

DEMOGRAPHY AND HEALTH IN EASTERN EUROPE AND EURASIA

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Summary of Findings

(1) The Eastern Europe & Eurasia region (EE)¹ is the only region worldwide to have experienced a contraction in population from 1991-2002.

The transition region overall witnessed a contraction in population from 1991-2002 of -0.1%. To contrast, high-income economies witnessed population growth of 0.7% in this period and low-income economies, 2%. The population contraction in the transition region is more pronounced (-0.3%) if one excludes the 6 Muslim-majority transition countries (which experienced population growth of 1.4%). Eighteen of 27 transition countries experienced a contraction in population in this period. The trend in declining population in the transition region was particularly pronounced with the collapse of communism through the mid-1990s.

The transition region had a population of 412 million people in 1990. By 2003, the transition region population had declined to 404 million persons, while world population had increased from 5.3 billion in 1990 to 5.7 billion in 2003. Hence, the transition region experienced a significant drop in the proportion of world population, from 7.8% in 1990 to 6.4% in 2003. The high income economies witnessed a much smaller drop in this period, from 16.9% to 15.5%, while all the developing country regions witnessed increases.

(2) The decline in population in the transition region stems from both a natural decrease in the population (i.e., crude death rates exceeding crude birth rates) and emigration.

Population changes are a function of two dynamics: natural changes in the population (the difference between birth rates and death rates) and migration (immigration or emigration).

The EE region is the only region worldwide that has not experienced a natural increase in population from 1991-2002 (where birth rates exceed death rates), and since 1994, the natural change in the population in the region has been negative. This pattern was the most pronounced in Northern Former Soviet Union (NFSU). The Muslim-majority transition countries are the salient exception in the transition region. From 1991-2002, the six Muslim-majority countries experienced a natural increase in population equal to almost 2%, comparable to the natural increase among the low-income developing countries.

The EE region also experienced emigration on balance from 1991-2002. The only other region worldwide to experience net emigration during this period was Latin America and the Caribbean. Twenty of 27 EE countries experienced emigration from 1991-2002.

(3) A closer look at natural changes in the population reveals the following:

The EE region in 1999-2002 had the lowest **fertility rates** in the world, though roughly comparable to the EMU. A notable distinction, however, is that the low fertility rates in Western Europe have been maintained since at least the 1980s, while the fertility rates in the EE region have dropped dramatically with the onset of the collapse of communism in 1989-1991. Of the 27

¹ See *Appendix* for country group definitions.

EE countries, only the six Muslim-majority transition countries have had fertility rates at replacement rate (2.1 children born per woman) or above.

Consistent with the fertility trends, the Muslim-majority countries have the highest **proportion of youth** among the transition countries; 34% on average in 2002 vs. a transition region average of 20%. The proportion of youth in the Muslim-majority transition countries is roughly comparable to that found in Latin America and the Caribbean (31%), though well below the percentage of youth in Sub-Saharan Africa (44%). The proportion of youth in the CEE countries (17% in the Northern Tier CEE and 19% in the Southern Tier CEE) is comparable to that found in the high-income economies (18%).

All but one transition country (Serbia & Montenegro) witnessed a decrease in the percentage of the **dependent population** from 1990-2002. (The dependent population is the percentage of the total population which is less than 15 years of age or greater than 65 years of age). This decline stemmed from a net effect: the decline in the proportion of youth was greater than an increase in the proportion of the elderly.

The range in **crude death rates** across the transition countries is almost as high as global extremes: the Muslim-majority transition countries have among the lowest crude death rates worldwide (6 deaths per 1,000 in 1999-2002), while the NFSU countries have among the highest crude death rates (15 deaths), though not as high as Sub-Saharan Africa (17 deaths) on average.

All but two regions in the world experienced an increase in **life expectancy** from 1990 to 2002. Only the EE region and Sub-Saharan Africa witnessed a decline; from 70 years to 68 years in EE, and from 50 years to 46 years in Sub-Saharan Africa. The drop in life expectancy in the EE region stemmed from pronounced declines in Eurasia; in fact, life expectancy in the CEE countries increased during this period. The decline in life expectancy in Sub-Saharan Africa, in contrast to that in Eurasia, has been due mostly to large numbers of death from HIV/AIDs.

