



Gap Analysis of Armenia

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Companion Narrative for PowerPoint Figures 1-80

Summary

This analysis attempts to take stock of Armenia's progress in its transition to a market-oriented democracy. Gaps in economic and democratic reform are examined first. To help ensure that these reform gains are sustained, we next look to see if progress in economic performance and human capital is advancing as well. Finally, we look at peace and security, focusing primarily on comparisons with the other nations of the Caucasus.

The salient finding is that democracy gaps are the largest and exist irrespective of which set of thresholds are employed. However, gaps also remain in second stage economic reforms. Armenia's gaps as measured by the *Monitoring Country Progress Reports* economic performance and human capital indices are apparent, especially for the human capital indices.

In order to have benchmarks against which to measure progress, this analysis considers two sets of thresholds, transition progress attained in: (1) Bulgaria and Romania on average in 2002; and (2) Bulgaria, Romania, and Croatia at phase-out in 2006.

Introduction and Method

This methodology uses the four E&E/USAID *Monitoring Country Progress (MCP)* indices (of economic reforms, democratic reforms, economic performance, and human capital). The methodology was approved by USAID and the State Department in 2004 to help determine when countries are likely to achieve benchmark standards based on the average of the scores that Romania and Bulgaria achieved in 2002. These standards were established with the intent to be proxies for when the path to political and economic reform has become irreversible. In this current analysis, we supplement the Bulgaria-Romania 2002 thresholds the current progress of Croatia, Romania, and Bulgaria (since assistance to all three is currently being phased out).¹ Given the current policy uncertainty regarding phase-out thresholds for Eurasia, the two thresholds contained in this analysis are for illustrative purposes only.

The *MCP* method employs a two step analysis.² First, we examine reform progress (both economic and democracy) and compare country progress against plausible phase-out thresholds. Next, we examine progress in economic performance and human capital. If reform gains are to be sustained, then sufficient progress needs to occur in terms of a

¹ Last year of new funds was 2006 for Croatia and Bulgaria; 2007 for Romania.

² For elaboration of the E&E Bureau's *MCP* system, see *Monitoring Country Progress in Eastern Europe & Eurasia*, #10 (August 2006), available on E&E/USAID's website.

reasonably well functioning economy and one that is favorably affecting social conditions or human capital. The sequence is important here. A country must achieve the reform gains before crossing acceptable thresholds in economic performance and human capital. Otherwise the reform gains may not be sustained. Belarus and Turkmenistan lag considerably in reforms and yet are doing relatively well in economic performance (in the case of Turkmenistan) and/or human capital (in the case of Belarus). Yet, the assumption or assertion here is that those favorable indicators will not likely be maintained in the absence of reform progress. It's also important to bear in mind that, in some circumstances, progress in economic performance can forestall reform progress, such as seems plausible in the case of energy-exporting economies.

Another key consideration in the analysis is the importance of the causal relationships between the transition sectors. Economic progress contributes to democratization and vice-a-versa; so, too the relationship between the economic sector and the social sector (or human capital), and democratization and human capital. These inter-relationships were not explicitly taken into account during the phase-out reviews in 2004. However, they do suggest that sustaining the gains in any one sector is less likely to occur if other sectors are lagging considerably.

We attempt to estimate Armenia' future progress largely by extrapolating from the past provided a trend in the past is discernable. Adjustments to this extrapolation can then be made on the basis of any additional relevant information.

Economic and democratic reforms

Figure 1 provides the bird's eye picture of reform progress in Armenia vis-à-vis the rest of the transition countries and vis-à-vis two plausible thresholds. Broadly, Armenia's economic reform progress leads the Eurasia set of transition economies. This position places it in the middle of the Southern Tier CEE countries in terms of economic reforms. On the other hand, it is more in line with the Eurasia average in terms of democratic reforms. It is close to the Romania-Bulgaria 2002 thresholds in the economic reform dimension; yet at considerable distance in terms of democratic reforms. When measured by the threshold standards of Bulgaria, Romania, and Croatia in 2006, Armenia has a noticeable gap in terms of economic reforms and a larger gap in terms of democratic reforms.

