#### Human Capital

Good macroeconomic performance needs to filter down to favorably affect social conditions. To improve the likelihood that reforms and good economic performance are sustained, economic growth needs to be broad-based and, more broadly, the gains at the macro level shared widely at the micro level. At the very least, from an economic standpoint, the deterioration of human capital (of health and education conditions) needs to stop or be prevented if the gains in other transition spheres are to continue.

Economic growth and poverty. Available evidence suggests that the resumption of economic growth in the transition region has had, not surprisingly, some favorable effects on at least certain aspects of human capital. One such apparent affect has been the reduction of poverty. Figures 25-31 show the latest poverty rate data from the World Bank for a series of transition countries. The poverty rate is defined as the percentage of the population which falls below an absolute poverty line of \$2.15 a day in purchasing power parity terms. Also included in Figures 25-31 are economic growth time series to facilitate observations regarding the relationship between economic growth and poverty rates.

While poverty rates vary widely across the countries, some common observations regarding the trends over time emerge: (1) poverty rates do appear to be responsive to economic growth across all the countries examined; i.e., there is at least an apparent inverse relationship between the two (not accounting for possible exogenous influences), rising growth corresponds to falling poverty; (2) the time series are consistent with the contention that there may be some minimum threshold of growth before poverty responds and declines, perhaps close to 5% annual economic growth. In other words, if an economy can continue to expand at 5% or more, then the poverty rate is likely to fall; and (3) in some but not all countries, urban poverty appears to be more responsive to economic growth than rural poverty. The extreme cases in this regard are Georgia and Armenia, where rural poverty rates actually increased in 2003 despite high and increasing economic growth.

Labor markets. 16 With resumption of economic growth, real wages have been increasing or recovering across the three sub-regions (*Figures 32-34*). Real wages have been increasing in CEE since 1993 and in Eurasia since 1995. They are highest relative to 1989 levels in the Southern Tier CEE (115% of 1989 levels), lowest in Eurasia (75%), and somewhere in between in the Northern Tier CEE (98%). Employment levels are lower today than in 1989 in all three sub-regions. They are lowest in the Southern Tier CEE (roughly 70% of 1989 employment levels), highest in Eurasia (90%), and somewhere in between in the Northern Tier CEE (80%).

Hence, labor markets have been adjusting quite differently in the CEE as compared to Eurasia. In the CEE (both Southern Tier and Northern Tier), these markets have been adjusting along both price and quantity dimensions. The greatest adjustments on both dimensions have occurred in the Southern Tier CEE (with the largest increase in real wages and the largest decrease in employment), but considerable change in both

dimensions has also taken place in the Northern Tier CEE. In contrast, most all of the labor market adjustments in Eurasia have taken place via the price mechanism; i.e., via real wages, with employment levels changing very little.

The regional (labor force survey) unemployment rates are consistent with these employment trends. Highest open unemployment rates are in the Southern Tier CEE countries (where the decrease in employment has been the greatest), while the lowest unemployment rates are in Eurasia (where the fall in employment rates has been the lowest) (*Table 9*). Most labor force survey unemployment rates in Eurasia are single digit figures, including unemployment rates in Uzbekistan, Russia, Kazakhstan, Ukraine, and Moldova. The salient Eurasian exception in this regard is Armenia where the unemployment rate is closer 32%. In contrast to the Eurasian trend, most unemployment rates in the Southern Tier CEE are very high; and highest in Macedonia (37%), Serbia & Montenegro (21%) and Bosnia-Herzegovina (16%). Unemployment rates in two Northern Tier CEE countries have also remained very high: in Poland (19%), and Slovakia (18%).

However, the sub-regions are less distinguishable by different trends over time in the unemployment rates (*Figures 35-39*). Particularly with the resumption of economic growth in the late 1990s, a number of transition countries across the three sub-regions have been experiencing falling unemployment rates. This includes Northern Tier CEE countries (Lithuania, Latvia, and Estonia), Southern Tier CEE (Bulgaria and Croatia), as well as Eurasia (Ukraine, Georgia, Russia, and Kazakhstan). However, there are almost as many countries still witnessing rising unemployment, again including countries across the three sub-regions. In the Northern Tier CEE, this includes Poland, the Czech Republic, and Slovakia. In the Southern Tier CEE: Macedonia, Romania, Serbia & Montenegro; in Eurasia: Armenia and Moldova.

Education. <sup>18</sup> High primary school enrollments have been maintained across the subregions, and tertiary enrollments have been increasing since the mid-1990s, though much more so in the Northern Tier CEE than in the Southern Tier CEE and Eurasia (*Figure 40*). Of the three levels of education, enrollments in secondary school have generally been the most adversely affected in the transition region in the 1990s. Most of the deterioration in secondary school enrollments has occurred in Eurasia (*Figure 41* and *Table 10*). However, these enrollment trends may have recently bottomed out in Eurasia, by 2001 on average. To contrast, secondary school enrollments recovered much sooner in CEE: in 1992 in the Northern Tier and in 1994 in the Southern Tier. Moreover, the Southern Tier CEE enrollments have seen a particularly strong recovery or upturn more recently, starting in 2001.

Most of the deterioration in secondary school enrollments in Eurasia has been in vocational and/or technical schools (*Figures 42* and *43*). In fact, general secondary enrollment trends across the three sub-regions are quite similar. Given the overspecialization that took place prior to communism's collapse, this distinction in trends between components of secondary school enrollments in Eurasia may mitigate the concern about the drop in total enrollments. In other words, the disproportionate drop in

enrollments in vocational and/or technical schools in Eurasia may be desirable, though this line of thought needs to be further explored.

Literacy rates as traditionally defined are uniformly high in the transition region by world standards. The World Bank reports that male adult literacy rates in the transition region averaged 98% in 2002 and 94% for females. <sup>19</sup> This compares with world averages of 80% male literacy and 73% female; and for low income developing countries of 68% male and 48% female.

However, "functional" literacy, or how well students and adults can function in a market economy given their formal and informal education, may be a more relevant measure of the quality of education in the transition region. The conventional wisdom has been that educational aspects of human capital in the former communist countries were largely an asset going into the transition. It has also been widely perceived that the type of education in the communist countries (with emphases on memorization at the expense of analytical and critical thinking, and perhaps premature specialization if not overspecialization) may be ill-suited for the needs of a market economy.

Figure 44 shows an effort by the OECD to measure functional literacy in the region and compared to standards worldwide. The Program for International Student Assessment (or PISA) attempts to focus on how well students, aged approximately fifteen, use knowledge in reading, mathematics, and science to meet real-world challenges. The OECD conducts the assessment every three years; two have so far been conducted, in 2000 and 2003. Forty-five countries have participated in at least one of the PISA surveys. Of these, eleven belong to the transition region—five from the Northern Tier CEE, five from the Southern Tier CEE, and Russia.

As shown in *Figure 44*, there are roughly three levels of outcomes in the transition sample: (1) the five Northern Tier CEE countries are all OECD standard; (2) Russia followed by Bulgaria, Romania, and Serbia & Montenegro perform at a middle level, well below OECD standards, comparable to Thailand; and (3) Macedonia and Albania score much lower still, comparable to Tunisia, Indonesia, and Brazil. While Russia is to date the only Eurasian country to take part in the PISA, new countries in the next round in 2006 are to include Azerbaijan, Kazakhstan, and Kyrgyz Republic (as well as Slovenia, Lithuania, Estonia, and Croatia).

The PISA surveys also provide data which help explain why performances across countries vary. For example, close to twenty percent of the students polled in the OECD countries claimed to be hindered either "somewhat" or "a lot" as a result of poor heating or cooling or lighting. In contrast, a much higher percentage of students in Macedonia and particularly in Russia and Albania contend that they are hindered by these constraints, roughly one-half of students in Russia and Albania. The data show that a lack of instruction materials pose a considerably larger constraint than poor heating, cooling, and lighting for students surveyed in the transition countries. A very high percentage of students surveyed in Russia, Albania, Latvia, Romania, and Macedonia

contended that a lack of instruction material was an obstacle towards learning, ranging from 65% in Russia to 46% in Macedonia.

Health. <sup>20</sup> Despite largely favorable macroeconomic trends across the three transition sub-regions, and a turnaround in many social conditions in most countries (some of which were noted above), there are not yet signs of improvement in some key health trends, particularly in Eurasia. Perhaps the most basic health indicator, and the most alarming, is life expectancy. *Figure 45* shows the trends over time by the three subregions in life expectancy, and highlights what appears to be a growing health gap between CEE and Eurasia. After an initial and slight decline in life expectancy in the CEE countries, life expectancy has been increasing, since 1992 in the Northern Tier and 1994 in the Southern Tier. In contrast, life expectancy in Eurasia fell much more drastically early on in the transition to 1994, recovered some through 1998 and since then, has remained steady at sixty-seven and a half through 2004 (latest year of data available).

Only four of twelve Eurasian countries had a higher life expectancy in 2004 than in 1990: Azerbaijan; Armenia; Georgia; and Tajikistan (*Table 11*). Only one CEE country, Bulgaria with a life expectancy of seventy-two years in 1990 and 2004, did not see an increase in life expectancy during this period.

Why is the health gap growing? Mortality rates among infants and children do not seem to explain the growing health gap. Under five and infant mortality rates are lower today than at the outset of the transition in a large majority of transition countries, CEE and Eurasia (*Figure 46* and *Table 10*). In the Northern Tier CEE countries, infant mortality rates (IMRs) have more than halved since 1990: from fifteen deaths per 1,000 live births in 1990 to seven deaths in 2004. In the Southern Tier CEE, the drop has been from twenty-one deaths in 1990 to fourteen deaths in 2004.

While infant mortality rates are much higher in some of the poorer Eurasian countries, the trend of declining IMRs generally holds in Eurasia as well as in CEE. Only two Eurasian countries did not have lower infant mortality rates in 2004 compared to 1990: Kazakhstan's IMR in 2004 was sixty-three deaths per 1,000 live births vs. fifty-three deaths in 1990; Turkmenistan's IMR in 2004 was what it was in 1990, namely eighty deaths per 1,000 live births. Trends in under five mortality rates mirror very closely infant mortality rates: only two transition countries saw an increase in under five mortality rates from 1990 to 2004: Kazakhstan (from sixty-three deaths per 1,000 children to seventy-three deaths) and Turkmenistan (from ninety-seven deaths to 103 deaths).

Trends in adult mortality rates shed light on the growing CEE-Eurasia health gap (*Table 12*). Nine of twelve Eurasian countries witnessed an increase in both male and female adult mortality rates from 1990 to 2004; only one Eurasian country (Armenia) had a decrease in both male and female adult mortality rates during this period. Ten of thirteen CEE countries witnessed a decrease in adult mortality rates in this period; only one CEE

country (Lithuania) witnessed an increase in both male and female adult mortality rates from 1990 to 2004.

Male adult mortality rates in the transition region are much higher than female adult mortality rates. In fact, the adult mortality rate gender gap in the transition region is the highest worldwide, and within the transition region, it is among the highest in the Northern Former Soviet Union countries (NFSU). In 2002-2004, the male adult mortality rate in the NFSU countries was 353 deaths per 1,000 adults; for females, it was 126 deaths. This means that roughly 35% 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.

Similarly, the highest life expectancy gender gaps (*Figure 47*) in the world are found in Eastern Europe and Eurasia, among the NFSU countries where males on average live 12 years less than females. Moreover, this gap is larger today than in 1990. Worldwide trends are in stark contrast with the Eastern Europe and Eurasia experience: females worldwide live only two years more than males in the low-income developing countries, and about five years more in the middle-income developing countries and six years more in high-income economies. The life expectancy gender gaps in other parts of the world have held steady or even declined some since 1990.

