Armenia Gap Analysis

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Highlights. Armenia is more advanced than the twelve-country Eurasian norm in all five development dimensions tracked by the Monitoring Country Progress (MCP) system: (1) economic reforms; (2) democratic reforms; (3) macroeconomic performance; (4) human capital; and (5) peace and security. Armenia lags the most in democratic reforms and is relatively more advanced in the economic sector.

Armenia's progress in macroeconomic reforms is closer to Southern Tier Central and Eastern Europe (CEE) standards than Eurasian standards. However, a disproportionate amount of the gains has been in first stage reforms, in liberalization and privatization. The business environment (or microeconomic reforms) in Armenia is very favorable, closer to Northern Tier CEE standards than to Southern Tier CEE or Eurasia.

Civil society is the leading dimension in democratic reforms in Armenia while independent media lags the most, though only slightly more than electoral process and local and national governance. Democratic reforms in Armenia have been regressing since at least 1996, first year of available data from Freedom House's region-specific *Nations in Transit* dataset.

Progress in macroeconomic performance has been very uneven. Significant challenges exist in the competitiveness of the export sector, the labor market (in high unemployment), energy security, and macroeconomic stability. Armenia's economy has witnessed substantial fluctuations, volatility, and vulnerability since the collapse of communism. This has included a substantial drop in output in the early years of the transition, though a quicker recovery than most of the Eurasian economies, including annual double-digit economic growth rates from 2002 to 2007. This also has included one of the most significant contractions in output during the global financial crisis in 2009 in the Eastern Europe and Eurasia (E&E) region, matched only by four other transition economies: Ukraine; Latvia; Lithuania; and Estonia. Contributing factors have included significant macroeconomic imbalances, a small export sector dependent on minerals, metals, and semi-precious stones, and a substantial reliance on remittances.

Human capital development in Armenia is slightly above Eurasian average, though progress in this broad dimension is also quite uneven. Armenia is advanced in health outcomes by Eurasian standards while progress in education outcome is more mixed and/or uncertain. Gender inequality is greater in Armenia than it is in most E&E countries. Per capita income is below Eurasian average and public expenditures in health and education are low by any standard. The national poverty rate fell from 51% in 2001 to 24% by 2008, though increased notably in 2009 to almost 30%.

Armenia is more peaceful and secure than most of the Eurasian countries, though less peaceful and secure than all of the CEE countries except Kosovo. Of the six peace and security components, Armenia

lags the most in combating weapons of mass destruction and in conflict mitigation. Counter-terrorism, combating trans-national crime, and counter-narcotics are the most advanced peace and security elements in Armenia.

Introduction and Overview. This gap analysis of Armenia utilizes the dataset and methodology developed by the E&E Bureau's Strategic Planning and Analysis Division in developing the Monitoring Country Progress (MCP) system. The core of the MCP system consists of five indices: economic reforms, democratic reforms, macroeconomic performance, human capital, and peace and security. Public, well-established data sources are used, and the metrics are standardized to a 1 to 5 scale, in which a 5 represents the most advanced standards worldwide. Primary data sources include E&E's *Monitoring Country Progress in Eastern Europe & Eurasia*, No. 13 (October 2011), which in turn draws on multiple sources including the International Monetary Fund (IMF), *World Economic Outlook* (September 2011); the European Bank for Reconstruction and Development (EBRD), *Transition Report* (November 2010); Freedom House, *Nations in Transit* (June 2011); the World Bank, *World Development Indicators* (2011) and *Doing Business* (2011); as well as a number of United Nations and U.S. State Department annual reports. Economic and democratic reform data from *MCP 13* have been updated in this gap analysis to include 2011 data, by drawing on the EBRD's *Transition Report* (November 2011) and Freedom House's *Freedom in the World* (2012). Armenia-specific sources include the IMF, *Armenia: Poverty Reduction Strategy Paper—Progress Report* (July 2011), the IMF, *Armenia Country Report* (December 2011), United Nations Office Armenia, *Armenia Millennium Development Goals National Progress Report, 2005-2009* (September 2010), and the Asian Development Bank, *Armenia Country Report 2010* (2011).

Armenia's development profile (*Figure 1*) reveals that the country is more advanced than the Eurasian norm in all five MCP dimensions. Armenia is closer to the higher Southern Tier CEE standards in the economic sector dimensions, in economic reforms and macroeconomic performance. As is the norm in Eurasia, Armenia lags the most in democratic reforms. *Figures 2* and *3* show Armenia's progress (shaded in blue) in the five dimensions disaggregated by the components of each index, and compared to the average progress of the eleven USAID country graduates in E&E (the red outline). These web charts underscore substantial gaps in Armenia across the development dimensions, most notably in democratic reforms, but even in economic reforms and economic performance. The web charts show that the progress in the economic sector and in human capital in Armenia in particular is very uneven; very good progress in some dimensions (including trade liberalization, large-scale privatization, economic growth, private sector share of GDP, life expectancy, and environmental health), while very little progress in others (including non-bank financial reforms, export sector competitiveness, unemployment, per capita income, and public spending on health and education).

Figures 4 and *5* compare Armenia's progress in economic and democratic reforms with such progress in the rest of the E&E countries, and (in *Figure 4*) against the EUR/ACE-established phase-out thresholds (of the average reform progress in Romania, Bulgaria, and Croatia in 2006). The economic reform data are taken from the EBRD, *Transition Report* and the democratic reform data are from Freedom House, *Nations in Transit*, and *Freedom in the World*. The pictures show Armenia doing quite well by Eurasian

reform standards, though it has far to go, particularly in democratic reforms, to meet the phase-out thresholds. Of the Eurasian countries, only Georgia is more advanced in economic reforms, and only Georgia, Ukraine, and Moldova are more advanced in democratic reforms.

Figure 5 includes the measurable changes in economic and democratic reforms in 2011. The changes generally conform to the reform patterns in the E&E region that have been ongoing for much of the transition: the Southern Tier CEE countries gradually closing the reform gap with the Northern Tier CEE countries; the Eurasia-CEE reform gap continuing to widen.

Economic reforms. *Figures 6* and *7* show Armenia's economic reform trajectory compared to that of the three E&E sub-regions, drawing on the EBRD data. By these measures, Armenia's progress in economic reforms is closer to Southern Tier CEE standards than Eurasian standards (*Figure 6*). However, a disproportionate amount of the gains in the case of Armenia have been in first stage reforms (trade and foreign exchange liberalization, price liberalization, and small and large-scale privatization); second stage reforms (infrastructure, financial sector, governance, competition policy) in Armenia are only moderately more advanced than in Eurasia overall. The downturn in economic reforms in 2011 in Armenia was due to reversals in price liberalization (i.e., the levying of price controls).

To supplement the macro-economic reform data from the EBRD, we also track the World Bank's dataset and analysis of the business environment (or micro-economic reforms). The business environment analysis and measurements are based on various aspects of an economy's business climate influenced by government interventions and range from the ease of starting a new business to registering property to getting credit and paying taxes to the regulations involved in closing a business or bankruptcy policy. The business environment in Armenia's economy by these measures is very favorable, closer to Northern Tier CEE standards than to Southern Tier CEE or Eurasia (*Figure 8*). Such standards range widely in Eurasia, however; all three Caucasus countries have relatively favorable business environments, even though Armenia's standards have been gradually eroding relative to global standards since 2006 (*Figure 9*). *Figure 10* provides the ranking of the 183 countries included in the business environment dataset in 2011. Armenia ranks 55, just behind Mexico (53) and Botswana (54), and just in front of Montenegro (56), and Antigua & Barbuda (57). Singapore ranks first worldwide and Chad is last (183).

Democratic reforms. Democratic reforms in Armenia lag considerably by E&E standards, though are more advanced by Eurasian standards (*Figures 1* and *4*). As is the case in every Eurasian country (except Turkmenistan where there is no room for backsliding), democratic reforms in Armenia have been regressing since at least 1996, the first year of available data from the *Nations in Transit* dataset (*Figure 11*). Of the seven democratic reform components tracked by Freedom House in its *Nations in Transit*, progress in civil society is well out front of the remaining six areas (*Figures 2* and *12*). Independent media lags the most, though only slightly more than electoral process and local and national governance.

Figure 13 shows the trends of the democratic reform components in Armenia since 1996. Local and national governance measures are combined as one measure since Freedom House did not disaggregate

the two measures until midway through the period. To compare, *Figure 14* shows the same trends for the twelve country Eurasian region on average. The pictures are very similar. In Eurasia, all of the democratization dimensions have regressed since 1996-1998, governance the most, though media, rule of law, and electoral process almost as much. In Armenia, only the anti-corruption efforts (which lagged the most in the early years) have not regressed since 1996-1998; governance and media have regressed the most. As with Eurasia on average, civil society in Armenia is the leading democratic reform sector with very little variation in the level of development in all the other dimensions. The development gap between civil society and the other dimensions in Armenia, however, is notably larger than the same gap in Eurasia overall.

We supplement the *Nations in Transit* dataset with additional measures of democratization in *Figures 15-20*. *Figure 15* draws on two global datasets--three indicators of democracy from Freedom House's *Freedom in the World* (political rights, civil liberties, and independent media), and two indicators of governance from the World Bank's *Governance Matters* (rule of law and control of corruption)—in an effort to compare democracy and governance in the world. In this sample of 153 countries, all of the Eurasian countries are less advanced than the global average. Armenia ranks 99 out of 153, i.e., well down the global pack, though still slightly more advanced than Eurasian standards. Of the Eurasian countries, only Ukraine, Georgia, and Moldova are more advanced than Armenia in democracy and governance by this measure. In short, Armenia does well in democracy and governance by Eurasian standards, though this is a region which compares very unfavorably by global standards.

Transparency International's *Corruption Perception Index* shows one aspect of democratization in Armenia in a global context (*Figure 16*). Armenia's global standing in 2010 of perceptions of corruption was similar to its rank in the broader democracy and governance measure (of *Figure 15*). More specifically, with Singapore ranking first with the lowest perceived corruption worldwide and Somalia at 179th with the highest corruption, Armenia ranked 126th or in the 70th percentile. More recent (2011) data has emerged since we produced *Figure 16*. The results change very little for Armenia, with a rank of 129 out of 182 (or in the 71% percentile). As with the global democracy and governance measure, corruption in Armenia is perceived to be somewhat lower than Eurasian average, three countries, Georgia, Moldova, and Kazakhstan are perceived to have lower corruption than Armenia; eight Eurasian countries with higher corruption (data for Turkmenistan was added in 2011; it ranks 177th alongside Uzbekistan). Other countries with Armenia's 2011 score include the Dominican Republic, Honduras, the Philippines, and Syria.

We compared Transparency International's *Corruption Perception Index* with Freedom House's measure of anti-corruption in its *Nations in Transit* (*Figure 17*). The two measures align quite closely. Georgia is the Eurasian outlier on both indicators with notably higher scores (i.e., lower corruption). Compared to other Eurasian countries, Armenia scores somewhat better in Freedom House's analysis, according to which of the Eurasian countries only in Georgia is corruption lower.

One final effort to measure corruption in Armenia comes from the *Business Environment and Enterprise Performance Survey*, done jointly by the EBRD and World Bank (*Figure 18*). The survey is done every three years (though the most recent data remain for 2008), and asks business owners their perceptions

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of key challenges towards doing business. Businesses are asked to respond from a menu of fourteen possible business challenges: burdensome tax rates; corruption; reliability of electricity; crime; courts; labor regulations; skills and education of the workers; tax administration; telecommunications; access to land; business licensing and permits; transport; customs and trade regulations; and access to finance. In 2008, of the fourteen possible challenges, tax rates were deemed to be problematic among the largest percentage of Armenian businesses (72%), followed by access to financing (59%) and corruption (52%). The largest percentage point increase in firms identifying a particular problem from 2005 to 2008 occurred in "crime, theft and disorder" (an increase from 13% to 46%), skills and education of workers (from 15% to 39%), and electricity (from 15% to 38%). The largest percentage point decrease in firms occurred in tax administration (a decrease from 73% in 2005 to 48% in 2008), followed by business licensing and permits (from 36% to 16%).   The next survey update is planned for 2012 and will include 2011 data.

Two additional empirical tools, the *Media Sustainability Index* (MSI) from IREX and the *NGO Sustainability Index* (NGOSI) from Management Systems International, provide a means to further disaggregate trends in two democratization areas and allow for an examination of a country's profile in those sectors. The *Media Sustainability Index* assesses the progress of five aspects needed for a sustainable independent media sector. As shown in *Figure 19*, Armenia conforms to a similar profile found in the Eurasian countries. More specifically, of the five components of a sustainable media sector, business management lags the most in Armenia (as it does elsewhere), while the plurality of news sources is the most advanced in Armenia (and elsewhere in the region). It is also instructive to note that Armenia is more advanced on all five of these dimensions as compared to the Eurasian average.

The *NGO Sustainability Index* assesses the progress of seven aspects needed for a sustainable NGO sector (*Figure 20*). As with the results in the media sector, Armenia's profile in the NGO sector conforms to a general pattern in Eurasia. More specifically, financial viability is the greatest challenge in Armenia and across most of the NGO sectors in E&E. The political and advocacy environment is the most advanced area in Armenia's NGO sector (and one of the more advanced areas on average in Eurasia).

Macroeconomic performance. The economic performance web chart in *Figure 3* (which compares Armenia's performance against progress among the eleven USAID E&E country graduates) and the profile chart in *Figure 21* (which compares Armenia's performance against Eurasian standards) give at least a first approximation of Armenia's economic performance profile. It is a skewed profile that includes significant gaps and challenges in export sector competitiveness, the labor market, and energy security. Yet, there has been relatively high economic growth over the medium term (five year average) in which the gains have been relatively equally distributed (at least measured by the ratio of income of the top quintile to the bottom quintile population). One economic structural indicator suggests an advanced economy (the private sector constitutes 75% of GDP), while another indicator suggests a relatively underdeveloped one (the service sector in Armenia constitutes only 45% of GDP). Macroeconomic stability (external debt, fiscal deficit, current account deficit, and inflation) is increasingly problematic.

Figures 22 and *23* show Armenia's economic growth performance during the transition years and highlights the tendency for substantial fluctuations and volatility in economic output in Armenia. This includes a substantial drop in output in the early years of the transition, though a quicker recovery than most of the Eurasian economies, including annual double-digit economic growth rates from 2002 through 2007, leading up to the global financial crisis. Both figures show the substantial negative impact of the global crisis on Armenia's economy, as well as the economy's slow recovery relative to Eurasian and (in *Figure 22*) global standards. Of the E&E region, the magnitude of the output contraction of Armenia's economy in 2009 was matched only by four other transition economies: Ukraine; Latvia; Lithuania; and Estonia.

Figures 24-30 shed some additional light on why Armenia's economy has been subject to such substantial fluctuations, volatility, and vulnerability. As with many economies in the E&E region, Armenia's economy has been characterized by significant macroeconomic imbalances (that is, large deficits in the current account and in the fiscal balance), alongside a high and growing external debt (*Figure 24*). Armenia's export sector is very small, and has fluctuated notably during the transition years (*Figure 25*). A substantial reliance on exports of mineral products, precious and semi-precious stones and metals, and non-precious metals has contributed to this fluctuation (*Figure 26*). In 2010, these three export categories constituted 67% of total exports in Armenia (25%, 12%, and 30%, respectively).[1] High technology exports account for only about 1% of total exports in Armenia. This is roughly Eurasian average, though notably less than in the CEE countries, particularly the Northern Tier CEE countries where it is closer to 8%.

Armenia's economy also relies heavily on remittances, the lion's share of which come from Russia. *Figure 27* provides some cross-country estimates of remittances in the E&E region. At least some of these country estimates are likely to be underestimates, including that for Armenia. The IMF reports that gross private transfers and compensation of employees (i.e., remittances) in Armenia in 2010 were 17% of GDP, 80% of which came from Russia.[2] These flows have fluctuated substantially since the global economic financial crisis. The IMF cites annual fluctuations in remittances from Russia in the years 2008-2011 on average ranging from around $50 million to $150 per month.[3]

High remittances and economic migration often accompany high domestic unemployment rates. This seems to be the case for Armenia, though the analysis is handicapped by the uncertainty of the reliability of unemployment rate estimates for Armenia's economy. The officially registered unemployment rate in Armenia was 7% in 2010. However, at least some sources and alternative estimates consider the official rate to be a substantial underestimate. A United Nations study estimated Armenia's unemployment rate in 2008 was 28% of the labor force, down from 38% in 2001,

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[1] IMF, *Armenia Poverty Reduction Strategy Paper—Progress Report*, July 2011, p. 13.
[2] IMF, *Armenia Country Report*, December 2011, p. 9.
[3] Ibid., p. 6.

and with youth unemployment rate at roughly two times the national rate.[4] The Asian Development Bank estimated the unemployment rate to be 18% in 2009, slightly up from 16% in 2008.[5]

Figure 28 combines two elements of energy security: energy dependence (net energy imports as a percent of energy use); and energy efficiency (GDP per unit of energy use). The greater is the output per energy input, the greater is the energy efficiency.   Quadrant II of *Figure 28* shows countries which are the most energy insecure on these two dimensions; i.e., countries where output per energy use is below the global average (of 6.9 GDP in $ per unit of energy use) and where energy imports exceed domestic energy use. Armenia, as with many E&E countries as well as the United States, is located in this energy insecure quadrant. Its economy is below global average in terms of energy efficiency, and is among the most dependent on energy imports relative to usage in the E&E region; only Moldova and Belarus are more dependent by this measure.

Figure 29 highlights a measure of environmental sustainability across the countries of the world and how the E&E countries fare in the global context on this measure. This index attempts to measure climate change, the availability and usage of natural resources (including agriculture, fisheries, and forestry), biodiversity and habitat, air pollution, and water scarcity. Overall, E&E countries score poorly on this measure; only two E&E countries, Albania and Latvia, are included in the top fifty countries, those with the most environmentally sustainable economies. Armenia ranks 107 out of 161. Of these dimensions, Armenia is challenged the most in climate change, which includes regulation of greenhouse gas and CO_2 emissions, and water scarcity; almost 70% of the country is under water stress or oversubscription to existing water resources.

We introduce a new empirical tool to the MCP gap analysis in *Figure 30*. This is the *Financial Sector Benchmarking System* developed by Deloitte Consulting in consultation with the Economic Growth Office of the E&E Bureau and as part of the USAID Partners for Financial Stability (PFS) Project. As shown in *Figure 30*, there are six components to this financial sector tool. Each of the six components has multiple indicators ranging in number from four to ten, thirty-nine indicators total.[6]

Figure 30 shows the financial sector profile of Armenia's economy relative to two standards: the development of the financial sector in Eurasia and that of the seventeen country Eurozone average. Progress across the various financial sector dimensions in Armenia varies greatly. In two dimensions--financial sector stability and the enabling environment--Armenia's financial sector generally meets Eurozone standards. In two other dimensions--macroeconomic stability and access to financial services--Armenia's financial sector lags considerably behind the Eurozone with progress closer to Eurasian standards. Finally, in the last two dimensions--sophistication of financial services and financial sector size--Armenia's financial sector lags considerably even by Eurasian standards.

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[4] United Nations Office Armenia, *Armenia Millennium Development Goals National Progress Report*, 2010.
[5] Asian Development Bank, *Armenia Country Report 2010*.

[6]For elaboration of the methodology of the Financial Sector Benchmarking System, see USAID Partners for Financial Stability Project, *Methodology: Financial Sector Benchmarking System* (November 2011).

According to the Financial Sector Benchmarking System's *Regional Comparison and Financial Sector Overviews for 12 Countries in Southeast Europe and Eurasia* (February 2012), the financial sector in Armenia is "generally stable, with high (but declining) levels of bank profits and capital and comparatively low levels of nonperforming loans….Macroeconomic performance has improved, but the government's deteriorating debt profile, persistently high current account deficits, and inflation pressures cause some concern about macroeconomic stability. The financial sector remains small and unsophisticated…Sophistication measures consider insurance product premiums and the trading of stocks and bonds. These products and services exist in Armenia, but they are only a fraction of the small financial sector. Armenia's enabling environment for financial services is generally healthier than its peers in Eurasia, although it ranks poorly in terms of the level of corruption."[7]

Human Capital. *Figure 31* compares the E&E countries' scores on the MCP human capital index, and *Figure 32* and the human capital web chart in *Figure 3* show the component values of the human capital index for Armenia. In *Figure 32*, Armenia is compared to Eurasia; in *Figure 3*, to the eleven USAID country graduates.   The MCP human capital index consists of measures of health outcomes, education outcomes, public spending on health and education, per capita income, and a measure of gender inequality.

Overall, human capital in Armenia lags considerably by Central and Eastern Europe standards, though is roughly average for Eurasia, comparable to that of Azerbaijan and Moldova. As shown in *Figures 3* and *31*, however, Armenia's human capital profile is very skewed. It is relatively advanced in health outcome measures, particularly by Eurasian standards, though trails considerably in public expenditures of health and education. Education outcome measures are slightly above Eurasian average, though such an observation is caveated with data limitations. Gender inequality is greater in Armenia than it is in most E&E countries, though gender inequality in the E&E region is lower than it is in most of the developing world. Per capita income in Armenia is below Eurasian average.

Health. Life expectancy in Armenia is seventy-four years. This is comparable to life expectancy in the Southern Tier CEE countries and far higher than the sixty-nine years in Eurasia (*Figure 33*). Moreover, the increase in life expectancy in Armenia since the early 1990s has been steady and substantial, and notably greater than in any of the three E&E sub-regions. *Figure 34* further underscores Armenia's outlier status in regards to life expectancy; namely, compared to other countries of comparable levels of per capita income (such as Turkmenistan, Ukraine, Kosovo, and to a lesser extent Georgia), life expectancy in Armenia is very high.

Figures 35-41 shed further light on this relatively favorable health picture.   Life expectancy for both males and females is higher in Armenia than among all other Eurasian countries, and the life expectancy gender gap (female minus male life expectancy), at six years, is among the lowest of the twelve countries; only in Azerbaijan, at five years, is it lower (*Figure 35*). In Russia, it is twelve years, highest in the world; in Belarus and Ukraine, it is eleven years.   The global average is five years.

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[7] Deloitte Consulting, *Regional Comparison and Financial Sector Overviews for 12 Countries in Southeast Europe and Eurasia*, USAID and Partners for Financial Stability (February 2012), p. 19.

Many adult deaths in parts of E&E are caused by non-communicable diseases (NCDs), in particular, those diseases related to adverse effects of alcohol, smoking, diet, and lack of exercise. A proxy indicator for gauging NCDs is the adult mortality rate, which reflects the probably of dying between the ages of fifteen and sixty. Armenia's rate, at 169 per 1000 adults, is low for Eurasia (*Figure 36*). The Eurasian average is 214 deaths per 1000 population. Armenia's low adult mortality rate for Eurasia is consistent with its relatively low gender gap by Eurasian standards; high male adult mortality rates often contribute disproportionately to adult mortality in the region.

The under-five mortality rate in Armenia, at twenty-two deaths per 1,000 children, is also low by Eurasian standards, though still notably higher than it is in CEE (ten deaths per 1,000, *Figure 37*). As is the case in most countries of the region, Armenia's under-five mortality rate continues to decrease.

The tuberculosis (TB) incidence rate in Armenia is among the lowest of the Eurasian countries (*Figure 38*) at seventy-three per 100,000 (Eurasian average of 107 per 100,000). It has held relatively steady at this rate since 2000. However, Armenia is classified by the WHO as a high MDR-TB (multi-drug resistant TB) burden country. In 2010, approximately 9.4% of new cases were MDR-TB compared to 4% worldwide according to recent estimates. Additionally, Armenia is one of sixty-nine countries that has reported at least one case of XDR-TB (extensively drug-resistant TB) in 2010. HIV prevalence in Armenia is estimated to be 0.1% of the population, among the lowest of Eurasia, and HIV incidence for 2009 was 4.6 per 100,000, the lowest in Eurasia (*Figures 39* and *40*).

Figure 41 shows an effort to measure environmental health across the globe, in a sample of 163 countries. It is an index of three parts: (1)environmental burden of disease (measured in disability-adjusted life years or DALYs); (2) access to water and sanitation (a. the percentage of the country's population that has access to an improved source of sanitation, and b. the percentage of the country's population that has access to an improved source of drinking water); and (3) air pollution (a. indoor pollution: the percentage of the population using solid fuels, and b. outdoor air pollution). By this measure, environmental health in Armenia is better than global average; it ranks sixty-nine out of 163 countries or in the 42% percentile. Only three Eurasian countries score better: Belarus; Ukraine; and Georgia.

Millennium Development Goals (MDGs). The eight MDGs, comprised of twenty-one targets and sixty indicators, were developed in 2000 as a strategy to reduce worldwide poverty by one-half by 2015. The E&E region has modest goals to reach compared to the developing world, and Armenia is on track to meet most, if not all, goals. According to the UN in its 2010 assessment, Armenia had succeeded in accomplishing the primary goal, that of reducing poverty by half; in particular, poverty in Armenia fell from 51% in 2001 to 24% by 2008 (*Figure 42*).

However, *Figure 42* also highlights that Armenia is not immune to backsliding in this trend. With the global financial crisis as backdrop, the IMF reports that the poverty rate in Armenia increased in 2009 to close to 30%. Moreover, the national average masks differences between population segments within Armenia. The poverty rate of Armenian children under the age of five increased even more, from 32% in 2008 to 40% in 2009. From 2004 to 2009, the poverty rate among children fell only slightly, by two

percentage points.[8] Poverty rates also differ between urban and rural areas of Armenia (*Figure 43*).   It is lowest in Yerevan, and highest among other urban areas relative to Yerevan and to rural areas. The trends over time generally conform among the three areas; namely, declining poverty rates from 2004 to 2008, increasing rates in 2009. In that regard, the least progress was made in the rural areas over this time period; there poverty fell only from 31% in 2004 to 29% in 2009.

Education. A primary source for education enrollment trends has been UNICEF's Transmonee dataset, an E&E region-specific dataset on human capital trends. However, in the past two years, UNICEF significantly changed the methodology and revised results of some of its education statistics for the region. Some data, previously available, are now unavailable. Education data from different sources, in particular from UNICEF, UNESCO, and the World Bank, do not always align closely.

