46.2 per cent) of the total loans outstanding with the IMF. Of this, 18.1 billion SDRs or approximately one-half (or one-quarter of the world total) were outstanding loans to the EiT. The vast majority of this assistance was provided under the General Resources Account (GRA) with only limited amounts under the Poverty Reduction Growth Trust (PRGT). The largest borrowers are Romania, Ukraine and Hungary. In addition the ECA has another 31.9 billion SDRs potentially available from undrawn accounts subject to satisfying loan commitments. Over half of this is a precautionary credit line for Poland which has yet to be used at all; Ukraine and Romania also have over a billion SDRs of undrawn resources.

Table 2.2
IMF Credit, outstanding and undrawn for ECA

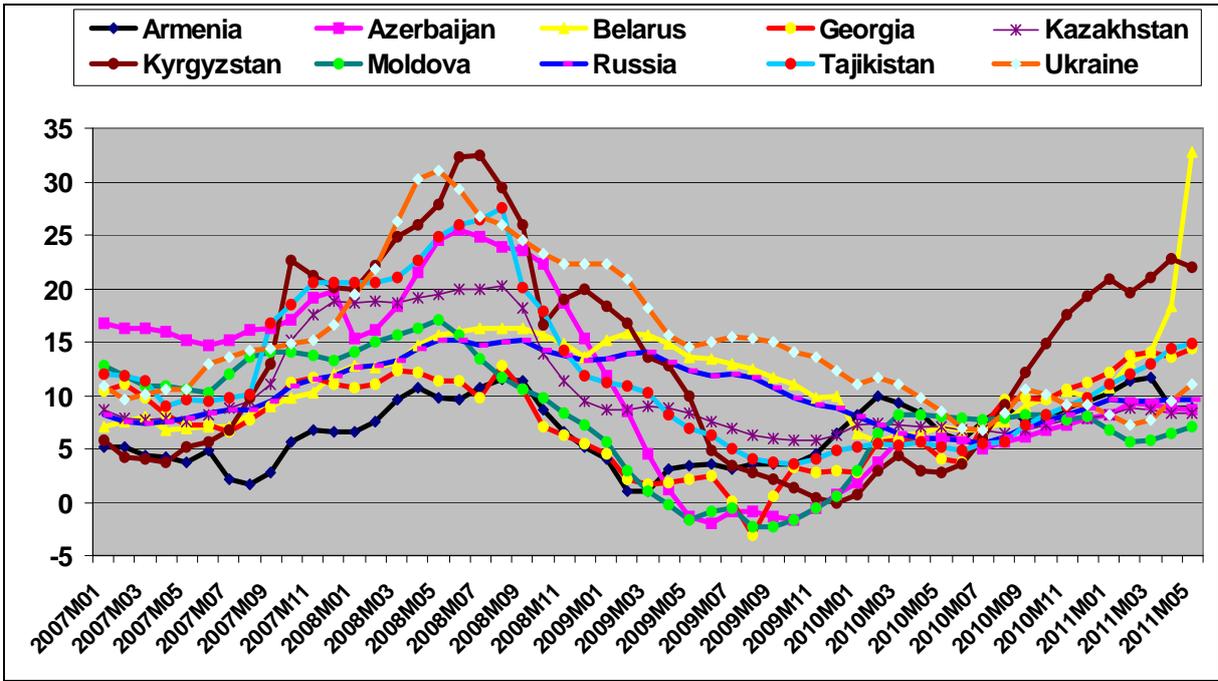
	GRA	PRGT	Total Outstanding	Available Undrawn
Albania	8.1	24.1	32.2	0.0
Bosnia & Herzegovina	338.2	0.0	338.2	676.0
UNMIK/Kosovo	18.8	0.0	0.0	74.0
Serbia	1,367.7	0.0	1,367.7	0.0
The fYR of Macedonia	197.0	0.0	197.0	216.0
Turkey	2,966.7	0.0	2,966.7	0.0
SEE	4,896.5	24.1	4,901.9	966.0
Armenia	402.9	106.7	509.7	158.0
Azerbaijan	0.0	22.2	22.2	0.0
Belarus	2,269.5	0.0	2,269.5	0.0
Georgia	577.1	92.2	669.3	0.0
Kyrgyz Republic	0.0	112.6	112.6	57.0
Moldova	80.0	229.8	309.8	150.0
Tajikistan	0.0	78.3	78.3	26.0
Ukraine	9,250.0	0.0	9,250.0	7,750.0
EECCA	12,579.5	641.9	13,221.4	8,141.0
Hungary	7,637.0	0.0	7,637.0	0.0
Latvia	982.2	0.0	982.2	539.0
Poland	0.0	0.0	0.0	19,166.0
Romania	10,569.0	0.0	10,569.0	3,091.0
NMS	19,188.2	0.0	19,188.2	22,796.0
EiT Total	17,476.1	666.0	18,123.3	9,107.0
ECA Total	36,664.3	666.0	37,311.5	31,903.0

Source: ECE calculations based on IMF data.

Note: In millions of SDRs, as of July 31, 2011.

Inflation in the EiT is moderate. In recent years, inflation in the EECCA (figure 2.9) has been higher than in the advanced economies and has fluctuated around about 10 per cent. Inflation rates increased considerably just prior to the crisis during the 2008 global commodity boom with rates exceeding 30 per cent in Kyrgyzstan and Ukraine. Inflation rates declined significantly during the worst phase of the Great Recession in 2009 with actual deflation for a short period in Azerbaijan, Georgia, and Moldova. With the recovery, prices have been slowly increasing during 2010 and 2011, with inflation rates averaging about 10 per cent which was their general level prior to the crisis in 2007. Projections suggest that inflation will stay in this general range for the next few years. There is not much difference between Russia and the EECCA-11 average; however within the EECCA-11 inflation has generally been somewhat higher in those economies whose currencies depreciated during the crisis. Also it is currently higher in the poorest of these economies as they are more severely impacted by the global price increases for food and commodities since these products account for a greater percentage of consumer budgets in these economies. Both Kazakhstan and Russia were able to eliminate their export restrictions on grain on July 1, 2011 due to an expected large harvest; this should put some downward price on wheat prices in the coming year.

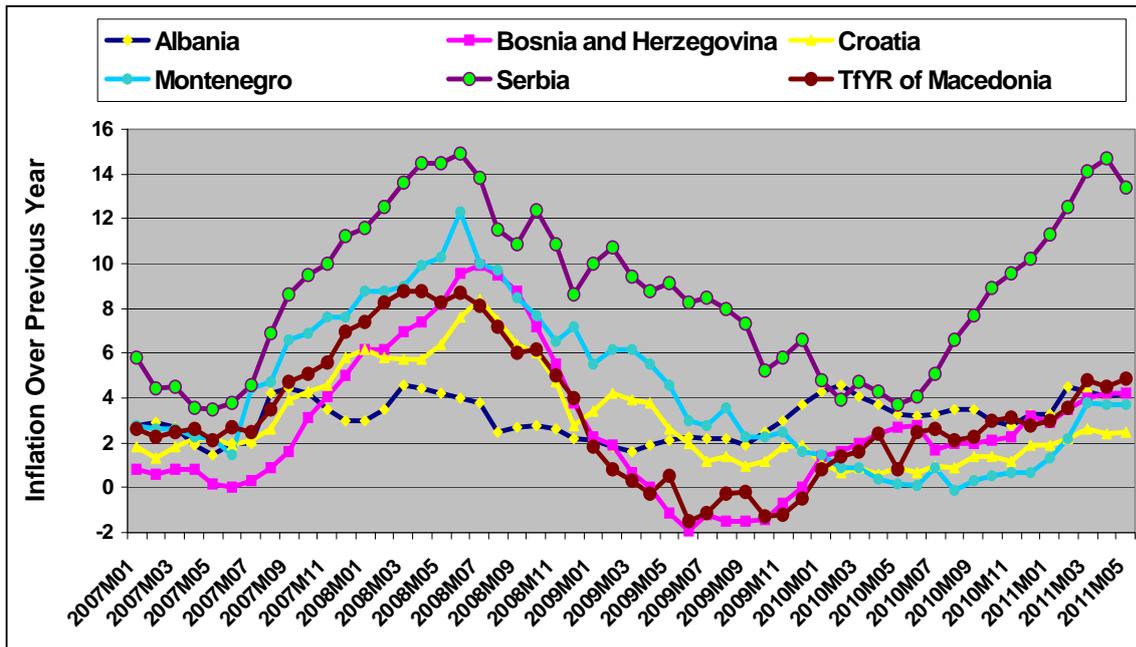
Figure 2.9
Inflation in the EECCA, 2007-2011



Source: ECE secretariat.

In South-Eastern Europe there is considerable variation in inflation rates but they are generally higher than those in Western Europe but still in the single digits (figure 2.10). Given that four of these economies (Bosnia and Herzegovina, Croatia, Montenegro, and the former Yugoslav Republic of Macedonia) have currencies linked to the euro, inflation has been anchored somewhat to that in the eurozone. Inflation has been higher in Serbia (which has a flexible exchange rate) over the last several years and is likely to be about 10 per cent for 2011; as a result the government has banned wheat exports as a temporary measure to moderate food price increases.

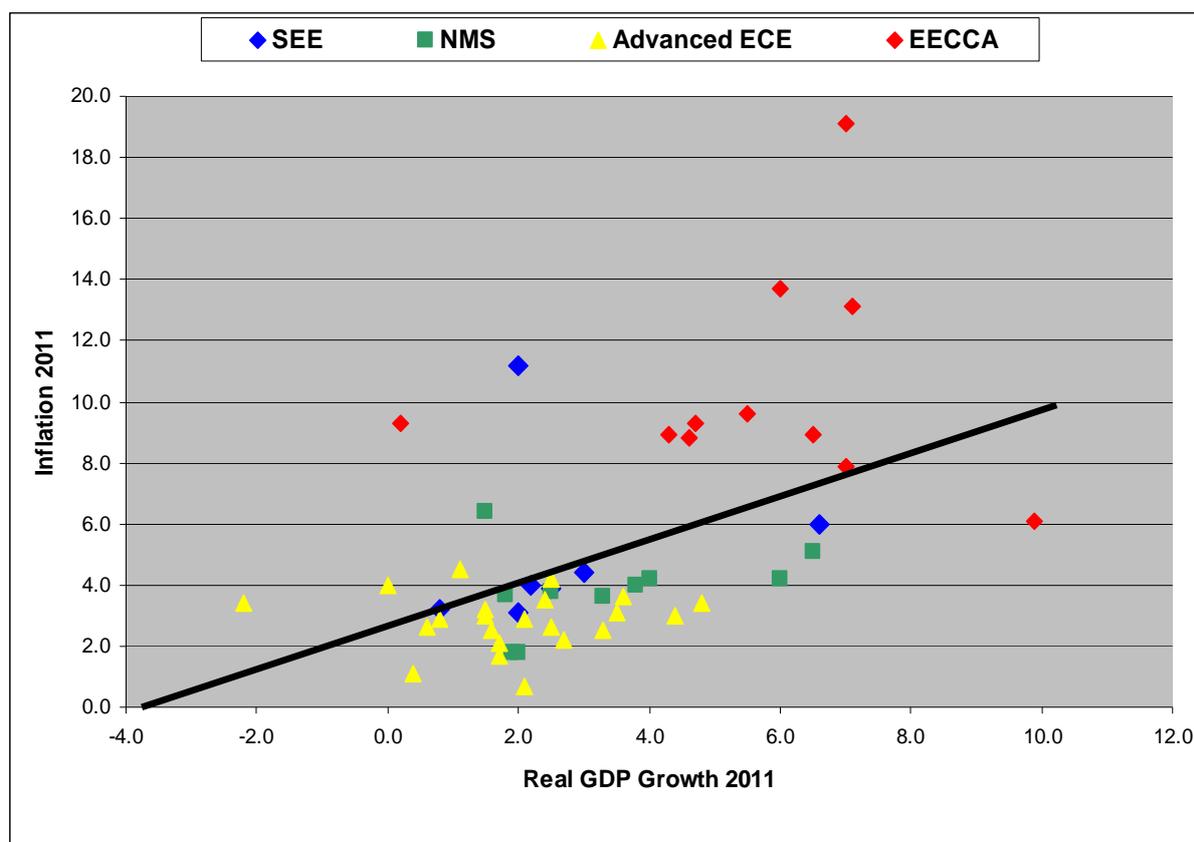
Figure 2.10
Inflation in South-Eastern Europe, 2007-2011



Source: ECE secretariat.

Inflation rates in the NMS are closely tied the rate in the eurozone (either formally or informally) but generally these economies are likely to have rates about one or two per cent higher than the eurozone. Estonia, Slovakia, and Slovenia are in the eurozone while Bulgaria, Latvia, and Lithuania have exchange rates fixed to the euro. Although the Czech Republic, Hungary, Poland, and Romania have more flexible rates the euro rate remains an important reference point and undoubtedly significantly influences monetary policy. The ECB has an inflation target of about two per cent, but the actual inflation rate in the eurozone is forecast to 2.5 per cent in 2011 or about a half point above the target. The inflation rate in the US is predicted to be about 3.0 per cent in 2011. These inflation rates reflect primarily "imported" inflation from higher global commodity prices and have not become ingrained into household inflationary expectations or wages increases. As a result they reflect a one off increase in the price level and therefore inflation is expected to decline to rates below central bank targets in 2012. Nevertheless, for the ECE region, the inflation rate is closely tied to the growth rate; those economies growing faster have faster inflation. The regression line in figure 2.11 is statistically significant and has a slope of .74 which means that each increase in the growth rate of one per cent increases inflation by .74 of a percentage point. As shown in figure 2.10, relative to the advanced economies, the transition economies have faster growth of GDP but also higher inflation; this is even more the case for the EECCA than the SEE or NMS. In the early part of 2011 central banks in the floating NMS economies were beginning to tighten monetary policy as solid growth was raising inflationary pressures; however, this trend ended after it became apparent in the summer that growth in the NMS, the eurozone and US and even globally was decelerating.

Figure 2.11
Growth and inflation in the ECE Region



Source: ECE calculations based on IMF WEO 2011 database.

Note: Belarus dropped from the sample.

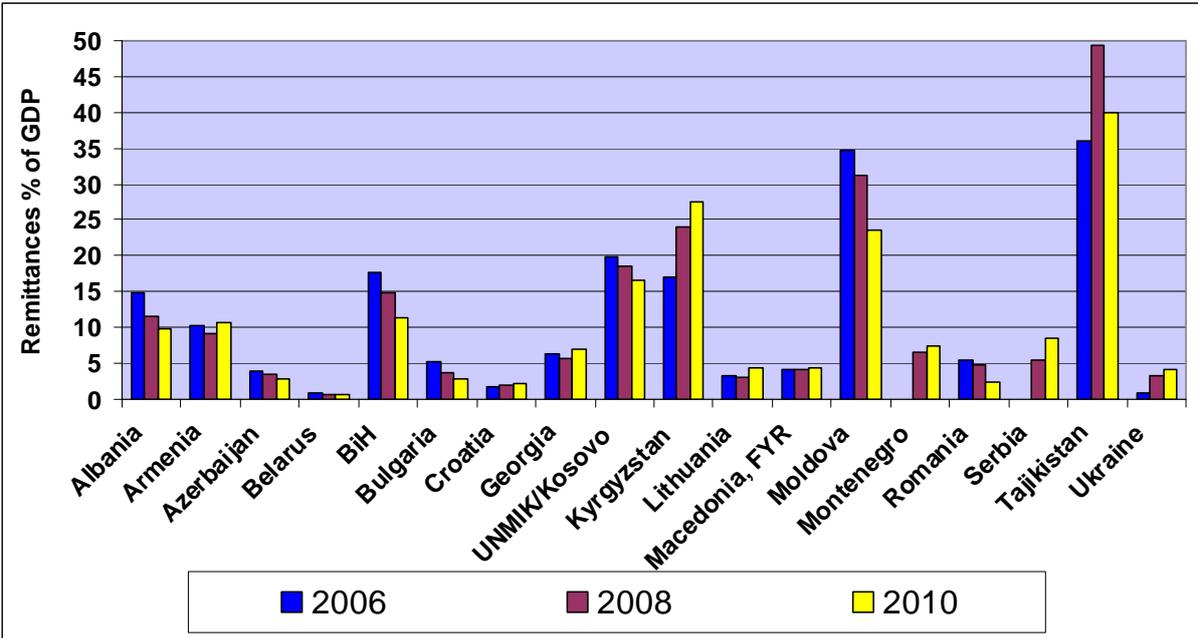
In the first half of 2011, Belarus experienced a currency crisis and sizable depreciation due to its large current account deficit (15.5 per cent of GDP in 2010) and declining international reserves which fell 38 per cent y-o-y by March 2011. The crisis was rather typical in that Belarus had experienced a deterioration in its terms of trade due to higher prices for Russian energy and the Belarusian government had boosted social security spending prior to the 2010 presidential election. Both of these developments made the exchange rate unsustainable but the authorities did not initially depreciate the currency. As a result the current account deficit was allowed to increase through 2010 since the government was able to finance it with IMF borrowing. In 2011 Belarus also benefited from a \$3 billion loan from a EurAsEC crisis fund. Ultimately they were forced to depreciate the currency and this led to a rapid increase in prices with 2011 inflation forecast to be 41 per cent. (For this reason Belarus is dropped from Figure 2.11.) Despite this crisis, economic growth has not been substantially impacted and is forecast to be almost 5 per cent in 2011. Financial conditions in many of the economies remain fragile and the level of non-performing loans is elevated in several. For example four Uzbek state owned banks had their Fitch credit rating lowered to B- in June 2011.

Remittances are a major source of revenue for many of the EiT.¹² Moldova and Tajikistan have some of the highest ratios of remittances to GDP in the world. Remittances fell quite significantly during the peak of the economic crisis. The decline was especially large in the CIS

¹² Robert Shelburne and Jose Palacin, Remittances and Development in Transition Economies, in Robert Vos and Malinka Koparanova (ed.), *Globalization and Economic Diversification: Policy Challenges for Economies in Transition*, Bloomsbury Press, 2011, ISBN 9781849665391.

countries, in particular in those where the significance of remittances is higher. Comparing 2009 to 2008, remittances shrank by 36 per cent in Moldova, 28 per cent in Kyrgyzstan and 31 per cent in Tajikistan. Given the rapid rate at which remittances had been growing, the declines from trend were thus considerably larger than these absolute declines. Remittances have increased significantly in 2010 and early 2011 but given the very large declines in 2009 inflows remain below 2008 levels for many economies. Figure 2.12 compares the percentage of remittances in GDP for 2006, 2008 and 2010; for the economies that are very dependent on remittances such as Tajikistan, Moldova, UNMIK/Kosovo, Bosnia and Herzegovina, and Albania remittances as a share of GDP in 2010 remained below pre-crisis levels. A notable exception has been the rapid growth of remittances into Kyrgyzstan which in 2010 had the second highest share (27.6 per cent of GDP) of remittances in the ECA.

Figure 2.12
Remittance flows of selected ECA economies



Source: ECE calculations based on World Bank data.

Remittances proved to be a channel for the transmission of the crisis rather than a factor of stability in these low income countries which generally had a very limited direct exposure to international capital markets. Previous research had generally concluded that remittances are a stabilizing influence because they are much less volatile than capital flows. This resulted from the fact that the crisis situations examined were often domestic with the result that capital inflows ceased while remittances often increased as more unemployed workers migrated to unaffected countries or those already abroad increased their transfers to help relieve the increased hardship at home. This global crisis however was centered abroad and was much deeper in the major migrant destination country Russia than in many of the peripheral migrant source countries of the CIS. Thus the economic situation during this crisis was significantly different from the situations that underlined this previous research; thus the fact that remittances tended to amplify the crisis in some of the migrant source countries should come as no surprise. The importance of the Russian Federation as a source of remittances had some additional implications; foremost was the fact that Russia was one of the world’s most negatively impacted economies. The sizable seasonal migration that was easily reversible and the sectoral specialization of migrants also explain the sharp reversal of remittances, which was further amplified by the devaluation of the rouble. The

dynamics of remittances during the crisis showed that the excessive geographical concentration of migrant flows remains a factor of vulnerability for the low income countries in the region.

III. MDG PERFORMANCE IN THE ECE REGION

GOAL 1: ERADICATE EXTREME POVERTY AND HUNGER

Target 1.A: Halve, between 1990 and 2015, the proportion of people whose income is less than one dollar and twenty-five cents a day.

Extreme poverty is defined in the broader MDG framework as living on less than \$1.25 (at purchasing power parity) a day. For most of the ECE emerging economies the percentage of the population living in extreme poverty is less than several percent. However in a few economies it is much higher; in Georgia and Turkmenistan the percentage is in the tens, while it is in the twenties in Kyrgyzstan and Tajikistan and almost 40 per cent in Uzbekistan. In the ECA region the proportion of people living at this level amounted to 2 per cent in 1990, increased during the transition recession in the 1990s and then declined to 3.7 per cent by 2005.¹³ By this standard, extreme poverty in Emerging Europe and Central Asia has increased since 1990, and in fact this region is the only one in the world in which the share of population in extreme poverty increased since 1990. In the EECCA region, the proportion of people living on less than \$1.25 has increased from 3 per cent in 1990 to 8 per cent in 1999 before declining to 5 per cent in 2005. Within the EECCA region, however, there are two distinctly different trends: in Eastern Europe, those living in extreme poverty accounted for 1.6 per cent of the population in 1990 but had fallen to less than half a per cent by 2005; in the Caucasus and Central Asia, however, those with incomes under \$1.25 a day amounted to 6 per cent of the population in 1990 and that increased to 22 per cent in 1999 and was still at 19 per cent in 2005.¹⁴

In SEE (excluding Turkey) extreme poverty increased from 0.1 per cent in 1990 to 2 per cent in 1999 before declining to 0.5 per cent in 2005. In Turkey extreme poverty has been eliminated by 2006.¹⁵ Recent UN projections estimate that the number of people in Europe and Central Asia living on less than \$1.25 increased by an additional one million in 2009 over 2008 levels.¹⁶ It is difficult to confirm these projections with the available official data. For instance, the extreme poverty rate reported by the Tajik statistical agency declined from 17.1 per cent in 2007 to 13.8 per cent in 2009.¹⁷ The poverty rate for 2008 was not estimated. According to the national MDG report, the inflow of remittances from Tajik workers employed abroad (mainly in Russia) declined significantly, falling from US\$2.7 billion in 2008 to US\$1.8 billion in 2009.¹⁸ The impact of the crisis on households was softened in 2009 by the international aid and a move towards self-sufficiency that increased domestic production of grains in response to the decline of cotton prices and rising prices of imported food.¹⁹ Nevertheless, the number of people living in poverty increased during the year before falling in 2010 when the pace of economic activity and the inflow of migrant's remittances picked up to about \$2.1 billion. In Kyrgyzstan, another low-income country of Central Asia, the remittances had a similar time pattern, falling from \$1.2 billion in 2008 to \$0.9 billion in 2009 and then increasing to over \$1 billion in 2010. According to

¹³ See United Nations, *Global Monitoring Report 2011*.

¹⁴ See United Nations, *The Millennium Development Goals Report 2010*.

¹⁵ See Turkish Statistical Institute, "Results of the 2009 poverty study," Press release, 6 January 2011.

¹⁶ United Nations, *World Economic Situation and Prospects*, New York, 2010.

¹⁷ Statistical Agency under President of the Republic of Tajikistan, *Food Security and Poverty*, No. 1, 2010, p. 126.

¹⁸ Republic of Tajikistan, *Millennium Development Goals: Tajikistan Progress Report*, 2010, p. 14.

¹⁹ For details, see H. Hemmings (2010), *The Effects of the 2008 Economic Crisis on Tajik Migrant Labor in Moscow*. Woodrow Wilson International Center for Scholars, Washington, D.C., p. 31.

official data, the national poverty rate in Kyrgyzstan remained unchanged in 2009 despite the decline in remittances. This probably reflects an increase in pensions and other cash transfers in early 2009.²⁰

The \$1.25 numerical target is viewed by many as an inappropriate standard of extreme poverty in transition economies due to their relatively urbanized environment and the extra food, shelter, heating and clothing expenses associated with living in a cooler climate. The World Bank has therefore proposed a higher standard of \$2.50 a day for defining extreme poverty; using this level the number of people in Emerging Europe and Central Asia living in poverty declined by more than half over the 2000 to 2007 period to approximately 30 million people. However, if the 2010-2011 high commodities prices persist, it is estimated that an additional 5.3 million people could be made poor (measured at the \$2.50 level) because of higher food and fuel inflation, increasing the rate of extreme poverty from 5.5 to 6.7 per cent. This would represent a stronger negative impact on poverty than the one due to the 2006-2008 price increases because it is happening at a time where Eastern European and Central Asian countries just begin to recover from the global economic crisis.²¹

Most governments in the region use national definitions of poverty that are adapted to local circumstances. However, the assessment of poverty trends based on national poverty lines is complicated by the limited availability of official data. Recent national poverty data are available at this time only for nine transition economies (see annex table 1A). These indicate that the social safety nets were rather effective in 2009 when the population below national poverty line increased only in three reporting countries, i.e. Armenia, Serbia and Turkey. Poverty declined noticeably in some resource-rich countries with fiscal space, including Russia that saw a significant increase of the pension and social assistance benefits during the crisis (figure 3.1). It also declined in Belarus, although this improvement may not be sustainable, given the vulnerable position of the Belarusian economy.

Although the official national poverty data for 2010 have not been released yet by most transition economies, the data available indicate that the *net* increase of the EiT population living in poverty amounted to some 2.5 million persons in 2010, reflecting to a large extent a sharp increase in poverty in Ukraine. This is comparable to the increase of absolute poverty in the United States in the same year.²² The ranks of the poor in the ECE region thus grew by at least 5 million in 2010. The actual increase was probably much higher but the exact number remains elusive, given the limited availability of data.²³ The underlying factors have included the persistently high unemployment in a number of the ECE advanced and emerging economies, reflecting both structural change and delayed job recovery (employment growth usually lags behind output growth). The proportion of long-term unemployment in total unemployment increased over the period 2007-2011 with the exception of Poland and Russia where it declined. The poverty outlook remains uncertain, given the continued below-trend growth in most economies of the region (see chapter II).

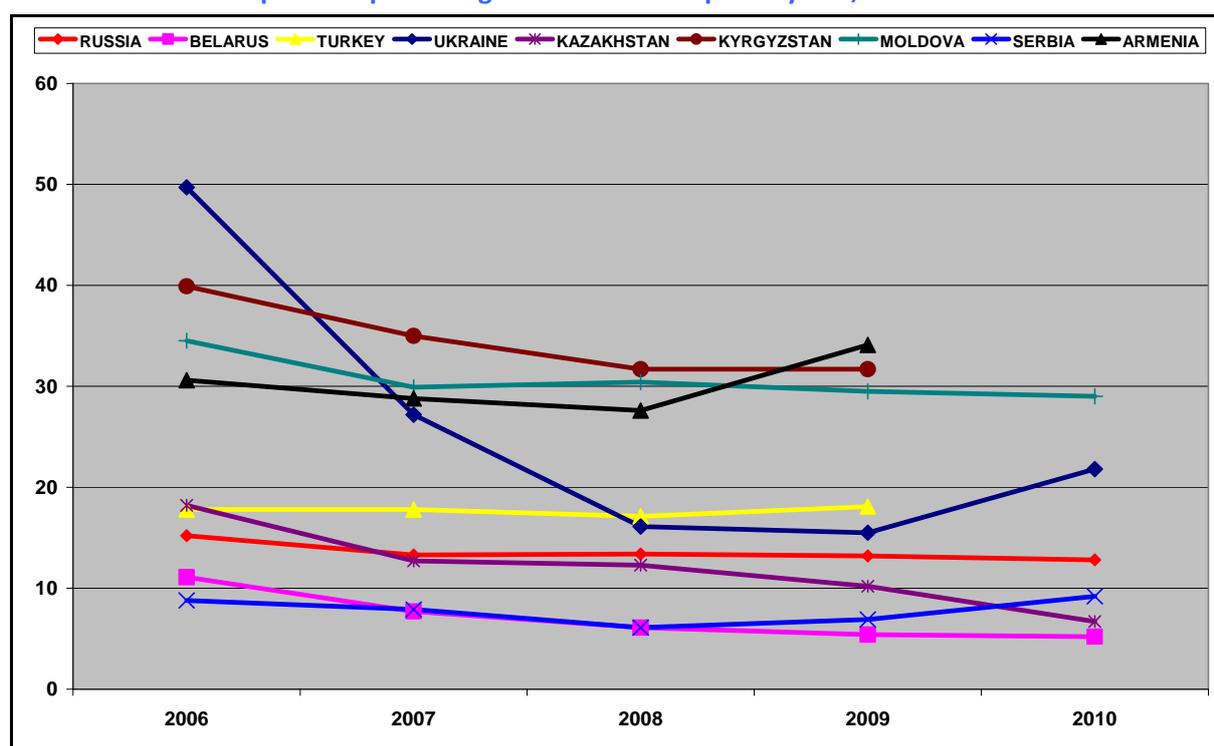
²⁰ See F. Gassmann (2011), "Protecting vulnerable families in Central Asia: Poverty, vulnerability and the impact of the economic crisis." *Innocenti Working Papers No. IWP-2011-05*.

²¹ For more details see The World Bank Europe and Central Asia Region (2011), *Rising Food and Energy Prices in Europe and Central Asia*, Washington.

²² For details, see U.S. Census Bureau, "Income, Poverty and Health Insurance Coverage in the United States: 2010." 13 September 2011 (http://www.census.gov/newsroom/releases/archives/income_wealth/cb11-157.html).

²³ No absolute poverty measures are available for the EU member States.

Figure 3.1
Population percentage below national poverty line, 2006 - 2009



Source: UNECE database and national statistical agencies.

Social policies protected households to some extent from the impact of the crisis on their living standards. Such policies included labour market measures, social assistance, social insurance and special programmes to ensure the access of poor population groups to education and healthcare.²⁴ In a number of ECE emerging economies, the most vulnerable population groups were supposed to be protected by IMF-supported programmes.²⁵ However, some of these countries have implemented so-called efficiency reforms that have restricted the access to social services and benefits while reducing employment and/or wages in the public sector. Generally, the poor were hit most by rising unemployment and forced to adopt some risky adjustment strategies, including cuts in discretionary expenditure on health and education. According to the available information, disadvantaged ethnic minorities have been injured by the crisis more severely than the majority population.

An additional measure of poverty, provided annually for the EU economies, estimates the percentage of population at risk of poverty as defined by having a disposable income below 60 per cent of national medium income. As shown in the annex table 1B, over the 1995 to 2009 period, these figures remain relatively stable except for some rather substantial increases in the Baltic States, Bulgaria and Romania, especially near the end of this period. By contrast, social transfers have kept the population at risk of poverty more or less stable in Central European countries and Croatia.

²⁴ For details, see World Bank (2011), *The Jobs Crisis: Household and Government Responses to the Great Recession in Eastern Europe and Central Asia*, Washington, D.C.

²⁵ The following ECE countries have adopted IMF-supported programmes that should protect social spending, including social assistance for the most vulnerable population groups: Armenia, Belarus, Bosnia and Herzegovina, Hungary, Latvia, Romania, Serbia, Tajikistan and Ukraine.

A substantial number of the poor in many of the transition economies are rural households and migrant workers. In the EECCA region, 31 million people have emigrated to work in another country, often another EECCA economy. In 9 of the 12 EECCA economies, more than 10 per cent of the population has emigrated. Due to the economic crisis remittances declined significantly, in some cases by more than 25 percent; this has had negative implications for living standards and investment in health and education for the poorest segments of the populations in the remittance receiving countries. Migrant workers are often illegal. Even if legal, they are often not granted the same rights or given the same access to social benefits as domestic residents. As such these workers are often marginalized and exploited.

Target 1.B: Achieve full and productive employment and decent work for all, including women and young people.

Poverty in Europe and Central Asia is strongly linked to unemployment; generally those with jobs outside of the informal and agriculture sectors are able to escape from extreme poverty. Thus creating high levels of employment in the formal sector is of central importance for addressing poverty in these areas. The region has for almost two decades been characterized by anemic employment growth and relatively high rates of unemployment. Between 1989 and 2003 total employment fell by 27 per cent in SEE excluding Turkey, 17 per cent in Eastern Europe and the Caucasus, and 17 per cent in the NMS. Over this period, employment increased by 15 per cent in Turkey and 10 per cent in Central Asia.²⁶ Unemployment rates remained high even in 2008 despite the relatively solid economic growth of the prior eight years. Overall unemployment rates in transition economies have generally been slightly higher for women but there are many important exceptions such as in Russia (see annex table 2).

Unemployment increased in most countries of the region in 2009 and 2010. The increase in unemployment is not unusual in the early phase of recovery, given the labour hoarding by business firms during cyclical downturns, a practice sometimes supported by government programmes. Other factors contributing to rising unemployment included the relatively slow pace of recovery and the increasing number of job seekers. In the second half of 2010 unemployment started to decline but by the middle of 2011 it remained well above the pre-crisis level in a number of countries, including the Baltic States, Bulgaria, Croatia, Hungary, Slovakia, Slovenia and Ukraine.²⁷

The evolution of employment rates has been uneven across the region. High levels of employment have been maintained in Russia and a number of other EECCA countries with the aid of exceptional wage flexibility, low unemployment benefits and a lax implementation of labour code regulations. Employment rates in these countries have continued to be higher than in other parts of the pan-European region.²⁸ In a number of the NMS, employment declined significantly in the 1990s as a result of lower wage flexibility and relatively generous unemployment and early retirement benefits. However, labour market, social assistance and pension reforms in the 2000s improved the incentives to work and resulted in rising employment rates 3.2).²⁹

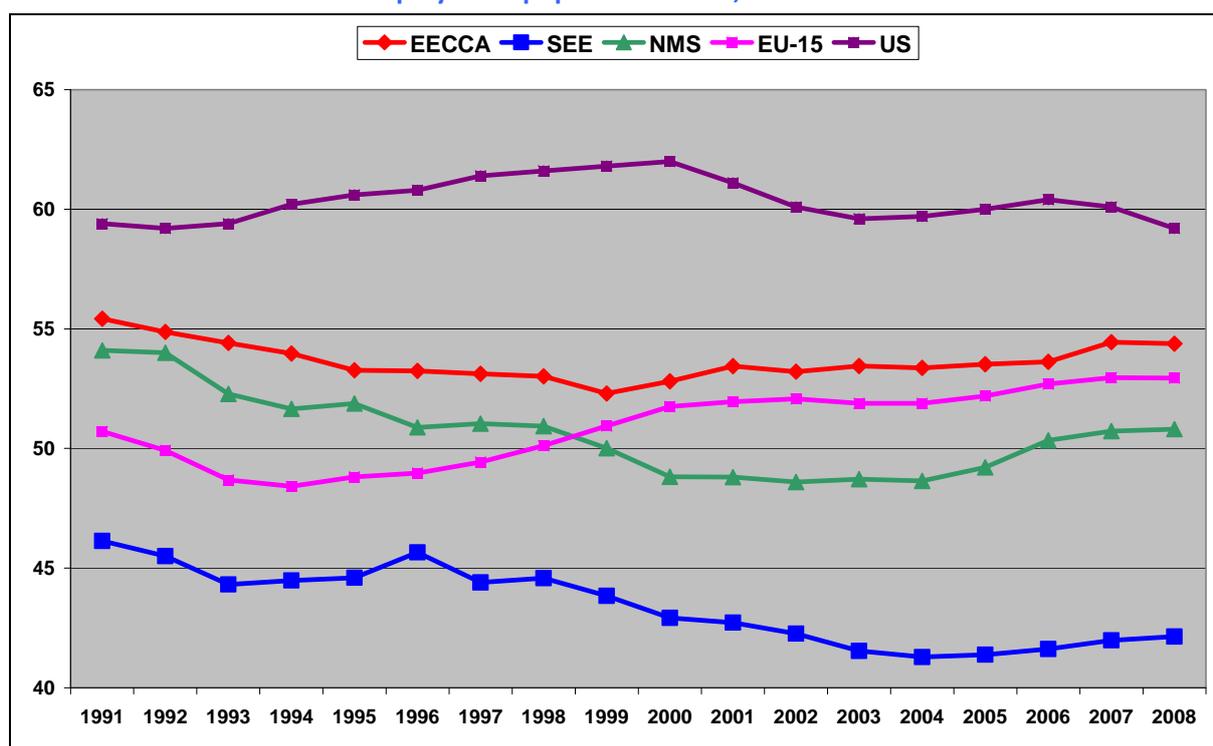
²⁶ UNECE, *Economic Survey* up to 2008 (figure of *Europe*, 2005 No.1, Geneva, 2005).

²⁷ For details, see EBRD, "Regional Economic Prospects in EBRD Countries of Operations: July 2011." EBRD Office of the Chief Economist.

²⁸ See V. Gimpelson and R. Kapeliushnikov (2011), "Labor market adjustment: Is Russia different?" *IZA Discussion Paper Series*, No. 5588.

²⁹ For a discussion of these reforms, see B. Slay (2009), Social policy, labour market, and tax reforms: Some early lessons from new EU member states and possible relevance for the Western Balkans. Discussion paper prepared for

Figure 3.2
Employment-population ratios, 1991-2008



Source: ECE calculations based on United Nations Statistics Division data.

Note: The employment-to-population ratio is the proportion of a country's working-age population (15 years and older) that is employed.

Subsequently, employment rates declined in a number of ECA countries, reflecting at first the impact of the global crisis that resulted in approximately two million jobs being lost and then the slow pace of recovery. The structure of employment deteriorated, due to the increasing share of informal employment. Following the output recovery in 2010, employment exceeded pre-crisis levels in all EECCA economies except Armenia and Ukraine. By contrast, employment levels remained depressed in the NMS with the exception of Poland. In SEE countries, employment exceeded pre-crisis levels everywhere but Croatia. The principal underlying factors of employment growth included output growth (EECCA countries, Poland and Turkey) and labour market reforms (some SEE countries).

The relatively good labour market performance of the EECCA subregion is not altogether positive. Flexible labour markets in Russia and other EECCA countries have preserved a large number of low-wage, low-productivity jobs while slowing the process of enterprise restructuring. This was perhaps desirable in the short run, especially during the period of deep transition recession in the 1990s. However, a more efficient utilization of human capital is needed to increase trend growth of wages and productivity.

The official data may underestimate the employment impact of the crisis since discouraged workers often drop out of the workforce and are therefore not considered in the unemployment rate. For example in Tajikistan at the end of 2009 the official unemployment rate was 12 per cent but researchers have estimated the actual unemployment rate to be near 40 per cent and as high as 60 per cent in some areas. Given limited safety nets in the region and

the "Technical Conference on the Impact of the Economic Crisis on Social Protection Systems in the Western Balkans", held on 15-16 June 2009 in Zagreb.

relatively high unemployment to begin with, the result of the crisis has been that a significant proportion of the population has been placed in a vulnerable position. The majority of households had to reduce consumption while spending savings of returning migrants and increasing production of food in their own backyards.³⁰

The increase in joblessness during the crisis was especially large for the youth of the region whose unemployment rate increased by 3 percentage points to almost 21 per cent in 2009 before declining to 19 per cent in 2010. Although this rate is quite high relative to the world average of 12.6 per cent and to most other developing regions, it is slightly below that found in North Africa and the Middle East. The very high youth unemployment levels signal the danger of rising poverty levels and social conflicts.

The shortage of jobs is especially prevalent for young workers and those with limited skills. Those unable to obtain regular employment are pushed into the unregulated informal or rural agriculture sectors where wages are low and benefits are limited. Poverty is higher in rural areas than urban areas, sometimes double or triple the urban level. There is also an ethnic dimension to unemployment and thus poverty in a number of countries in the region, especially in SEE and in some of the NMS. Those displaced by internal conflicts have also had a hard time in gaining employment in the formal sectors.

Target 1.C: Halve, between 1990 and 2015, the proportion of people who suffer from hunger.

Malnourishment is moderate to low in most parts of Europe and Central Asia. The level depends on which of several measures of under-nourishment are used. In terms of the absolute level of under-nourishment, the percentage of the population with a caloric intake below the minimum dietary energy requirement (according to the FAO) is below 5 per cent in most transition economies but was reported to be higher than this (in 2004-06) in Turkmenistan (6%), Azerbaijan (11%), Georgia (12%), Armenia (23%) and Tajikistan (26%).³¹ Eight countries are classified as ODA eligible with recurrent net food trade deficit: Armenia, Azerbaijan, Georgia, Kyrgyzstan, Moldova, Tajikistan, Turkmenistan and Uzbekistan.

By the onset of the Great Recession most of the countries in the region had made considerable progress in reducing hunger by the one-half goal incorporated into MDG target 1.C. Tajikistan and Turkmenistan have made measurable progress and may be able to reach the target; the Caucasus economies had already achieved the target by 2006 and their objective would be to not allow this progress to be undone by the current crisis. Food insecurity however, appears to have increased in Central Asia in recent years with the increases being most noticeable in Tajikistan and rural areas of Kyrgyzstan, Turkmenistan and Uzbekistan. The underlying factors include high international food prices, natural disasters and past environmental mismanagement. For Kyrgyzstan the WFP estimates that during the 2008 global food crisis, one in five households consumed inadequate diets in terms of energy and protein.³² While no new post-crisis data on under-nourishment is yet available, it is estimated that the high food and fuel prices registered in 2010 and 2011 will severely negatively affect poverty rates of net importing countries such as Armenia, Georgia, Kyrgyzstan, Moldova and Tajikistan. Among these, Kyrgyzstan is projected to

³⁰ See H. Hemmings (2010), *The Effects of the 2008 Economic Crisis on Tajik Migrant Labor in Moscow*. Woodrow Wilson International Center for Scholars, Washington, D.C.

³¹ William Meyers and Guljahan Kurbanova, *Impacts of the Global Economic and Financial Crisis on Food Security in Eastern Europe and Central Asia*, a paper presented at a Ministerial Conference on the Social Impacts of the Economic Crisis in Eastern Europe, Turkey and Central Asia in Almaty, Kazakhstan, December 7-8, 2009.

³² For details see WFP (2009) [Emergency Operation in Kyrgyz Republic](#)

be the worst affected country: in 2010 the price of wheat – which provides approximately 40 per cent of calories consumed in that country – increased by 54 per cent.³³

Over the last few years, the affordability of food has declined in parts of the Caucasus and Central Asia due to the income losses associated with the Great Recession and the subsequent increase in commodity prices. In a number of transition economies consumers have to spend a large percentage of their income on food; thus price inflation for food products translates into large declines in real purchasing power.

GOAL 2: ACHIEVE UNIVERSAL PRIMARY EDUCATION

Target 2.A: Ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling.

Numerous milestones have been reached towards the realization of universal primary education in Emerging Europe and Central Asia. In general, school access and retention rates are very high, and grade repetition at the primary level quite low.

In countries for which data are available, the Net Enrolment Rate (NER) averages 93 per cent and is above 85 per cent in all countries but Albania, Armenia, Kyrgyzstan and Montenegro (annex table 3). Most countries of the region are within reach of achieving universal primary education. However, the available data for the ECA economies show that between 2000 and 2009-10 the NER increased in only five ECA countries – Croatia, Hungary, Kazakhstan, Turkey and Slovenia. The modest declines in the remaining countries illustrate the great difficulty faced by governments in reaching the last 10 per cent of children currently excluded from the school system. Since it is usually more expensive and difficult to implement initiatives aimed at enrolling the hardest-to-reach children currently not in school, explicit political and financial commitments are needed to overcome obstacles to generalized access. On average between 5 per cent and 7 per cent of primary-school age children do not attend school. In some countries the number exceeds 10 per cent. Nonetheless, since 1999 the region has significantly reduced its out-of-school population.

In most countries of the region, almost all children who enrol in primary school complete the first cycle. In 2007, at least 93 per cent of young learners completed the last grade of primary school in all countries for which data were available. In many countries, this rate is close to 100 per cent. Such an achievement is encouraging news for governments, knowing that if they can enrol young learners into the first grade of school, their school systems are likely to allow them to complete the first cycle of education.

Nearly all youth in the region are literate. Despite the relatively low number of illiterate youth, there is still a large population in the ECA lacking the knowledge and skills to participate actively in society. In today's world, however, just learning to read and write is not enough. Young people need to continually upgrade their skills according to changing technologies; which reinforces the importance of quality literacy programmes.

In many of the transition economies enrolment rates are similar to those in the middle income countries in Latin America and south-east Asia and are approaching those of the advanced economies. One particular problem for the region is that actual school attendance rates are often

³³ The World Bank Europe and Central Asia Region (2011), [*Rising Food and Energy Prices in Europe and Central Asia*](#), Washington.

significantly below enrolment rates.³⁴ Although in a few countries enrolment rates need to be increased, the primary concern is how to achieve high attendance rates and the quality of the education that the students are receiving.

Although this MDG target is primarily concerned with achieving basic literacy, as economies develop economically and work and life become more complicated and technologically challenging, the minimum level of education increases. The ECE emerging economies are therefore focused on increasing the enrolment in secondary and even tertiary schooling. For most of these there has been a considerable increase in the secondary and tertiary enrolment rates since at least 1999 (see annex tables 4 and 5).

Although the 2007 - 2009 global financial crisis hit Emerging Europe and Central Asia harder than any other region, education investments of most crisis-affected households were not reduced significantly and children not withdrawn from schools. This can be explained by the low opportunity cost of sending children to school in most parts of the region. Although there were no withdrawals from general schooling, crisis-affected households have reduced or postponed some discretionary education-related spending on transportation, tutoring and school supplies. This is likely to have a negative impact on the future educational attainment of affected children. Generally, government spending on education was better protected than spending on health. A few countries of the region implemented pro-poor measures, reducing out-of-pocket education expenses and protecting special programmes for students from disadvantaged backgrounds.³⁵

Disadvantaged ethnic minorities have been hit particularly hard by the crisis and have thus been unable to protect their educational investment to the same extent as the majority population. For instance, the Roma and Turkish minorities in Bulgaria withdrew their children from preschools and reduced other educational expenses in much larger proportions than majority households.³⁶

The marginalization in education is the single biggest factor preventing the universal achievement of MDG 2 in Emerging Europe and Central Asia. It is a form of acute and persistent disadvantage rooted in underlying diverse social and economic inequalities. These include poverty, gender, culture, language, ethnicity, race, geographical location, disability, and health. The inequalities, which rarely operate in isolation, can multiply the chances of children being left behind. Not only do marginalized individuals and groups study for fewer years but the education they receive is also of poorer quality. In some countries of the region, such as Albania, Georgia, Tajikistan, Turkey and Uzbekistan, being born a girl still carries a significant educational disadvantage.

While countries facing difficulties in achieving universal primary education tend to be the poorest ones, some relatively wealthy ECA countries have not performed as well as could be expected. Overall, Turkey has made good progress in access to primary education with an enrolment rate which increased from 92.2 per cent in 2000 to 94.7 per cent in 2008, and is thus close to achieving universal primary education. However, according to the Demographic and Health Surveys, the eastern part of the country has a net enrolment rate of 79 per cent. Moreover, while the average number of years of schooling was 8.1 at national level, it was 6.3 years for the bottom 20 per cent of the population with the fewest years of education. In Russia, the educational

³⁴ This is discussed in more detail in UNECE, [The Millennium Development Goals: The Way Ahead](#), Geneva 2006.

³⁵ For details, see World Bank (2011), *The Jobs Crisis: Household and Government Responses to the Great Recession in Eastern Europe and Central Asia*.