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 Eastern Europe and Eurasia 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) (*Figures 48-51*). Drawing from the World Health Organization (WHO), 61% deaths in the NFSU countries in 2003 can be attributed directly to lifestyle diseases, vs. 40% in the EU-15. In contrast, only 4% of NFSU country 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 these proportions to 74% in the NFSU, vs. 45% in the EU-15 countries (and 56% in the U.S.). Obesity and stress-related deaths, which are particularly high in Ukraine, Russia, Latvia, Belarus and Estonia, make up 71-91% of lifestyle deaths. Seventy-one percent of elderly Russian adults were either overweight or obese in 2003, an increase from 59% in 1992.

<u>Lifestyle conditions</u>. Data on smoking and drinking underscore some of these concerns. 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 (*Figure 52*). 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 Eastern Europe and Eurasia, 43% of males smoked in 2002-2005 vs. 15% of females. Contrast this with the UK (28% males and 24% females), France (30% and 21%), and Denmark (28% and 23%).

WHO data suggest that citizens of the transition countries actually consume notably less alcohol than most of the citizens in the EU-15 countries, roughly a third less (6.5 liters per person in 2001 in E&E vs. 9.2 in the EU-15). According to the WHO data, persons in the Caucasus and the Central Asian Republics drink much fewer alcoholic beverages (2.5 and 1.4 liters) than the average E&E person, and much fewer still than those in the Northern Tier CEE countries (8.7 liters) and the NFSU countries (7.4 liters).

However, these data do not differentiate between types of alcoholic drinks; nor do these figures include home made liquor or illegal production. When one accounts for these considerations, at least in the case of Russia, the picture changes dramatically. Estimates of consumption of (legal and illegal) alcohol in Russia (and excluding beer which is not considered alcohol according to Russian legislation) are closer to 15 liters per person per year; roughly half of this consumption is from illegally produced alcohol.

Another important aspect that the WHO 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. According to the survey, 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.

Data on Russia show male life expectancy trends tracking very closely and inversely with per capita alcohol consumption in Russia (*Figure 53*). 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) (*Figure 54*).

Suicide rates in the E&E region are more than twice the rates in the EU-15 (*Figure 55*). Within the transition region, they are highest in the NFSU. In fact, the WHO estimates that the six NFSU (for which data are available; i.e., excluding Moldova) in addition to Hungary, Kazakhstan, and Slovenia have the highest suicide rates worldwide; Finland is 10<sup>th.</sup> Suicide rates in E&E are lowest in the Caucasus, and among the Muslim-majority countries. Suicide rates have been falling throughout the transition region since the midto-late 1990s.

<u>Infectious diseases</u>. According to the WHO, infectious, parasitic, maternal and perinatal diseases were responsible for three to five percent of E&E deaths in 2003; vs. seven percent in the U.S. and the EU-15. Estimates of HIV prevalence in the large majority of transition countries remain low by global standards: twenty out of twenty-six transition countries had rates equal to or less than the EU-15 average in 2005 (of 0.27 percent of the population) (*Table 13*). However, from 1997-2005, HIV rates increased more rapidly in

the E&E than any other region in the world. Yet, only a handful of transition countries have been contributing to this significant increase in recent years; Ukraine, Russia, Estonia, Moldova, and Latvia in particular (*Figure 56*). *Figure 57* puts the global trends in perspective by underscoring how much more problematic HIV has been in Sub-Saharan Africa relative to anywhere else worldwide.

Tuberculosis prevalence is far higher in E&E than it is in the EU-15, and is currently higher in the majority of E&E countries than in 1990 while it has decreased in the EU-15 during this period (*Figure 58*). The incidence of TB was almost seven times greater in 1999-2002 in E&E than in the EU-15 (seventy-five vs. eleven per 100,000 persons). TB is higher in Eurasia than in CEE, and highest in the Central Asian Republics. TB incidences have been falling in CEE since at least the late 1990s. The trend is less clear in Eurasia.

<u>Demography</u>. Finally, *Figures 59-61* highlight the rather unique and troubling demographic picture in Eastern Europe and Eurasia. While the range in crude death rates and fertility rates is very large across the transition countries, some transition countries have among the highest crude death rates worldwide along with among the lowest fertility rates worldwide. This combined with emigration in many countries has contributed to the contraction of population (as shown in *Figure 61*).

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, while the NFSU countries have among the highest crude death rates; only such death rates in Sub-Saharan Africa are higher (*Figure 59*). Crude death rates have held steady or fallen in much of the world since 1990, with two regional exceptions: these rates increased in Sub-Saharan Africa and in the transition region.

The fertility rates in the E&E region are well below replacement rate overall and in fact are lowest worldwide (*Figure 60*).<sup>24</sup> In 1999-2004, the average fertility rate in E&E was 1.6 children per woman. As with crude birth rates, only the advanced industrial economies have fertility rates comparably low: 1.7 in the high income economies; 1.5 in the EMU. A notable distinction, however, is that these low fertility rates in the advanced industrial economies have been maintained since at least the 1980s, while the fertility rates in the E&E region have dropped significantly since the 1980s, and particularly with the onset of the collapse of communism.

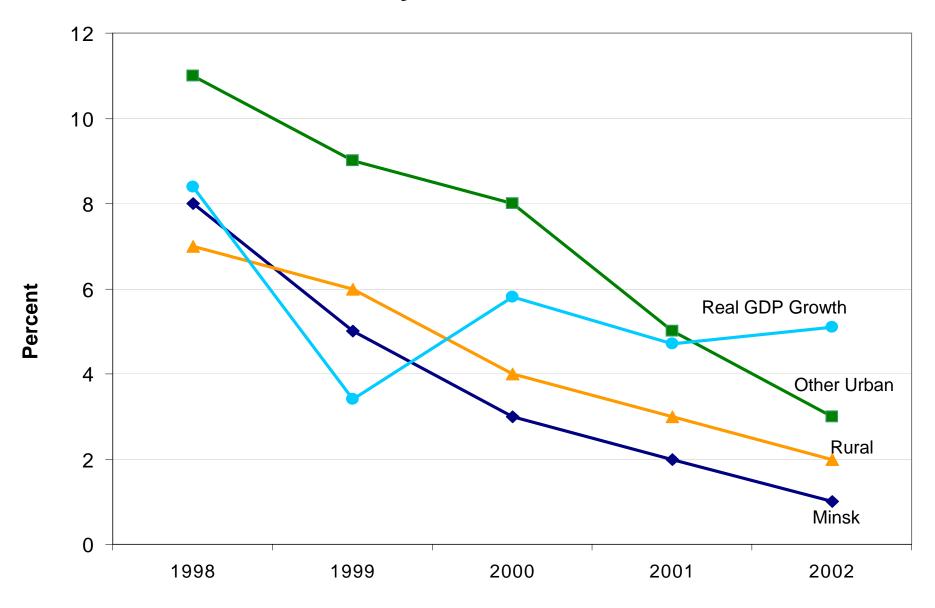
While fertility rates have been falling across the transition countries, there remains wide variation in the rates between transition countries: they are lowest in CEE and in the NFSU (1.4 children per woman in each country group); and highest among the Muslimmajority countries (2.6 children per woman, which is comparable to fertility rates in parts of the developing world, though nowhere near the rates in Sub-Saharan Africa, 5.4). The Muslim-majority countries are the outliers or exceptions to the general E&E trend, with fertility rates which are much higher than in the rest of the transition countries, even though the rates have been falling even more significantly than in the rest. In fact, the

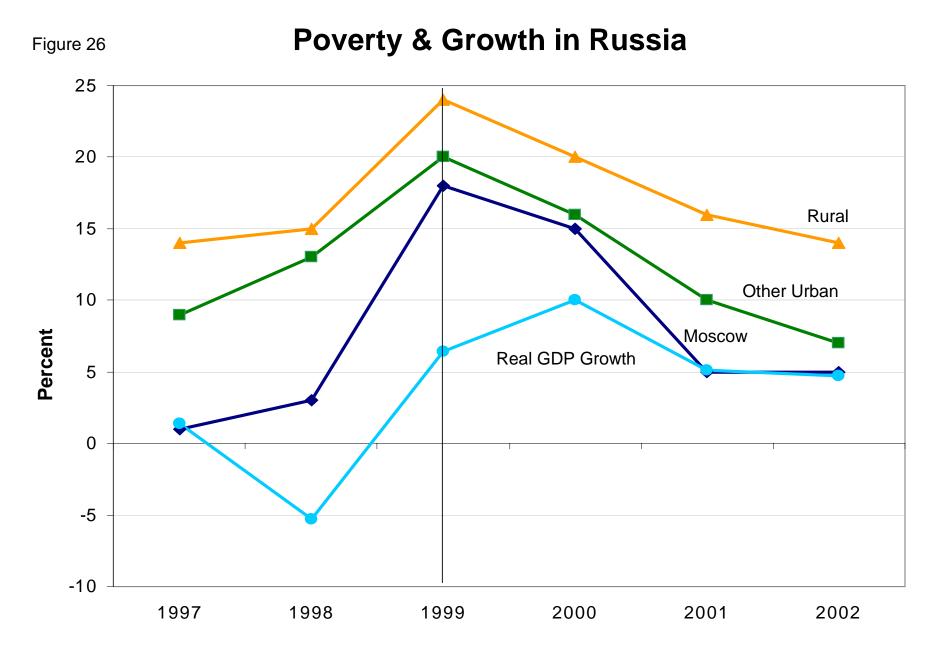
only transition countries which have fertility rates above replacement rates are the six Muslim-majority countries.

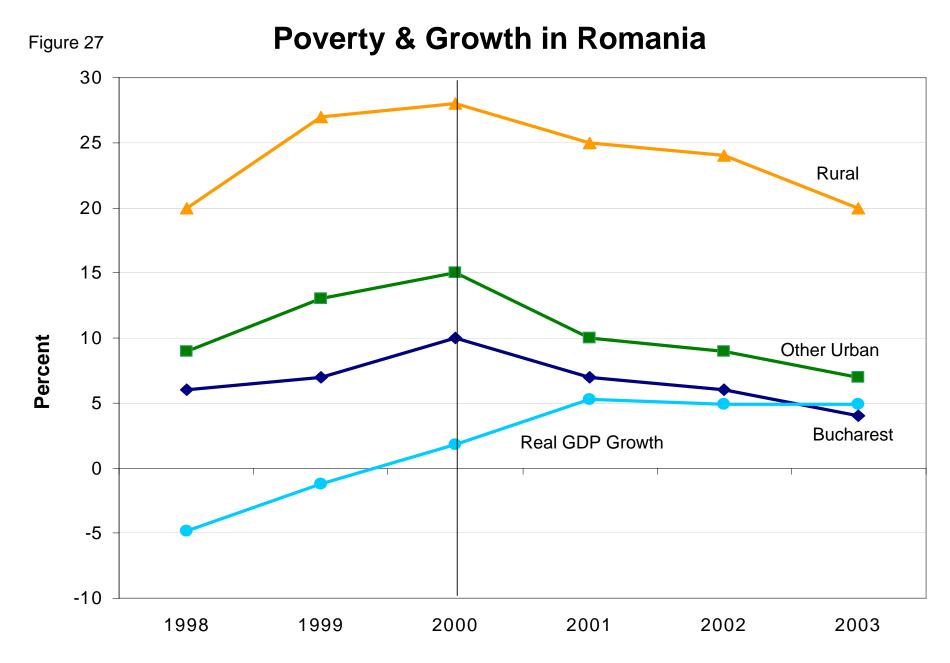
Both emigration and a natural decrease in population (i.e., death rates exceeding birth rates) have contributed to an overall contraction in population in Europe and Eurasia each year since 1995 (*Figure 61*). During this time period, all other regions in the world have experienced expanding populations, ranging from a small increase in Western Europe (0.3% average annual) to closer to 2.5% increase in Sub-Saharan Africa. Similarly, E&E is very much a global extreme when compared with the rest of the world differentiated by level of income. Population growth has been falling in low-income, middle-income, and high-income countries worldwide, though all groups have maintained, in contrast to the E&E region, on balance positive population growth.