The highest **life expectancy gender gaps** in the world are found in EE, among the NFSU countries where males on average live 12 years less than females. Worldwide trends are in stark contrast with the EE experience: females worldwide live only 2 years more than males in the low-income developing countries; 4 years more in the middle-income developing countries; and 6 years more in the high-income economies.

The **adult mortality rate** gender gap in the transition region is also the highest worldwide, and within the transition region, it is among the highest in the NFSU countries. In 2002, the male adult mortality rate in the NFSU countries was 432 deaths per 1,000 adults; for females, it was 157 deaths. This means that roughly 43% of 15 year old males in the NFSU countries will die before reaching 60 years of age. Only in Sub-Saharan Africa is the male adult mortality rate higher: 519 deaths per 1,000 in the year 2000. The highest female adult mortality rates in the transition region are in Central Asia; these rates are higher than in most other parts of the world, both in the developing and developed worlds (with the salient exception of the extremely high female mortality rates in Sub-Saharan Africa).

Possible explanations for some of the striking mortality trends in the region, and particularly the gender disparities emerge from an examination of trends in: (a) lifestyle conditions; (b) "non-medical" deaths (such as suicides, homicides and accidents); and (c) infectious diseases such as TB and HIV/AIDS.

The lion's share of deaths in EE are due to **non-communicable diseases**, some of which are due to genetic attributes, though most stem from lifestyle choices (in particular, those related to alcohol, smoking, diet and exercise-related conditions). Non-communicable diseases and injuries may contribute up to 95% of deaths in E&E. Drawing from the World Health Organization (WHO), 55% of EE deaths in 2000 can be attributed directly to **lifestyle diseases**, vs. 40% in the EU-15. In contrast, only 5% of EE deaths were due to infectious, parasitic, maternal and perinatal

conditions, compared to 7% in the EU-15. A broader definition (which includes non-medical deaths including suicides and deaths from accidents and homicides, though also fire and war), increases this proportion to 66% in EE, vs. 56% in the U.S. and 45% in the EU-15 countries. Within the transition region, lifestyle related deaths are highest in the NFSU. Obesity and stress-related deaths, which are particularly high in Ukraine, Russia, Latvia, Belarus and Estonia, make up 71-91% of lifestyle deaths. 71% of elderly Russian adults were either overweight or obese in 2003, an increase from 59% in 1992.

Overall, the proportion of **smokers** and the amount of cigarettes smoked in the transition region (4.1 cigarettes per person per day) is roughly comparable to Western Europe norms (4.3 to 4.7 cigarettes per person per day for countries for which data are available). However, the gender disparity in smoking is much greater in the transition countries than it is in Western Europe. Males in the transition region smoke more than their Western Europe counterparts, while females in the transition smoke much less than Western European females. In EE, 46% of males smoked in 1999-2001 vs. 16% of females. Contrast this with the UK (29% males and 25% females), France (33% and 21%), Denmark (32% and 29%), and Germany (40% and 32%).

Deaths from smoking-related conditions (lung cancer and emphysema) have been lower in EE than in Western Europe. However, smoking-related deaths have increased between 1996 and 2000 in 11 out of the 16 transition countries for which there are data, fueled in part by a rise in smoking among women, particularly in the Northern Tier CEE. Smoking-related deaths have been particularly high in Hungary, Ukraine, and Belarus.

Citizens of the EE countries consume notably less **alcohol** (undifferentiated by the type of alcoholic drinks and excluding home-made liquor) than most of the citizens in the EU-15 countries, roughly a third less (6.5 liters per person in 2001 in EE vs. 9.2 in the EU-15). Persons in the Caucasus and the Central Asian Republics drink much fewer alcoholic beverages (2.5 and 1.4 liters) than the average EE person, and much fewer still than those in the Northern Tier CEE countries (8.7 liters) and the NFSU countries (7.4 liters).

One important aspect that these country averages mask is the differences in alcohol consumption by gender. The Russia Longitudinal Monitoring Survey data underscore this in the case of Russia. Russian males drink far more alcohol than do females. The annual per capita alcohol consumption for Russian males in 2003 was 13.1 liters, while for females it was only 2.1 liters. Earlier years showed even greater differentiation in consumption by gender.