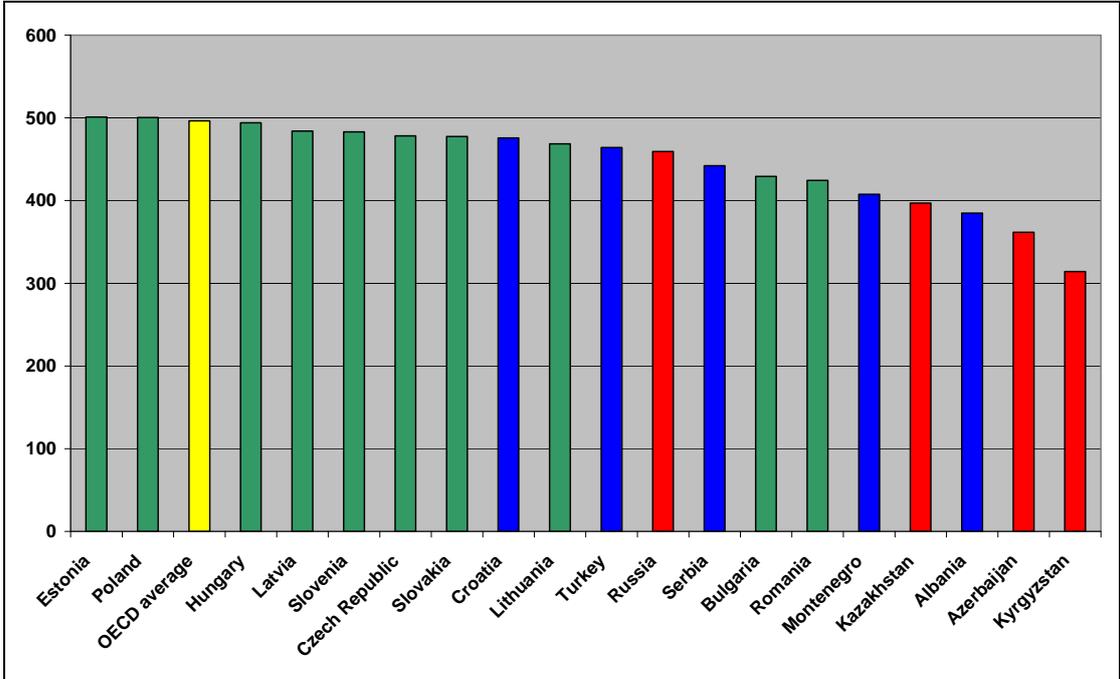
³⁶ Ibid.

attainment of small indigenous populations lags significantly that of the majority population. In Central and Eastern Europe, Roma are often excluded from the access to decent education.

Access to education is only one side of the coin. What and how pupils learn in schools remains a challenge. While in all countries with data, the survival rate to last grade at primary level is over 93 per cent, poor quality education in many countries of Emerging Europe and Central Asia is jeopardizing the life chances of millions of young people.

Evidence from international assessments of reading skills illustrates the extent to which quality varies between countries. The Programme for International Student Assessment (PISA) assesses the literacy of students with about eight years of education. Figure 3.3 shows that only a few of the ECE emerging economies perform close to the OECD average. The performance is especially low in a number of countries of South-Eastern Europe and Central Asia. Four of the participating transition economies have achieved a statistically significant improvement in reading literacy over the period 2000 – 2009: Albania, Hungary, Latvia and Poland.

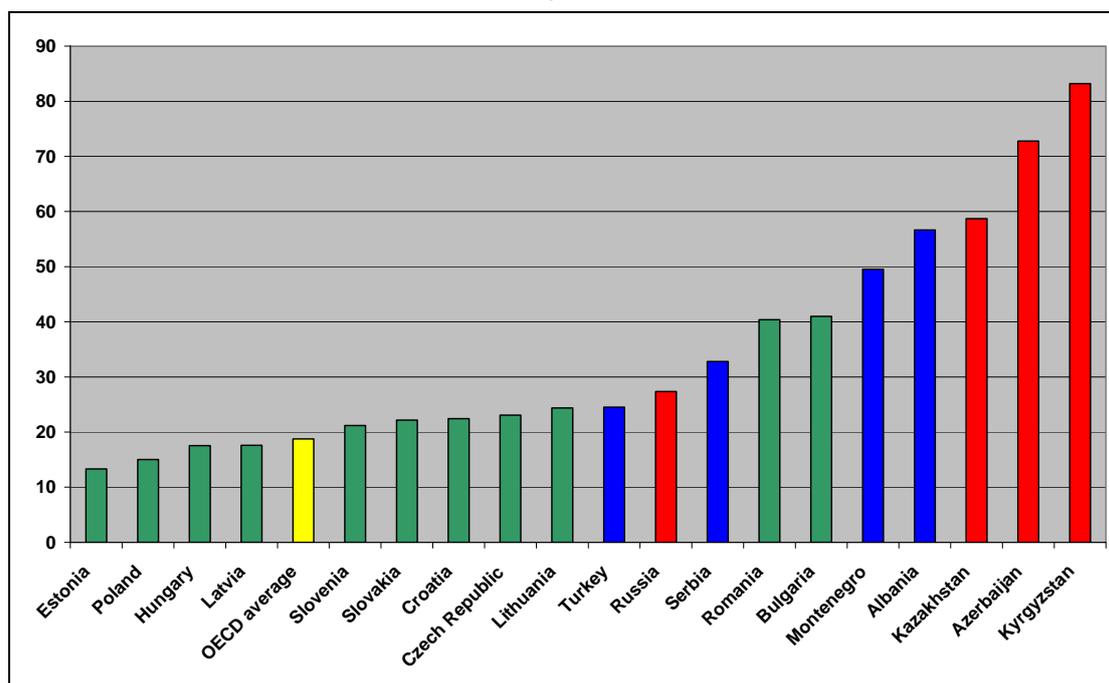
Figure 3.3
Reading literacy of 15-year old students
Mean scores, PISA 2009



Source: ECE calculations based on OECD data.

PISA tests also identify students with reading literacy below level 2 as being at risk during the transition to work. In Kyrgyzstan, 83 per cent of students tested were below the reading level 2 that corresponds to 407.5 points on the PISA scale. The percentage of similarly performing students in other countries ranged from 13 per cent in Estonia to 73 per cent in Azerbaijan (Figure 3.4). Between 2000 and 2009 the percentage of students below level 2 decreased significantly in Albania, Hungary, Latvia and Poland while increasing in the Czech Republic.

Figure 3.4
Share of 15-year old students below reading level 2
Per cent, PISA 2009



Source: ECE calculations based on OECD data.

Learning outcomes measured by PISA and other tools imply the need to adopt a comprehensive approach to addressing the quality and relevance of primary education and improved learning environments. The countries that achieve consistently high scores in international tests have paid special attention to the students in the lowest quintile of achievers who often come from disadvantaged backgrounds. These efforts were successful because the school achievement problems have been addressed by competent, motivated and well-paid teachers working in modern, well-equipped classrooms. By contrast, in many ECA countries the shortage of trained teachers and adequate school facilities resulted in poor educational outcomes. To reach universal primary education by 2015, additional primary school teachers will have to be recruited in about half of the 15 ECA countries with data. On the positive side, the pupil/teacher ratio has improved. In 2007, all ECA countries had ratios below the widely recognized ceiling of 40:1, and even below the world average of 25:1.

GOAL 3: PROMOTE GENDER EQUALITY AND EMPOWER WOMEN

Target 3.A: Eliminate gender disparity in primary and secondary education, preferably by 2005, and in all levels of education no later than 2015.

Gender equality is not only a basic human right, but is increasingly considered a decisive factor for social cohesion and stability, as well as sustainable and innovative economic growth, as it allows for the best use of human resources and talents among both women and men. While target 3.A specifically references a) education and specific indicators regarding the elimination of gender disparities at the various school levels, b) the relative status of women in labor markets and c) the relative participation of women in the political process, it is self-evident that the empowerment of women and the promotion of gender equality across all domains can positively

affect progress toward reaching all of the MDGs and efforts should not be restricted to only reaching educational parity. In recognition of the essential role that gender mainstreaming plays in all areas, in 2005, targets on full, productive, and decent employment (especially for women and youth) and on universal access to reproductive health were added to MDG 1 and MDG 5, respectively.

Arguably MDG 3, with its focus on gender equality and empowerment, covers a more complex set of issues that are not adequately captured by the assigned target and indicators. Nevertheless, in line with the target assigned to MDG 3 (target 3.A), the remainder of this chapter will focus on selected critical areas of women's empowerment, notably qualitative measures of educational parity and employment status, paid employment, as well as representation and decision-making power at the national level.

Educational Parity in the ECE Region

In the ECE region the narrowly defined target 3.A of reaching educational parity (indicator 3.1) is not of particular concern; women in most countries make up 55 to 60 per cent of the graduates in tertiary education, with the highest share being observed in the Eastern European countries (see annex tables 3, 4, and 5).³⁷ The EiT made important achievements in the field of education, including universal enrollment for basic schooling, free access (at least formally) to school and tertiary level institutions, with a strong emphasis on equity in access – however progress has been uneven in these areas. The economic crisis at the beginning of the transition period put many of these achievements at risk, but nevertheless most of the countries managed to maintain high female enrolment rates for compulsory education even during the most difficult phase of economic decline.³⁸

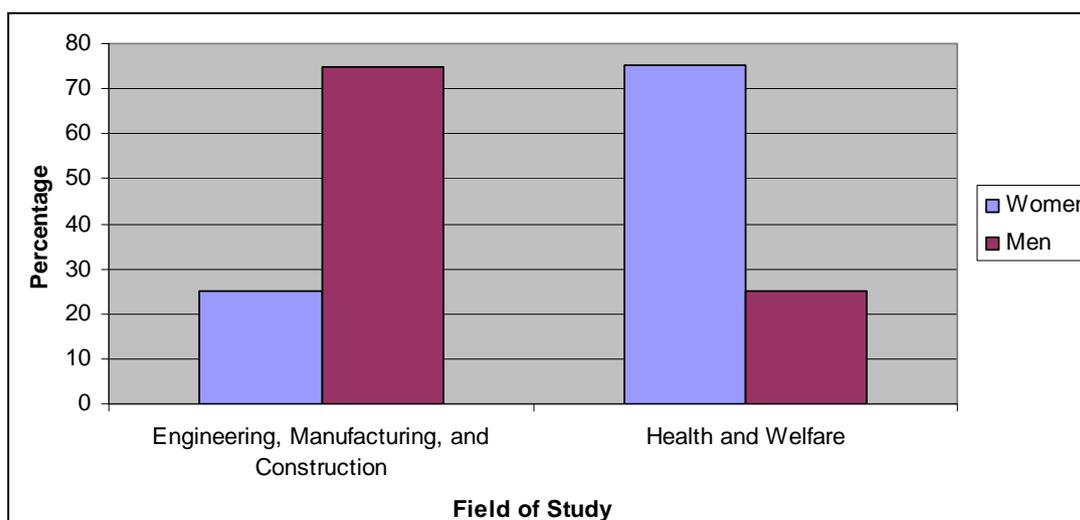
In countries of the Caucasus and Central Asia, remaining gender disparities in education appear more pronounced in rural than urban areas, especially in countries with a significant rural population such as Azerbaijan, Kyrgyzstan, Turkmenistan, and Uzbekistan. Shortages in public funding, impoverishment of the population, and a return to traditional practices (especially marriage of girls at a relatively early age) are contributing factors.

In most countries in the ECE region (including Belarus, Bosnia and Herzegovina, Sweden, Ukraine and especially the Baltic States), women now outnumber men in tertiary education, with Tajikistan and Uzbekistan being notable exceptions. There remain, however, significant gender differences in the fields of study chosen. Men continue to be overrepresented in the fields of science, technology, engineering, and mathematics, while women are more highly concentrated in the fields of business administration, law, social sciences, journalism, humanities and the arts. Gender segregation with regard to educational choice risks reinforcing occupational segregation in the labour market and subsequently has the potential to perpetuate the gender pay gap as well.

³⁷ UNECE, ECE/AC.28/2009/3, [Regional review of progress: Regional synthesis](#), background document for November 2009 Beijing +15 regional review conference.

³⁸ UNICEF, [Innocenti Social Monitor 2009](#), Florence, 2009.

Figure 3.5
Gender differences in tertiary education



Source: UNECE Statistical Database, 2007-8 data

Note: Figure represents average of selected countries from the UNECE region: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, and Finland.

Women's Labour Force Participation

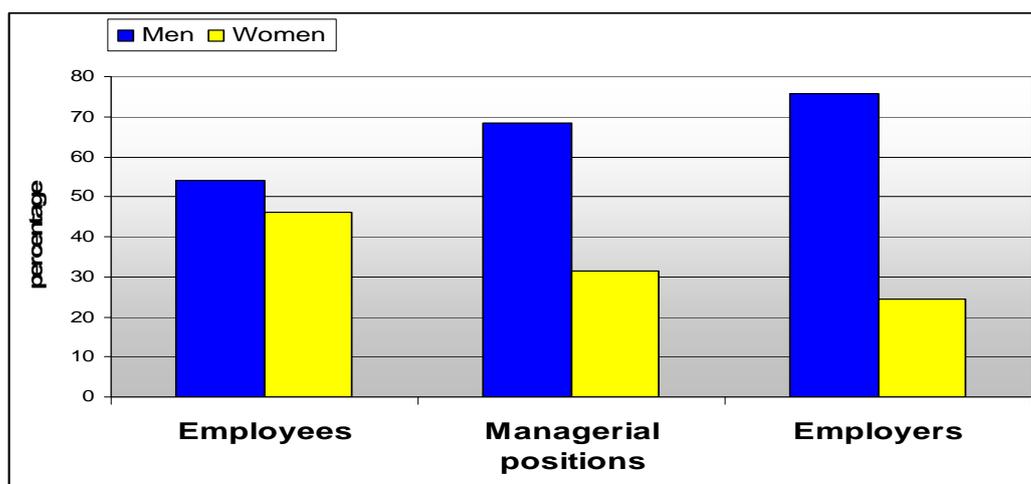
Women's labour market participation in the ECE region has increased in recent years and is the highest in the world. However, despite the importance of women as a source of new labour and their high education level, severe problems remain both with respect to the quality of women's employment and their opportunities for career advancement, especially in countries of Eastern Europe, the Caucasus and Central Asia. Vertical and horizontal labour market segregation continues to be a major concern: the majority of women still occupy lower-paid, part-time or other forms of unstable jobs at the lower end of the career ladder, they are concentrated in fewer occupations, and have more career interruptions, largely due to caregiving responsibilities. These differences contribute to lower earnings (gender pay gap) and slower career progressions. Furthermore, the disadvantages accumulate over the lifetime leading to lower pensions in old age.

Labour market access remains problematic for many women, especially those trying to re-integrate into the labour market after maternity leave. Thus, the higher educational attainment of women in many countries is not yet reflected in women's job quality and remuneration and therefore has yet to feed through to employment.³⁹

In most of the ECE countries, women's economic activity rate is lower than men's; there are a few exceptions such as Latvia. The highest rate is found in Iceland where nearly 80 per cent of women of working age are economically active. In contrast, only about 25 per cent of Turkish women participate in economic activity. On average, the women's employment rate tends to be higher in the EECCA and the Baltic States than in the EU (especially the NMS from Central Europe) and the Balkans.

³⁹ UNECE, [Gender Gap and Economic Policies](#), 2009.

Figure 3.6
Gender differences in employment in the ECE Region



Source: UNECE Statistical Database, 2008 data or latest available.

Note: *Employees* are all the workers who hold paid employment jobs; *Managerial positions* refer to Legislators, Senior Officials and Managers; *Employers* are workers who hold self-employment jobs and have engaged, on a continuous basis, one or more persons to work for them in their business as employees.

Unemployment remains generally higher for women than for men. Where female unemployment is lower than men's (in approximately ¼ of the ECE member states, such as the Baltic States, Ireland, Romania, Russian Federation, and Ukraine), women are more likely than men to accept jobs below their qualifications or to retire from the labour market (Estonia, Italy). The 2007-2009 economic crisis severely affected the economies of ECE member States, eroding labour markets. While initially the number of unemployed men increased at a faster rate than the number of unemployed women, more recent data show that women's unemployment is likely to increase at a rapid pace, while the rate of increase of men's unemployment is slowing.

When jobs are not available in the formal sector, workers tend to find employment in the informal sector. In the EECCA in particular, many women continue to work in the informal economy, including in home-based market-oriented production of goods and services (sewing, souvenir production, home care services, etc.), and subsistence food production. Due to the rising job uncertainty reflected in atypical working arrangements and increasing incidence of outsourcing, self-employment has become a more and more important avenue for women to provide a steady income for themselves and their families. The agrarian reform in post-Soviet Central Asia dismantled the previously existing social fabric in rural areas and the virtual absence of new institutions (such as civil society organizations and microfinance systems) favored the dramatic rise of inequality and poverty rates. Poverty has increased particularly in rural areas and most of all among women, many of whom lost their jobs in the decline of rural social infrastructure.⁴⁰ Moreover, the persistence of customary law and societal norms, which tends to discriminate against women and limited awareness of women about their economic rights, particularly with regards to land and property ownership, contribute to women's difficulties in obtaining land and getting access to land-related resources.⁴¹ UNIFEM spearheaded a process of

⁴⁰ Max Spoor, *Agricultural Restructuring and Trends in Rural Inequalities in Central Asia. A Socio-Statistical Survey*, UNRISD, Programme Paper Nr 13, November 2004.

⁴¹ In Kyrgyzstan women faced many obstacles in realizing their rights to land due to some gaps in the legislation regulating norms of land inheritance and land disputes in case of divorce or marriage. In Kazakhstan the social workers in rural regions were deprived of their land shares, as they were not members of the agricultural farms. Later, due to

legal analysis, advocacy and partnership-building that led to the adoption of gender amendments in the Land Code in Tajikistan and in the Law on Land Management in Kyrgyzstan, though there is still much progress to be made in this area.⁴²

The Gender Pay Gap in the ECE Region

Despite widespread legislation against wage discrimination, women across the ECE region continue to earn considerably less than men holding similar positions. Some countries report a narrowing of the gender pay gap, but wage differentials remain a persistent challenge to equality in the region, ranging from an average of 17 per cent in the EU to between 40 and 50 per cent in Central Asia and the Caucasus.⁴³ Frequently women earn less than men for work of equal value. One reason for women's lower remuneration may be gender-biased job and competence evaluations.⁴⁴ In all countries there are important variations by sector (the gap tends to be higher in the private than the public sector), and by occupation and educational level (the gap is generally larger for people with higher education).

Annex table 6 presents two indicators of the difference between men's and women's average earnings from employment, shown as a percentage of men's average earnings. Gender pay gap (GPG) indicators offer a synthesized view of earning differences, but can also convey a variety of interpretations depending on the way they are calculated and presented. The first measure of GPG (table 6a) refers to differences in gross monthly earnings from employment. This measure of GPG is arguably a more accurate indicator of overall gender inequality since it takes into account levels of participation in the labour market. The second measure (table 6 b) relates to differences in the hourly wage rate between male and female employees. This indicator is independent of the number of hours worked by either sex in any sector of economy. It therefore reflects overall inequalities which could stem from factors such as occupation (sector and seniority), qualification, and years of experience.

Generally, the earnings gap based on monthly data is wider than that based on hourly wages. As already mentioned, one factor affecting this is that women tend to work fewer hours than men. In fact, the difference between the two measures is a valuable source of information in and of itself. Looking at the pattern for Azerbaijan, for example, the overall pay gap is almost 50 per cent for both monthly and hourly earnings. This indicates that patterns of full/part-time employment are similar between the sexes. There are therefore other factors that are determining the high GPG. In Poland, on the other hand, where the overall GPG is relatively low, up to a third of the disparity could possibly be attributed to differences in labour force participation of men and women. This highlights the importance of not focusing exclusively on the wage gap but considering it as one part of a more complicated picture. For example, the wage gap declined in

the common decline of the social service system in villages the majority of social workers lost their jobs, staying without land shares at the same time. In Tajikistan due to the strong patriarchal customs and inheritance system, and patriarchal living arrangements, women had access to land and other productive resources only through their relationship to a male, be it a father or husband. This problem is quite similar to Uzbekistan where women due to cultural, religious, legal and information constraints are typically excluded from gaining control over land and other productive resources.

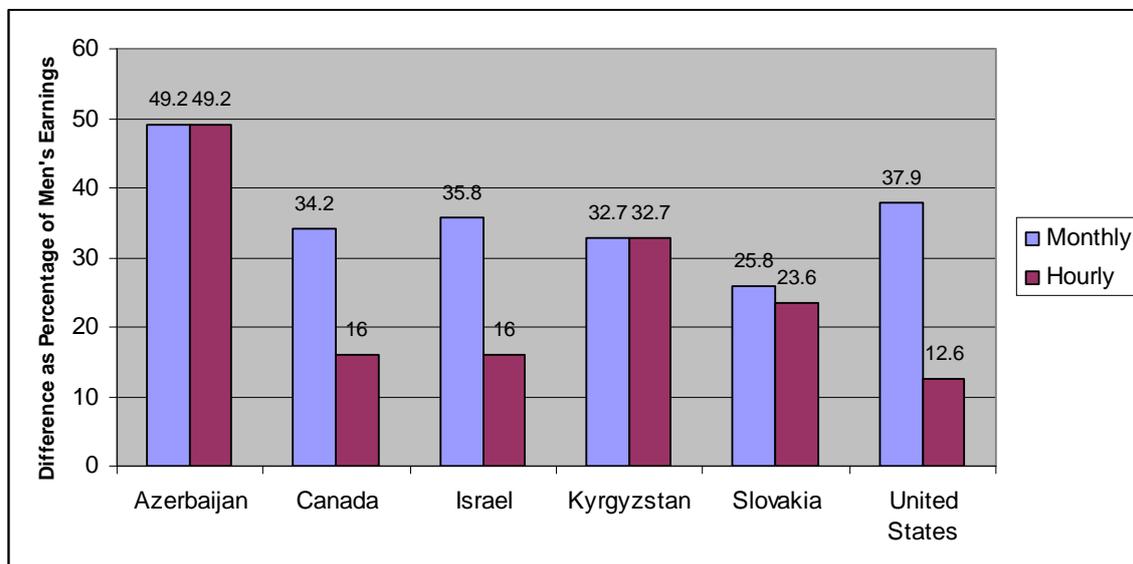
⁴² For more information on these projects see http://www.unifem.org/worldwide/europe_cis/

⁴³ International comparisons of the gender pay gap should be interpreted with care as there are variations in measurement across countries: <http://www.unece.org/stats/gender/Welcome.html>.

⁴⁴ Lisa Warth, *Gender Equality and the Corporate Sector*, UNECE Discussion Paper No. 2009.4, Geneva, 2009.

the East German *Länder* during the 1990s but this was due largely to the fact that low-skilled women were disproportionately laid off during the restructuring.⁴⁵

Figure 3.7
Gender pay gap in monthly and hourly earnings, selected ECE countries
2010 or latest available



Source: UNECE Statistical Database.

The position of women on the labour market could deteriorate in the wake of the financial crisis. In fact, the economic crisis led to an increase in female vulnerable employment and the wage gap. The lack of income generation opportunities in the formal sector and an oversupply of workers in the informal economy result in working arrangements in the latter that entail low wages and few benefits. Women tend to be more affected by recession-induced deteriorations in labor markets as they were generally more likely to work in the informal economy and were paid less than men before the crisis. Concerns that the existing gender pay gap might increase during this crisis have been confirmed by recent evidence from developed countries.⁴⁶

Women's Underrepresentation in the Political Process

The weak position of women in many societies is reflected by the low political representation they have. While women's participation in economic and political decision-making has been increasing over the past five years in many countries across the ECE region, improvements in women's access to power have generally been rather slow and uneven and women continue to be strongly underrepresented in all areas of decision-making in most countries (see annex tables 7 and 8). Where women are given more political responsibility, it tends to be limited to socio-cultural issues. Although there are no legal barriers for women to vote and stand for elections in the ECE region, their significant under-representation in power and decision-making across the region implies that significant challenges to women's empowerment persist.

⁴⁵ Jennifer Hunt, [The Transition in East Germany: When Is a Ten-Point Fall in the Gender Wage Gap Bad News?](#), *Journal of Labor Economics*, 2002.

⁴⁶ Ursula Hermelink and Claudia Trentini, [Gender-sensitive Economic Policies in the UNECE Region in the Context of the Economic and Financial Crisis](#), UNECE Discussion Paper No. 2009.3, Geneva, 2009.

In most countries (e.g. Luxembourg, Canada, Croatia, Poland, United States, Turkmenistan), between 15 and 25 per cent of members of parliament (MPs) are female (indicator 3.3). Just a few, including Belgium and Denmark, report a share higher than 35 per cent. Only in Sweden has full parity practically been achieved with 46.4 per cent female MPs. The weakest representation of women in national parliaments is found in Georgia (6.5 per cent), Ukraine (8.0 per cent), Malta (8.7 per cent), Hungary and Turkey (9.1 per cent), and Armenia (9.2 per cent). In Albania, even though still relatively low, the share of women in national parliament has doubled after the 2009 election (see annex table 9).

In all the countries of the ECE except Finland and Spain, men outnumber women as ministers in national government. Female ministers tend to be responsible for social or cultural portfolios and rarely head the ministries responsible for the economy, infrastructure, home affairs, foreign affairs, and defense. Although government is a large employer of women, they tend to be less represented in the higher administrative posts, especially in Western Europe where the share of female senior civil servants often does not exceed 30 per cent. In numerous countries (e.g. the Baltic States, Kazakhstan), this share equals more than 50 per cent. In some EECCA countries (e.g. Uzbekistan), affirmative action has been undertaken to ensure women's representation in power and decision-making. In others (e.g. the Russian Federation), the introduction of transparent competitive selection procedures of candidates for an open vacant post in governmental organizations has been viewed as an instrument to ensure fair gender competition and promotion.⁴⁷

The Impact of the Global Economic Crisis – Looking Ahead

The recovery from the 2007-2009 economic and financial crises has been very slow, which could endanger the achievements of the past years and hinder the pace of progress by diverting issues related to women's rights and gender equality from the political, economic and social agenda of public authorities. At the same time a number of new challenges arising in the region have a gender dimension, such as the expansion of migration flows and the acceleration of population ageing.

With regard to the dramatic increase of migration flows in the ECE region in recent years, the condition of working migrant and/or trafficked women needs particular attention. Much of the migration in Western European countries is constituted by women (more than 50 per cent are females) working in the domestic economy and in the sexual industry. These two categories of migrant workers are particularly vulnerable. Their work and status in the society is "invisible", being usually informal workers, they are at high risk of exploitation and abuse, and do not have access to social security or health protection.

Migrant domestic workers contribute to the sustainability of Western European ageing populations, freeing time for Western women to enter the formal labor market. However, this equilibrium is not sustainable in the long term. In fact, many countries in the Eastern part of the region – i.e., the migrant sending countries – also have fertility rates which are declining rapidly. A long-term sustainable equilibrium for the whole ECE region's welfare and employment systems can only be achieved through the better and more equitable use of women's human resources in the labour market while social policy contributes to ensuring that career and family can be adequately combined.⁴⁸

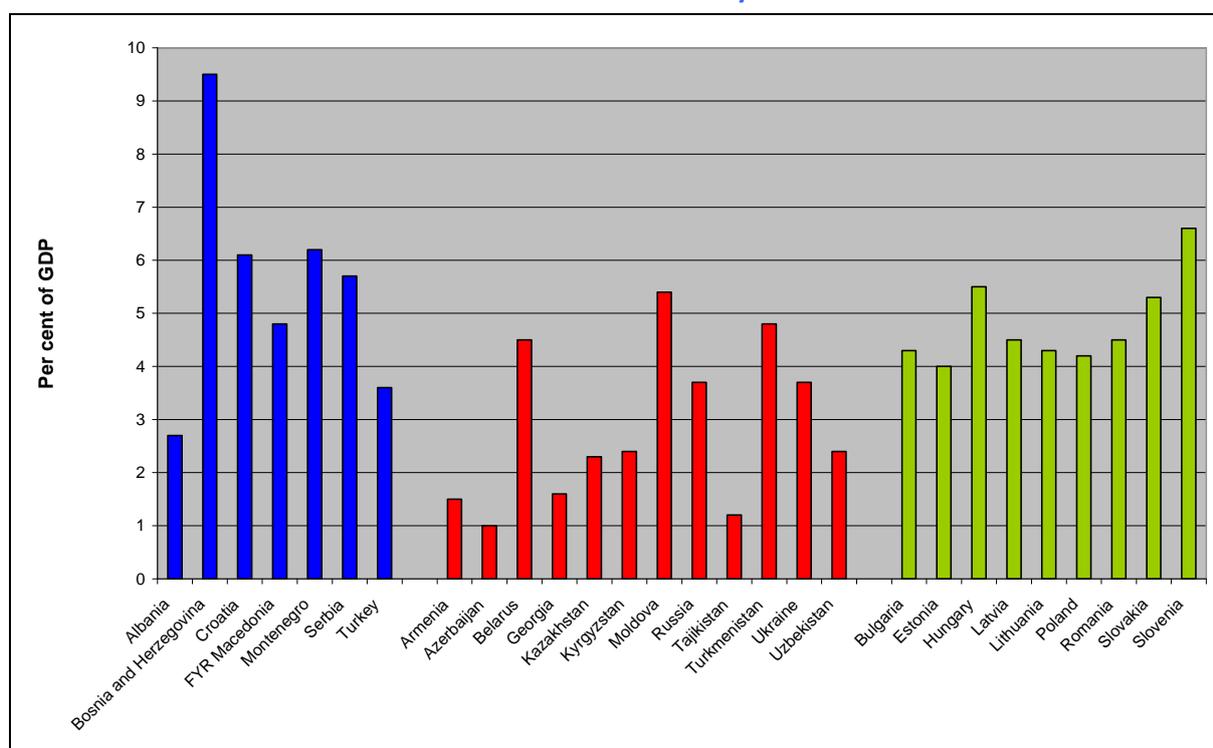
⁴⁷ UNECE, ECE/AC.28/2009/3, [Regional review of progress: Regional synthesis](#), background document for November 2009 Beijing +15 regional review conference.

⁴⁸ The average fertility rate in the UNECE region has declined over the past two decades from 2.4 to 1.5 children per woman between 1980 and 2005. Over the same period, the old-age dependency ratio (population aged 65 and higher

Health-related MDGs

Health indicators in Emerging Europe and Central Asia are generally better than in other developing regions of the world. The comparatively good outcomes reflect to some extent the levels of government expenditure on health (figure 3.8). The public health expenditure in Emerging Europe and Central Asia averages 4 per cent of GDP and is below the internationally recommended standard (5 per cent of GDP) in most countries of the region. However, it is below 3 per cent of GDP in Albania and countries of the Caucasus and Central Asia with the exception of Turkmenistan. The inadequate public health expenditure has resulted in an increase of privately funded health services that are not accessible for the poor.

Figure 3.8
Government expenditure on health
2008 or latest available year



Source: ECE calculations based on EBRD data.

On the whole, the progress on health-related MDGs in the region is far from satisfactory. This reflects the fact that health outcomes deteriorated since 1990 in a number of transition economies, particularly in the poorer former Soviet republics that experienced a gradual deterioration of living conditions (the social determinants of health) and of essential health infrastructure as well as inadequate training and remuneration of physicians.⁴⁹ In most cases the low government investment in public health care has shifted the burden to patients. This has led to increasing inequities in health care access and consequently of health outcomes reinforcing the growing income inequalities across the societies.⁵⁰ In addition, the global financial crisis hit the

over the population aged 15 to 64) has increased in virtually all UNECE countries. This process will accelerate during the coming decades when the falling fertility rates impact the size of the workforce and the baby-boom generations of the 1960s retire (UNECE, [Gender Gap and Economic Policies](#), 2009).

⁴⁹ For details see International Crisis Group (2011), *Central Asia: Decay and Decline*. Asia Report N°201.

⁵⁰ See for example Podvysotskaya et al. (2011), [Does health Matter for Inequality in Transition Countries: the Case of Ukraine](#), The wiiw Balkan Observatory Working Papers No 90.

health sector in the ECE emerging economies particularly hard, both directly and indirectly. Most governments tried to preserve levels of public spending on education and health. A few countries even increased education and health spending in real terms (Armenia, Moldova, Russia and Turkey). In the majority of countries, however, public education expenditure was better protected than health expenditure. A few countries reduced health spending significantly (e.g. Bulgaria, Latvia and Ukraine). At the same time, households in EECCA and SEE countries reacted to the crisis by cutting out-of-pocket health expenditure much more than discretionary spending on education.

Some countries enacted so-called efficiency reforms of public health care systems during the crisis (Bulgaria, Hungary, Georgia, Latvia, Poland, Romania, Tajikistan, Kyrgyzstan and Turkey). Only a few governments have been reported to introduce specific measures to reduce the adverse impact of the crisis and health care reforms on poor households. Such measures have included a wider coverage of health insurance for the poor in Georgia and the abolition of co-payments for health care and pharmaceuticals for poor patients in Latvia.⁵¹

GOAL 4: REDUCE CHILD MORTALITY

Target 4.A: Reduce by two-thirds, between 1990 and 2015, the under-five mortality rate.

A critical indicator for assessing the health status of young children is the mortality rate for children under five years of age (U5MR). This MDG indicator not only measures the probability of survival of a newborn to his or her fifth birthday, but also reflects the socio-economic conditions in which the child grows up, and the access of households to basic social services and infrastructure.

For most countries in the region U5MR has dropped rapidly since the late 1990s and is amongst the lowest in the world. The regional average under-five mortality rate for Europe and Central Asia declined from 34 deaths per 1000 live births in 1990 to 13 in 2009.⁵² The estimates reported for Emerging Europe and Central Asia in annex table 11 show that for some countries the reductions were impressive. In 2009, the countries that reached their MDG 4 target were Albania, the Czech Republic, Estonia, Poland, Serbia, Slovenia, the former Yugoslav Republic of Macedonia and Turkey.⁵³ In the EECCA subregion, the under-five mortality rate has fallen in some countries by 50 per cent over the last decade. Nevertheless, child mortality in these countries is still high, and five of them are unlikely to reach the target. Three more countries may reach it only with additional effort.

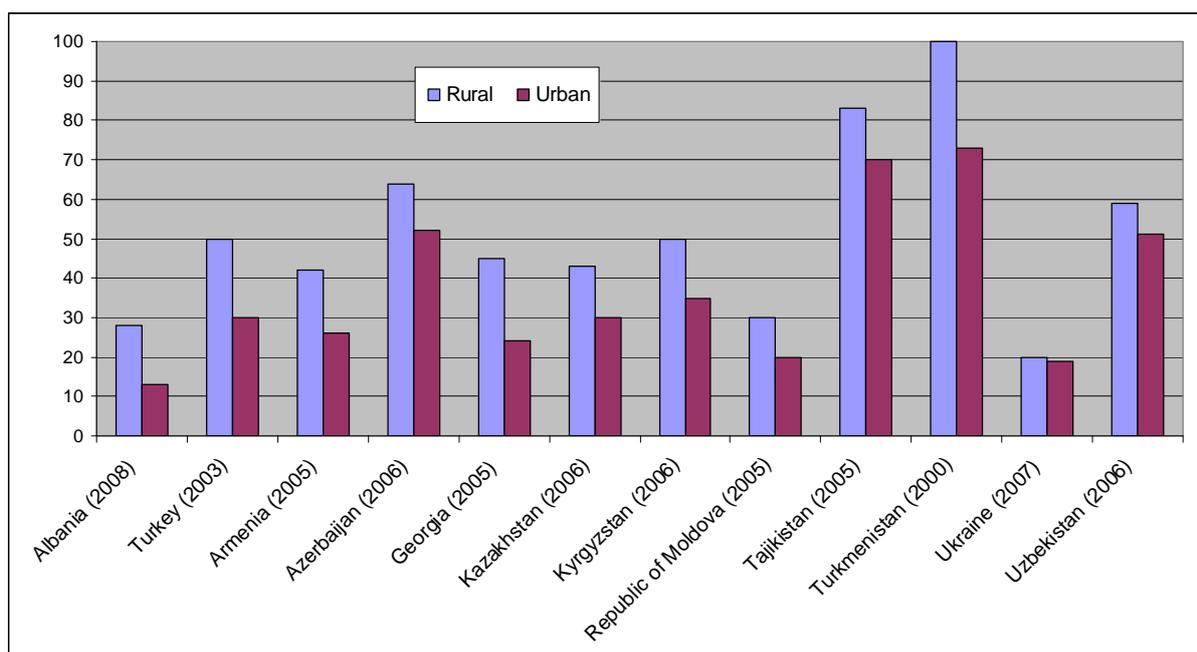
Not only progress in reducing under-five mortality is uneven, with some countries on track or close, and many others requiring a major scaling up of investments but also there are great in-country inequities between urban and rural areas, between children of women with higher and lower levels of education, and between children who are in the 20 per cent richest segment of the population and those who are in the 20 per cent poorest.

⁵¹ For details see World Bank (2011), *The Jobs Crisis: Household and Government Responses to the Great Recession in Eastern Europe and Central Asia*. Washington, D.C.

⁵² WHO (2011). [World health statistics 2011](#). Geneva, World Health Organization and UN (2011). MDG Indicators – The Official United Nations site for the MDG Indicators: [Children under five mortality rate per 1,000 live births](#).

⁵³ WHO (2011). [World health statistics 2011](#). Geneva, World Health Organization and UN (2011). MDG Indicators – The Official United Nations site for the MDG Indicators: [Children under five mortality rate per 1,000 live births](#).

Figure 3.9
Under-five mortality rate (probability of dying by age 5 per 1000 live births)



Source: WHO (2011). *World health statistics 2011*. Geneva, World Health Organization

Note: The year of data collection in parenthesis.

Infant mortality (i.e. mortality occurring before the first birthday) represents the main component of under five mortality, since the vast majority of the deaths for children under the age of five occur in the first year of life. In Europe and Central Asia, the estimated regional average infant mortality rate was 12 in 2009, down from 28 in 1990. Although the declines have been similar across country groups, rates still differ greatly between countries, varying from lower rates in the NMS countries to somewhat higher rates in the SEE countries and still higher rates in EECCA countries.⁵⁴

The estimated average measles immunization coverage for Europe and Central Asia in 2010 was 95 per cent, compared with the 1990 estimate of 80 per cent.⁵⁵ Many countries in the region, including Kazakhstan, Kyrgyzstan and Turkmenistan, reached 99% coverage in 2010. ECE countries with lower measles vaccine coverage include Azerbaijan (67%), Malta (82%), Austria (83%) and Denmark (84%).⁵⁶

For all of Europe and Central Asia, cases of measles went from 234,827 in 1990 down to 37,421 in 2000, further decreasing to 7,499 in 2009. They rose back up to 30,638 in 2010 due to a large outbreak in one member State and an increase in cases in a few other countries.⁵⁷ In the first six months of 2011, outbreaks across Europe and Central Asia resulted in over 24,000 confirmed measles cases. Factors contributing to immunity gaps and recent outbreaks include social

⁵⁴ UN (2011), The Official United Nations site for the MDG Indicators: [Infant mortality rate \(0-1 year\) per 1000 live births](#).

⁵⁵ WHO (2011c). WHO-UNICEF estimates of MCV coverage [web site]. Last update: 22 July 2011 (data as of 20 July 2011). Geneva, World Health Organization (http://apps.who.int/immunization_monitoring/en/globalsummary/timeseries/tswucoveragemcv.htm, accessed 1 August 2011).

⁵⁶ WHO (2011). *World health statistics 2011*. Geneva, World Health Organization

⁵⁷ WHO Regional Office for Europe (2011a). Centralized information system for infectious diseases (CISID) [Web database]. Copenhagen, WHO Regional Office for Europe (<http://data.euro.who.int/cisid/>, accessed 1 August 2011).

exclusion experienced by marginalized groups, low risk perception, lack of confidence in vaccine safety and quality, and perceived inconvenience.

GOAL 5: IMPROVE MATERNAL HEALTH

Target 5.A: Reduce by three quarters, between 1990 and 2015, the maternal mortality ratio.

According to the latest interagency estimates that include adjustments for misclassification and under-reporting, the regional maternal mortality ratio in Europe and Central Asia was 21 deaths per 100,000 live births in 2008. This was down from 44 in 1990.⁵⁸ The decline has been steepest in the NMS (nearly 70 per cent). The EECCA countries had a maternal mortality ratio in 2008 of 40, nearly twice as high as the ratio for the entire pan-European region. Romania had the fastest rate of decline, with an 84% change in maternal mortality ratio between 1990 and 2008. Even if ratios in the countries of the EECCA region are five to six times the EU-15 average, it has to be pointed out that these countries have the lowest levels of maternal mortality in the developing world.⁵⁹

The presence of skilled healthcare personnel at childbirth is important for reducing both infant and maternal mortality (indicator 5.2). In Europe and Central Asia, the percentage of births assisted by skilled health personnel between 2000 and 2010 was 98 percent. Few countries have adequate disaggregated data, but the data there highlights inequities experienced by the poor, rural residents, migrants, refugees and ethnic minorities and other socially excluded populations. For instance, DHS data for Armenia, Azerbaijan, Tajikistan, and Turkey show pronounced variations among rural and urban populations or across wealth quintiles.⁶⁰ While the proportion of births attended by skilled health professionals is generally high for the region, there is evidence of the persisting need to ensure the quality of the services provided across the reproductive, maternal, newborn and child health continuum of care.

Target 5.B: Achieve, by 2015, universal access to reproductive health.

Low contraceptive prevalence rates (indicator 5.3) and the unmet need for family planning (indicator 5.6) are important indicators for monitoring progress towards MDG 5, as a considerable proportion of maternal deaths could be prevented if women who desired contraception could have access to it. The contraceptive prevalence rate for Europe and Central Asia was 70.7% for the 2000-2010 period.⁶¹ Contraceptive prevalence (using any modern method) has generally increased across the region since 1990. An average of 9.7% women (of reproductive age who were married or in a union) had an unmet need for family planning in Europe and Central Asia during the 2000-2009 period. In some countries, abortion still causes more than 20% of all cases of maternal mortality (European Health for All Database, January 2011 update). It is estimated that half a million unsafe abortions were performed in 2008 in Europe and Central Asia, causing 7% of maternal deaths.⁶² However, as shown in annex table 14, abortion rates have been decreasing steeply for many countries.

⁵⁸ WHO (2010). *Trends in maternal mortality: 1990-2008*. Geneva, World Health Organization

⁵⁹ UNICEF, *Progress for Children. A Report Card on Maternal Mortality*, Number 7, September 2008

⁶⁰ UNICEF, *Childinfo* [website]. monitoring the situation of children and women.

⁶¹ WHO (2011). *World health statistics 2011*. Geneva, World Health Organization

⁶² WHO (2011). *Unsafe abortion: global and regional estimates of the incidence of unsafe abortion and associated mortality in 2008*. Geneva, World Health Organization

(http://www.who.int/reproductivehealth/publications/unsafe_abortion/9789241501118/en/index.html, accessed 27 July 2011).

Adolescents are more likely to die or experience complications in pregnancy and childbirth than adult women (indicator 5.4). Moreover, the children of these young mothers have a higher risk of morbidity and mortality. In developed countries adolescent pregnancies are more prominent among populations experiencing poverty and social exclusion, including ethnic minority groups. In the 27 EU Member States adolescent fertility rates are quite low, ranging between 4 and 22 births per 1,000 women aged 15 - 19, with the exceptions of Bulgaria (47), Romania (40) and the United Kingdom (25). In the EECCA region, the return to old traditions and practices like early marriage is considered one of the factors contributing to the high rates in some countries (e.g. Azerbaijan, Ukraine, Georgia).

According to the latest estimates, in Europe and Central Asia as a whole, an average of 97% of women received antenatal care from skilled health personnel at least once during pregnancy (indicator 5.5).⁶³ Azerbaijan and Tajikistan have particularly lower coverage, at 77 per cent and 89 per cent respectively. Despite relatively high levels of coverage across the region, progress needs to be made for all women to receive the minimum number of four antenatal visits. Many countries do not have comprehensive data on the number of visits. However, available records point to inequities.⁶⁴

GOAL 6: COMBAT HIV/AIDS, MALARIA AND OTHER COMMUNICABLE DISEASES

Target 6.A: Have halted by 2015 and begun to reverse the spread of HIV/AIDS.

In Europe and Central Asia, there were an estimated 2.2 million people living with HIV in 2009. This number, compared with 1.4 million people living with HIV in Europe and Central Asia in 2001, implies a 60% increase during the 2001-2009 period.⁶⁵

Progress in controlling the spread of HIV/AIDS has been disappointing, especially in the EECCA region, where its incidence continues to rise despite quite large increases in funding by some governments.⁶⁶ Currently, “Eastern Europe and central Asia is the only region of the world where HIV prevalence clearly remains on the rise.”⁶⁷

The HIV epidemic in Europe remains concentrated in key populations at higher risk with no evidence of generalizing. Specific populations at higher risk of HIV exposure and infection are people who inject drugs and their sexual partners, men who have sex with men, transgender people, sex workers, prisoners and migrants.⁶⁸

Ukraine has the highest infection rate in the ECA region; at the beginning of 2010 it was estimated that 360,000 people aged 15 and over, or some 1.2 per cent of the adult population were

⁶³ World health statistics data of the WHO indicate that countries with antenatal coverage below 95% include Armenia, Azerbaijan, Latvia, Romania, Tajikistan, The former Yugoslav Republic of Macedonia and Turkey.

⁶⁴ For more details see UNICEF (2010). *Progress for Children: Achieving the Millennium Development Goals with Equity*. New York, United Nations Children’s Fund

⁶⁵ UNAIDS (2010). *Global report on the global Aids Epidemic 2010*. Geneva, the Joint United Nations Programme on HIV/AIDS.

⁶⁶ Seventeen countries in EECCA reported spending more than US\$ 1.2 billion on HIV and AIDS in 2009, of which US\$ 750 million was spent in the Russian Federation. UNAIDS (2011), *Aids at 30 - Nations at the crossroads*, Geneva. Joint United Nations Programme on HIV/AIDS.

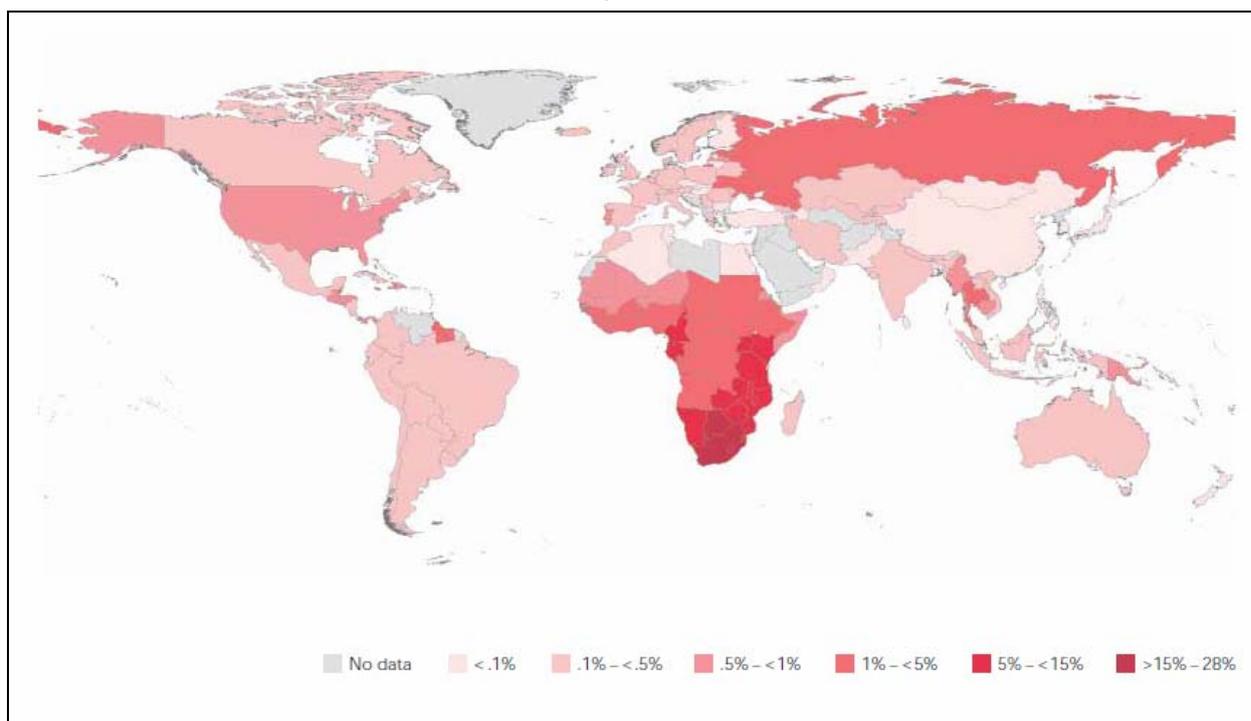
⁶⁷ Michel Sidibé, UNAIDS Executive Director at the 3rd EECCAAC Conference on Universal Access in Moscow, October 28, 2009.