## **Poverty & Growth in Belarus**

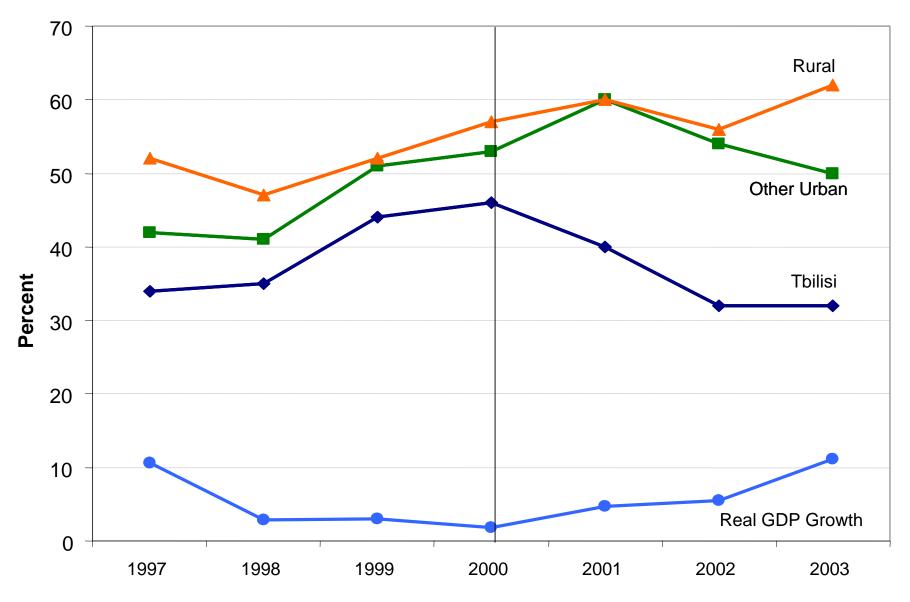


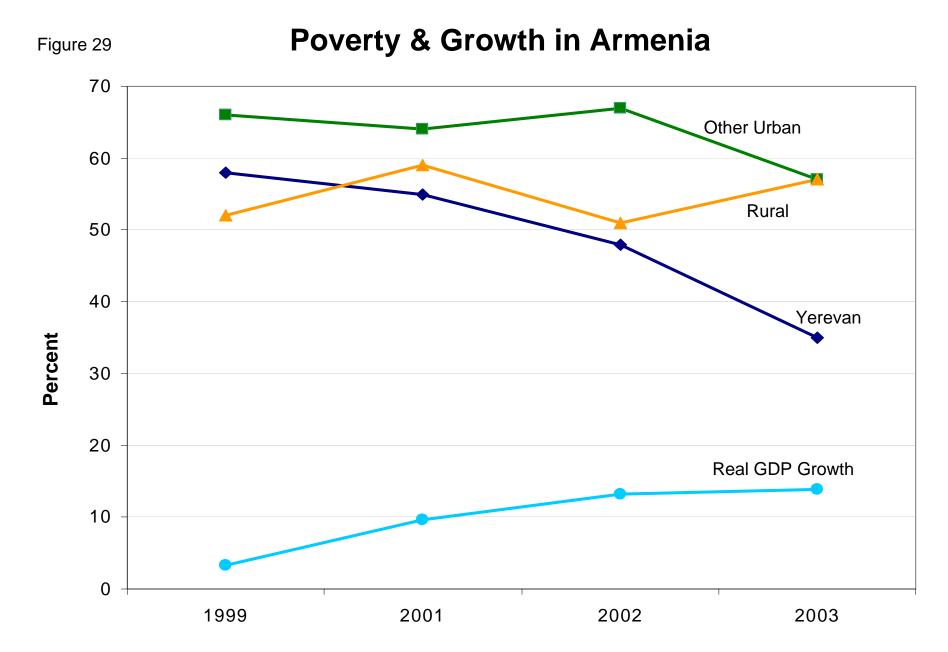


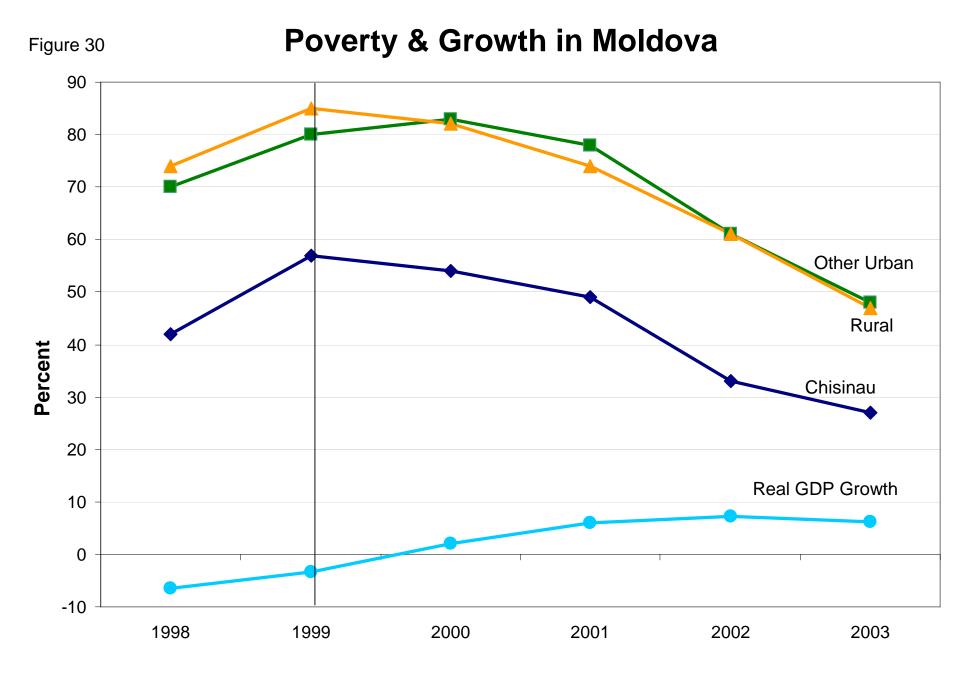


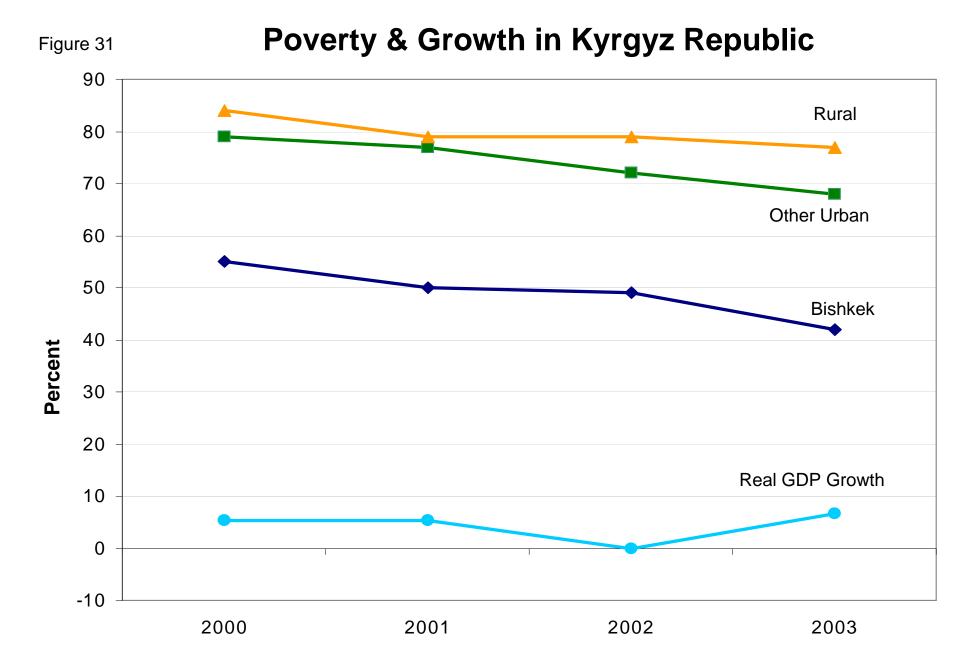


## **Poverty & Growth in Georgia**

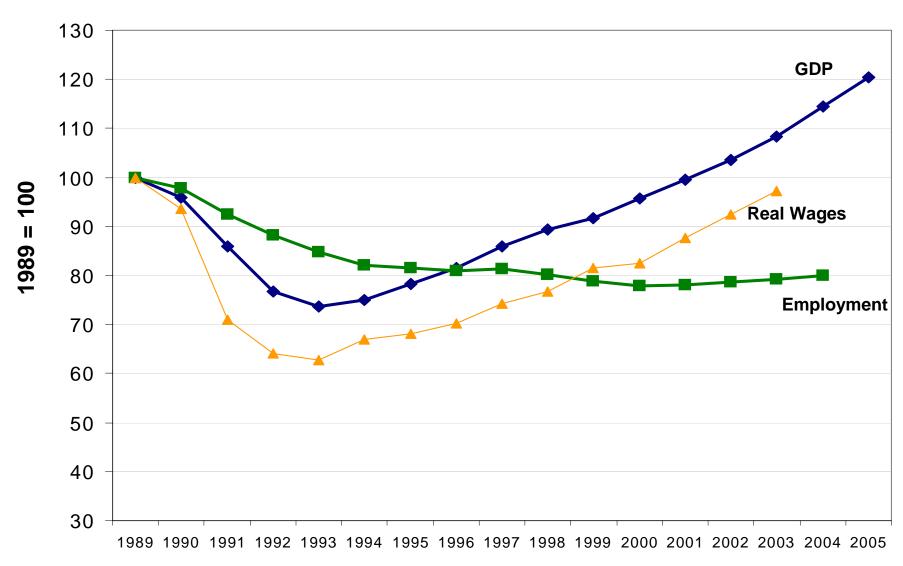








Output & Employment in Northern Tier CEE (as % 1989)



Output & Employment in Southern Tier CEE (as % 1989)