With these considerable caveats in mind, available data from UNICEF show a mixed picture in regards to enrollment rates in Armenia relative to Eurasian norms. Basic education (primary and lower secondary) enrollment rates in Armenia are below the Eurasian average, decreasing notably in 2009-2010 (*Figure 44*). Pre-primary enrollment rates are also very low in Armenia; 32% vs. 61% in Eurasia overall. On the other hand, Armenia's (gross) upper secondary school enrollment rate is closer to Northern Tier CEE standards, and has been steadily increasing since at least 2000 (*Figure 44*). Drawing on UNICEF data, we estimate that tertiary enrollment rates in Armenia are 50% which is higher than overall rates in Eurasia (41%) and the Southern Tier CEE (44%), though not the Northern Tier CEE (68%).[9]

Public expenditures in education in Armenia remain low, relative to the Eurasian average of roughly 5% of GDP in recent years and relative to the MDG goal of 4% of GDP by 2015.[10] According to UNICEF, in its Transmonee dataset, public expenditures in education in 2009 in Armenia were 3.5% of GDP. From 2000 to 2008, such expenditures remained below 3% of GDP for all years except 2007 (when it reached 3%).

Two recent World Bank studies have suggested that the quality, relevance, and sustainability of the education systems in the E&E region need to be a growing concern. A 2010 World Bank study, *Turmoil at Twenty: Recession, Recovery, and Reform in Central and Eastern Europe and the Former Soviet Union*, drew on the results from the Business Environment and Enterprise Performance Survey (referred to earlier in *Figure 18*) and observed in its summary update of transition progress in in E&E since the collapse of communism, that for the first time since the BEEPS survey started a decade ago, firms are identifying workers' education and skills as a major impediment to their growth prospects.[11] The skills and education of the workforce were perceived to be more problematic in 2008 than in 2005 according to the perceptions of businesses across all three E&E sub-regions. More specifically, results in twenty-six of the twenty-seven countries surveyed showed an increasing proportion of firms from 2005 to 2008

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[8] IMF, *Armenia: Poverty Reduction Strategy Paper—Progress Report* (July 2011), p. 26.
[9] E&E/USAID, *Monitoring Country Progress in Eastern Europe & Eurasia*, Number 13 (October 2011).
[10] United Nations Office Armenia, *Armenia Millennium Development Goals National Progress Report, 2005-2009* (September 2010).
[11] P. Mitra, M. Selowsky, and J. Zalduendo, *Turmoil at Twenty: Recession, Recovery, and Reform in Central and Eastern Europe and the Former Soviet Union*, the World Bank (2010).

with a perspective that labor skills were problematic; i.e., the perception of a worsening situation took place in all countries except Hungary. As shown in *Figure 18*, the proportion of Armenian businesses which felt that the skills and education of the workforce were problematic in 2008 was much higher than in the previous 2005 survey; 39% in 2008 vs. 15% in 2005.

A 2012 World Bank study, *Skills, Not Just Diplomas: Managing Education for Results in Eastern Europe and Central Asia*, has argued that a key factor contributing to the "slide in quality and relevance" and one of the legacies of central planning has been "that the countries [of the E&E region] pay too much attention to the measurement of inputs into learning—such as the number of schools and the number of teachers—and not enough to outcomes."[12] In this context, a growing number of E&E countries are participating in a handful of standardized international exams given to students which attempt to measure educational performance.

However, Armenia remains one of the laggards in the region in terms of measuring educational performance. It has so far only participated in two rounds—now quite dated--of the Trends in International Mathematics and Science Study (TIMSS), which tests trends in math and science achievement at the fourth grade and eight grade levels.   Armenia has not yet participated in the more comprehensive Program for International Student Assessment (PISA) tests, an effort to test functional literacy among high school students which includes reading and analytical skills needed to function in a market economy.

Figures 45 and *46* show the results of the two latest rounds of the TIMSS for E&E eight graders compared to the international average of sixty-three participant countries. By this measure, Armenia students perform well in math and science by international standards, showing notable improvement from 2003 to 2007.

One final component of the MCP human capital index is a measure of gender inequality drawn from the UNDP's *Human Development Report* (*Figure 47*). This measure is an index in itself and has three dimensions: reproductive health (maternal mortality rate and adolescent fertility rate); political empowerment (share of parliamentary seats held by each sex); and labor market participation (attainment of secondary and higher education by each sex, and labor market participation rate by each sex). *Figure 47* shows the overall results for 2009 across the 140 countries which are included in the sample, twenty-one of which are in E&E. By this measure, all of the twenty-one E&E countries score roughly equal to or better than the global average of gender inequality; i.e., gender inequality in E&E is lower than global standards. However, seven of the nine Eurasian countries lag considerably behind the rest of E&E in the sample. Armenia is one of the laggards; of the E&E countries only in Georgia and Kyrgyzstan is gender inequality greater.

Peace and Security. *Figure 48* compares peace and security in Armenia to that of other E&E countries and a handful of countries outside of the region. *Figure 49* and the peace and security web chart in *Figure 3* provide a picture of the progress of the sectors of peace and security in Armenia compared to

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[12] L. Sondergaard and M. Murthi, *Skills, Not Just Diplomas: Managing Education for Results in Eastern Europe and Central Asia*, the World Bank (2012), p. XV.

the three sub-regions (*Figure 49*) and compared to the eleven USAID graduate countries (*Figure 3*). Armenia's peace and security score has risen slightly since the previous year with improvements in counterterrorism.

Armenia continues to maintain a lower score for combating weapons of mass destruction due to controls in places for potential proliferation of chemical and biological weapons. It also scores low on conflict mitigation due to high militarization (number of citizens in the armed forces as compared to total population) and neighborhood instability caused by armed conflict in neighboring countries.

Armenia Gap Analysis

USAID
E&E Bureau
Strategic Planning and Analysis Division
March 2012

Figure 1

Development Profile
Regional Comparison of Five MCP Indices

1 to 5 Scale

| Economic Reforms | Democratic Reforms | Economic Performance | Human Capital | Peace and Security |

Northern Tier CEE
Southern Tier CEE
Armenia
Eurasia
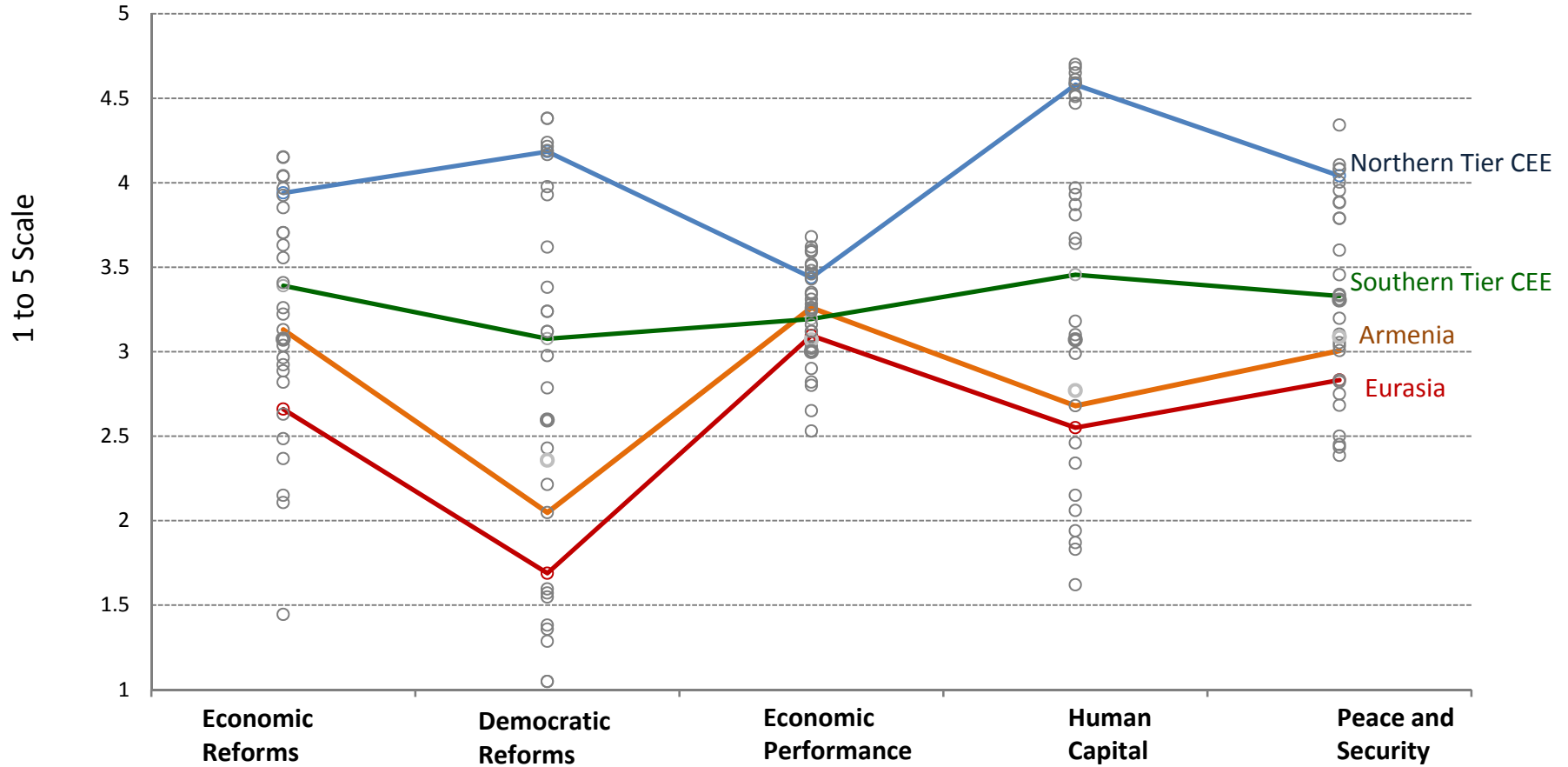
Ratings are based on a 1 to 5 scale, with 5 representing the most advanced.

Figure 2

Armenia

Economic Reforms, 2011
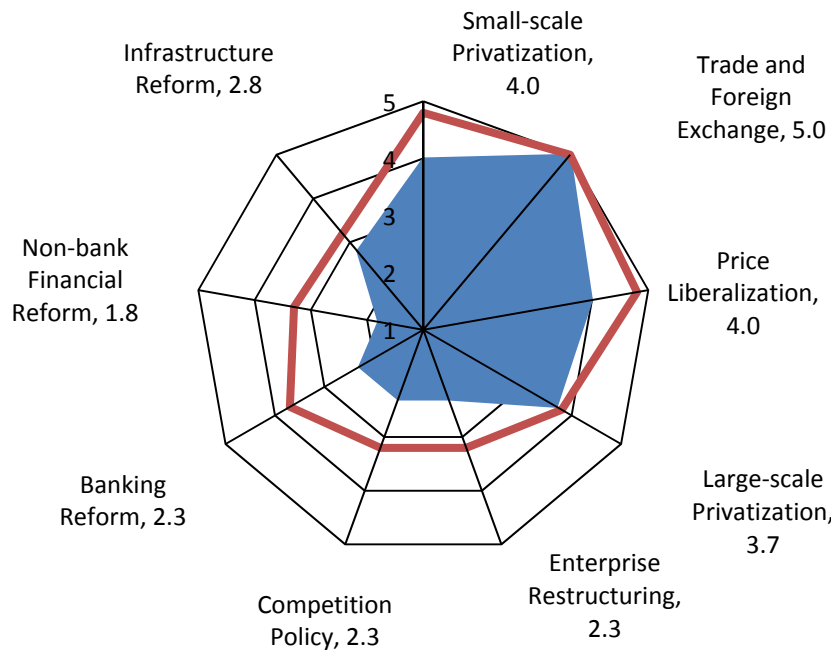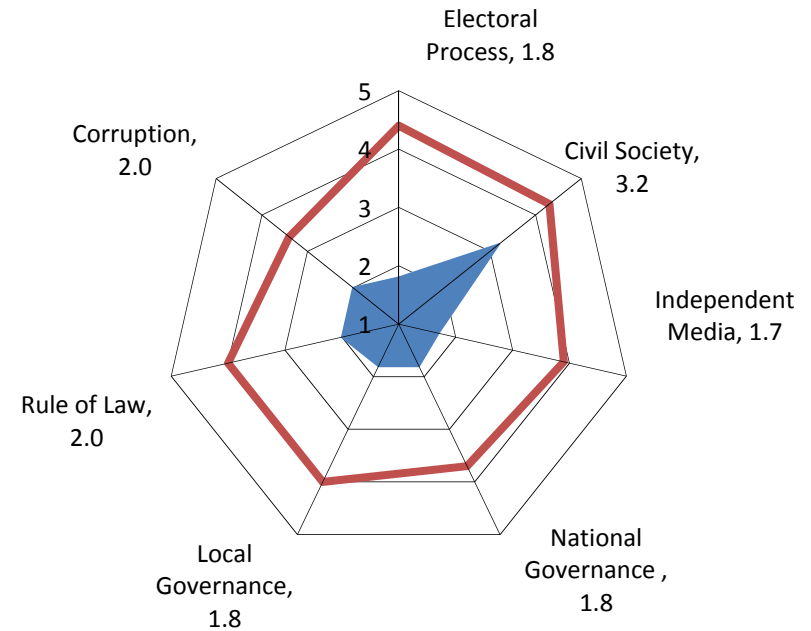
Infrastructure Reform, 2.8
Small-scale Privatization, 4.0
Trade and Foreign Exchange, 5.0
Non-bank Financial Reform, 1.8
Price Liberalization, 4.0
Banking Reform, 2.3
Large-scale Privatization, 3.7
Competition Policy, 2.3
Enterprise Restructuring, 2.3

Democratic Reforms, 2010

Electoral Process, 1.8
Corruption, 2.0
Civil Society, 3.2
Rule of Law, 2.0
Independent Media, 1.7
Local Governance, 1.8
National Governance, 1.8

USAID Country Graduates

Country graduates = Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, and Slovenia.

Figure 3

Armenia

Economic Performance, 2008-2010

- GDP Growth, 5.0
- Unemployment, 2.4
- Macro Stability, 3.0
- FDI, 2.8
- Export Share & Composition, 1.5
- Services as % GDP, 2.0
- Private Sector Share of GDP, 4.5
- Energy Security, 2.4
- Environmental Sustainability, 2.7
- Income Inequality, 4.6

Human Capital, 2008-2010

- GNI per capita, 2.0
- Under-5 Mortality Rate, 3.4
- Life Expectancy, 3.8
- Environmental Health, 4.0
- TB Incidence, 3.5
- Public Exp. Health, 1.4
- Public Exp. Education , 1.2
- Education Gaps, 3.0
- Gender Inequality, 3.0

Peace & Security

- Counter-Terrorism, 3.8
- Combating Weapons of Mass Destruction, 2.3
- Stabilization and Security Reform, 3.1
- Counter-Narcotics, 3.4
- Transnational Crime, 3.5
- Conflict Mitigation, 2.8

USAID Country Graduates

Country graduates = Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, and Slovenia.

Figure 4

Economic and Democratic Reforms in 2011
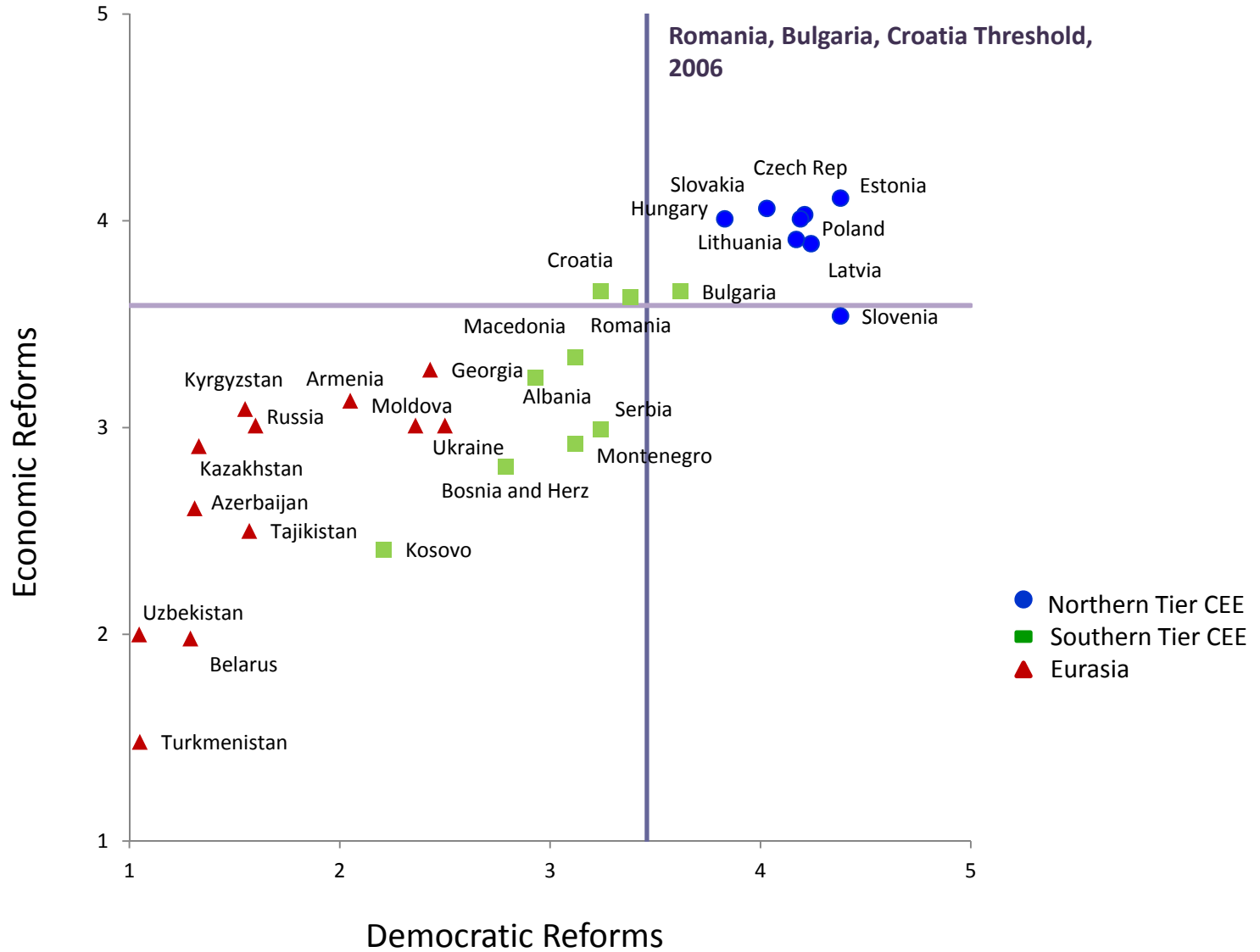
Ratings are based on a 1 to 5 scale, with 5 representing most advanced. Freedom House, *Nations in Transit 2011* (June 2011) and *Freedom in the World* (2012); and EBRD, *Transition Report 2011* (November 2011).

Figure 5

Economic and Democratic Reforms in 2011
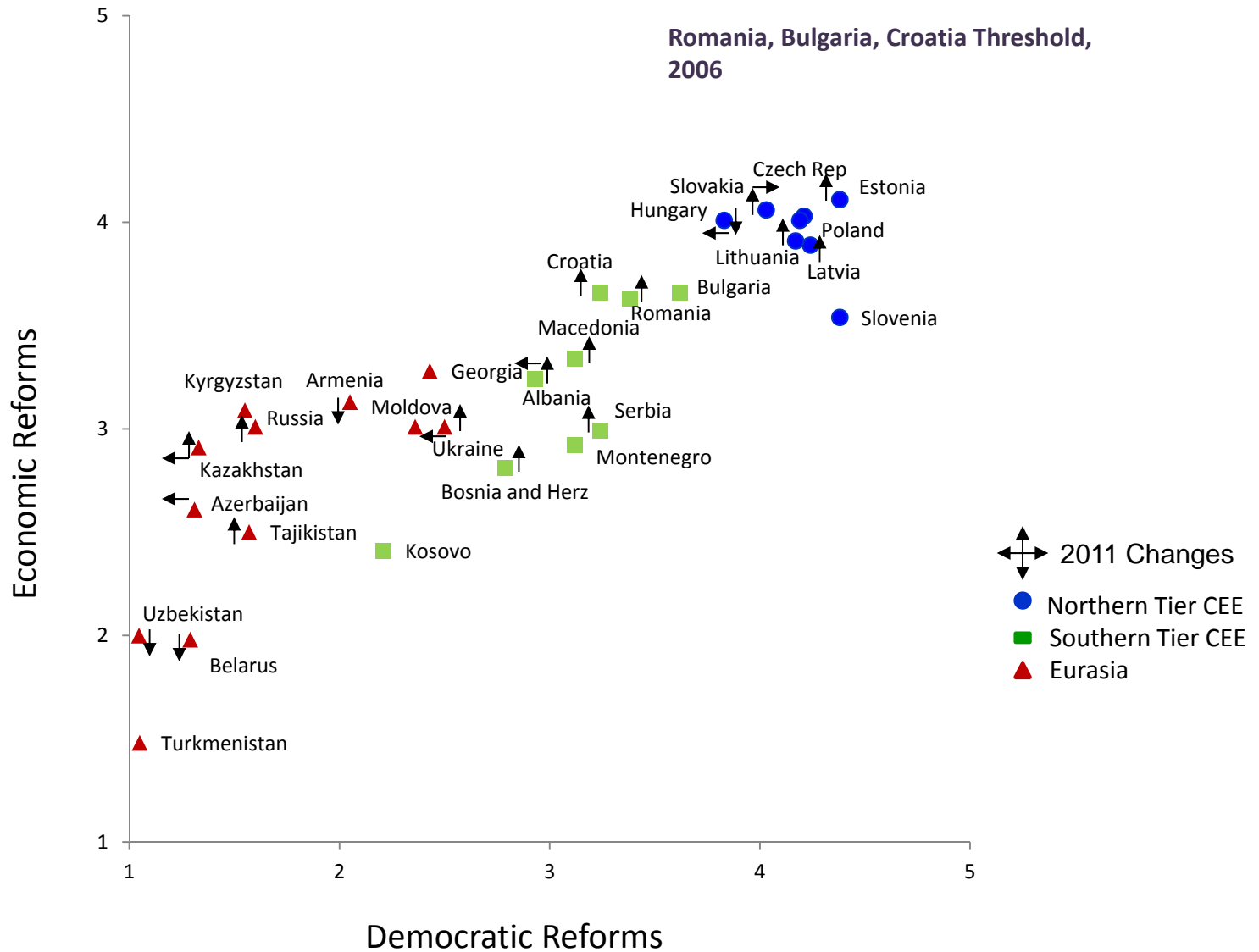
Romania, Bulgaria, Croatia Threshold, 2006

Czech Rep
Slovakia
Estonia
Hungary
Poland
Lithuania
Latvia
Croatia
Bulgaria
Romania
Slovenia
Macedonia
Kyrgyzstan
Armenia
Georgia
Russia
Moldova
Albania
Serbia
Ukraine
Kazakhstan
Bosnia and Herz
Montenegro
Azerbaijan
Tajikistan
Kosovo
Uzbekistan
Belarus
Turkmenistan

2011 Changes

● Northern Tier CEE
■ Southern Tier CEE
▲ Eurasia

Economic Reforms

Democratic Reforms

Ratings are based on a 1 to 5 scale, with 5 representing most advanced. Freedom House, *Nations in Transit 2011* (June 2011) and *Freedom in the World* (2012); and EBRD, *Transition Report 2011* (November 2011).

Figure 6

Economic Reforms in Eastern Europe and Eurasia
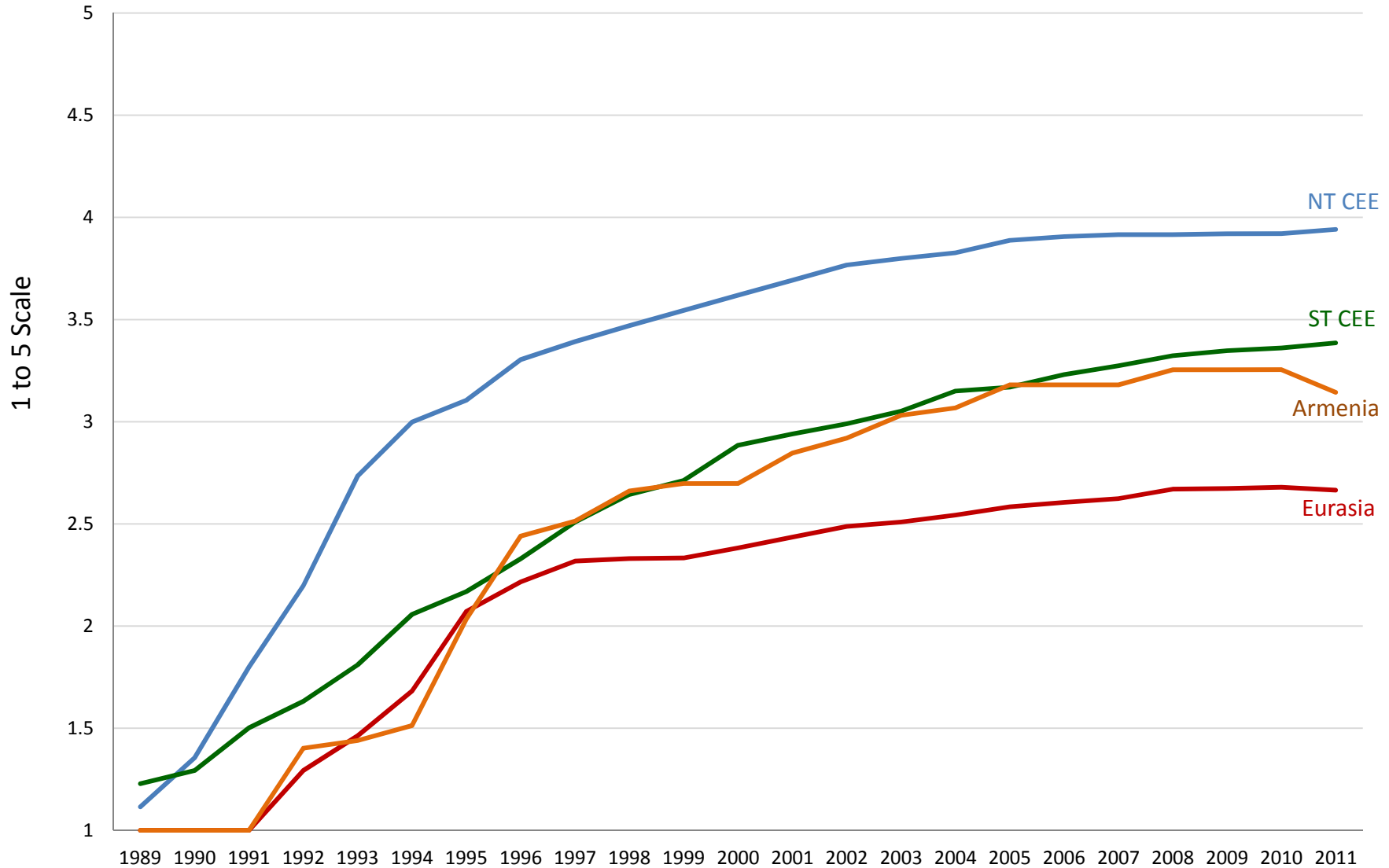
Drawn from the EBRD, *Transition Reports*. Scores are based on 1 to 5 scale, with 5 representing the most advanced.