Despite the lower estimates of alcohol consumption in the EE region compared to the EU-15, deaths in 2000 which were directly connected to alcohol (i.e., cirrhosis) were notably higher in EE than in the EU-15 (as well as in the U.S.). There were 24 alcohol-related deaths per 100,000 in EE, vs. 15 in the EU-15 and 9 in the U.S. Alcohol-related deaths were particularly high in Moldova and Hungary (69 and 66, respectively). Alcohol-related deaths increased from 1996 to 2000 in 10 out of the 16 transition countries for which data are available.

Data on Russia show male life expectancy trends tracking very closely and inversely with per capita alcohol consumption in Russia. There is also evidence that suggest that many deaths are indirectly caused by alcohol. Again using data from Russia, there exist a very close correspondence between alcohol consumption in Russia and **external causes of death** (i.e., from injuries, such as those stemming from automobile accidents, and poisoning, primarily alcohol poisoning).

Suicide rates in the EE region are more than twice the rates in the EU-15. Within the transition region, they are highest in the NFSU. In fact, the WHO estimates that the six NFSU (for which data available; i.e., excluding Moldova) in addition to Hungary, Kazakhstan, and Slovenia have the highest suicides worldwide; Finland is 10th. Suicide rates in EE are lowest in the Caucasus, and among the Muslim-majority countries. Suicide rates have been falling throughout the transition region since the mid-to-late 1990s.

According to the WHO mortality database, **infectious, parasitic, maternal and perinatal diseases** were responsible for 5% of EE deaths in 2000 (and of that, only 1.2% due to TB and HIV); vs. 8% and 7% in the US and the EU-15, respectively. Estimates of **HIV prevalence** in the large majority of transition countries remain low by global standards: 23 out of 27 transition countries had rates equal to or less than the EMU average in 2003 (of 0.31 percent of the population). However, from 1997-2003, HIV rates increased more rapidly in the EE than any other region in the world. Yet, only a handful of transition countries have been contributing to this significant increase in recent years.

TB prevalence is far higher in EE than it is in the EU-15, and has increased in the majority of EE countries from 1990 to 2002, while it has decreased in the EU-15 during this period. The incidence of TB was almost 7 times greater in 1999-2002 in EE than in the EU-15 (75 vs. 11 per 100,000 persons). TB is highest in EE in some Muslim-majority countries, some NFSU countries, and Romania; its incidence hence cuts across a wide and unusual variety of transition countries.

(4) A closer look at migration patterns reveals the following:

Political aspects. As a percent of the population, the number of **refugees** originating from the EE from 1992-2002 was comparable to Middle East and North Africa levels, notably fewer than levels in Sub-Saharan Africa, and much higher than all other regions of the world. Over the transition, the number of EE refugees was highest in the mid-to-late 1990s. Far and away, the largest numbers of refugees have been in the Balkans, the Caucasus, and Tajikistan. Among these countries, six transition countries stand out: Bosnia-Herzegovina, Serbia-Montenegro, Croatia, Azerbaijan, Armenia, and Tajikistan. These six countries, in fact, are among the top 20 refugee-producing countries worldwide (population weighted) from 1992-2003, according to UNHCR.

There is a large difference between the number of refugees in the transition region by country of origin, and the number of refugees by country of destination; refugees by transition country of origin are roughly 30% greater than refugees by transition country of destination. This suggests that many refugees have migrated to countries outside the region. Of the top 10 refugee-producing countries in EE in 2002, 59% of the refugees stayed in the EE region, while 21% went to Western Europe and 14% went to the U.S. However, these aggregates mask considerable diversity in destination of refugees by country. For example, within the Balkans, 73% of the refugees from Serbia and Montenegro went to Western Europe, while 93% of refugees from Croatia stayed within EE, while refugees from Bosnia-Herzegovina spread out among EE countries (35%), Western Europe (35%) and the U.S. (25%).

Transition countries which have had the greatest refugees have generally also had the greatest **internally displaced persons (IDPs)**. There have generally been more IDPs than refugees, however. In other words, many more persons who were displaced have stayed within their country's borders than have gone beyond them. Weighted by population, IDPs from 1992-2002 in the transition region have been greatest far and away in Bosnia-Herzegovina (22,167 per 100,000), followed by Azerbaijan (7,127), Georgia (4,637), Serbia-Montenegro (3,612), Croatia (3,355), Tajikistan (2,038), and Armenia (1,809). The average number of IDPs per 100,000 in the top ten transition countries was comparable to the average found in Sub-Saharan Africa from 1992-2002. These orders of magnitude are higher than anywhere else in the world. Bosnia-Herzegovina, Azerbaijan, and Georgia all fall into the world's top 10 IDP-producing countries when weighted by population.