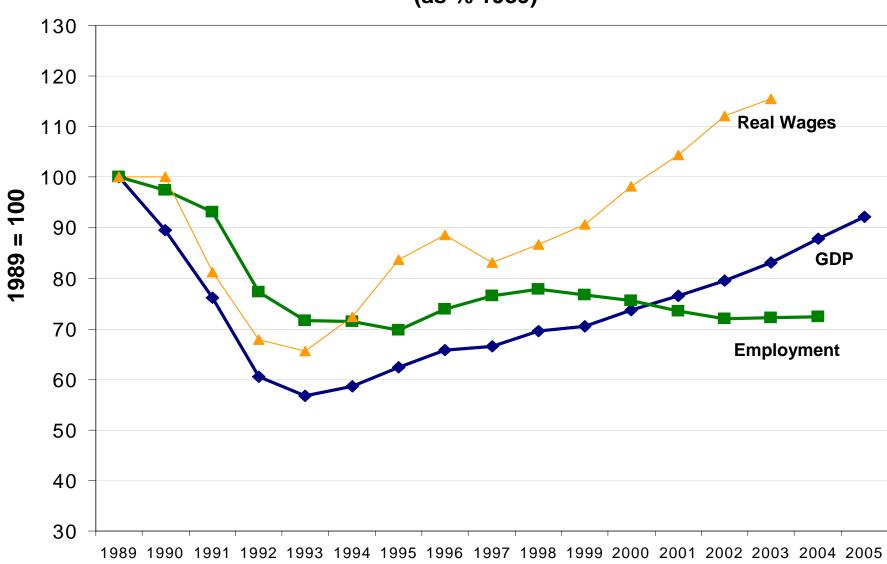
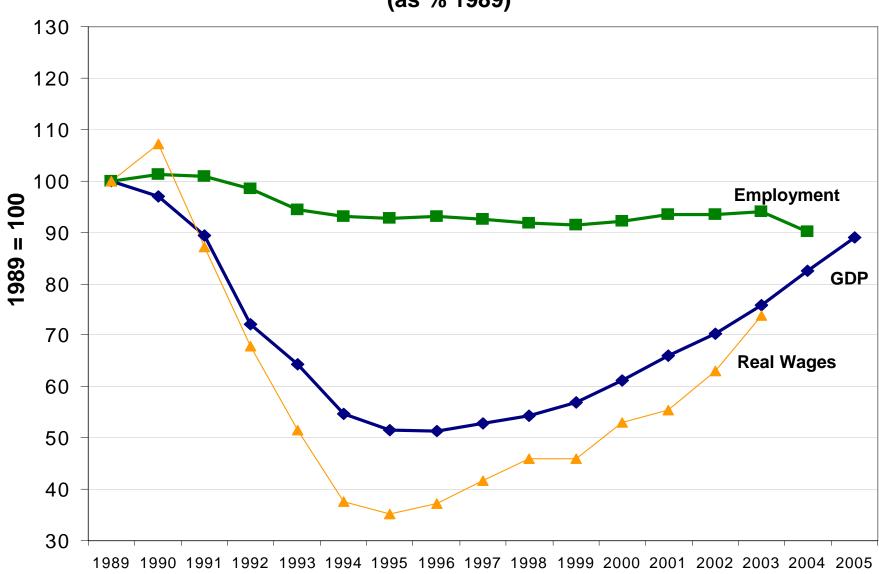


Figure 33





EBRD, Transition Report 2005 (November 2005). UNICEF, TransMONEE Database (December 2005).

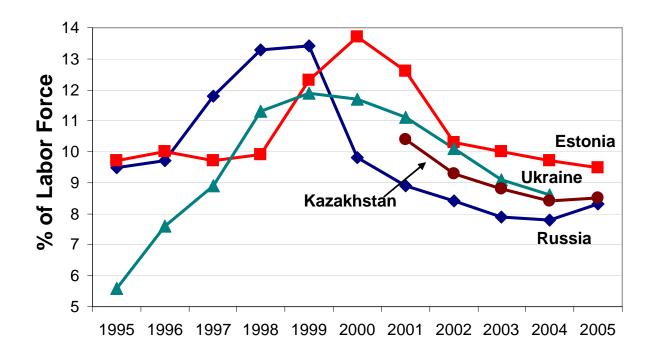
Figure 34

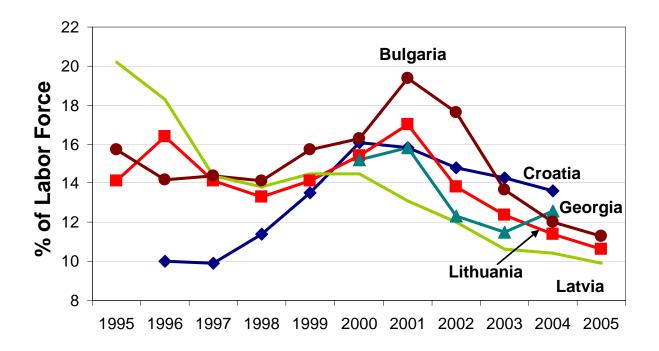
TABLE 9. LABOR FOR	CE SU	RVEY	UNEME	PLOYN	IENT R	ATE (l	JNEME	PLOYE	D AS %	OF L	ABOR	FORCE)
	<b>5</b> _ <b>5</b>		· · · ·			(				<u>.</u>		
	1990	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	Q1 2005
UZBEKISTAN								6.0				
SLOVENIA		7.4	7.3	7.1	7.7	7.4	7.2	5.9	5.9	6.7	6.3	6.9
HUNGARY		10.2	9.9	8.7	7.8	7.0	6.4	5.7	5.8	5.9	6.1	7.1
ROMANIA	1.3	8.0	6.7	6.0	6.3	6.8	7.1	6.6	8.4	7.0	8.0	
RUSSIAN FEDERATION		9.5	9.7	11.8	13.3	13.4	9.8	8.9		7.9	7.8	8.3
CZECH REPUBLIC		4.0	4.1	5.4	7.3	9.0	8.8	8.1	7.3	7.8	8.3	8.4
KAZAKHSTAN								10.4	9.3	8.8	8.4	8.5
UKRANIE		5.6	7.6	8.9	11.3	11.9	11.7	11.1	10.1	9.1	8.6	
ESTONIA	0.6	9.7	10.0	9.7	9.9	12.3	13.7	12.6	10.3	10.0	9.7	9.5
MOLDOVA						1.1	8.5	7.3	6.8	7.9	8.1	9.6
LATVIA		20.2	18.3	14.4	13.8	14.5	14.5	13.1	12.0	10.6	10.4	9.9
KYRGYZ REPUBLIC									12.5	9.9		
ALBANIA									10.3			
LITHUANIA		14.1	16.4	14.1	13.3	14.1	15.4	17.0	13.8	12.4	11.4	10.6
AZERBAIJAN										10.7		
BULGARIA	21.4	15.7	14.2	14.4	14.1	15.7	16.3	19.4	17.6	13.7	12.0	11.3
TAJIKISTAN						16.0			12.0			
GEORGIA							15.2	15.8	12.3	11.5	12.6	
CROATIA			10.0	9.9	11.4	13.5	16.1	15.8	14.8	14.3	13.6	
BOSNIA-HERZEGOVINA								16.1				
SLOVAKIA		13.1	11.3	11.8	12.5	16.2	18.6	19.2	18.5	17.4	18.1	17.5
POLAND	13.5	13.3	12.3	11.2	10.5	13.9	16.1	18.2	19.9	19.6	19.0	18.9
SERBIA & MONTENEGRO		13.4	13.2	13.8	13.7	13.7	12.6	12.8	13.8	20.8		
ARMENIA					27.3	24.4		31.0	29.0	31.2	31.6	
MACEDONIA			31.9	36.0	34.5	32.4	32.2	30.5	31.9	36.7	37.2	
BELARUS												
TURKMENISTAN		44.	40.0	40.0	40.1	40 =	40 =	40.0	40.1	40.0	40.0	
CEE & EURASIA		11.1	12.2	12.2	13.4	13.5	13.5	13.9	13.4	13.3	13.2	10.5
NORTHERN TIER CEE		11.5	11.2	10.3	10.4	11.8	12.6	12.5	11.7	11.3	11.2	11.1
ADVANCED ECONOMIES	6.5	7.0	7.1	6.9	6.8	6.4	5.8	5.9	6.4	6.6	6.6	
USA	5.6	5.6	5.4	4.9	4.5	4.2	4	4.8	5.8	6.0	6.0	
EU-15	6.9	9.9	9.8	9.2	8.4	7.6	6.8	6.2	6.5	7.0	7.0	

UNECE, *Trends in Europe and North America 2003 and 2005* (2003 and 2005), ILO *LABORSTA* (2005), IMF World Economic Outlook (April 2004) World Bank, Albania Country Economic Memorandum, Sustaining Growth Beyond the Transition (2004).



## Labor Force Survey Falling Unemployment Rates



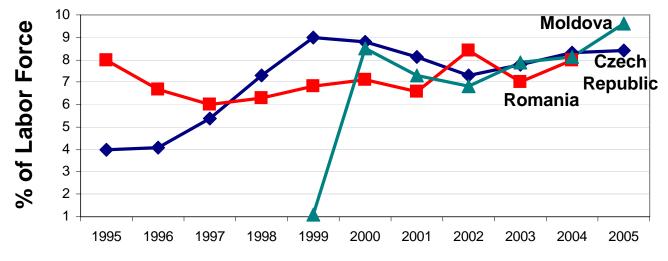


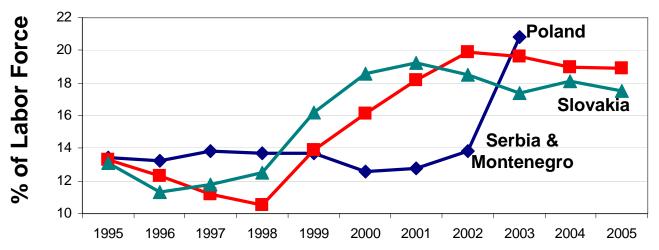
UNECE, Trends in Europe and North America (2003 and 2005); and National Surveys.