Figure 7

Economic Reforms, Stage 1 and Stage 2
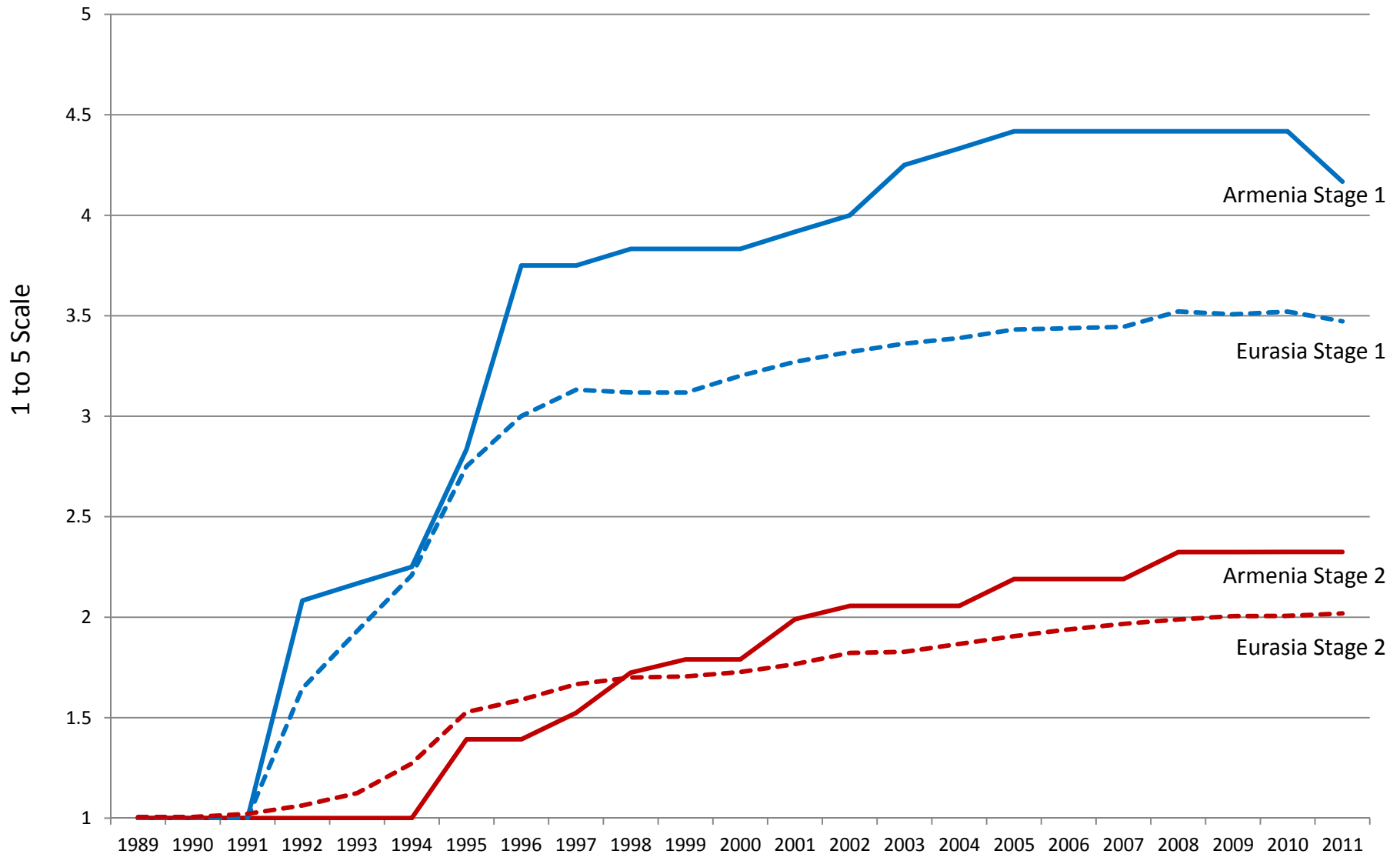
Data are drawn from the EBRD, *Transition Report* 2011. Stage 1 Reforms: Small Scale Privatization, Trade and Foreign Exchange, Price Liberalization, Large Scale Privatization. Stage 2 Reforms: Enterprise Reform, Competition Policy, Banking Reform, Competition Policy, Banking Reform, Non-Bank Financial Reform, Infrastructure. Ratings are based on a 1 to 5 scale, with 5 representing most advanced.

Figure 8

Business Environment
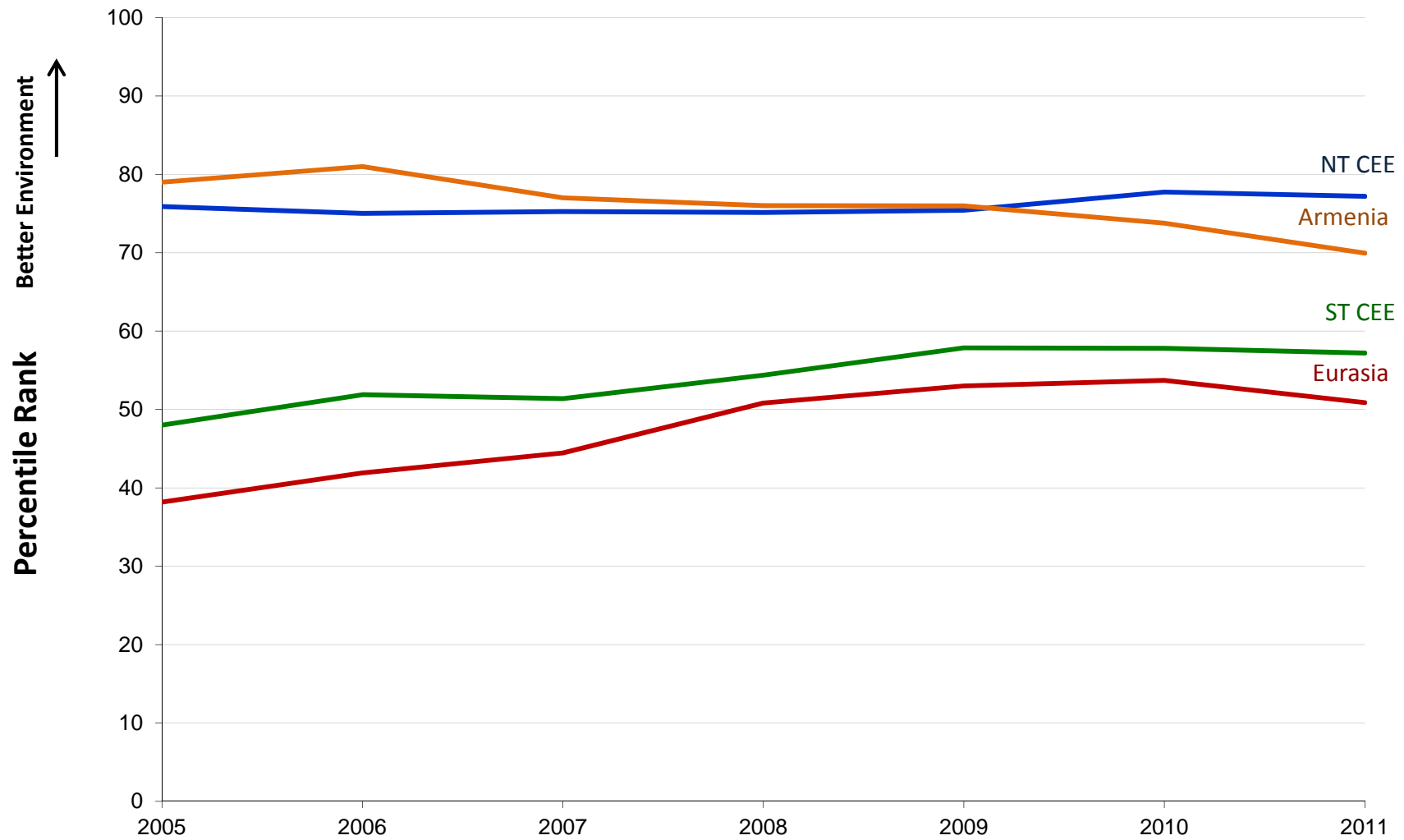
Better Environment ↑

Percentile Rank

NT CEE

Armenia

ST CEE

Eurasia

World Bank, *Doing Business* 2012 (October 2011). The analysis is based on 10 aspects: starting a business; dealing with construction; hiring and firing workers; registering a property; getting credit; protecting investors; paying taxes; trading across borders; enforcing contracts; and closing a business.

Figure 9

Business Environment
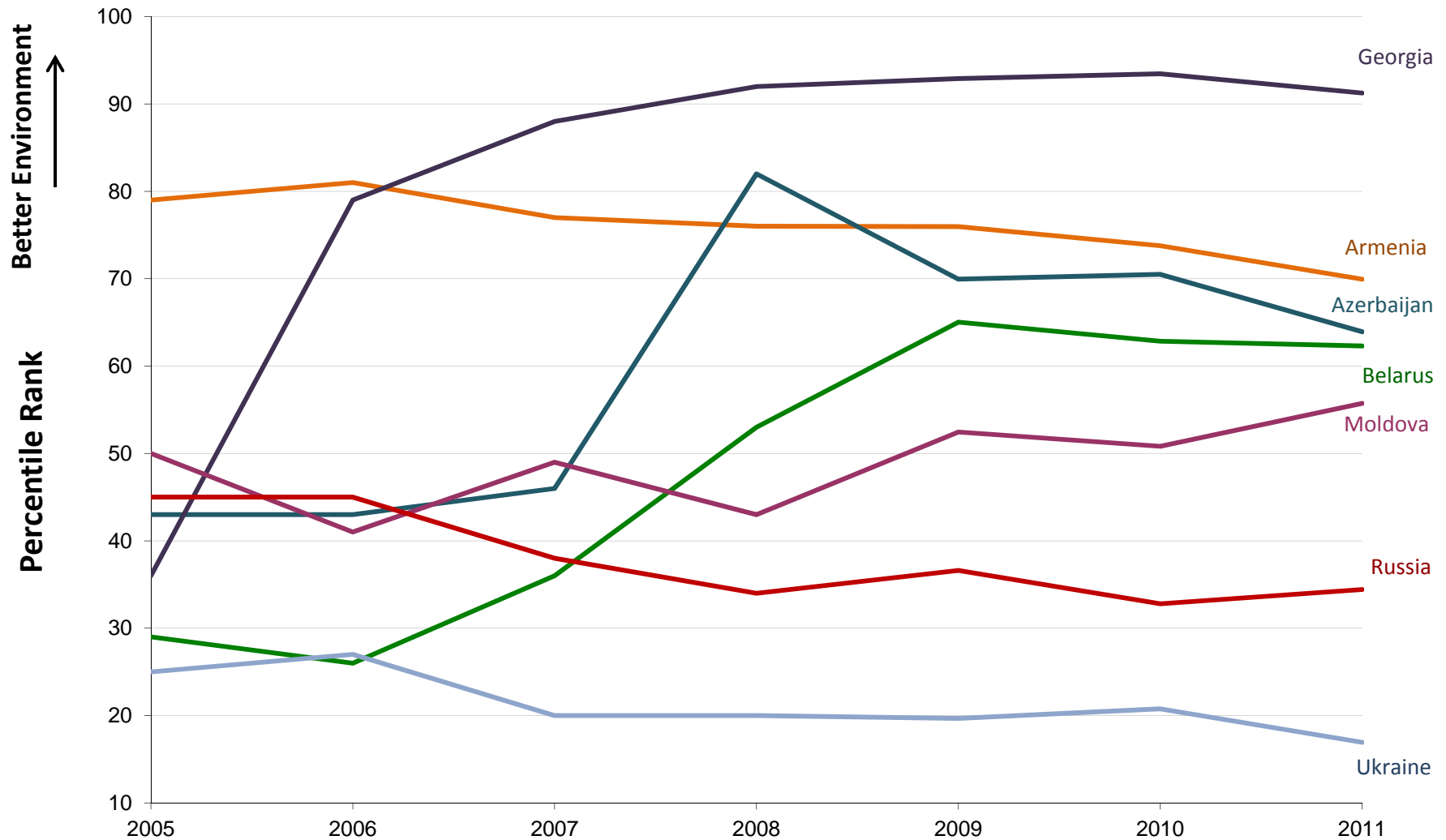
World Bank, Doing Business 2012 (October 2011). The analysis is based on 10 aspects: starting a business; dealing with construction; hiring and firing workers; registering a property; getting credit; protecting investors; paying taxes ; trading across borders; enforcing contracts; and closing a business.

Figure 10

Business Environment in 2011

Rank

Armenia

Singapore · Ireland · Georgia · Latvia · Macedonia · Estonia · Lithuania · Portugal · Slovenia · Kazakhstan · Slovakia · Hungary · Armenia · Montenegro · Bulgaria · Poland · Czech Rep · Azerbaijan · Belarus · Kyrgyzstan · Romania · Croatia · Moldova · Albania · Serbia · Jordan · El Salvador · Kosovo · Russia · Bosnia & Herz. · Nigeria · Tajikistan · Ukraine · Afghanistan · Uzbekistan · Chad
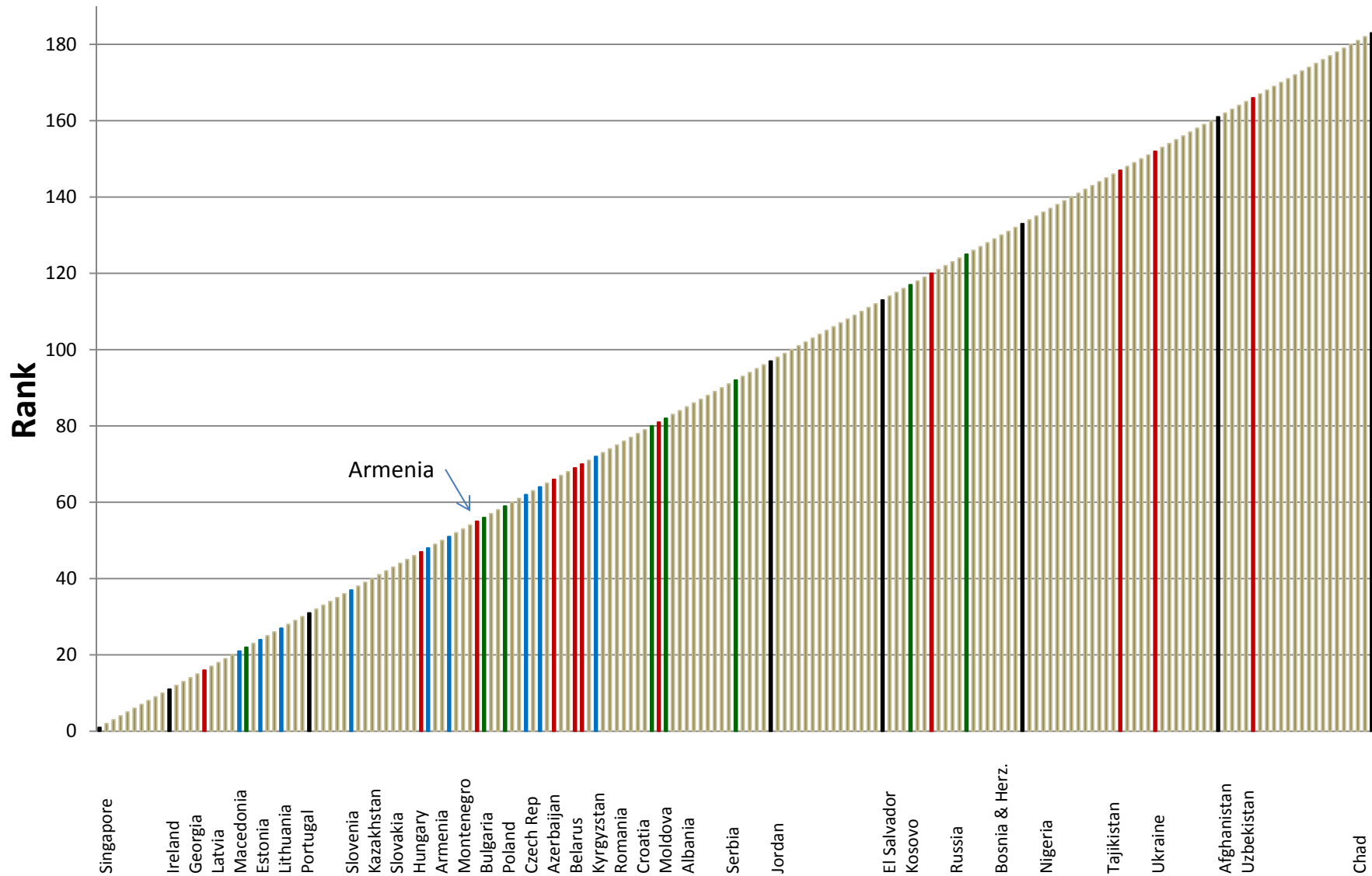
World Bank, *Doing Business* 2012 (October 2011). 183 countries are included in the analysis. The business environment is gauged based on 10 aspects: starting a business; dealing with construction; hiring and firing workers; registering a property; getting credit; protecting investors; paying taxes; trading across borders; enforcing contracts; and closing a business.

Figure 11

Democratic Reforms in Eurasia: Country Trends
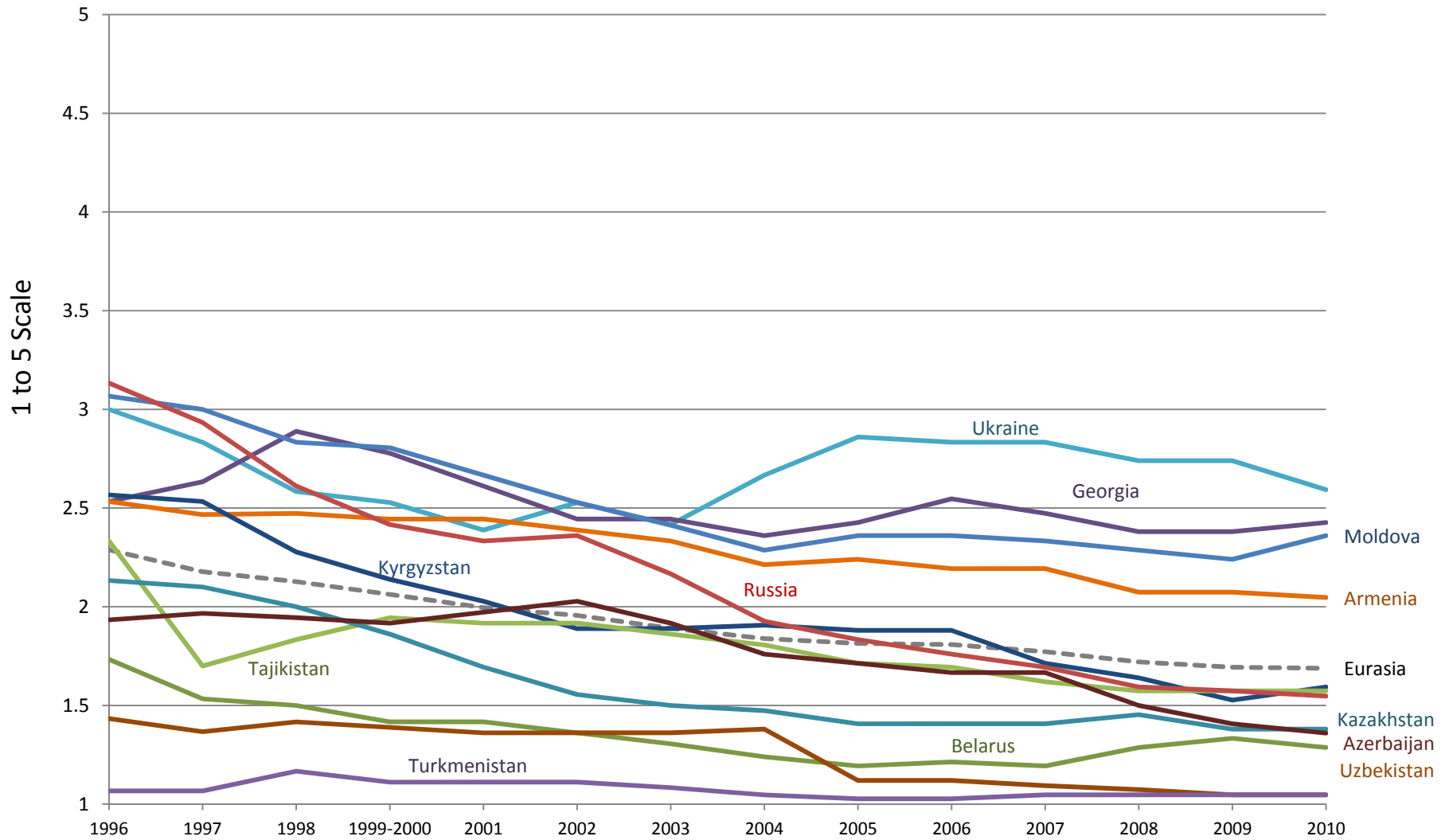
Dotted line represents regional average. Scores calibrated on MCP 1 to 5 scale. Source: Freedom House, *Nations in Transit.*

Figure 12

Democratic Reform Profiles:
Regional Comparisons
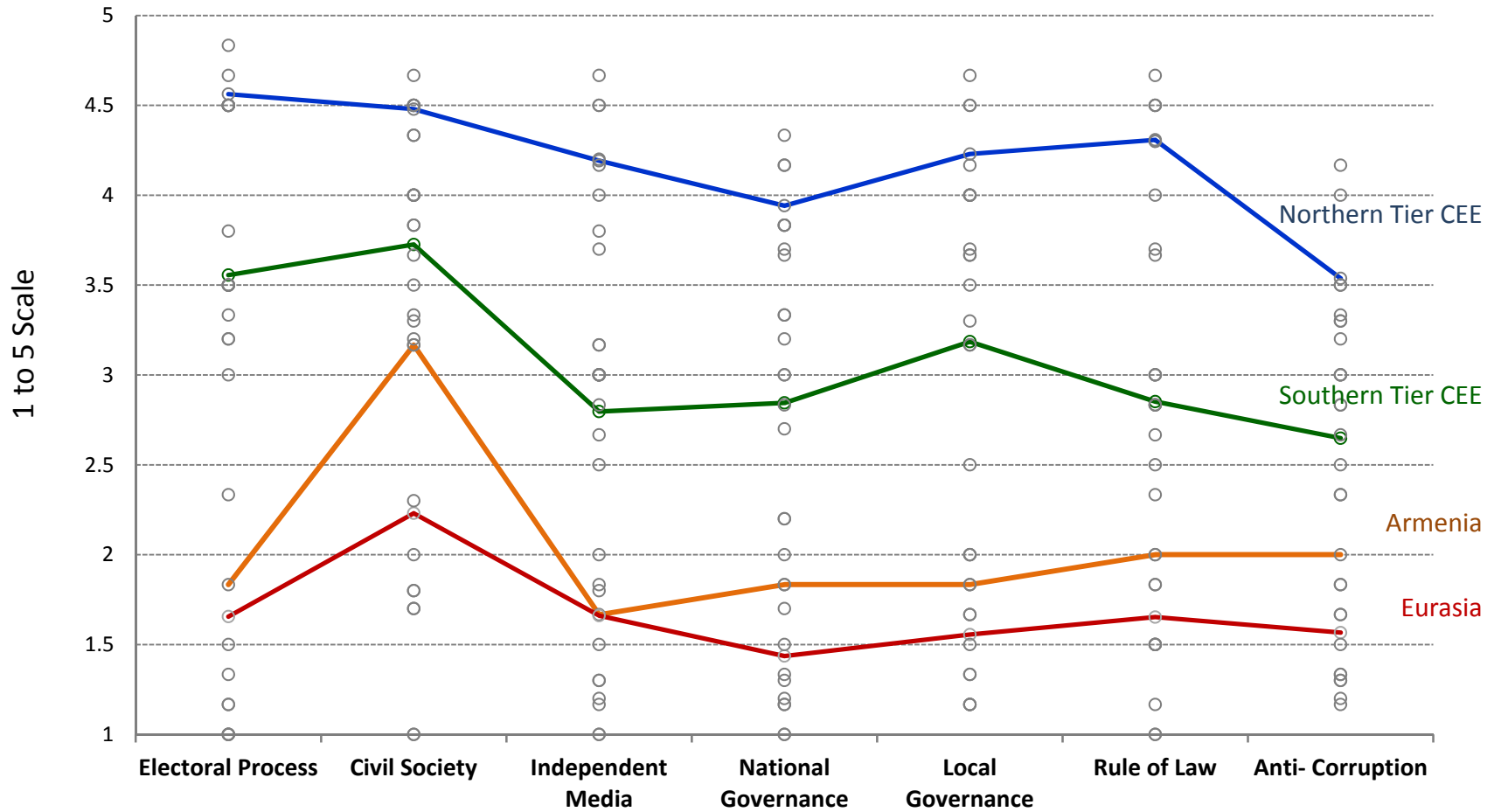
Drawn from Freedom House, *Nations in Transit* (June 2011). Scores calibrated on MCP 1 to 5 scale, with 5 representing the most advanced.