⁶⁸ WHO Regional Office for Europe (2011). *Regional Committee for Europe document EUR/RC61/19: Summary of the European action plan for HIV/AIDS 2012–2015*. Copenhagen, WHO Regional Office for Europe

infected.⁶⁹ Annual HIV diagnoses in Ukraine have more than doubled since 2001. Together with the Russian Federation which has an infection rate of 1.1% these two countries account for almost 90% of newly reported HIV diagnoses in the EECCA. The HIV epidemic in the Russian Federation also continues to grow, but at a slower pace than in the late 1990s. Newly reported HIV cases have increased in several of the countries in Central Asia, including Uzbekistan, which has the largest epidemic in the sub-region.⁷⁰

In Central Europe Estonia had the highest HIV/AIDS infection rate (1.2%) in 2008. Latvia also has a relatively high rate of 0.7 per cent.⁷¹ The infection rate in these countries varies significantly in the different geographical regions; for example in Ukraine the infection rate is 6 times higher in the east of the country compared to the western regions; and in Estonia infections are higher along the Russian border. In Russia the highest incidence is found in the large cities of St. Petersburg and Moscow. The incidence of HIV/AIDS is also relatively high in the US where approximately one million people have the disease; the infection rate is about 0.7 per cent. It is estimated that approximately one-quarter of those in the US with HIV/AIDS are undiagnosed and unaware of their infection. The incidence rate in most of Western Europe is considerably below that in the US.

Figure 3.10
HIV infections prevalence 2009



Source: UNAIDS

⁶⁹ See, Ukrainian Ministry of Health, (2010). [Ukrainian national report on monitoring progress towards the UNGASS Declaration of Commitment on HIV/AIDS](#)

⁷⁰ UNAIDS (2010). [Global report on the global Aids Epidemic 2010](#). Geneva, the Joint United Nations Programme on HIV/AIDS.

⁷¹ UNAIDS - AIDSInfo online dataset. <http://www.aidsinfoonline.org/>

Unlike in much of the rest of the world, HIV/AIDS in the transition economies is largely a male disease since 72 per cent of those infected are male.⁷² The HIV epidemics in Eastern Europe and Central Asia are concentrated among people who inject drugs, sex workers, their sexual partners and, to a much lesser extent, men who have sex with men.⁷³ More recently, the incidence of HIV/AIDS in women, especially in the very young age group 15-24 years, has been increasing due to sex with drug users accelerating the spread of HIV in the European region. For example, in 2009 an estimated 45 per cent of the people living with HIV in Ukraine were women compared with 37 per cent in 1999.⁷⁴ Heterosexual transmission is particularly high (around 50 per cent of infections) in Belarus and Moldova. The sex trade (which is generally illegal throughout the region) is also escalating the heterosexual transmission of HIV/AIDS.

Although the number of diagnosed AIDS cases and AIDS-related mortality declined in the pan-European region as a whole, both continued to rise in Eastern Europe and Central Asia,⁷⁵ with a four-fold increase in estimated AIDS-related deaths during the period 2001-2009 (UNAIDS, 2010).

Target 6.B: Achieve, by 2010, universal access to treatment for HIV/AIDS for all those who need it.

Whereas many countries, especially in the Western part of the pan-European region, have among the best ART coverage rates in the world, in 2009 only 19% of adults in need were receiving ART in the region's low- and middle-income countries. This represents almost half the global average for low- and middle-income countries.⁷⁶

In 2008 the number of persons receiving treatment in Russia has increased by 80 per cent to more than 55,000; nevertheless this represents only about 5 per cent of those infected. All transition economies have set national universal access targets for HIV/AIDS prevention.⁷⁷ However, though people who inject drugs account for the majority of people living with HIV in Eastern Europe and Central Asia, they account for less than 25 per cent of all people living with HIV and receiving antiretroviral treatment. Many countries have prevention programs specifically targeting sex workers, men who have sex with men, and persons who inject drugs. "Harm reduction" strategies that provide services for persons who use drugs have proven to be beneficial in a number of countries, including Azerbaijan, Kyrgyzstan, Moldova, and Ukraine.

Most of the schools in the region now provide some type of skills-based HIV education. This is an important development because knowledge about the transmission of HIV has been quite low in much of the region.

⁷² Joint United Nations Programme on HIV/AIDS, [At Great Risks of HIV/AIDS: Young People in Eastern Europe and Central Asia](#), 2005.

⁷³ In EECCA more than 50% of infections in 2010 were through shared drug-injecting equipment. See UNAIDS (2011), *Aids at 30: Nations at the crossroads*.

⁷⁴ UNAIDS (2010). [Global report on the global Aids Epidemic 2010](#). Geneva, the Joint United Nations Programme on HIV/AIDS.

⁷⁵ Sources: ECDC/WHO Regional Office for Europe (2010); annual bulletins of the Federal AIDS Centre of the Russian Federation; and 2010 UNGASS country report for Ukraine (Ministry of Health of Ukraine, 2010).

⁷⁶ WHO, UNAIDS and UNICEF (2010). [Towards universal access: scaling up priority HIV/AIDS interventions in the health sector: Progress report 2010](#). Geneva

⁷⁷ In October 2009 the [3rd HIV/AIDS Conference for Eastern Europe and Central Asia](#) on Efforts Towards Universal Access was held in Moscow.

Universal HIV/AIDS testing and immediate initiation of anti-retroviral therapy are considered the most effective approach for controlling this disease.⁷⁸ HIV testing of the general population is available in a number of countries in Eastern Europe as well as in Western Europe.⁷⁹

Target 6.C: Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases.

Considerable progress has been made since the 1990s in addressing malaria. The number of reported cases has dropped dramatically, from 90,712 in 1995 to only 176 in 2010. The countries of Europe and Central Asia aim to interrupt the transmission of malaria and eliminate the disease from the remaining 5 countries affected by malaria by 2015: Azerbaijan, Kyrgyzstan, Tajikistan, Turkey and Uzbekistan. All affected countries have implemented intensive control programs and all have endorsed the Tashkent Declaration which has the aim of eliminating transmission in the region by 2015.⁸⁰ Turkmenistan was certified as malaria-free in October 2010. Armenia is working closely with WHO to be certified as malaria-free by the end of 2011, Georgia by the end of 2013, and Turkey and possibly some Central Asian countries by the end of 2015.

In 2010 a milestone was achieved in mankind's centuries old battle against tuberculosis (TB) as the global number of those falling ill declined for the first time since global records have been kept and the number of deaths globally declined to 1.4 million from 1.8 million in 2003.⁸¹ Nevertheless tuberculosis remains a quite important health risk in Eastern Europe and Central Asia, in particular, due to a huge increase in the incidence of drug resistant tuberculosis. The progress achieved in the control of TB during the Soviet era has been lost, and TB deaths doubled during the transition period, particularly among working-age men. Much of this increase is due to overcrowding in urban centers and prisons. By contrast, the NMS managed to control the incidence of tuberculosis after its peak in the late 1990s. The prevalence rate in the EECCA region (112 per 100,000 inhabitants in 2009) is more than 15 per cent higher than the level prior to the transition period. It is three times higher than in the NMS (45)⁸² and almost ten times higher than in Western Europe. Within the EECCA region, the number of cases is highest in central Asia; with the prevalence rate in Tajikistan (202 per 100,000) almost double that of Russia (106) in 2009. The TB treatment rate is lower and the death rate is higher in the EECCA region due to drug-resistant varieties and less aggressive treatment (annex table 17). There has also been a significant increase in those with both HIV and TB infections in the EECCA region.⁸³

Europe and Central Asia faces significant challenges in reaching the MDG 6 TB targets. In 2009, there were a total of 396,992 reported cases of TB across 51 countries⁸⁴ of Europe and Central Asia, of which 329,391 were new episodes of TB (new cases and relapses). Countries in

⁷⁸ Brian Williams (South African Centre for Epidemiological Modelling and Analysis), *Battling HIV/AIDS – Test All, Treat All?*, American Association for the Advancement of Science Annual Meeting, San Diego, USA, February 20, 2010.

⁷⁹ In October 2009 the [3rd HIV/AIDS Conference for Eastern Europe and Central Asia](#) on Efforts Towards Universal Access was held in Moscow.

⁸⁰ World Malaria Report 2010. Geneva, World Health Organization and WHO Regional Office for Europe web site on malaria: <http://www.euro.who.int/malaria>

⁸¹ WHO (2011). [Global Tuberculosis Control 2011](#). Geneva, World Health Organization.

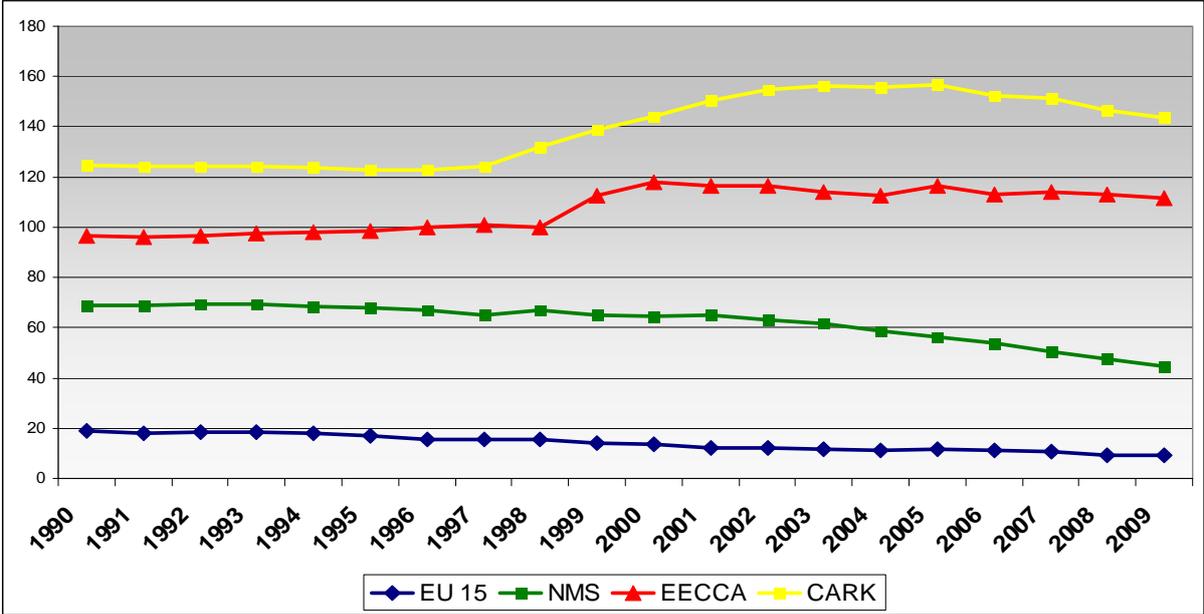
⁸² However NMS include several TB high priority countries: Bulgaria (prevalence rate of 41 per 100,000), Latvia (45), Lithuania(71) and Romania (125).

⁸³ ECDC and WHO Regional Office for Europe (2011). [Tuberculosis surveillance in Europe 2009](#). Stockholm, European Centre for Disease Prevention and Control.

⁸⁴ No data are available for Liechtenstein, Monaco or San Marino.

the Eastern part of the region had much higher notification rates than in Western areas. While the estimated TB prevalence fell from 80 to 63 per 100,000 population between 2000 and 2009, this is still far from the 48 per 100,000 population target for 2015.⁸⁵ Estimated mortality from TB decreased from 8.6 to 6.9 per 100,000 population between 2000 and 2009. To meet the MDG 6 target, TB mortality must decline to 6 per 100,000 population by 2015. In 2009, the proportion of new TB cases detected in Europe and Central Asia (assumed indicative also of those smear-positive cases targeted by MDG 6) was 80%, above the global target of 70%. However, the European Region has the poorest treatment outcomes in the world, with the success rates of 67% and 47% respectively among new and previously-treated smear-positive cases, i.e., much lower than the 87% and 72% reported globally.

Figure 3.11
Estimated incidence of tuberculosis per 100,000 in the ECE subregions



Source: WHO Europe dataset.

Note: CARK = Central Asia (Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan).

GOAL 7: ENSURE ENVIRONMENTAL SUSTAINABILITY

Target 7.A: Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources.

Current patterns of world growth are unsustainable as a number of resources are being depleted at an alarming rate. Of foremost concern is the use of the atmosphere as a dumping ground for the emissions of greenhouse gases (GHG) whose accumulations are altering the global climate. If not abated, this will have profound effects on the world’s biological, economic and social systems. The need to address this will be a major concern for all of the ECE economies for the next century and only very limited progress can be expected by 2015. Therefore the objective of reversing the loss of environmental resources will not be attained by 2015 in either the ECE region or globally. All that can be expected is that a policy framework can be established both nationally and internationally which will begin to address the political, economic and technological challenges for addressing this problem. National governments throughout the region

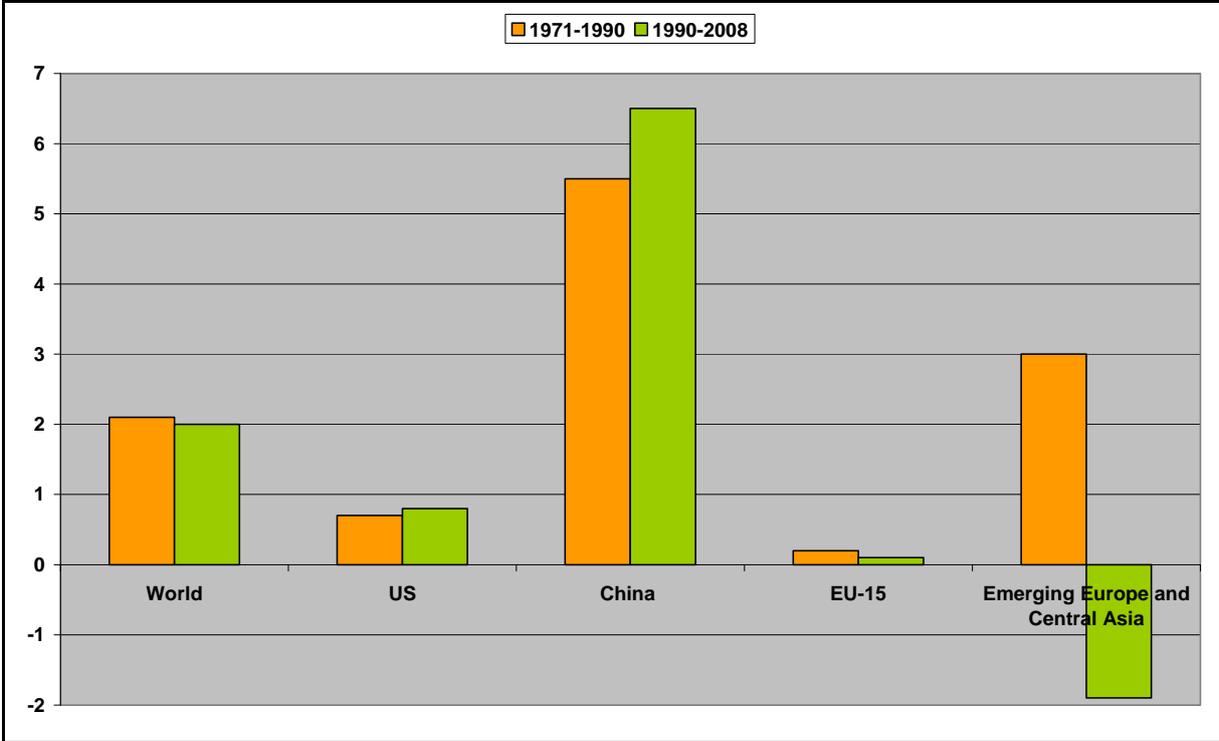
⁸⁵ WHO (2010). *Global tuberculosis control – epidemiology, strategy, financing*. Geneva, World Health Organization

have begun to implement tentative programs to address these challenges but the progress is only in its earliest phase. Currently the ECE accounts for approximately one half of global GHG emissions (and a roughly similar percentage of global GDP).

The first international agreement to control GHG was the Kyoto Protocol which included commitments by some economies to reduce emissions in 2008-2012 from their 1990 level. Thirty of the 31 countries that made a commitment under the Kyoto Protocol to reduce GHG emissions are UNECE members; three others committed to a target with Russia and Ukraine agreeing to no growth and Norway to a 1% increase.

The transition crisis saw a significant reduction in GHG emissions. The subsequent enterprise restructuring resulted in long-term energy efficiency improvements in former centrally planned economies that were generally characterized by wasteful use of resources. As a result Emerging Europe and Central Asia is the only region of the world in which emissions in 2010 were below their level in 1990 (Figure 3.12). Thus while emissions of developing regions more than doubled and even trebled in the case of China, those in the ECA declined by approximately 30 per cent. This decline was achieved in spite of the significant increase of Turkey’s emissions that have more than doubled since 1990. Emissions from the EU-15 and US have increased since 1990 by about 2 and 15 per cent respectively.⁸⁶ A comparison of the US with the EU-15 is complicated by the faster population and real economic growth in the former. Essentially all of the difference between the trends in the two regions is accounted for by these two factors; slightly more than half is explained by higher population growth in the US and the remainder is due to higher per capita economic growth.

Figure 3.12
Annual average growth of CO2 emissions from fossil fuel use
Per cent



Source: EBRD (2011), *The Low Carbon Transition*.

⁸⁶ For details, see EBRD (2011), *The Low Carbon Transition*.

Most of the improvement in sustainability in the ECA reflects the falling energy intensity of production that declined on average by 40 per cent between 1990 and 2007 in the EECCA and SEE transition economies and by more than 60 per cent in the NMS.⁸⁷ During the early 1990s the falling use of energy in the goods-producing sector reflected mainly the impact of the transition recession. This was replaced by absolute decoupling in the second half of the 1990s when output levels increased while the energy use kept declining. Since the early 2000s relative decoupling prevailed, i.e. the energy use grew at a slower pace than production. During this period the decline in energy intensity has accelerated but this tendency has been overwhelmed by robust output growth.

The decoupling trends in transition economies reflect the combined effect of structural changes of production, resulting in a shift from industry to services, and efficiency improvements. Not surprisingly, new private businesses and foreign-invested firms tend to be more efficient than state-owned enterprises. In spite of the progress achieved over the last two decades, most transition economies still remain more energy intensive than comparable middle-income countries such as Chile.⁸⁸ This implies that major improvements in energy efficiency and sustainability are feasible in the ECA over the medium term, especially in transition economies that have delayed enterprise restructuring.

The progress in reducing emissions is more favourable when calculated in terms of emissions per \$1 of GDP (annex table 18). Most of the economies in the region have achieved sizable reductions in this measure which reflects the increasingly efficient use of energy. The energy intensity of GDP in Western Europe is approximately a third lower than in North America and less than half that in the EECCA (annex table 18A). Thus there is considerable potential for reducing emissions in North America and transition economies by increasing their energy efficiency to the levels of Western Europe. Especially in these two regions, but even in Western Europe there are numerous opportunities for increasing energy efficiency that have negative long-run costs; the challenge is to identify these opportunities and find sources of finance with which to implement them.⁸⁹

Despite the failure to reach an agreement at COP-15 in Copenhagen in December 2009, most of the ECE economies are making commitments to further reduce their GHG emissions and many have implemented a number of programs and regulations to achieve these objectives.⁹⁰ However the pledges made at Copenhagen and other proposed national policies – if fully implemented – are sufficient to only stabilize GHG emissions by 2020, but world emissions must decline by at least 50 % (and thus ECE emissions by even more) in order to limit global temperature increases to a manageable level (i.e., about 2 degrees centigrade). Thus although these newly proposed actions can further contribute towards reducing emissions, none of the economies of the region can be said to have put forth a national agenda that will be sufficient to reduce emissions to a level that is sustainable over the long run.⁹¹

The recent economic crisis by reducing growth in the short run and perhaps in the medium-term may slightly reduce GHG emissions; however, this is unlikely to be important in

⁸⁷ Ibid.

⁸⁸ With the exception of Hungary and Slovakia that have more energy-efficient economies than Chile. See *ibid.*

⁸⁹ The UNECE has such programs, including its [Energy Efficiency 21 Project](#).

⁹⁰ For example, the EU has committed to a 20 % reduction in GHG emissions from 1990 levels by 2020.

⁹¹ A concise summary of climate change activities in the UNECE region is available in UNECE, [Catalysing Change: UNECE Responds to the Climate Countdown](#), Geneva, 2009.

the long run. There had been some hope that the recovery packages implemented during the crisis could be used to promote climate related initiatives as part of a “green new deal.” And in fact some of the economies in the region did increase environmentally related spending or “green” tax credits as part of their fiscal expansions. However over the medium to long run, the extra government spending was not additional expenditure but was simply “borrowed” from the future. Thus over the medium term this represented no additional expenditure and considering that lower national income means lower government revenue and expenditure, the crisis has most probably reduced the total amount that governments will spend on climate related activities. In addition the private sector has also reduced its investments in climate related activities due principally to problems in obtaining finance. Thus overall, the Great Recession has probably negatively affected progress in addressing climate change.

In order to achieve the necessary large reductions in GHG emissions, a major restructuring will be required in numerous industries including electricity production, transport systems⁹² and in housing design and urban planning. Thus progress in achieving the overall emission reductions can be monitored by examining the progress that is being made in these various sectors. Approximately 30 to 40% of energy is used in buildings so that improving the heating and lighting in these can significantly reduce overall energy use and thus carbon emissions. Over the last several decades improved building techniques have allowed energy consumption per square meter to decline by 50%; newer developments in passive housing promise even larger efficiency gains. Building techniques in many of the transition economies use older technologies and significant improvements would be possible if they used more recent technology and design.

Globally the transport sector currently accounts for 23% of world GHG emissions from fuel combustion and 13% of total GHG emissions. Approximately three-quarters of emissions are accounted for by road transport. The transport sector does not appear favourably when comparing the growth of emissions over time by sector or major economic activity. CO₂ emissions from transport measured in tonnes have increased by 23% in the ECE region from 1990-2008. In several member States the CO₂ emissions have more than doubled. Other ECE countries have been able to reduce their CO₂ emissions. For example in Germany the emissions have been reduced by 6% over the same period. The emission levels were inversely related to per capita income levels and were lowest in Tajikistan and the Republic of Moldova.⁹³

The growth of GHG emissions, in spite of continuous increases in fuel economy, reflects the overwhelming impact of the rising number of vehicles and the number of miles driven per vehicle. Car ownership in Central and Eastern Europe tripled since 1990. Freight transport continues to grow and road and air freight keep increasing faster than the more efficient modes of rail and inland waterways. For example, air freight (road freight) emissions per tonne-kilometre are over 25 times (3 times) those of rail.⁹⁴ For passenger travel, bus transport is more efficient than car transport but it has its highest share in the poorest countries which suggest that it is viewed to be an inferior good with the implication that the bus share will decline with further economic growth.

⁹² For a summary of UNECE anticipated activities to reduce transport-related GHG emissions see ECE (2011), *Transport for Sustainable Development in the ECE region*.

⁹³ Ibid.

⁹⁴ European Environment Agency, *Transport at a Crossroads*, EEA Report No. 3/2009, Copenhagen.

Target 7.B: Reduce biodiversity loss, achieving, by 2010, a significant reduction in the rate of loss.

Biodiversity is concerned with the species variety and overall health of ecosystems. In 2006 the UN General Assembly declared 2010 to be the international year of biodiversity. Increased urbanization, large scale agriculture and other human related activities are producing stresses on the biodiversity in Europe and Central Asia. Habitat destruction and species extinction are associated with this declining biodiversity. Since there is no internationally agreed upon measure of biodiversity, different measures are commonly used to describe different types of ecosystems. The European Environment Agency has selected 26 indicators to measure biodiversity and set a 2010 target of halting the loss of biodiversity based upon these indicators; but it has recently concluded that this target cannot be met.⁹⁵

One aspect of biodiversity concerns the size and variety of species in the forests in the region; two of the EEA's 26 indicators address forest biodiversity. While forest area has declined in many developing regions of the world, it has increased in the ECE region by 17 million hectares between 1990 and 2005. This included an increase of 12 million hectares in Western Europe and 4 million hectares in North America. The overall area of protected forests in the pan-European region is about 40 million hectares, 17.7 million of which are in Russia.

Forest maintenance and development are subject to severe challenges in the Caucasus and Central Asia where forest cover is low and must compete with other land-uses and for water resources, while at the same time being subject to illegal logging. Forest as a percentage of land area (annex table 19) is particularly low in Kazakhstan (1.2%), Tajikistan (2.9%) and Kyrgyzstan (5%).

Target 7.C: Halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation.

Lack of access to safe drinking water and proper sanitation remain serious problems in many ECE emerging economies and a leading cause of death for children aged 0-14. Approximately 13,000 deaths in this region occur each year due to diarrhoeal disease obtained from unsafe drinking water. In addition unsafe water causes many to get sick from viral hepatitis A, E. coli, and typhoid fever.⁹⁶ Currently, over 20 million people in the region do not have access to safe drinking water and up to 50 million do not have access to appropriate sanitation.⁹⁷ This is primarily a problem in the poorest economies, for example three in ten in Tajikistan and one in ten in Kyrgyzstan do not have safe drinking water. The available technical performance indicators for water utilities in EECCA countries show that the service quality deteriorated throughout the subregion even during the period of high economic growth, reflecting the lack of maintenance and continued deterioration of Soviet-era assets.⁹⁸

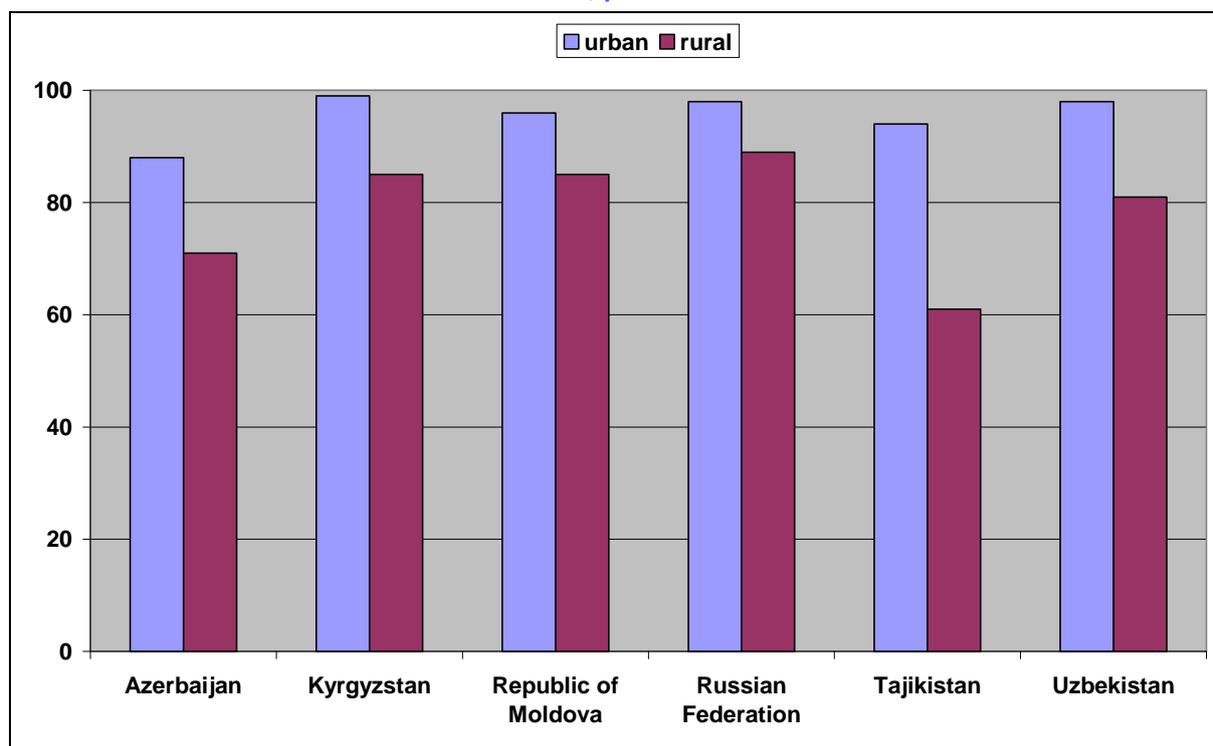
⁹⁵ European Environment Agency, [Progress towards the European 2010 Biodiversity Target – Indicator Fact Sheets](#), Technical Report No. 5/2009, Copenhagen, 2009.

⁹⁶ Drinking water supply can be broken down into three categories: unimproved drinking water sources, improved drinking water sources other than piped water, and water piped into a dwelling, plot or yard. The category 'improved drinking water sources' includes sources that, by nature of their construction or through active intervention, are protected from outside contamination, particularly faecal matter. These include piped water in a dwelling, plot or yard, and other improved sources. 'Unimproved sources' refer to unprotected dug well, unprotected spring, cart with small tank/drum, tanker truck, and surface water (river, dam, lake, pond, stream, canal, irrigation channels), bottled water (UNICEF and WHO, [Progress on Drinking Water and Sanitation](#), New York and Geneva, 2008).

⁹⁷ WHO, [The European Health Report](#), Geneva, 2009.

⁹⁸ OECD, [Ten Years of Water Sector Reforms in Eastern Europe, Caucasus and Central Asia](#), Paris, 2011.

Figure 3.13
Share of persons using improved drinking water sources, urban and rural
2008, per cent



Source: MDG database of the UN Statistics Division.

The problem is significantly worse in the rural areas (annex table 20). Improved sanitation is also a problem in a number of economies; for example in Moldova in 2008 only 79% of the population had adequate facilities (annex table 21). Only 13% of the households in Uzbekistan, 22% in Bosnia and Herzegovina, 24% in Kyrgyzstan, and 30% in Moldova and Turkmenistan have a bath or shower in the dwelling.⁹⁹ Even in Romania only about 10% of rural households are connected to a safe supply of water. Access to safe drinking water and sanitation is closely related to the problem of informal settlements (target 7.D) as municipal authorities or private water companies are unlikely to construct infrastructure for illegal developments.

Target 7.D: By 2020, to have achieved a significant improvement in the lives of at least 100 million slum dwellers.

The housing market in transition has a very different history than that found in typical market economies. However, there was no single model of housing provision among the formerly planned economies but instead there were a diversity of institutional arrangements resulting from their different economic orientations and levels of economic development. While the means of production were largely state-owned, there were three basic patterns of housing ownership which coexisted simultaneously, including state, co-operative, and privately owned housing. Even where there was a share of private ownership of the dwellings, the state sector was

⁹⁹ Improved sanitation facilities are facilities that ensure hygienic separation of human excreta from human contact. These include shared sanitation facilities which are facilities of an otherwise acceptable type shared between two or more households. Shared facilities include public toilets (UNICEF and WHO, [Progress on Drinking Water and Sanitation](#), New York and Geneva, 2008).

the largest developer of new properties. Relative to population, the housing stock was low.¹⁰⁰ Relative to Western norms the amount of urban land reserved for residential use was quite low; for example in Moscow and St. Petersburg approximately 35 % of the land was allocated for residential use while the average in cities in market economies was 65 %.¹⁰¹ Given the generally long life of housing and the small yearly additions to the housing stock, this legacy of limited and low quality housing remains a significant factor in understanding the present situation and trends in the current housing market.

Although most of the housing stock has now been privatised, the region is characterized by some unique features including a quite limited amount of rental housing and a very limited amount of social or publicly subsidized housing. Currently over 50 million people in the region are classified as living in informal settlements; these are defined as housing units built without legal rights to the land and generally associated with the lack of complementary physical infrastructure such as sanitation and running water.¹⁰² In some urban areas a sizable share of the population lives in informal housing; for example, 70% of the population of Istanbul lives in informal housing and 40% of the residential areas of Belgrade are composed of informal settlements. In addition to the inadequate housing stock, the underlying problems include the poverty, poorly defined property rights, undeveloped housing market institutions, rapid rural to urban migrations, and displacements related to political conflicts and natural disasters. Population segments generally found in informal settlements include the long-term unemployed, large or one-parent families, people with a low level of education, those with disabilities, ethnic minorities, and refugees.

GOAL 8: DEVELOP A GLOBAL PARTNERSHIP FOR DEVELOPMENT WITH TARGETS FOR AID, TRADE AND DEBT RELIEF

Goal 8 considers the degree to which the world's trading and financial system is conducive for economic development and what is needed in order to ensure that globalization becomes a positive force for all the world's people. It is the supportive international pillar for the realization of the other goals 1 to 7. An evaluation of this goal is best performed at the global level but given the importance of Western Europe and North America in the governance structure of world economic institutions and the provision of development assistance these countries have an especially important role in fulfilling this goal. Since they are collective global level targets, a country level evaluation of each country's contribution to the global objective is generally not possible; the official development assistance (ODA) objective is an exception. Some of the targets are defined quite broadly which further makes an evaluation of progress for them particularly difficult. The UN MDG Gap Task Force was created to monitor the progress being made for MDG 8 and each year they release an annual report. Generally they have concluded that progress is being made in several areas but that important gaps remain in fulfilling the global commitments contained in this goal.¹⁰³ The recent economic crisis, followed by a severe contraction in trade

¹⁰⁰ Jose Palacin and Robert Shelburne, *The Private Housing Market in Eastern Europe and the CIS*, Discussion Paper 2005.5, Geneva 2005.

¹⁰¹ World Bank, *Russia Housing Reform and Privatization: Strategy and Transition Issues* (Washington, DC), 1995.

¹⁰² Using perhaps a different definition, UN-HABITAT had estimated that 25 million of people in Europe and Central Asia lived in slums in 2001.

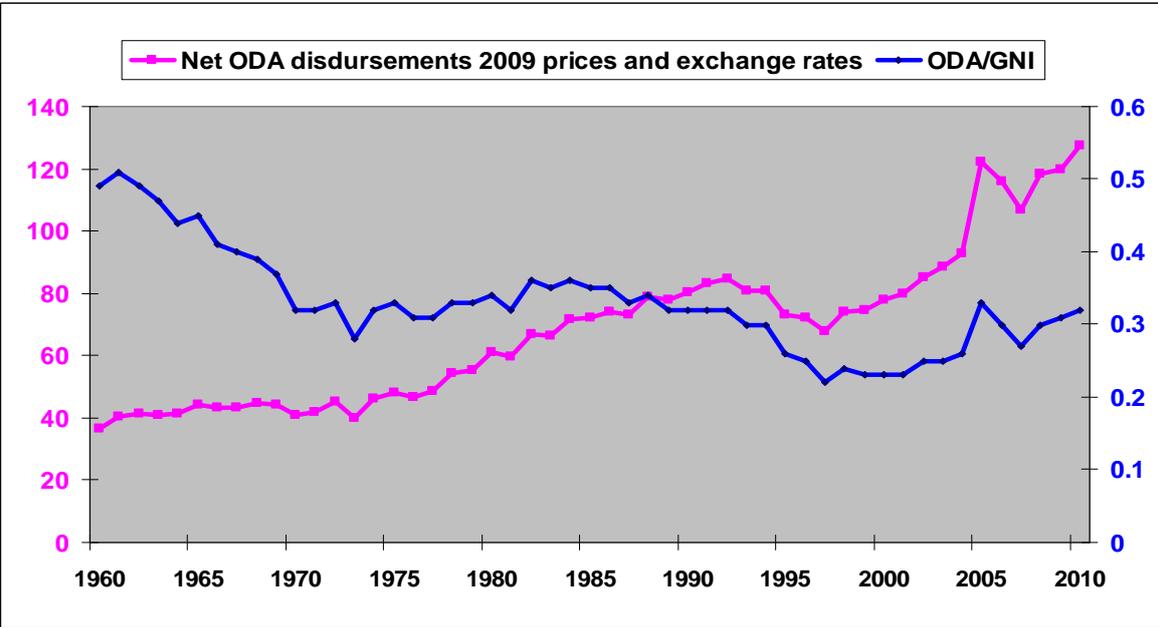
¹⁰³ The United Nations MDG Task Force reports are available online on [its web site](http://www.un.org/en/development/desa/policy/mdg_gap/index.shtml) http://www.un.org/en/development/desa/policy/mdg_gap/index.shtml.

and economic growth in 2009 and a mild recovery in 2010 and 2011, has resulted in a significant slippage on several fronts.¹⁰⁴

Official Assistance

Central to MDG 8 was the recognition that many developing countries did not have the domestic resources that would be required in order to achieve their objectives. Thus aid, private sector financial resources and international trade are important ingredients for allowing countries to achieve their MDG targets. The advanced economies which are able to provide this aid are primarily located in the UNECE region as these economies donate almost 90 per cent of total ODA supplied by DAC countries (Japan and Australia being the only major donors outside the UNECE).

Figure 3.14
Official development assistance 1960-2010



Source: OECD-DAC database.

Since 1990 the real dollar amount of net ODA has increased by 59 per cent but as a percentage of the GNI of the donors, the level in 2010 (0.32 per cent) is approximately equal to what it had been in 1990 (0.32 per cent). This level is also less than half of the level of 0.7 per cent of GNI which was first proposed as a target by the 1969 Pearson Commission on International Development.¹⁰⁵ The DAC donors had committed in 2005 at the Gleneagles G8 meeting and at the UN Millennium+5 Summit to raise their national aid targets and as a result their overall ODA/GNI target was expected to increase from 0.26 per cent to 0.36 per cent by 2010. Other than Japan, the non-EU members generally met their national targets in 2010. The EU DAC, however which had committed to raise its ODA from .35 per cent to 0.51 per cent in 2010 has significantly missed that target by providing only .46 per cent.¹⁰⁶ However, eight EU countries met the .51 per

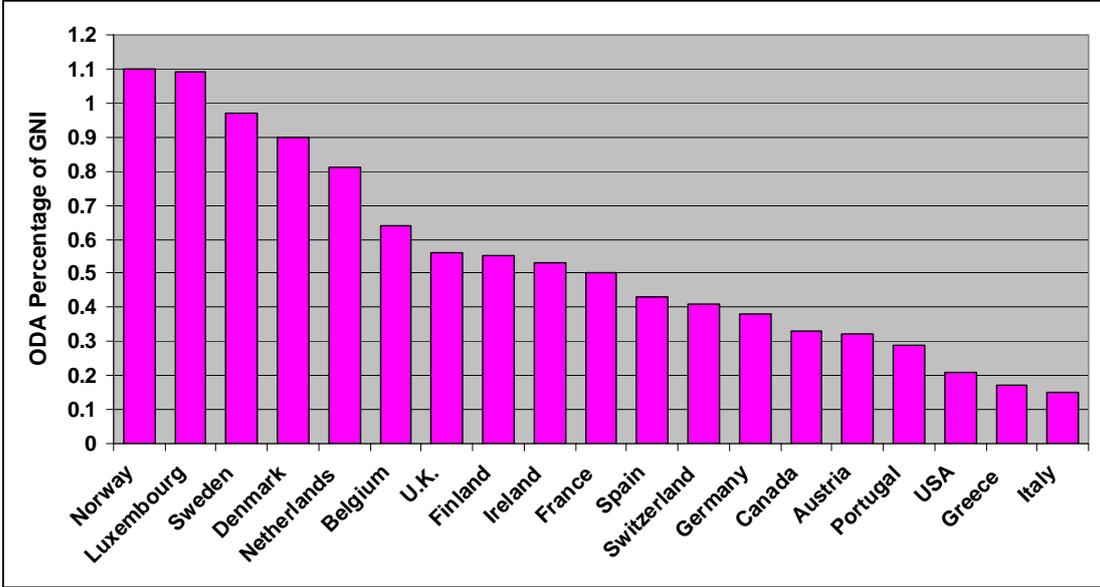
¹⁰⁴ See UNCTAD, “Successful trade and development strategies for mitigating the impact of the global economic and financial crisis” (TD/B/C.I/7).

¹⁰⁵ In 2010, Norway (1.10 per cent), Luxembourg (1.09 per cent), Sweden (.97 per cent), Denmark (.90 per cent) and the Netherlands (0.81 per cent) exceeded the UN target of 0.7 per cent of GNI.

¹⁰⁶ Despite missing the 2010 target, the EU still provides a higher percentage contribution than the non-EU members (except for Norway’s level of 1.1 per cent).

cent goal; these include Luxembourg, Sweden, Denmark, the Netherlands, Belgium, the United Kingdom, Finland, and Ireland. The United States remains the largest donor in dollar terms but provided only .21 per cent of its GNI in 2010.

Figure 3.15
ODA percentage of GNI for UNECE donors



Source: OECD-DAC database.

The failure to meet these ODA commitments may be the result of the financial crisis; historical evidence shows that financial crises often lead to a decline in foreign assistance.¹⁰⁷ In dollar terms, 2010 net disbursements increased to \$128.7 billion from \$119.8 billion in 2009 after a decline from the \$121.9 billion in 2008. Given the continuing economic problems in the advanced economies and the accompanying budgetary retrenchments, significant increases in ODA are unlikely and actual cuts may occur instead in the years ahead despite the increases in 2010. The OECD expects aid to increase by 2 per cent per year over the next three years compared to an annual 8 per cent increase over the last three years. Nevertheless there is a distinct possibility that aid could decline as opinion polls in the advanced donor economies find that there is broad public support for reducing foreign aid.¹⁰⁸

Assistance from non-DAC members, some of them emerging economies themselves, is now significant and is expected to further increase. Global Humanitarian Assistance has estimated aid from non-DAC countries (largely Brazil, China, India, and Russia) is about \$10 billion a year but it is often difficult to separate aid from trade and investment. For instance, for years Russia has supplied energy to many of its neighbours at below market-based prices, but quantifying the aid component of this is complicated. During the financial crisis Russia provided assistance to several economies including Armenia and Tajikistan and has provided approximately \$1.5 billion in support to Abkhazia and South Ossetia.

Equally important to the level of aid is the efficiency with which it is used. To assess these issues is complicated and there are no simple quantitative targets for this purpose. Nevertheless

¹⁰⁷ Hai-Anh Dang, Steve Knack, and Halsey Rodgers, *International Aid and Financial Crises in Donor Countries*, Work Bank Policy Research Paper 5162, Washington, US, 2009.

¹⁰⁸ Based upon a 2011 FT/Harris poll in the US, Germany, UK, France, Italy and Spain.

the efficiency in the delivery and use of aid needs to be regularly monitored and assessed by both donors and recipients.

Eighteen of the UNECE economies plus UNMIK/Kosovo are official recipients of ODA (see annex table 22). In 2009 they received almost \$8 billion in assistance or slightly more than six per cent of total world ODA.¹⁰⁹ This was divided almost evenly between South-Eastern Europe (\$3.968 billion) and the EECCA (\$3.931 billion). The largest recipient was Turkey (\$1.376 billion) followed by Georgia (\$928 million), UNMIK/Kosovo (\$788 million), Ukraine (\$682 million), Serbia (\$628 million), and Armenia (\$528 million). If viewed in terms of their ODA as a percentage of their GNI the situation is remarkably different. The region's largest recipients included UNMIK/Kosovo (14.0 per cent of GNI), Georgia (8.6 per cent), Tajikistan (8.3 per cent), Kyrgyzstan (7.1 per cent), and Armenia (5.9 per cent). Turkey which was the largest recipient by value is tied for being the lowest as a percentage of its GNI at 0.2 per cent.

In terms of ODA received per capita, the economies in SEE (except Croatia and Turkey) have received comparatively large amounts, often more than \$100 per capita. All of the SEE countries, including Turkey, receive assistance from the EU pre-accession programme. In the EECCA region, Armenia (\$171 per capita) and Georgia (\$210) in the Caucasus, Kyrgyzstan (\$62) and Tajikistan (\$56) in Central Asia, and Moldova (\$71) also receive considerable aid.

The developing and transition economies need external financial assistance in order to strengthen their social safety nets and fund health, education, environmental and social programs for their populations. To ensure that these countries have the financial resources they need for addressing the MDGs, donor nations should fulfill their aid commitments, especially those that promote further productivity increases such as “Aid for Trade.”

Target 8.A: Develop further an open, rule-based, predictable, non-discriminatory multilateral trading and financial system.

Current Integration into the World Trading System

Prior to 1990, the ECA economies became segmented off from the global trading and financial system for over 40 years. Since the transition, the NMS (especially due to their membership in the EU) and to a lesser degree SEE have now become reasonably integrated into the world economy.¹¹⁰ The growth of exports from the NMS nearly doubled after EU accession. Although the total value of the EECCA region's exports is approaching global norms, this is due to their extensive exports of natural resource products. The manufacturing sectors of these economies remain largely outside of global markets and global supply chains; their shares of manufactured exports are low relative to global norms. There has been limited progress in diversifying their export structures; in fact there has been a tendency for their export concentrations to increase. There is need for these countries to review national trade and economic policies with a view to elaborating new policies and strategies to build up competitiveness, enhance and diversify supply capacities and build up economic resilience to external shocks.

¹⁰⁹ Some ODA is provided regionally or not specified by region; these economies received some of this ODA and thus their actual share of world ODA would be somewhat higher than six per cent.

¹¹⁰ Vitalija Gaucaite Wittich, [*Some Aspects of Recent Trade Developments in South-east Europe*](#), UNECE Discussion Paper No. 2005.6, Geneva, 2005.

The export structures of these economies are overly concentrated both in terms of commodity structure and geographical destinations.¹¹¹ The geographical destinations for their exports are concentrated, with the countries of the EECCA region over-relying on others in the region as destinations for their manufactures exports. Thus diversifying trading partners is also needed. Numerous export opportunities exist with the rapidly growing emerging economies of the South such as China, India and Brazil. Building economic and trade relations with developing countries would also widen possibilities for development cooperation. In the NMS FDI inflows have been found to be associated with increased exports and thus the ability of the EECCA to export more manufactures could be enhanced by encouraging more FDI into manufacturing sectors. During the current economic crisis, the EECCA economies experienced large declines in trade especially in the first half of 2009. Although the need for diversification is most apparent for the natural resource abundant EECCA, the remaining emerging UNECE economies also could benefit from increased diversification. The NMS and SEE are, however making some progress in increasing their export structures towards more high-skill and technology-intensive exports.

The EiT and the NMS should implement trade and investment initiatives that will promote the diversification of their exports geographically and towards higher-value manufactured goods and business services. They should also develop trade and economic relations with the developing countries (i.e., South-South cooperation) to diversify their markets and widen development cooperation. They should further review their trade and development policies with a view to adapting them to the new realities of globalization as well as enhance their related domestic institutional and regulatory capacities.