Figures 37-39

# Labor Force Survey Rising Unemployment Rates





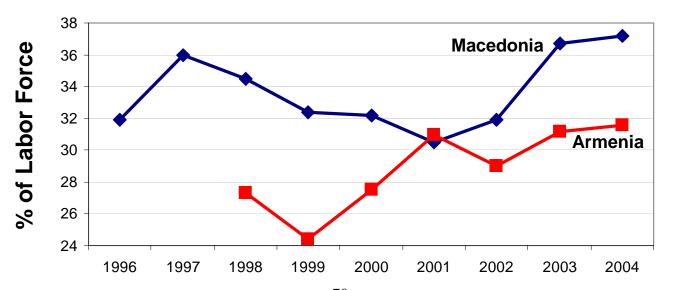


Figure 40

# **Primary & Tertiary Enrollment**

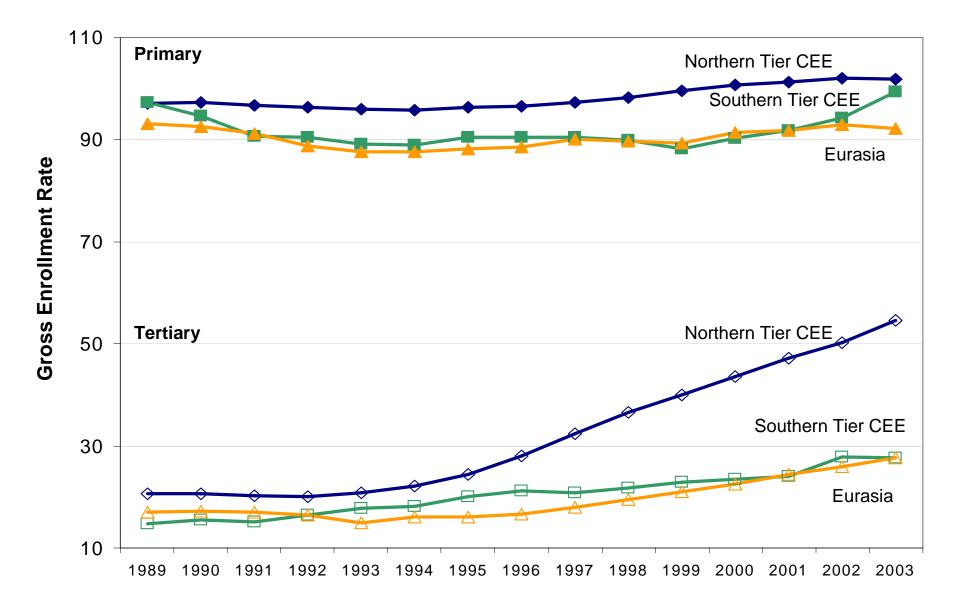


Figure 41

## **Total Secondary Enrollment**

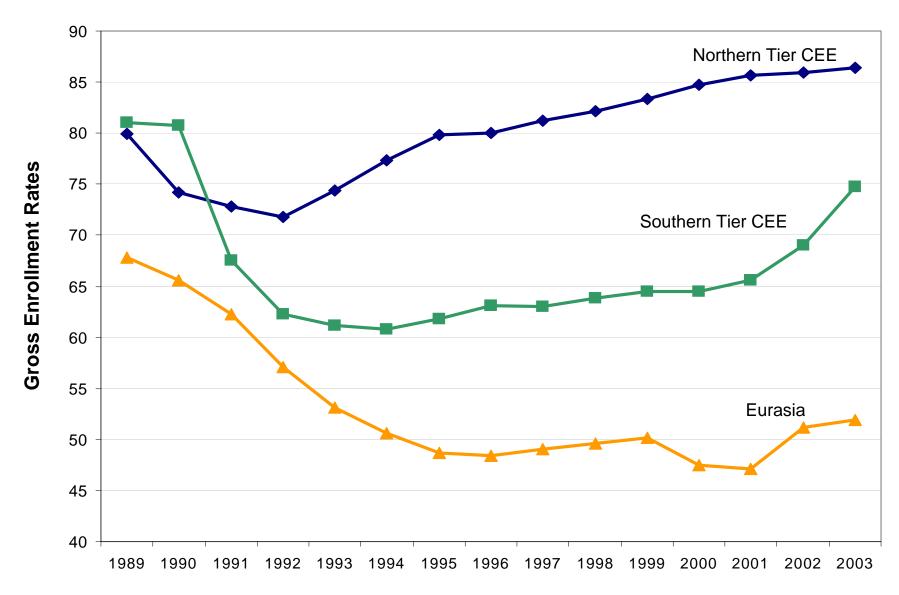
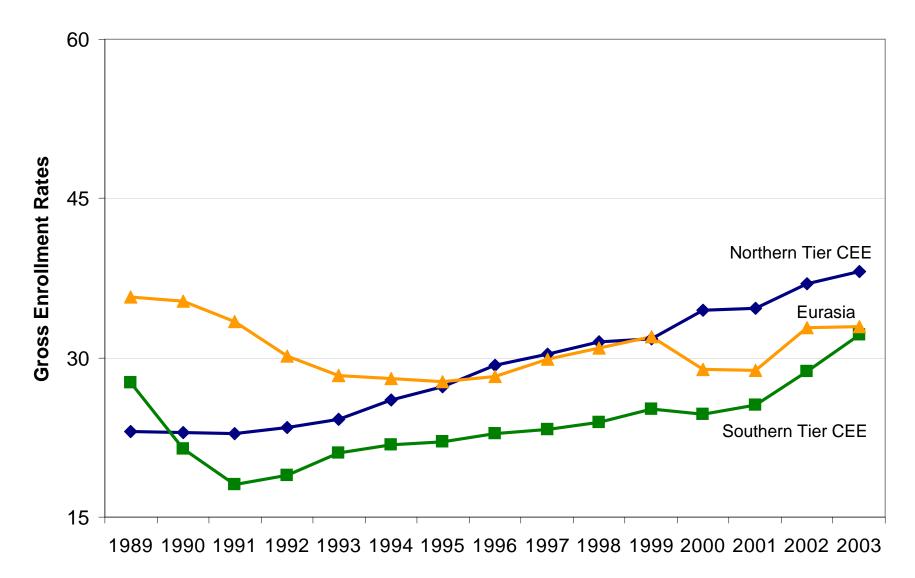


Figure 42

## **General Secondary Enrollment**





## **Vocational/Technical Enrollment**

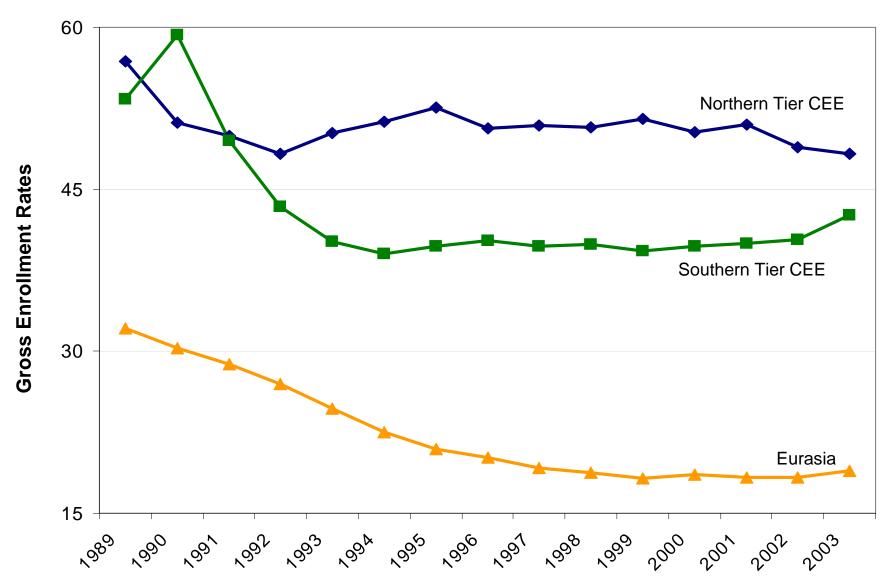
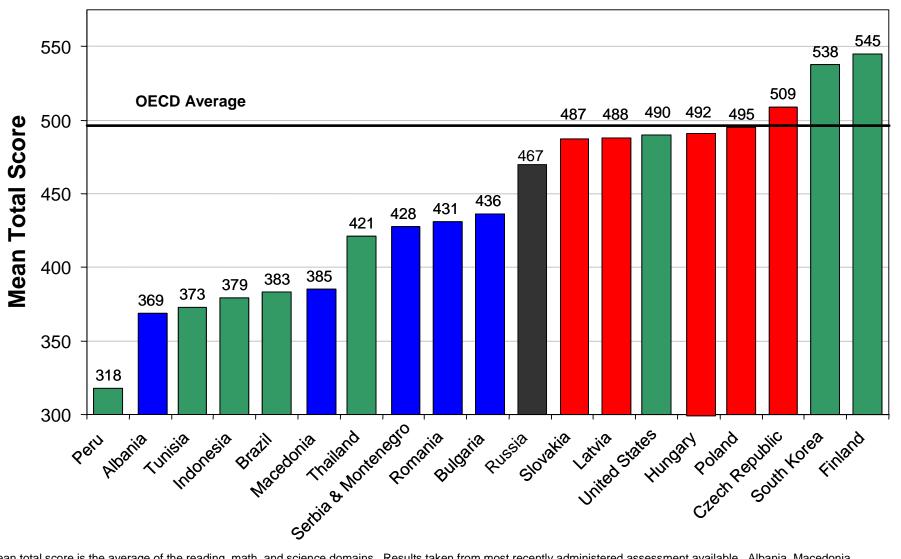


Figure 44

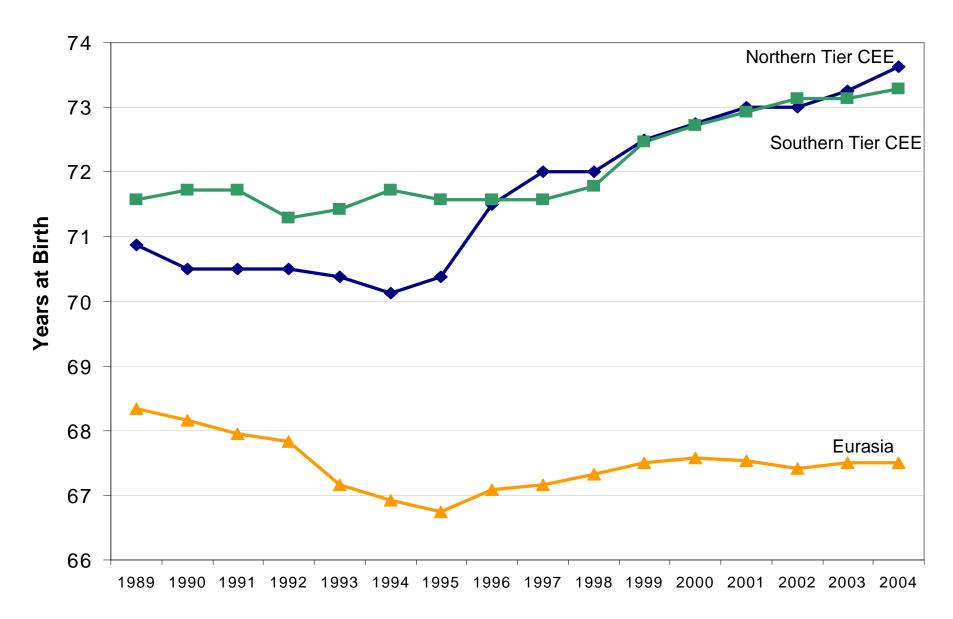
## **Functional Literacy (PISA)**



Mean total score is the average of the reading, math, and science domains. Results taken from most recently administered assessment available. Albania, Macedonia, Romania, and Bulgaria use PISA 2000; Serbia & Montenegro, Russia, Slovakia, Latvia, Hungary, Poland, Czech Republic, the OECD, and all non-E&E, excepting Peru, countries use PISA 2003. OECD, Literacy Skills for the World of Tomorrow: Further Results from PISA 2000 (2003). OECD, Learning for Tomorrow's World: First Results from PISA 2003 (2004).