Figure 13

Democratic Reforms in Armenia: Component Trends
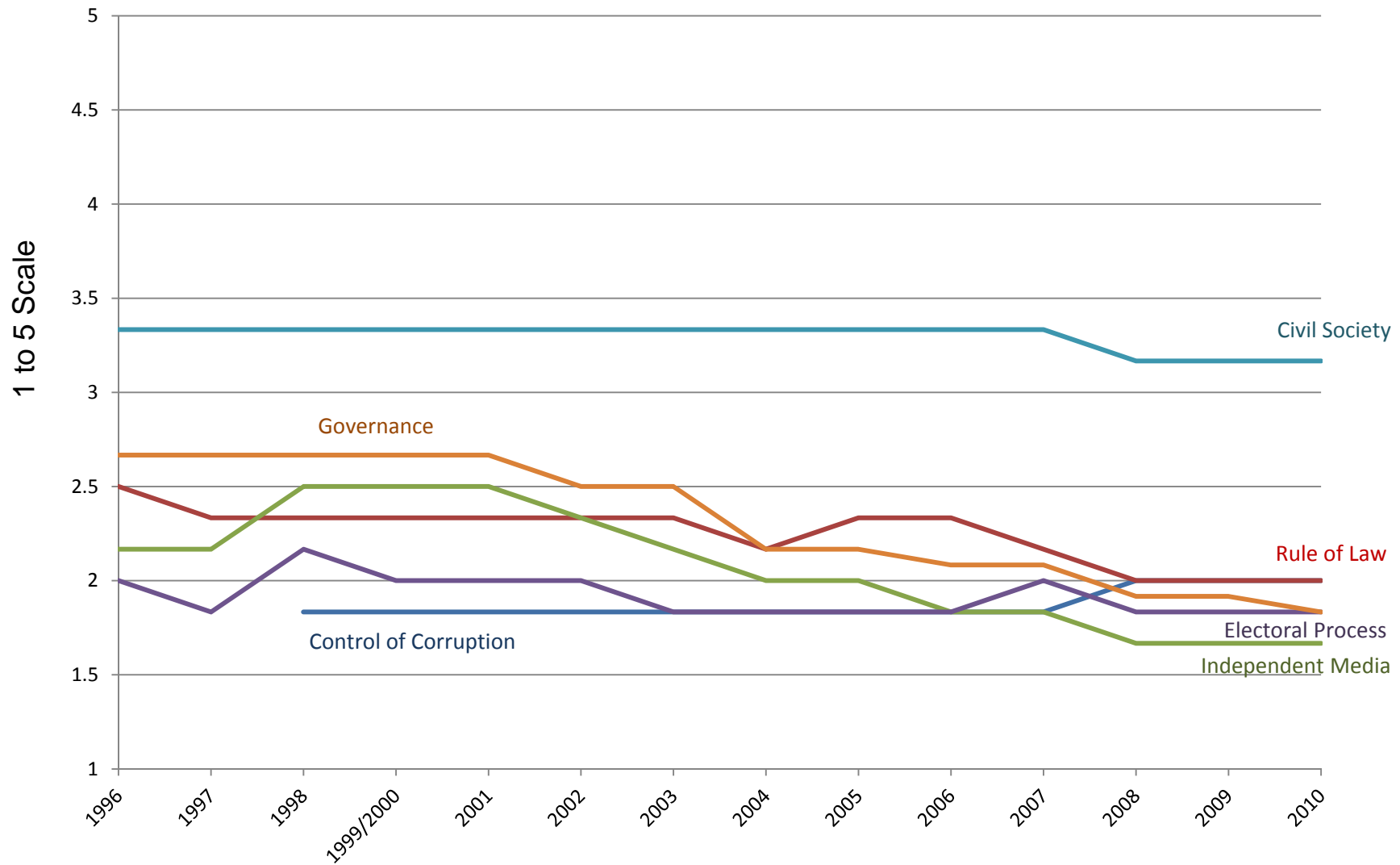
Scores for control of corruption begin in 1998. Scores calibrated on MCP 1 to 5 scale. Source: Freedom House, *Nations in Transit.*

Figure 14

Democratic Reforms in Eurasia: Component Trends
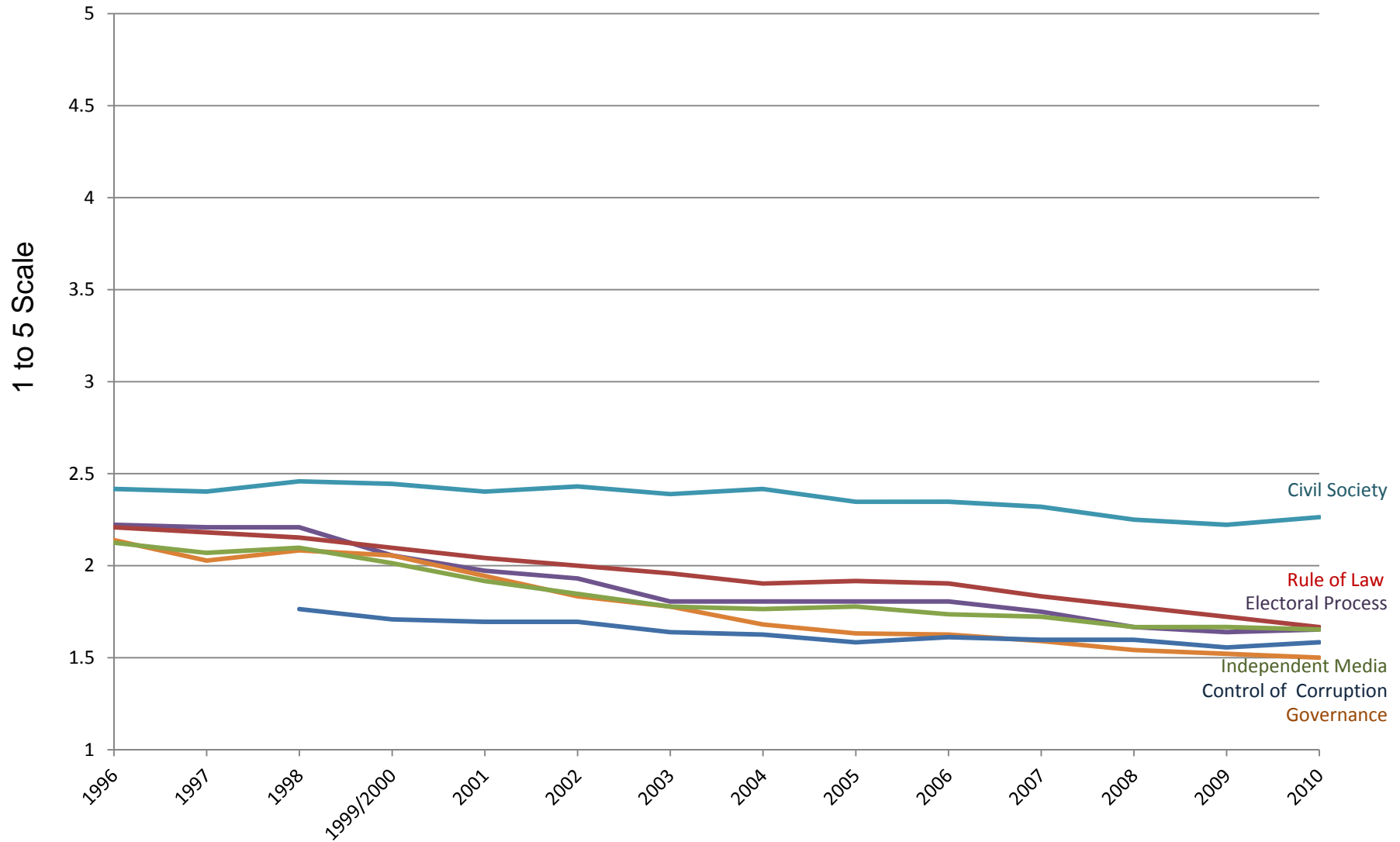
Scores for control of corruption begin in 1998. Scores calibrated on MCP 1 to 5 scale. Source: Freedom House, *Nations in Transit.*

Figure 15

Democracy and Governance in the World in 2010
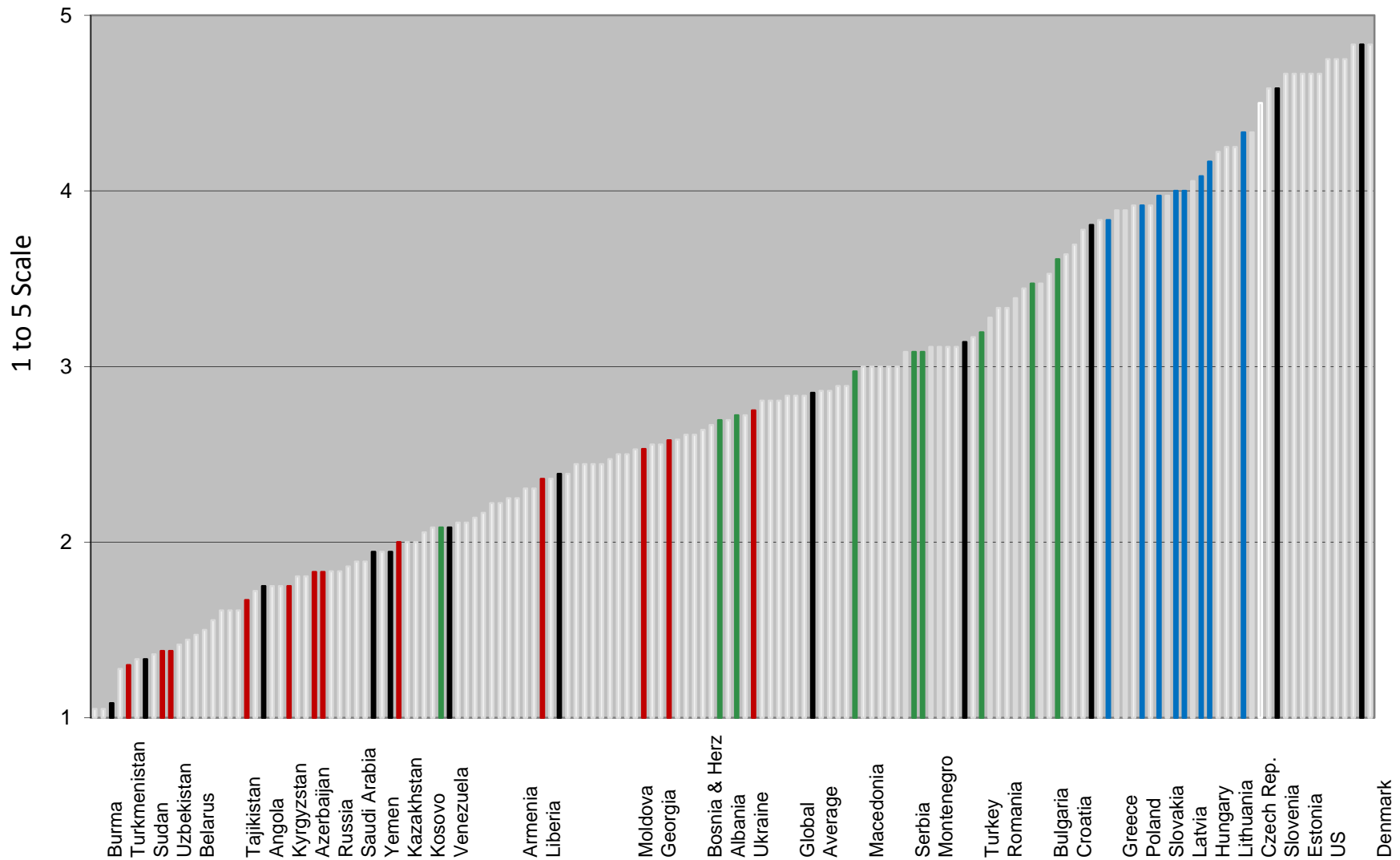
Drawn from World Bank Institute, *Governance Matters Indicators* (2010); Freedom House, *Freedom in the World* (2010) and *Freedom of the Press* (2010). N=153. Ratings are based on a scale from 1 to 5, with 5 representing the most advanced. An index of 5 indicators: rule of law; anti-corruption; free media; political rights; and civil liberties.

Figure 16

Corruption Perceptions in 2010
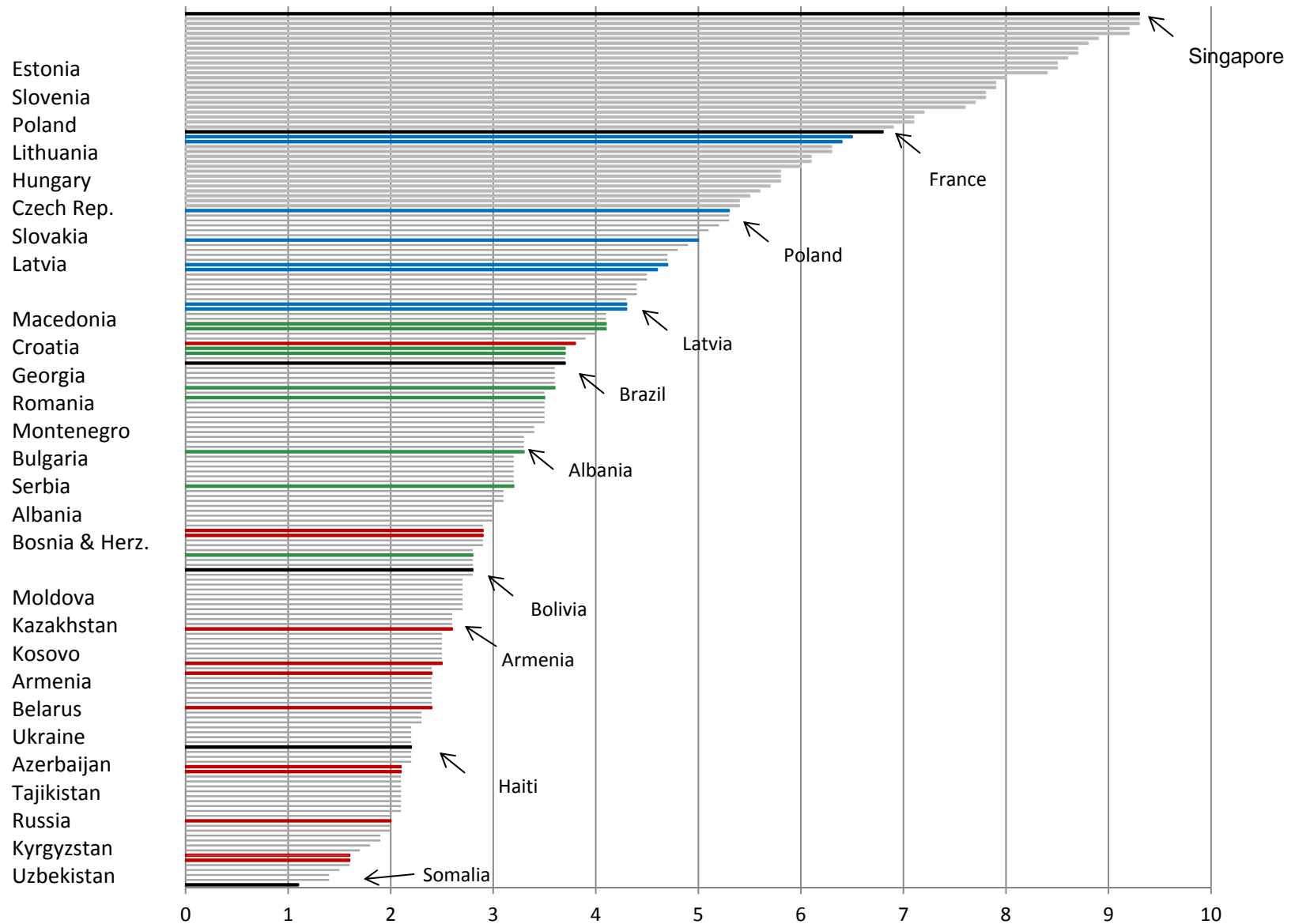
Transparency International, *Corruption Perceptions Index*, 2010. Scores are based from 0 (highly corrupt) to 10 (very clean).

Figure 17

Corruption in Eastern Europe and Eurasia

Anti-Corruption

Corruption Perceptions Index
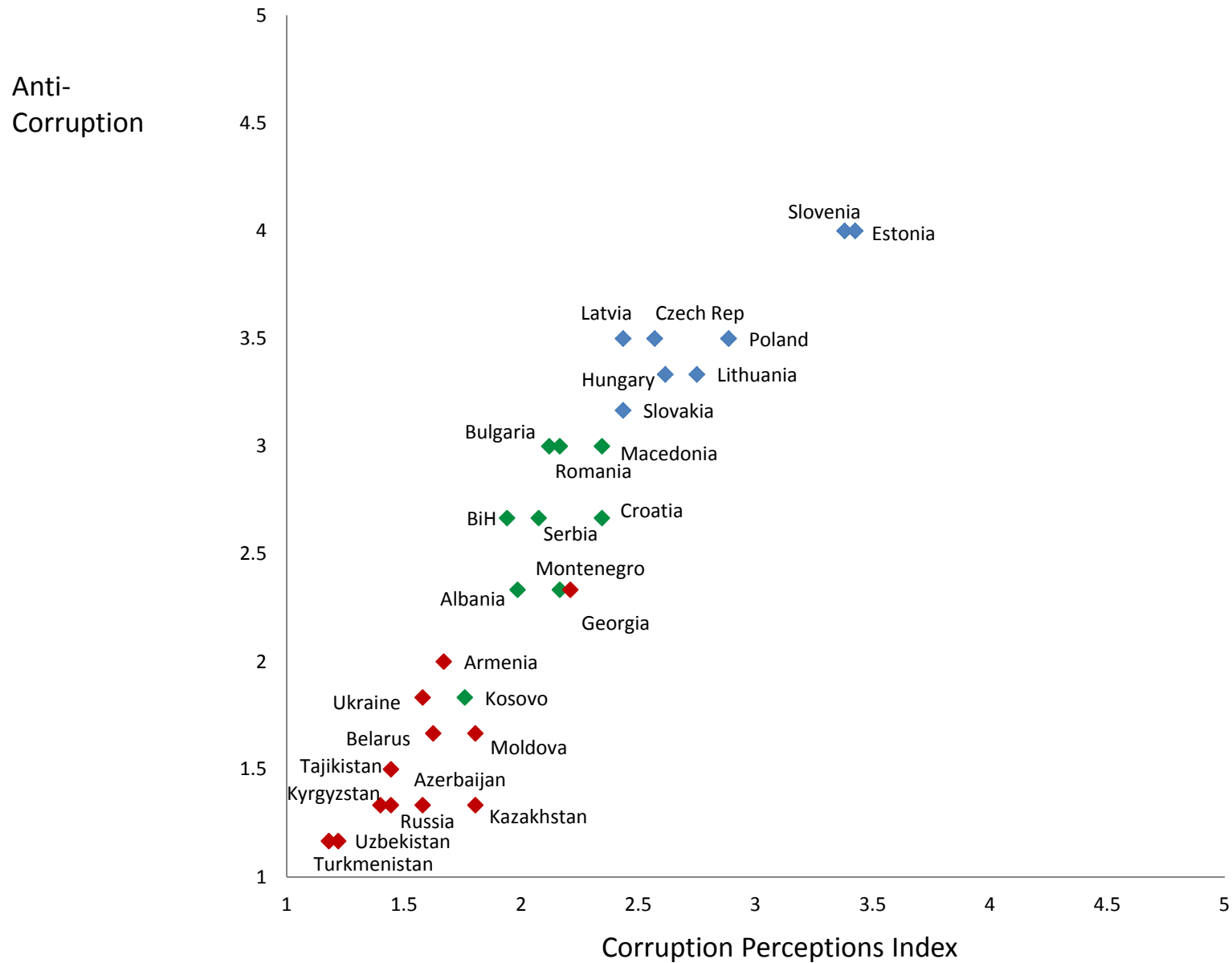
Scores are recalibrated to MCP 1 to 5 scale. Transparency International, *Corruption Perceptions Index*, 2010. Freedom House, *Nations in Transit*, 2011.

Figure 18

Business Problems as Indicated by Firms in Armenia

% of Firms Indicating a Problem
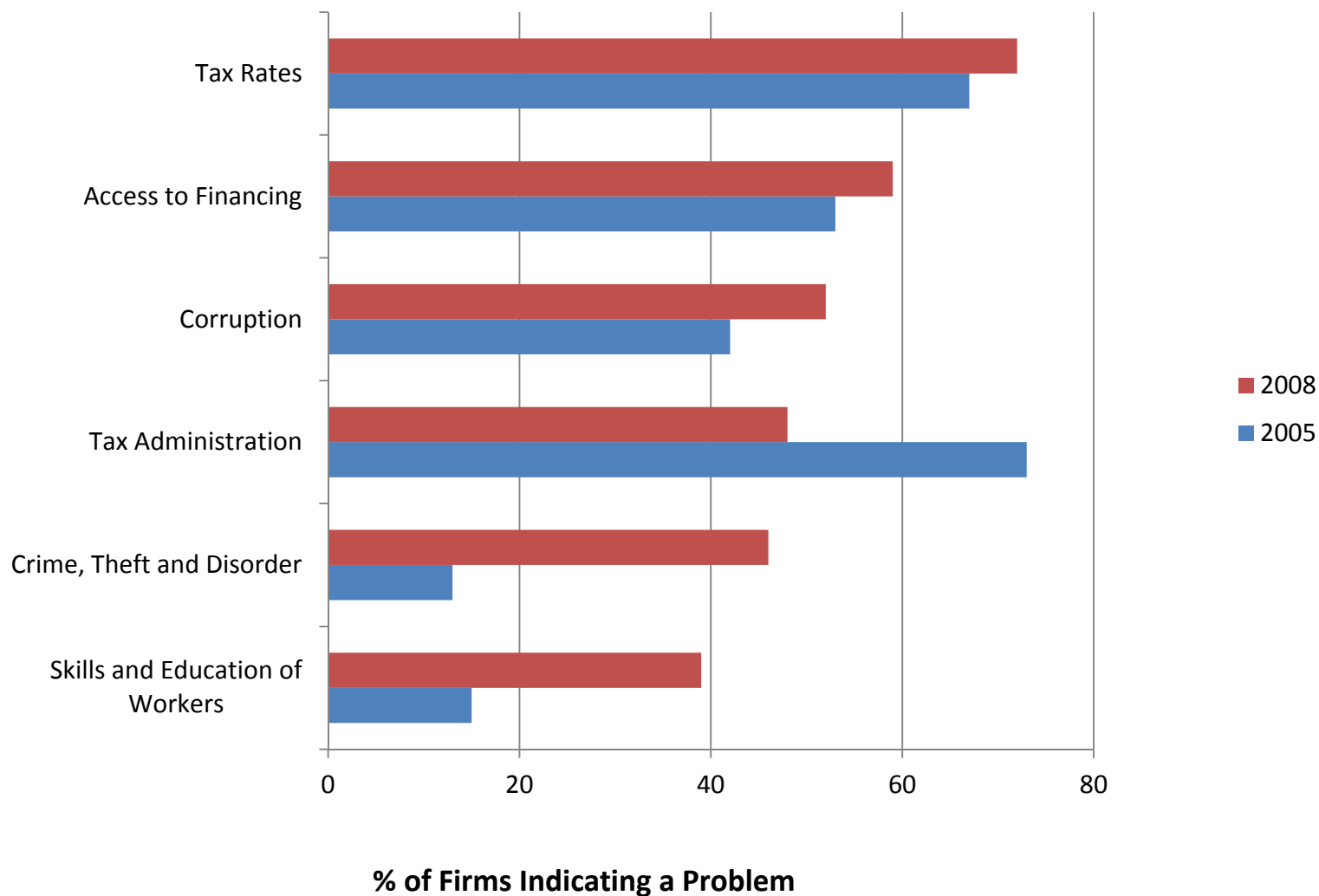
Figure 19

Media Sustainability Index

IREX, *Media Sustainability Index 2011.* Scale of 0 to 4 where 4 is the most advanced. This index does not track the progress in the Northern Tier CEE countries.

Figure 20

NGO Sustainability Index, Eurasia
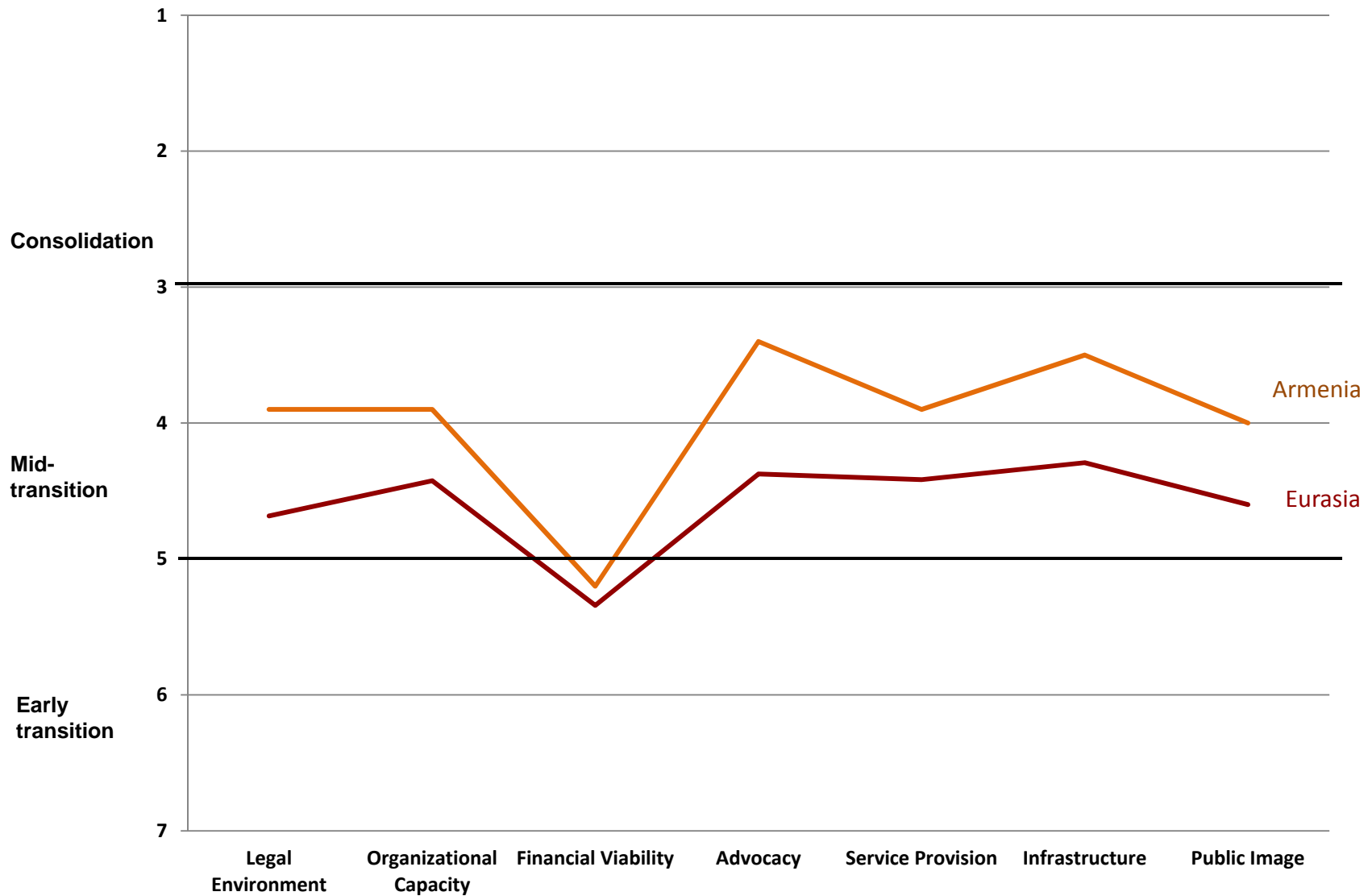
USAID, *2010 NGO Sustainability Index for Central and Eastern Europe and Eurasia*, 14th Edition (2011). Scale of 1 to 7 , with 1 representing the most advanced.