Market Access

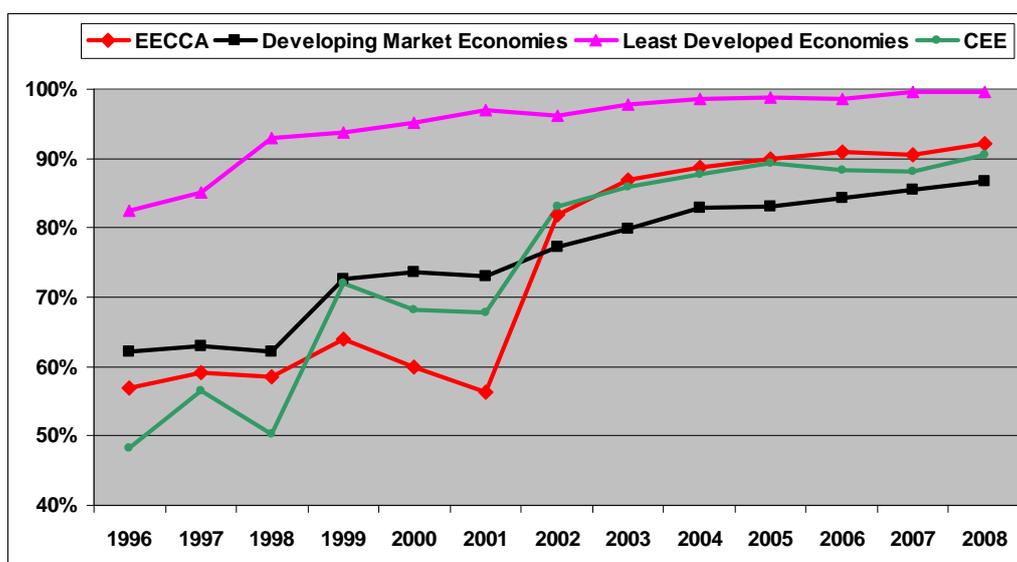
One of the indicators concerning improving market access for developing countries and countries with economies in transition concerns the proportion of their exports that are admitted duty-free into the developed countries. On this measure significant progress has been made for the EECCA; in 1996, 89 per cent of this region's exports received duty-free treatment in the developed economies (compared to 53 per cent for all developing market economies) and by 2008 this had increased to 98 per cent (compared to 84 per cent for all developing economies). As a result the EECCA now have better market access, as defined by this measure, than even the least developed countries (for which 92 per cent enter duty free). This is somewhat surprising given that many of the EECCA are not members of the WTO and are not entitled to MFN-treatment in a number of economies. To some degree the high level of market access is due their concentration of exports of petroleum products which are often given duty-free treatment. Only 28 per cent of EECCA textile products and 37 per cent of clothing exports received duty-free treatment in 2008 compared to 36 per cent and 27 per cent for all developing countries.¹¹² For all industrial products, 92 per cent of EECCA exports received duty free treatment in 2008 by the developed market economies compared to 91 per cent for Central Europe and 87 per cent for all developing countries (see figure 3.16).¹¹³

¹¹¹ Robert C. Shelburne and Oksana Pidufala, *Evolving Trade Patterns in the CIS: The Role of Manufacturing*, UNECE Discussion Paper No. 2006.2, Geneva, 2006.

¹¹² The data on duty-free access and average tariff rates come from the ITC Millennium Development Goals database at www.mdg-trade.org.

¹¹³ The ITC defines CEE as the NMS-10 minus Slovenia plus Ukraine.

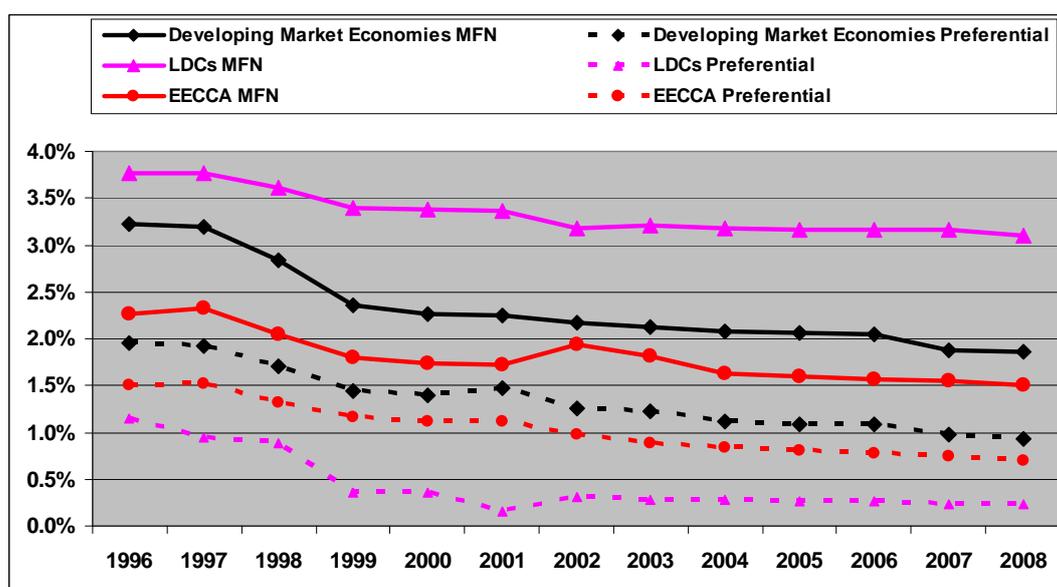
Figure 3.16
Percentage of industrial imports receiving duty-free treatment in developed market economies



Source: ITC Market Access Map, July 2011.

For those items subject to duty, the average tariff rate for EECCA exports in developed market economies was 4.8 per cent in 2008; for those entering under a preferential program it was 4.2 per cent. For industrial products, the EECCA faced a tariff of 1.5 per cent in 2008 which was fairly similar to that faced by the developing countries; for industrial products that receive some preferential tariff treatment, the rate was only 0.7 per cent (see figure 3.17) in 2008. What is apparent from these data is that tariffs represent only a minor burden on exporting by the EECCA; equal emphasis needs to be on lowering transport costs, improving border crossing procedures and on upgrading their ability to meet product standards in export markets. Nevertheless, the economies in transition need improved market access so that they can better reap the benefits of international trade.

Figure 3.17
Average tariff on industrial products imported by developed market economies



Source: ITC Market Access Map, July 2011.

WTO Accession and Conclusion of the Doha Development Round

A central objective in having target 8.A was the evolution of an open, rule-based, predictable, non-discriminatory multilateral trading and financial system which is essential for fostering sustainable trade growth. Another feature of the system which tends to be ignored but is inscribed in the UN Millennium Declaration is an 'equitable' trading system. The rationale for a fairer and equitable trading system has been strengthened by the damaging impact of the global crisis on employment, access to essential social services and poverty alleviation. It has made the case for a development-oriented multilateral trading system even more imperative and urgent. Target 8.A should be revised to promote an open, equitable, rule-based, predictable, and non-discriminatory multilateral trading and financial system.

For many developing countries this requires changes to the trade rules inscribed in the agreements and procedures of the World Trade Organization (WTO) so as enhance the role that trade can contribute to the development process. For this reason the current round of trade negotiations which began in Doha in 2001 has been referred to as the Doha Development Agenda since a key objective was supposed to be to make the trading system fairer and development-oriented for developing countries. Many of the development objectives which the developing countries initially expected would be addressed in this trade round have been marginalized from the negotiations and it is increasingly apparent that it will not be possible to conclude this trade round. There remains a slight hope that a scaled down set of agreements can be reached but even this may not be possible. The impasse has prevented realization of new trading opportunities badly needed to boost trade and sustain the recovery following the crisis. However, conclusion of the Doha Development Round has less immediate importance for many of the EiT which have yet to gain accession to the WTO.

Ten of the EiT (Azerbaijan, Belarus, Bosnia and Herzegovina, Kazakhstan, Montenegro, Russia, Serbia, Tajikistan, Turkmenistan, and Uzbekistan) have yet to gain accession to the WTO and thus are not fully integrated into the multilateral trading system. Russia is the largest ECE emerging economy and the only G-20 country not in the WTO. Russia has concluded agreements that address most of the substantive economic issues for membership and its accession would appear to be imminent. However, it remains uncertain how the creation in 2010 of the Belarus, Kazakhstan and Russia customs union will complicate WTO accession for these economies.

Failure to join the WTO has limited the integration of many of the EiT into the world economy. Generally current WTO members have requested significant structural reforms (especially towards more market-based principles) in these economies as a condition for membership. A number of general equilibrium modelling efforts have been undertaken to investigate the implications of WTO membership on these economies. These studies find that although trade would increase slightly and this would slightly increase economic welfare the major positive impact would come from increased FDI especially in the service sectors. If the WTO Doha Round cannot be fully completed, a scaled down version that focuses on the development needs should be attempted instead. Both existing WTO members and the EECCA and SEE acceding countries should be more accommodating in their negotiating positions so as to facilitate the accession of EiT non-members to the WTO so that they can benefit more fully from the multilateral trading system.

The import protections of the EiT are a factor that has also limited their integration into the global economy. At a theoretical level in long-term static equilibrium, an import tariff is equivalent to a tax on exports. All of the EiT except Georgia have higher average tariffs than the

EU NMS; this also applies if agricultural and industrial products are considered separately.¹¹⁴ Several have average tariffs on all products above ten per cent; this includes Belarus, Kyrgyzstan, Russia and Uzbekistan. For agricultural products, 14 of the 19 economies have average tariffs above ten per cent, including Turkey whose average agricultural tariff is 59 per cent. For industrial products Kyrgyzstan, Russia and Uzbekistan have average tariffs above ten per cent. Georgia's tariffs on industrial products are essentially zero. The average tariff of the nine EiT WTO members (3.92 per cent) is less than half of the average of the ten EiT non-WTO members (8.79 per cent).

Regional Preferential Trade Agreements

An additional development which has contributed to increasing trade integration in the region has been the progress made in terms of regional integration agreements. Obviously the expansion of the EU to include the NMS has been vastly important as is the EU likely further enlargement into SEE. The Central European Free Trade Agreement has proven to be a quite adaptable institutional structure that has essentially shifted from being a preferential trade area in Central Europe to one in South-Eastern Europe. All of the SEE, except Turkey but including Moldova, are now parties to the agreement. There has been less progress in the EECCA where the Eurasian Economic Community (EurAsEC) has been the main institutional arrangement promoting trade integration in the region although several countries appear to have different visions regarding its objectives. Belarus, Kazakhstan, and Russia (B-K-R) moved ahead independently in creating a customs union in 2010 and have further plans for an economic union ("common economic space") beginning in 2012. The B-K-R customs union has even adopted parts of the EU's *acquis communautaire* to harmonize regulations for the proper functioning of their customs union; this also will reduce the impediments towards future possible trade liberalization between the B-K-R customs union and the EU. There are a number of important free trade agreements in the region including most importantly that between the EU and Turkey and well as a possible new one between the EU and Ukraine. There are numerous other agreements in the region, often with overlapping memberships and scope.

Regional trade initiatives can promote development but they should be designed to encourage open regionalism instead of closed trading blocs. There is a need to make effective use of regional trade agreements, especially in the EECCA where current agreements are more limited in scope; these could be improved by consolidating many of the existing agreements into fewer but more viable agreements.

Improving the Regional Transport Infrastructure and Streamlining Border Control Procedures

Many of the EECCA and SEE economies, like other developing countries have a number of additional obstacles in expanding trade links to the rest of the world. Regional transport infrastructure is inadequate, border crossing procedures are cumbersome, and product and regulatory standards (i.e., health, safety, environmental, etc.) may be incompatible with global norms. These infrastructure and institutional issues can be quite significant in reducing both exports and in limiting the gains from importing cheaper or technologically superior inputs. These problems are compounded when countries are landlocked and therefore dependent on the transport infrastructures and border control policies of their neighbors (see target 8.C). The resulting high transport costs erode their competitiveness and reduce the volumes traded. Together these factors have reduced the pace and quality of economic development.

¹¹⁴ Georgia's tariffs on agricultural products are above that of the EU NMS.

Compared to other developing regions, the EECCA and SEE have a more extensive transport infrastructure network although there are significant maintenance backlogs. The creation of new states after the disintegration of the Soviet Union and Yugoslavia meant that the existing transport network was no longer consistent with the new borders. This development cut off parts of the railway network while creating numerous enclaves without appropriate infrastructure connections with their national capitals. Consequently national investment programmes have favoured the construction of new transport links rather than regular maintenance of the already existing transport infrastructure assets.

However, these constraints do not affect progress in addressing institutional constraints or non-physical obstacles such as cumbersome export/import and regulatory procedures and regulatory standards. The lack of real progress in this area largely reflects a lack of commitment on the part of national governments to adequately address these matters. The World Bank's Doing Business report ranks countries in terms of the ease of trading based upon the time and difficulty (i.e., number of documents, etc) in obtaining customs clearances. In its 2011 report three (Azerbaijan, Kazakhstan, and Tajikistan) of the 10 most difficult countries in "trading across borders" are in the EECCA. However two EiT (Armenia and Montenegro) are listed in the top 5 of those that improved the most over the previous year's report. Those making improvements included Belarus, Kazakhstan, Latvia, and Lithuania for improving electronic data interchange systems, Armenia for improved customs administration, Kazakhstan and Montenegro for reducing the number of trade documents, and Armenia and Kazakhstan for improved risk-based inspections.¹¹⁵ The failure to make more progress is often blamed on special interest groups, poor governance, corruption, or simply the failure of national governments to focus attention on these issues.

Although some progress has been made in the region in addressing these impediments to trade, it has nevertheless been disappointing. For the infrastructure constraints, limited progress is to be expected since improving infrastructure involves significant investment and takes time to build. For instance improving the Euro-Asian rail and road systems for the Central Asian economies involves investments of tens of billions of dollars. Given financing constraints, all that can be expected for infrastructure improvements is slow but incremental progress.

Increasing the EiT's integration into the global economy requires improving the regional transportation system; this is especially critical for the land-locked economies. Transport costs can be reduced by implementing international legal instruments, standards, norms and recommendations. Improving the pan-European and Euro-Asian transport infrastructure requires the active participation of member States. Improving border control procedures is an extremely cost effective method of improving trade performance. There is a need for transparent border-crossing performance measures and best-practice benchmarks and for improvements in transport data collection and statistics.

Addressing these issues therefore requires technical assistance and funding. The Aid for Trade (AfT) Initiative can play a substantial role in helping the EiT integrate into the global economy by addressing supply side constraints and building trade related infrastructure. At the global level AfT commitments have continued to increase and amounted to \$40.1 billion in 2009; this was up slightly from 2008 and up more than 60 per cent from the 2002-2005 average.¹¹⁶ Of this, \$22.7 billion or 57 per cent was donated bilaterally by the DAC countries with Japan being

¹¹⁵ World Bank, [Doing Business 2011](#), Washington, DC, 2011.

¹¹⁶ Data for AfT commitments and disbursements is obtained from the World Trade Organization, AID For Trade at a Glance, OECD and WTO, 2011.

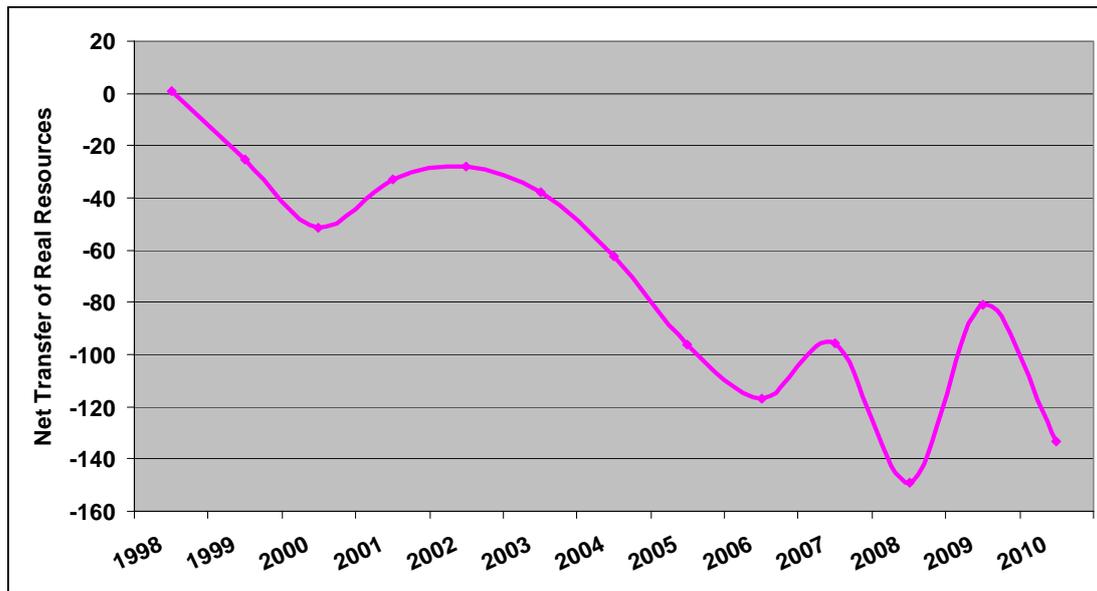
the largest donor; and \$16.9 billion or 42 per cent by multilateral donors, with the World Bank accounting for almost one-half. Of the \$40.1 billion total, \$7.1 billion was provided to multi-country programs and \$33.0 billion to individual countries. Of the \$33.0 billion donated to a specific country, \$2.6 billion or 7.8 per cent went to the EiT. This percentage has fluctuated over the years but has been on a slightly downward path from the average 9.5 per cent during 2002-2005. In real dollar terms commitments to the EiT in 2009 declined by 12 per cent from those in 2008. In 2009 all of the EiT including UNMIK/Kosovo received some commitments although the amounts were quite small for some such as Belarus, Montenegro, and Turkmenistan.¹¹⁷ In 2009, Georgia received by far the largest commitments of \$526 million, followed by Ukraine with \$293 million and Turkey with \$284 million. However, over the 2006-2009 period Turkey was by far the largest recipient both of commitments and disbursements of the EiT, and over the 2002-2009 period was among the top 20 recipients in the world. On a per capita basis, Georgia was the largest EiT recipient of commitments in 2009 and was among the top 20 countries in the world. Approximately one half of AfT for the EiT goes to building productive capacity and the other half to economic infrastructure. Similar objectives in promoting trade and transport facilitation are incorporated into the Almaty Programme of Action which addresses specific trade problems of the EECCA and SEE landlocked developing countries (see target 8.C).

External Financial Flows

Target 8.A is also concerned with improving the access of developing countries to international financial markets as a source of development finance. In terms of integrating financially into the world economy the region has been rather successful but these flows are characterized by a number of anomalies. Prior to the transition private sector inflows were quite small with most borrowing being undertaken by government authorities. After the transition the privatization schemes that sold off state-owned production facilities began to attract significant foreign investment. By the 2000-2008 period, the NMS and SEE were receiving very large net capital inflows and these were quite significant in contributing to the strong growth of that period. These external inflows allowed these economies to achieve investment rates much higher than would have been possible otherwise. Net inflows of capital to the NMS and SEE which had reached over 8 per cent of GDP prior to the crisis were over twice the percentage level for other developing areas including even fast growing Asia. In 2006 and 2007 even the EECCA had net capital inflows greater than in any other world region except NMS+SEE. Nevertheless this reliance on external capital proved to be the most important underlying factor that caused the region to experience the economic crisis of 2007-2009 to a greater degree than any other region of the world economy. Not only was the region more dependent than elsewhere on capital inflows but the drop in capital inflows during the crisis was larger than elsewhere. While the private sector has been a large borrower of external financial resources, the public sectors of the energy rich EECCA have been large lenders of financial resources primarily through their accumulation of international reserve (mainly US dollar and euro) assets. As a result the EiT-Turkey (EiT-T) overall have been net providers of goods and services to the rest of the world. Thus instead of the rest of the world providing the EiT-T with net real resources which would allow them to develop, the EiT-T have been providing real resources to the rest of the world. Thus in 2010 the EiT-T produced over \$130 billion more than they consumed.

¹¹⁷ Note that Russia is the only EiT economy which is not an official ODA recipient.

Figure 3.18
The net transfer of real resources by the EiT minus Turkey



Source: *World Economic Situation and Prospects 2010*, United Nations.

Note: In billions of US dollars.

Capital flows to emerging /developing economies have been subject to a high degree of volatility over the last 40 years. The collapse of capital inflows to the European emerging economies in 2008-2009 had a number of strong similarities to a similar collapse in the capital inflows to East Asia in 1997-1998. Nine of the EECCA and SEE (Armenia, Belarus, Bosnia and Herzegovina, Georgia, Kyrgyzstan, Moldova, Serbia, Tajikistan, and Ukraine) and four of the NMS (Hungary, Latvia, Poland,¹¹⁸ and Romania) were forced to turn to the IMF for some type of assistance during the current economic crisis.¹¹⁹ These experiences suggest that, given the current design of the world financial system, an over-reliance on external capital flows to finance development is not a prudent development strategy due to the inherent volatility of global capital markets.¹²⁰ There is a need to limit exposure to external capital markets and implement policies that will ensure that the private capital flows that do occur will promote long-run economic development.

Improving the Operation and Design of the International Financial System

Despite these concerns about the ability of the international financial system to continuously provide external finance, there have been several recent reforms in the design and operation of the international financial system that have made it slightly more “development friendly”. Given the high volatility in private international capital flows and the large negative consequences during periods of reversals, the world needs a type of “lender of last resort” that can provide emergency funds to help replace private sector withdrawals. The IMF has primarily provided this service but its effectiveness has been limited because of limited resources. At the London G-20 meeting in April 2009 the resources of the IMF were quadrupled (including the

¹¹⁸ Poland only requested a precautionary facility which was not used.

¹¹⁹ The former Yugoslav Republic of Macedonia drew IMF resources in 2011 and Albania, Azerbaijan, and Turkey had outstanding loans from the IMF prior to the crisis.

¹²⁰ The EEE+NMS had been warned about the financial risks that were developing in the region several years before the current crisis but few policies to address these risks were implemented; for warnings see, UNECE, *Economic Survey of Europe*, 2005 No. 1, Geneva, 2005.

SDR increases) and this should allow it to play an enhanced role in stabilizing the international financial system. The IMF had been highly criticized for the policies it had required (i.e., conditionality) for providing support for decades up to and including the Asian financial crisis. During the current crisis this conditionality was relaxed considerably (largely for the EiT) in order to minimize the economic downturn in the borrowing nations.¹²¹ Most observers view this as a significant improvement in IMF operations and one that makes the use of IMF resources more likely and thus the international monetary system more stable. Most recently the IMF has suggested some support for the use of capital controls in order to reduce the boom/bust cycles caused by volatile private sector capital flows. The IMF has also altered its quota allocations with additional reform likely. The MDG Declaration also proposed increased coherence and coordination between the UN agencies and the Bretton Woods Institutions; regular meetings between these have occurred since 1998. All of these changes in IMF governance, procedures and policy prescriptions are making the international financial system more supportive of development. Various options for further reform of the international financial architecture have been proposed.¹²²

The European Bank for Reconstruction and Development (EBRD) has assisted in financing specific development projects in transition economies since its founding in 1991. During the current crisis the financial sectors in the EiT benefited considerably from the support of the EBRD which increased its investments by 55 per cent in 2009 to \$10.7 billion. EBRD involvement in investment projects also contributes to the achievement of some MDG 7 goals as the organization requires that approved projects meet environmental standards. The European Investment Bank has also provided significant loans for specific projects especially in the NMS, South-Eastern Europe and the European EECCA. The Council of Europe Development Bank finances social projects primarily in the EU and South-Eastern Europe; in 2008 it approved 39 projects worth almost €1.9 billion. These projects are particularly relevant to MDG objectives and include such items as housing for low-income households, education, vocational training and job creation, construction of healthcare facilities, and environmental projects. The Eurasian Development Bank and the Asian Development Bank have financed major infrastructure investment projects in the EECCA, especially in Russia and Kazakhstan. Loans by these organizations contribute to the ability of both the public and the private sectors towards achieving the MDGs.

Given the potential risks of private sector capital inflows, other public sources of finance would be desirable for Emerging Europe and Central Asia. These funds could come from things such as a global carbon tax, a tax on financial or exchange market transactions, or on the exploitation of sea-bed resources. SDRs could be allocated based upon development needs instead of by IMF quotas. Currently, however, none of these proposals is under serious consideration and therefore none of these alternative sources of funding is likely by the MDG 2015 target date.

Global efforts are needed to reform capital markets to make them less prone to boom-bust cycles and to improve the assistance provided countries experiencing difficulties during crisis situations. The IMF should be encouraged to continue with its evaluation efforts on the necessary degree of conditionality it imposes for assisting countries in crisis situations. Employment creation and the provision of social services should be emphasized in designing IMF programs. The activities of regional development banks should be supported with increased funding.

¹²¹ This change in conditionality was largely the result of the IMF's own appraisal of its previous operations; IMF Independent Evaluation Office, *Structural Conditionality in IMF-Supported Programs*, Washington, DC, 2007.

¹²² See UNCTAD, Trade and Development Report 2009 (UNCTAD/TDR/2009).

Ensuring that Private Capital Flows Promote Development

Besides the level of capital inflows the structure of those inflows is also important. Generally it is viewed that foreign direct investment (FDI) contributes more towards economic development than inflows of portfolio equity or debt. This is because FDI is generally associated with inflows of technology and managerial talent and is less subject to volatility. As with capital flows generally, the UNECE emerging economies were relatively successful in attracting FDI inflows. The stock of FDI inflows in the ECA increased by 724 per cent between 2000 and 2010 from \$183 billion to \$1.5 trillion. By subregion, the increase of 1,245 per cent was the greatest in the SEE-6, followed by an increase of 1,214 per cent in Russia, 847 per cent in Turkey, 720 per cent in the EECCA-11 and 520 per cent increase in the NMS. These increases are over twice as large as that recorded for the developing countries overall whose increase over this period was only 244 per cent. For all of the ECA, the percentage increase between 2000 and 2010 was the smallest in Kyrgyzstan whose FDI barely doubled. The largest stock of FDI is in Russia (\$423 billion), followed by Poland (\$193 billion) and Turkey (\$182 billion).¹²³ Besides FDI growing by less in the EECCA than in SEE, an additional issue is that the inflows have been largely associated with natural resource attraction. Increasing FDI in their manufacturing and services sectors could contribute significantly to making the EECCA more dynamic and diversified. The stock of FDI as a percentage of GDP is quite high in the NMS with most countries being in the range between 30 to 50 per cent of GDP.

The financial crisis has had a significant impact upon FDI inflows; not only did FDI decline significantly in 2009 from their peak levels in 2008 but FDI continued to decline in 2010. For the ECA 2010 inflows were down 48 per cent from 2008 levels. The largest declines in inflows were for SEE-6 (-67 per cent), NMS-10 (-56 per cent), and Turkey (-53 per cent) while Russia (-45 per cent) and EECCA-11 (-31 per cent) experienced smaller but still quite significant declines. Despite this overall downward trend, several economies escaped this pattern and had larger inflows in 2010 than in 2008; this included Albania, Azerbaijan, the Czech Republic, and Uzbekistan. Preliminary data suggest that FDI inflows are likely to increase in 2011. It is notable that in recent years China has been increasing its investment in the natural resource sectors in Central Asia; both in terms of exploration and development as well as the construction of pipelines from the region to China.

Table 3.1
FDI stocks and inflows in the ECA

	FDI Inward Stock			FDI Inflows			
	2000	2010	Per Cent Increase 2000 to 2010	2008	2009	2010	Per Cent Change 2008 to 2010
SEE-6	5.7	76.4	1,245	12.6	7.8	4.1	-67
Turkey	19.2	181.9	847	19.5	8.4	9.1	-53
Russia	32.2	423.2	1,214	75.0	36.5	41.2	-45
EECCA-11	23.0	188.3	720	33.4	27.3	22.9	-31
EIT	80.1	869.7	986	140.5	80.0	77.3	-45
NMS	103.1	639.4	520	64.1	28.4	28.5	-56
ECA	183.2	1,509.1	724	204.6	108.4	105.7	-48

Source: World Investment Report 2011, UNCTAD.

¹²³ UNCTAD, [World Investment Report](#), Geneva 2011.

It should also be noted that EiT FDI outflows increased significantly in 2010 and were similar to their peak levels in 2008 of \$63 billion; Russia was the largest source of these outflows accounting for over three-fourths of the total. Thus for the EiT, FDI outflows in 2010 were almost as large as FDI inflows.

The reforms required to increase FDI inflows are primarily domestic as there are at this point no meaningful proposals under consideration as to how the global financial system might be altered to promote additional FDI. Creating a more inviting investment and business climate has been one of the major challenges facing the EECCA since the beginning of the transition and remains an important issue for these economies. For example in Russia the price/earnings ratio of its stock market is almost half that of other comparable emerging markets reflecting nervousness on the part of global investors about exposure to that market. Nevertheless slow but incremental progress is being made as judged by such indicators as the EBRD transition score, the World Bank's Doing Business rankings, or the World Economic Forum (WEF) competitiveness index. Further required domestic reforms include strengthening legal systems and the rule of law, strengthening intellectual property rights, and easing investment requirements. Bilateral investment treaties have also been shown to have a positive impact on increasing FDI and may be able to substitute for weak domestic institutions.¹²⁴

Economic development is dependent on increasing investment and external private sector capital can provide an important additional source of finance for this domestic investment. However, inflows of speculative capital should be controlled while FDI is encouraged; but FDI should be minimized in the real estate sector.

Target 8.B: Address the special needs of the least developed countries.

and

Target 8.C: Address the special needs of landlocked developing countries and small island developing States (through the Programme of Action for the Sustainable Development of Small Island Developing States and the outcome of the twenty-second special session of the General Assembly).

None of the UNECE economies are part of the UN category of least developed countries but the poorest UNECE economies are mostly landlocked economies so target 8.B and 8.C are considered together. There are 22 landlocked economies in the UNECE region and two additional ones (Slovenia and Bosnia and Herzegovina) that are considered to be almost landlocked due to very limited coastlines.¹²⁵ Of these 12 are transition economies and nine of these (Armenia, Azerbaijan, Kazakhstan, The former Yugoslav Republic of Macedonia, Kyrgyzstan, Moldova, Tajikistan, Turkmenistan, and Uzbekistan) are considered to be UN landlocked developing countries. The three EiT that are not considered UN landlocked developing countries include: Belarus, Bosnia and Herzegovina, and Serbia. Three NMS are landlocked, including the Czech Republic, Hungary and Slovakia.

¹²⁴ Matthias Busse, Jens Königer, and Peter Nunnenkamp, FDI Promotion through Bilateral Investment Treaties: More than a Bit?, *Review of World Economics*, Vol. 146(1), April 2010, pp.147-177.

¹²⁵ Those with a coastline on the Caspian or Aral Sea are considered landlocked since access to that body of water does not give them direct access to world markets; however those with access to the Black Sea are not considered landlocked despite some limitations that might exist in terms of wider ocean access.

Being a landlocked economy is considered to impose on a country an additional handicap as it limits an economy's access to world markets and the benefits that derive from that. Empirical analysis which controls for the other components of growth finds that being landlocked reduces economic growth.¹²⁶ In this regard, however, the experiences of the West European landlocked economies are of particular importance as they include some of the richest economies in the world.¹²⁷ Their experiences therefore suggest that any disadvantage of being landlocked can essentially be eliminated with well designed regional trade agreements, trade facilitation procedures, regional transport networks, and national policies. Some of the transit-related problems of the landlocked economies in Central Asia are being addressed by the Almaty Programme of Action. This program has set out specific objectives for the landlocked economies, the transit countries, the donor community and the United Nations agencies. The programme assists both land-locked and transition countries in revising their regulatory frameworks to international conventions, establishing regional transport corridors, and modernizing existing infrastructure facilities, and improving the commercial orientation of the entire transport system. This includes rail, road, ports, inland waterways, pipelines, and air transport. The programme also establishes priorities for donors' official development assistance in terms of what types of projects to support and the criteria and procedures for evaluating them.

Regional initiatives that promote infrastructure development, reduce the cost of doing business, improve trade efficiency, and foster trade and economic cooperation are especially critical for landlocked and transit countries. Given externalities and public good characteristics of these programs they can especially benefit from external financial assistance, and regional cooperation.

Target 8.D: Deal comprehensively with the debt problems of developing countries through national and international measures in order to make debt sustainable in the long term.

Generally, the external debt levels of the EiT have been relatively normal and have not posed a significant problem. Most started the transition with limited external debt and slowly accumulated more over the 1990s. Between 2000 and 2008 debt levels as a percentage of GDP in most of the EiT were on a downward path. Since 2000 the level of public debt of the EiT had increased quite slowly or in many cases actually declined; most of the increase in external debt since 2000 was assumed by the private sector. However, due to the economic crisis the external debt of a number of the ECA has increased quite substantially as shown in annex table 23. Between 2008 and 2010 the external debt as a percentage of GDP doubled in Armenia and Belarus, and increased by 50 per cent in Romania and Ukraine Debt service payments as a percentage of export revenues for the Caucasus and Central Asia are slightly below the average for all developing countries. The external debt levels of Moldova and Kyrgyzstan have been close to thresholds established for the Heavily Indebted Poor Countries Initiative of the IMF and World Bank but neither country is currently eligible under that program although Kyrgyzstan is currently being considered for entry into the program.

Many of the NMS increased their external debt ratios considerably during the five years prior to the crisis due to the large current account deficits they were incurring; a substantial proportion of this was private sector debt. Although the NMS debt was not viewed to be necessarily problematic in the long run, the need to refinance parts of this debt created a

¹²⁶ Landis MacKellar, Andreas Wörgötter, and Julia Wörz, [Economic Development Problems of Landlocked Countries](#), Vienna Institute for Advanced Studies, Transition Economies Series No. 14, 2000.

¹²⁷ The remaining UNECE landlocked economies include: Andorra, Austria, Liechtenstein, Luxembourg, San Marino, and Switzerland.

significant liquidity problem for some of these economies during the current crisis which required them to turn to the IMF for assistance.

Initiatives to reduce the debt burden of developing countries such as the Heavily Indebted Poor Countries have made significant progress. The deterioration in fiscal positions associated with the financial crisis should not be allowed to reverse this progress. In addition to excessive public debt, countries should also implement policies which will limit the external indebtedness of the private sector.

Target 8.E: In cooperation with pharmaceutical companies, provide access to affordable essential drugs in developing countries.

In order for the private sector to invest in the development of new drugs they must be able to sell them at a price that allows them to recoup the research and development costs. At the same time there are clearly moral issues involved when those in need of treatment are unable to obtain it because they lack the income to purchase it. As such there is a natural “conflict” at least in the short run between global health and intellectual property law. This conflict took on a decidedly international dimension with the WTO Trade-Related Aspects of Intellectual Property Rights (TRIPS) agreement in 1994 which required that all WTO members standardize their intellectual property law by the beginning of 2005. Concerns that implementation of this agreement might negatively impact global health led to the Doha Declaration that the UN least developed countries were not obligated to implement it until 2016. In addition the declaration also introduced a provision that developing countries with a public health emergency could use compulsory licensing to produce generics domestically. This issue has been of particular importance for the entire UNECE region since almost all of world-wide drug development occurs in the advanced economies of the region and the EiT have had a particular need for a number of highly expensive drugs used to fight AIDS and tuberculosis. Although Russia is not a WTO member its patent legislation is generally consistent with the TRIPS agreement. Russia and Ukraine are members of the Technological Network on HIV/AIDS which has as its objective self-sufficiency in the development and production of antiretroviral drugs.

The design of intellectual property rights should consider the need for firms to receive compensation to cover the costs of their research and development, but must also consider the humanitarian consequences of various pricing schemes and the need for ensuring adequate and affordable access to essential drugs. Further funding for initiatives such as the Global Fund are needed so that all those that need life-saving drugs can obtain them.

Target 8.F: In cooperation with the private sector, make available the benefits of new technologies, especially information and communications.

Analysis of the global information and communications technology (ICT) sector reveals that there is a significant digital divide which is largely explained by differences in per capita income;¹²⁸ this is true for the UNECE economies as well.¹²⁹ Generally the middle income countries in the wider European region have digitalization scores somewhat higher than what would be expected based upon their per capita incomes. After controlling for per capita income, the factors that affect the level of digitalization appear to vary depending on the level of economic

¹²⁸ Margarita Billon, Fernando Lera-Lopez and Rocio Marco, Differences in Digitalization Levels: A Multivariate Analysis Studying the Global Digital Divide, *Review of World Economics*, Vol. 146 (1), April 2010, pp. 39-73.

¹²⁹ Larissa Kapitsa, [*Towards a Knowledge-based Economy –Europe and Central Asia: Internet Development and Governance*](#), UNECE Discussion Paper No. 2008.1, Geneva, 2008.

development. For middle income countries, improvements in the education system and the telecommunication infrastructure are important for increasing the diffusion of digital services. The digital divide has been gradually shrinking due to efforts undertaken by governments and civil society groups.

Several per capita measures are used to assess progress in this target including telephones lines and internet and computer use. Although data for these variables is somewhat limited in the poorer economies it has been improving in recent years. Internet usage is viewed as important as it provides individuals general access to information including educational material and job opportunities and can thereby prevent social exclusion. There has been a rather rapid increase in the number of internet users (annex table 25) whether measured by occasional users (over the last three months) or frequent users (only the last week). In most of the EiT internet use doubled between 2005 and 2010; about a third of those in the EECCA use the internet although the rates are somewhat lower. Turkmenistan with a usage rate of only two per cent is particularly low. The rates of increase in the NMS are generally lower than in the EiT but their levels are much higher and are close to Western European levels.

In the NMS for which there is more detailed data, there had been a gender difference with men having higher usage rates than women but that difference has been declining and is almost nonexistent for the younger age groups. In addition to internet availability there are other technologies such as personal computer use, voice and data mobile telephony and digital television for which there is a divide. However, the number of mobile cellular subscriptions per 100 inhabitants increased dramatically over the last decade in the Caucasus and Central Asia and the region now has more than the world average. Significant impediments towards further reducing the digital divide is the legacy of state control over knowledge production and dissemination as well as state monopolies over ICT infrastructure. The availability of ICT varies greatly within countries with those living in rural areas or the poor often not having access.

Access to information is not only an important human right but is also a critical factor in spreading technologies that can increase economic growth. State control over knowledge production and its dissemination and government monopolies over ICT infrastructure hamper the development of digital technologies. The use of private-public partnerships offers a way of overcoming a limit on public financial resources. Provision of digital services in schools, libraries and community centers is a cost-effective approach that allows large numbers of people to get access to digital services.

IV. MDG-RELEVANT STATISTICS IN EUROPE AND CENTRAL ASIA: MAIN ISSUES

The purpose of this chapter is to deepen understanding of the MDG-related data and data comparisons. The chapter reviews main statistical issues in this area while providing some examples of the problems that have to be faced when monitoring progress towards the MDG Goals and Targets or performing comparative analysis of MDG indicators. The chapter deals first with some general issues with data and indicators and with reporting in official national MDG reports. Next, it discusses the reporting on indicators for MDG1 and discrepancies between national and international data. In the final section, the various definitions in use for indicator 1.1 and additional national indicators are discussed in more detail.

The time-series analysis and cross-country comparison issues

For each Millennium Development Goal, Targets are set. In order to measure progress towards the Targets, they have to be operationalized with measurable indicators. Developments in the values of these selected indicators are used to measure progress towards the Targets. The official MDG indicators were tailored to the specific situation of the low income countries. They are often based on indicators typically available from surveys conducted in such countries under the supervision of the United Nations and other international organizations. In the ECE region, most countries are middle and higher income countries and many of the official indicators are of limited relevance for their stage of development. Surveys needed for the estimation of some of the internationally agreed upon indicators are not always conducted in these countries. To better monitor their specific situation, many ECE countries have chosen alternative indicators that are more relevant to them.

For example, Goal 1, ‘Eradicate extreme poverty and hunger’, with to ‘halve, between 1990 and 2015, the proportion of people whose income is less than one dollar a day’ as the Target and ‘extreme poverty’ defined as the population living below \$1 a day is not relevant for developing countries where \$1 is not enough to survive (e.g. because of a cold climate and/or cost of food etc.). It is neither relevant for countries where extreme poverty still exists but where the majority of the poor live above \$1 per day. Therefore, a number of ECE emerging economies have set their own specific Targets and added other alternative indicators. The focus tends to be country specific, leading to a multitude of indicators being used to monitor progress towards these national goals.

Although the United Nations has stimulated the adjustment of MDG indicators to the national situation, for comparative analysis and the monitoring of progress across countries and regions, indicators are needed that are comparable across time and between countries. The channelling of scarce international aid might also depend on such data analysis. International comparability is not only useful for international organizations. For countries that advocate evidence based-policy in their national development plans, improvements in a country have to be compared to the performance in other countries. If gains are made but they lag behind improvements in countries in similar situations, additional efforts or change of policy might be warranted.

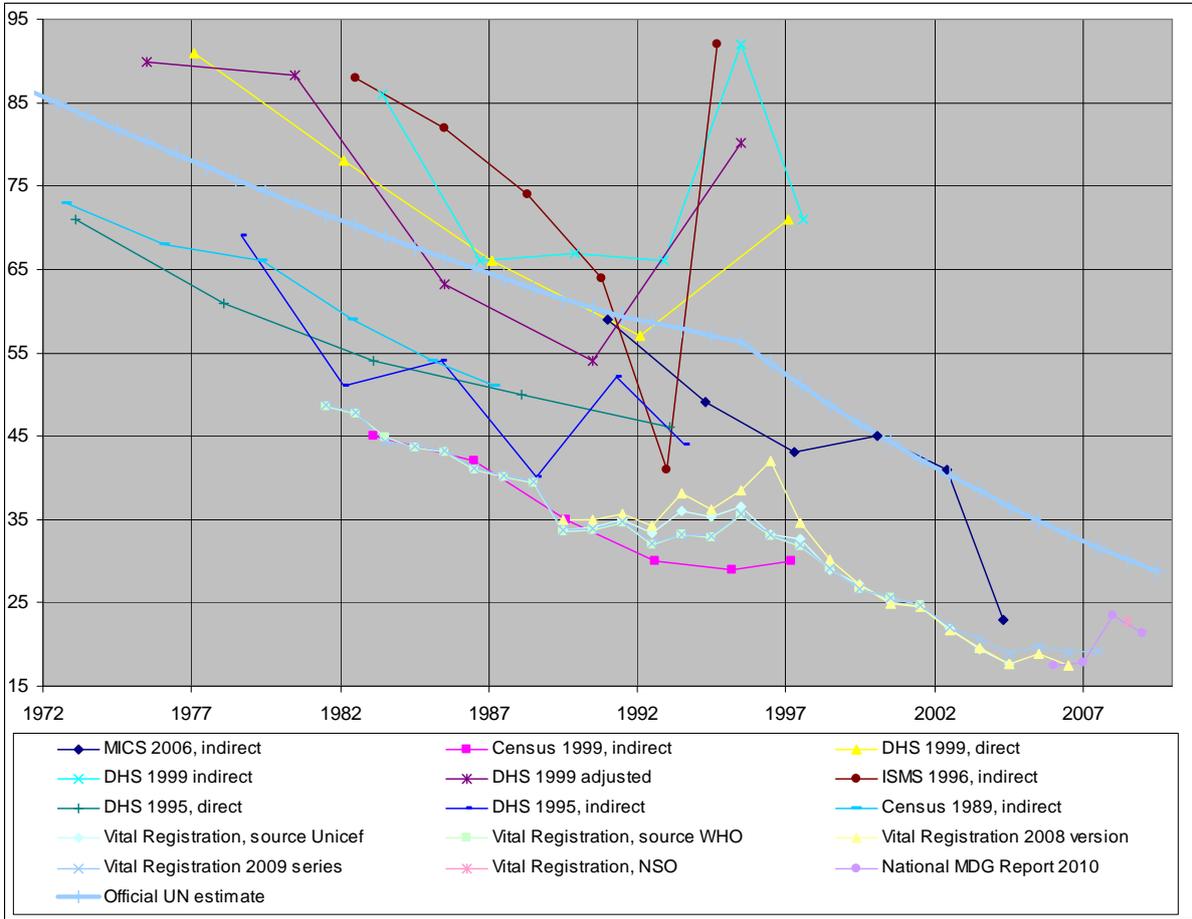
The indicators that are used for monitoring progress on the MDGs have to be measured. Obtaining these estimates is not straightforward. In most cases, the exact definitions vary and several methods exist for each definition. Further, there are many primary data sources available with different ways of collecting the data. Even if exactly the same survey is used, conditions are

not the same as factors such as interviewer instructions, the period of the year it is held and the local context differ. All this influences the outcome and thus the extent to which the estimate reflects the exact underlying situation which again determines whether solid conclusions can be drawn from time-series or comparative analysis.

If data collection and measurement are done strictly according to methodological rules, the statistical uncertainty or reliability can be measured to a large extent. This, in theory, makes it possible to determine whether a change is significant or random. More in-depth analysis can further reveal statistical artefacts or spurious relations. One problem is that such analysis is very often not done and consequently wrong conclusions are being drawn. An additional issue is that there is often bias in the data collection that goes beyond random statistical variance. This can affect the data comparison and trend-analysis and lead to false conclusions that might subsequently result in wrong adjustments to national and international policies.

Figure 4.1 shows an example of one of the indicators of Goal 4 ('Reduce child mortality').

Figure 4.1
Turkmenistan: Under-five mortality estimates from various sources



Source: Inter Agency Expert Group on child mortality.

To estimate the under-five mortality rate, various methods and several primary data sources are available. Results are not consistent. In the specific case of under-five (and infant) mortality, it is felt that population registers often suffer from undercounting. The United Nations Inter-Agency Expert Group (IAEG) therefore assigned either zero or low weight to estimates from such sources. Depending on the source and method used, time-series analysis to monitor

Target 4A ('Reduce by two-thirds, between 1990 and 2015, the under-five mortality rate') might come to significantly different conclusions. For the other countries of the Caucasus and Central Asia, and for other indicators, similar charts can be drawn.

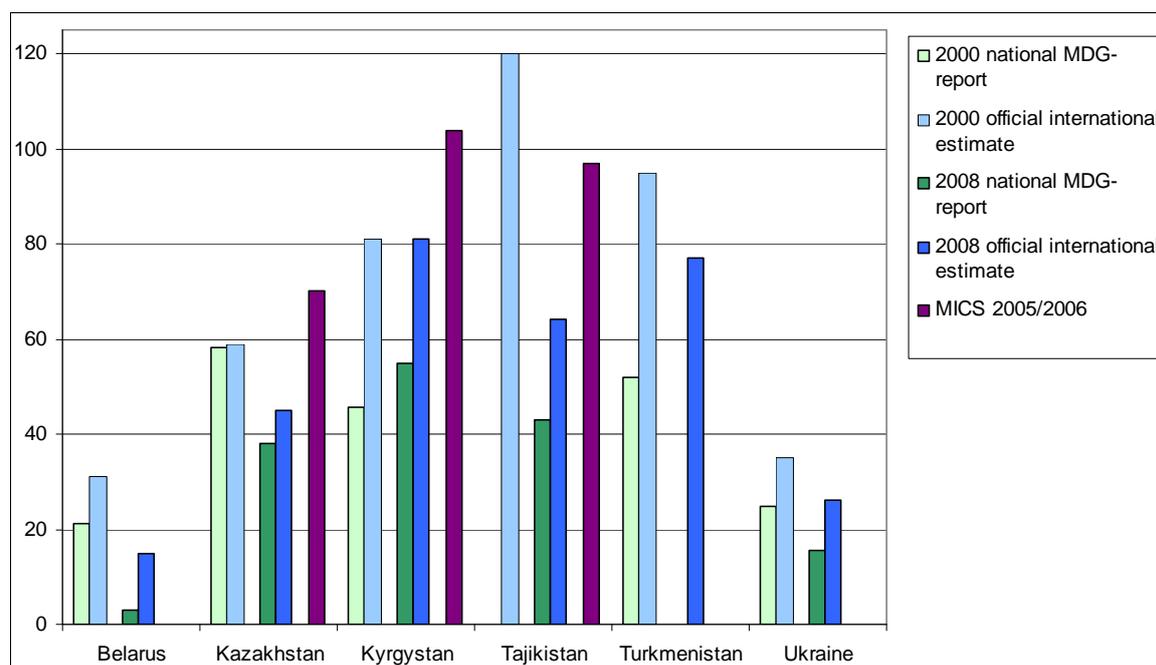
Another example of how data issues complicate the monitoring of progress towards the MDG Goals is the measurement of maternal mortality through the ratio of maternal deaths in a period to live births in the same period per 100,000 (Goal 5, Target 5A, Indicator 5.1). Maternal mortality is a relatively rare event. There are several methods to estimate the maternal mortality rate. In many cases, the indirect sisterhood method is used to estimate maternal mortality. By collecting retrospective data from respondents, it tries to overcome limitations of relatively small sample sizes. This method has its own set of assumptions. It basically asks women whether any sister has died during pregnancy or delivery, regardless of the underlying or direct cause. It suffers from recall bias and interviewers and interviewees might evade asking or answering the question. These retrospective estimates are centred at about 10-12 years before the time of the survey. Because of this broad window of time and the large confidence intervals, it is recommended not to use this method for comparisons across time (or between countries). It additionally relies on a number of assumptions about the relationships between fertility and age-specific maternal mortality, which makes the method unsuitable for populations with a total fertility rate below 3 children per woman or where fertility has been declining markedly in recent periods.¹³⁰ Furthermore, adjustments are generally made to account for the underestimation of early pregnancy deaths and to remove accidental deaths.