# Life Expectancy at Birth





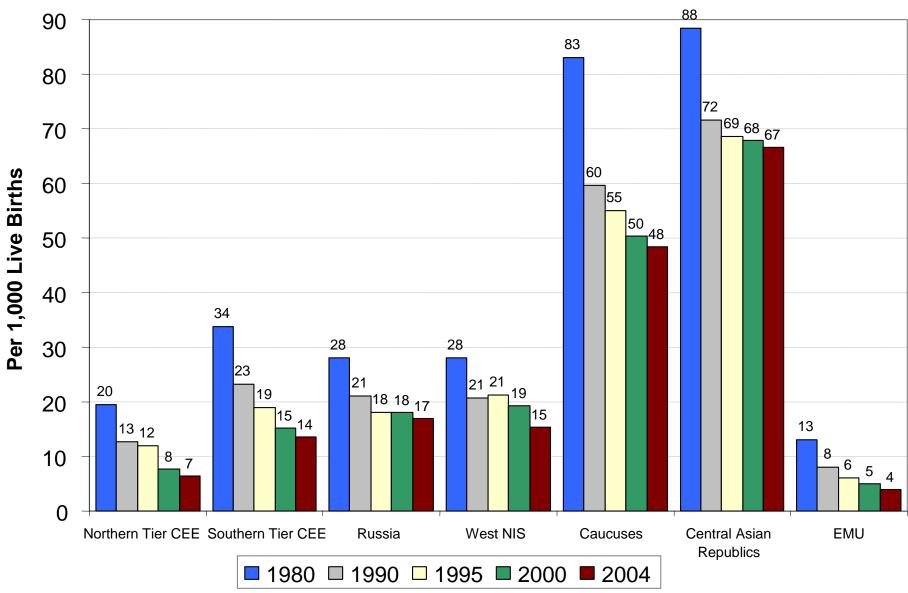


TABLE 10. INDICATORS OF SUSTAINABILITY: HUMAN CAPITAL											
	SECONDARY SCHOOL ENROLLMENT (gross, % age 15-18) 2003		SECONDARY SCHOOL ENROLLMENT (gross, % age 15-18) 1989	UNDER 5 MORTALITY (per 1,000) 2004		UNDER 5 MORTALITY (per 1,000) 1990	PER CAPITA INCOME (PPP, \$) 2005	OME PP, \$)			
SLOVENIA	100.5	5.0		4	5.0	10	19,902	5.0			
CZECH REPUBLIC	91.7	4.5	79.2	4	5.0	13	16,286	4.5			
HUNGARY	99.3	5.0	72.6	8	4.5	17	14,421	4.0			
SLOVAKIA	86.0	4.0	79.0	9	4.5	14	14,179	4.0			
ESTONIA	79.7	4.0	58.4	8	4.5	16	13,669	4.0			
LITHUANIA	68.0	3.0	73.7	8	4.5	13	12,153	3.5			
POLAND	102.8	5.0	90.1	8	4.5	18	11,815	3.5			
LATVIA	70.5	3.5	70.2	12	4.5	18	11,078	3.5			
CROATIA	84.3	4.0	66.7	7	4.5	12	11,013	3.5			
RUSSIA	69.9	3.0	77.8	21	4.0	29	9,585	3.0			
BULGARIA	89.8	4.5	78.2	15	4.5	19	7,962	2.5			
ROMANIA	74.5	3.0	89.9	20	4.0	31	7,733	2.5			
MACEDONIA	72.2	3.5		14	4.5	38	6,946	2.0			
KAZAKHSTAN	64.7	3.0	76.1	73	1.5	63	6,870	2.0			
BELARUS	76.6	3.5	77.3	11	4.5	17	6,716	2.0			
BOSNIA & HERZEGOVINA	73.0	3.5		15	4.5	22	6,606	2.0			
TURKMENISTAN	28.8	0.5	66.8	103	0.5	97	6,282	2.0			
UKRAINE	62.1	2.5	65.6	18	4.0	26	6,087	2.0			
SERBIA & MONTENEGRO	76.0	3.5		15	4.5	28	5,227	2.0			
ALBANIA	53.0	2.0	79.2	19	4.0	45	4,988	1.8			
ARMENIA	49.2	2.0	67.5	32	3.5	60	4,173	1.5			
AZERBAIJAN	45.8	1.5	62.8	90	1.0	105	3,736	1.5			
GEORGIA	37.2	1.0	58.7	45	3.0	47	2,772	1.0			
MOLDOVA	42.1	1.5	67.1	28	3.5	40	1,888	1.0			
UZBEKISTAN	70.1	3.0	67.6	69	2.0	79	1,847	1.0			
KYRGYZ REPUBLIC	46.9	2.0	65.0	68	2.0	80	1,810	1.0			
TAJIKISTAN	29.3	0.5	60.1	93	0.5	119	1,150	1.0			
CEE & EURASIA	68.3	3.0	71.7	30.3	3.6	39.9	8,033	2.5			
NORTHERN TIER CEE	87	4.3	75	8	4.6	15	14,188	4.0			
SOUTHERN TIER CEE	75	3.4	79	15	4.4	28	7,211	2.3			
EURASIA	52	2.0	68	54	2.5	64	4,410	1.6			
ROMANIA & BULGARIA 2002	80.0	3.8		18	4.3		6,760	2.3			
NORTHERN TIER CEE											
AT GRADUATION	81.4	3.9		10	4.5		8,949	2.8			

Shaded columns represent ratings based on a 1 to 5 scale, with 5 representing most advanced. World Bank, *World Development Indicators (2005); EBRD Transition Report 2005 (November 2005); and* UNICEF, *TransMONEE Database* (December 2005).

TABLE 11. INDICATORS OF SUSTAINABILITY: HUMAN CAPITAL											
E	PUBLIC EXPENDITUR ON HEALTI (% GDP) 2003		PUBLIC EXPENDITURE ON HEALTH (% GDP) 1989	PUBLIC EXPENDITURE ON EDUCATION (% GDP) 2004		PUBLIC EXPENDITURE ON EDUCATION (% GDP) 1989	LIFE EXPECTANCY (Years) 1990	LIFE EXPECTANCY (Years) 2004			
SLOVENIA	6.8	5.0	5.6	6.1	5.0		73	77	5.0		
CZECH REP.	6.8	5.0	4.2	4.4	3.0	4.0	71	76	5.0		
CROATIA	6.5	5.0		4.5	3.0		72	75	4.5		
POLAND	4.5	3.0	4.9	5.6	4.5	4.8	71	74	4.0		
ALBANIA	2.7	1.5	2.9	2.6	1.5	4.0	72	74	4.0		
BOSNIA & HERZ.	4.8	3.5	3.2	5.2	4.0	 	72	74	4.0		
SLOVAKIA	5.2	4.0	5.0	4.4	3.0	5.1	71	74	4.0		
MACEDONIA	6.0	5.0		3.5	2.3		72	74	4.0		
SERBIA & MONT.	5.4	4.0	3.6	3.6	2.5		72	73	4.0		
HUNGARY	6.1	5.0	5.2	5.5	4.0	5.7	69	73	4.0		
LITHUANIA	5.0	3.5	2.8	5.9	4.5	4.5	71	72	3.5		
BULGARIA	4.1	3.0	6.4	3.5	2.0	5.0	72	72	3.5		
AZERBAIJAN	0.9	0.5	3.1	3.2	2.0	6.9	71	72	3.5		
ESTONIA	4.6	3.5		5.7	4.5		69	72	3.5		
ARMENIA	1.3	0.5	2.4	3.2	2.0	7.5	69	71	3.0		
GEORGIA	0.9	0.5	4.1	2.2	1.0	6.4	70	71	3.0		
LATVIA	3.3	2.0	2.5	5.8	4.5	4.5	69	71	3.0		
ROMANIA	3.8	2.5	2.5	3.5	2.0	2.2	70	71	3.0		
UKRAINE	3.7	2.5	3.3	5.4	4.0	5.3	70	68	2.0		
BELARUS	4.1	3.0	2.7	3.8	2.5	4.6	71	68	2.0		
KYRGYZ REPUBLIC	2.2	1.0	3.2	3.1	2.0	6.0	68	68	2.0		
MOLDOVA	3.9	2.5	4.0	4.9	3.5	7.8	68	68	2.0		
UZBEKISTAN	2.4	1.0	4.6				69	67	1.5		
RUSSIA	3.0	1.5	2.4	3.8	2.5	3.6	69	65	1.0		
KAZAKHSTAN	2.0	0.5	4.3	3.0	1.5	2.1	68	65	1.0		
TAJIKISTAN	0.9	0.5		2.8	1.5		63	64	0.5		
TURKMENISTAN	2.6	1.5		2.6	1.5		63	63	0.5		
CEE & EURASIA	3.8	2.6	3.8	4.1	2.8	4.8	70	71	3.0		
NORTHERN TIER CEE	5.3	3.9	4.3	5.4	4.1	4.8	71	73	3.9		
SOUTHERN TIER CEE	4.8	3.5	3.7	3.8	2.4	3.7	71	73	3.7		
EURASIA	2.3	1.3	3.5	3.5	2.2	5.1	69	68	2.0		
ROM & BULGARIA '02 NORTHERN TIER CEE	3.7	2.5		3.8	2.5			71	3.3		
AT GRADUATION	5.4	3.9		5.6	4.2			73	3.8		

Shaded columns represent ratings based on a 1 to 5 scale, with 5 representing most advanced. Data for public expenditure on education and health in 1989 in Eurasia are from 1991. Data for public expenditure on education in 2004 preliminary in Albania, Bosnia & Herzegovina, Serbia & Montenegro, Belarus and Turkmenistan are from 2002, UNICEF, *TransMONEE Database* (2005).

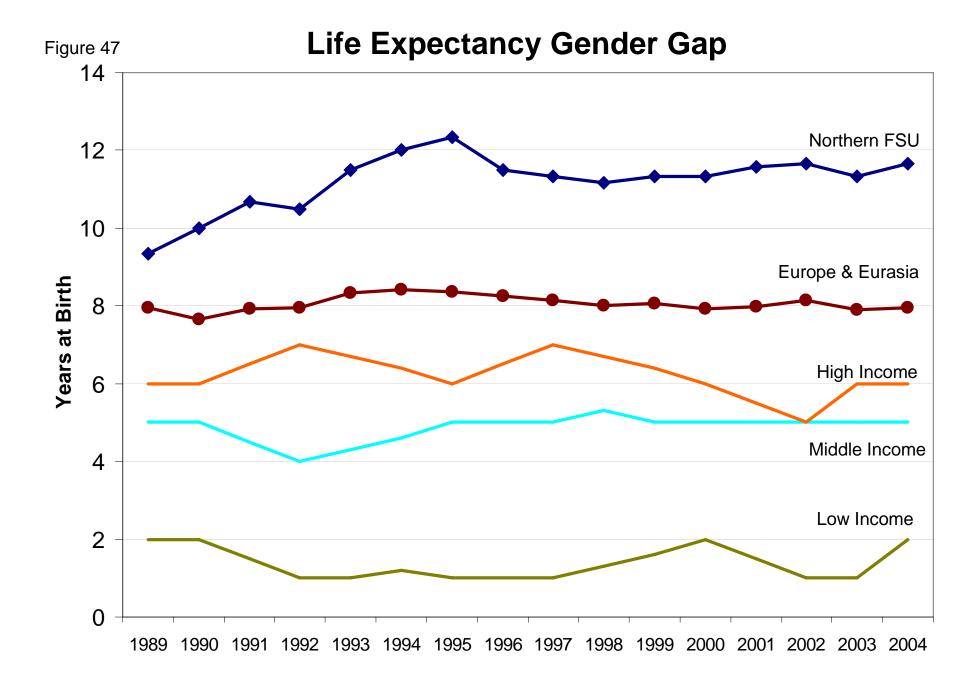
World Bank, World Development Indicators (2005).

TABLE 12. ADULT MORTALITY RATE											
	1	990	19	997	20	000	2002	2-2004			
	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE			
RUSSIA	298	107	410	146	428	156	431	153			
KAZAKHSTAN	306	136			366	201	351	158			
UKRAINE	268	105			365	135	421	161			
BELARUS	254	98	361	128	381	133	366	131			
TURKMENISTAN	250	135	282	159	343	217	311	161			
KYRGYZ REPUBLIC	291	143			335	175	273	129			
LATVIA	295	108			328	122	294	112			
ESTONIA	286	106			316	114	310	101			
LITHUANIA	246	92			286	106	294	96			
MOLDOVA	269	146			325	165	302	154			
TAJIKISTAN	168	106			293	204	223	149			
HUNGARY	290	135	295	123	295	123	242	105			
UZBEKISTAN	207	109			282	176	252	149			
ROMANIA	237	114	257	119	260	117	234	101			
AZERBAIJAN	216	96			261	153	230	107			
BULGARIA	211	107	222	112	239	103	208	89			
GEORGIA	195	90			250	133	219	84			
SLOVAKIA	247	100	225	90	216	83	178	71			
ARMENIA	216	119			223	106	209	95			
POLAND	264	102	238	91	226	88	201	78			
MACEDONIA	147	100			160	89	145	84			
BOSNIA & HERZEGOVINA	186	109			200	93	159	82			
SERBIA & MONTENEGRO	168	101					172	94			
CROATIA	207	96	162	119	178	74	173	76			
ALBANIA	203	101			209	95	99	56			
CZECH REPUBLIC	230	99	181	82	174	75	157	79			
SLOVENIA	211	91	179	77	170	76	151	66			
CEE & EURASIA	236	109			273	127	245	108			
NORTHERN TIER CEE	259	104			251	98	228	89			
SOUTHERN TIER CEE	194	104			208	95	170	83			
EURASIA	276	109			381	157	299	136			
N.FSU	275	103			351	128	353	126			
MUSLIM MAJORITY	226	116			288	169	227	120			
EUROPEAN MONETARY UNION	145	68	130	61	125	58					
EAST ASIA & PACIFIC	187	152	179	134	184	129					
LATIN AMERICA & CARIB.	198	130			222	125					
MIDDLE EAST & NORTH AFR.	211	183			193	143					
SOUTH ASIA	248	250			252	202					
SUB-SAHARAN AFRICA	448	372			519	461					
LOW-INCOME COUNTRIES	293	267			310	259					
MIDDLE-INCOME COUNTRIES	195	137	205	131	211	128					
HIGH-INCOME COUNTRIES	150	76	130	67	128	66					

World Bank, World Development Indicators (2005 and previous editions).