Economic aspects. **Remittances** play a critical economic role in a number of transition countries. However, estimates vary widely, and a more rigorous effort to measure remittances as well as their repercussions needs to be pursued. In this context, according to the World Bank, remittances are highest in three Southern Tier CEE countries: Albania, Bosnia-Herzegovina, and

Serbia-Montenegro (12-13% of GDP). They are estimated by the World Bank to be far lower in the Caucasus countries of Armenia and Georgia (1 and 3% of GDP respectively), and far lower still in the EMU (0.2%). These estimates, at least for the Caucasus, are likely far from the mark. IMF estimates of remittances and private transfers for Armenia, for example, have ranged from 8-9% of GDP from 1998 to 2002, and a USAID-financed study estimates Armenian remittances to be 25% of GDP.

Most of the transition countries conformed to the global trend of **urbanization** (i.e., a growing share of the urban population to the total population) from 1990 to 2002. However, ten transition countries experienced **ruralization** from 1990-2002: most salient are the poorer Eurasian countries of Tajikistan, Moldova, Kyrgyzstan, Uzbekistan, and Azerbaijan, but also included in this trend is Latvia.

One proxy for **brain drain** (or the migration of human capital) might be the trend over time of the proportion of research and development personnel per population. Most transition countries saw a notable decrease in research and development (R&D) personnel from 1994-2001: 11 (out of 18) countries in the transition region saw a decrease in R&D personnel ranging from 9% to 43%. Losses were particularly high in Croatia (43%), Georgia (35%), Bulgaria (33%), and the Ukraine (30%). In contrast, five of the eight Northern Tier CEE countries saw a significant increase in these persons (by 26% in Hungary; 17% in the Czech Republic; 13% in Poland). On the basis of at least this dimension, the EE region has witnessed a growing human capital gap between the Northern Tier CEE and many of the rest of the transition countries. Moreover, compared to the limited data elsewhere in the world, the declines in R&D persons in many of the transition countries are high by global standards.

Human trafficking is widely recognized as a very troubling trend in much of the transition region. However, there are few estimates of the magnitude of the problem, and they vary widely. There is consensus, nevertheless, from a number of sources that there has been a dramatic increase in the women being trafficked from Europe and Eurasia to North America and Western Europe over the past decade. According to the UNECE, Russia, Ukraine, and Moldova in particular have become the main supplying countries from the transition region since the mid-1990s. Estimates on Russia range from 500,000 to 1 million trafficked women since the mid-1990s; for Ukraine, 400,000; for Moldova, 50,000-100,000. Recently these countries have been joined by Albania (over 8,000 trafficked women), Lithuania (several thousand per year), and Central Asia (5,000 from Kazakhstan; 4,000 from Kyrgyzstan) and Romania (no data available).

Finally, one outcome of population change may be changes in **ethnic compositions**, either as a result of natural changes (majority population increases or decreases at a different rate than other populations) and/or migration (majority population migrates at a different rate than other populations). Ethnic majorities constituted 80% of their national populations on average in the transition region in 2002, a slight increase from 79% in 1992. Highest majority ethnic concentration is found in Albania (95%), and Armenia (93%); lowest in Bosnia-Herzegovina (44%), Kyrgyzstan (52%), and Kazakhstan (53%). Ten transition countries have become more ethnically homogenous from 1992 to 2002 (as defined by an increase in the population share of the ethnic majority): Kazakhstan's ethnic homogeneity increased the most (from 40% in 1992 to 53% in 2002), followed by Uzbekistan and Latvia. Only four countries have had a decrease in the population share of the largest ethnic group: Hungary, Slovenia, Bulgaria, and Serbia-Montenegro. There doesn't appear to be a link between the concentration of ethnic majorities and the increase in the concentration of ethnic majorities. More ethnically homogenous countries do not seem to further homogenize any faster than more ethnically heterogeneous countries.