Nevertheless, despite all these limitations, experts think that in many countries such estimates might still provide more realistic results than estimates of the cause of death from the registers based on death certificates. The World Health Organization for example increases results from such civil registration systems by 50 per cent to account for underestimation in the case of the countries from the ECE region. Figure 4.2 shows results from these MICS-surveys and estimates as reported in official national and international reports.

The two examples discussed above show that even if the same indicator is used for monitoring progress, several different estimates can exist for the same year. This is also the main reason why national and international figures are more often different than not. In many cases the discrepancies go beyond simple random statistical variance. The choice of a specific estimate might also have been influenced by reasons other than methodological. Governments or agencies can report progress to gain support or the opposite, report stagnation to obtain financial aid.

¹³⁰ WHO and UNICEF (1997), The sisterhood method for estimating maternal mortality: guidance notes for potential users.

Figure 4.2
Maternal mortality rates, selected countries



Source: UNECE database and MICS-reports.

The United Nations agencies try to apply harmonized methods that are agreed upon by the IAEG in a transparent way with a view to improving comparability and transparency. Although in general based on rules and standards, the ultimate method and corrections applied are based on judgement and therefore not free from subjectivity. For instance, superior methods might not be applied because only some countries would have the data needed. Further, using a uniform type of indicator and applying the same method to countries facing different circumstances might not be most suitable for each individual country. Indicators used nationally should have been chosen taking into account the specific national situation so that they should, in principle, be more relevant for measuring progress within the national context.

Issues in official national MDG reporting

Nearly all ECE emerging economies have published at least one official national MDG report. A notable exception is the Russian Federation that does not have an official MDG programme.¹³¹ Reporting is less frequent for countries that have changed their status after the period 1990-2000 and are now considered developed countries. Most countries have produced two or more reports and 15 countries have published reports as recently as 2009 or 2010. In most cases these official national reports were made in close cooperation with agencies of the United Nations in the country. There are however cases where agencies of the United Nations could not support the national report due to the unreliability of its content and in order to distance themselves from any controversial data and/or statements that may have been included in the document.

In general, the National Statistics Office delivered most of the data for national MDG reports. Unfortunately, in most cases the national statistical agencies were not directly involved in

¹³¹ However, UNDP published a national report on MDGs in Russian regions in 2007 and a national report on MDG progress in Russia in 2010.

the production of the reports. Only a few countries have a dedicated and freely accessible MDG-website. For some of the official international MDG indicators, more data is available than shown in these reports. These are not considered in this section as their status in national monitoring is unclear.

The previous section highlights the importance of providing alongside the MDG data also the relevant information regarding exact definitions, methods applied and primary sources used. Unfortunately, this data about data or metadata, i.e. the information that might provide an indication of the quality and comparability, is often missing, incomplete or incorrect. In some cases the exact or even broad definitions are missing. In several cases the methodology is not clearly specified and sometimes even the definition is not provided. For example, publishing the national poverty line without any further specification makes comparative analysis impossible. In general, data sources are listed in national reports. However, in several cases it is not clear to which indicator or period they refer. Important for the interpretation is a reference to the primary sources. These are often missing or not clearly specified.

Another problem is that sometimes inconsistent data are published for the same indicator. The figures listed in the text of a national report sometimes do not coincide with the figures listed in the tables. For example, in one report the share of population living below the relative poverty line was, on the same page, 46.7% in a graph, 51.0% in the text and 53.6% in a table. In each case, no details were provided about possible differences in the methodology or source data. Other reports provide different (primary) sources in the text than in the tables, making it difficult to assess the quality of the data. Different statements about the methodology for the same figure have also been encountered.

Sometimes two or more different figures are published, each according to its own methodology or data source. One country listed four estimates of the primary school enrolment, all according to different sources. Reporting of two figures for an indicator is most common when both survey and register data are available (e.g. refer to figure 4.1). Applying different methodologies and reporting both figures is less common. In contrast to the issues mentioned above, this approach is not a problem because it provides alternative results transparently and the underlying uncertainty is not hidden. Policy makers and non-specialist users might need some guidance though. Note that if only one estimate would have been provided, the non-expert users should have been given a similar warning about the uncertainty. Ignoring the different estimates that could have been obtained with different methods and/or data sources does not miraculously improve the quality of the data reported. Providing only one estimate is therefore not the solution.

The frequency of the official data varies from one indicator to another. Reporting on the indicators that were added in 2008 is, for obvious reasons, limited to the most recent reports. In several cases only two data points were provided to show changes over time. Considering the uncertainty in the data it is better to list more data so that random fluctuations or bias in figures for the selected year have less influence on the conclusions. Recent data points are needed, but also the comparable information for 1990, the base year for judging the MDG progress made. However, the 1990 base year is problematic for a number of the ECE countries with transition economies for various reasons, including the limited availability of data. Therefore, other years (often around 1995) are sometimes chosen as a more appropriate reference in national reports.

The availability of poverty and employment indicators of Goal 1 in national reports

As with the other Goals and Targets, the availability of the various poverty and employment indicators is mixed in the official national MDG reports. Figure 4.3 shows the

coverage in official national MDG reports and at official national MDG-websites. Among the poverty and employment indicators of MDG1, only the share of the population living below the poverty line is widely reported. In most cases, the national poverty line differs from the official international MDG indicator 1.1 ('the proportion of population living in households below US\$1.25 (PPP)'). Only Armenian national reports show the official international indicator; some other countries have reported the \$1 or \$1.08 poverty lines, based on the levels at which the official MDG indicator for Goal 1 and Target 1A were set in the past (changes reflect the impact of inflation on the original \$1 line). Each country uses its own base years for the PPP conversion (this is only partly due to the different year of reporting), making comparative analysis even more complicated.

In 2008, 'achieve full and productive employment and decent work for all, including women and young people' was added as a Target to Goal 1. The four new indicators¹³² used for measuring this goal are obviously less reported. Data disaggregated by sex or rural-urban status is available but to a far lesser extent.

Figure 4.3
Reporting on poverty and employment indicators of MDG 1 in national MDG reports

	1.1	1.1 nat.	1.2	1.2 nat.	1.3	1.4	1.5	1.6	1.6 nat.	1.7	1.8	1.9
Albania												
Armenia												
Azerbaijan												
Belarus												
Bosnia and Herzegovina												
Bulgaria												
Croatia												
FYR of Macedonia												
Georgia												
Hungary												
Kazakhstan												
Kyrgyzstan												
Montenegro												
Republic of Moldova												
Romania												
Russian Federation												
Serbia												
Tajikistan												
Turkey												
Turkmenistan												
Ukraine												
Uzbekistan												
Number of observations:	1	2-4	5+	0	nat.: according to the national poverty line							

Source: UNECE.

Besides that international estimates tend to be more harmonized, more data tend to be available (refer to figure 4.4). International data is also more often available by the rural-urban status. The World Bank and other international agencies are aware of the limited usefulness of the \$1.25 poverty line for the ECE region and often propose more relevant national poverty lines. In their own analysis they have used the \$2 and \$4 poverty lines (afterwards inflated to \$2.15, \$2.50 and \$4.30 and \$5.00). Also food based and subsistence based poverty lines have been promoted. By applying the same methodology to harmonized Household (Budget) Surveys, further comparability is guaranteed. Note again that, additionally to differential bias in the different surveys, due to the different circumstances in each country, such harmonization still does not necessarily ensure robust comparability.

¹³² 1.4 Growth rate of GDP per person employed; 1.5 Employment-to-population ratio; 1.6 Proportion of employed people living below the poverty line (working poor); 1.7 Proportion of own-account and contributing family workers in total employment (vulnerable employment rate).

Figure 4.4
Official international estimates for MDG 1 indicators

	1.1	1.1 nat.	1.2	1.2 nat.	1.3	1.4	1.5	1.6	1.6 nat.	1.7	1.8	1.9
Albania												
Armenia												
Azerbaijan												
Belarus												
Bosnia and Herzegovina												
Bulgaria												
Croatia												
FYR of Macedonia												
Georgia												
Hungary												
Kazakhstan												
Kyrgyzstan												
Montenegro												
Republic of Moldova												
Romania												
Russian Federation												
Serbia												
Tajikistan												
Turkey												
Turkmenistan												
Ukraine												
Uzbekistan												
Number of observations:	1	2-4	5+	0	nat.: according to the national poverty line							

Source: UNECE, based on UNSD data.

There are not many years for which data are available from both national and international sources. Even more scarce are data points for which the value for both sources coincides. For example, the share of the population living below the national poverty line in Armenia in 2008 is 0.1 percent according to national figures, while international estimates indicate that it is 1.3 per cent. Likewise, for Turkey the figures for 2005 are 0.1 and 2.7 per cent respectively. In Kyrgyzstan the figure declined from 0.4 per cent in 2002 to 0.1 in 2007 while the international estimate dropped from 34 to 1.9 per cent over the same time period.

Table 4.1 provides an overview of the various definitions that are in use for the national poverty line. Again, having the same definition does not mean that exactly the same estimation method was applied and that the primary data collections are comparable. For example, the absolute poverty lines expressed in US dollars use certain purchasing power based conversion rates (PPP) and have each a specific base year. The food basket based poverty lines are based on a food basket according to a certain caloric value that varies across countries (e.g. 2,100 kcal, 2,250 kcal, 2,282 kcal) and the type of food included differs to reflect local availability and so on. The availability of the metadata detailing the estimation methods and data collection is therefore important.

Table 4.1
National poverty lines, definitions reported in official national MDG reports

Population living (in households) below:	Countries having used the definition in official MDG reports or websites:
\$1.00 a day	Albania, Armenia, Georgia, Kyrgyzstan, Montenegro, Turkey
\$1.08 a day	Tajikistan
\$1.25 a day	Armenia
\$2.00 a day	Albania, Armenia, Belarus
\$2.15 a day	Armenia, Belarus, Moldova, Slovakia, Tajikistan, Turkmenistan
\$2.50 a day	Armenia
\$4.00 a day	Armenia, Belarus
\$4.30 a day	Armenia, Hungary, Moldova, Slovakia, Ukraine
\$5.00 a day	Armenia, Ukraine
Minimum food basket based poverty line	Albania, Armenia, Azerbaijan, Belarus, Kazakhstan, Kyrgyzstan, Moldova, Turkey, Uzbekistan
Costs basic needs based poverty line	Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Kazakhstan, Kyrgyzstan, Moldova, Montenegro, Serbia, Tajikistan, Turkey
Basic needs and social exclusion based poverty line	Albania, Czech Republic, Ukraine
40% of median equivalized disposable income	Latvia
50% of median income median equivalized disposable income	Turkmenistan
60% of median income median equivalized disposable income	Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Hungary, Latvia, Romania, Serbia, Slovakia, Slovenia, Ukraine
70% of median income median equivalized disposable income	Azerbaijan, The former Yugoslav Republic of Macedonia
75% of median income median equivalized disposable income	Ukraine
an unspecified poverty line	Georgia, Kyrgyzstan, Romania, Slovakia, Tajikistan, The former Yugoslav Republic of Macedonia

Source: UNECE.

More than 50 different alternative indicators have been published in official national reports in the region. Indicators chosen can be quite specific. Examples include:

- Household Consumption Expenditure by the Poorest and Richest Quintiles according to the Percentage of Food Expenditure in Total Expenditure
- Informal employment as % of employed
- Long-term unemployment rate, more than 12 months as a % of the active population
- Persons living in jobless households (EU)
- Employment ratio (people aged 55-64)
- Ratio of long-term unemployed in the total number of unemployed (15-64 yrs)
- Average Monthly Wages
- Ratio of the minimum wage to the absolute poverty line
- Proportion of children aged 5-14 years who are working

- Family allowance budget expenditure to poverty gap ratio, %
- The number of jobs created in the non-oil sector
- Share of children aged 8-14 years suffering from goiter
- Proportion of the household income allocated to food (%)
- Disabled persons unemployment rate (15-64)
- Roma unemployment rate (15-64 yrs)

The top four of additional indicators countries in the ECE region have used to monitor the progress on Goal 1 are:

- Unemployment level
- Income of the poorest quintile to the income of the richest quintile
- Gini Coefficient
- Long-term unemployment rate, more than 12 months as a % of the active population

In addition, disaggregated data is used for some indicators (also at the international level) as situations might be quite different among sub-groups and this heterogeneity might obscure developments when only considering the total at the national level. In most of these cases, data was disaggregated by sex and/or rural/urban status, age and ethnicity.

This chapter addressed the quality and comparability of the MDG data reported nationally and internationally. However, the above discussion of the main issues with MDG data intends by no means to disqualify national MDG reports or to discourage comparative analysis. It rather provides a reminder of the difficulties and challenges involved in this process. Analyses that do not take into account these issues are likely to lead to spurious conclusions and wrong policy choices. This might slow down or reverse the progress towards reaching the Targets of the various Millennium Goals and should therefore be prevented as much as possible. Considering all the issues described in this chapter, it should be clear that it is of imminent importance that proper metadata is provided alongside the MDG data and that the uncertainty in analyses is properly addressed.

V. THE SOCIAL INCLUSION OF ROMA: CHALLENGES AND OPPORTUNITIES

Introduction

Given the relatively high income levels of the economies in the wider European area, achieving the MDGs in this region is increasingly focused on improving the living standards of ethnic minorities which have failed to gain from the more general increase in prosperity. The Roma are one of the largest and most disadvantaged ethnic minorities in the pan-European region. On most of the MDG indicators for poverty, health, gender, housing and education the Roma are substantially worse off than the rest of the population. This part of the report addresses some challenges and opportunities associated with the social inclusion of Roma in Europe.

The actual number of Roma in the region cannot be established on the basis of population censuses alone because in countries of Central and South-Eastern Europe most of them have refused to identify themselves as such. The Council of Europe average estimate of the Romani population in the European region is close to 11 million. Approximately 6 million Roma live on the territory of the European Union (EU), some 70 per cent of them in the 10 former communist countries that joined the EU in 2004 and 2007. In addition, another 2.8 million Roma live in Turkey, 1.2 million in the states of the former Soviet Union, and another 1 million in South-Eastern Europe. In relative terms, the Roma account for 1.4 per cent of European population and 1.3 per cent of the EU population but their share in the population of post-communist EU countries averages 4 per cent.

Following the transition recession of the 1990s that resulted in major industrial restructuring, economic growth resumed and the levels of absolute poverty declined. However, some disadvantaged population groups, including the Roma, have become increasingly marginalized during the recovery period. The plight of the Roma reflects large losses of low-skilled jobs in agriculture, mining and manufacturing that were provided for them during the communist era and disappeared during the transition process. The subsequent marginalization of Roma manifests itself in their inadequate access to quality education and decent jobs in the formal sector, substandard housing conditions, poor health and relatively low life expectancy. The situation of Roma is somewhat similar to that of indigenous population groups in the region (Box 1).

Box 1. Indigenous peoples in the ECE region

According to various estimates, indigenous and tribal groups encompass approximately 5,000 distinct peoples worldwide with a total population of more than 300 million. Indigenous peoples are referred to in different countries by terms such as 'indigenous ethnic minorities', 'first nations', 'aboriginals', 'hill tribes', 'minority nationalities' or 'tribal groups.' Average values of the available MDG indicators for indigenous populations tend to be significantly worse than the corresponding national averages.

The United Nations Declaration on the Rights of Indigenous Peoples, adopted by the General Assembly on 13 September 2007, states that they have the right to determine and develop priorities and strategies for the development or use of their lands or territories and that States should respect their right to free, prior, and informed consent pertaining to development initiatives that concern them. The Declaration also stipulates that indigenous peoples have the right, without discrimination, to the improvement of their economic and social conditions, including, inter alia, in the areas of education, employment, vocational training and retraining, housing, sanitation, health and social security.

The Declaration on the Rights of Indigenous Peoples was originally adopted by 144 countries while 11 countries abstained (Azerbaijan, Bangladesh, Bhutan, Burundi, Colombia, Georgia, Kenya, Nigeria, Russian Federation, Samoa, and Ukraine) and 4 countries (Australia, Canada, New Zealand, and the United States) voted against it.

Box 1. Indigenous peoples in the ECE region (continued)

In rejecting the Declaration, countries cited various concerns, including provisions pertaining to land and resources, self-government, and the requirement to obtain informed consent before enacting laws that would impact indigenous peoples, amongst other things. Since then Australia, New Zealand, Canada and the United States have reversed their positions and now endorse the Declaration. Colombia and Samoa have also changed their positions and indicated their support for the Declaration.

The MDG Project has not focused from the outset on issues of concern to particular marginalized groups such as ethnic minorities and indigenous populations. Nevertheless, it has been increasingly accepted by the international community that such issues need to be addressed urgently, if the MDGs are to be achieved. Including indigenous peoples in the MDG context requires a culturally sensitive approach, based on the respect for and inclusion of indigenous peoples' world-views, perspectives, experiences, and concepts of development.

How many indigenous people live in the ECE region? According to various estimates, some 7 million indigenous people live in high-income countries of Western Europe and North America, including 5-6 million in the US, 1.2 million in Canada, 130 thousand in Scandinavia and 50 thousand in Greenland. The poverty, education, income and health indicators for these populations are generally worse than for non-indigenous groups.

Indigenous peoples in Emerging Europe and Central Asia live mainly in Russia and Central Asia. The available census data indicate that a few million of indigenous people live in Russia, mainly in North Caucasus and Siberia. National MDG reports indicate that the indigenous peoples living in northern territories of Russia are significantly poorer and have worse educational and employment outcomes than the majority population (Hartley, 2008). The indigenous peoples account probably for the majority of population in former Soviet republics of Central Asia. However, only a minority still lives in a traditional manner, including pastoral tribes that continue to take their herds to high mountains each summer. The available information indicates that there are major gaps in educational attainment, employment rates, incomes and living standards between these traditional minorities and the settled majority population (Bower and Johnston, 2007).

The most reliable and comparable data are available for the indigenous peoples living in Greenland and northern territories of Canada, Finland, Russia, Sweden and the United States. Some of them have political control over their ancestral lands. The indigenous peoples constitute the majority of population in Greenland, three republics of the Russian Federation (Komi, Sakha and Tuva) and the Nunavut territory in Canada. Despite the enhanced political status of these indigenous peoples, their education, health and poverty levels are worse than those of comparable non-indigenous populations.

The indigenous peoples in northern territories of Russia are worse off than the aboriginals in Alaska, Canada, Greenland and northern Europe. This is due to the Soviet legacy of uneven development and the collapse of Soviet institutions in the early 1990s that hit indigenous communities in the north of Russia particularly hard. The mortality of indigenous peoples in Russia has remained high over the last three decades, with a temporary decline in late 1980s during the unpopular anti-alcohol campaign and a temporary increase in early 1990s resulting from the transition shock. By contrast, mortality of indigenous nations in the Western countries mentioned above has declined continuously since the 1960s. The average death rate in 1996–2004 for 26 indigenous nations living on their ancestral homelands in northern Russia was 13.6 per thousand compared to 4.3 in Nunavut (Canada) and 8 in Greenland. The life expectancy gap between the indigenous peoples and majority population has been significantly higher in both Soviet and post-Soviet Russia than in other northern countries of the ECE region (Petrov, 2008).

Looking forward, the MDG progress for indigenous peoples in Russia's North and Central Asia can be accelerated if they are provided with land ownership, local self-government and control over cultural resources, followed by culturally appropriate education and health services (Balzer, 2004). Similarly as elsewhere, the aboriginal rights are promoted by non-government organizations. For instance, the Russian Association of the Indigenous Peoples of the North, Siberia and the Far East, unites some 250,000 from 41 indigenous groups that are represented by 34 regional and ethnic organizations. These organizations lobbied the Russian government and parliament since the early 1990s with the aim to codifying aboriginal rights in national legislation. Such efforts have been partly successful; however, the existing laws guaranteeing indigenous communities' rights over land and natural resources are not properly implemented throughout Russia while the indigenous people's right to consultation in decisions affecting them, including decisions about the industrial development of natural resources are often not respected (Anaya, 2010).

Due to relatively high birth rates of the Roma, the population share of the Romani minority has generally been increasing in all countries of Central and South-Eastern Europe. This implies that the economic costs of social exclusion are bound to rise over time unless targeted structural policies improve the educational achievement and employment rates of the Romani population. The higher tax revenue and social security contributions as well as lower welfare payments associated with a higher employment of Roma in the formal sector could result in net savings for the general government sector and greater sustainability of the social security system. To reap such benefits, however, current education and employment policies would have to be radically reformed with a view to providing Roma with equal access to quality education and decent jobs. Such reforms appear to be affordable. According to recent estimates of the World Bank, the annual fiscal gains from bridging the ethnic employment gap exceed considerably the total cost of investing adequately in public education of Roma (World Bank, 2010).

In response to the plight of the Roma, a number of European governments have made a political commitment to improve their socio-economic status and social inclusion in the framework of an international initiative. This initiative, known as *The Decade of Roma Inclusion 2005 – 2015* (<http://www.romadecade.org>) brings together governments, intergovernmental and non-governmental organizations as well as Romani civil society, to accelerate the progress toward improving the welfare of the Roma and to monitor this progress in a transparent and quantifiable way. Priority areas are education, employment, health and housing, and governments are committed to take into account the other core issues of poverty, discrimination and gender mainstreaming.

The twelve countries currently taking part in the Decade are Albania, Bosnia and Herzegovina, Bulgaria, Croatia, the Czech Republic, Hungary, Montenegro, Romania, Serbia, Slovakia, Spain and The former Yugoslav Republic of Macedonia. All of these countries have significant Roma minorities that have been disadvantaged both economically and socially. Each of these countries has developed a national [Decade Action Plan](#) that specifies the goals and indicators in the priority areas. A thirteenth country, Slovenia, has observer status.

The founding international partner organizations of the Decade are the [World Bank](#), the [Open Society Institute](#), the [United Nations Development Program](#), the [Council of Europe](#), [Council of Europe Development Bank](#), the [Contact Point for Roma and Sinti Issues](#) of the Office for Democratic Institutions and Human Rights of the Organisation for Security and Co-operation in Europe, the [European Roma Information Office](#), the [European Roma and Traveller Forum](#), and the [European Roma Rights Centre](#). In 2008, [UN-HABITAT](#), [UNHCR](#), and the [United Nations Children's Fund \(UNICEF\)](#) also became partners in the Decade.

In spite of some progress in a few countries participating in the Decade of Roma Inclusion, the MDG achievement gaps between the European Roma and mainstream population have increased in most countries with significant Romani minorities. Therefore, it is important that European governments develop a post-2015 strategy to reduce within-country inequalities and achieve the MDGs for vulnerable population groups, including the Roma. The recent European Commission's strategy for Roma inclusion in EU member States, known as the European Framework for National Roma Integration Strategies, is a step in this direction. The European Framework is set to guide national policy makers in the creation of their own Roma policies with a particular focus on the access to education, jobs, housing and healthcare. According to the Commission, funds will be made available at the EU level for national inclusion strategies, and "member states should set individual national Roma integration goals in proportion to the population on their territory and depending on their starting point." While the European Commission's strategy for Roma's inclusion is most welcome, similar strategies and funding for

their implementation are urgently needed in non-EU countries with large Roma minorities in South-Eastern Europe. The United Nations (UN) system has a major role to play in this context.

Over the past two decades many agencies of the UN system active in Emerging Europe and Central Asia have been intensifying their actions at the regional and national levels in order to promote Roma inclusion in their respective areas of work. The agencies have been increasingly able to provide expertise, know how and institutional support to national governments and to the Roma communities by achieving a better understanding of the issues at hand. In many cases, they have also provided practical responses at the local level. In spite of these significant efforts, the work undertaken has not been properly coordinated among the UN family, and the lack of a common understanding of the subject and of a global strategy is undermining the efficiency and effectiveness of the work undertaken in the UN agencies' respective fields.

The current economic trends are increasing inequalities and impacting negatively on Roma living conditions, and the emerging social context and national policy frameworks involve growing prejudices, racial and ethnic discrimination and xenophobic political discourses combined with more restrictive migration and social policies in various EU member States. These developments require from the UN agencies not only that they pay more attention to Roma issues in accordance with their respective mandates, but also that they strengthen their internal and external coordination mechanisms and act more strategically, i.e. take action that is more sustainable and achieves greater impact.

Roma in the Generations and Gender Surveys

Lack of reliable ethnic data is one of the obstacles to developing and implementing evidence-based policies for social integration of the Roma and other disadvantaged groups. In some cases relevant ethnic data can be found in the surveys collected in the framework of the *Generations & Gender Programme* (GGP), coordinated by the UNECE. The GGP is made of two major components, totally independent from each other at the data gathering level: the *Generations & Gender Survey* (GGS) and the *Contextual Database* (CDB). The GGS consists of a panel survey of three waves (three years apart) in which 10,000 individuals aged from 18 to 80 are followed. The CDB on the other hand, includes more than 200 variables, at national and/or regional level, sometimes qualitative but more frequently quantitative (time series from 1970 up to present in most cases), related to a wide range of topics: health, economy, employment, culture, education, demography, pensions, etc.

Two recent discussion papers show how the GGP surveys can be used to analyze the educational attainment, labour market performance and living conditions of Roma in Bulgaria, Hungary and Romania, three countries that participate in the GGP programme.¹³³ These surveys ensure international comparability of data at least for the core questionnaire. Some of the modules are optional, e.g. housing, ethnicity and nationality, previous partners, intention to break-up, preventing some cross country comparisons. The first wave surveys were conducted in the mid 2000s (in 2004 in Bulgaria, mainly in 2005 in Hungary and Romania). The second wave data are being collected or processed. The GGS questionnaire covers a wide range of topics related to the household and the relations among genders and generations. Main respondents can be either men or women aged between 18 and 80.

The interviews are done face to face in the main language of the country. This most probably reduced the participation of Roma in the surveys. Moreover, samples can exclude up to

¹³³ See Cekota and Trentini (2011) and Trentini (2011).

5 per cent of the target population (UNECE, 2005). Unfortunately, exclusions are due to frame limitations or practical constraints – such as eliminating remote regions where survey collection would be prohibitively expensive. These two limitations can result in a partial exclusion of Roma from the survey and – what is even more worrying – they imply an exclusion of the most disadvantaged among them: those living in remote areas and/or having the lowest exposure to majority population and to education. Therefore the actual situation of Romani minorities may well be worse than that depicted in GGP surveys.

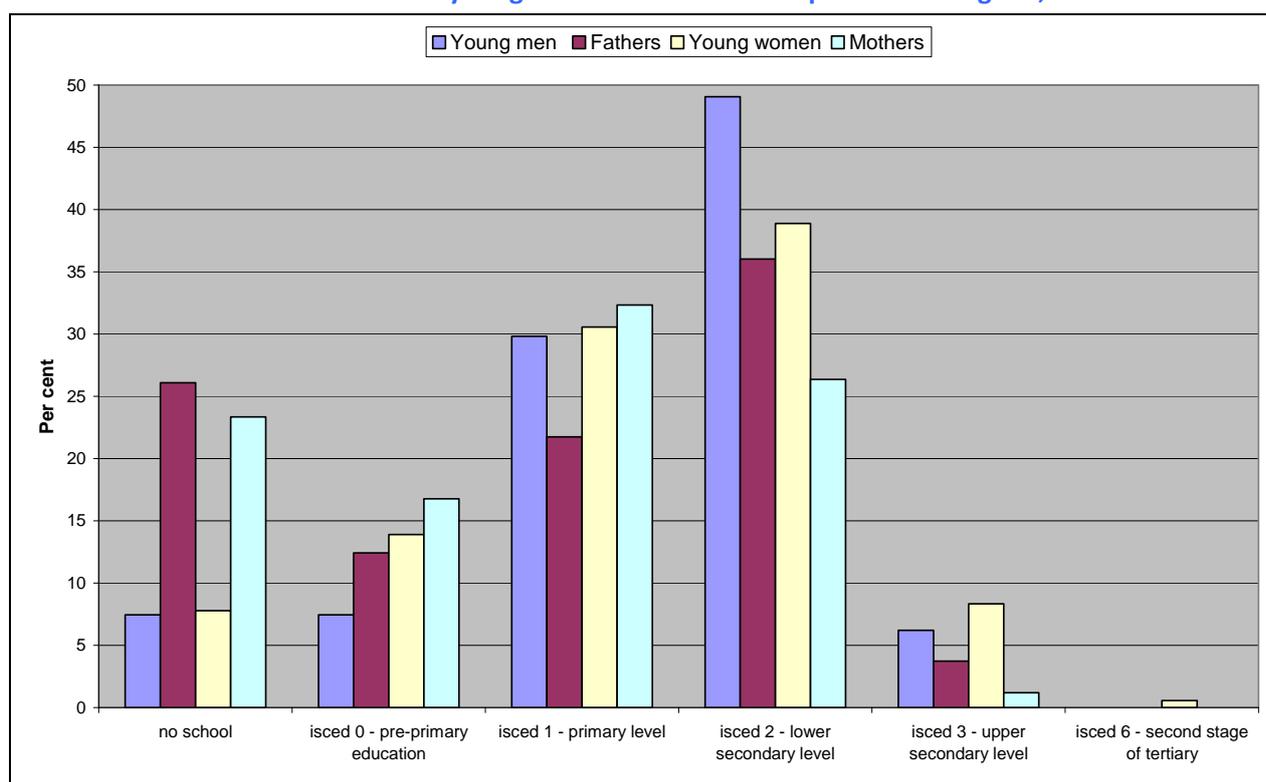
Education

The GGP surveys of Bulgaria, Hungary and Romania show that educational achievement gaps between the majority population and Roma are huge in all three countries. The educational attainment of young Roma adults in Hungary exceeds that of their counterparts in Bulgaria and Romania. In addition, the attainment of young Roma women in Hungary lags remarkably behind that of young Roma men. This reflects the relatively good attainment of young Roma men in Hungary as well as the negative impact of traditional gender roles on school attendance of young Roma women.

The extremely wide achievement gap between the majority and Romani populations implies social exclusion on the basis of ethnicity. Although it is widely believed that communist regimes provided all social groups, including the Roma, with decent education, the reality was different. According to the GGP surveys from mid-2000s, a surprisingly high proportion of parents of the 25-34 years old Roma did not complete primary education in spite of growing up and becoming adults during the communist era. The proportion of mothers with less than complete primary education is particularly high in Romania (50 per cent) and Bulgaria (40 per cent) but significantly lower in Hungary (8 per cent). The proportion of fathers of the 25-34 years old Roma with less than primary education amounts to 39 per cent in Bulgaria and 6 per cent in Hungary. No data on the educational achievement of fathers is available for Romania.

The following figure shows that in Bulgaria the educational attainment of young Roma adults (25-34 years old) exceeds that of their parents. However, the attainment of majority population peers has improved faster. If one measures the achievement gap by the difference in proportions of population groups with at least upper secondary education, then this gap amounts in case of young Roma men and women to 83 per cent (see table 5.1). The gap equals 72 per cent and 77 per cent for the generation of fathers and mothers respectively. In other words, although the educational achievement of Roma improved somewhat, their educational handicap increased over time.

Figure 5.1
Educational attainment of young Roma adults and their parents in Bulgaria, 2004



Source: ECE calculations based on Generations and Gender Surveys.

The Bulgarian generations and gender survey includes comparable data for the ethnic Turkish minority. Similarly as in the case of Roma, the educational attainment of young Turkish adults (25-34 years old) exceeds that of their parents. However, the achievement gap between the Turkish minority and majority population has decreased by the mid-2000s. Nevertheless, the gap is still large at 51 per cent for young Turkish men and 55 per cent for young Turkish women. The intermediate position of the Turkish minority with respect to education and other social status indicators (employment, income, job satisfaction, housing and living conditions) confirms that ethnicity is an important underlying factor of social stratification in Bulgaria. An econometric analysis of the returns to education in terms of employment and wages in Bulgaria found that both Roma and Turkish minorities have very limited incentives to invest in education, given the very low returns in terms of prospective employment and wages in the labor market. The gap in returns to education is much wider for the Roma with respect to both employment and labour-market earnings. The evidence suggests that the Roma are more vulnerable to discrimination, with a high percentage of the employment gap unexplained by differences in observable skills or characteristics.¹³⁴

The generations and gender survey of Romania includes data for the population majority and two ethnic minorities, the Roma and Hungarians. The educational attainment levels are available for young people and their mothers. Young Roma adults have on average more years of education than their mothers and, presumably, their fathers. Similarly as in Bulgaria, the achievement gap of young Roma women is greater than a generation ago, increasing strongly from 35 per cent to 63 per cent over one generation. However, the same gap has diminished significantly for ethnic Hungarian women, falling from 12 per cent to 2 per cent.

¹³⁴ For details, see Trentini (2011).

In the case of Hungary, the educational attainment of young Roma adults is higher than that of their parents. The educational achievement gap between them and the comparable cohort of majority population has declined somewhat for young Roma men but increased noticeably for Roma women (table 5.1).

Table 5.1
The educational achievement index, mid-2000s
Share of the 25-34 year old population with at least upper secondary education

	Young men	Young women	Fathers	Mothers
Bulgaria				
Majority	89.7	92.1	75.4	78.6
Turkish minority	39.0	36.8	16.5	9.3
Roma minority	6.2	8.9	3.7	1.2
Hungary				
Majority	89.7	87.9	76.5	60.5
Roma minority	33.9	18.7	17.9	3.5
Romania				
Majority	82.0	73.8	..	37.4
Hungarian minority	80.0	71.9	..	25.6
Roma minority	13.9	10.9	..	2.4

Source: ECE calculations based on Generations and Gender Surveys.

Which policies could accelerate the slow progress in the educational attainment of the Romani minority? Successful policies would improve both educational equity and quality. With respects to equity, affirmative policies are needed most for poor children living in urban ghettos and segregated settlements in depressed areas. Such children are academically disadvantaged as a result of material deprivation and limited education of their parents. Pre-school attendance can improve considerably educational outcomes, especially for children from disadvantaged backgrounds. Pre-school plays an important role in the social inclusion of minorities, improving their language skills and their integration with the majority population at an early age.

In Hungary, the integration of young children from disadvantaged families in pre-school facilities has been promoted, at least in principle. Hungarian municipalities must provide pre-school places for at least one year but a longer enrolment of children from disadvantaged families has been encouraged with the aid of cash benefits for parents. However, the majority of Roma children living in segregated settlements cannot benefit from early pre-school education, given a shortage of kindergarten places that is most acute in disadvantaged areas. Moreover, the quality of kindergarten services in such areas is poor due to over-crowding as well as under-financing. In contrast, kindergartens in more prosperous residential areas have superior facilities for sports and language instruction and provide excellent remedial intervention services with the aid of speech therapists, remedial teachers and psychologists (Havas, 2009). The availability of pre-school education in Bulgaria and Romania is generally more limited than in Hungary.

Forward-looking policies should provide children of poor parents with the opportunity to attend kindergartens from an early age, preferably three years (UNICEF, 2010). Whereas this could be achieved in Hungary through a more equitable distribution of existing resources, the provision of kindergarten services to children from disadvantaged backgrounds would require new funding in Bulgaria and Romania. Some financing for this purpose could be provided by the

EU structural funds for education of Roma, especially if the complex administrative procedures governing the use of such funds were simplified.

In countries of Central and South-Eastern Europe, a significant proportion of poor Roma children are either streamed into remedial classes in general public schools or are sent to special schools for mentally challenged pupils. Both types of remedial schooling provide Roma pupils with substandard primary education while limiting their exposure to majority population peers. Not surprisingly, only a minority of Roma students enters secondary schools. Approximately one-half of Roma students at secondary schools drop out before graduation and only a few of those who graduate continue their education in colleges or universities. By contrast, a relatively large proportion of Roma who complete primary education continue to study at vocational schools that are characterized by low academic requirements and inadequate training standards.

A number of authors have argued that the social and ethnic selection in primary education should be reduced in order to improve educational equity. Ethnic segregation in Hungarian schools has increased during the transition period due to the early streaming of students into advanced, regular and remedial classes or schools and growing concentration of marginalized populations in ghettos and segregated settlements (Havas, 2009). According to a survey of Bulgarian schools and preschools in 2005, over 10% of them had a majority of Roma children and over 70% of Roma children attended schools for Roma children only (ERRC 2004). Not surprisingly, such segregated schools have provided education of poor quality (UNDP, 2008). According to unofficial data, the extent of segregation in Romanian schools appears to be similar (Rostas, 2009). In all three countries, the early streaming of students has been supported by the relatively well educated middle-class parents aiming to maximize the chances of their children to benefit from higher educational standards. By contrast, the less educated parents of Roma students have more often than not accepted segregation of their children in substandard schools. Nevertheless, in response to the growing educational divide, a number of school integration initiatives have been launched over the last decade.

Kézdi and Surányi (2009) provide a comprehensive evaluation of a school integration programme in Hungary. Their study compared 30 schools participating in the Hungarian voluntary desegregation programme with 30 control schools. Results of the study indicate that both Roma and non-Roma students in programme schools achieve somewhat higher grades, acquire somewhat better reading skills and are more likely to pursue further education in secondary schools that provide a graduating examination (a pre-requisite for University admission) than their peers in control schools. The effects on cognitive and academic development are largest for Roma students but are also positive, albeit to a lesser extent, for non-Roma students. The effects on non-cognitive (social) skills are also positive and larger than effects on cognitive skills.

The positive results of integrated education in the participating schools, which saw both Roma and non-Roma students improve their mental skills and social attitudes, were made possible with the aid of teacher training and modest incentives provided by the national government. In principle, similar outcomes could be achieved on a national scale, if the Hungarian government would provide adequate financial incentives and most schools were willing to participate. However, the decentralised nature of the school system in Hungary would prevent the national government from mandating desegregation in public schools, even if it were willing to do so. Nevertheless, since the mid-2000s the government has provided funding for a school integration programme for disadvantaged groups, including the Roma who account for 13 per cent of primary school children. By now some 1,500 schools participate in the programme.

However, the number of segregated school classes appears to have increased at the same time (Havas, 2009).

Although the Hungarian school integration programme increases short-term budgetary outlays, the available economic analysis indicates that policies resulting in improved educational attainment should generate net budget savings of some €70,000 for each successful Roma student who completes secondary school (Kertesi and Kézdi, 2006). From the fiscal point of view, the integration programme would be self financing if at least one out of five beneficiaries would complete secondary school.

Similarly as in Hungary, government programmes for the education of Roma in integrated schools have been launched in Bulgaria and Romania in mid-2000s. In Bulgaria, the number of segregated schools decreased by 40 per cent between 2005 and 2007 (Republic of Bulgaria, 2008). In Romania, government initiatives encouraged the use of the Romani language in some schools, reserved some places for Roma students in schools and universities, and introduced a special food programme for Roma school children (European Parliament, 2008). UNICEF (2010) describes examples of good practice in Roma education in Central and South-Eastern Europe, including a desegregation project in Bulgaria and an education equity project in Romania. Such projects have improved the school performance of participating Roma students and could be successfully replicated. In spite of positive evaluations, the lack of government funding limits the scaling-up of school integration projects (European Commission, 2010). To some extent, the lack of funding seems to result from administrative capacity bottlenecks that limit the utilization of the structural funds available for education equity programmes in the new EU member States.

Employment

The low level of education limits the chances of Roma to find gainful employment, especially in the formal sector. Employment to population rates of young Roma males are generally lower than of the comparable majority population.¹³⁵ Employment rates of Roma women are even lower. Figure 5.2 shows self-reported employment rates of majority and Roma youth in the countries investigated. In the data used we are not able to distinguish between formal and informal/irregular employment, and as a consequence employment rates reported here include both forms of employment and result in some cases in higher rates than those reported in other studies (O'Higgins (2010), Kertesi and Kezdi (2011), UNDP (2002), O'Higgins and Ivanov (2006), Ringold et al. (2006)). Another important difference is determined by our focus on the age group 25-34 years; in fact, Roma of older age groups have typically even lower employment rates. Employment rates for young Roma males vary considerably among the countries investigated, ranging from 26.7 per cent in Bulgaria to almost 70 per cent in Romania. These rates compare unfavourably with the majority rates of about 80-90 per cent. Roma females report employment rates below 20 per cent; about a third of majority rates.

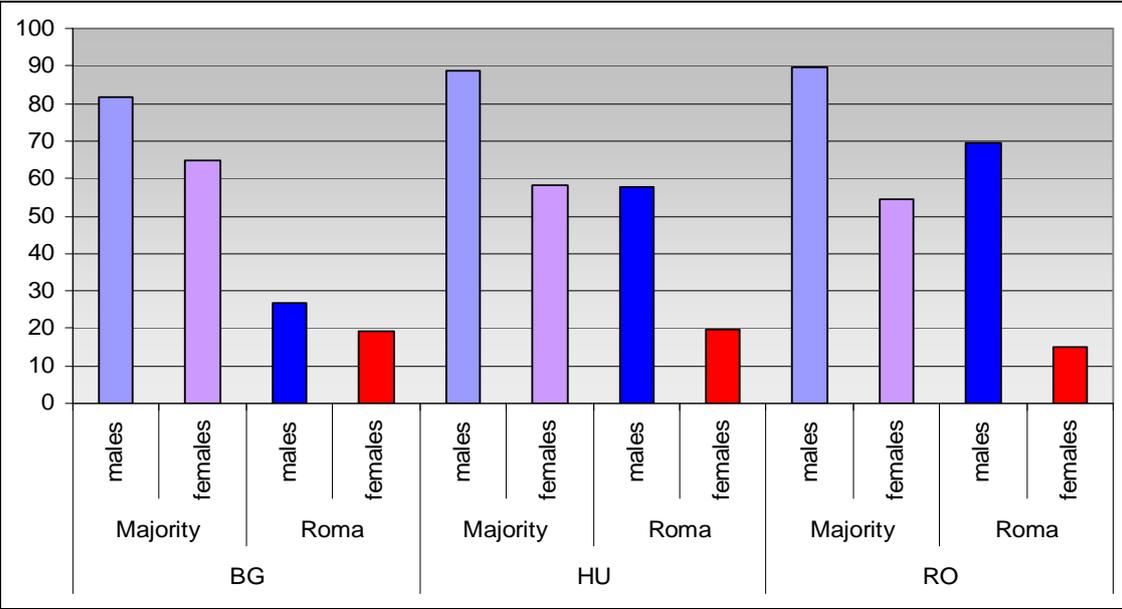
Differences in female employment rates are particularly sensitive to the age range chosen that overlaps with the childbearing age. However, employment rates for older Roma women, for example in the age range 35 to 44 years are clearly higher only in Bulgaria (29.6 per cent) while they are about the same or even lower than in the reference age range in Hungary and Romania (respectively 23.7 and 13.2 per cent). Roma male employment rates in the older age range are – with the exception of Bulgaria – even lower than in the younger range reaching only 43.3 per cent of the Romani population in Hungary and 62 per cent in Romania. This is at odds with

¹³⁵ Employment to population rates are defined for each ethnic group as the ratio of the number of currently employed to the total population of the respective group.

employment patterns of the majority population where employment rates of the age group 35 to 44 are usually comparable with the younger group for males and markedly higher for females.

Education reduces employment gaps especially for women, who seem to profit more than men from schooling. Those few Roma women who achieve at least secondary education more than double their probability to be employed. Calculating unemployment rates from self reported socio-economic activities, might give misleading results, depending on the respondent’s interpretation of the definitions of employment and importantly of unemployment.¹³⁶ For example, over 50 per cent of Romanian and Hungarian Roma females report being inactive - either looking after the home or on parental leave - while over 60 per cent of Bulgarian ones report being unemployed. However, it is questionable whether Bulgarian Roma females are really actively seeking a job. The resulting unemployment rates range quite strikingly from over 70 per cent in Bulgaria to about 10 per cent in Romania (figure 5.4), roughly corresponding to rates reported by UNDP (2002). Notably, Romanian Roma report very low unemployment rates which for males possibly reflect the extensive engagement in the informal sector and casual employment activities and for females reflect the high inactivity rate as already mentioned.

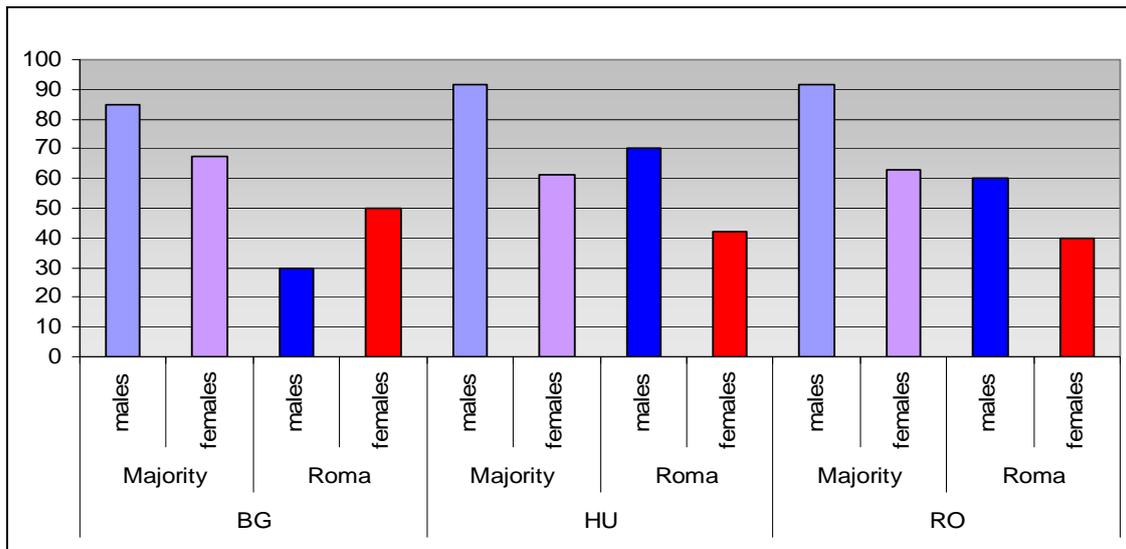
Figure 5.2
Employment rates of young adults (aged 25-34), mid-2000s



Source: ECE calculations based on Generations and Gender Surveys.