Figure 21

Economic Performance Index
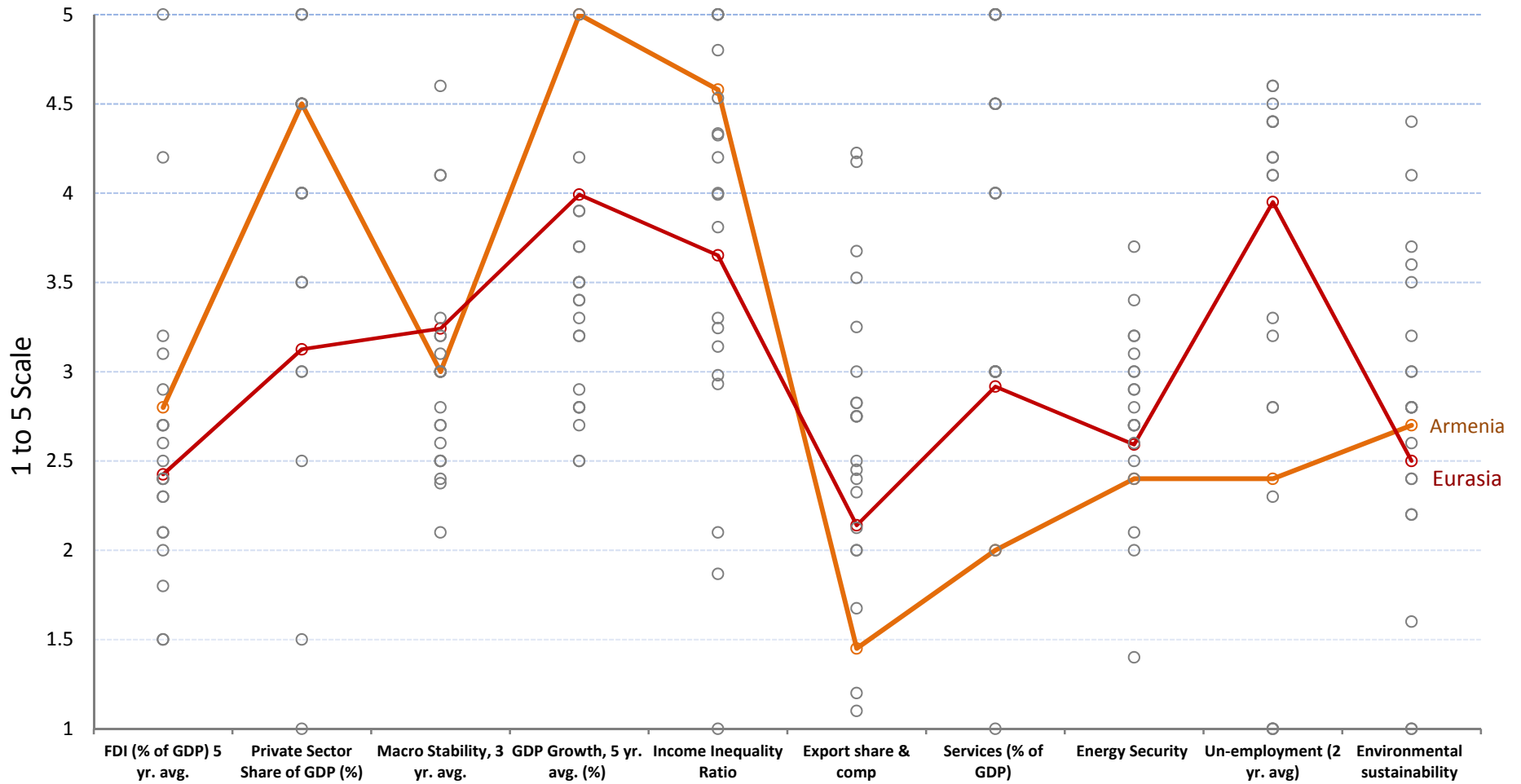
See Appendix for data sources. Scores calibrated on MCP 1 to 5 scale, with 5 representing the most advanced.

Figure 22

Economic Growth and Contraction
(% change in GDP)

Eurasia
Armenia
World
NT CEE
ST CEE
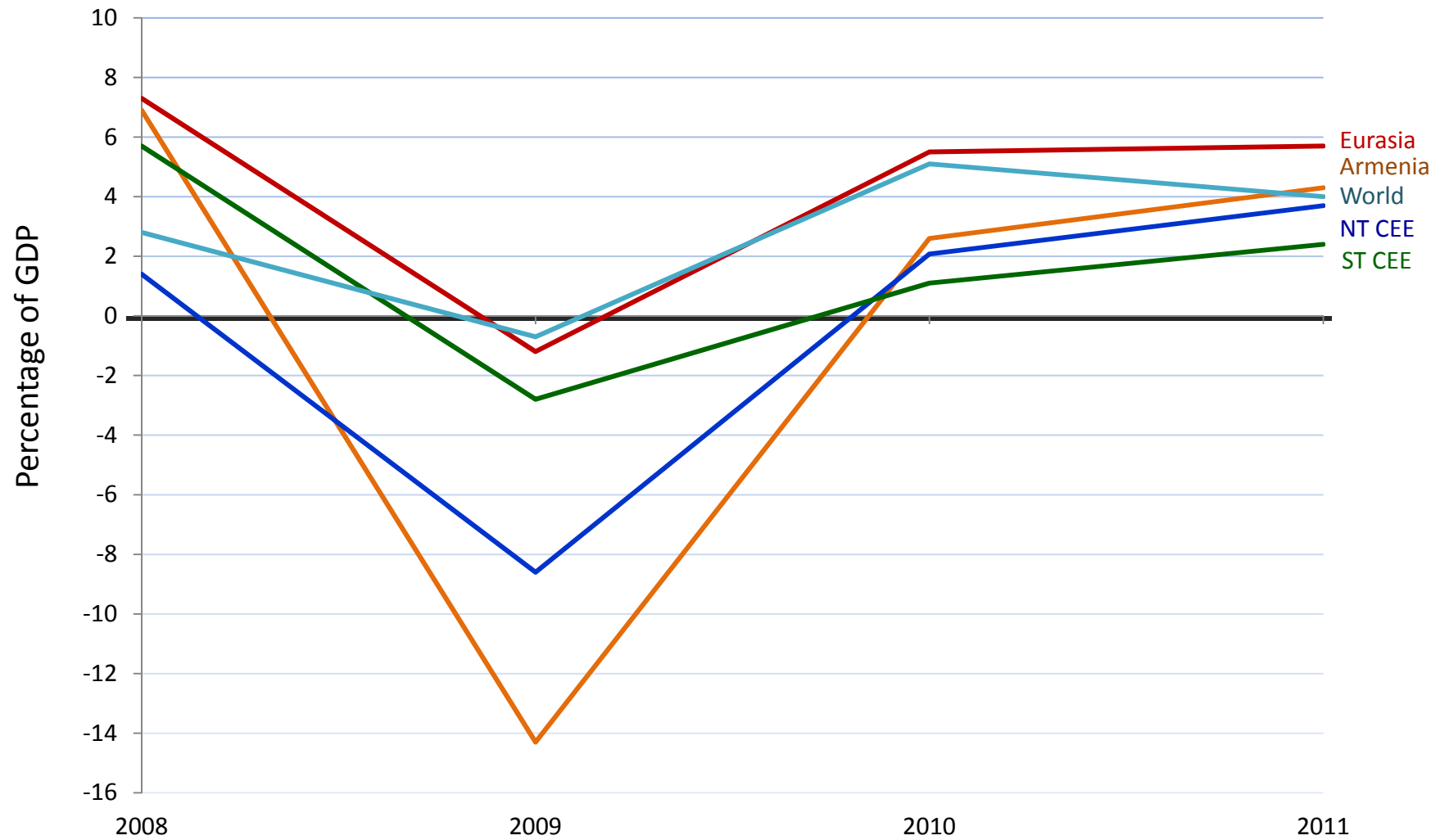
World Bank, *World Development Indicators*, 2011; Economist Intelligence Unit Database. Equally-weighted calculations for the EE subregions.

Figure 23

GDP as Percentage of 1989 GDP

EBRD, *Transition Report 2010* (November 2010), IMF *World Economic Outlook* Update (April 2011).
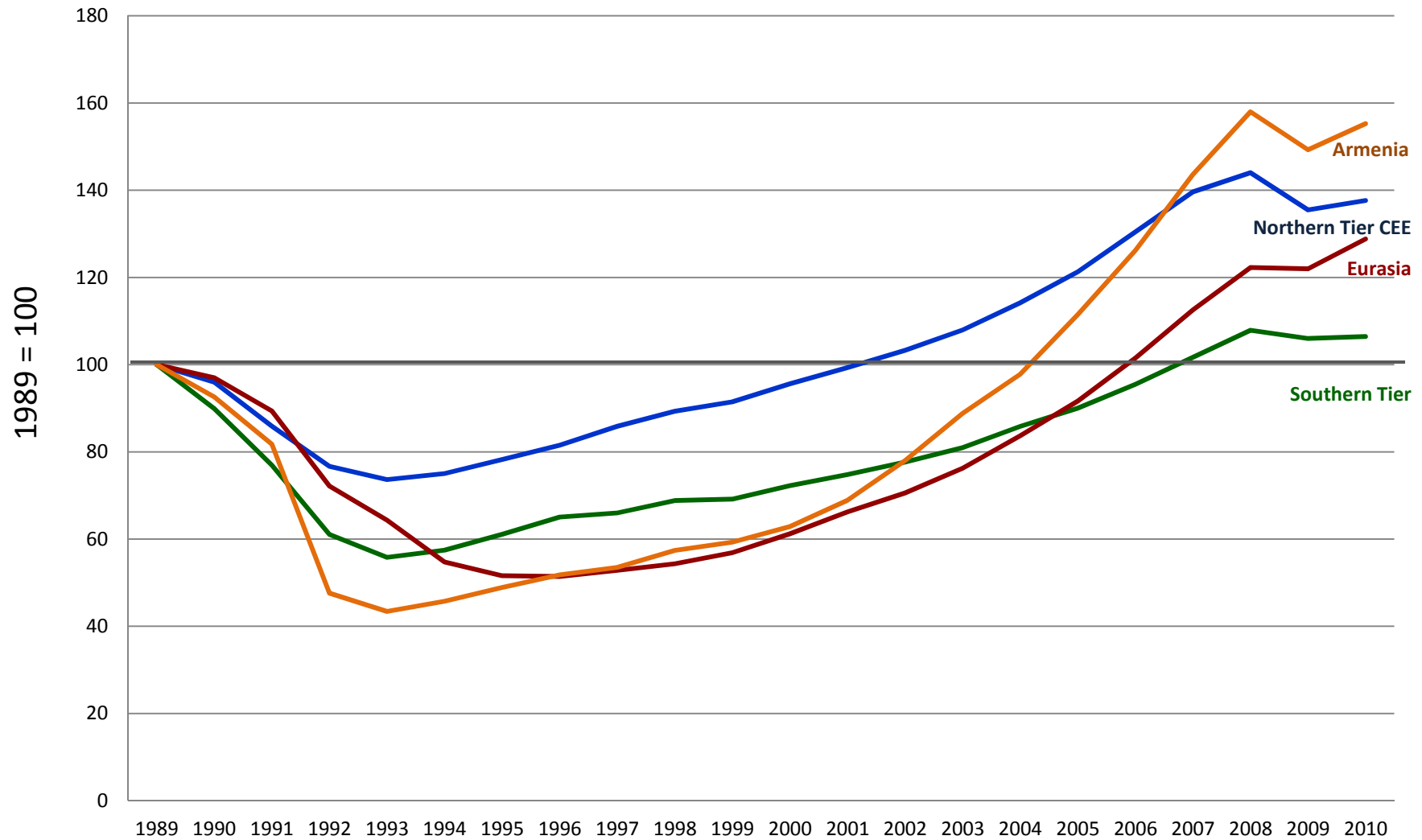
Figure 24

Current Account Balance and External Debt in 2010-2011

External Debt as % of GDP in 2010 (y-axis)

Current Account as % GDP in 2010-2011 (x-axis)

Greece
Spain
Lat
Hun
Slv
Est
Bul
Italy
Mont (-25.1, 100)
USA
Cro
Srb
Ukr
Lith
Kaz
Mol
Rom
Arm
Slk
Kyr
Pol
Bel
Geo
Mac
BH
Cz
Taj
Alb
Rus
Kos
Uzb
Surplus
Deficit
Turk
Azer (28.1, 7)

3-year fiscal deficit ≥ 4% GDP

Legend:
- NT
- ST
- Eur
- Other

Figure 25

Exports as a Percentage of GDP

World Bank, *World Development Indicators (*2011); International Monetary Fund (2011).
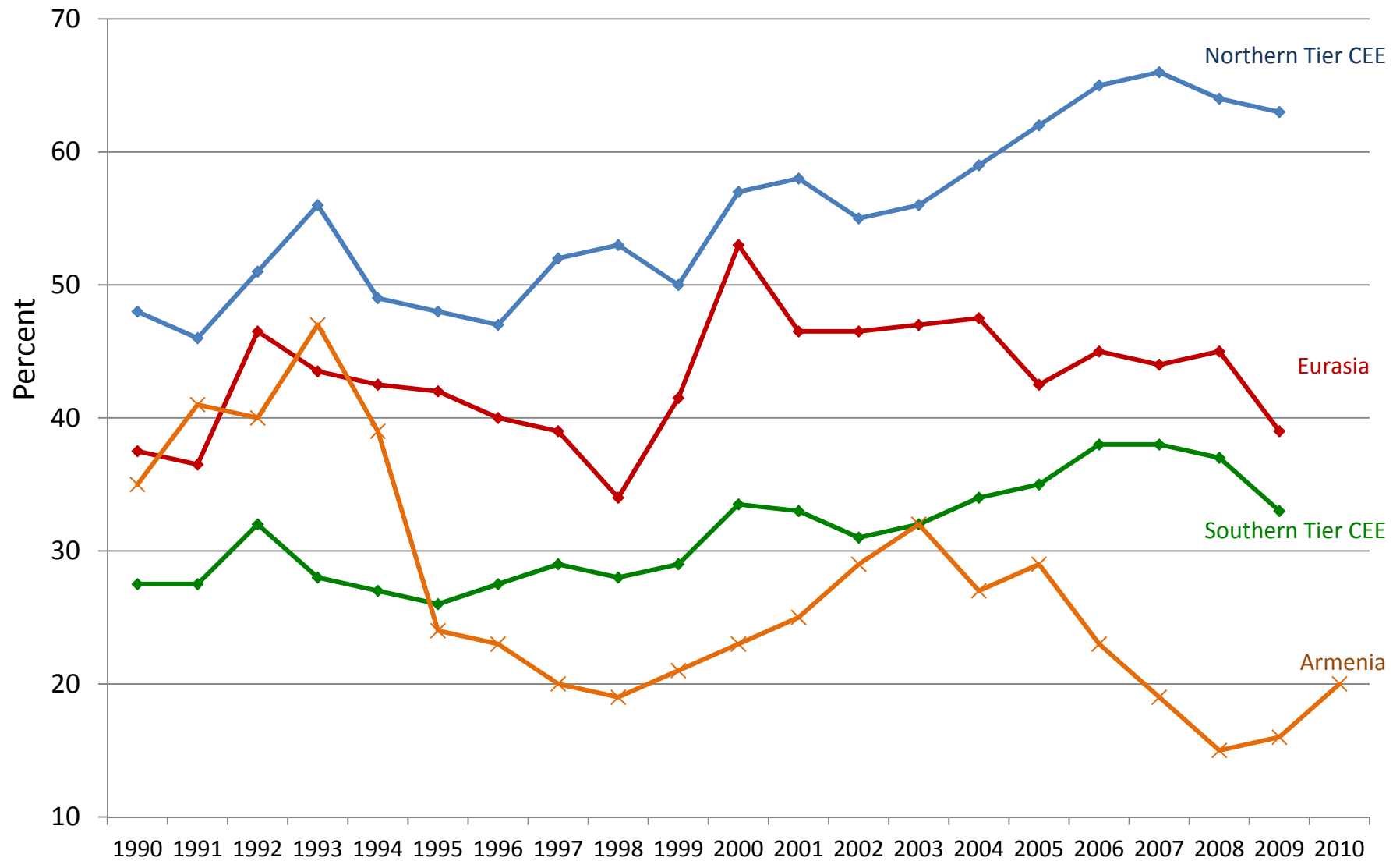
Figure 26

Exports of Fuels, Metals, and Precious Stones in Eurasia

Figure 27

Top Remittance Receiving Countries in Eastern Europe and Eurasia, 2011
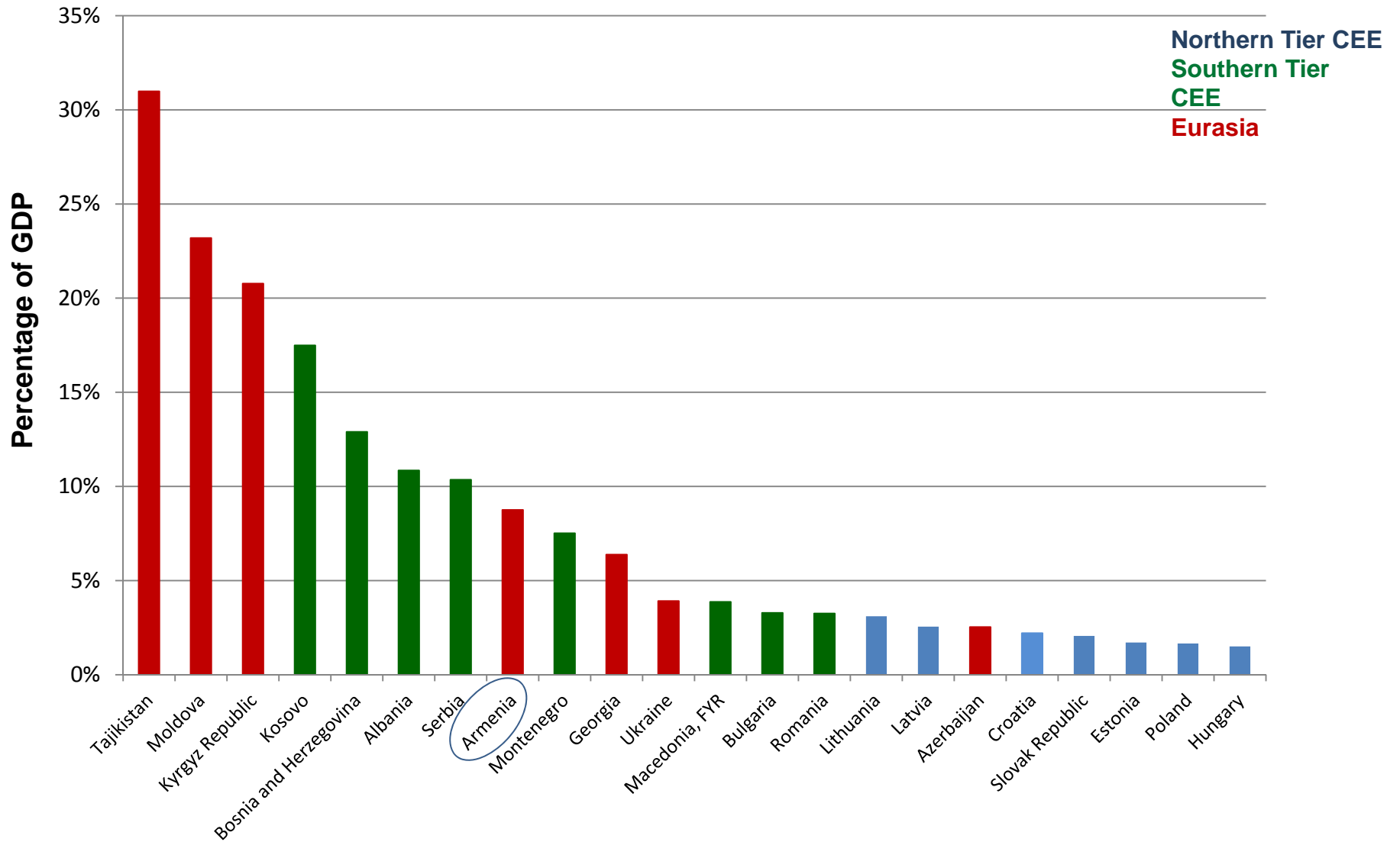
Inflow remittances for Czech Republic, Belarus, Slovenia, Russia, and Kazakhstan are all below 1%. World Bank, Annual Remittances Data, 2011.

Energy Security, 2010

Figure 28

I. Efficient but Dependent

II. Inefficient and Dependent

Energy Imports (Net % of energy use)

GDP per unit of energy use

III. Inefficient but Independent

IV. Efficient and Independent

Global Average

Australia (6.7, -119)
Azer (5.5, -338)
Kaz (2.3, -109)
Turk (1.7, -265)

Legend:
ST CEE
NT CEE
Eurasia
Other

Data points: Mol, Bel, Arm, Geo, Slk, Lat, Hun, Lth, Cr, Sln, Mac, Bul, Kyr, Taj, Srb, Ukr, Rom, BH, Pol, Cz, Est, USA, Alb, Costa Rica, Argentina, Mexico, Denmark, Uzb, Rus

World Bank, *World Development Indicators* (2011).

Figure 29

Environmental Sustainability

Albania
Latvia
Slovakia
Lithuania
Romania
Czech Republic
Belarus
Hungary
Serbia
Azerbaijan
Georgia
Croatia
Kyrgyzstan
Russia
Bulgaria
Poland
Estonia
Tajikistan
Armenia
Moldova
Kazakhstan
Slovenia
Macedonia
Ukraine
Bosnia and Herz.
Turkmenistan
Uzbekistan

Albania

Lithuania

Georgia

Armenia

Uzbekistan

% Proximity to Target

0   10   20   30   40   50   60   70   80   90   100
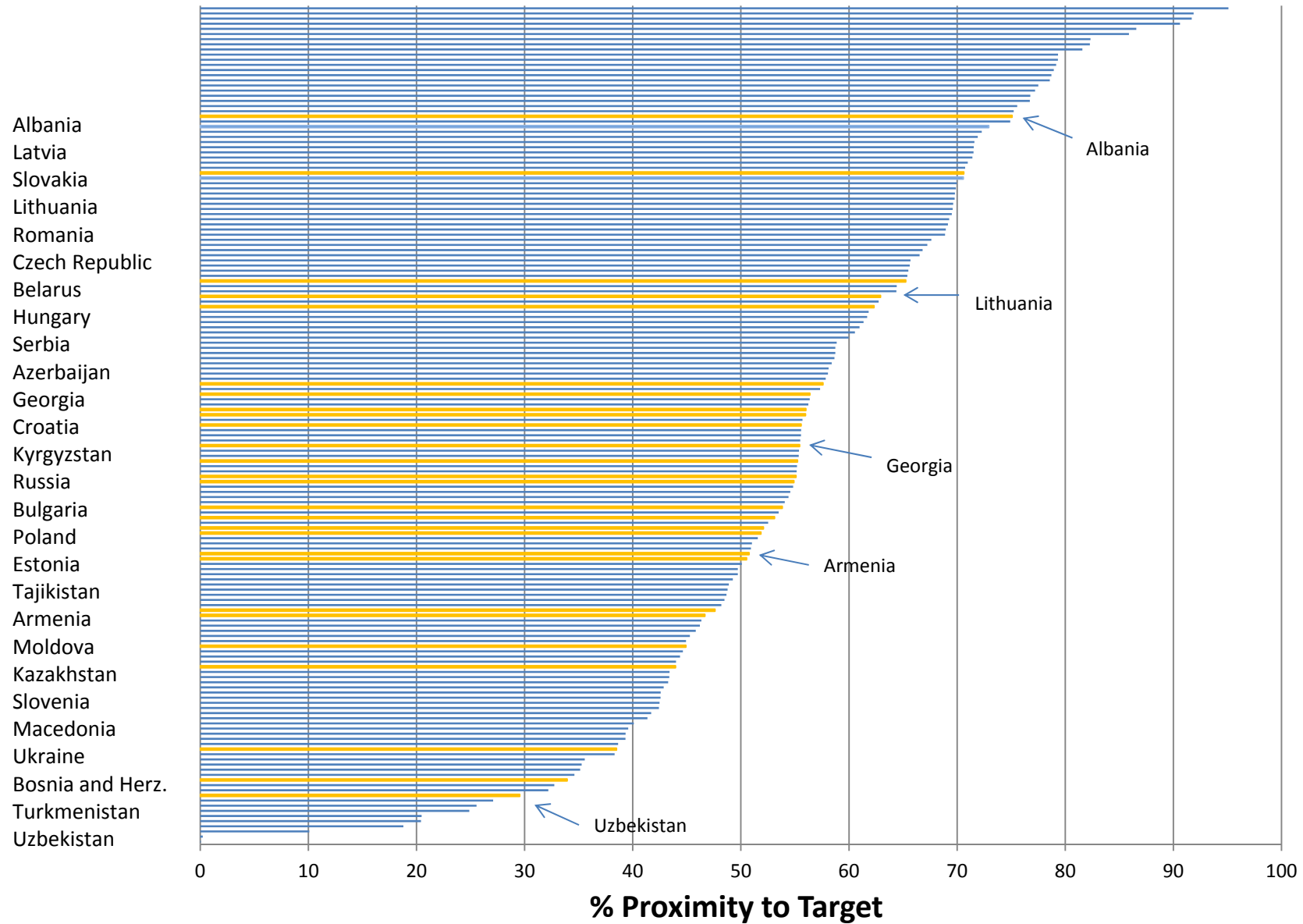
Figure 30