Economic reforms Economic reforms had been progressing in Armenia at a relatively steady pace from 1996 to 2005. Since 2005 the pace of reforms has slackened (*Figure 2*). Armenia's economic reforms (as measured in 2007 by *MCP*'s economic reform index, which draws from EBRD indicators) are currently at the Romania-Bulgaria 2002 standard. However, with the slow down in the pace of reforms it is difficult to estimate when it will meet the standards of Bulgaria, Romania, and Croatia. It might be possible to envision the convergence sometime in the period 2013-15.

Figures 3-6 show the components of the economic reform index and Armenia's current level of economic reform progress in each component relative to the Romania-Bulgaria 2002 thresholds, the Bulgaria, Romania, and Croatia 2006 threshold, and relative to economic reform progress in Armenia in 1999. Good progress has been made in first stage reforms; while gaps still remain in the second stage reforms vis-à-vis the Bulgaria, Romania and Croatia threshold. This is evident in *Figure 5* which shows gaps in all five of the indicators relative to this threshold: enterprise restructuring, competition policy, banking reform, non-bank financial reform and infrastructure reform. It is notable that while Armenia is the leader in the Eurasia region when looking at economic reforms, Stages I and II combined; the country is in the middle of the Eurasia group when looking at Stage II reforms alone. Russia (Stage II score of 2.6), Kazakhstan (2.5), and Ukraine (2.5) lead Armenia (2.3) in this regard.

Microeconomic reform appears to be moving forward well at least in terms of one set of measures. According to the World Bank's *Doing Business* analysis, Armenia ranks 39 out of 178 countries worldwide in the extent to which its business environment is conducive to enterprise growth³ (see *Figure 7*). The lower the rank, the more favorable business finds the microeconomic environment to be. This puts Armenia in the middle of the Northern Tier CEE average and ahead of Czech Republic, Hungary, Slovenia, as well as Bulgaria, Romania, and Croatia in Southeast Europe.

Despite the overall good showing in the *Doing Business* reports, there are three areas of the ten business environment areas from this report that indicate lagging performance: constraints against (1) dealing with licenses (Armenia ranks 73rd out of 178); (2) paying taxes (143rd); and (3) trading across borders (118th). The higher the index score, the greater are the constraints from the perspective of the enterprise.

Figure 8 compares the tax constraints in Armenia to those of other transition countries and elsewhere. These constraints consist of the number of tax payments required, the time it takes to prepare, file and pay taxes, the percentage paid of profits, the percent paid for labor taxes, the percent paid for all other taxes. The sub-component in which Armenia lags the most in the region is the time it takes to prepare, file and pay taxes: 1,120 hours versus 451.5 hours as an average in the region. In general, according to this dataset, such restrictions remain very high in Armenia.

In contrast to the overall good rating in *Doing Business* analysis noted above, the World Economic Forum in the *Global Competitiveness Report (WEF-GCR)* ranks Armenia number 93 of 131 countries in 2007 (see *Figure 9*). The best ranking is one and the worst ranking is 131. The WEF-GCR employs a methodology that combines publicly available data with survey data from the WEF Executive Opinion Survey. There are 123 indicators organized among 12 groupings of indicators called 'pillars': institutions, infrastructure, macroeconomic stability, health and primary education, higher education and training, goods market efficiency, labor market efficiency, financial market sophistication,

³ Scores are based on progress in ten areas, constraints towards starting a business, dealing with licenses, hiring and firing workers, registering a property, getting credit, protecting investors, paying taxes, trading across borders, enforcing contracts, and closing a business.

technological readiness, market size, business sophistication and innovation. There are 91 indicators derived from the survey data and 32 from various hard data sources. Armenia's overall rank is below Bulgaria, Romania, and Croatia as well as countries such as Russia, Uzbekistan, and Ukraine. Elements within the overall competitiveness ranking reveal particular challenges for Armenia such as lack of judicial independence; the weak protection of minority shareholders interests; the quality of health, primary education, and management schools; burden of customs procedures; difficulty in accessing loans; and government procurement of advanced technological products, to name several.