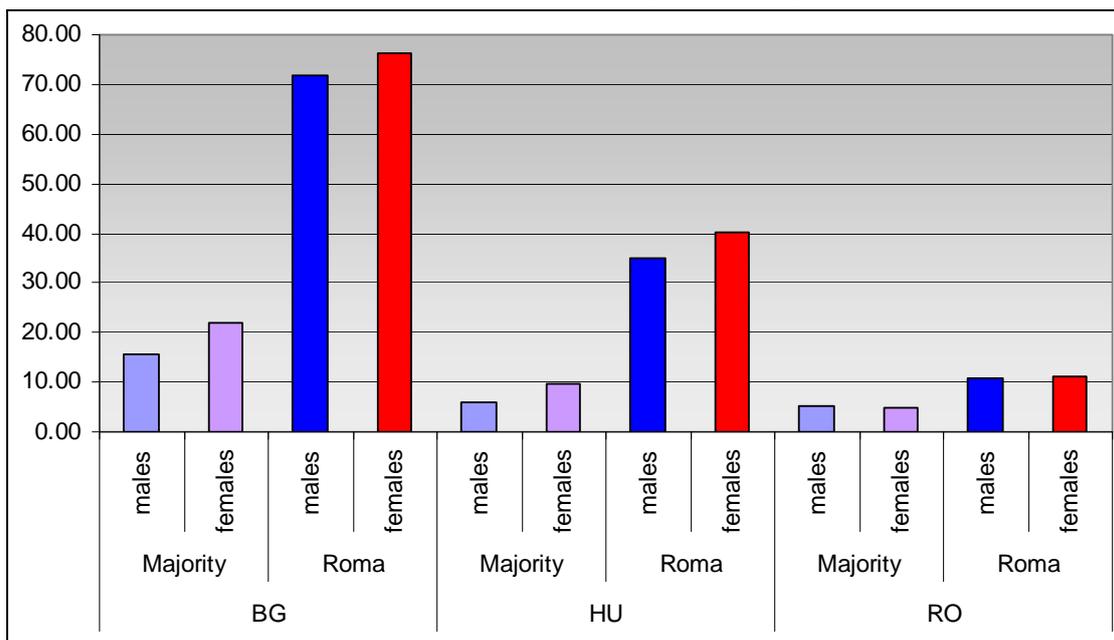
¹³⁶ According to the standard ILO definition, an unemployed person is one who is willing, able and actively seeking work. Unemployment rates are defined by the ratio of the unemployed to active population where active population is equal to the sum of the unemployed and employed population.

Figure 5.3
Employment rates of young adults (aged 25-34) with at least secondary education, mid-2000s



Source: ECE calculations based on Generations and Gender Surveys.

Figure 5.4
Unemployment rates of young adults (aged 25-34), mid-2000s



Source: ECE calculations based on Generations and Gender Surveys.

In the case of Bulgaria it is possible to investigate a bit further Roma's unemployment conditions: of the unemployed males, only less than half report having had a job before the unemployment spell while for females this percentage shrinks below 30 per cent. The reported average unemployment duration is above 5 years for male Roma and almost 8 years for females. Even though the Bulgarian majority's unemployment spells are relatively long (around 3 and a half years for men and a couple of months more for females), the minorities' unemployment durations are much longer for the population of young workers. Young adults seem to have spent more time unemployed than actively engaged in economic activities. Given the long

unemployment durations it is not surprising that only a minority of them receive unemployment benefits.

Table 5.2
Unemployed population in Bulgaria, mid-2000s

	Majority		Turkish minority		Roma	
	m.	f.	m.	f.	m.	f.
% had a job before unemployment	77.7	72.1	54.5	43.2	44.6	28.4
average unemployment duration in months	41.2	44.6	72.8	79.6	69.3	92.3
% receives unemployment benefit	10.1	9.7	4.6	5.7	7.9	6.2

Source: ECE calculations based on Generations and Gender Surveys.

It is often claimed that Romani minorities suffered a much deeper transition crisis than the majority population and that the working and consequently living conditions of the current generation worsened considerably with respect to those of their parents. We verify whether retired Roma in the age of their parents (50 to 65 years) receive pensions. The right to receive retirement pension is matured after a certain number of working years in the formal sector (registered employment), and can thus reveal if the generation of parents enjoyed higher employment rates and more stable working conditions. In Bulgaria and Hungary the retirement pension coverage rates are relatively similar across ethnic groups and above 75 per cent of the population. In Romania the pension coverage rate for the Roma is much lower and the gap with respect to the majority population is more important. This would confirm at least partially the hypothesis that parents had a better working life and have nowadays a stable and safe source of income. However, while in all three countries parents of the majority population report being mainly either retired or still active with negligible unemployment rates, Roma parents who are not retired report unemployment rates similar to the ones of the young population.¹³⁷ Thus only those who managed to retain their job across the transition period accumulated pension rights, while the others most likely share the difficult working conditions and high unemployment rates of the younger Roma population.

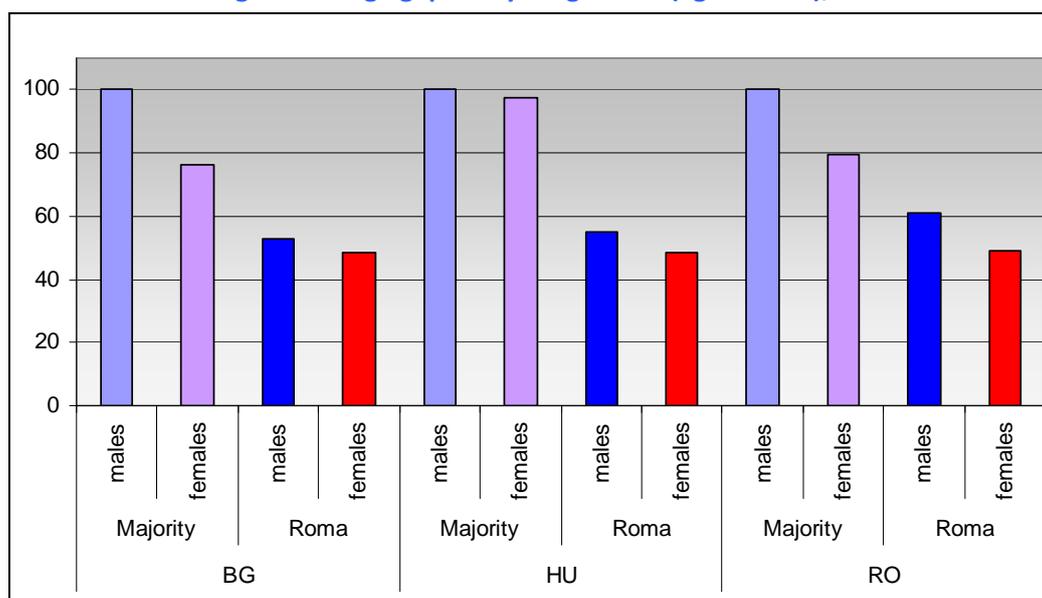
Most worrisome is the future perspective. The intergenerational gap in living conditions seems bound to increase with the much lower percentages of today's young Roma being able to accumulate enough pension contribution years to secure a stable source of income when old.

The poor working conditions and the unskilled occupations are mirrored in quite high wage gaps. In figure 5.5 we report wages of the different groups and gender as a percentage of the average wage earned by males of the majority population (this group's earnings index is set to 100).¹³⁸ Wage gaps are quite wide ranging from almost 50 per cent for male Roma in Bulgaria to about 40 per cent in Romania. Interestingly gender wage gaps for Roma do not seem to be much higher than for the majority of population with the exception of Hungarian workers. This is in contradiction with some literature according to which gender pay gaps were higher in Roma communities because of the stronger traditional role of females (European Commission, 2009).

¹³⁷ Almost 38 per cent of Hungarian Roma parents report being inactive because ill or disabled. These receive in 95 per cent of the cases some kind of disability allowance. This allowance can be viewed as a sort of social assistance/income support.

¹³⁸ Bulgarian data reflect monthly total income and not only earnings from main occupation/ business as in the Romanian and Bulgarian cases.

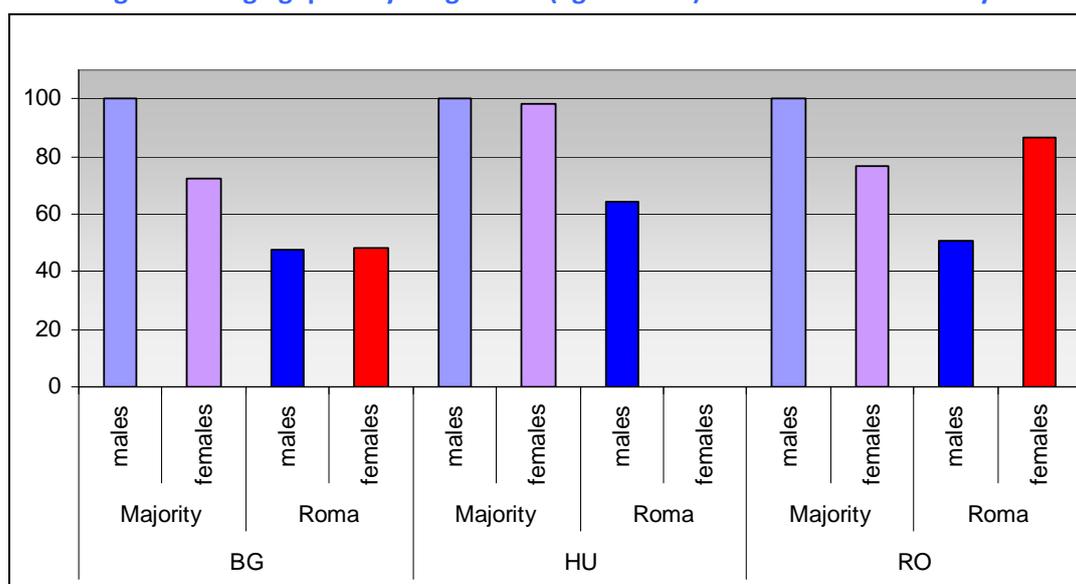
Figure 5.5
Ethnic and gender wage gaps for young adults (aged 25-34), mid-2000s



Source: ECE calculations based on Generations and Gender Surveys.

If accumulating experience on the job allows improving productivity and thus salaries, one would expect, considering the precarious working conditions and the little training Roma workers are undergoing, to observe wider wage gaps in older age groups. Looking again at the age range 35 to 44 years, wage gaps for male Roma are higher than those in the reference age group by 2 and 5 per cent in Bulgaria and Hungary, and by more than 30 per cent in Romania. Increases in the wage gaps for older females are much greater ranging from 5 and 10 per cent in Hungary and Bulgaria to over 40 per cent in Romania. Likely this is due to the accumulation over their working histories of disadvantages, i.e. long unemployment spells, work discontinuity, and poor working conditions. As a result the gender pay gap for Roma also increases.

Figure 5.6
Ethnic and gender wage gaps for young adults (aged 25-34) with at least secondary education



Source: ECE calculations based on Generations and Gender Surveys.

Raw wage gaps reflect many factors, most importantly differences in education. However, wage gaps for workers who have accomplished at least secondary schooling are bigger than for the whole group aged 24-35 by almost 10 per cent in Romania and roughly the same in Bulgaria while being clearly smaller only for Hungarian males and Romanian females.¹³⁹ This indicates that for Roma workers education slightly increases the probability to be employed but does not contribute to closing the income gap with the majority population.

Not having more detailed data, it is difficult to rule out straightforward discrimination as an explanation for these wage gaps. As a matter of fact, many reports, e.g. UNDP (2002), EU (2009), Decade Watch (2010), cite heavy discrimination as one of the main factors determining the poor performance of Roma in the labour market.

In a number of European transition economies, employment declined significantly in the first half of 1990s as a result of low wage flexibility and relatively generous unemployment and early retirement benefits. However, labour market, social assistance and pension reforms in late 1990s and early 2000s improved incentives to work and resulted in rising employment rates (Slay, 2009). The Eurostat labour survey data show that employment-population ratios increased rapidly in Bulgaria and less spectacularly in Hungary and Romania between early 2000s and 2008. Less information is available about employment rates of the Roma. However, the available estimates indicate that large employment gaps between the Roma and the majority population have continued to persist despite the reduced tax wedge on labour in the aftermath of the reforms mentioned above. This implies that market reforms need to be complemented by affirmative action policies in order to increase the employment of the Roma and other marginalized groups in the formal sector of the economy.

Given the rapid ageing of the majority population in Central and South-Eastern Europe, a higher employment in the formal sector of the demographically more dynamic Roma population would be beneficial from the economic point of view. OECD estimates based on a simple macroeconomic catch-up model and demographic estimates of the Romani population in Hungary imply that raising the Roma employment rate to the level of the majority population could significantly increase GDP growth and improve sustainability of the pension system over the next 50 years (Burns and Cekota, 2002). Similar payoffs from higher employment of Roma seem to be plausible in Bulgaria and Romania as well. In addition to boosting economic growth, the high employment of Roma in the formal economy would provide them over time with social security benefits that are based on the number of years of contributory service.

The higher tax revenue and social security contributions as well as the lower welfare payments associated with the employment scenario mentioned above would result in considerable net savings to the general government sector and improve the long-term sustainability of the social security system. To reap such benefits, however, current education and employment policies would have to be reformed in a major way with a view to providing Roma with equal access to quality education and decent jobs. Such reforms appear to be affordable. According to recent World Bank estimates, the annual fiscal gains from bridging the ethnic employment gap exceed considerably the total cost of investing adequately in public education of Roma to ensure that their educational attainment catches up to the majority population (World Bank, 2010). The World Bank economists assume that the required education expenditure would amount to at most 50 percent *more* per Roma pupil than per non-Roma pupil. Such outlays on education would have to be accompanied by additional investment in health and housing services that would enable the Roma to escape the poverty trap.

¹³⁹ Data on wage gaps for Hungarian Roma females is not available.

The improved quality of education available to the Roma would not ensure by itself their high employment in the formal sector, given the apparently strong racial discrimination in the labour market. However, this problem could be addressed with reforms that strengthen the implementation of the existing anti-discrimination legislation pertaining to employment and procurement policies that would award government contracts only to business firms that practice anti-discrimination. The fiscal cost of such reforms would be probably marginal.

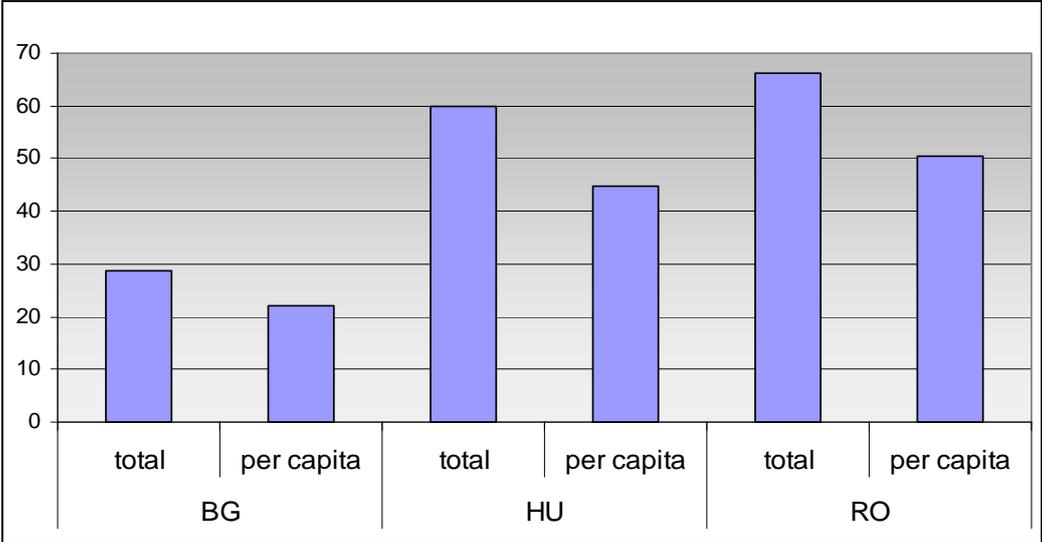
Given the expected fiscal benefits of social inclusion, the obvious question is why governments in Central and South-Eastern Europe do not develop and implement policies that would integrate the Roma better into society. Aside from the political arithmetic constraints that limit the scope for pro-Roma policies, the lack of reliable data poses an important obstacle to social progress. Accountable governments need to evaluate the impact of policies and concentrate scarce public funds in most effective programmes. This implies an urgent need for better disaggregated data.

Robust ethnic monitoring is urgently needed but seldom available. Examples of good practice from the Central European region include a well developed demographic model of the Romani population in Hungary (Hablicsek, 2008) and a detailed labour-force survey of the Romani working-age population in the Czech Republic (World Bank, 2008b). Outside the region, an important example of good practice is provided by the British labour force survey that reports quarterly labour market trends for the mainstream population and ethnic groups on a consistent basis.

Living conditions

The large wage gaps highlighted in the previous section, low employment rates and the poor working conditions determine wide standard of livings gaps. The following figure shows the gaps in monthly total household income. The Bulgarian Roma households’ average income only represents less than 30 per cent of the majority’s average. The Hungarian and Romanian Roma families’ income reaches more than 60 per cent of the majority’s income.

Figure 5.7
Per capita income gaps between the Roma and majority population, mid-2000s
Roma household income as a percentage of majority's average income



Source: ECE calculations based on Generations and Gender Surveys.

The second bars of the graph show the gap in per capita household income. Gaps increase by 6 per cent in Bulgaria to 16 per cent in Hungary and Romania, due to the fact that Roma households are on average composed by 4 - 5 members, while the majority's households are smaller (3-4 persons). Due to the different demographic trends¹⁴⁰ and the widening income gaps over the working life already mentioned in the previous paragraph, family income gaps increase with the age of the household head. For household heads aged 35 to 44 Roma per capita incomes are, across the countries under study, around 30 per cent of the majority's average per capita income.¹⁴¹

The high inactivity and unemployment rates lead to a marked dependency on social welfare benefits; in other cases informal and occasional employment prevents Roma from accessing unemployment benefits or other social security contribution-based benefits (i.e. child raising allowance), especially in countries where social benefits are related to the employment status and social assistance is based on residential criteria.

Roma household are more likely than other households to rent their dwelling or benefit from social housing. Almost half of them are unable to pay rent for their accommodation. More than half cannot afford paying utility bills. In all countries these percentages are 2, 3 and sometimes 4 times higher than those of the majority population in the same age group. The poverty of Roma households is both a consequence and a cause of their low incomes. Their inability to afford adequate clothing, housing, and food is likely to negatively impact their children's schooling performance as well as the employability of adults. The data show that very few Roma households have a sufficient protein intake. This corroborates UNDP (2002) survey findings that substantial numbers of Roma children suffer from undernourishment. This has negative effects on their health and educational capacities.

Moreover, considering that a big part of the Romani population lives in rural areas, the fact that only a minority of them has a means of transport and a telephone reduces their ability to reach a school or for the adults to find a job. Poor access to transport is increasingly being recognized as a barrier to employment and other key activities and, thus, an important contributing and reinforcing factor in reduced social participation and social exclusion even in G7 countries (Lucas, 2003). In a rural context where public transport is less available, a car can be a determining factor for employability. Their complete lack of access to new technologies (computers) also excludes the Roma from the labour market and undermines their future employability.

¹⁴⁰ Roma women not only procreate more but also their fertility period seem to last longer. The number of household members increases with the age of the household head: for Roma household heads aged between 35 and 44 years, the average household size is above 5 while the size of the majority population families remains stable across age groups.

¹⁴¹ A similar analysis by educational group is not possible due to the limited sample size.

Table 5.3
Selected characteristics of Roma and non-Roma households, mid-2000s

	BG		HU		RO	
	majority	Roma	majority	Roma	majority	Roma
Percentage of HH:						
having difficulty or great difficulty to make ends meet	47.7	91.5	13.2	46.7	24.2	55.6
with money left for savings	12.8	1.1	-	-	21.4	11.1
own their dwelling	76.4	62.8	74.6	64.6	84.2	82.2
rent	8.5	8.9	8.2	14.6	7.0	11.1
social housing	14.0	26.2	8.3	14.6	6.6	4.4
Percentage of HH having:						
Colour TV	97.5	63.5	98.0	95.8	94.6	84.4
Video recorder/DVD player	58.1	11.1	80.9	55.0	33.0	13.3
Microwave	42.9	2.7	-	-	21.9	6.7
Washing machine	89.9	20.5	87.9	33.6	74.4	26.7
Computer	27.7	0.5	56.1	11.2	31.0	2.2
Dishwasher	5.3	0.5	8.9	0.9	1.3	0.0
Telephone (whether fixed/mobile)	92.6	23.7	88.8	60.6	79.0	31.1
Car/van available for private use	63.3	13.2	66.1	27.5	33.1	13.2
Second car	8.3	1.6	-	-	3.3	0.0
Second home	10.4	1.6	-	-	3.3	0.0
Percentage of HH which can afford:						
keeping home adequately warm	87.4	67.9	97.6	87.8	89.1	64.4
a week's annual holiday	36.0	2.1	57.8	10.9	41.6	6.7
replacing any worn-out furniture	21.1	1.1	28.6	16.7	21.2	4.4
buying new, rather than second-hand clothes	75.7	13.2	59.9	21.9	71.9	20.0
eating meat, chicken or fish every second day	65.3	11.6	69.7	40.0	71.3	31.1
having friends/family for a drink/meal once a month	65.4	16.3	-	-	56.9	15.6
Percentage HH unable to pay in the last 12 months:						
rent for accommodation	24.2	44.4	10.8	45.6	15.4	57.1
utility bills	23.5	70.2	14.6	52.3	15.3	45.5

Source: ECE calculations based on Generations and Gender Surveys.

For Bulgaria it is possible to verify the water and sanitation access of minorities.

Table 5.4
Access to water and sanitation in Bulgaria, mid-2000s

Percentage of HH:	Majority	Turkish	Roma
with access to piped water	99.4	95.0	78.5
with bath or shower	96.5	78.1	34.7
with a flush toilet	89.0	42.7	22.0

Source: ECE calculations based on Generations and Gender Surveys.

Looking at these figures one has to consider the geographical distribution of the different communities. In Bulgaria the majority population is mainly urban and only 20 per cent of it lives in rural areas. However, Roma seem to be particularly disadvantaged, having a very low rate of access to water and sanitation, also in comparison to the Turkish minority which has a share of rural population (63 per cent of all the Turks interviewed are living in rural areas) that is relatively similar to the Roma one (58 per cent). Housing conditions can contribute to the vicious circle: poverty – low education – no employment – bad housing and health – poverty. Researchers found that poor housing conditions in part contributed to Roma poverty in several countries. In many cases this is because Roma were left out of the property and land privatization processes that occurred during the early 1990s (Ringold et al, 2006).

The poor living conditions translate into poorer health, especially in the older age. Several European studies show that Roma women and men have an average life expectancy at birth considerably lower than the rest of the population. This is a consequence of their bad housing and living conditions, as well as their patchy access to screening and healthcare (Fundación Secretariado Gitano, 2009, European Commission, 2009).

In the following table we report three indicators of health conditions for two age groups, between 25 and 34 years and above 45 years. The first indicator is the percentage of individuals reporting good or very good health, the second shows whether the individual has any long standing illness or chronic condition, and the third one is an indicator for any health related limitation or disability. In general it seems that while for Roma females the gap in health conditions is already present when young and it exacerbates getting old, for Roma males the gap is only evident in the older age.

The difference across genders is certainly related to different hygienic conditions and care necessities that females require, especially during the fertile period. With respect to non-Roma women, Roma women tend to experience greater health risks, because of early and multiple pregnancies and abortions, a heavy workload at home, poor housing, malnutrition, etc.

Table 5.5
Selected health indicators, mid-2000s

	BG				HU				RO			
	Majority		Roma		Majority		Roma		Majority		Roma	
	F	M	F	M	F	M	F	M	F	M	F	M
good/ very good health 24-35 yrs	89.8	91.5	77.0	85.9	84.8	85.7	78.7	85.7	89.2	93.5	84.0	80.0
good/ very good health ≥ 45 yrs	37.5	50.5	29.0	43.6	38.3	43.5	31.2	21.1	34.8	46.8	25.6	42.4
Any long-standing illness/ chronic condition 24-35 yrs	10.0	8.0	13.3	9.0	11.1	11.8	14.9	6.1	5.3	4.7	8.0	10.0
Any long-standing illness/ chronic condition ≥ 45 yrs	50.5	39.0	50.0	51.6	54.5	46.9	63.9	59.7	40.9	31.2	44.2	39.4
Any health-related limitation/ disability 24-35 yrs	2.3	2.2	2.7	2.6	8.0	8.0	12.8	4.1	2.0	1.8	0.0	5.0
Any health-related limitation/disability ≥ 45 yrs	13.0	11.8	20.0	19.4	43.5	40.0	49.2	59.0	16.7	13.2	20.0	11.1

Source: ECE calculations based on Generations and Gender Surveys.

The statistics on labor market participation, education and health presented this far highlight the vulnerable position of Roma women, being at higher risk of poverty and social exclusion. The handicaps of Roma women with respect to the men from their community and ethnic majority women, especially in accessing employment, education, health and social services, are due to some extent to the gender roles persisting in some of the most disadvantaged communities.

The comparative disadvantage of Roma women with respect to the men from their community and ethnic majority women, especially in accessing employment, education, health and social services is due to some extent to what is called a “triple discrimination”; for being women in a patriarchal society, for belonging to an ethnic minority that is affected by the most negative social perception and for belonging to a culture whose gender values have been associated almost exclusively to the function of mother and spouse (Fundacion Secretariado Gitano 2009). This particularly severe discrimination against Roma women calls for targeted interventions which aim at improving Roma women health, education, labor market participation and more generally inclusion into society.

The inclusion of a gender perspective in designing inclusive policies for Roma is not only justified by the inequalities detected between men and women, but also by the multiplying effect of interventions aimed at women, for their pivotal role in the organization of the family and the transmission of values and habits. Besides producing positive changes in the life of Roma women, specifically focused and tailored policies may make them more aware of the importance of good health, education and employment for their children and families (European Commission 2009). Recent studies reviewing inclusive policies for Roma women in Europe found that some of the best good practices involved some form of cultural mediation (e.g. in the health or education sector) combined with measures aiming at developing employability. More generally, the key to

success seem to lie in the direct empowerment of women achieved through a wide range of measures supporting on the one hand their capabilities and skills and on the other facilitating community integration.¹⁴²

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¹⁴² For more details see European Commission (2009) and Fundación Secretariado Gitano (2009).

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Statistical Annex

Introduction

The statistical annex was prepared by the UNECE Statistics Division on the basis of the information available as of 30 August 2011. Please note that the MDG indicators for the ECE region are continuously updated. The latest available version of the data can be downloaded from the UNECE website at <http://w3.unece.org/pxweb/Dialog/>

Table 1A

Population below national poverty line, percentage ^a																
Country	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Eastern Europe, Caucasus and Central Asia																
Armenia	50.9	49.7	42.9	34.6	29.8	26.5	25.0	27.6	34.1	..
Azerbaijan	68.1	49.6	46.7	44.7	40.2	29.3	20.8	15.8	13.2	10.9	..
Belarus	38.4	38.6	32.1	33.0	46.7	41.9	28.9	30.5	27.1	17.8	12.7	11.1	7.7	6.1	5.4	..
Georgia	46.2	50.2	51.8	51.8	51.1	52.1	54.5	27 ^b	31.0
Kazakhstan	..	34.6	38.3	39.0	34.5	31.8	28.4	24.2	19.8	16.1	31.6 ^c	18.2	12.7	12.1	8.2	..
Kyrgyzstan	..	43.5	43.0	54.9	55.3	62.6	56.4	54.8	49.9	45.9	43.1	39.9	35.0	31.7	31.7	..
Republic of Moldova	67.8	54.6	40.4	29.0	26.5	29.1	30.2	25.8	26.4	26.3
Russian Federation	24.8	22.1	20.8	23.4	28.4	29.0	27.5	24.6	20.3	17.6	17.7	15.2	13.3	13.4	13.2	13.1
Tajikistan	36.0	18.0	17.1	..
Ukraine	80.2	82.7	83.3	76.2	65.6	55.3	49.7	27.2	16.1	15.5	21.8
Uzbekistan	27.5	26.5	27.2	26.1	25.8
South-Eastern Europe																
Albania	25.4	18.5	12.4
Bosnia and Herzegovina	19.5	18.3	18.2
Croatia	17.2	18.2	16.9	16.7	17.5	18.0	17.3	17.9
Serbia	14.0	8.8	7.9	6.1	6.9	9.2
The former Yugoslav Republic of Macedonia	19.0	20.7	21.0	22.3	22.7	30.2	30.2	29.6	30.0	29.8	29.4	28.7
Turkey	27.0	28.1	25.6	20.5	17.8	17.8	17.1	18.1	..
Notes: The national poverty rate is the percentage of the total population living below the national poverty line. National poverty lines are set by individual countries, reflecting their population's basic needs for subsistence. The following are definitions applied in the reported countries.																
Armenia: Consumption below the adult equivalent poverty line. Data from 2008 are based on revised poverty line. Source: Integrated Living Conditions Survey (ILCS) 2004, 2009 Republic of Armenia National Statistical Service.																
Azerbaijan: Absolute poverty line, Source: UNSD MDG database for years 1995-2001, State Statistical Committee (MDG indicators) for years 2002-2008.																
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Serbia: Percentage of poor persons, under absolute poverty line. Source: Poverty in the Republic of Serbia, 2008 - 2010 (LP20), Statistical Office of the Republic of Serbia																
The former Yugoslav Republic of Macedonia: Relative poverty (70% of median equivalised expenditure), Source: MDG report 2009, State Statistical Office.																
Turkey: Income below subsistence minimum, complete poverty line (food and non-food), Source: MDG report 2005 for years 2002-2003, Poverty study 2008 for years 2004-2008.																
a Poverty data in the EU countries and other high income countries are presented in Table 1B.																
b Break in series due to change in methodology.																
c Break in series due to change in composition of food and non-food items in the minimum subsistence basket.																
d Provisional data.																

Table1B																						
Poverty in the EU countries and other high income countries, percentage																						
Country	Total							Women							Men							
	1995	2005	2006	2007	2008	2009	2010	1995	2005	2006	2007	2008	2009	2010	1995	2005	2006	2007	2008	2009	2010	
European Union																						
Austria	13.0	12.3	12.6	12.0	12.4	12.0	..	15.0	13.1	14.0	13.3	13.5	13.2	..	12.0	11.5	11.0	10.6	11.2	10.7	..	
Belgium	16.0	14.8	14.7	15.2	14.7	14.6	..	17.0	15.5	15.6	15.9	15.9	15.7	..	15.0	14.1	13.7	14.4	13.6	13.4	..	
Bulgaria	..	14.0	18.4	22.0	21.4	21.8	..	..	15.0	19.3	23.0	22.9	23.7	..	..	13.0	17.3	20.9	19.8	19.8	..
Croatia	..	18.0	17.0	18.0	17.3	17.9	..	..	20.0	18.0	19.0	19.0	19.7	..	..	16.0	16.0	16.0	15.4	16.0	..
Cyprus	..	16.1	15.6	15.5	16.2	16.2	..	..	17.6	17.7	17.4	18.3	17.9	..	..	14.5	13.5	13.5	14.0	14.4	..
Czech Republic	..	10.4	9.9	9.6	9.0	8.6	..	..	11.0	10.8	10.5	10.1	9.5	..	..	9.7	8.9	8.7	8.0	7.5	..
Denmark	10.0	11.8	11.7	11.7	11.8	13.1	..	..	12.1	12.0	12.0	12.0	13.3	..	..	11.6	11.4	11.3	11.7	13.0	..
Estonia	..	18.3	18.3	19.4	19.5	19.7	..	..	19.1	19.9	21.7	22.0	21.6	..	..	17.4	16.3	16.7	16.5	17.5	..
Finland	..	11.7	12.6	13.0	13.6	13.8	13.1	..	12.7	13.1	13.8	14.5	14.7	13.8	..	10.6	12.1	12.1	12.1	12.7	12.9	12.4
France	15.0	13.0	13.2	13.1	12.7	12.9	..	16.0	13.7	14.0	13.4	13.4	13.7	..	15.0	12.3	12.3	12.8	11.9	12.0	..	
Germany	15.0	12.2	12.5	15.2	15.2	15.5	..	16.0	12.9	13.0	16.3	16.2	16.3	..	13.0	11.4	12.1	14.1	14.2	14.7	..	
Greece	22.0	19.6	20.5	20.3	20.1	19.7	..	22.0	20.9	21.4	20.9	20.7	20.2	..	21.0	18.3	19.5	19.6	19.6	19.1	..	
Hungary	..	13.5	15.9	12.3	12.4	12.4	..	..	13.2	15.5	12.3	12.4	12.1	..	..	13.9	16.3	12.3	12.4	12.8	..
Ireland	19.0	19.7	18.5	17.2	15.5	15.0	..	20.0	20.6	19.5	18.5	16.4	15.1	..	17.0	18.9	17.5	16.0	14.5	14.9	..	
Italy	20.0	18.9	19.6	19.9	18.7	18.4	..	21.0	20.6	21.1	21.3	20.1	19.8	..	19.0	17.0	18.0	18.4	17.1	17.0	..	
Latvia	..	19.2	23.1	21.2	25.6	25.7	21.3	..	20.0	24.8	22.7	27.7	27.0	21.0	..	18.3	21.1	19.3	23.1	24.2	21.7	
Lithuania	..	20.5	20.0	19.1	20.0	20.6	..	..	21.3	20.8	21.2	22.0	21.9	..	..	19.7	19.1	16.7	17.6	19.1	..
Luxembourg	12.0	13.7	14.1	13.5	13.4	14.9	..	13.0	14.2	14.3	14.1	14.3	16.0	..	11.0	13.2	13.8	12.9	12.5	13.8	..	
Malta	..	13.7	13.6	14.3	14.6	15.1	..	..	14.3	14.1	14.9	15.5	15.6	..	..	13.1	13.2	13.6	13.7	14.7	..
Netherlands	11.0	10.7	9.7	10.2	10.5	11.1	..	12.0	10.8	9.9	10.7	10.4	11.3	..	11.0	10.6	9.5	9.6	10.5	10.8	..	
Poland	..	20.5	19.1	17.3	16.9	17.1	..	..	19.9	18.5	17.1	16.7	17.4	..	..	21.3	19.7	17.6	17.0	16.9	..
Portugal	23.0	19.4	18.5	18.1	18.5	17.9	..	24.0	20.1	19.1	19.0	19.1	18.4	..	21.0	18.7	17.7	17.2	17.9	17.3	..	
Romania	..	..	..	24.8	23.4	22.4	..	..	..	..	25.3	24.3	23.4	..	..	..	..	24.3	22.4	21.4	..
Slovakia	..	13.3	11.6	10.5	10.9	11.0	..	..	13.5	11.5	11.2	11.5	11.8	..	..	13.2	11.8	9.8	10.1	10.1	..
Slovenia	..	12.2	11.6	11.5	12.3	11.3	..	..	13.7	12.9	12.9	13.6	12.8	..	..	10.6	10.3	10.0	11.0	9.8	..
Spain	19.0	19.7	19.9	19.7	19.6	19.5	..	19.0	20.8	21.3	20.9	21.0	20.6	..	19.0	18.5	18.5	18.5	18.3	18.3	..	
Sweden	..	9.5	12.3	10.5	12.2	13.3	..	..	10.0	12.3	10.6	13.0	14.5	..	..	9.0	12.3	10.5	11.3	12.0	..
United Kingdom	20.0	19.0	18.9	18.8	18.7	17.3	..	22.0	19.4	19.9	19.7	20.0	17.9	..	19.0	18.6	17.9	17.9	17.4	16.8	..	
Other high income countries																						
Canada ^a	14.5	10.8	10.5	9.2	9.4	9.6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Iceland	..	9.7	9.6	10.1	10.1	10.2	9.8	..	9.6	10.2	11.0	10.7	11.1	9.8	..	9.8	9.1	9.1	9.5	9.3	9.8	
Norway	..	11.4	11.3	12.4	11.4	11.7	..	..	12.5	12.6	14.1	12.9	13.2	..	..	10.2	10.0	10.6	9.9	10.1	..
Switzerland	16.2	15.1	18.0	16.7	14.5	13.5	..
United States of America ^b	13.8	12.6	12.3	12.5	13.2	14.3	15.1	15.4	14.1	13.6	13.8	14.4	15.6	16.2	12.2	11.1	11	11.1	12.0	13.0	14	
Source: Eurostat (Statistical Office of the European Union) and National Statistical Offices																						
Note: Population at risk of poverty, share of persons aged 0+ with an equivalised disposable income below 60% of the national equivalised median income.																						
a: Proportion of population with income below low income cut-offs after tax, Source: Statistics Canada																						
b: The official poverty definition uses money income before taxes and does not include capital gains or noncash benefits (such as public housing, Medicaid, and food stamps). The official poverty thresholds do not vary geographically, but they are updated for inflation using Consumer Price Index, Source: US Census Bureau and Bureau of Labor Statistics (Annual Demographic Survey).																						

Table 2																			
Unemployment rate by sex, percentage																			
Country	Total						Women						Men						
	1995	2000	2007	2008	2009	2010	1995	2000	2007	2008	2009	2010	1995	2000	2007	2008	2009	2010	
Eastern Europe, Caucasus and Central Asia																			
Armenia	36.4	..	28.7	28.6	..	..	34.4	..	35.4	35.0	..	..	38.0	..	22.2	22.2	..	..
Azerbaijan	0.8	1.2	6.5	6.0	5.9	5.6	1.0	1.4	5.3	4.9	..	..	0.6	1.0	7.8	7.1	..	..
Belarus ^a	2.9	2.1	1.1	0.9	0.9	0.8	3.5	2.4	1.3	1.1	1.0	0.8	2.2	1.7	0.8	0.7	0.8	0.8	
Georgia	7.6	10.4	13.3	16.5	16.9	16.3	7.8	9.7	12.6	16.1	15.4	14.5	7.4	11.0	13.9	16.8	18.1	17.9	
Kazakhstan	11.0	12.8	7.3	6.6	6.6	5.8	..	..	8.7	7.9	7.5	6.6	..	..	5.9	5.3	5.6	4.9	
Kyrgyzstan	..	..	8.2	8.2	..	..	..	..	7.6	9.4	..	..	..	..	9.0	7.3	..	..
Republic of Moldova	..	8.5	5.1	4.0	6.4	7.4	..	..	7.2	3.9	3.4	4.9	5.7	..	9.7	6.3	4.6	9.1	
Russian Federation	9.4	10.6	6.1	6.3	8.4	7.5	9.2	10.4	5.8	6.1	7.8	7.0	9.7	10.8	6.4	6.6	9.0	8.0	
Tajikistan ^b	1.8	2.7	2.5	2.1	2.1	..	..	..	..	..	..	..	..	..	..	..	..	..
Turkmenistan	..	2.4	3.6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Ukraine	..	11.6	6.4	6.4	8.8	8.1	..	..	11.6	6.0	6.1	7.3	6.8	..	11.6	6.7	6.6	10.3	9.3
Uzbekistan ^b	0.3	0.4	0.2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
South-Eastern Europe																			
Albania	12.9	16.8	13.5	13.0	13.8	..	14.8	19.3	12.2	13.5	15.9	..	11.6	14.9	14.4	12.5	12.2	..	..
Bosnia and Herzegovina	..	..	29.0	23.4	..	..	..	..	32.9	26.8	..	..	..	..	26.7	21.4	..	..	..
Croatia	..	16.1	9.6	8.4	9.1	11.8	..	17.3	11.2	10.1	10.3	12.3	..	15.0	8.4	7.0	8.0	11.4	..
Montenegro	..	..	19.4	16.8	..	..	..	..	20.9	17.9	..	..	..	..	18.1	15.9	..	..	..
Serbia	..	..	18.1	13.6	..	..	..	..	21.0	15.8	..	..	..	..	15.8	11.9	..	..	..
The former Yugoslav Republic of Macedonia	..	32.2	34.9	33.8	32.2	32.0	..	34.9	35.5	34.2	32.8	32.3	..	30.5	34.5	33.5	31.8	31.9	..
Turkey	7.6	6.5	10.3	11.0	14.0	11.9	7.3	6.3	11.0	11.6	14.3	13.0	7.8	6.6	10.0	10.7	13.9	11.4	..
EU 27																			
Austria	4.4	4.7	4.4	3.8	4.8	4.4	4.9	4.6	5.0	4.1	4.6	4.2	3.9	4.8	3.9	3.6	5.0	4.6	..
Belgium	9.3	6.6	7.5	7.0	7.9	8.3	12.2	8.3	8.5	7.6	8.1	8.5	7.3	5.3	6.7	6.5	7.8	8.1	..
Bulgaria	15.7	16.2	6.9	5.6	6.6	10.2	15.8	15.8	7.3	5.8	6.6	9.5	15.5	16.6	6.5	5.5	7.0	10.9	..
Cyprus ^c	2.6	5.0	3.9	3.7	5.3	6.2	3.7	7.3	4.6	4.3	5.5	6.4	1.9	3.2	3.4	3.2	5.2	6.0	..
Czech Republic	4.0	8.8	5.3	4.4	6.7	7.3	4.8	10.5	6.7	5.6	7.7	8.5	3.4	7.3	4.2	3.5	5.9	6.4	..
Denmark	7.0	4.5	3.8	3.3	6.0	7.4	8.6	5.0	4.2	3.7	5.4	6.6	5.6	4.0	3.5	3.0	6.5	8.2	..
Estonia	9.7	13.1	4.7	5.5	13.8	16.9	8.9	11.5	3.9	5.3	10.6	14.3	10.5	14.6	5.4	5.8	16.9	19.5	..
Finland	15.4	11.1	6.9	6.4	8.2	8.4	15.1	12.0	7.2	6.7	7.6	7.6	15.7	10.3	6.5	6.1	8.9	9.1	..
France	11.6	10.2	8.0	7.4	9.1	9.3	13.8	12.2	8.6	7.9	9.4	9.7	9.7	8.5	7.5	6.9	8.9	9.0	..
Germany	8.2	7.9	8.6	7.5	7.7	7.1	9.6	8.3	8.7	7.5	7.2	6.6	7.1	7.7	8.6	7.4	8.1	7.5	..
Greece	9.1	11.3	8.3	7.7	9.5	12.6	13.8	17.0	12.8	11.4	13.2	16.2	6.2	7.4	5.2	5.1	6.9	9.9	..
Hungary	..	6.6	7.4	7.8	10.0	11.2	..	5.8	7.7	8.1	9.7	10.7	..	7.2	7.1	7.6	10.3	11.6	..
Ireland	12.0	4.3	4.6	6.0	11.8	13.5	12.1	4.3	4.2	4.6	7.9	9.5	12.0	4.4	4.9	7.1	14.8	16.8	..
Italy	11.7	10.9	6.1	6.8	7.8	8.4	16.1	14.9	7.9	8.5	9.3	9.7	9.1	8.3	4.9	5.5	6.8	7.6	..
Latvia	20.2	14.2	6.0	7.5	17.1	18.7	19.8	13.4	5.6	6.9	13.9	15.7	20.7	15.0	6.4	8.0	20.3	21.7	..
Lithuania	14.1	16.0	4.3	5.8	13.7	17.8	13.9	13.7	4.3	5.6	10.4	14.5	14.2	18.3	4.3	6.1	17.1	21.2	..
Luxembourg	2.9	2.3	4.1	5.1	5.1	4.4	4.4	3.1	4.7	6.0	6.1	5.1	2.1	1.8	3.6	4.3	4.4	3.8	..
Malta	..	6.3	6.5	6.0	..	..	..	6.5	7.6	6.8	..	..	..	6.2	6.0	5.6	..	..	..
Netherlands	7.2	2.7	3.2	2.8	3.4	4.5	8.7	3.5	3.6	3.0	3.5	4.5	6.1	2.2	2.8	2.5	3.4	4.4	..
Poland	13.3	16.4	9.6	7.1	8.2	9.6	14.7	18.4	10.4	8.0	8.7	10.0	12.1	14.6	9.0	6.4	7.8	9.3	..
Portugal	7.1	3.9	8.1	7.7	9.6	11.0	7.8	4.8	9.7	9.0	10.3	12.1	6.5	3.1	6.7	6.6	9.0	10.0	..
Romania	8.0	7.1	6.4	5.8	6.9	7.3	8.6	6.6	5.4	4.7	5.8	6.5	7.5	7.7	7.2	6.7	7.7	7.9	..
Slovakia	13.1	19.1	11.1	9.5	12.0	14.4	13.8	18.6	12.7	10.9	12.8	14.6	12.6	19.4	9.9	8.4	11.4	14.2	..
Slovenia	7.4	6.9	4.9	4.4	5.9	7.3	7.0	7.1	5.9	4.8	5.8	7.1	7.7	6.8	4.0	4.0	5.9	7.5	..
Spain	22.7	13.8	8.3	11.3	18.0	20.1	30.6	20.3	10.9	13.0	18.4	20.5	17.9	9.5	6.4	10.1	17.7	19.7	..
Sweden	8.9	5.5	6.2	6.2	8.4	8.4	7.9	5.0	6.5	6.6	8.0	8.3	9.8	5.9	5.9	5.9	8.7	8.5	..
United Kingdom	8.7	5.6	5.3	5.6	7.6	7.8	6.9	4.9	5.0	5.1	6.4	6.8	10.1	6.2	5.6	6.1	8.6	8.6	..
Other high income countries																			
Canada	9.5	6.8	6.0	6.1	8.3	8.0	9.1	6.7	5.6	5.7	7.0	7.2	9.8	6.9	6.4	6.6	9.4	8.7	..
Iceland	5.2	1.9	2.3	3.0	7.2	7.6	4.9	2.6	2.3	2.6	5.7	6.7	5.5	1.3	2.3	3.3	8.6	8.3	..
Israel	..	8.8	7.3	6.1	7.6	..	..	9.2	7.9	6.5	7.6	..	..	8.4	6.8	5.7	7.0	..	..
Norway	6.3	3.5	2.5	2.5	3.1	3.5	6.3	3.3	2.4	2.4	2.6	2.9	6.3	3.6	2.6	2.7	3.6	4.0	..
Switzerland	3.3	2.7	3.7	3.4	4.1	4.6	3.9	3.1	4.5	4.0	4.5	5.0	2.9	2.3	2.9	2.8	3.8	4.2	..
United States	5.6	4.0	4.6	5.8	9.3	9.6	5.6	4.1	4.5	5.4	8.1	8.6	5.6	3.9	4.7	6.1	10.3	10.5	..
Source: UNECE Statistical database, compiled from national and international (Eurostat and ILO) official sources.																			
Note: The unemployment rate is the share (in per cent) of the unemployed in the labour force. The unemployed are all the persons above a specific age who, during the reference period, were: (a) without work, i.e. were not in paid employment or self-employment, (b) currently available for work, i.e. were available for paid employment or self-employment during the reference period, and (c) seeking work, i.e. had taken specific steps in a specified reference period to seek paid employment or self-employment.																			
a Data refer to end of period registered unemployment.																			
b Data refer to registered unemployment, end of period, and are compiled by the National Statistical Office using administrative records.																			
c Data cover only the Government controlled area.																			