The Financial Sector in Armenia
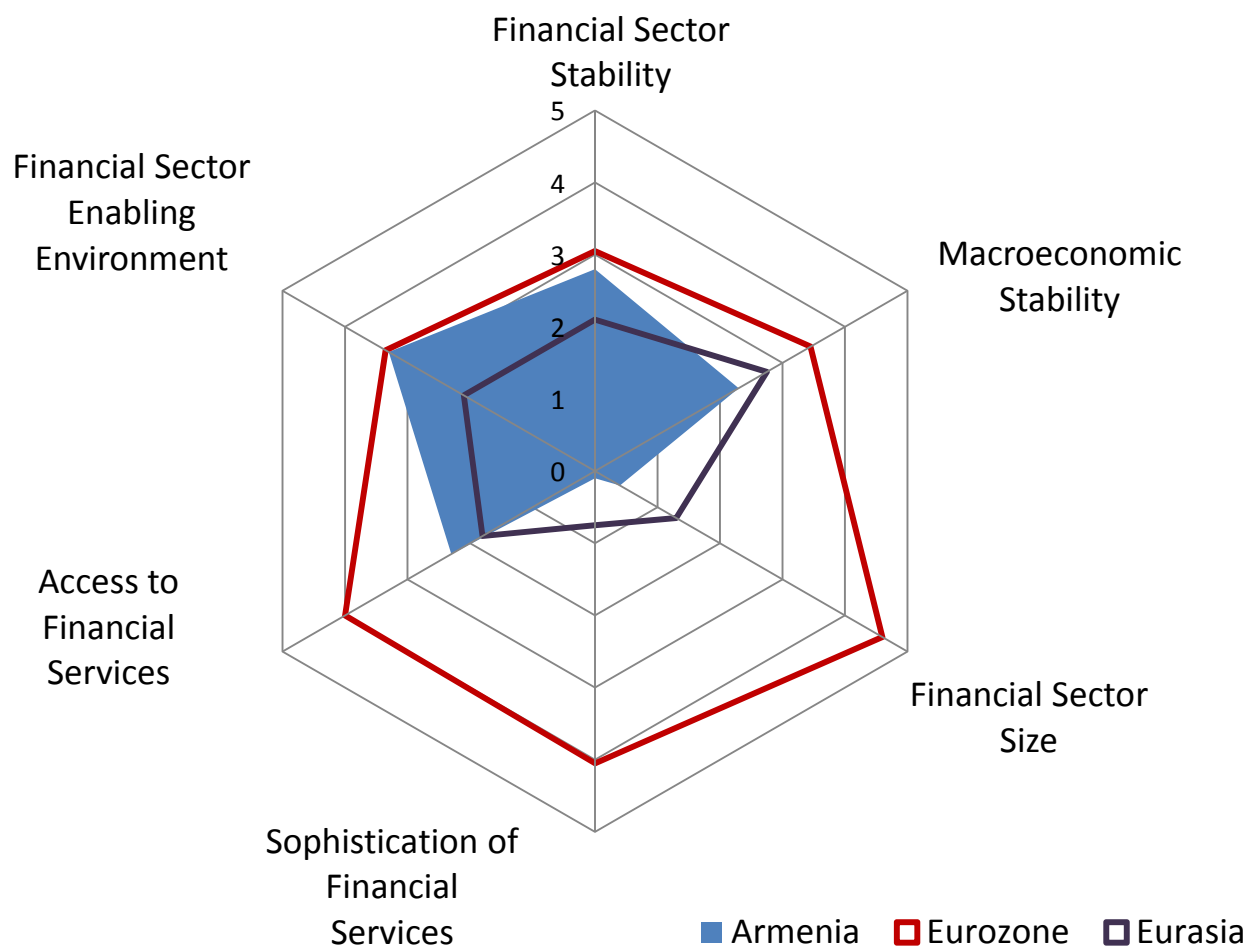
Figure 31

Human Capital Index
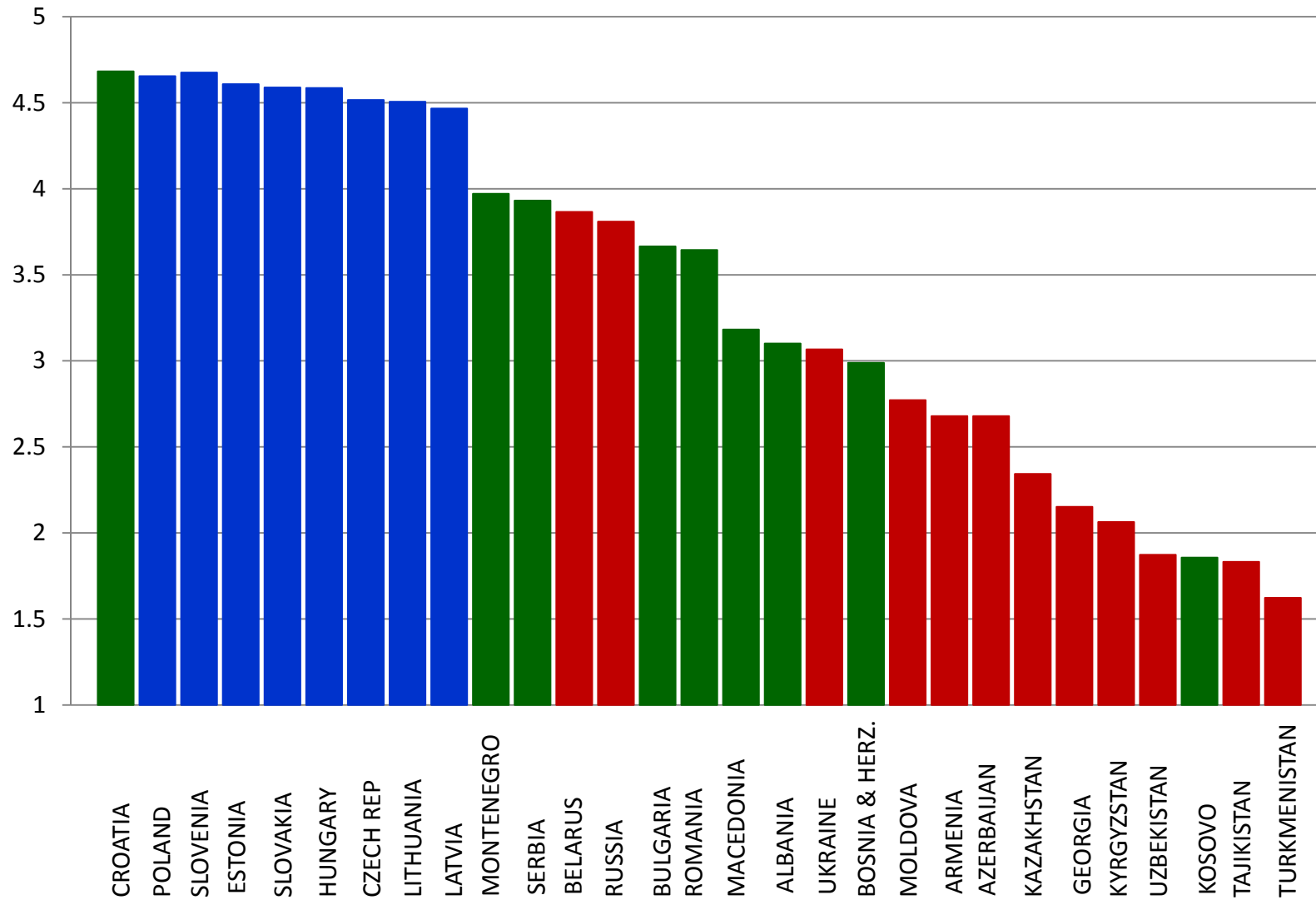
See *Appendix* for data sources and methodology. Scores calibrated on MCP 1 to 5 scale, with 5 representing the most advanced.

Figure 32

Human Capital Index
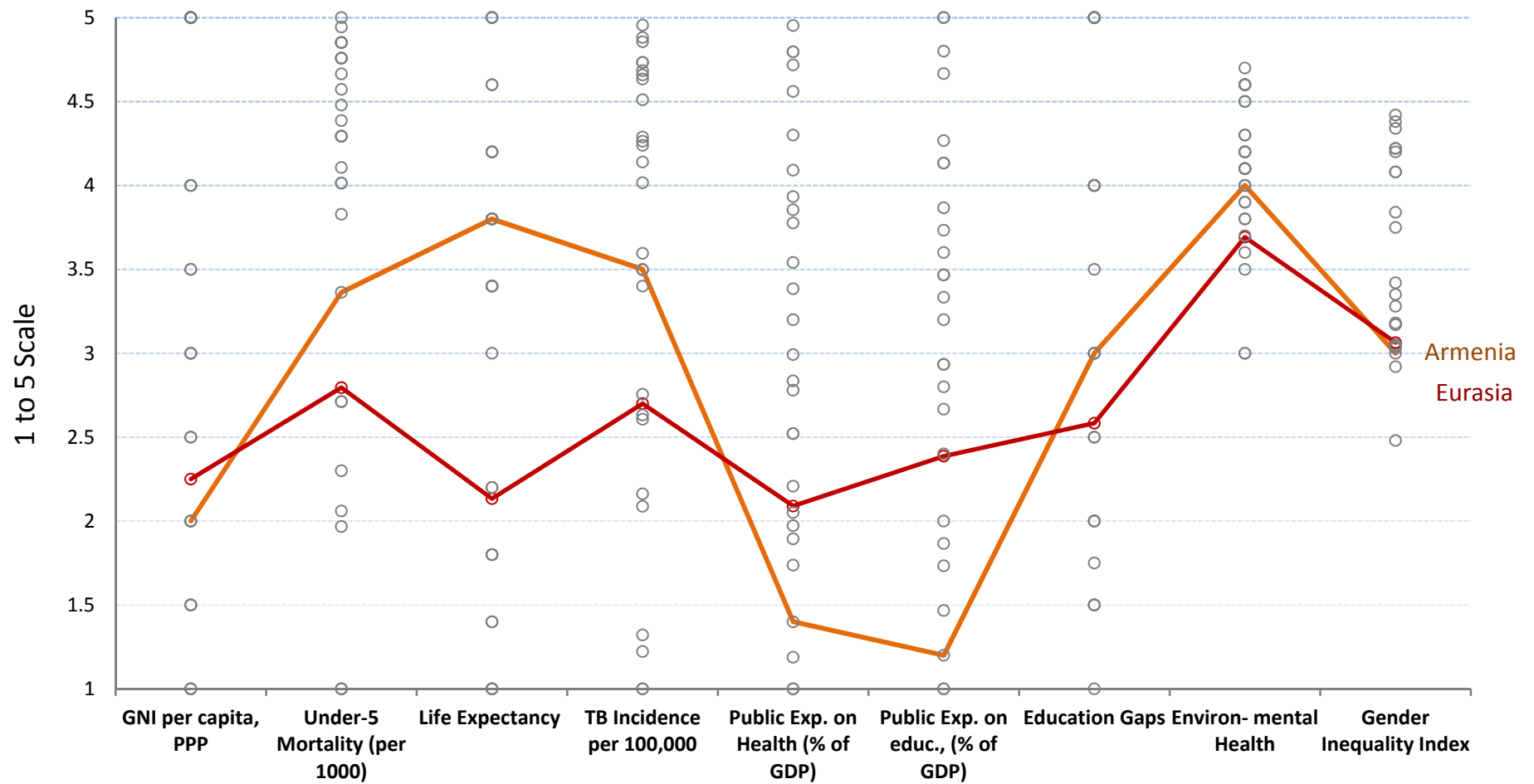
See *Appendix* for data sources and methodology. Scores calibrated on MCP 1 to 5 scale, with 5 representing the most advanced.
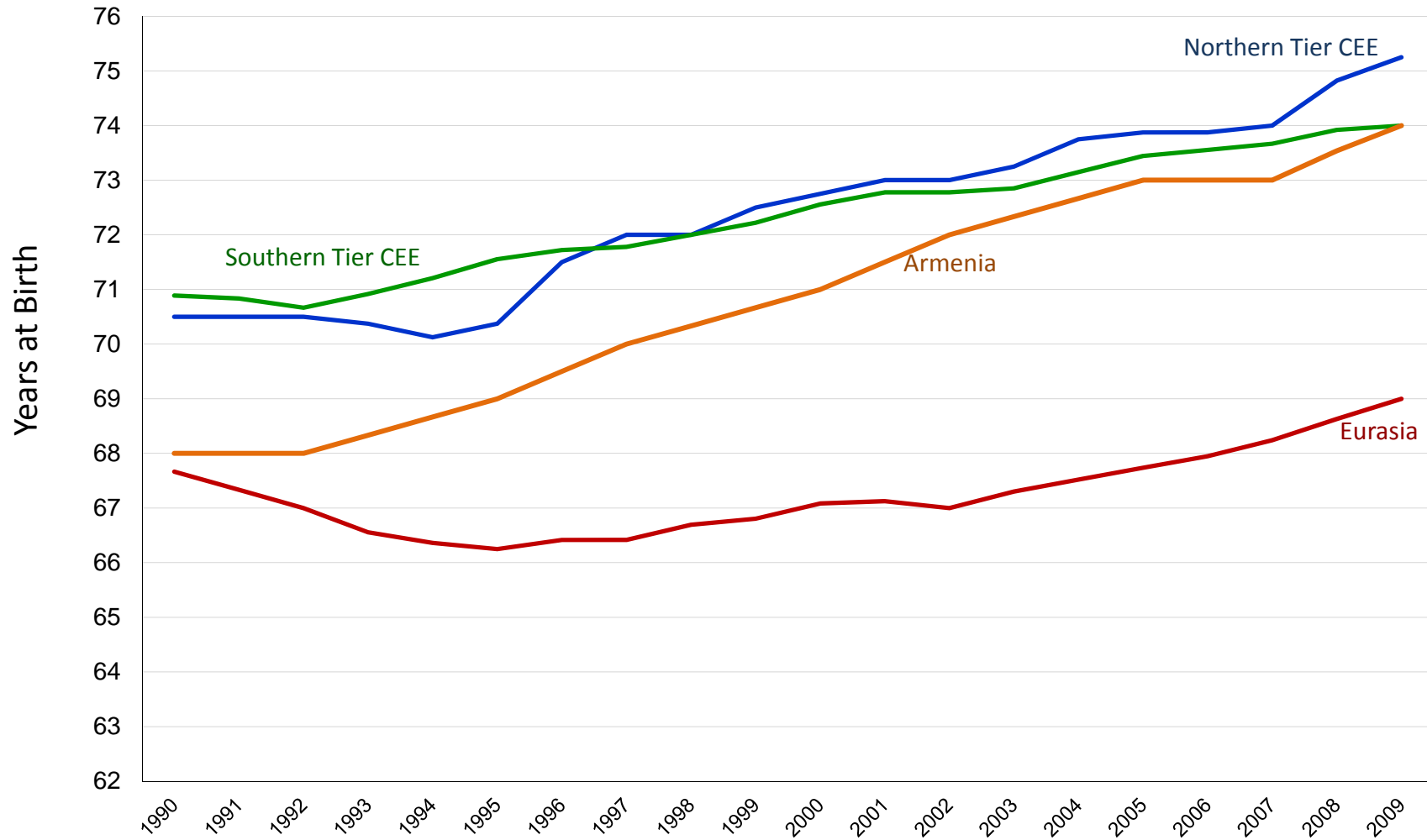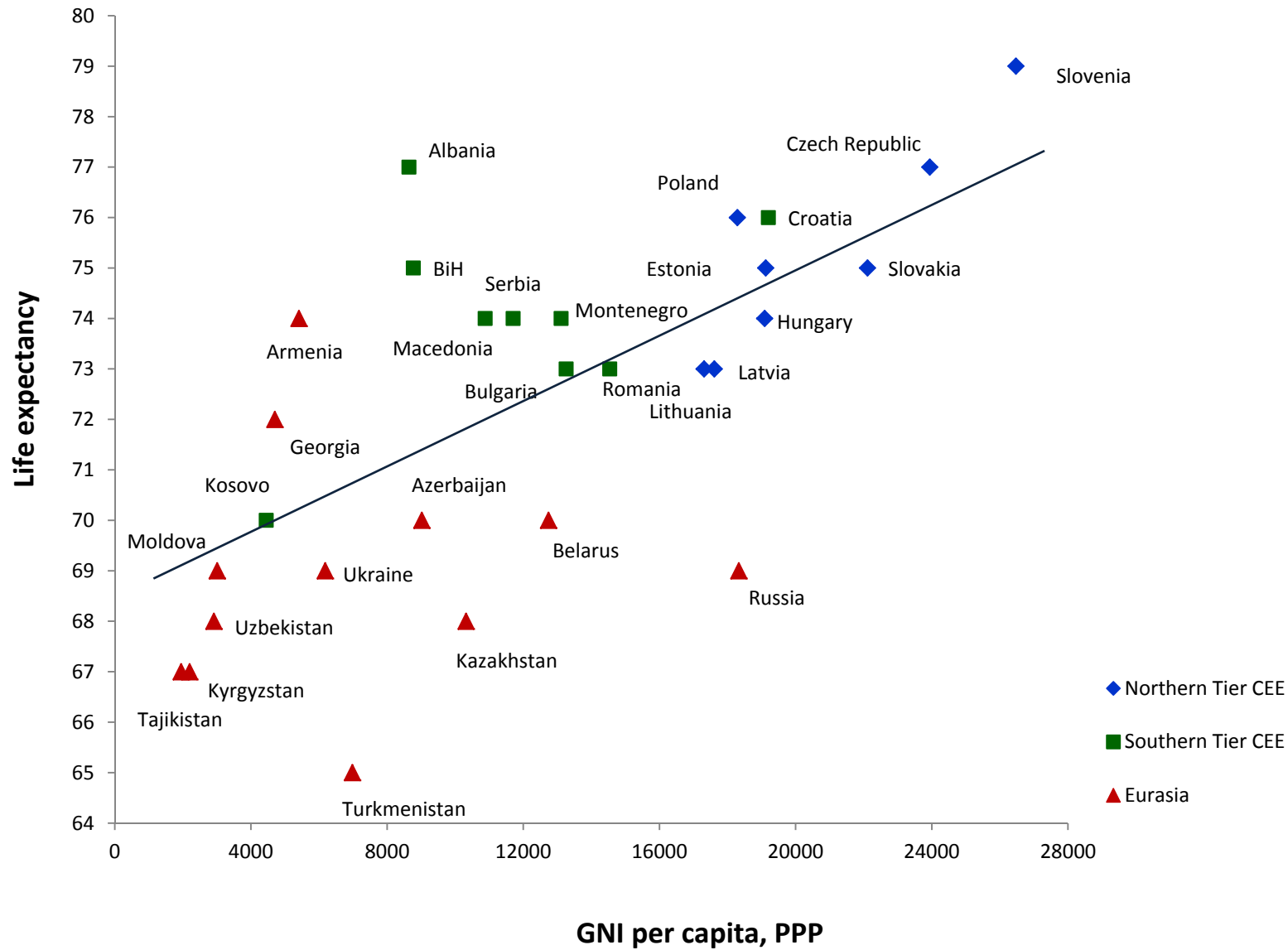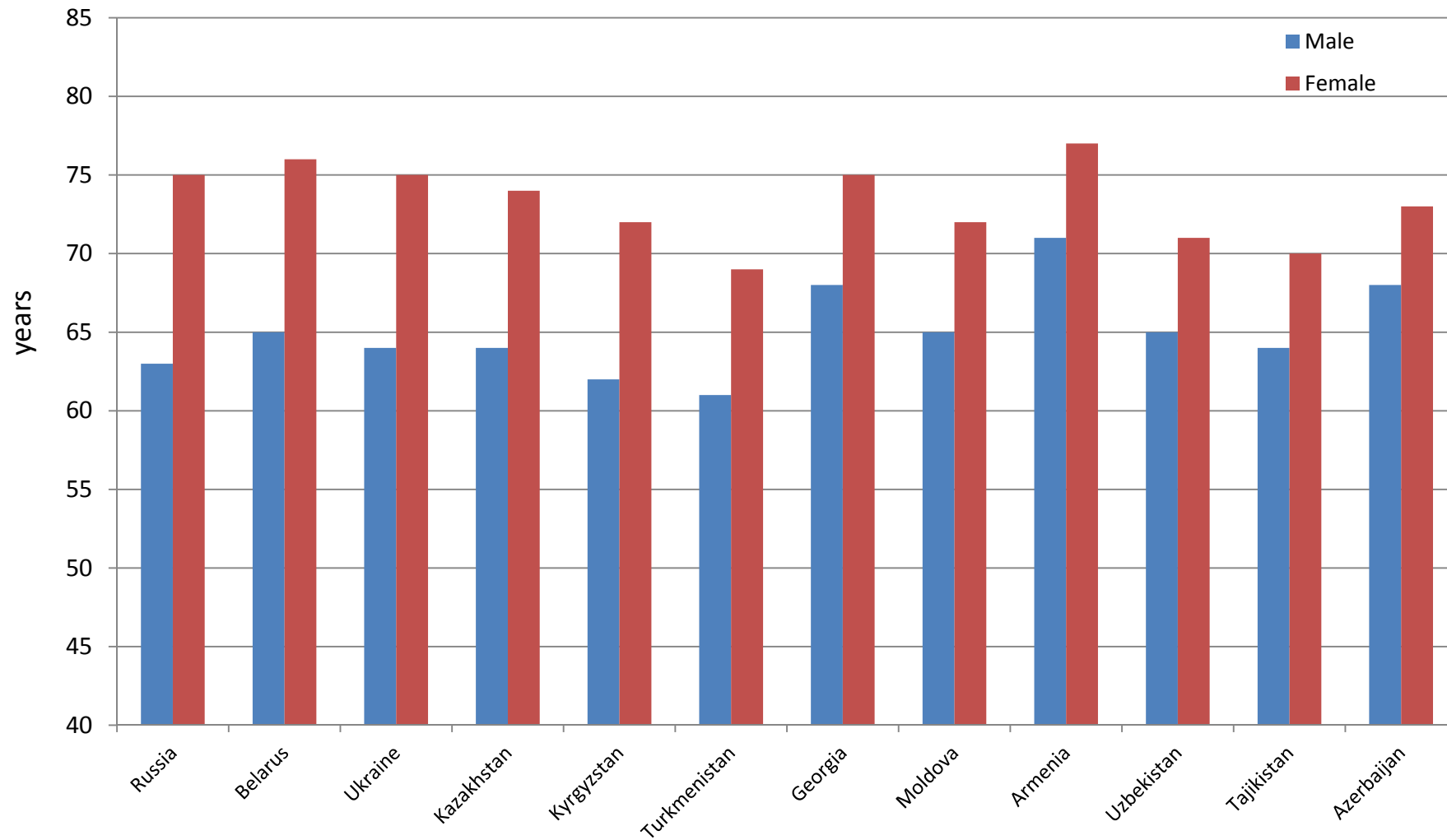
Figure 33

Life Expectancy at Birth

World Bank, *World Development Indicators* (2011).

Figure 34

Life Expectancy and Income

World Bank, *World Development Indicators* (2011).

Figure 35

Life Expectancy Gender Gap
Eurasia

World Bank, *World Development Indicators* (2011).

Figure 36

Adult Mortality Rate in Eastern Europe and Eurasia, 2009

Northern Tier CEE
Southern Tier CEE
Eurasia
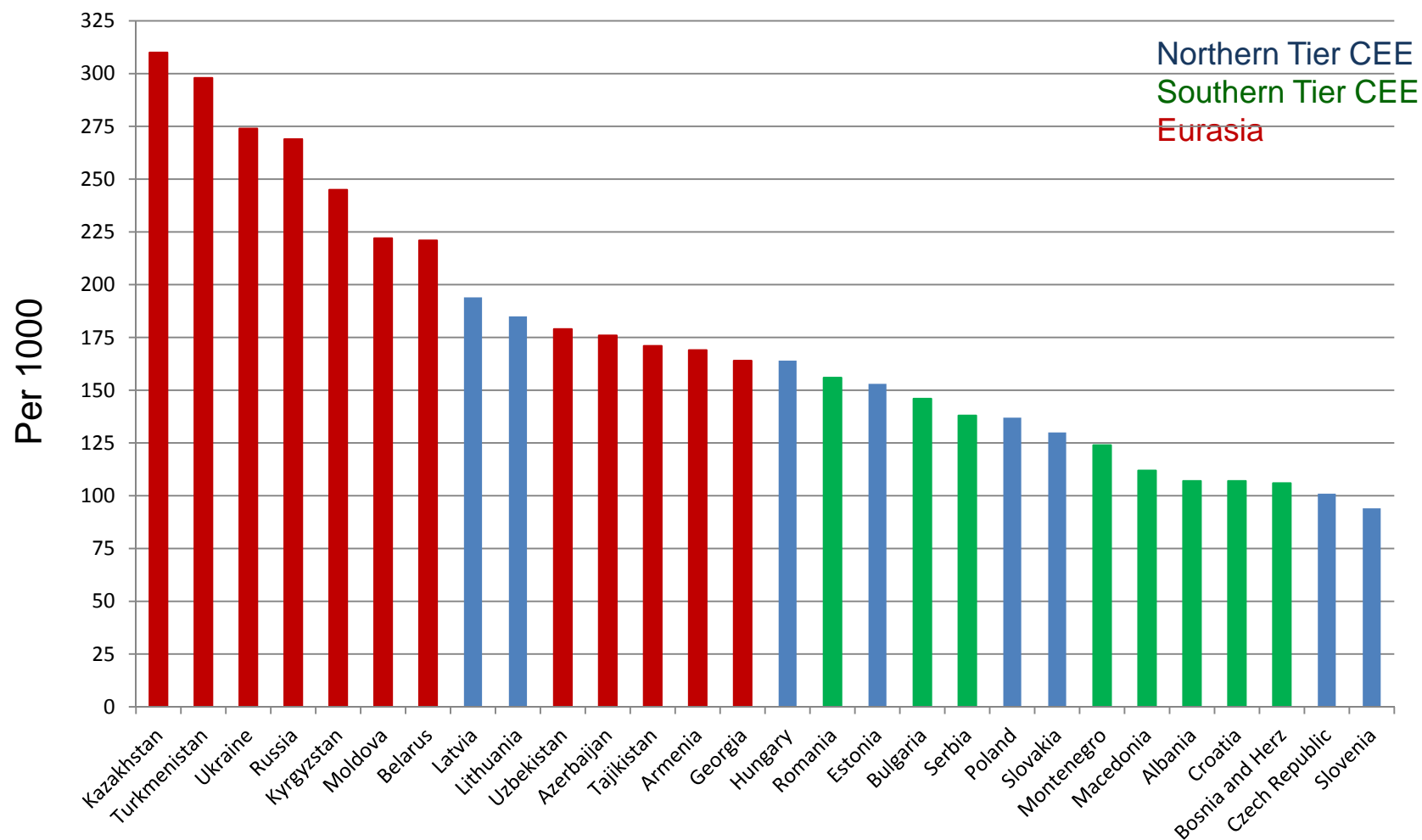
World Health Organization, *World Health Statistics (*2010). AMR is the probability of dying between the ages of 15-60 per 1000 population.