As shown in *Figure 10*, Transparency International's *Corruption Perception Index* suggests that corruption remains a key problem in Armenia (exceeding the "rampant" corruption threshold as defined by Transparency International). Businesses, in particular, view corruption as being among the largest constraints to doing business. *Figure 11* provides business' perception of the leading problems they have reported in the World Economic Forum Global Competitiveness Report 2007-08. Corruption is reported by 17.1 percent of businesses as the leading problem followed by access to finance (14.6). Other problems reported are inefficient government bureaucracy, tax regulation and inadequate supply of infrastructure.

To sum up the discussion of the overall economic reform measures presented above, Armenia is doing well with the Stage I reforms as measured by the EBRD and reported in the Monitoring Country Progress Report. The same holds true for most of the measures presented by the World Bank's Doing Business Report. Both of these sets of measures entail policy and legal reform. In the other two sets of measures, the EBRD-MCP Stage II reforms and the WEF-GCR reforms capture mostly institutional change. Progress on institutional reforms generally requires more time than the policy-legal reforms, as appears to be the case for Armenia.

Democratic reforms As noted earlier, *Figure 1* indicates that Armenia, like all of Eurasia except Ukraine, lags considerably in democratic reforms behind all Northern and Southern Tier Central and Eastern European countries.⁴ Armenia's most recently measured level of Democratic Reforms is positive by Eurasian standards - lagging behind only Ukraine, Georgia and Moldova among the twelve Eurasian nations. While Armenia has had a consistently higher democratic reform score than much of Eurasia, the slope of its recent trend line is more similar to the rest of Eurasia than to the moderately reforming countries of Georgia, Moldova and Ukraine (*Figure 12*). Armenia is now in the camp of the democratically backsliding autocracies that characterize most of Eurasia. The relatively high democracy rating compared to the rest of Eurasia reflects the fact that Armenia began the transition with a promising democratic profile; one from which it has been retreating for the past 13 years. The story of this backsliding reflects both the Eurasian pattern and a set of circumstances and actors unique to Armenia and the Caucasus.

Progress in democracy has been very uneven over time in Armenia; characterized by a tremendous jump in the very early 1990s, followed by two prominent periods of

⁴ The exception is Kosovo, which was under a UN Protectorate at the time the data was reported.

backsliding. (*Figure 13*) Armenia's most notable democracy gains peaked in 1992 with the election the year before of Levon Ter-Petrossian as Armenia's first president. Ter-Petrossian was essentially elected President of Armenia by acclamation as the USSR was breaking apart; the first of a series of three presidents for whom the status of Nagorno-Karabakh was a defining issue. As leader of the Yerevan-based Karabakh Committee, Ter-Petrossian advocated in the late 1980s for inclusion into the Armenian SSR of the Nagorno-Karabakh region, which was populated by ethnic Armenians but located within the Azerbaijan SSR. By the time of the 1991 election, Armenia was in a de-facto war with Azerbaijan over the status of Nagorno-Karabakh, marked by the forcible expulsion of ethnic refugees on both sides. Armenia began its post-transition economic shock in a time of war, characterized by extreme energy shortages during back-to-back frigid winters. Armenia emerged from the conflict victorious in 1994 with the signing of a cease fire with Azerbaijan. Nagorno-Karabakh declared independence and the Armenian military occupied significant parcels of Azerbaijani territory around the ethnic Armenian region. However, the victory was accompanied by continued economic privations brought about by a border blockade by Azerbaijan and its ally Turkey. Throughout this period, Armenia's democracy rating remained at 2.8 on a five point scale, the highest in its history, as Armenians remained relatively unified in purpose.

Armenia's democratic backsliding began in 1995 with controversial elections for parliament. Ter-Petrossian's contested reelection in 1996 continued the trend, as the military was called into the street to suppress protests. In 1998, Ter-Petrossian was forced from power by the military and replaced by Prime Minister Robert Kocharian, the former President of the Republic of Nagorno-Karabakh. A snap election was called in 1998 that Kocharian won, but with serious irregularities.