Table 3

Net Enrolment Rate in primary education by sex									
Country	Total			Girls			Boys		
	2000/2001	2005/2006	2009/2010 ^a	2000/2001	2005/2006	2009/2010 ^a	2000/2001	2005/2006	2009/2010 ^a
Eastern Europe, Caucasus and Central Asia									
Armenia	..	82.2	84.1	..	84.2	85.6	..	80.3	82.7
Azerbaijan	88.2	83.9	85.2	88.0	81.4	84.4	88.5	86.2	85.9
Belarus	..	89.4	94.4	..	87.8	95.6	..	90.8	93.3
Georgia	..	91.3	99.6	..	90.9	..	..	91.6	..
Kazakhstan	87.2	91.0	89.5	87.8	90.9	89.2	86.7	91.1	89.7
Kyrgyzstan	86.7	85.1	83.5	86.0	84.8	83.3	87.3	85.4	83.8
Republic of Moldova	89.1	91.0	87.5	88.5	90.6	86.8	89.7	91.3	88.2
Russian Federation	..	..	91.8	..	..	91.7	..	..	91.8
Tajikistan	95.9	97.5	97.3	92.2	95.6	95.4	99.5	99.3	99.2
Ukraine	..	90.5	88.6	..	90.4	88.8	..	90.7	88.4
Uzbekistan	..	..	87.3	..	..	86.1	..	..	88.4
South-Eastern Europe									
Albania	99.4	..	84.7	99.4	..	83.8	99.5	..	85.6
Bosnia and Herzegovina	..	..	87.1	..	..	88.3	..	..	86.0
Croatia	86.0	90.5	89.2	85.4	90.2	89.0	86.7	90.8	89.4
Montenegro	..	..	82.9	..	..	..	..	..	..
Serbia	..	97.7	94.2	..	98.0	93.7	..	97.4	94.8
The former Yugoslav Republic of Macedonia	92.1	89.9	86.6	91.7	89.9	86.9	92.5	89.9	86.2
Turkey	92.2	91.8	94.7	88.4	89.7	93.6	96.0	93.7	95.8
EU 27									
Austria	..	..	..	..	..	..	..	..	..
Belgium	99.1	97.4	98.7	99.2	97.6	98.9	98.9	97.2	98.5
Bulgaria	96.9	92.6	96.6	96.1	92.3	96.8	97.7	92.9	96.3
Cyprus	95.3	99.3	98.7	95.5	99.4	98.4	95.1	99.3	99.0
Denmark	97.3	95.8	95.0	97.5	96.3	96.3	97.2	95.3	93.9
Estonia	96.6	94.7	94.4	96.0	94.5	94.0	97.2	94.8	94.7
Finland	99.7	98.5	96.1	99.3	98.6	96.1	100.0	98.4	96.2
France	99.0	98.6	98.5	99.1	98.8	98.6	98.9	98.5	98.4
Germany	99.2	98.5	97.3	99.2	98.5	97.1	99.3	98.6	97.4
Greece	93.5	99.6	99.4	93.7	99.5	99.7	93.3	99.6	99.2
Hungary	88.5	90.7	90.6	88.2	89.8	90.0	88.8	91.6	91.2
Ireland	93.5	95.3	96.5	93.9	95.7	97.4	93.2	94.9	95.6
Italy	98.5	98.6	98.4	98.5	98.2	97.9	98.6	99.0	98.9
Latvia	..	..	92.8	..	..	93.1	..	..	92.6
Lithuania	95.6	88.1	93.6	95.6	88.0	92.7	95.6	88.1	94.5
Luxembourg	97.2	95.0	95.7	98.5	95.7	96.5	96.0	94.2	94.8
Malta	95.5	91.2	91.3	96.3	90.8	92.3	94.7	91.7	90.3
Netherlands	99.5	98.3	99.0	99.0	97.6	98.9	100.0	98.9	99.2
Poland	96.6	96.7	95.6	96.6	97.0	95.8	96.7	96.4	95.5
Portugal	..	98.0	98.9	..	97.6	99.3	..	98.4	98.5
Romania	93.8	91.3	90.5	93.6	91.0	90.2	94.0	91.5	90.7
Slovenia	94.3	94.9	97.4	95.2	94.7	97.2	93.5	95.1	97.7
Spain	99.9	99.6	99.8	99.9	99.4	99.8	100.0	99.8	99.7
Sweden	99.4	96.7	96.0	99.1	96.6	95.6	99.7	96.9	96.4
United Kingdom	100.0	98.7	99.6	100.0	98.8	99.7	99.9	98.6	99.5
Other high income countries									
Canada	99.5	..	..	99.7	..	..	99.3	..	..
Iceland	98.9	98.3	98.2	97.9	96.9	98.3	99.9	99.5	98.1
Israel	97.9	97.4	96.7	97.7	97.8	97.2	98.0	97.0	96.2
Norway	99.7	98.0	98.7	99.8	98.2	98.9	99.5	97.8	98.6
Switzerland	95.4	94.3	94.3	95.6	94.2	94.2	95.2	94.3	94.4
United States of America	94.2	90.8	91.0	94.2	91.5	92.1	94.2	90.1	90.0
Source: UNESCO Institute for Statistics database									
Note: The net enrolment ratio is the number of students of the official school-age group (defined by each country) enrolled in primary level education per 100 persons of the same age group.									
a: Data for school year 2009/2010 or latest data available									

Table 4									
Enrolment ratio at secondary education by sex									
Country	Total			Girls			Boys		
	1995/1996	2000/2001	2008/2009 ^a	1995/1996	2000/2001	2008/2009 ^a	1995/1996	2000/2001	2008/2009 ^a
Eastern Europe, Caucasus and Central Asia									
Armenia	..	86	87	..	86	89	..	84	86
Azerbaijan	..	74	93	..	74	94	..	77	91
Belarus	..	82	88	..	82	89	..	..	87
Georgia	71	..	77	71	..	77	72	..	77
Kazakhstan	..	88	90	..	88	91	..	88	90
Kyrgyzstan	..	..	79	..	..	80	..	..	79
Republic of Moldova	..	78	80	..	78	80	..	77	79
Russian Federation	92	95	..	93	95	..	91	95	..
Tajikistan	..	74	83	..	74	77	..	80	88
Turkmenistan	..	..	..	..	..	..	..	..	..
Ukraine	..	91	85	..	91	85	..	90	84
Uzbekistan	..	..	92	..	..	91	..	..	93
South-Eastern Europe									
Albania	..	70	..	..	70	..	..	71	..
Bosnia and Herzegovina	..	64	..	..	63.5	..	..	63	..
Croatia	..	83	88	..	83	89	..	82	87
Montenegro	..	..	80	..	..	81	..	..	79
Serbia	..	..	88	..	..	89	..	..	87
The former Yugoslav Republic of Macedonia	55	78	76	55	78	75	55	79	78
Turkey	39	44	59	33	44	56	44	49	61
EU 27									
Austria	90	90	90	89	89.8	91	90	90	90
Belgium	97	..	87	97	..	..	97	..	89
Bulgaria	76	88	83	..	88	82	..	88	85
Cyprus	80	88	96	82	88	97	78	87	95
Czech Republic	87	88	90	89	88.3	91	86	88	89
Denmark	87	..	90	88	..	92	86	..	88
Estonia	85	84	89	88	84	91	82	83	88
Finland	93	94	96	94	94	97	92	94	96
France	94	92	98	95	92	99	94	91	98
Germany	89	88	..	89	88.3	..	89	88	..
Greece	..	83	92	..	83	..	..	80	92
Hungary	86	87	91	87	87	91	85	87	91
Ireland	85	84	88	87	84	90	83	82	86
Italy	..	91	95	..	90.5	95	..	90	94
Latvia	78	86	90	80	85.5	91	77	84	88
Lithuania	..	93	92	..	93	92	..	93	91
Luxembourg	69	81	84	72	81	85	67	78	82
Malta	78	80	80	77	80	82	78	80	79
Netherlands	91	89	88	91	89	89	90	89	88
Poland	..	91	94	..	91	94	..	90	93
Portugal	..	81	82	..	81	86	..	78	78
Romania	72	80	73	73	80	72	71	79	74
Slovakia	..	86	74	..	85.7	74	..	85	74
Slovenia	..	..	91	..	..	92	..	..	91
Spain	..	91	95	..	91	97	..	90	93
Sweden	98	95	99	98	95	99	97	94	99
United Kingdom	93	95	93	94	95	95	92	94	92
Other high income countries									
Canada	91	98	..	91	97.8	..	91	98	..
Iceland	87	83	90	87	83	91	86	81	89
Israel	..	88	86	..	88	88	..	87	85
Norway	95	94	96	96	94	96	95	94	96
Switzerland	87	83	85	83	83	83	90	85	87
United States	89	86	88	89	86	89	89	85	88
Source: UNECE Statistical Division Database, compiled from national and international (UNESCO Institute for Statistics) official sources.									
Note: The net enrolment ratio is the number of students of the official school-age group (defined by each country) enrolled in secondary-level education per 100 persons of the same age group.									
a Data for school year 2008-2009 or latest data available									
.. Data not available									

Country	Total			Women			Men		
	1999/2000	2004/2005	2008/2009 ^a	1999/2000	2004/2005	2008/2009 ^a	1999/2000	2004/2005	2008/2009 ^a
Eastern Europe, Caucasus and Central Asia									
Armenia	23.6	28.0	50.1	24.6	30.8	56.5	22.6	25.2	43.9
Azerbaijan	15.7	14.5	19.1	12.9	13.4	18.9	18.3	15.5	19.2
Belarus	53.4	63.6	77.0	60.8	73.6	91.1	46.2	54.0	63.5
Georgia	38.0	45.9	25.8	37.2	46.6	28.4	38.8	45.2	23.1
Kazakhstan	28.2	52.0	39.5	30.6	61.4	46.8	25.8	42.9	32.4
Kyrgyzstan	34.7	41.4	50.8	35.0	46.1	58.0	34.5	36.8	43.8
Republic of Moldova	32.5	36.1	38.3	37.1	42.9	44.7	28.1	29.5	32.1
Russian Federation	55.2	71.8	77.2	..	83.0	89.1	..	60.8	65.7
Tajikistan	14.0	17.4	19.8	7.1	9.0	11.5	20.8	25.7	27.9
Ukraine	48.9	68.5	81.1	52.3	75.7	90.9	45.7	61.6	71.8
Uzbekistan	13.0	9.7	9.8	11.8	8.0	8.0	14.1	11.3	11.5
South-Eastern Europe									
Albania	16.1	19.3 ^b	..	18.6	23.4 ^b	..	13.4	14.9 ^b	..
Bosnia and Herzegovina	..	..	37.0	..	..	42.0	..	..	32.2
Croatia	30.8	43.9	48.9	33.1	48.2	54.9	28.6	39.7	43.2
Montenegro	..	..	..	..	..	..	..	..	..
Serbia	..	..	49.8	..	..	56.4	..	..	43.6
The former Yugoslav Republic of Macedon	22.6	29.8	40.6	25.5	34.7	44.3	19.9	25.1	37.2
Turkey	23.2	31.5	..	18.8	26.9	..	27.5	36.0	..
EU 27									
Austria	55.7	48.3	59.3	57.6	52.8	64.3	53.8	44.0	54.4
Belgium	57.8	62.3	66.3	61.5	68.9	73.8	54.2	56.0	59.0
Bulgaria	44.7	43.8	53.6	52.6	46.9	61.1	37.2	40.9	46.5
Cyprus	19.6	33.2	52.0	22.2	35.3	48.5	16.9	31.2	55.6
Czech Republic	29.4	48.1	60.9	29.9	51.8	71.0	28.9	44.6	51.4
Denmark	57.6	80.8	77.0	66.6	94.1	92.1	48.8	67.8	62.7
Estonia	55.6	66.0	..	65.9	82.8	..	45.6	49.8	..
Finland	82.8	92.0	90.9	90.9	100.8	100.5	75.0	83.6	81.7
France	53.3	55.3	55.3	58.7	62.0	62.3	48.1	48.8	48.6
Germany	..	..	..	..	..	..	..	..	..
Greece	51.2	90.4	..	53.7	96.7	..	49.0	84.6	..
Hungary	37.3	63.9	62.5	41.1	76.2	72.4	33.6	52.1	53.0
Ireland	48.6	58.3	60.6	53.7	65.2	66.3	43.7	51.7	55.1
Italy	48.6	64.4	..	54.8	74.5	..	42.6	54.7	..
Latvia	56.3	74.9	67.3	72.3	96.6	87.4	40.7	54.0	47.9
Lithuania	50.4	76.3	79.5	61.0	93.4	96.3	40.0	59.8	63.5
Luxembourg	9.6	10.0 ^c	..	..	10.5 ^c	..	..	9.4 ^c	..
Malta	21.4	31.5	..	23.5	36.4	..	19.4	26.8	..
Netherlands	52.1	59.0	61.6	53.0	61.1	65.1	51.2	57.0	58.1
Poland	49.7	64.1	71.4	58.2	75.0	84.3	41.5	53.5	58.9
Portugal	48.1	55.7	61.2	55.2	63.2	66.7	41.3	48.5	56.0
Romania	24.0	45.2	67.1	25.5	50.4	77.0	22.7	40.1	57.5
Slovakia	28.8	40.3	55.8	29.6	45.5	68.9	28.0	35.3	43.2
Slovenia	55.6	79.5	87.6	64.5	94.5	104.2	47.2	65.3	71.9
Spain	59.3	66.1	73.4	64.3	72.7	81.6	54.6	59.7	65.6
Sweden	67.2	81.0	71.5	80.0	98.9	88.1	54.9	63.9	55.7
United Kingdom	58.1	59.4	59.0	63.2	69.2	68.9	53.1	50.0	49.6
Other high income countries									
Canada	59.3	62.3 ^b	..	68.2	71.9 ^b	..	50.9	53.0 ^b	..
Iceland	45.5	71.0	74.3	57.0	93.5	98.6	34.2	49.1	51.4
Israel	49.7	58.1	62.5	58.6	66.7	71.3	41.2	49.9	54.2
Norway	69.2	78.5	73.5	82.5	95.3	91.8	56.5	62.3	56.0
Switzerland	37.7	45.4	51.2	32.4	42.3	51.5	42.9	48.5	50.8
United States of America	67.5	81.6	85.9	77.1	95.6	100.6	58.4	68.1	71.9
Source: UNESCO Institute for Statistics database									
Note: Enrolment in tertiary education expressed as percentage of population that is in the five-year age group following the age of leaving the secondary school. The age for each level of educating is specific to each country. Tertiary level is defined as level 5 and 6 of ISCED 1997 for the academic year concerned									
... Data not available									
a 2008-2009 or latest data available.									
b Data refer to year 2003/2004.									
c Data refer to year 2005/2006.									

Table 6A							
Gender pay gap in gross monthly earnings, percentage							
Country	1995	2000	2005	2006	2007	2008	2009
Eastern Europe, Caucasus and Central Asia							
Armenia ^a	..	48.1	42.5	40.8	40	41.8	39.2
Azerbaijan	..	..	54.6	53.5	49.2	46.8	..
Belarus	20.9	19	20.9	20.1	21.6	26.1	..
Georgia	..	45.7	51.1	50.9	49.5	..	..
Kazakhstan	..	38.5	38.9	37.7	34.2	36.2	..
Kyrgyzstan	..	32.4	37.5	34.2	32.7	32.7	..
Republic of Moldova ^b	..	..	..	24	22.8	23.1	..
Russian Federation	..	..	39.3	..	..	..	..
Tajikistan	..	56.8	48	44.6	43.3	40.3	..
Ukraine	33	29.1	29.1	27.2	27.1	24.8	..
South-Eastern Europe							
Albania	..	31.1 ^e	..	..	..	..	..
Croatia	..	..	10.6	11	10.8	11.1	..
Serbia	..	..	7.3	6.7	3.7	..	..
EU 27							
Austria	..	..	29.7	26.9	..	..	..
Belgium	..	26.5	24.7	23.6	..	..	..
Bulgaria	..	24.2	17.7	16.8	16.6	..	..
Cyprus	..	..	..	25.7	22.7	..	..
Czech Republic	..	..	24.9	24.6	24.8	26	..
Estonia	..	..	31.6	33.3	..	..	..
Finland	21.4	21.2	19.1	19.8	19.8	..	..
France ^d	19.4	18.6	18.5	..	..	..	..
Germany	24.7	..	..	..	..	..	..
Hungary	..	..	11.6	..	..	..	..
Ireland	25.2	20.9	19.1	..	..	..	..
Italy	..	..	..	..	..	..	..
Latvia ^e	21.7	21.4	18.1	17.6	16.1	15.2	..
Lithuania	29.7	18.3	17.6	17.9	20.7	19.3	..
Luxembourg ^f	..	19.1	19.2	18.7	17.7	17.3	..
Netherlands ^g	45	42.9	41.4	..	..	..	..
Poland	..	..	..	17.8	..	..	..
Romania	..	..	14.1	13.1	10.6	..	..
Slovakia	..	25	28.4	26.9	25.8	..	..
Slovenia	15	12.2	6.9	6.9	..	..	..
Spain ^b	17.6	18.5	..	..	..	..	..
Sweden	15	17.6	16.3	15.9	16.1	..	..
United Kingdom	..	26.9	23.3	23.7	23.6	..	..
Other high income countries							
Canada	35.7	38.4	35.9	35.2	34.4	35.5	31.2
Iceland	..	35.4	30.6	30.7	30.8	28.1	..
Israel	39.6	38.4	36.8	36.6	35.8	36.9	..
Norway	..	16.5	15.3	15.4	15.7	15	..
Switzerland ^h	..	21.3	..	18.9	..	..	..
United States	45.1	44.3	41.4	39.1	37.9	..	..
Source: UNECE Statistical Division Database, compiled from national and international official sources.							
Note: Gender pay gap is the difference between men's and women's average earnings from employment, shown as a percentage of men's average earnings. Gender pay gap in monthly earnings is measured on the average total gross monthly earnings from work.							
..: Data not available							
a Data relate to employees in the formal sector of the economy only. Data cover both, paid employees and self-employed and refer to net earnings.							
b Data refer to net earnings.							
c Data refer to October 1998.							
d Data cover only Metropolitan France.							
e Data refer to full-time equivalent..							
f Data include only full-time employees and cover the NACE REV.1 sections C-K.							
g Bonuses, gratuities, housing and family allowances are not included.							
h Data refer to full-time employees only. Overtime pay and family allowances are not included.							

Table 6B							
Gender pay gap in gross hourly earnings, percentage							
	1995	2000	2005	2006	2007	2008	2009
Eastern Europe, Caucasus and Central Asia							
Azerbaijan ^a	..	..	55	53.1	49.2	45.8	
Kyrgyzstan ^b	..	32.4	37.5	34.2	32.7	32.7	
EU 27							
Austria	22	20	18	25.5	25.5	25.5	25.4
Belgium	12	13	7	9.5	9.1	9	..
Bulgaria	..	..	15	12.4	12.4	13.6	15.3
Cyprus	29	26	25	21.8	23.1	21.6	21
Czech Republic	..	22	19	23.4	23.6	26.2	25.9
Denmark	15	15	18	17.6	17.7	17.1	16.8
Estonia	27	25	25	29.8	30.9	..	..
Finland	..	17	20	21.3	20	20	20.4
France	13	13	12	15.4	16.9	17.1	16
Germany	21	21	22	22.7	23	23.2	23.2
Greece	17	15	9	20.7	21.5	22	..
Hungary	22	21	11	14.4	16.3	17.5	17.1
Ireland	20	19	9	17.2	17.1	17.1	15.7
Italy	8	6	9	4.4	5.1	4.9	5.5
Latvia	..	20	16	15.1	15.4	13.4	14.9
Lithuania	27	16	15	17.1	20	21.6	15.3
Luxembourg	19	15	14	10.7	12.5	12.4	12.5
Malta	..	11	4	5.2	7.6	8.6	6.9
Netherlands	23	21	18	23.6	23.6	19.6	19.2
Poland	..	..	..	12.1	..	9.8	9.8
Portugal	5	8	9	8.4	8.3	9.2	10
Romania	21	17	13	7.8	12.7	9	8.1
Slovakia	..	22	24	25.8	23.6	20.9	21.9
Slovenia	14	12	8	8	8.3	8.5	3.2
Spain	13	15	13	17.9	17.1	16.1	16.7
Sweden	15	18	16	16.5	17.9	17.1	16
United Kingdom	26	21	16	24.3	21.1	21.4	20.4
Other high income countries							
Canada	..	19.4	16.2	16.2	16	16.2	..
Iceland	..	35.1	28.4	27.5	28.2	24.5	..
Israel	19.3	17.3	16.7	..	16	17.3	..
Norway	..	17	16	16	15.7	17.2	16.7
Switzerland	..	21	..	18.6	18.7	18.4	18.4
United States	..	16.7	12.9	13.2	12.6	12.7	..
Source: UNECE Statistical Division Database, compiled from national and international official sources.							
Note: <i>Gender pay gap</i> is the difference between men's and women's average earnings from employment, shown as a percentage of men's average earnings. Pay gaps in hourly earnings refers to gender pay gap in hourly wage rates.							
a Data cover both paid employees and self-employed.							
b Figures for hourly earnings are obtained by dividing the monthly earnings figures by the total number of monthly working hours.							
..: data not available							

Country	1995	2000	2005	2009	2010
Eastern Europe, Caucasus and Central Asia ^a					
Armenia	..	23.9	..	..	..
Azerbaijan	..	..	..	17.7	..
Belarus	..	45.5 ^b	..	..	..
Georgia ^c	..	19.0	26.3	34.0	..
Kazakhstan	..	..	35.5	38.3	..
Kyrgyzstan	..	..	..	31.5	..
Republic of Moldova ^d	..	..	33.2	38.9	38.0
Russian Federation	37.5 ^e	35.6	39.0	37.1	..
Tajikistan	..	..	..	..	..
Turkmenistan	..	..	..	..	..
Ukraine	..	36.7	38.2	38.6	..
Uzbekistan	..	..	..	..	..
South-Eastern Europe					
Albania	..	..	..	..	..
Bosnia and Herzegovina	..	..	..	..	..
Croatia	22.6	24.7	24.1	27.7	26.6
Montenegro	..	..	19.7	..	..
Serbia ^f	..	..	24.8	..	..
The former Yugoslav Republic of Macedonia	..	..	28.5	..	..
Turkey	..	..	..	10.2	10.0
EU 27					
Austria	23.9	28.4	27.2	27.2	28.8
Belgium	..	..	..	..	..
Bulgaria	28.5 ^e	29.8	34.0	32.1	34.1
Cyprus ^g	..	14.4	15.1	11.8	13.1
Czech Republic	26.8	24.9	29.6	29.0	27.7
Denmark	19.2	24.2	24.2	24.7	22.0
Estonia	36.6	39.9	36.9	35.8	36.9
Finland	..	26.7	29.8	29.7	30.4
France ^h	36.4	35.0	37.4	37.9	38.7
Germany	26.0	27.1	28.3	29.8	29.9
Greece	22.1	25.1	26.5	29.7	29.7
Hungary	33.8	33.5	34.8	36.3	36.4
Ireland	27.6	26.3	30.3	32.5	33.0
Italy	15.7	14.3	32.4	33.6	32.8
Latvia	37.5 ⁱ	37.2	42.7	43.4	41.2
Lithuania	35.8 ^e	41.9	42.9	38.9	40.6
Luxembourg	24.6	27.2	23.5	18.8	24.3
Malta	..	18.2	18.5	21.1	22.5
Netherlands	20.3	26.6	25.5	28.5	28.6
Poland	34.7	32.5	32.8	35.5	36.2
Portugal	30.4	31.1	33.9	31.4	31.8
Romania	28.2	26.8	29.2	31.2	32.4
Slovakia	27.4	31.2	30.8	32.2	34.6
Slovenia	27.2	29.6	34.2	35.6	34.8
Spain	31.3	31.5	32.0	33.1	34.3
Sweden	..	30.7	29.9	32.5	31.2
United Kingdom	33.6	34.5	34.3	35.5	35.7
Other high income countries					
Canada ^j	35.1	35.4	35.9	37.0	36.8
Iceland	27.7	29.3	27.4	33.3	34.5
Israel	..	27.2	27.6	..	..
Norway	..	25.0	30.4	34.0	34.4
Switzerland	23.9	23.3	28.3	31.5	33.0
United States	..	40.5	42.5	..	..

Source: UNECE Statistical Division Database, compiled from national and international (Eurostat and ILO) official sources.

Note: Percentage of women in managerial positions is the percentage of female employed in the ISCO-88 category, legislators, senior officials and managers, over the total number of male and female employed of the same ISCO-88 category.

a Data for 2009 data or latest available year.

b data refer to 1999.

c Data do not cover Abkhazia and South Ossetia (Tshinvali).

d Data do not cover Transdniestra.

e data refer to 1997.

f Data do not cover Kosovo and Metohia.

g Data cover only the area controlled by the Republic of Cyprus.

h Data do not cover overseas departments (DOM).

i Data refer to 1996.

j Data do not cover the three northern territories (Yukon, Northwest and Nunavuk).

Table 8								
Female employers, as percentage of total number of employers								
Country	1995	2000	2005	2006	2007	2008	2009	2010
Eastern Europe, Caucasus and Central Asia								
Armenia	..	..	..	..	9.5	12.2	..	..
Azerbaijan	..	..	..	..	..	..	..	..
Belarus	..	19.9 ^a	..	..	..	..	..	..
Georgia	..	12.0	18.8	..	..	..	..	..
Kazakhstan	..	..	23.2	31.0	33.6	35.0	..	..
Kyrgyzstan	..	17.7	22.3	24.2	..	..	..	..
Republic of Moldova ^b	..	16.2	23.0	27.0	39.3	30.8	..	..
Russian Federation	..	28.7	39.8	36.6	39.0	36.9	..	..
Ukraine	..	26.2	35.5	30.5	..	..	..	..
South-Eastern Europe								
Albania	..	..	..	..	10.4	15.9	..	..
Bosnia and Herzegovina	..	..	..	25.6	27.1	27.4	..	..
Croatia	28.5 ^c	24.1	25.4	28.5	24.4	25.9	24.0	27.1
Montenegro	..	..	28.2	..	..	..	..	..
Serbia ^d	..	..	23.8	21.9	29.3	28.7	..	..
The former Yugoslav Republic of Macedonia	..	16.4	19.6	20.5	23.5	..	..	..
Turkey	3.6	3.9	4.5	5.7	6.3	6.2	6.4	6.9
EU 27								
Austria	24.5	29.1	23.3	26.0	25.5	26.4	25.5	25.9
Belgium	13.8	21.1	21.7	22.7	22.3	22.2	23.0	24.3
Bulgaria	25.0	25.5	27.7	26.2	27.1	29.0	27.8	29.8
Cyprus ^f	..	10.6	12.1	11.8	13.1	10.8	13.8	12.7
Czech Republic ^g	24.1	23.1	23.2	23.5	21.4	22.6	22.6	21.0
Denmark	18.9	16.4	16.4	20.9	20.1	19.7	19.9	20.8
Estonia ^g	26.1	32.4	..	..	..	..	..	..
Finland	32.4	24.0	24.7	25.8	26.2	24.5	23.2	24.6
France ^g	21.5	21.4	22.4	22.1	24.5	26.1	23.2	22.6
Germany	21.3	22.5	24.1	24.2	23.7	23.9	24.1	24.5
Greece	12.9	18.2	19.2	19.8	19.9	20.0	20.1	20.6
Hungary	23.5	26.8	27.9	27.4	27.6	26.6	27.5	29.3
Ireland	15.9	18.5	17.6	17.2	17.9	18.1	20.3	21.2
Italy	22.5	24.0	21.4	22.1	22.0	22.3	21.9	21.9
Latvia	27.4 ^c	28.4	33.8	37.1	30.1	26.5	24.7	35.2
Lithuania ^h	37.9 ^g	38.8	28.6	30.1	26.0	23.2	27.8	26.5
Luxembourg	21.4	24.8	24.1	23.1	26.7	24.5	21.3	23.9
Malta	..	..	..	..	..	..	..	..
Netherlands ^g	30.4	31.2	22.6	23.0	22.6	21.7	23.3	22.7
Poland	31.3	31.5	31.2	30.7	30.7	30.2	29.4	29.1
Portugal	25.0	25.0	25.6	27.0	28.5	27.7	26.1	26.7
Romania	27.4	22.8	24.4	24.7	21.4	22.9	24.3	24.3
Slovakia	24.5	28.5	25.2	26.4	27.6	23.4	24.2	25.5
Slovenia	65.9	23.1	27.1	27.6	21.5	24.4	25.2	25.6
Spain	17.6	20.5	24.2	24.8	24.6	25.5	..	..
Sweden	21.2	18.7	20.0	19.5	18.6	19.7	20.3	21.2
United Kingdom	22.4	23.6	24.3	24.1	24.7	22.5	24.1	25.9
Other high income countries								
Canada	..	..	..	..	..	..	..	..
Iceland	24.5	26.1	25.0	22.1	25.9	23.5	17.6	26.5
Israel	9.7	14.2	16.1	16.5	18.5	..	..	..
Norway ^g	26.7	29.1	28.8	26.2	28.2	27.9	25.2	24.2
Switzerland	22.5	23.4	23.0	22.6	24.9	24.3	25.2	24.9
United States	..	..	..	..	..	..	..	..
Source: UNECE Statistical Division Database, compiled from national and international (Eurostat and ILO) official sources.								
Note: Employers are workers who hold self-employment jobs and have engaged on a continuous basis, one or more persons to work for them in their business as employees.								
a Data refer to 1999.								
b Data do not cover Transdnriestra.								
c Data refer to 1996.								
d Data do not cover Kosovo and Metohia.								
e Data do not cover overseas departments (DOM).								
f Data cover only the area controlled by the Republic of Cyprus.								
g Data include own-account workers.								
h Data refer to 1997								

Table 9				
Women in national parliaments, percentage				
Country	1995	2000	2005	2010
Eastern Europe, Caucasus and Central Asia				
Armenia	6.3	3.1	5.3	9.2
Azerbaijan	12.0	12.0	10.5	11.4
Belarus	..	4.5	29.4	31.8
Georgia ^a	6.0	7.2	9.4	6.5
Kazakhstan	13.4	10.4	10.4	17.8
Kyrgyzstan	1.4	10.0	3.2	25.6
Republic of Moldova ^b	4.8	8.9	20.8	23.8
Russian Federation	10.2	7.7	9.8	14.0
Tajikistan	2.8	15.0	17.5	19.0
Turkmenistan	18.0	26.0	16.0	16.8
Ukraine	3.8	7.8	5.3	8.0
Uzbekistan	6.0	7.2	17.5	22.0
South-Eastern Europe				
Albania	7.1	5.2	6.4	16.4
Bosnia and Herzegovina	..	28.6	16.7	19.0
Croatia	7.9	20.5	21.7	23.5
Montenegro	..	..	..	11.1
Serbia	..	..	..	21.6
The former Yugoslav Republic of Macedonia	3.3 ^d	..	19.2	32.5
Turkey	2.9	4.2	4.4	9.1
EU 27				
Austria	21.9	26.8	33.9	27.9
Belgium	12.7	23.3	34.7	39.3
Bulgaria	10.8 ^e	10.8	20.8	20.8
Cyprus ^o	5.4 ^e	7.1	16.1	12.5
Czech Republic	10.3	15.0	17.0	22.0
Denmark	33.0	37.4	36.9	38.0
Estonia	10.9	17.8	18.8	22.8
Finland	33.5	36.5	37.5	40.0
France	5.9	10.9	12.2	18.9
Germany	30.8 ^f	30.9	32.8	32.8
Greece	6.3 ^d	8.7	14.0	17.3
Hungary	11.1	8.3	9.1	9.1
Ireland	13.3	12.0	13.3	13.9
Italy	11.1 ^d	11.1	11.5	21.3
Latvia	9.0	17.0	21.0	22.0
Lithuania	18.0 ^d	17.5	22.0	19.1
Luxembourg	16.7	16.7	23.3	20.0
Malta	5.8	9.2	9.2	8.7
Netherlands	32.7	36.0	36.7	40.7
Poland	13.0 ^e	13.0	20.2	20.0
Portugal	13.0	17.4	21.3	27.4
Romania	7.3 ^d	7.3	11.2	11.4
Slovakia	14.7	14.0	16.7	15.3
Slovenia	13.3 ^g	10.0	12.2	14.4
Spain	24.7 ^d	28.3	36.0	36.6
Sweden	40.4	42.7	45.3	46.4
United Kingdom	9.2	18.4	19.7	22.0
Other high income countries				
Canada	20.6 ^e	19.9	21.1	22.1
Iceland	25.4	34.9	30.2	42.9
Israel	7.5 ^d	12.5	15.0	18.3
Norway	39.4	36.4	38.2	39.6
Switzerland	21.5	23.0 ^h	25.0	29.0
United States	11.7 ^d	12.9	15.2	16.8
Source: UNECE Statistical Division Database, compiled from national and international official sources (Inter-Parliamentary Union).				
Note: Percentage of women who are in the lower or the single house of the parliaments (on 30th June of the reference year) from the total number of men and women who are in the lower or single house.				
a Data do not cover Abkhazia and South Ossetia (Tshinvali).				
b Data do not cover Transdniestria.				
c Data cover only the Government controlled areas.				
d Data refer to 1996.				
e Data refer to 1997.				
f Data refer to 1994.				
g Data refer to 1992.				
h Data refer to 1999.				
.. - data not available				

Table 10												
Life expectancy at birth by sex												
Country	Total				Women				Men			
	1995	2000	2005	2009 ^a	1995	2000	2005	2009 ^a	1995	2000	2005	2009 ^a
Eastern Europe, Caucasus and Central Asia												
Armenia	71.2	72.9	73.5	73.7	74.9	75.8	76.5	76.7	67.3	70.1	70.3	70.5
Azerbaijan	69.1	71.8	72.4	74.3	72.9	75.1	75.1	76.8	65.2	68.6	69.6	71.8
Belarus	..	69.0	68.8	70.5	74.3	74.7	75.1	76.5	62.9	63.4	62.9	64.7
Georgia	..	71.3	74.0	74.2	77.2	75.0	77.6	79.0	68.9	67.5	70.0	69.3
Kazakhstan	64.6	65.8	65.9	68.7	70.4	71.6	71.7	..	59.3	60.2	60.4	63.7
Kyrgyzstan	65.5	67.8	67.7	68.8	69.9	72.0	71.8	..	61.3	63.8	63.8	64.8
Republic of Moldova	65.9	67.8	67.8	69.4	69.7	71.4	71.7	..	62.0	64.0	63.8	65.3
Russian Federation	64.7	65.4	65.4	67.5	71.7	72.4	72.4	73.9	58.3	59.2	59.0	61.4
Tajikistan	66.1	68.2	70.6	72.2	68.9	70.3	73.2	74.8	63.5	66.1	68.1	69.7
Turkmenistan	..	..	..	..	67.5	71.8	72.7	..	61.9	64.9	65.8	..
Ukraine	66.9	67.9	67.3	68.0	72.6	73.6	73.4	73.9	61.3	62.3	61.5	62.3
Uzbekistan	70.8	71.3	72.5	72.9	73.2	73.6	74.9	75.1	68.4	68.9	70.2	70.5
South-Eastern Europe												
Albania	74.9	74.9	..	75.2	78.3	78.0	78.6	73.7	71.5	72.0	72.1	72.9
Bosnia and Herzegovina ^c	..	..	..	..	75.1	76.7	77.5	..	69.5	71.3	72.1	..
Croatia	73.3	73.0	75.4	76.4	77.2	76.7	78.9	..	69.3	69.1	71.9	73.0
Montenegro	..	..	74.2	75.5	76.7	76.3	77.0	77.9	71.4	71.0	71.4	73.1
Serbia ^b	72.2	72.3	72.7	..	74.7	75.1	75.4	..	69.9	69.5	70.0	..
The former Yugoslav Republic of Macedonia	71.8	73.0	73.7	74.4	74.0	75.2	75.9	76.7	69.8	70.8	71.6	72.3
Turkey	70.2	70.4	71.3	71.9	67.8	72.8	73.8	74.4	65.6	68.1	68.9	69.5
EU 27												
Austria	76.9	78.3	79.5	80.5	80.1	81.2	82.2	83.2	73.4	75.2	76.6	77.6
Belgium	77.0	77.9	79.1	80.1	80.4	81.0	81.9	82.8	73.5	74.6	76.2	77.3
Bulgaria	71.0	71.6	72.5	73.7	74.9	75.0	76.2	77.4	67.4	68.4	69.0	70.1
Cyprus ^d	..	..	78.9	81.1	79.8	80.4	80.9	83.6	75.3	75.3	76.8	78.6
Czech Republic	73.3	75.1	76.1	77.4	76.8	78.5	79.2	80.5	69.7	71.7	72.9	74.2
Denmark	75.3	76.9	78.3	79.0	77.9	79.2	80.5	81.1	72.7	74.5	76.0	76.9
Estonia	67.7	70.8	72.8	75.2	74.3	76.2	78.1	80.2	61.4	65.2	67.3	69.8
Finland	76.8	77.9	79.4	80.2	80.4	81.3	82.8	..	72.9	74.3	75.8	76.7
France	..	79.2	80.3	81.6	82.2	83.0	83.8	85.0	73.9	75.3	76.7	78.0
Germany	76.7	78.3	79.4	80.3	79.9	81.2	82.0	82.8	73.3	75.1	76.7	77.8
Greece	77.5	78.0	79.2	80.2	80.0	80.6	81.6	82.7	75.0	75.5	76.8	77.8
Hungary	70.0	71.9	73.0	74.4	74.8	76.2	77.2	78.4	65.4	67.5	68.7	70.3
Ireland	75.5	76.6	79.4	79.9	78.3	79.2	81.6	82.5	72.8	74.0	77.2	77.4
Italy	78.3	79.9	80.9	..	81.5	82.8	83.6	..	75.0	76.9	78.0	..
Latvia	66.3	70.6	71.1	73.3	72.9	76.1	76.6	78.0	60.0	64.9	65.4	68.1
Lithuania	69.2	72.2	71.3	73.2	75.1	77.5	77.4	..	63.3	66.8	65.4	67.6
Luxembourg	76.8	78.0	79.6	80.8	80.6	81.3	82.3	83.3	73.0	74.6	76.7	78.1
Malta	77.2	78.4	79.4	80.3	79.6	80.3	81.4	82.7	74.8	76.2	77.2	77.9
Netherlands	77.7	78.3	79.7	80.9	80.6	80.8	81.8	82.9	74.7	75.6	77.4	78.7
Poland	72.0	73.9	75.1	75.9	76.4	78.1	79.4	80.1	67.7	69.6	70.8	71.5
Portugal	75.4	76.7	78.1	79.6	79.0	80.2	81.3	82.6	71.7	73.2	74.9	76.5
Romania	69.4	71.2	72.2	73.6	73.5	74.8	75.8	..	65.5	67.8	68.8	69.9
Slovakia	72.4	73.3	74.1	75.3	76.5	77.5	78.1	79.1	68.4	69.2	70.2	71.4
Slovenia	74.7	76.2	77.5	79.4	78.5	79.9	80.9	82.7	70.8	72.2	73.9	75.9
Spain	78.1	79.3	80.3	81.8	81.8	82.9	83.7	84.9	74.4	75.8	77.0	78.6
Sweden	79.0	79.8	80.7	81.5	81.7	82.0	82.9	83.5	76.2	77.4	78.5	79.4
United Kingdom	76.8	78.1	79.3	80.6	79.4	80.4	81.4	..	74.1	75.6	77.1	78.4
Other high income countries												
Canada ^e	78.0	79.0	80.2	..	81.0	81.7	82.5	..	75.0	76.3	77.7	..
Iceland	78.0	79.7	81.5	81.8	80.1	81.6	83.5	83.8	76.0	77.8	79.6	79.8
Israel	77.5	79.0	80.2	..	79.4	81.1	82.1	..	75.5	76.7	78.2	..
Norway	77.8	78.8	80.3	81.0	80.9	81.5	82.7	83.2	74.8	76.0	77.8	78.7
Switzerland	78.7	80.0	81.5	82.3	81.9	82.8	84.0	84.6	75.4	77.0	78.7	79.9
United States	75.8	76.8	77.4	..	78.9	79.3	79.9	..	72.5	74.1	74.9	..

Source: UNECE Statistical Division Database, compiled from national and international (WHO European health for all database, Eurostat and UNICEF TransMONEE) official sources.

Note: Life expectancy at birth is the average number of years a newborn is expected to live, if the prevailing patterns of mortality at the time of her/his birth were to stay the same throughout her/his life.

a 2009 or latest available year.

b Data do not cover Kosovo and Metohia.

c Data refer to the period 1990-1995.

d Data cover only the Government controlled areas.

e Data are calculated with a method that uses three years of data (e.g. 2007 data refers to 2005-2007).

Children under five mortality rate, per 1,000 live births					
Country	1990	1995	2000	2005	2009
Eastern Europe, Caucasus and Central Asia					
Armenia	56.4	48.4	36.3	27.2	21.6
Azerbaijan	97.7	93.4	68.7	46.1	33.5
Belarus	23.6	21.4	17.5	14.3	12.1
Georgia	47.0	40.1	34.8	31.5	29.1
Kazakhstan	60.3	56.3	44.3	34.8	28.7
Kyrgyzstan	74.7	61.9	51.3	42.5	36.6
Republic of Moldova	36.9	29.9	24.3	19.7	16.7
Russian Federation	27.0	27.0	23.9	16.9	12.4
Tajikistan	117.0	113.9	94.0	74.1	61.2
Turkmenistan	98.6	87.1	70.9	55.3	45.3
Ukraine	21.3	20.6	19.1	16.8	15.1
Uzbekistan	73.7	68.1	62.3	46.0	36.1
South-Eastern Europe					
Albania	51.2	37.7	27.4	19.7	15.3
Bosnia and Herzegovina	23.3	21.1	17.0	15.8	14.4
Croatia	12.8	9.9	8.4	6.8	5.4
Montenegro	16.6	14.6	14.0	10.6	9.0
Serbia	28.5	19.4	12.4	9.2	7.1
The former Yugoslav Republic of Macedonia	35.9	26.0	18.8	13.6	10.5
Turkey	84.2	61.9	41.6	27.9	20.3
EU 27					
Austria	9.4	6.9	5.4	4.9	4.1
Belgium	9.9	7.7	5.7	5.0	4.6
Bulgaria	18.0	19.4	17.6	13.4	10.0
Cyprus	10.4	9.3	6.4	4.9	3.5
Czech Republic	12.1	8.6	5.4	4.4	3.5
Denmark	9.3	6.3	5.5	5.2	4.0
Estonia	17.2	15.9	10.9	7.2	5.5
Finland	6.9	5.1	4.2	3.8	3.2
France	8.8	6.7	5.3	4.6	3.9
Germany	8.6	6.4	5.3	4.8	4.2
Greece	10.5	8.4	6.5	4.6	3.4
Hungary	17.2	12.8	10.0	7.6	6.3
Ireland	9.3	7.0	7.2	5.2	4.2
Italy	9.6	7.5	5.5	4.4	4.0
Latvia	16.3	20.0	14.3	10.5	8.0
Lithuania	14.9	15.8	10.3	8.6	6.2
Luxembourg	9.0	5.8	5.1	4.1	2.6
Malta	11.0	9.8	7.3	6.5	6.7
Netherlands	8.3	6.9	6.2	5.4	4.4
Poland	17.2	14.4	9.3	7.5	6.7
Portugal	14.8	9.8	7.3	4.7	3.7
Romania	32.1	26.9	22.4	18.1	11.9
Slovakia	14.7	12.0	9.6	8.3	6.9
Slovenia	10.4	7.2	5.3	4.4	3.0
Spain	9.2	7.0	5.4	4.8	4.1
Sweden	6.9	4.8	4.0	3.7	2.8
United Kingdom	9.5	7.1	6.6	6.0	5.5
Other high income countries					
Canada	8.3	6.9	6.2	6.1	6.1
Iceland	6.8	5.4	3.8	3.0	3.0
Israel	11.4	8.8	6.9	5.6	4.4
Norway	8.9	5.6	4.9	4.0	3.3
Switzerland	8.3	6.3	5.6	5.1	4.4
United States	11.2	9.5	8.4	8.0	7.8
Source: MDG database of the UN Statistics Division					
Note: the under-five mortality rate (U5MR) is the probability (expressed as a rate per 1,000 live births) of a child born in a specified survey year dying before reaching the age of five if subject to current age-specific mortality rates.					

Country	Total				Girls				Boys			
	1995	2000	2005	2009 ^a	1995	2000	2005	2009 ^a	1995	2000	2005	2009 ^a
Eastern Europe, Caucasus and Central Asia												
Armenia	14.2	15.8	12.3	10.7	12.6	12.3	..	..	15.7	18.6	..	..
Azerbaijan	23.3	16.4	12.7	11.4	22.2	15.5	11.6	11.6	26.2	17.2	13.6	11.2
Belarus	13.3	9.3	7.1	4.5	10.9	7.9	5.7	..	15.6	10.7	8.4	..
Georgia	28.4	22.5	19.7	17.0	24.3	19.2	19.9	..	32.1	25.6	19.6	..
Kazakhstan	27.9	19.1	15.1	18.2	23.4	16.1	13.3	16.2	32.0	21.9	16.8	20.1
Kyrgyzstan	27.7	23.0	29.7	27.5	23.3	19.3	26.8	24.4	31.8	26.5	32.4	30.5
Republic of Moldova	21.5	18.4	12.4	12.1	18.8	15.0	12.3	10.4	24.1	21.6	12.5	13.7
Russian Federation	18.2	15.2	11.0	8.1	15.6	13.1	9.4	7.1	20.7	17.2	12.6	9.0
Tajikistan	30.9	15.6	..	..	27.2	13.0	..	..	33.8	15.3	..	..
Turkmenistan	42.8	21.4	12.1	..	38.0	..	..	..	47.4	..	..	..
Ukraine	14.8	12.0	10.0	9.4	12.9	9.9	8.7	8.4	16.7	13.9	11.2	10.3
Uzbekistan	26.3	19.1	15.0	..	22.5	16.7	13.1	..	29.9	21.4	16.7	..
South-Eastern Europe												
Albania	23.3	11.6	7.6	6.0	21.5	10.6	..	..	24.9	12.6	..	..
Bosnia and Herzegovina	..	9.7	6.7	6.9	..	8.5	5.9	7.4	..	10.8	7.5	6.3
Croatia	9.0	7.4	5.7	4.5	7.6	7.1	5.6	5.5	10.2	7.7	5.8	3.4
Montenegro	12.1	11.1	9.5	5.8	12.5	9.5	8.9	5.2	11.7	12.6	10.0	6.3
Serbia ^b	13.8	10.6	8.0	7.0	12.8	8.8	6.3	6.3	14.8	12.4	9.6	7.7
The former Yugoslav Republic of Macedonia	24.3	13.2	12.8	9.7	24.4	12.4	11.9	..	24.2	13.9	13.6	..
Turkey	43.0	28.9	23.6	21.7	38.0	25.4	20.6	24.3	47.7	32.3	26.4	19.0
EU 27												
Austria	5.4	4.8	4.2	3.7	4.9	4.2	4.0	4.4	5.9	5.4	4.4	3.0
Belgium	5.9	4.8	3.9	3.4	4.5	4.4	3.5	..	7.2	5.2	4.1	..
Bulgaria	14.8	13.3	10.4	8.6	13.0	12.0	9.0	..	16.6	14.6	11.8	..
Cyprus	..	5.6	4.7	3.3	..	5.5	5.0	2.1	..	5.7	4.5	4.5
Czech Republic	7.7	4.1	3.4	2.9	6.5	3.5	2.7	2.7	8.9	4.6	4.0	3.1
Denmark	5.1	5.0	4.4	4.0	4.5	4.3	3.7	..	5.6	5.6	5.2	..
Estonia	14.9	8.4	5.4	5.0	13.1	7.2	5.1	5.6	16.6	9.5	5.7	4.4
Finland	4.0	3.6	3.1	2.7	3.6	3.1	2.9	2.8	4.4	4.1	3.3	2.5
France	4.9	4.4	3.6	3.5	4.3	3.7	3.2	3.8	5.4	5.0	4.0	3.2
Germany	5.3	4.4	3.9	3.5	4.6	3.9	3.5	..	5.9	4.9	4.4	..
Greece	8.2	5.4	3.8	3.2	7.3	4.8	3.6	2.9	9.0	6.1	4.0	3.4
Hungary	10.7	9.2	6.2	5.1	9.3	8.6	5.4	5.0	12.0	9.8	7.0	5.3
Ireland	6.4	6.2	3.9	3.2	5.8	5.1	4.3	2.8	6.9	7.2	3.5	3.7
Italy	6.2	4.5	..	3.5	5.4	4.2	..	3.8	7.0	4.7	..	3.2
Latvia	18.9	10.4	7.8	7.8	16.7	8.9	7.7	7.5	20.9	11.8	7.9	8.0
Lithuania	12.5	8.6	6.8	4.9	11.0	8.9	6.0	4.0	13.9	8.3	7.7	5.8
Luxembourg	4.1	3.0	2.6	2.1	3.4	2.9	3.1	2.4	4.7	3.0	2.2	1.8
Malta	8.9	6.0	6.0	8.1	6.8	5.9	4.8	10.0	10.8	6.0	7.0	6.0
Netherlands	5.5	5.1	4.9	3.9	4.6	4.7	4.6	3.5	6.3	5.5	5.3	4.2
Poland	13.6	8.1	6.4	5.6	12.4	7.4	5.9	5.1	14.7	8.8	7.0	6.0
Portugal	7.5	5.5	..	3.7	6.7	5.0	..	3.1	8.3	6.0	..	4.2
Romania	21.2	18.6	15.0	9.8	18.6	16.6	13.1	8.6	23.7	20.6	16.8	10.9
Slovakia	11.0	8.6	7.2	5.7	9.6	7.2	6.3	4.6	12.4	9.9	8.0	6.6
Slovenia	5.5	4.9	4.2	2.4	5.1	4.2	3.9	2.6	6.0	5.6	4.4	2.2
Spain	5.5	4.4	3.8	3.4	5.1	4.1	3.3	3.7	5.9	4.7	4.2	3.0
Sweden	4.0	3.4	2.5	2.5	3.5	2.8	2.4	2.4	4.5	4.0	2.5	2.6
United Kingdom	6.2	5.6	5.1	4.7	5.4	5.1	4.4	4.2	6.9	6.1	5.7	5.1
Other high income countries												
Canada	6.1	5.3	5.4	5.1	5.5	4.7	5.0	5.5	6.7	5.9	5.9	4.7
Iceland	6.1	3.0	2.3	1.8	4.9	1.4	1.9	1.6	7.2	4.6	2.8	2.0
Israel	6.8	5.5	4.4	3.8	6.2	4.7	4.1	4.3	7.5	6.3	4.7	3.3
Norway	4.1	3.8	3.1	3.2	3.2	3.3	2.8	2.6	5.0	4.3	3.3	3.7
Switzerland	5.0	4.9	4.2	4.0	4.4	4.4	3.6	..	5.6	5.3	4.8	..
United States	7.6	6.9	6.9	6.8	6.8	6.2	6.2	7.4	8.3	7.6	7.6	6.1
Source: UNECE Statistical Division Database, compiled from national and international (WHO European health for all database, Eurostat and UNICEF TransMONEE) official sources.												
Note: The <i>infant mortality rate</i> is the number of deaths of infants under one year of age per 1000 live births in a given year.												
a 2009 or latest available year.												
b Data do not cover Kosovo.												