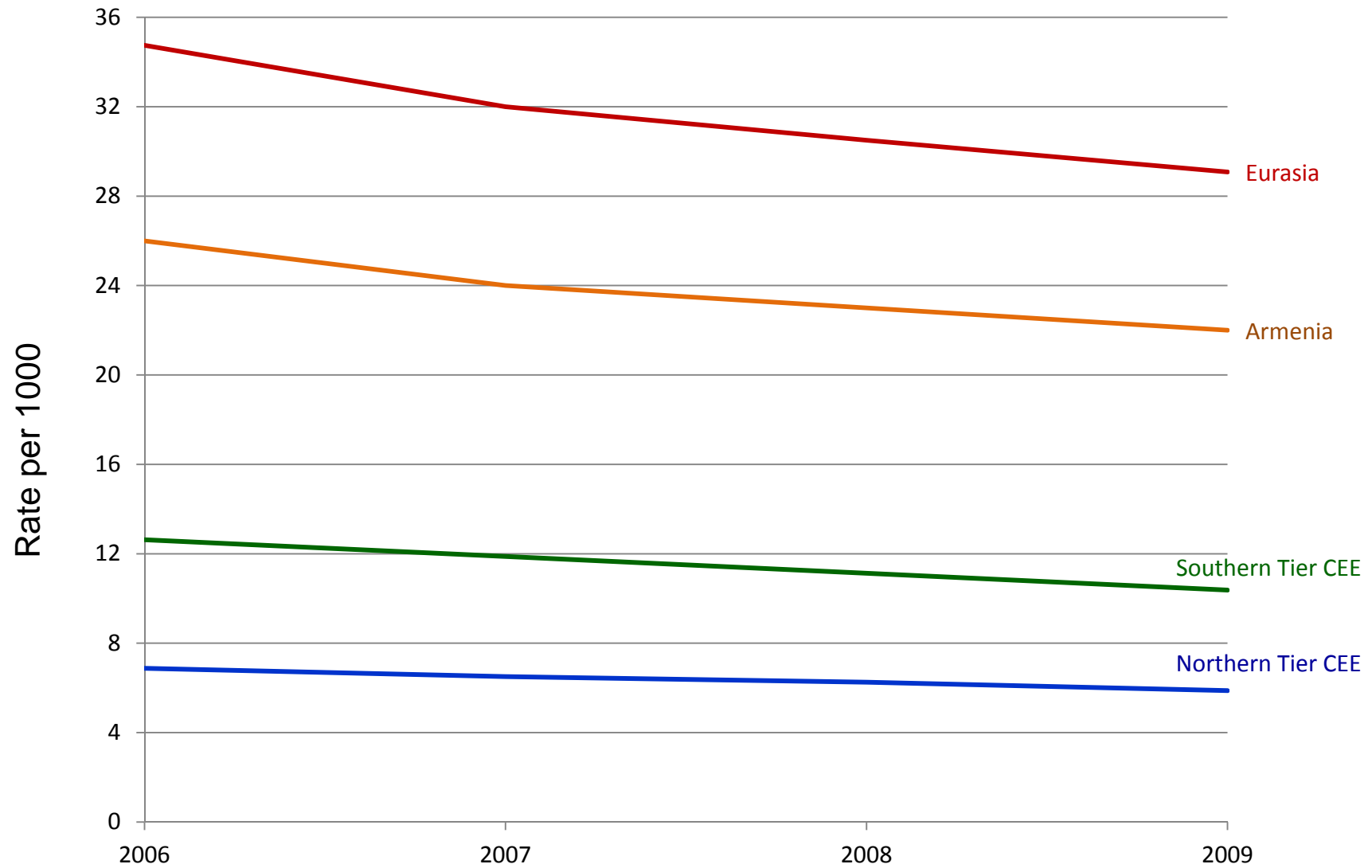Figure 37

Under-5 Mortality Rate in E&E

World Bank, *World Development Indicators* (2011).

Figure 38

Tuberculosis Incidence

New Cases per 100,000 Population

CAR

Eurasia

Armenia

ST CEE

NT CEE

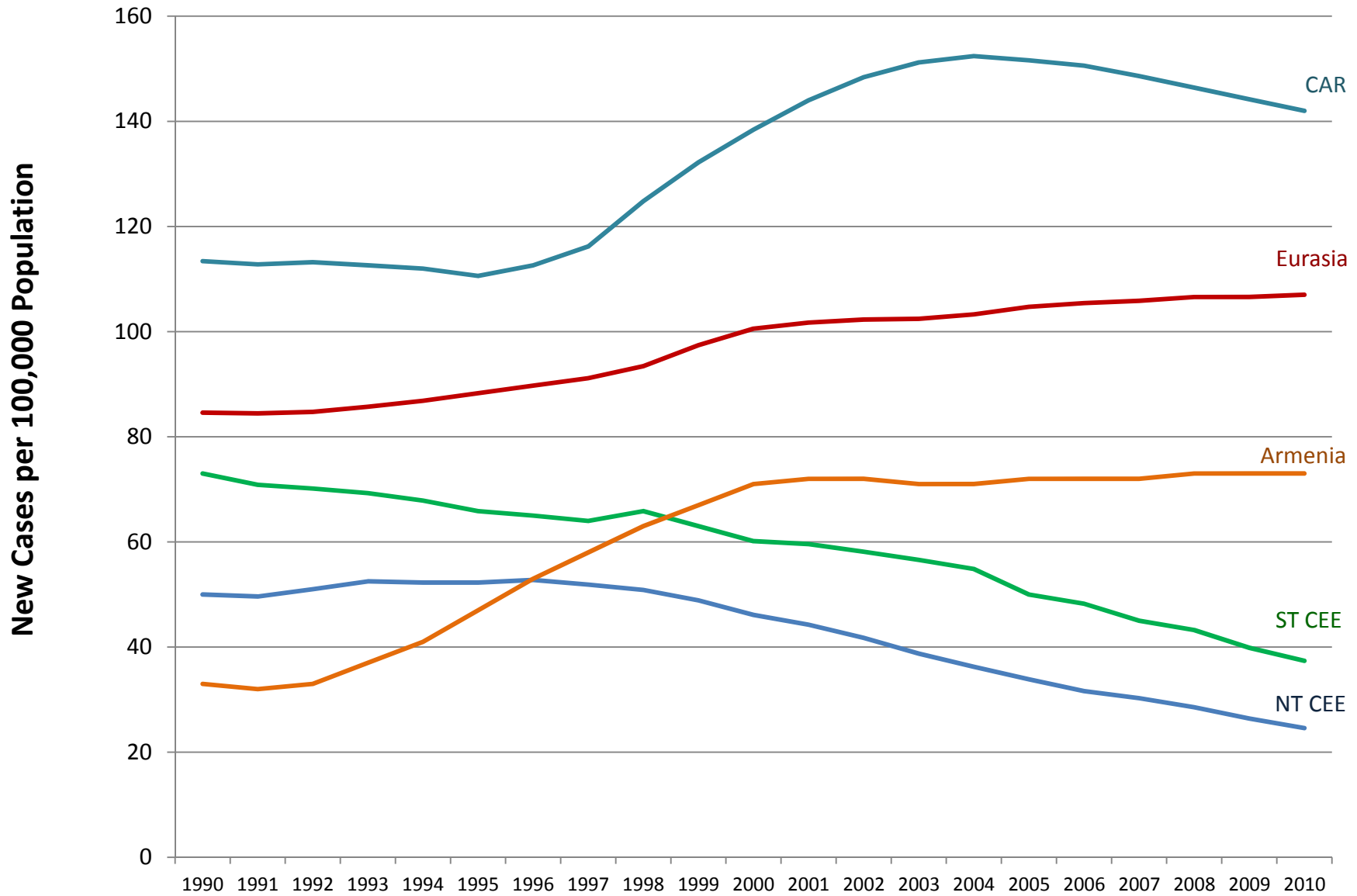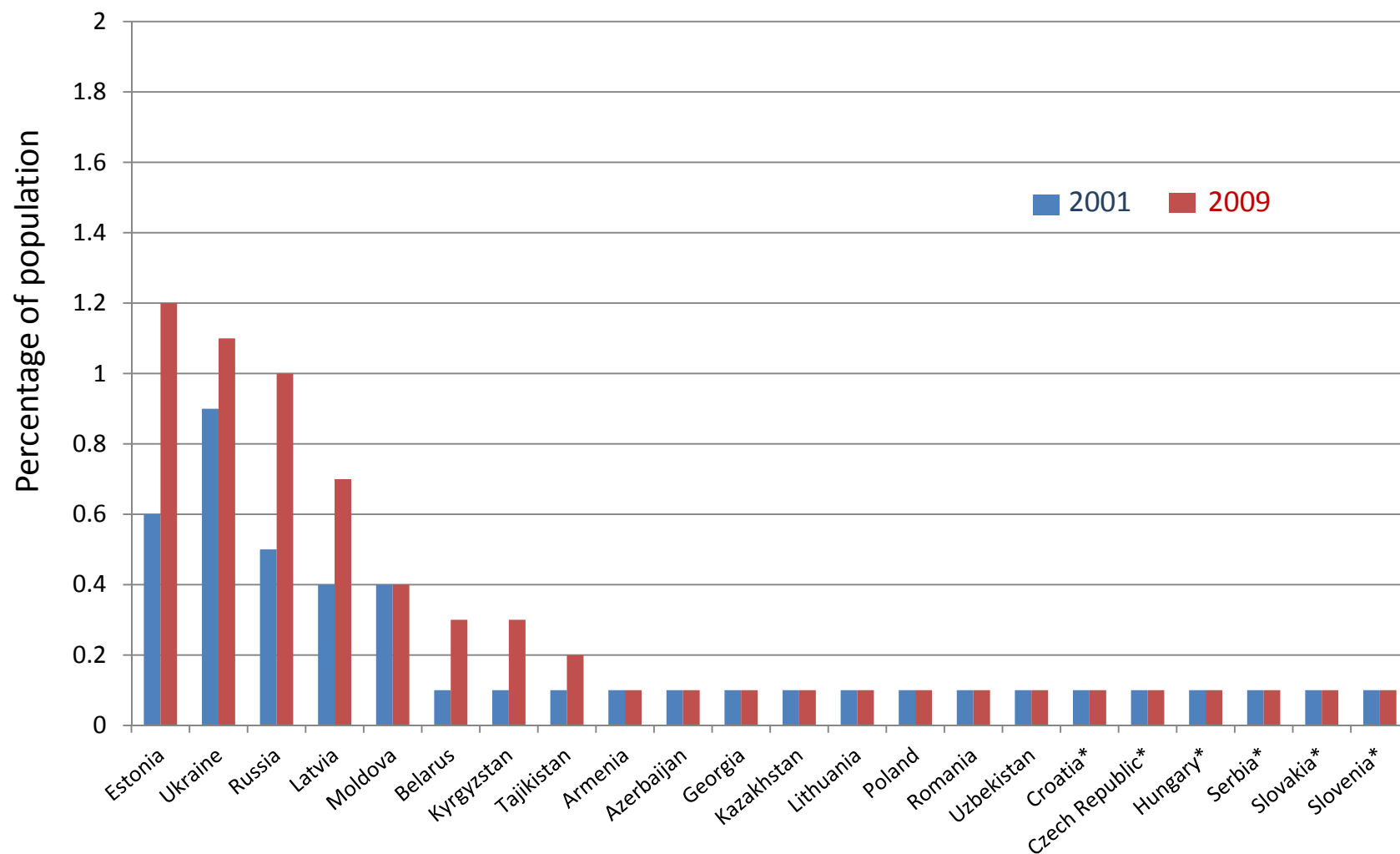World Health Organization, *European Health For All Database* (January 2011).

Figure 39

Adult HIV Prevalence Rates, 2001 and 2009

UNAIDS, *Global Report* (2010). * Rates are less than 0.1%.

Figure 40

HIV Incidence

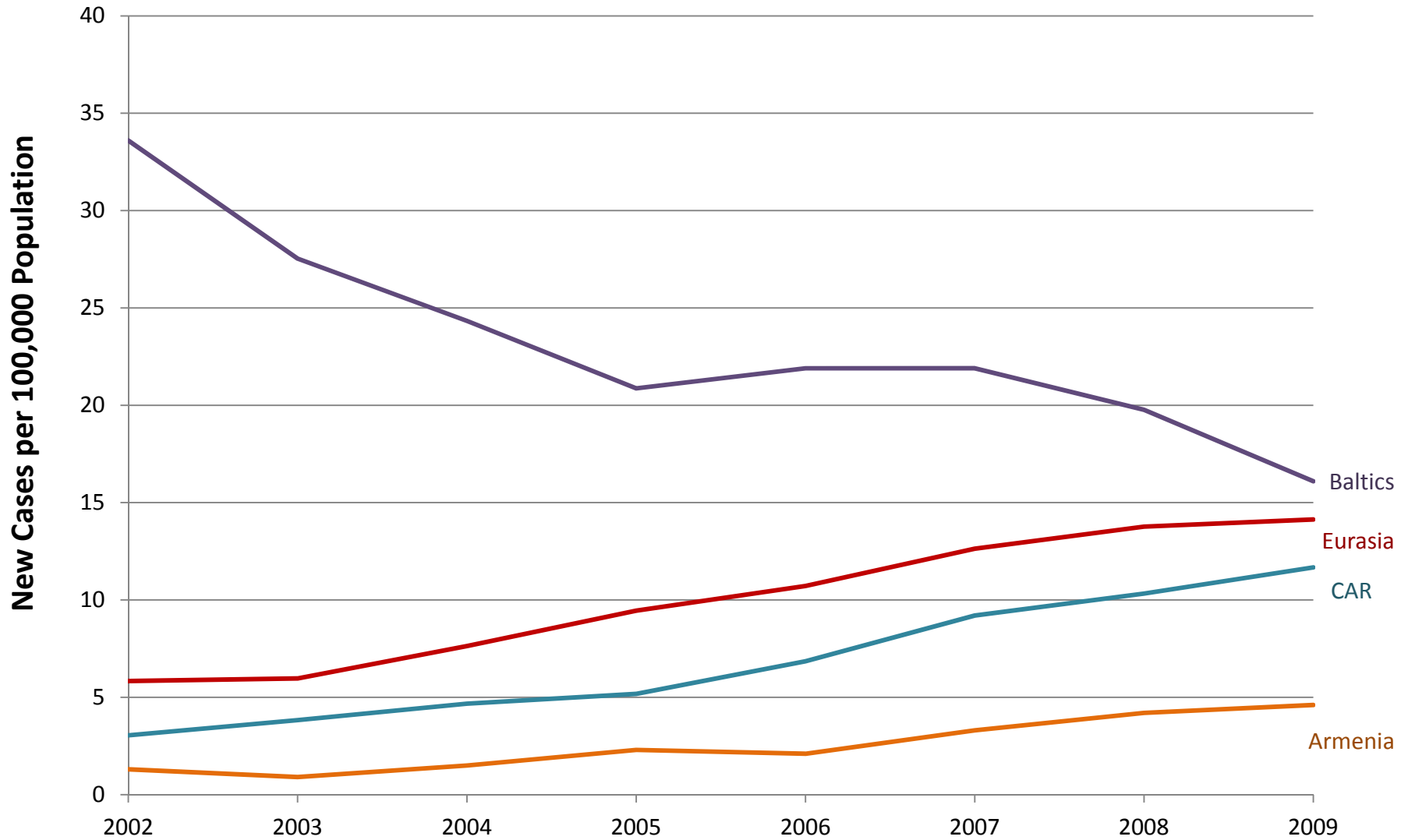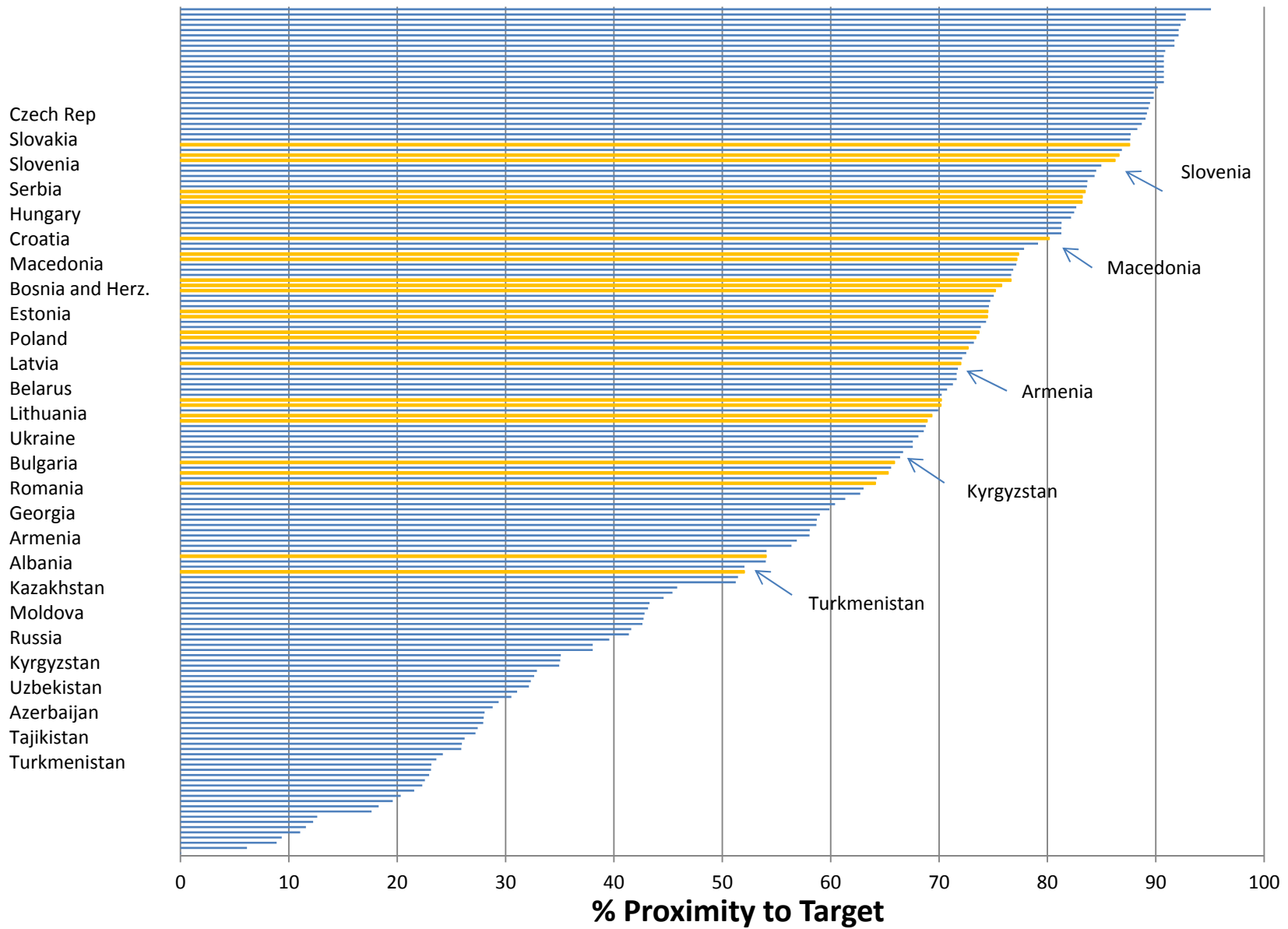
New Cases per 100,000 Population

Baltics
Eurasia
CAR
Armenia

Figure 41

Environmental Health

Czech Rep
Slovakia
Slovenia
Serbia
Hungary
Croatia
Macedonia
Bosnia and Herz.
Estonia
Poland
Latvia
Belarus
Lithuania
Ukraine
Bulgaria
Romania
Georgia
Armenia
Albania
Kazakhstan
Moldova
Russia
Kyrgyzstan
Uzbekistan
Azerbaijan
Tajikistan
Turkmenistan

Slovenia

Macedonia

Armenia

Kyrgyzstan

Turkmenistan

0   10   20   30   40   50   60   70   80   90   100

% Proximity to Target

Yale Center for Environmental Law & Policy and Center for International Earth Science Information Network, Columbia University, *2010 Environmental Performance Index* (2011).

Figure 42

National Poverty in Armenia

Percentage of population
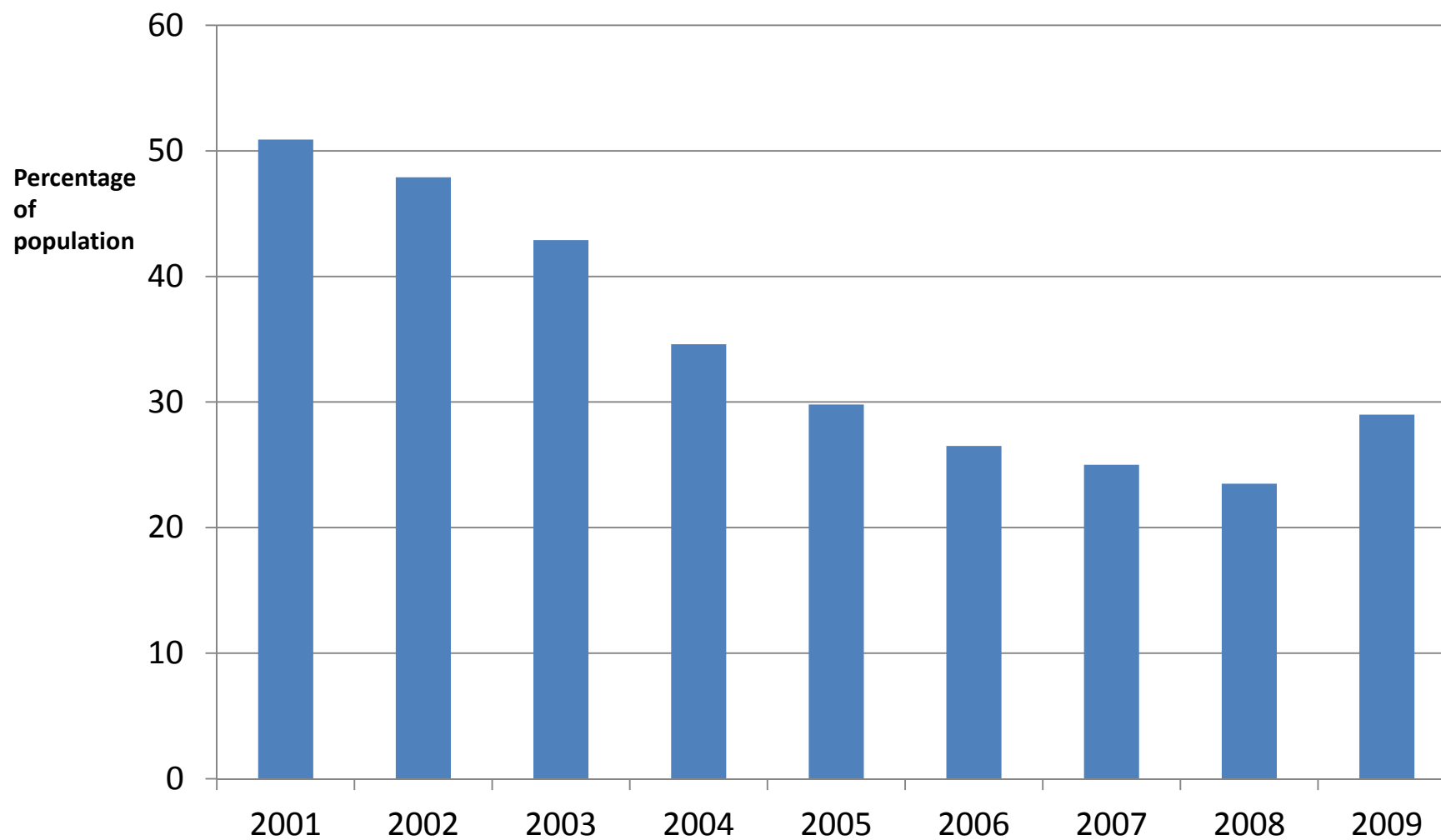
Percentages are based on Armenia's definition of the national poverty line. UN, *The MDGs in Europe and Central Asia: Achievements, Challenges and the Way Forward*, 2010; IMF, *Poverty Reduction Strategy Report*, (July 2011).
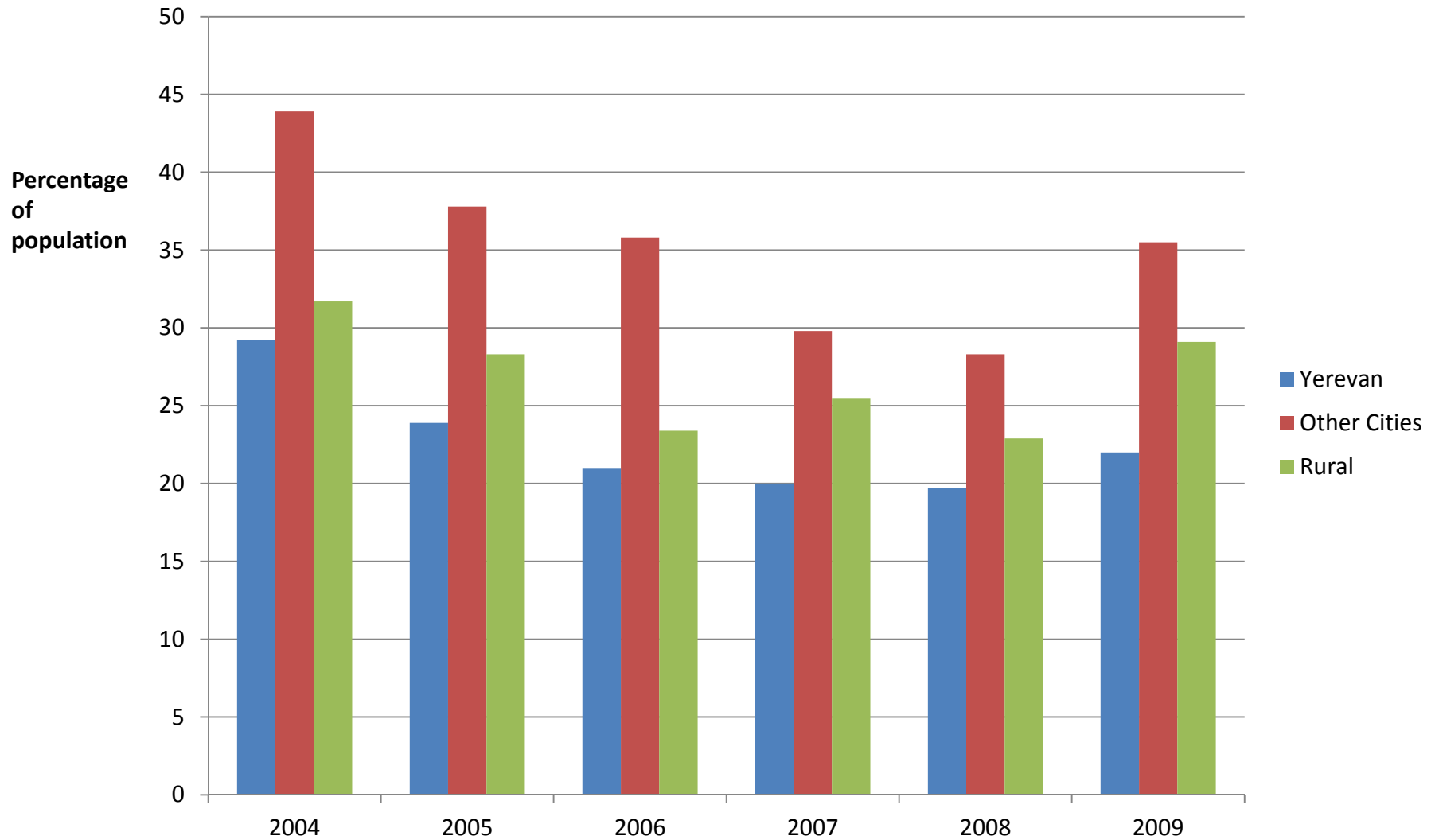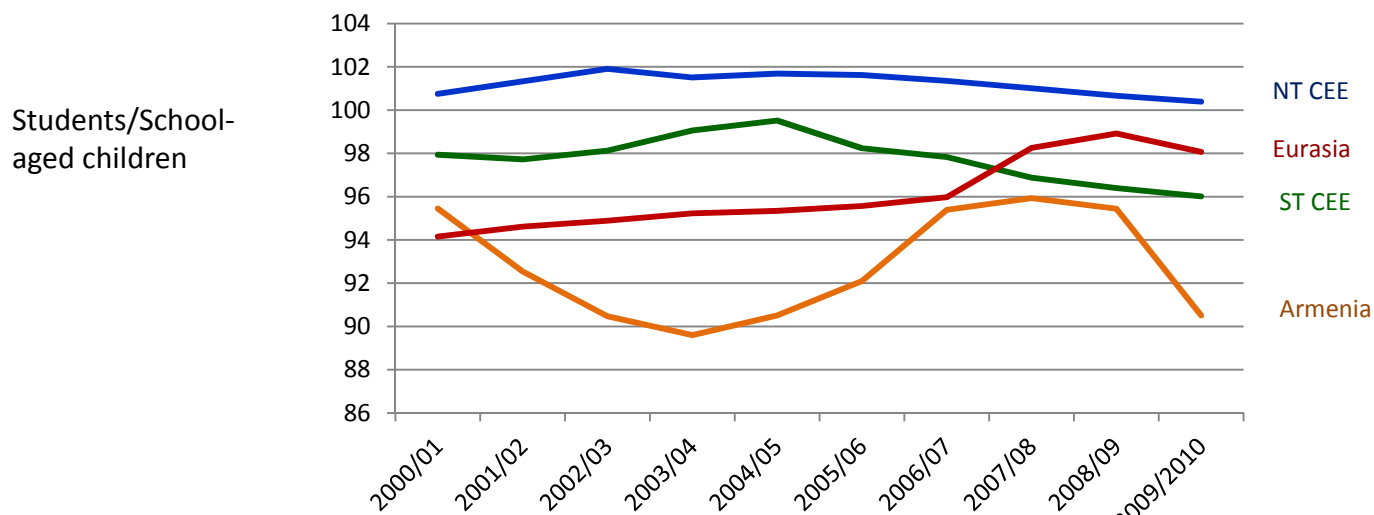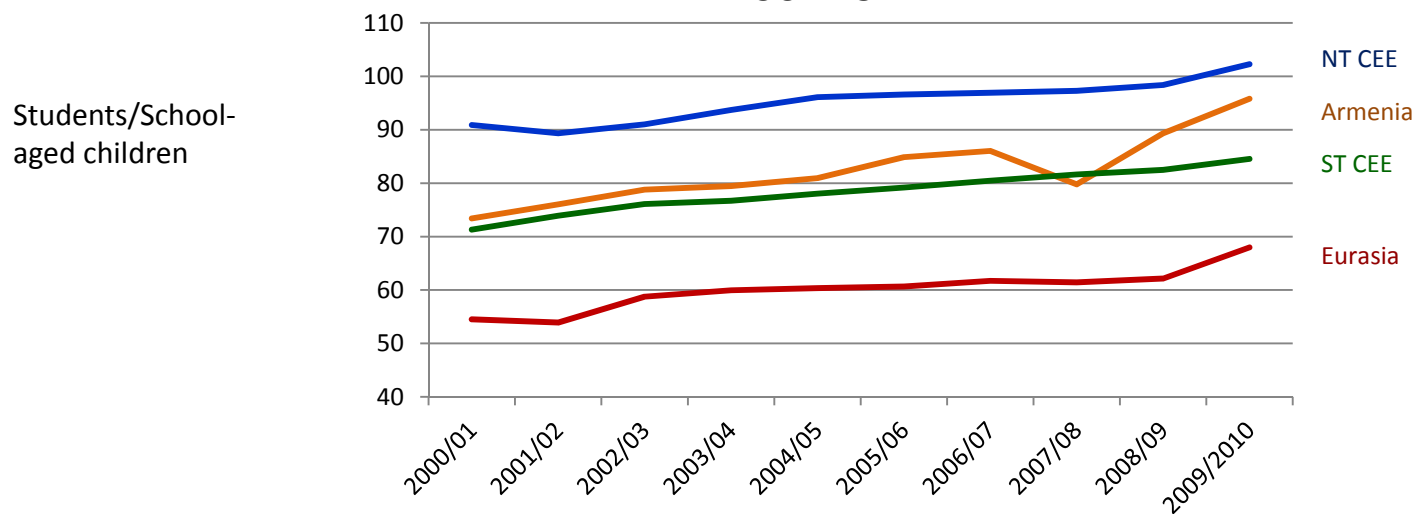
Figure 43