TABLE 13. ADULT HIV PREVALENCE RATE 15-49 (Estimate)										
	1997	1999	2001	2003	2005	Change 1997-05	Change 2003-05			
Ukraine	0.43	0.96	1.20	1.40	1.40	224	0			
Estonia	0.01	0.04	0.70	1.10	1.30	9525	18			
Russia	0.05	0.18	0.70	1.10	1.10	2031	0			
Moldova	0.11	0.20	0.20	0.90	1.10	919	22			
Latvia	0.01	0.11	0.50	0.60	0.80	9678	33			
Belarus	0.17	0.28	0.30		0.30	75				
Georgia	0.01	0.01	0.10	0.10	0.20	3900	100			
Lithuania	0.01	0.02	0.10	0.10	0.20	3668	100			
Serbia and Montenegro	0.10	0.10	0.20	0.20	0.20	109	0			
Uzbekistan	0.01	0.01	0.10	0.10	0.20	3900	100			
Kazakhstan	0.03	0.04	0.10	0.20	0.10	257	-50			
Armenia	0.01	0.01	0.10	0.10	0.10	1871	0			
Azerbaijan	0.01	0.01	0.10	0.10	0.10	1900	0			
Bosnia and Herzegovina	0.04	0.04	0.10	0.10	0.10	183	0			
Bulgaria	0.01	0.01	0.10	0.10	0.10	1286	0			
Croatia	0.01	0.02	0.10	0.10	0.10	654	0			
Czech Republic	0.04	0.04	0.10	0.10	0.10	169	0			
Hungary	0.04	0.05	0.10	0.10	0.10	155	0			
Kyrgyz Republic	0.01	0.01	0.10	0.10	0.10	1900	0			
Macedonia	0.01	0.00	0.10	0.10	0.10	1083	0			
Poland	0.06	0.07	0.10	0.10	0.10	71	0			
Romania	0.01	0.02	0.10	0.10	0.10	1077	0			
Slovak Republic	0.01	0.01	0.10	0.10	0.10	1900	0			
Slovenia	0.01	0.02	0.10	0.10	0.10	914	0			
Tajikistan	0.01	0.01	0.10	0.10	0.10	1900	0			
Turkmenistan	0.01	0.01	0.10	0.10	0.10	1900	0			
Albania	0.01	0.01								
Europe and Eurasia	0.1	0.1	0.2	0.2	0.6	793	265			
Top 4 E&E	0.2	0.4	0.8	1.1	1.2	515	17			
Rest of E&E	0.0	0.0	0.1	0.1	0.2	700	45			
NT CEE	0.0	0.1	0.1	0.1	0.1	147	-22			
ST CEE	0.0	0.0	0.1	0.1	0.1	353	11			
N.FSU	0.1	0.4	0.8	1.1	0.7	376	-36			
Eurasia Eurasia less C. Asia	0.1	0.3	0.6	1.0	1.0	577 583	-6 -7			
Central Asia	0.0	0.0	0.0	0.1	0.2	1153	24			
Muslim Group	0.0	0.0	0.1	0.1	0.8	7152	593			
Eurasia less Muslim G.	0.0	0.4	0.8	1.1	0.6	319	-43			
E&E less Muslim G.	0.1	0.2	0.5	0.7	0.5	335	-37			
EU-15	0.2	0.3	0.3	0.3	0.3	14	0			
East Asia and Pacific	0.2	0.2	0.2	0.2	0.4	111	100			
Latin America and Carib.	0.7	0.6	0.6	0.7	1.6	122	132			
Middle East and North Afr.	0.0	0.0	0.1	0.1	0.2	567	100			
South Asia	0.6	0.5	0.6	0.7	0.6	-6	-14			
Sub-Saharan Africa	7.1	8.1	7.0	6.2	6.1	-14	-2			

UNAIDS, Global Report on the HIV/AIDS Epidemic (2006).



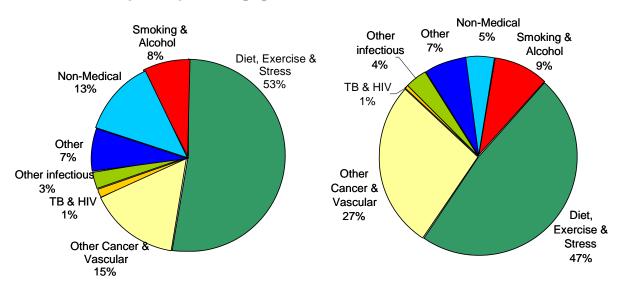
World Bank, World Development Indicators (2006). The life expectancy gender gap is female life expectancy minus male life expectancy.



## Causes of Death in 2003 (%)

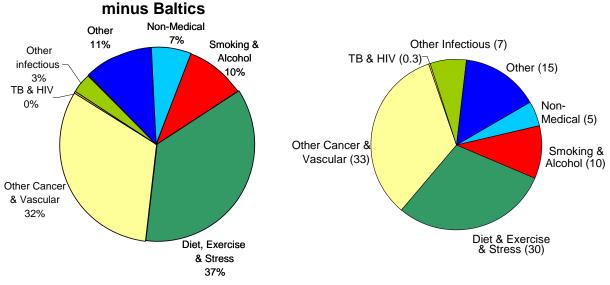
#### **Northern FSU**

#### S. Tier CEE



## N. Tier CEE

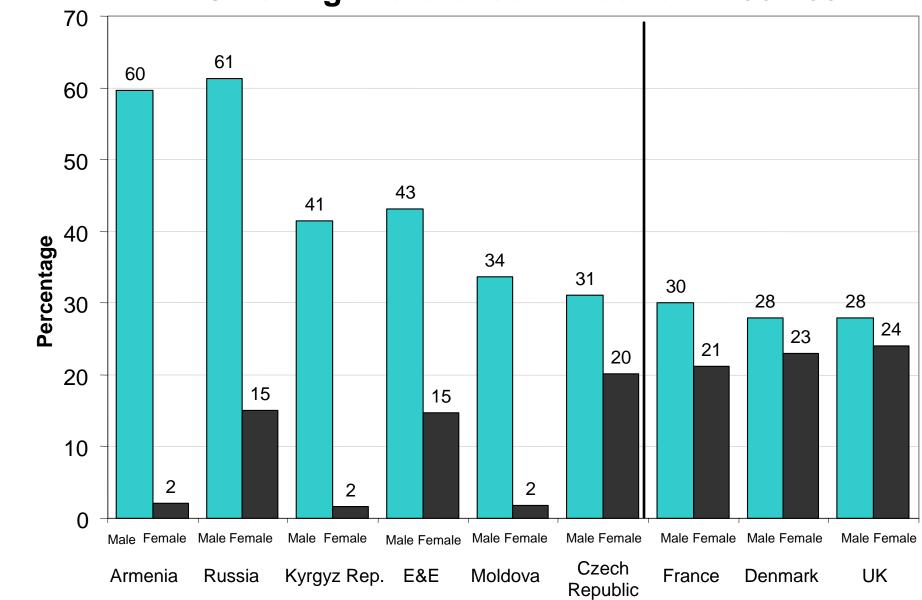
#### **EU-15**



WHO, Mortality Database (2004). Diet/exercise/obesity deaths include coronary heart disease, stroke, hypertension, diabetes, and colorectal cancer. (Studies in the New England Journal of Medicine estimate that up to 80% of cases of coronary heart disease and up to 90% of type 2 diabetes could be avoided through changing lifestyle factors, and about one-third of cancers could also be prevented by eating healthily, maintaining normal weight, and exercising throughout the life span.) Non-medical causes include accidents, suicides, homicides and disaster. Alcohol deaths include cirrhosis. Smoking deaths include lung cancer and emphysema/COPD. Other Infectious are infectious and parasitic diseases other than TB and HIV. Other Cancer and Vascular includes cancers other than lung and colorectal, and cardiovascular disease other than coronary heart disease, stroke and hypertension. Data for EU-15 are from 2000.

Figure 52

# **Smoking Prevalence in Adults in 2002-05**



World Health Organization; Tobacco Control Database 2006. E&E is a sample of 17 countries.