The second period of backsliding occurred in the early 2000s, coinciding with Kocharian's reelection as President in what, according to international observers, was one of the most seriously flawed elections in Armenian history. Opposition protests in 2003 and 2004 were met with mass detentions. A flawed constitutional referendum in 2005 continued the trend, resulting in a score for Armenia of only 2.2 out of 5.0 by 2006 – Armenia's lowest democracy score since the Soviet period.

In light of past trends, and the 2008 violence that is not reflected in this data, no plausible forecast can be made on when Armenia will meet the Romania-Bulgaria-Croatia 2006, Romania-Bulgaria 2002 or any other democratic reform threshold.

Relative to both the 2002 and 2006 thresholds, significant gaps prevail in six of the seven areas measured as of 2006: in electoral process; media; corruption; rule of law; national governance; and local governance (*Figure 14*). Civil society is the only area where Armenia does not score far from the thresholds and is, along with anti-corruption and rule of law, among the only areas on the Democratic Reform Index in which Armenia has not backslid since 1999. (*Figure 15*) Backsliding is evident in electoral processes, national governance, local governance and independent media.

Figure 16 shows the disaggregated components over time. Three components have shown little or no change. Civil society has remained at 3.3 out of 5.0 for the past decade, a testament to the relatively strong and independent NGO sector in Armenia. Rule of Law, with some minor variations, has remained at 2.3. Anti-Corruption levels are unimproved at 1.8, but have not worsened. Armenia's regression in democratic reforms has been driven by backsliding, beginning in the early 2000s, of the remaining three components. Governance has been declining consistently since 2002, as has independent media. The negative trend began with drops in electoral processes scores in 2000 and 2003. Electoral process is at 1.8, tied with corruption for the lowest score.

Figure 17 tracks Armenia's electoral process score, a leading indicator in the country's democracy trends. It also shows Azerbaijan and Georgia for comparison. The combustible period of 1996-1998 results in a drop to an electoral process score of 1.8. In the flawed 1996 Presidential elections, Levon Ter-Petrossian – the first president of Armenia - declared a narrow first round victory amidst allegations of fraud. The military was deployed to counter angry demonstrators and fights broke out in the parliament. After a controversial presidential televised speech hinting at concessions on Nagorno Karabakh, Ter Petrossian was forced from office to be replaced by Karabakh hard-liner Robert Kocharian. Kocharian in turn was elected in a flawed two-round election in 1998, characterized by ballot box stuffing and counting irregularities.

The high-point for Armenia's electoral process in the last decade was 1999, the year of parliamentary elections that resulted in a victory for the Unity Coalition. Unity was led by former Defense Minister Vazgen Sargsyan, who became Prime Minister; and Karen Demirchian, Kocharian's 1998 election opponent, who became Parliament Speaker. Although there were problems with the voter lists, the elections were considered an improvement over the elections of 1995, 1996 and 1998. While Vazgen Sargskyan was Kocharian's Defense Minister and a Karabakh hardliner, his alliance with Kocharian's foe Demirchian made the Unity Coalition the only election victor in recent Armenian history that was not overtly supported by the Presidential apparatus. The Unity-led parliament might have evolved into an opposition legislative body. However, the October 27 1999 assassinations in parliament that killed Sargsyan, Demirchian and several of their deputy leaders, marked the end of an era that never really started. There was widespread speculation that Kocharian, who saw most of his potential challengers killed in a single evening, had masterminded the assassinations. Several Kocharian associates were arrested and released, including the Presidential Chief of Staff. Still, no proof of Kocharian's complicity was offered and the President succeeded in consolidating power in the executive, beginning in 2000. The Unity Party fractured into pro and anti presidential factions with the pro-Kocharian Republican Party taking effective control of the parliament.

Stepan Demirchian, the son of the slain opposition leader Karen Demirchian ran against Kocharian in 2003 in a two round election. The polling and counting were roundly condemned by international observers, who documented numerous cases of ballot box stuffing and irregularities in the vote counting. The 2003 elections were also marred by harassment and detention of opposition demonstrators.