Urban and Rural Poverty in Armenia

Percentage
of
population

Legend:
- ■ Yerevan
- ■ Other Cities
- ■ Rural

IMF, *Poverty Reduction Strategy Report,* (July 2011).

Figure 39

Education Overview

Basic Education Gross Enrollment Ratio
ISCED 1 and 2

Students/School-
aged children

Upper Secondary Education Gross Enrollment Ratio
ISCED 3

Students/School-
aged children

Upper secondary education is the final stage of secondary education. It begins at age 15-16 and lasts three to five years. UNICEF, *TransMONEE Database* (May 2011 and earlier editions).

Figure 45

TIMSS Scores, Grade 8
2007

Legend: Science (red), Math (blue)

Categories (top to bottom): International Average*, GEORGIA, BOSNIA & HERZ, ROMANIA, UKRAINE, BULGARIA, SERBIA, ARMENIA, SLOVENIA, CZECH REP, LITHUANIA, RUSSIA, HUNGARY
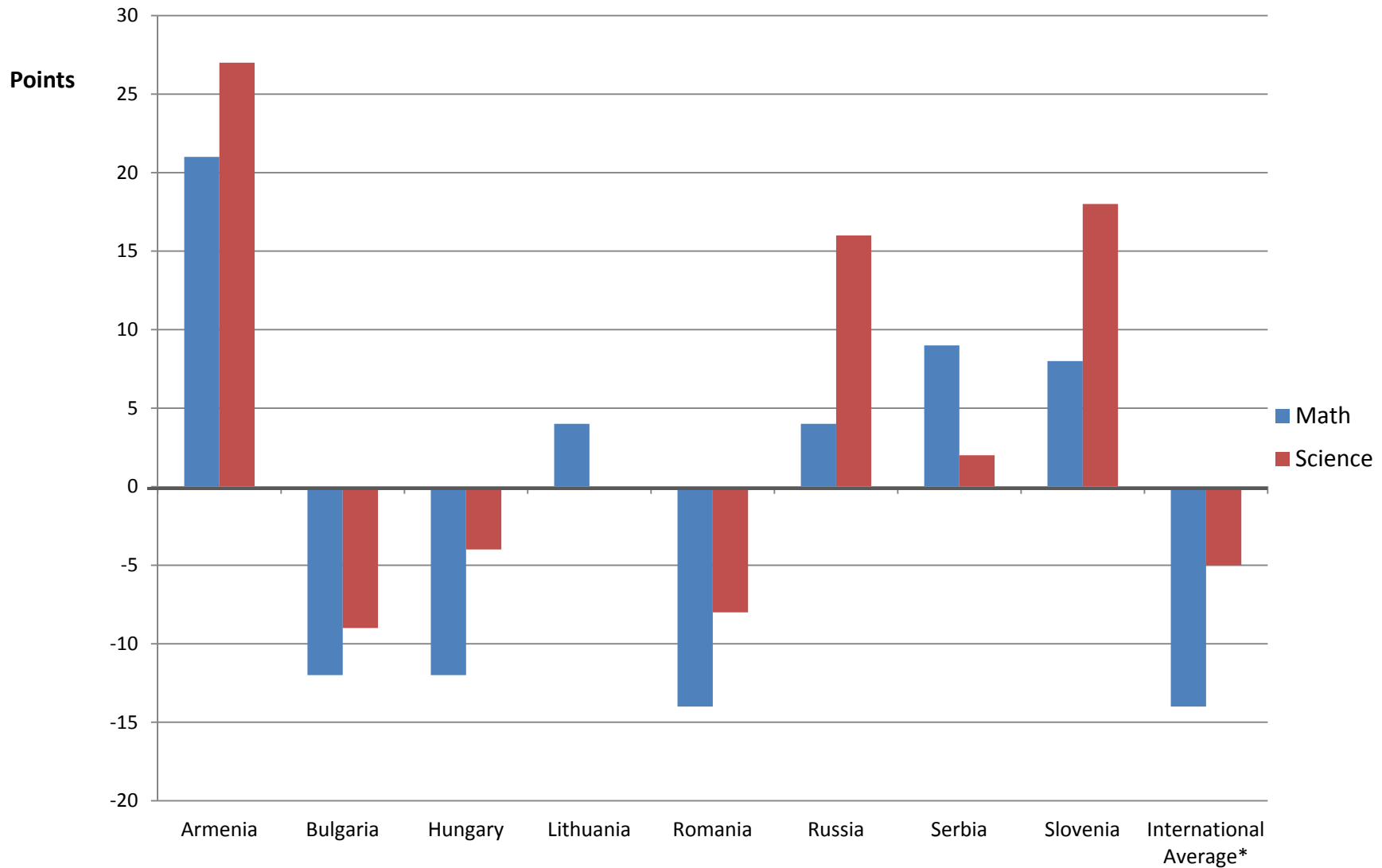
X-axis: 0, 100, 200, 300, 400, 500, 600
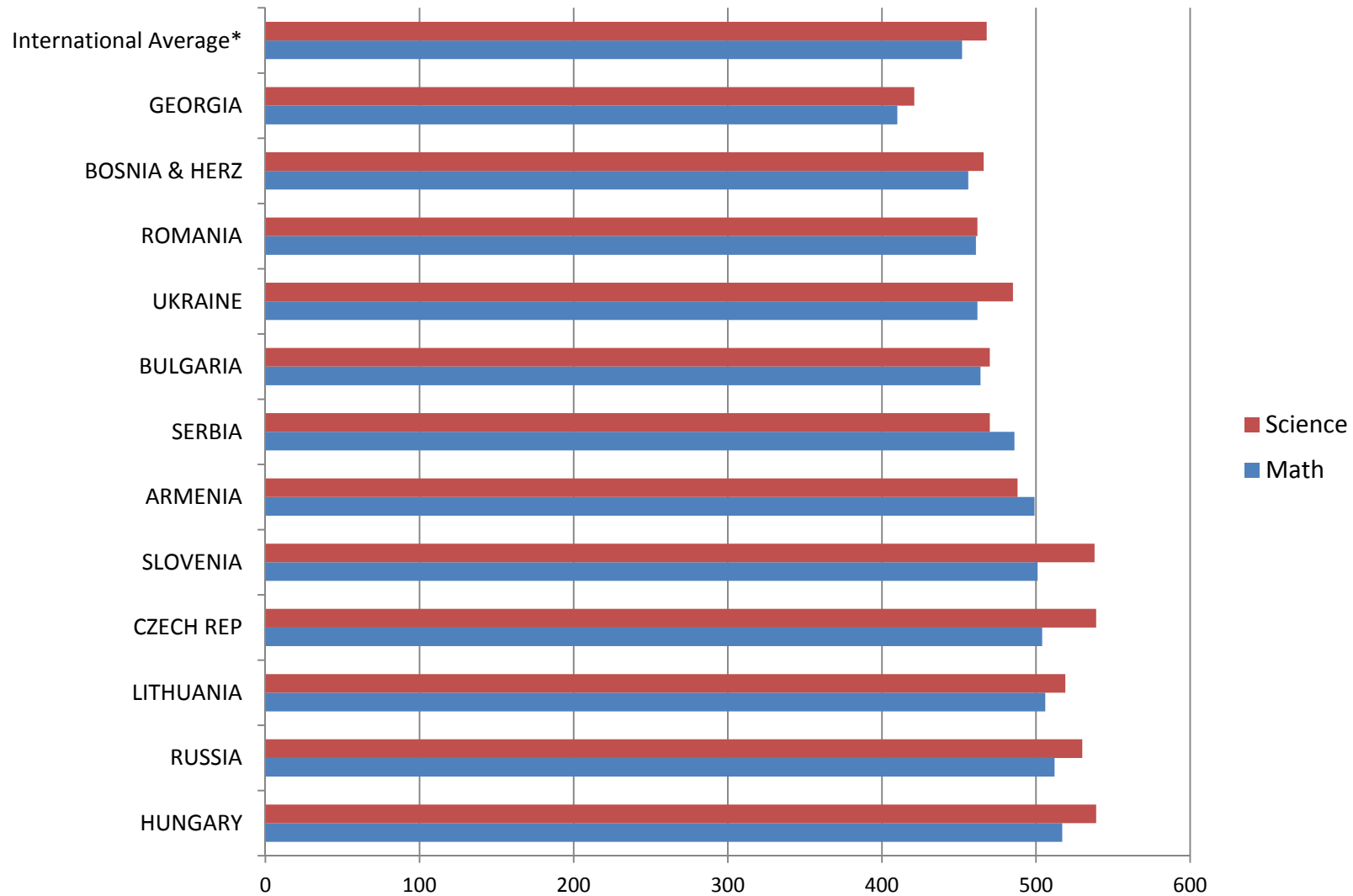
*For international average, n=63. Trends in International Mathematics and Sciences Study (TIMSS), 2007.
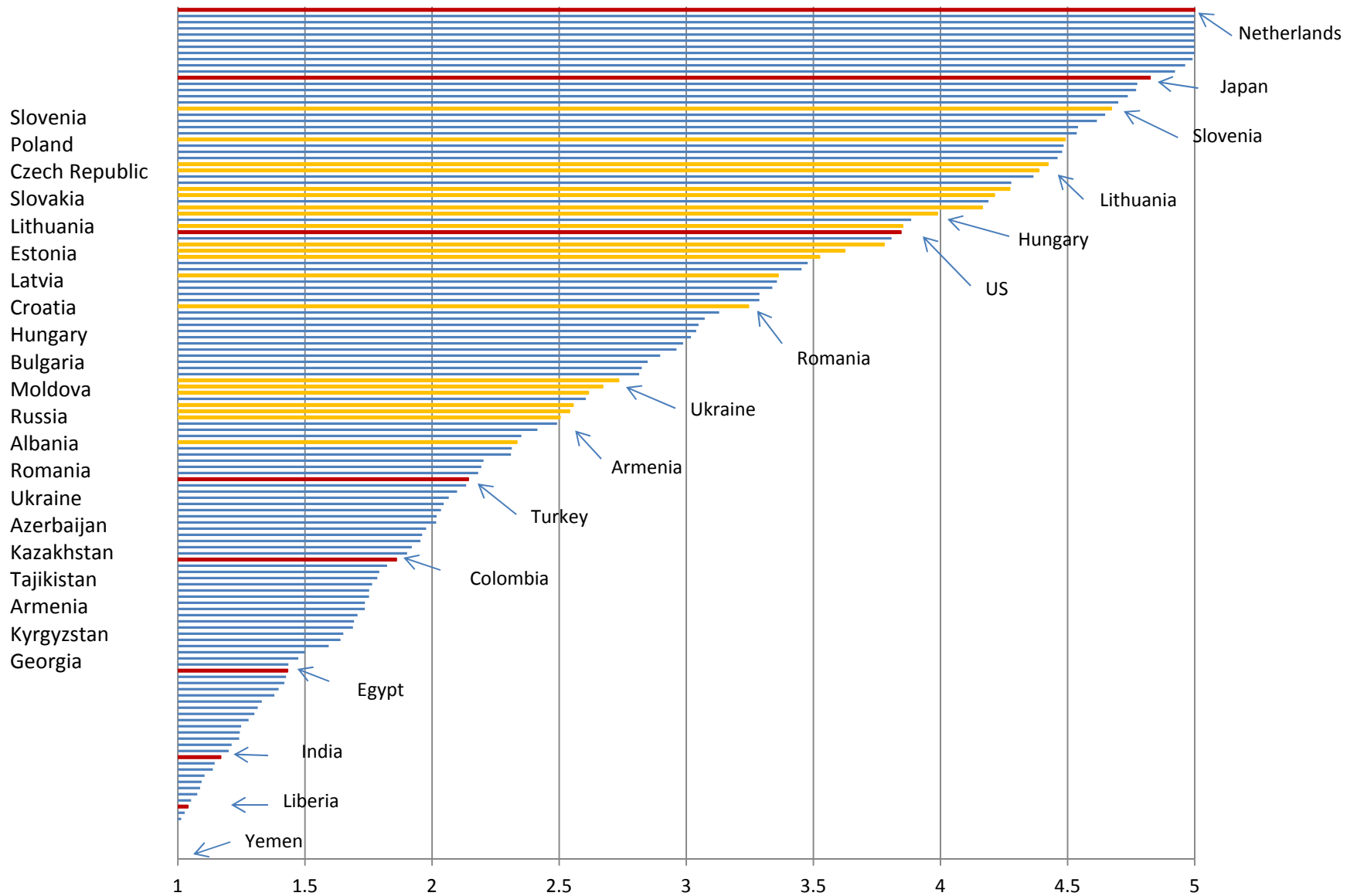
Figure 46

Changes in TIMSS Scores, 2003 to 2007

*For international average, n=63. Scores are for Grade 8. Trends in International Mathematics and Sciences Study (TIMSS), 2007 and 2003.

Global Gender Inequality Index

Figure 47

Slovenia
Poland
Czech Republic
Slovakia
Lithuania
Estonia
Latvia
Croatia
Hungary
Bulgaria
Moldova
Russia
Albania
Romania
Ukraine
Azerbaijan
Kazakhstan
Tajikistan
Armenia
Kyrgyzstan
Georgia

Netherlands
Japan
Slovenia
Lithuania
Hungary
US
Romania
Ukraine
Armenia
Turkey
Colombia
Egypt
India
Liberia
Yemen

1   1.5   2   2.5   3   3.5   4   4.5   5

Source: UNDP, *Human Development Report*, 2010.

Figure 48

Peace and Security in Europe and Eurasia, 2010-2011
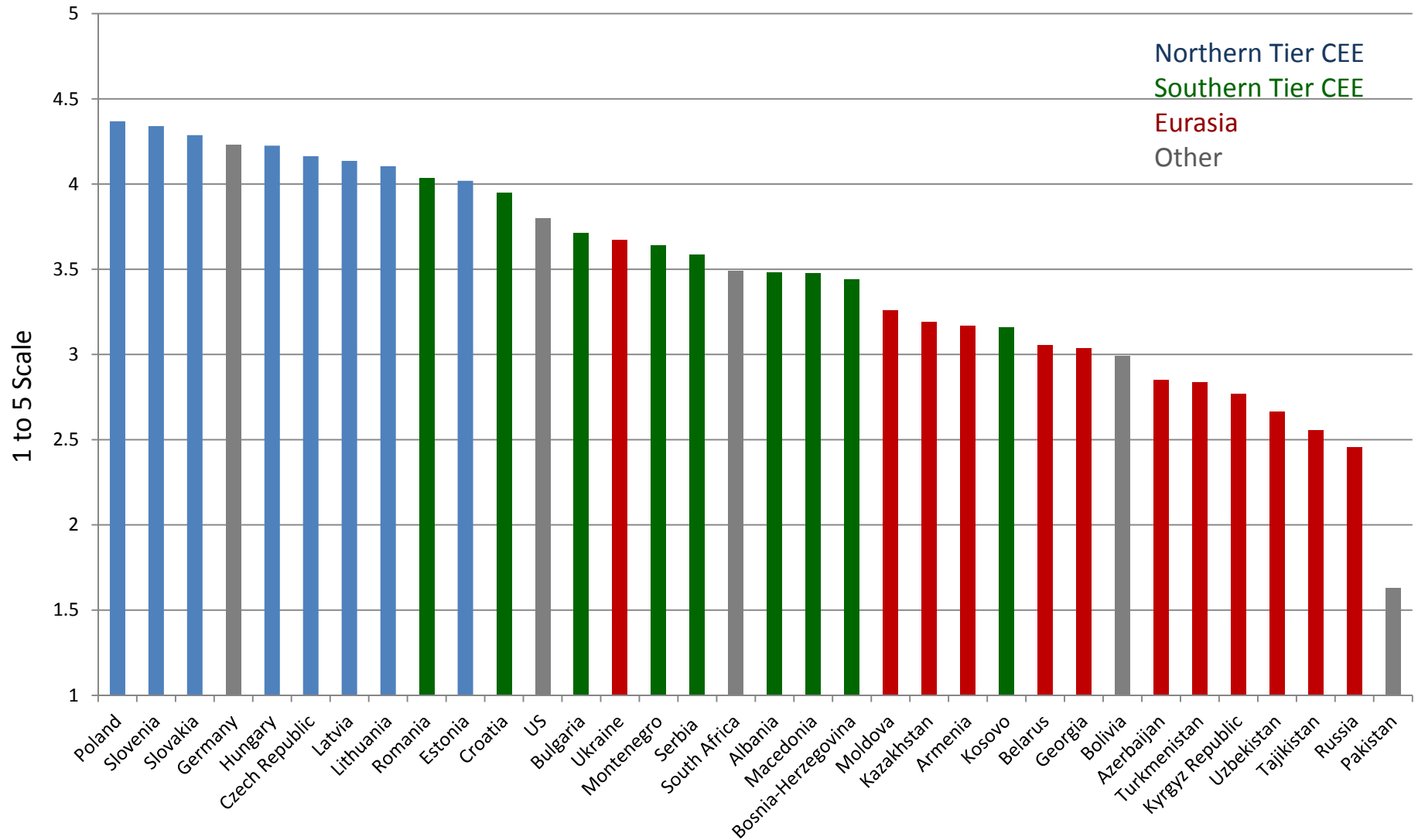
Northern Tier CEE
Southern Tier CEE
Eurasia
Other

1 to 5 Scale

Poland, Slovenia, Slovakia, Germany, Hungary, Czech Republic, Latvia, Lithuania, Romania, Estonia, Croatia, US, Bulgaria, Ukraine, Montenegro, Serbia, South Africa, Albania, Macedonia, Bosnia-Herzegovina, Moldova, Kazakhstan, Armenia, Kosovo, Belarus, Georgia, Bolivia, Azerbaijan, Turkmenistan, Kyrgyz Republic, Uzbekistan, Tajikistan, Russia, Pakistan

See *Appendix* for elaboration of the methodology. Scores calibrated on MCP 1 to 5 scale, with 5 representing the most advanced.

Figure 49

Peace and Security
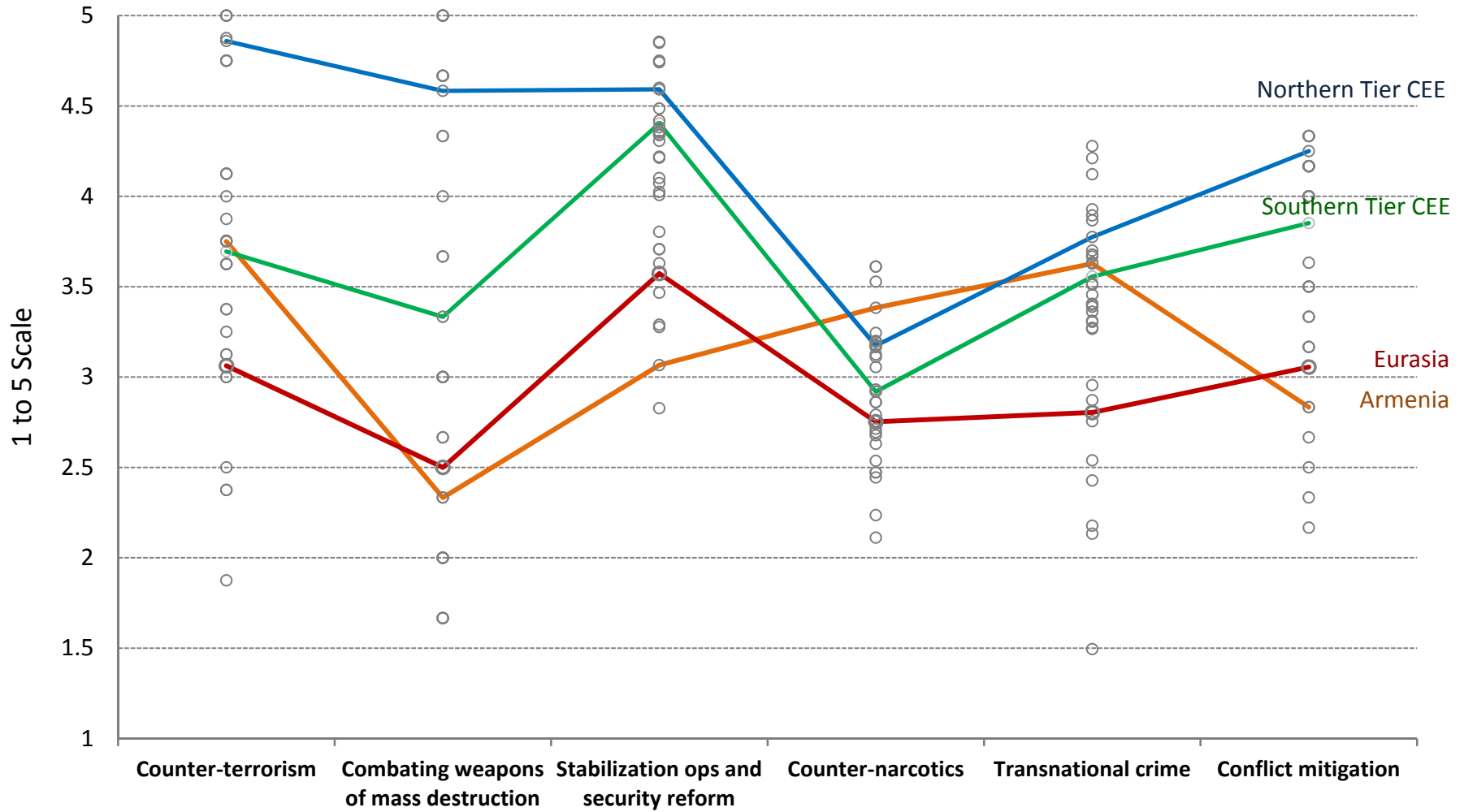

See *Appendix* for elaboration of the methodology. Scores calibrated on MCP 1 to 5 scale, with 5 representing the most advanced.