Country	1990	1995	2000	2005	2009^a
Eastern Europe, Caucasus and Central Asia					
Armenia	40.1	34.7	72.9	26.7	33.8
Azerbaijan	9.3	37.0	37.6	28.9	24.3
Belarus	21.8	13.8	24.6	15.5	7.3
Georgia	20.5	55.1	49.2	23.7	52.1
Kazakhstan	73.2	76.7	61.6	40.9	37.2
Kyrgyzstan	62.9	67.3	46.5	61.0	69.8
Republic of Moldova	44.1	40.8	27.1	21.2	17.2
Russian Federation	47.4	53.3	39.7	25.4	22.0
Tajikistan	97.7	97.7	48.4	33.2	46.5
Turkmenistan	42.3	49.6	50.4	15.5	11.6
Ukraine	32.4	32.3	24.7	17.6	25.2
Uzbekistan	34.1	33.0	34.5	29.2	30.4
South-Eastern Europe					
Albania	37.8	29.1	22.3	..	19.3
Bosnia and Herzegovina	10.5	..	..	..	..
Croatia	10.8	12.0	6.9	7.1	13.5
Montenegro	..	..	..	..	12.8
Serbia	..	..	9.5	13.9	19.9
The former Yugoslav Republic of Macedonia	..	21.8	13.7	13.3	4.2
Turkey	180.0	55.0	..	28.5	18.4
EU 27					
Austria	6.6	1.1	2.6	3.8	2.6
Belgium	3.2	9.5	..	3.4	..
Bulgaria	20.9	13.9	17.6	11.3	10.9
Cyprus	..	0.0	0.0	24.3	5.9
Czech Republic	8.4	6.2	9.9	14.7	2.5
Denmark	1.6	10.0	7.5	3.1	6.3
Estonia	31.4	51.8	45.9	13.9	0.0
Finland	6.1	1.6	5.3	5.2	1.7
France	10.4	9.6	6.5	5.3	5.3
Germany	9.1	5.4	5.6	4.1	1.8
Greece	1.0	0.0	0.0	0.0	3.4
Hungary	20.7	15.2	10.3	5.1	18.7
Ireland	3.8	0.0	1.8	1.6	4.0
Italy	8.6	3.2	3.0	..	2.3
Latvia	23.7	37.1	24.7	4.6	46.1
Lithuania	22.9	29.1	11.7	13.1	8.6
Luxembourg	20.3	18.5	17.5	18.6	17.7
Malta	0.0	21.7	0.0	0.0	0.0
Netherlands	7.6	7.4	8.7	8.5	4.9
Poland	12.8	12.7	10.8	3.0	1.9
Portugal	10.3	8.4	2.5	..	7.0
Romania	83.6	47.8	40.5	22.6	21.1
Slovakia	6.3	8.1	1.8	3.7	11.4
Slovenia	8.9	5.3	22.0	16.6	4.6
Spain	5.5	4.4	3.8	3.9	4.6
Sweden	3.2	3.9	4.4	5.9	5.4
United Kingdom	7.6	7.0	6.8	7.1	9.4
Other high income countries					
Iceland	21.0	..	..	..	..
Israel	12.6	6.0	3.7	4.9	5.6
Norway	3.3	6.6	3.4	3.5	1.6
Switzerland	6.0	8.5	6.4	5.5	1.3
Source: WHO European Health for All database.					
Note: A maternal death is death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management, but not from accidental or incidental causes.					
^a 2009 or latest available year.					

Abortions, per 1,000 live births								
Country	1990	1995	2000	2005	2006	2007	2008	2009
Eastern Europe, Caucasus and Central Asia								
Armenia	327	628	343	291	296	287	303	..
Azerbaijan ^a	134	200	150	138	140	147	166	..
Belarus	1 835	1 911	1 301	714	605	447	391	..
Georgia ^b	659	702	306	423	444	363	338	..
Kazakhstan	702	807	617	450	433	413	366	..
Kyrgyzstan ^c	416	231	165	116	98	108	104	..
Republic of Moldova ^d	1 063	1 014	705	442	419	417	408	..
Russian Federation	..	1 751	1 411	907	837	701	619	..
Tajikistan	196	169	132	107	94	54	51	..
Turkmenistan	285	260	169	134	127	..	..	..
Ukraine	1 551	1 502	1 128	619	499	445	..	..
Uzbekistan	278	175	117	89	81	67	62	..
South-Eastern Europe								
Albania	318	442	410	237	279	265	230	..
Bosnia and Herzegovina	..	241	348	482	..	..	..	..
Croatia	697	285	172	107	114	109	103	..
Montenegro	..	429	302	204	174	167	141	..
Serbia ^e	..	..	574	369	362	356	350	..
The former Yugoslav Republic of Macedonia	619	492	389	295	273	268	257	237
Turkey	..	..	..	..	..	..	..	..
EU 27								
Austria	39	28	30	23	..	..	..	..
Belgium	..	97	120	140	144	149	149	150
Bulgaria	1 375	1 349	833	588	504	499	471	417
Cyprus	..	..	..	..	..	..	..	..
Czech Republic	852	515	381	259	240	222	215	208
Denmark	325	254	234	235	232	..	..	..
Estonia	1 319	1 308	975	670	630	563	525	479
Finland	187	157	193	189	181	179	175	173
France ^f	..	252	..	254	..	..	..	..
Germany	200	128	176	181	178	171	168	..
Greece	99	133	175	153	153	..	..	..
Hungary	719	687	607	499	464	449	445	448
Ireland	..	..	..	..	..	..	..	..
Italy ^g	284	257	248	233	225	222	..	..
Latvia	1 030	1 201	851	595	531	508	435	410
Lithuania	857	759	476	327	305	297	258	219
Luxembourg	..	..	..	..	..	..	..	..
Malta	..	..	..	..	..	..	..	..
Netherlands ^h	93	110	132	153	154	156	154	..
Poland	..	1	..	1	1	1	1	..
Portugal	..	..	5	7	12	42	130	..
Romania	3 153	2 125	1 100	739	685	639	576	522
Slovakia	702	584	335	265	264	247	234	216
Slovenia	659	569	464	322	298	261	227	215
Spain	93	136	160	197	210	227	223	..
Sweden	303	304	343	345	340	346	348	336
United Kingdom ⁱ	247	239	291	287	286	284	272	..
Other high income countries								
Canada	230	286	322	282.9 ⁱ	..	..	..	..
Iceland	150	189	229	203	205	199	198	..
Israel ^k	150	151	137	133	131	128	..	..
Norway	255	228	247	247	241	259	265	255
Switzerland ^l	155	144	157	148	144	143	142	..
United States	387	349	324	291	..	..	..	..
.. - data not available								
Source: UNECE Statistical Division Database, compiled from national and international (Eurostat, UN Statistics Division Demographic Yearbook, WHO European health for all database and UNICEF TransMONEE) official sources.								
Note: <i>Legal abortions</i> refer to legally induced early foetal deaths and do not cover spontaneous abortions (i.e. miscarriages). The abortion rate is defined as the number of abortions per 1000 live births during a given year.								
a Data include an estimate of illegal abortions								
b From 1995 : data do not cover Abkhazia and South Ossetia (Tshinvali).								
c Data include miscarriages.								
d Data do not cover the left bank of Nistru river and Bender municipality.								
e Data do not cover Kosovo and Metohia.								
f Data do not cover overseas territories								
g Incomplete data for the mentioned years and Regions: 1990 (Piemonte), 1995 (Piemonte), 2002 (Campania), 2003 (Campania), 2004 (Sicilia), 2005 (Friuli-Venezia Giulia, Molise, Campania, Sicilia), 2006 (Friuli-Venezia Giulia, Campania, Sicilia), 2007 (Campania)								
h Data refer to abortions performed on women living in the Netherlands.								
i Data include residents and non-residents, but do not cover Northern Ireland.								
j Data do not cover abortions performed on non-Canadian residents.								
k Data include East Jerusalem and Israeli residents in certain other territories under occupation by Israeli military forces since June 1967. Data refer to applications for abortions and not to actual abortions performed.								
l Until 2003: data partially estimated.								

Table 15					
Adolescent fertility rate, live births per 1,000 to women aged 15-19					
	1990	1995	2000	2005	2009 ^a
Eastern Europe, Caucasus and Central Asia ^b					
Armenia ^c	70	56	27	27	26
Azerbaijan	27	40	28	33	41
Belarus ^c	44	39	27	21	22
Georgia ^d	58	64	40	38	44
Kazakhstan	53	50	31	27	31
Kyrgyzstan	47	32	34	26	30
Republic of Moldova ^e	58	62	36	29	26
Russian Federation ^c	55	45	28	27	30
Tajikistan ^c	40	52	29	..	..
Turkmenistan ^c	24	25	26	..	..
Ukraine	61	54	32	28	32
Uzbekistan ^c	44	59	21	9	..
South-Eastern Europe					
Albania ^c	15	23	15	19	12
Bosnia and Herzegovina ^f	40	31	20	15	..
Croatia	27	..	..	14	13
Montenegro	..	..	..	16	23
Serbia ^g	42	33	26	23	22
The former Yugoslav Republic of Macedonia	..	44	31	22	20
Turkey	50	50	..	39	36
EU 27					
Austria	21	17	14	13	..
Belgium	12	10	11	11	11
Bulgaria	71	52	46	38	47
Cyprus ^h	34	17	10	6	6
Czech Republic	45	25	13	11	12
Denmark	9	9	8	6	5
Estonia ^c	50	38	26	21	20
Finland ⁱ	12	10	10	10	8
France ^j	..	..	12	12	11
Germany ^k	11	9	13	11	9
Greece	20	13	9	10	12
Hungary	40	31	23	20	19
Ireland	16	15	20	17	16
Italy	9	7	7	7	..
Latvia	50	30	26	21	21
Lithuania	41	41	25	19	17
Luxembourg	14	11	12	12	7
Malta	..	10	17	16	20
Netherlands ^c	8	6	7	6	5
Poland	32	22	17	13	16
Portugal	24	20	22	19	15
Romania	51	42	39	34	40
Slovakia	45	32	24	20	22
Slovenia	25	13	8	6	5
Spain	12	8	9	11	12
Sweden	14	9	7	6	6
United Kingdom	33	28	29	26	25
Other high income countries					
Canada ^m	25	24	17	13	..
Iceland	38	23	23	14	15
Israel ⁿ	20	18	17	15	14
Norway	17	14	12	8	10
Switzerland	7	6	6	5	4
United States	60	57 ^o	48	40	41
Source: UNECE Statistical Division Database, compiled from national and international (Eurostat, UN Statistics Division Demographic Yearbook, WHO European health for all database and UNICEF TransMONEE) official sources.					
Note: The adolescent fertility rate is the number of live births to women aged 15-19 per 1000 women aged 15-19.					
..: Data not available					
a 2009 or latest available year.					
b Data do not cover infants born alive with less than 28 weeks gestation, less than 1000 grams in weight and 35 centimeters in length, who die within seven days of birth.					
c Data refer to age group 0-19.					
d From 1995 : data do not cover Abkhazia and South Ossetia (Tshinvali). Data before 2003 refer to age group 15-20.					
e Data do not cover the left bank of Nistru river and Bender municipality. Data refer to age group 0-19.					
f Data refer to 1996.					
g Data do not cover Kosovo and Metohia.					
h Data cover only the area controlled by the Republic of Cyprus.					
i Data include nationals temporarily outside the country.					
j Data do not cover overseas departments (DOM).					
k Before 1990, data cover only West Germany (Federal Republic of Germany). From 1995, data refer to reunified Germany, i.e. include the ex-German Democratic Republic					
m Data include Canadian residents temporarily in the United States, but exclude United States residents temporarily in Canada.					
n Data cover East Jerusalem and Israeli residents in certain other territories under occupation by Israeli military forces since June 1967.					
o Data refer to 1999.					

Table 16				
Tuberculosis incidence rate, per 100,000 population				
Country	1995	2000	2005	2009
Eastern Europe, Caucasus and Central Asia				
Armenia	47.0	71.0	72.0	73.0
Azerbaijan	110.0	110.0	110.0	110.0
Belarus	80.0	75.0	58.0	39.0
Georgia	107.0	107.0	107.0	107.0
Kazakhstan	139.0	196.0	215.0	163.0
Kyrgyzstan	143.0	151.0	158.0	159.0
Republic of Moldova	114.0	136.0	164.0	178.0
Russian Federation	107.0	124.0	109.0	106.0
Tajikistan	92.0	116.0	198.0	202.0
Turkmenistan	52.0	92.0	70.0	67.0
Ukraine	51.0	84.0	102.0	101.0
Uzbekistan	128.0	128.0	128.0	128.0
South-Eastern Europe				
Albania	24.0	23.0	19.0	15.0
Bosnia and Herzegovina	84.0	63.0	52.0	50.0
Croatia	52.0	42.0	27.0	25.0
Montenegro	..	..	27.0	21.0
Serbia	..	..	34.0	21.0
The former Yugoslav Republic of Macedonia	58.0	41.0	30.0	23.0
Turkey	58.0	46.0	33.0	29.0
EU 27				
Austria	21.0	17.0	13.0	11.0
Belgium	16.0	14.0	12.0	8.6
Bulgaria	46.0	46.0	46.0	41.0
Cyprus	5.7	4.8	4.7	5.5
Czech Republic	20.0	16.0	11.0	8.8
Denmark	9.9	13.0	8.4	6.8
Estonia	66.0	69.0	40.0	30.0
Finland	15.0	12.0	7.4	8.8
France	17.0	12.0	9.2	6.1
Germany	17.0	13.0	7.7	4.9
Greece	10.0	7.4	6.5	4.5
Hungary	48.0	35.0	21.0	16.0
Ireland	15.0	12.0	11.0	8.5
Italy	11.0	7.0	7.5	6.4
Latvia	92.0	94.0	68.0	45.0
Lithuania	92.0	85.0	70.0	71.0
Luxembourg	9.0	12.0	9.2	9.2
Malta	3.3	4.7	6.0	11.0
Netherlands	12.0	9.0	7.9	7.5
Poland	51.0	35.0	27.0	24.0
Portugal	64.0	48.0	36.0	30.0
Romania	143.0	167.0	164.0	125.0
Slovakia	33.0	22.0	15.0	9.1
Slovenia	31.0	21.0	15.0	12.0
Spain	26.0	23.0	19.0	17.0
Sweden	7.3	5.4	6.8	6.2
United Kingdom	12.0	12.0	16.0	12.0
Other high income countries				
Canada	7.5	6.2	5.3	4.8
Iceland	5.2	5.3	3.9	3.1
Israel	8.5	11.0	6.9	5.4
Norway	6.2	5.7	6.7	5.9
Switzerland	14.0	8.7	7.9	4.9
United States	9.7	6.5	5.3	4.1
Source: MDG Database of the UN Statistics Division				
Note: Number of newly diagnosed tuberculosis cases, all forms during the given calendar year per 100,000 population.				

Table 17

Tuberculosis treatment success rate under DOTS, percentage				
Country	1995	2000	2005	2008
Eastern Europe, Caucasus and Central Asia				
Armenia	55	87	72	73
Azerbaijan	65	90	59	56
Belarus	..	..	..	71
Georgia	58	63	73	73
Kazakhstan	..	79	71	64
Kyrgyzstan	..	82	85	84
Republic of Moldova	..	63	62	62
Russian Federation	65	68	58	57
Tajikistan	88	77	82	82
Turkmenistan	73	81	85	83
Ukraine	83	..	..	62
Uzbekistan	78	80	81	81
South-Eastern Europe				
Albania	..	..	79	91
Bosnia and Herzegovina	97	94	97	92
Croatia	..	..	46	58
Montenegro	..	..	30	85
Serbia	..	..	85	86
The former Yugoslav Republic of Macedonia	70	86	84	89
Turkey	..	73	89	92
EU 27				
Austria	82	73	75	47
Belgium	..	66	66	76
Bulgaria	..	..	86	85
Cyprus	100	..	63	58
Czech Republic	60	70	72	68
Denmark	..	86	83	41
Estonia	..	70	72	60
Finland	..	..	..	72
Germany	..	77	71	68
Hungary	..	64	45	53
Ireland	..	84	64	76
Italy	80	74	..	..
Latvia	61	72	74	33
Lithuania	..	73	70	82
Luxembourg	100	..	..	..
Malta	100	100	100	60
Netherlands	72	76	84	85
Poland	..	72	77	74
Portugal	69	79	89	87
Romania	51	70	82	37
Slovakia	64	82	92	93
Slovenia	90	84	84	80
Sweden	..	79	74	87
United Kingdom	..	..	68	78
Other high income countries				
Canada	..	35	68	78
Iceland	100	100	100	80
Israel	..	78	..	81
Norway	77	70	91	84
United States	76	83	84	85

Source: MDG Database of the UN Statistics Division

Note: Treatment rate is the proportion of registered patients who were cured or who completed treatment to all registered cases. DOTS (Direct Observed Therapy Short Course) is the method of the therapy that is considered the most cost effective strategy to reduce tuberculosis cases and deaths.

Table 18A					
Energy use (kg oil equivalent) per \$1,000 GDP (Constant 2005 PPP \$)					
Country	1990	1995	2000	2005	2009 ^a
Eastern Europe, Caucasus and Central Asia					
Armenia	740	297	284	199	174
Azerbaijan	759	895	571	354	190
Belarus	684	570	418	322	250
Georgia	411	447	259	180	151
Kazakhstan	628	730	501	426	432
Kyrgyzstan	676	424	325	299	265
Republic of Moldova	582	646	472	416	319
Russian Federation	470	547	491	364	328
Tajikistan	327	360	347	243	207
Turkmenistan	1427	1621	1388	731	605
Ukraine	602	816	736	543	438
Uzbekistan	1129	1278	1261	897	753
South-Eastern Europe					
Albania	207	117	120	121	91
Bosnia and Herzegovina	..	281	235	214	213
Croatia	141	152	142	131	118
Serbia	218	308	270	237	213
The former Yugoslav Republic of Macedonia	156	199	184	186	173
Turkey	120	120	122	108	112
EU 27					
Austria	125	122	112	124	112
Belgium	193	199	188	174	160
Bulgaria	435	402	321	262	216
Cyprus	130	133	135	120	124
Czech Republic	288	254	232	215	187
Denmark	133	132	110	105	100
Estonia	605	451	315	232	214
Finland	246	259	227	212	201
France	158	158	146	145	133
Germany	172	148	134	131	121
Greece	121	120	121	111	97
Hungary	225	229	180	161	147
Ireland	161	137	111	90	87
Italy	109	111	109	111	102
Latvia	292	299	184	147	127
Lithuania	349	326	214	178	156
Luxembourg	209	159	125	135	114
Malta	143	112	84	102	88
Netherlands	167	161	136	138	128
Poland	331	286	197	176	147
Portugal	104	115	114	118	105
Romania	342	283	236	189	155
Slovakia	324	314	259	216	164
Slovenia	174	191	163	155	141
Spain	117	122	121	119	103
Sweden	224	231	184	175	145
United Kingdom	152	147	128	113	99
Other high income countries					
Canada	279	283	252	241	214
Iceland	320	340	369	336	509
Israel	138	136	125	125	117
Norway	154	143	132	122	115
Switzerland	107	106	99	97	94
United States	240	229	204	184	169

Source: MDG Database of the UN Statistics Division

Note: Energy use per GDP (Constant 2005 PPP \$) is the kilogram of oil equivalent of energy use per gross domestic product converted to 2005 constant international dollars using purchasing power parity rates. Energy use refers to use of primary energy before transformation to other end-use fuels, which is equal to indigenous production plus imports and stock changes, minus exports and fuels supplied to ships and aircraft engaged in international transport.

Gross Domestic Product (GDP) is the sum of gross value added by all resident producers in the economy plus any product taxes (less subsidies) not included in the valuation of output. Value added is the net output of an industry after adding up all outputs and subtracting intermediate inputs. The purchasing power parity (PPP) conversion factor is the number of units of a country's currency required to buy the same amounts of goods and services in the domestic market as the United States (U.S.) dollar would buy in the United States. An international dollar has the same purchasing power over GDP as a U.S. dollar has in the United States.

^a 2009 or latest year available.

Table 18

Carbon dioxide emissions, kg per \$1 GDP (PPP)				
Country	1995	2000	2005	2008
Eastern Europe, Caucasus and Central Asia				
Armenia	0.64	0.49	0.35	0.32
Azerbaijan	2.36	1.52	0.91	0.67
Belarus	1.43	0.91	0.71	0.56
Georgia	0.28	0.41	0.30	0.26
Kazakhstan	2.34	1.59	1.35	1.44
Kyrgyzstan	0.80	0.61	0.58	0.58
Republic of Moldova	1.65	0.58	0.58	0.48
Russian Federation	1.35	1.17	0.90	0.77
Tajikistan	0.40	0.36	0.24	0.26
Turkmenistan	4.04	3.41	1.85	1.54
Ukraine	2.22	1.76	1.29	1.04
Uzbekistan	3.03	2.98	2.09	1.86
South-Eastern Europe				
Albania	0.18	0.21	0.24	0.18
Bosnia and Herzegovina	0.65	1.26	1.09	1.11
Croatia	0.38	0.36	0.34	0.30
Montenegro			0.40	0.29
Serbia			0.74	0.66
The former Yugoslav Republic of Macedonia	0.86	0.83	0.72	0.66
Turkey	0.34	0.35	0.30	0.32
EU 27				
Austria	0.29	0.26	0.29	0.24
Belgium	0.46	0.40	0.37	0.33
Bulgaria	1.14	0.87	0.72	0.61
Cyprus	0.44	0.43	0.41	0.41
Czech Republic	0.82	0.73	0.60	0.50
Denmark	0.42	0.33	0.29	0.28
Estonia	1.63	1.03	0.75	0.69
Finland	0.52	0.40	0.35	0.33
France	0.26	0.24	0.23	0.20
Germany	0.41	0.36	0.33	0.30
Greece	0.46	0.46	0.41	0.36
Hungary	0.54	0.42	0.36	0.31
Ireland	0.45	0.36	0.30	0.27
Italy	0.31	0.29	0.30	0.28
Latvia	0.59	0.35	0.26	0.23
Lithuania	0.59	0.37	0.30	0.26
Luxembourg	0.47	0.33	0.39	0.32
Malta	0.43	0.26	0.32	0.27
Netherlands	0.39	0.32	0.31	0.28
Poland	1.05	0.71	0.61	0.52
Portugal	0.30	0.30	0.30	0.26
Romania	0.79	0.62	0.52	0.42
Slovakia	0.79	0.60	0.48	0.36
Slovenia	0.47	0.39	0.35	0.33
Spain	0.31	0.30	0.31	0.26
Sweden	0.27	0.21	0.18	0.16
United Kingdom	0.38	0.32	0.28	0.26
Other high income countries				
Canada	0.60	0.56	0.50	0.48
Iceland	0.35	0.33	0.28	0.31
Israel	0.48	0.43	0.37	0.20
Norway	0.23	0.21	0.20	0.19
Switzerland	0.19	0.18	0.17	0.16
United States	0.60	0.53	0.48	0.45

Source: MDG database of the UN Statistics Division

Note: Carbon emissions are measured as the total amount of carbon dioxide emitted by the country as a consequence of all relevant human (production and consumption) activities. Total CO₂ emissions is divided by the total value of the gross domestic product (GDP) expressed in purchasing power parity (PPPs).

Table 19

7.1 Proportion of land area covered by forest

Country	1990	2000	2005	2010
Eastern Europe, Caucasus and Central Asia				
Armenia	Other high inc	10.8	10.0	9.3
Azerbaijan	11.3	11.3	11.3	11.3
Belarus	37.5	39.9	40.7	41.6
Georgia	40.0	39.8	39.6	39.5
Kazakhstan	1.3	1.2	1.2	1.2
Kyrgyzstan	4.4	4.5	4.5	5.0
Republic of Moldova	9.7	9.9	11.0	11.7
Russian Federation	49.4	49.4	49.4	49.4
Tajikistan	2.9	2.9	2.9	2.9
Turkmenistan	8.8	8.8	8.8	8.8
Ukraine	16.0	16.4	16.5	16.8
Uzbekistan	7.2	7.6	7.7	7.7
South-Eastern Europe				
Albania	28.8	28.1	28.5	28.3
Bosnia and Herzegovina	43.2	42.7	42.7	42.7
Croatia	33.1	33.7	34.0	34.3
Montenegro	40.4	40.4	40.4	40.4
Serbia	26.4	28.1	28.3	31.0
The former Yugoslav Republic of Macedonia	35.9	37.7	38.3	39.2
Turkey	12.6	13.2	14.0	14.7
EU 27				
Austria	45.8	46.5	46.8	47.1
Belgium	22.4	22.0	22.2	22.4
Bulgaria	30.1	30.5	33.6	36.1
Cyprus	17.4	18.6	18.7	18.7
Czech Republic	34.0	34.1	34.3	34.4
Denmark	10.5	11.5	12.6	12.8
Estonia	49.3	52.9	53.1	52.3
Finland ^a	72.0	73.9	72.9	72.9
France	26.4	27.9	28.6	29.0
Germany	30.8	31.8	31.8	31.8
Greece	25.6	27.9	29.1	30.3
Hungary	20.0	21.3	22.1	22.6
Ireland	6.7	9.2	10.1	10.7
Italy	25.8	28.5	29.8	31.1
Latvia	51.1	52.2	52.9	53.8
Lithuania	31.0	32.2	33.8	34.5
Luxembourg	33.2	33.6	33.6	33.6
Malta	0.0	0.0	0.0	0.0
Netherlands	10.2	10.6	10.8	10.8
Poland	29.2	29.8	30.0	30.5
Portugal	36.3	37.6	37.9	38.1
Romania	27.7	27.7	27.8	28.6
Slovakia	40.0	39.9	40.2	40.2
Slovenia	59.0	61.2	61.7	62.2
Spain	27.7	34.0	34.6	36.4
Sweden	66.5	66.7	68.7	68.7
United Kingdom	10.8	11.5	11.7	11.9
Other high income countries				
Canada	34.1	34.1	34.1	34.1
Iceland	0.1	0.2	0.2	0.3
Israel	6.1	7.1	7.2	7.1
Norway	30.0	30.6	31.8	33.1
Switzerland	28.8	29.9	30.4	31.0
United States	32.3	32.8	33.0	33.2

Source: MDG database of the UN Statistics Division

Note: Proportion of forest area to total land area expressed as a percentage.

a: The official land area by the National Land Survey of Finland on 1.1. 2004 is the one used. This is because the land area of Finland has been changing size due to the postglacial crustal uplift and to the construction of artificial lakes.

Table 20

Persons using improved drinking water sources, urban

Country	Total					Urban					Rural				
	1990	1995	2000	2005	2008	1990	1995	2000	2005	2008	1990	1995	2000	2005	2008
Eastern Europe, Caucasus and Central Asia															
Armenia	..	92	93	95	96	99	99	99	99	98	..	78	83	89	93
Azerbaijan	70	71	74	77	80	88	88	88	88	88	49	52	59	66	71
Belarus	100	100	100	100	100	100	100	100	100	100	99	99	99	99	99
Georgia	81	82	89	96	98	94	94	97	99	100	66	69	80	92	96
Kazakhstan	96	96	96	96	95	99	99	99	99	99	92	92	91	91	90
Kyrgyzstan	..	78	82	87	90	98	98	98	99	99	..	66	73	80	85
Republic of Moldova	..	93	92	90	90	0	98	97	96	96	..	89	88	85	85
Russian Federation	93	94	95	96	96	98	98	98	98	98	81	83	86	89	89
Tajikistan	..	58	60	67	70	0	91	92	93	94	..	45	49	57	61
Turkmenistan	..	83	83	84	..	97	97	97	97	97	..	72	72	72	..
Ukraine	..	96	97	98	98	99	99	99	99	98	..	91	92	95	97
Uzbekistan	90	90	89	88	87	97	97	98	98	98	85	85	83	82	81
South-Eastern Europe															
Albania	..	96	97	97	97	100	100	100	98	96	..	94	95	97	98
Bosnia and Herzegovina	..	97	97	98	99	..	99	99	100	100	..	96	96	97	98
Croatia	..	99	99	99	99	..	100	100	100	100	..	97	97	97	97
Montenegro	..	..	98	98	98	..	..	100	100	100	..	..	96	96	96
Serbia	..	..	99	99	99	..	..	99	99	99	..	..	98	98	98
The former Yugoslav Republic of Macedonia	..	..	100	100	100	..	..	100	100	100	..	..	99	99	99
Turkey	85	89	93	97	99	94	95	97	99	100	73	79	85	92	96
South-Eastern Europe															
Austria	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Belgium	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Bulgaria	100	100	100	100	100	100	100	100	100	100	99	100	100	100	100
Cyprus	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Czech Republic	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Denmark	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Estonia	98	98	98	98	98	99	99	99	99	99	97	97	97	97	97
Finland	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
France	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Germany	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Greece	96	98	99	100	100	99	100	100	100	100	92	95	98	99	99
Hungary	96	97	99	100	100	98	99	100	100	100	91	94	98	100	100
Ireland	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Italy	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Latvia	99	99	99	99	99	100	100	100	100	100	96	96	96	96	96
Luxembourg	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Malta	100	100	100	100	100	100	100	100	100	100	98	99	100	100	100
Netherlands	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Poland	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Portugal	96	97	99	99	99	98	98	99	99	99	94	96	98	100	100
Slovakia	..	..	100	100	100	..	..	100	100	100	..	..	100	100	100
Slovenia	100	100	100	99	99	100	100	100	100	100	99	99	99	99	99
Spain	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Sweden	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
United Kingdom	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Other high income countries															
Canada	100	100	100	100	100	100	100	100	100	100	99	99	99	99	99
Iceland	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Israel	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Norway	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Switzerland	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
United States	99	99	99	99	99	100	100	100	100	100	94	94	94	94	94

Source: MDG database of the UN Statistics Division

Note: Percentage of persons who use improved drinking water sources to the total population. Improved drinking water sources include household connection, public standpipe, borehole, protected dug well, protected spring, and rainwater collection.

Table 21															
Persons using an improved sanitation facility, percentage															
Country	Total					Urban					Rural				
	1990	1995	2000	2005	2008	1990	1995	2000	2005	2008	1990	1995	2000	2005	2008
Eastern Europe, Caucasus and Central Asia															
Armenia	..	88	89	89	90	95	95	95	95	95	..	75	77	79	80
Azerbaijan	..	57	62	74	45	..	70	73	81	85	..	43	50	67	39
Belarus	..	93	93	93	93	..	91	91	91	91	..	96	96	97	97
Georgia	96	96	95	95	95	97	97	96	96	96	95	95	94	94	93
Kazakhstan	96	96	97	97	97	96	96	97	97	97	97	97	97	98	98
Kyrgyzstan	..	93	93	93	93	94	94	94	94	94	..	93	93	93	93
Republic of Moldova	..	..	79	79	79	..	..	85	85	85	..	..	74	74	74
Russian Federation	87	87	87	87	87	93	93	93	93	93	70	70	70	70	70
Tajikistan	..	89	90	93	94	93	93	94	95	95	..	87	89	92	94
Turkmenistan	98	98	98	98	98	99	99	99	99	99	97	97	97	97	97
Ukraine	95	95	95	95	95	97	97	97	97	97	91	91	91	90	90
Uzbekistan	84	85	91	97	100	95	96	97	99	100	76	78	87	96	100
South-Eastern Europe															
Albania	..	87	90	96	98	..	97	97	97	98	..	81	85	96	98
Bosnia and Herzegovina	..	95	95	95	95	..	98	98	99	99	..	93	93	92	92
Croatia	..	99	99	99	99	..	99	99	99	99	..	98	98	98	98
Serbia	..	..	92	92	92	..	..	96	96	96	..	..	88	88	88
The former Yugoslav Republic of Macedonia	..	..	88	89	89	..	..	92	92	92	..	..	82	82	82
EU 27															
Austria	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Belgium	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Bulgaria	99	100	100	100	100	100	100	100	100	100	98	99	100	100	100
Cyprus	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Czech Republic	100	99	98	98	98	100	100	99	99	99	98	98	97	97	97
Denmark	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Estonia	..	95	95	95	95	..	96	96	96	96	..	94	94	94	94
Finland	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
France	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Germany	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Greece	97	97	98	98	98	100	99	99	99	99	92	94	96	97	97
Hungary	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Ireland	99	99	99	99	99	100	100	100	100	100	98	98	98	98	98
Latvia	..	..	78	78	78	..	..	82	82	82	..	..	71	71	71
Luxembourg	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Malta	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Montenegro	..	..	92	92	92	..	..	96	96	96	..	..	86	86	86
Netherlands	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Poland	..	..	90	90	90	96	96	96	96	96	..	..	80	80	80
Portugal	92	95	98	99	100	97	98	99	100	100	87	92	96	98	100
Romania	71	72	72	72	72	88	88	88	88	88	52	53	54	54	54
Slovakia	100	100	100	100	100	100	100	100	100	100	100	100	100	99	99
Slovenia	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Spain	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Sweden	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
United Kingdom	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Other high income countries															
Canada	100	100	100	100	100	100	100	100	100	100	99	99	99	99	99
Iceland	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Israel	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Norway	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Switzerland	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
United States	100	100	100	100	100	100	100	100	100	100	99	99	99	99	99
Source: MDG database of the UN Statistics Division															
Note: Percentage of persons who use improved sanitation facilities to the total population. Improved sanitation facilities include connection to a public sewer, connection to a septic system, pour-flush latrine, simple pit latrine, ventilated improved pit latrine.															
..: Data not available															

Net official development assistance and official aid received (constant 2008 US\$, and per capita)								
Country	1995		2000		2005		2009	
	US$ per cap	US$ Mln	US$ per cap	US$ Mln	US$ per cap	US$ Mln	US\$ per cap	US\$ Mln
Eastern Europe, Caucasus and Central Asia								
Armenia	89.5	288.3	98.1	301.7	64.9	199.0	171.2	528.1
Azerbaijan	21.3	163.7	24.2	195.7	30.3	257.5	26.9	240.3
Belarus	27.4	278.9	5.5	54.7	7.3	71.3	10.9	104.8
Georgia	58.2	275.5	54.4	240.5	78.8	343.5	210.3	927.5
Kazakhstan	5.5	87.5	15.4	229.6	17.4	263.1	19.3	305.0
Kyrgyzstan	75.2	343.0	60.6	296.4	62.4	319.2	61.9	326.3
Republic of Moldova	25.1	90.7	49.9	181.6	56.0	201.2	71.0	253.1
Russian Federation	13.8	2 046.1	15.3	2 241.4	..	..	..	..
Tajikistan	15.2	88.6	29.7	184.0	42.6	292.0	56.0	417.6
Turkmenistan	9.1	38.2	10.3	46.6	7.8	37.2	8.4	41.9
Ukraine	8.7	443.9	16.1	788.2	10.4	489.9	14.9	681.8
Uzbekistan	4.2	97.4	9.1	226.0	7.4	192.2	7.2	194.2
South-Eastern Europe								
Albania	76.1	239.1	168.9	518.8	121.6	382.2	115.0	367.3
Bosnia and Herzegovina	..	1 231.8	295.9	1 259.4	149.9	643.5	101.4	434.4
Croatia	15.2	71.0	24.3	107.5	33.9	150.6	39.4	174.4
Montenegro	..	..	..	..	..	..	123.7	78.0
Serbia	..	125.6	262.1	2 007.7	169.3	1 260.0	85.7	627.5
The former Yugoslav Republic of Macedonia	50.8	99.5	202.5	410.3	133.7	272.4	95.7	196.6
Turkey	6.4	380.1	7.8	501.9	7.4	506.2	19.1	1 376.0
Source : Compiled by UNECE from UNECE Statistical Database and World Development Indicators (World Bank)								

Table 23

Gross external debt in relation to GDP, %

Country	1995	2000	2005	2008	2009	2010
Eastern Europe, Caucasus and Central Asia						
Armenia	28.8	47.9	37.3	27.4	54.3	66.2
Azerbaijan	17.3	25.2	15.4	8.8	11.0	..
Belarus	19.9	20.4	17.2	24.9	44.8	52.1
Georgia	..	110.8	56.0	60.4	80.4	82.9
Kazakhstan	28.6	69.3	76.0	80.9	98.2	81.2
Kyrgyzstan	51.2	127.4	96.2	68.1	85.3	86.6
Republic of Moldova	59.3	133.6	69.6	67.6	80.2	82.3
Russian Federation	38.7	62.1	33.7	28.9	38.2	33.0
Tajikistan	143.4	120.1	45.9	44.8	50.5	..
Turkmenistan	6.9	50.1	6.2	3.0	3.1	..
Ukraine	22.8	39.0	46.0	56.5	88.2	85.1
Uzbekistan	17.9	33.7	30.0	13.9	12.3	..
South-Eastern Europe						
Albania	13.3	29.2	25.2	39.0	39.6	..
Bosnia and Herzegovina	..	34.4	24.1	16.0	22.9	..
Croatia	17.2	50.5	67.8	79.7	101.7	101.3
Montenegro	..	..	43.8	68.8	102.5	..
Serbia	..	172.0	61.4	59.4	81.9	..
The former Yugoslav Republic of Macedonia	34.2	43.1	50.0	47.5	58.0	59.0
Turkey	32.4	44.3	35.3	38.2	43.8	39.6
EU 27						
Austria	..	..	168.6	200.0	217.4	207.9
Belgium	..	..	261.4	314.4	303.8	..
Bulgaria	77.7	86.5	61.6	99.1	113.7	104.6
Cyprus	26.6	30.1	87.7	104.1	505.7	447.4
Czech Republic	31.1	38.0	37.3	38.2	46.6	49.6
Denmark	..	..	138.9	170.4	195.2	192.3
Estonia	..	52.9	80.9	113.3	129.5	115.1
Finland	71.3	93.1	111.7	127.2	168.2	182.7
France	..	..	142.8	171.0	197.5	200.4
Germany	..	..	128.3	140.4	153.3	157.2
Greece	..	..	108.5	144.8	179.3	179.7
Hungary	68.9	63.8	77.1	142.5	183.6	158.7
Ireland	..	..	661.7	889.8	1 071.0	1 049.1
Italy	..	..	94.2	103.9	120.4	118.5
Latvia	31.0	61.9	93.8	124.7	161.7	165.1
Lithuania	23.8	42.5	48.4	68.3	89.8	85.9
Luxembourg	..	..	3 328.9	3 723.2	4 146.3	3 594.0
Malta	..	209.9	346.8	493.9	526.3	520.8
Netherlands	..	..	261.3	276.0	302.6	310.1
Poland	37.7	40.5	43.7	46.0	64.9	66.5
Portugal	..	..	158.0	191.6	233.6	231.4
Romania	19.1	29.5	39.1	48.8	72.4	76.0
Slovakia	23.0	37.5	44.1	53.3	74.9	76.0
Slovenia	40.4	51.5	67.7	99.6	117.9	114.6
Spain	..	..	119.4	145.4	172.4	165.4
Sweden	..	119.0	156.7	193.5	222.5	205.5
United Kingdom	177.1	222.6	323.7	341.1	427.6	..
Other high income countries						
Canada	..	..	56.0	54.6	72.2	69.7
Iceland	62.5	97.6	282.6	452.4	1 002.9	940.0
Israel	..	55.7	58.2	43.0	47.1	48.8
Norway	41.6	79.5	91.2	126.6	146.7	144.0
Switzerland	110.1	248.0	238.0	243.6	253.2	246.0
United States	..	..	75.0	95.7	97.5	98.6

Source: Compiled from UNECE Statistical Division

Note: Data refer to external debt as a percentage of GDP.

Table 24

Number of personal computers, per 100 population					
Country	1995	2000	2005	2006	2007
European Union					
Austria	16	36	61	..	..
Belgium	18	22	38	42	..
Bulgaria	2	5	..	..	9
Cyprus	5	19	33	38	..
Czech Republic	5	12	27	..	..
Denmark	27	51	69	73	55
Estonia	..	16	49	51	52
Finland	23	40	50	..	..
France	15	30	58	66	..
Germany	18	34	60	65	..
Greece	3	7	9	9	..
Hungary	4	9	14	18	26
Ireland	18	36	53	59	..
Italy	8	18	37	..	..
Latvia	1	14	25	33	..
Lithuania	1	7	18	18	..
Luxembourg	..	46	62	68	..
Malta	8	20	..	..	..
Netherlands	20	40	86	91	..
Poland	3	7	14	17	..
Portugal	5	10	15	16	17
Romania	1	3	13	15	19
Slovakia	4	14	36	43	52
Slovenia	10	28	41	42	43
Spain	6	17	28	37	40
Sweden	25	51	83	88	..
United Kingdom	20	34	77	81	..
Other developed countries					
Canada	22	42	88	95	..
Iceland	21	39	48	54	..
Israel	14	26	..	..	..
Norway	27	49	59	63	..
Switzerland	29	66	89	88	93
United States	32	57	77	80	..
South-Eastern Europe					
Albania	..	1	2	4	..
Bosnia and Herzegovina	..	..	5	6	..
Croatia	2	11	..	..	..
Serbia	..	..	..	16	18
The former Yugoslav Republic of Macedonia	..	..	22	27	37
Turkey	1	4	6	6	..
Eastern Europe, Caucasus and Central Asia					
Armenia	..	1	10	..	..
Azerbaijan	..	..	2	2	2
Belarus	..	..	1	..	..
Georgia	..	2	5	..	5
Kyrgyzstan	..	1	2	..	..
Republic of Moldova	0	1	8	10	..
Russian Federation	2	6	12	13	..
Tajikistan	..	..	1	..	..
Turkmenistan	..	..	7	..	..
Ukraine	1	2	4	5	..
Uzbekistan	..	..	3	3	..

Source: International Telecommunication Union (ITU)

Note: The number of Personal Computers (PC) measures the number of computers installed in a country. The statistic includes PCs, laptops, notebooks etc, but excludes terminals connected to mainframe and mini-computers that are primarily intended for shared use, and devices such as smart-phones that have only some, but not all, of the functions of a PC (e.g., they may lack a full-sized keyboard, a large screen, an internet connection, drives etc).

Table 25

Individuals regularly using the internet, percentage				
Country	1995	2000	2005	2010
Eastern Europe, Caucasus and Central Asia				
Armenia	0.1	1.3	5.3	37.0
Azerbaijan	0.0	0.2	8.0	36.0
Belarus	0.0	1.9	..	31.7
Georgia	0.0	0.5	6.1	27.0
Kazakhstan	0.0	0.7	3.0	34.0
Kyrgyzstan	..	1.0	10.5	20.0
Republic of Moldova	0.0	1.3	14.6	40.0
Russian Federation	0.2	2.0	15.2	43.0
Tajikistan	..	0.1	0.3	11.6
Turkmenistan	..	0.1	1.0	2.2
Ukraine	0.0	0.7	3.8	23.0
Uzbekistan	0.0	0.5	3.3	20.0
South-Eastern Europe				
Albania	0.0	0.1	6.0	45.0
Bosnia and Herzegovina	..	1.1	21.3	52.0
Croatia	0.5	6.6	33.1	60.3
Montenegro	..	..	28.8	52.0
Serbia	..	..	26.3	40.9
The former Yugoslav Republic of Macedonia	0.0	2.5	26.5	51.9
Turkey	0.1	3.8	15.5	39.8
EU 27				
Austria	1.9	33.7	58.0	72.7
Belgium	1.0	29.4	59.8	79.3
Bulgaria	0.1	5.4	20.0	46.2
Cyprus	0.4	15.3	32.8	53.0
Czech Republic	1.5	9.8	35.3	68.8
Denmark	3.8	39.2	82.7	88.7
Estonia	2.8	28.6	61.5	74.1
Finland	13.9	37.3	74.5	86.9
France	1.6	14.3	42.9	80.1
Germany	1.8	30.2	68.7	81.9
Greece	0.8	9.1	24.0	44.4
Hungary	0.7	7.0	39.0	65.3
Ireland	1.1	17.9	41.6	69.9
Italy	0.5	23.1	35.0	53.7
Latvia	..	6.3	46.0	68.4
Lithuania	..	6.4	36.2	62.1
Luxembourg	1.6	22.9	70.0	90.6
Malta	0.2	13.1	41.2	63.0
Netherlands	6.5	44.0	81.0	90.7
Poland	0.7	7.3	38.8	62.3
Portugal	1.5	16.4	35.0	51.1
Romania	0.1	3.6	21.5	39.9
Slovakia	0.5	9.4	55.2	79.4
Slovenia	2.9	15.1	46.8	70.0
Spain	0.4	13.6	47.9	66.5
Sweden	5.1	45.7	84.8	90.0
United Kingdom	1.9	26.8	70.0	85.0
Other high income countries				
Canada	4.2	51.3	71.7	81.6
Iceland	11.2	44.5	87.0	95.0
Israel	0.9	20.9	25.2	67.2
Norway	6.4	26.8	82.0	93.4
Switzerland	3.6	47.1	70.1	83.9
United States	9.2	43.1	68.0	79.0

Source: International Telecommunication Union (ITU)

Note: Data correspond to the percentage of users of internet, usually in an age group of population, depending on the country definition of age group (e.g., 15-74 years old) and reference period (e.g., last three months preceding the survey). Use of internet includes all locations and methods of access.