Following the Rose Revolution of late 2003 and the snap presidential elections in January 2004 in Georgia, opposition demonstrators in Armenia attempted similar tactics. In response, the Armenian Government used the Soviet-era Administrative Detention Act to round up opposition leaders without the normal judicial protections. Armenia's electoral process score dropped back to its previous low of 1.8.

Strikingly, Azerbaijan and Armenia's electoral process scores have tracked closely on a similar downward trajectory with trends mirroring those in post Rose Revolution Georgia.

Figure 18 looks at the election monitoring reports issued by the Office of Security and Cooperation in Europe (OSCE) in Armenia since 1998. Individual election observation reports are primarily qualitative in nature and difficult to compare empirically. However, since 1998 OSCE reports on Armenian elections have provided quantitative information on the quality of the polling and the vote counting in polling stations visited by OSCE observers. Observers are given forms to fill out at every precinct they visit on Election Day and are asked to rate the quality of voting process at that location. Based on factors such as quality of the voter lists, unrest at the polling station, presence of unauthorized personnel, etc., observers are asked to rate the process as very good, good, bad, or very bad. Observers fill out a similar form when they observe the counting of ballots after the polls have closed. Factors for counting include the transparency of the counting process, the adherence to election code procedures for the filling out of precinct protocols and whether the results on the protocols are consistent with observed voting behavior throughout the day, e.g. do the protocols reflect a suspiciously high turnout in precincts where observers has noticed low turnout throughout the day?

An analysis of election monitoring reports written by OSCE's Office of Democratic Institutions and Human Rights (ODIHR) since 1998 shows two patterns. First, the number of observer reports in which monitors rated positively the conduct of the voting (composition of voter lists, orderly voting procedures, etc) has been increasing steadily. Given the USAID investment over the years in technical assistance for election administration, this indicates significant progress in the technical proficiency of the election process.

The other trend line shows the findings of observer reports regarding the counting process (transparency of the count, handling of ballots and protocols etc.). The quality of the counting process is often more a factor of political will than technical proficiency. In this case, the quality of Armenian elections is less impressive. Nonetheless, the presidential elections of 2008 did show progress, with only 13% of counts being rated badly. However, these numbers do not reflect the whole story. For instance, the 2003 presidential election report cited numerous instances of ballot box stuffing, a level of illicit activity not apparent in the counting quality trend line.

Figure 19 puts the most recent Armenian election (presidential 2008) in the context of the most recent elections in selected Eurasian countries. The gap between the quality of the

voting and counting is a persistent feature of elections in Eurasia. A review of the most recent ODIHR reports shows that only Ukraine and Moldova had more problem-free voting, and only Ukraine exceeds Armenia in voting. These numbers do not reflect other, difficult-to-quantify aspects of elections, such as fairness in media coverage, use of state resources, or whether some candidates or parties were presented with unfair obstacles to competition. Still, the OSCE/ODIHR report for Armenia's 2008 election was clearly seen as less problematic than those for several other Eurasian countries.

Armenia's Governance scores have experienced a sharp fall off since the 2003 presidential elections (*Figure 20*). Post-election demonstrations were countered by use of Soviet era administrative detentions that resulted in the jailing opposition supporters. A flawed parliamentary election of the same year resulted in a weakened parliament that further accelerated the concentration of executive power. Although a package of constitutional amendments passed in a 2005 referendum generally supported by the international community, irregularities in the conduct of the referendum further eroded the legitimacy of Armenian governance. Flawed local elections in 2005 further undermined confidence in local governance. Governance had been one component of the Democratic Reform Index in which Armenia had a significant advantage over its neighbor Georgia. However, recent reforms in Georgia, coupled with declines in Armenia, have put the two countries close to on-par for the first time since 1999.

According to the World Bank Institute' Control of Corruption index (*Figure 21*), Armenia ranks at about the 35th percentile indicator. In contrast to the Freedom House corruption indicator, this marks a slight, but unsteady improvement since 1996.

Figure 22 highlights Armenia's media scores, which have been dropping steadily since 2001, the year in which the President assumed responsibility for appointing all members of the broadcast licensing commission. In 2002, A1+, the country's leading independent television station lost its license. Since then, there has been an increasing climate of hostility and violence toward journalists, a trend that closely tracks that of Azerbaijan. The independent media trend line slopes for the two countries have been identical since 2002.