Figure 53

# Total Alcohol Consumption and Male Life Expectancy in Russia

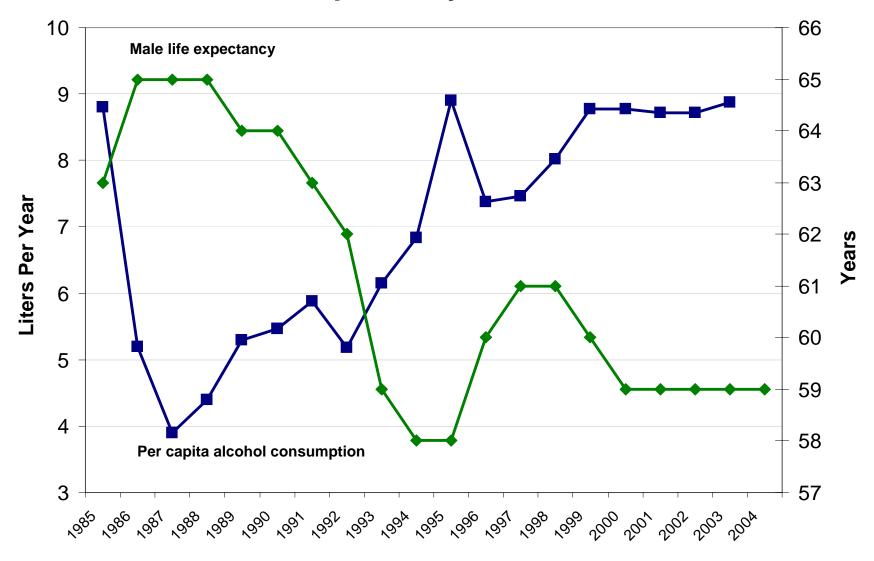


Figure 54

# External Cause Deaths by Injury and Poisoning & Total Alcohol Consumption in Russia

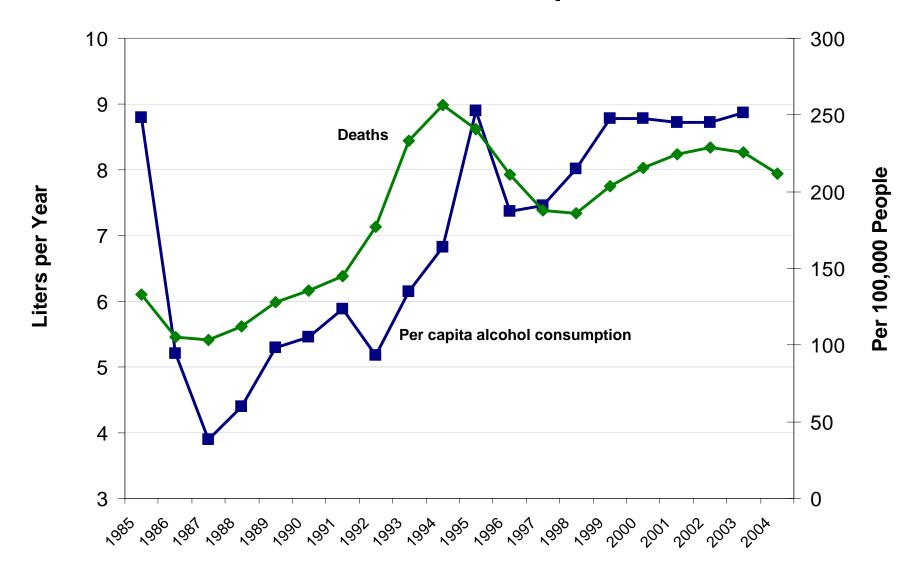


Figure 55 Suicide Rates for Selected E&E Countries

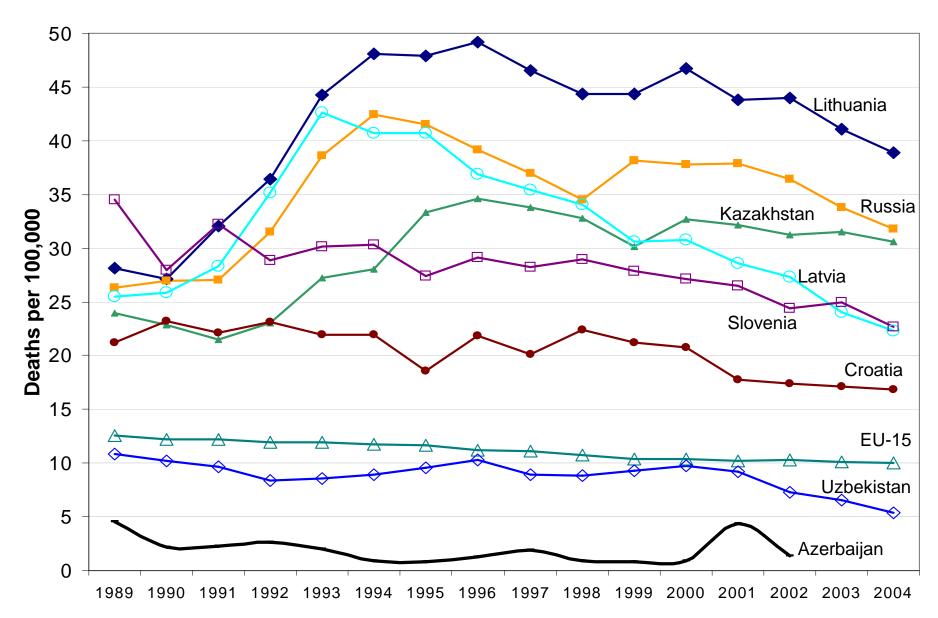


Figure 56 Adult HIV Prevalence Rate (15-49 yrs) in E&E

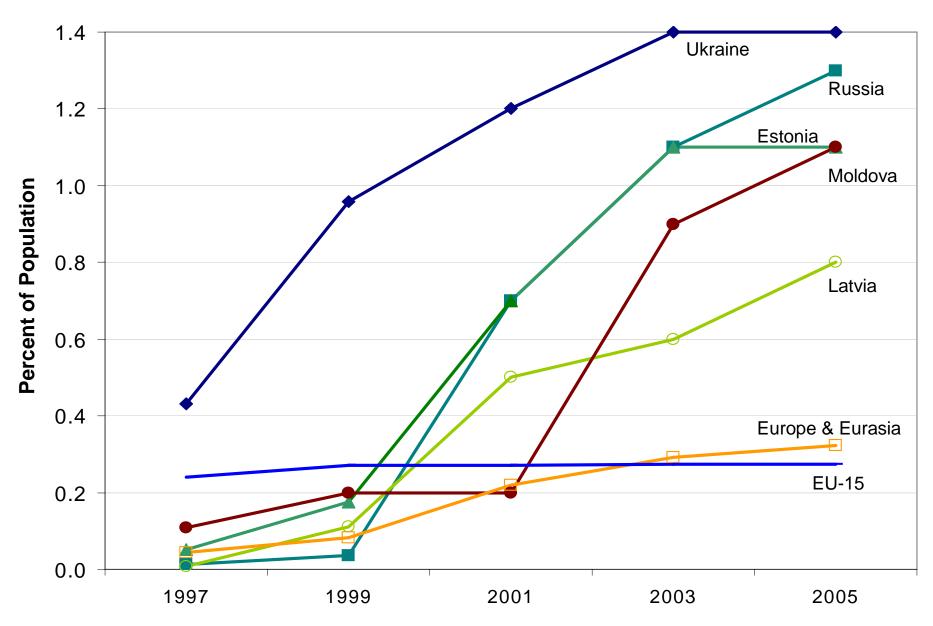
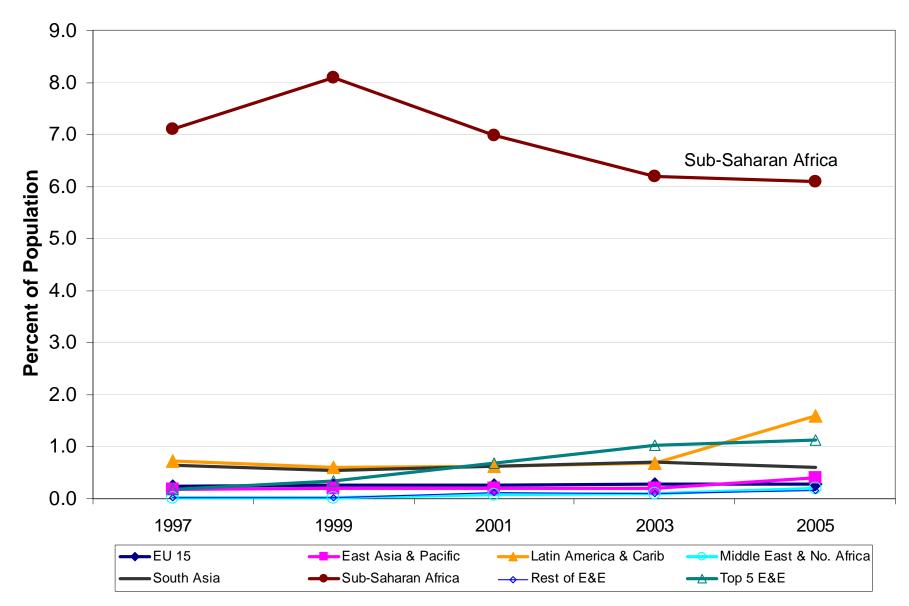
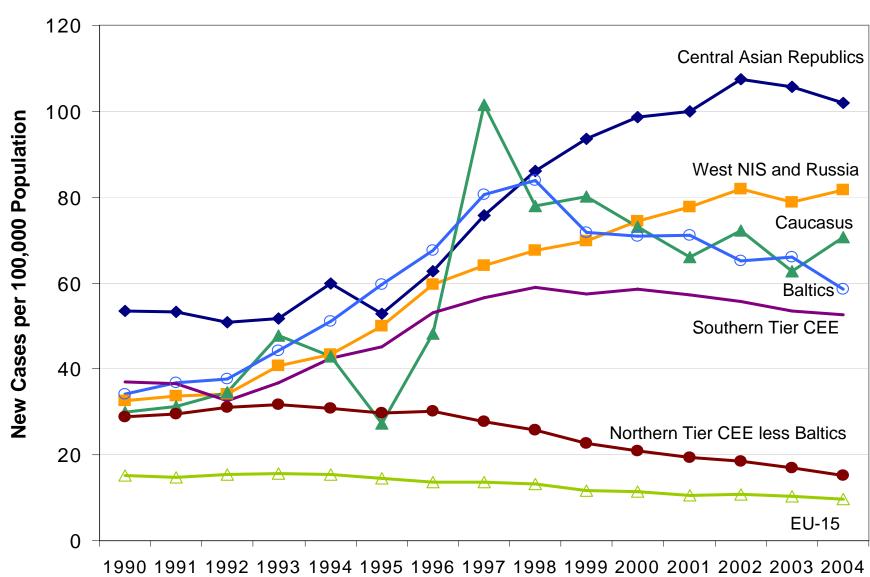


Figure 57 Adult HIV Prevalence Rate in the World (15-49 yrs)



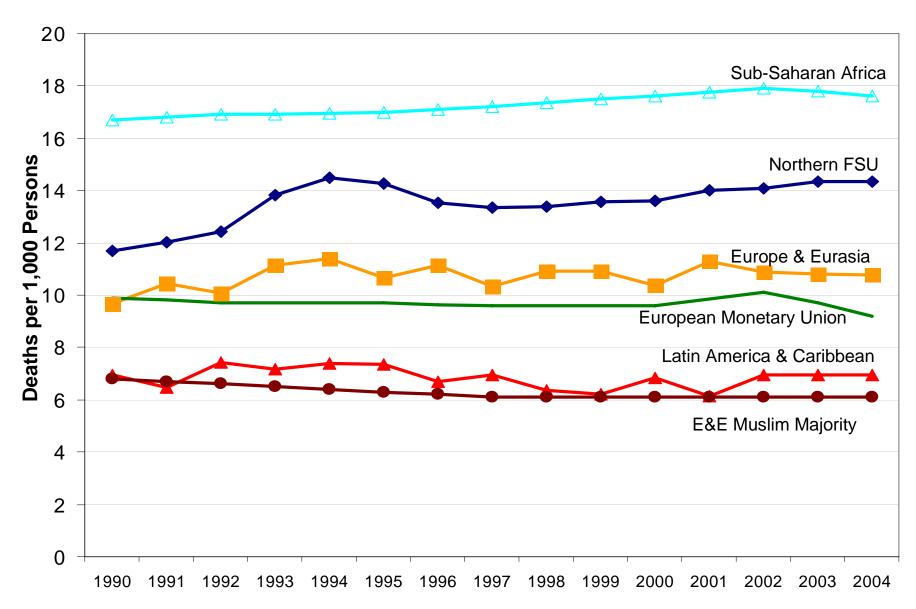


## **Tuberculosis Incidence**



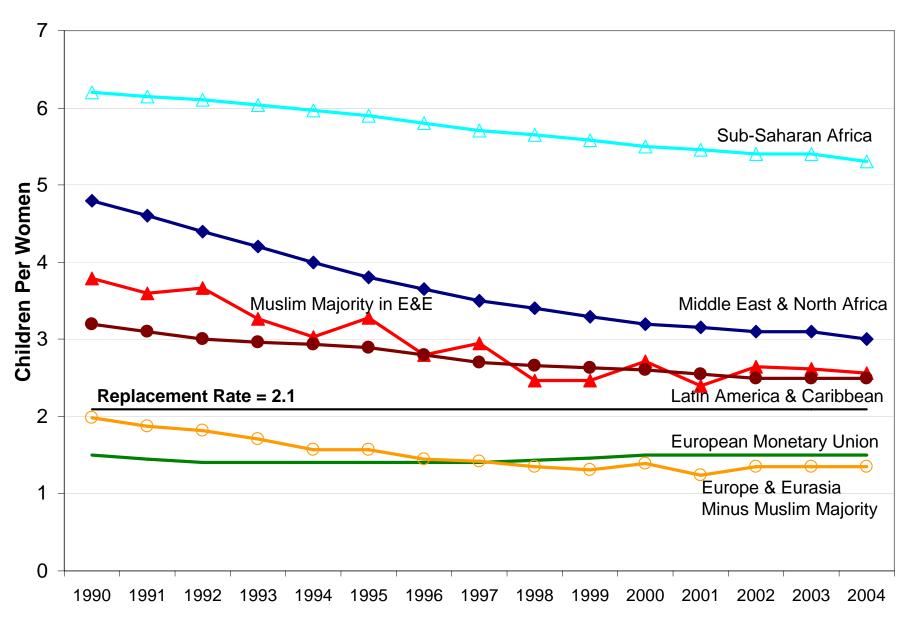


### **Crude Death Rates**



#### Figure 60

## Fertility Rates in the World



World Bank, World Development Indicators (2006). Missing data were estimated by interpolation.

#### Figure 61

# **Population Growth in the World**