Rule of Law scores in Armenia have stagnated rather than backslid in the past decade. Recent Human Rights Reports from the State Department's show that pre-trial detainees have averaged about 19% of the total prison population over the past 3 years. (*Figure 23*) A large majority of pre-trial detainees recant their pre-trial testimony, claiming it is given under duress or torture. (*Figure 24*)

USAID/Freedom House indicators have not taken into account the tragic events of March 1, 2008. After February 19 presidential elections, which were evaluated as relatively positive by OSCE and EU observers, Prime Minister Serge Sarkysyan was declared the victor with 53%. After several days of protests, the demonstrations were crushed. Seven supporters of opposition candidate and former President Levon Ter-Petrossian were killed, as was one policeman. Video shows troops firing directly at ground level rather

than into the air as the Armenian Government contends.⁵ The New York Times reported witness reports that “government authorities planted guns and grenades among the sleeping protestors prior to the attack, then, claiming that they were thwarting an attempted coup, police attacked the opposition camp.”

The events of March 1 2008 represent the second largest death toll in Europe and Eurasia since the breakup of the Soviet Union caused by government firing upon demonstrators. Only the attack on demonstrators in Andajan, Uzbekistan in 2005 was larger. According to State Department Human Rights Reports, a single documented death in Azerbaijan in 2003 is the only other case of post election violence turning deadly in Europe and Eurasia. On a per-capita basis, 8 deaths in a country of 3 million is a higher toll than the government crackdowns in Burma in 2007 or China in 1989. (*Figure 25*)

Close to 900 people were arrested or detained after the 2008 election demonstrations, a dramatic escalation in a pattern of political arrests that began in the early 2000s. Eighty persons were arrested in 2002 protesting the closure of A1+, the primary independent broadcast news outlet. 200 were arrested 2003 protesting the election results of that year. 140 were arrested in 2004 in protests widely seen as inspired by the Rose Revolution in Georgia the year before. After three relatively placid years, the arrests of 2008 indicate that a significant lack of trust remains between the Armenian state and a large section of its population. (*Figure 26*)

Gallup sampled the public in several CIS countries in 2007 and asked those who feel democracy is important (76% in Armenia, compared to 78% in Georgia, 75% in Ukraine, 69% in Moldova, 60% in Belarus, and 58% in Kyrgyzstan) how satisfied they were with the way democracy works in their country. According to Gallup, the results reflected respondents' likelihood to base opinions of their countries' political systems on the success of those systems in driving economic performance. Less than 25% of Armenians who believed democracy was important were satisfied with their democratic system. The two countries where residents are least likely to say they are satisfied with the way their democracy works -- Ukraine and Georgia -- are also the two where people are least likely to feel the national economy is in good shape, even though the state of their democracy looks more robust under the MCP system. *Figure 27*

Economic performance and human capital

Drawing from the *MCP* indices, Armenia falls in the lower left quadrant in terms of economic performance and human capital by transition country standards (*Figure 28*).⁶

⁵ <http://www.youtube.com/watch?v=8e6XR8TXGWA>. The Armenian Government contends this footage was doctored.

⁶ The economic performance index includes: (1) private sector share of GDP; (2) export share of GDP and composition; (3) employment in micro-, small- and medium enterprises as a percent of total employment; (4) macroeconomic stability (a composite of four indicators: 3-year average of inflation, external debt as percent of GDP, fiscal balance as a percent of GDP, current account balance as a percent of GDP); (5) the 5-year average growth of GDP per capita; (6) foreign direct investment per capita, cumulative since 1989; (7) long term unemployment as a percent of total employment; (8) a measure of the uneven economic development of a country along group and ethnic lines; and (9) the percent of total GDP entailed in manufacturing. The human capital index includes: (1) per capita income; (2) education gap, an index of

Its progress on these dimensions comes closest to its neighbors in the Caucasus: Georgia and Azerbaijan. Armenia's progress in economic performance exceeds its performance in terms of human capital, as is the case with much of Eurasia. It scores around the Eurasian median in both economic performance and in human capital.

Economic performance *Figure 29* shows Armenia's economic performance trajectory with significant progress since the mid 1990s.⁷ *Figure 30* disaggregates the economic performance index and shows the gaps against the Romania, Bulgaria, and Croatia 2006 threshold. These figures also highlight some imbalances between different aspects of Armenia's economic performance. For example, macroeconomic stability has been very ably maintained (with very low inflation and low external debt) as found in the MCP. Armenia's GDP growth in recent years has been among the best globally. It has the second highest average annual growth rate in the region with a five-year annual average of 12.6% after Azerbaijan's 21.1% average rate, which has been buoyed by sizeable increases in oil wealth (see *Figure 31*). On the other hand, several economic structural changes have been slow to occur. For instance, there has been a rather small proportion of the micro-, small-, and medium enterprises (MSME) represented in total employment in the economy (34.0% of total employment), below or well below the levels of most other transition economies (see *Figure 32*). Export share as a percent of GDP is small (23% of total GDP versus 49% for Bulgaria, Romania and Croatia) (see *Figure 33*) while the composition of exports as represented by manufacturing exports is slightly above the same standard (71% versus 69%) – (see *Figure 34*). Cumulative foreign direct investment is low at \$490 per capita through 2006 as compared to an average of \$1,856 for Bulgaria, Romania, Croatia in 2006 (see *Figure 35*). Long-term unemployment is noticeably high, 71% of total unemployed (labor force survey - see *Figure 36*). Likewise, the service sector as a portion of the overall economy is well below the thresholds (25% vs. 58% for BRC) - see *Figure 37*.

As noted above, Armenia's economic growth has been very robust. Virtually all transition economies witnessed a sizable drop in output in the 1990s and Armenia was no exception. (*Figure 38*) Armenia's GDP bottomed out in 1993. From there growth was good through 2000 with average annual rates of 5.4%. Since 2001 growth has increased markedly – with annual growth averaging 12.7%, more twice the rate (5.8%) of BRC in the same period. Several factors have boosted economic growth. Two in particular are official aid and remittances. In *Figure 39* official aid and remittances are plotted against GDP growth rates. Official aid increased noticeably in 1994, a year before GDP became positive. Official aid has remained above 10% of GDP through 2003. In 2003, remittances climbed markedly from 5% to 23% of GDP and as of 2006 are 18%. *Figure 40* compares remittances with other transition economies. Armenia is third highest in terms of remittances in 2006 following Moldova with 30.8% and Tajikistan with 20.2%

several education indicators; (3) public expenditure in education and health as a percent of GDP; (4) life expectancy; (5) under five years of age mortality rates; (6) tuberculosis incidence; and (7) vulnerable populations (the proportion of children and elderly in poverty at \$2.15 per day, and the rate of institutionalized children)

⁷ The economic performance index was changed in 2008 and the historical trend line adjusted accordingly.

of GDP. If remittances drop off from their elevated levels in the next few years there will be downward pressure on growth. Labor productivity gains have also assisted Armenia's growth. *Figures 41 and 42* show Armenia with the highest labor productivity average in the region over 1998-2002 with a five-year average annual positive change over 17%. This is supported by more recent WEF-GCR 2007-08 Labor Market Efficiency Rankings⁸ that place Armenia number 40 of 131 countries, ahead of the averages for the Northern Tier and for Bulgaria, Romania, and Croatia (see *Figure 43*).

Armenia's outward orientation, as measured by exports as a percentage of GDP, is lower today than in the early 1990s (see *Figure 44*). Armenia's export share of GDP has trended downward since 2003 and is below its Caucasus' neighbors as well as Bulgaria and Romania. How large an export sector is relative to GDP is a function not only of competitiveness but also country size; larger economies generally don't need to trade as much as do smaller economies and typically have much smaller export sectors relative to GDP. Hence comparing outward orientation between economies of comparable size may be more meaningful. *Figure 45* attempts to do this and shows that Armenia's outward orientation by this measure is still lower than found in the Kyrgyz Republic, Macedonia, and Tajikistan. The fact that Armenia is landlocked offers part of the explanation. In addition, two of its borders (with Azerbaijan and Turkey) are essentially closed for trade. *Figure 46* shows what countries face in terms of the typical cost of exporting and importing a standard container of goods as compiled by the Doing Business Reports. As seen in the chart, business in Armenia pays \$1,250 for such a typical container. This is greater than the average for Southeast Europe and the average for Bulgaria, Romania, and Croatia, though better than the cost for Russia, Azerbaijan and Tajikistan. Thus, Armenia is not paying a high cost for importing and exporting for its geographic location nor a higher price relative to its neighbors.

The *MCP* economic performance index includes the long-term unemployment indicator. There are other data and indicators that augment this aspect of the labor markets helpful to this gap analysis. *Figure 47* provides an overview of how and to what extent Armenia's labor market has been adjusting. What is so striking about Armenia is the extent to which labor market dimensions have changed. Employment has been dropping over most of the period from 1991 while GDP has been growing over all of the period since 1993. In 2005, with the last available data, total (official) employment in Armenia had dropped to 68% of its pre-transition level. Some of this employment drop was to be expected given that "over-employment" (by market economy standards) was likely a key characteristic prior to the transition. Moreover, employment levels are also lower today in virtually all other transition economies, particularly those that have undergone substantial economic and democratic reforms. Employment levels in the Northern Tier CEE on average today are likely not much above 80% of 1989 levels. Another perspective of the relation of employment to economic growth is shown in *Figure 48*,

⁸ The WEF-GCR "labor market efficiency" index is composed of the following 10 indicators: 1) cooperation in labor-employer relations (survey data); 2) flexibility of wage determination (survey data); 3) non-wage labor costs (hard data); 4) rigidity of employment (hard data); 5) hiring and hiring practices (survey data); 6) firing costs (hard data); 7) pay and productivity (survey data); 8) reliance on professional management (survey data); 9) brain drain (survey data); and, 10) female participation in labor force (hard data).

which measures how much employment changed with the onset of economic growth (after GDP bottomed out from the transition recession). This is termed the “responsiveness” of employment to economic growth. About half of the transition economies continue to experience employment contraction while the economy expands (“jobless growth”). Armenia, along with Lithuania and Moldova, has had the greatest job contraction while GDP expands. Real wages, while largely increasing since 1993, were still less than 60% of pre-transition levels as of 2003 (latest data available). To compare, real wages in the CEE countries on average were above 1989 levels by 2004.

As labor market participation has been trending down in Armenia, the unemployment rate has remained high and has increased in the period from 1998 through 2004 (see *Figure 49*). At about 32% according to a labor force survey, Armenia’s unemployment rate is much higher than most transition economies, and as of 2005 (latest data available) shows no sign of falling. There are a number of transition economies which are still witnessing a rise in unemployment rates, but among that group there is only one other country, Macedonia (at 37% unemployment in 2004), which has a comparably high rate of unemployment to that found in Armenia.⁹ The unemployment rate estimate of 32% is derived from a labor force survey, generally much more reliable than the most frequent alternative method to measure unemployment; i.e., via registered unemployment. Still estimates vary widely for Armenia, and perhaps a more credible estimate of open unemployment (which adjusts for informal economy employment) may be closer to 25%.¹⁰ The large majority of Armenia’s unemployed has been unemployed for at least one year (i.e. “long term” unemployed (see *Figure 36*). On the positive side, as noted earlier, the efficiency of the labor market as measured by the World Economic Forum’s Global Competitiveness Report is good (see *Figure 43*).

The *MCP* economic performance index does not explicitly address the financial market. As seen in *Figures 50 and 51*, there is reason to pay closer attention to the development of the financial sector in Armenia. *Figure 50* shows the extent to which the financial system generates credit for the economy, measured as a percent of GDP. Armenia’s domestic credit by this percentage is about 20 percent, compared to Bulgaria, Romania, and Croatia at 48 percent, and the Northern Tier at 51 percent. A survey by the World Economic Forum’s Global Competitiveness Report of businesses on financial market sophistication shows Armenia with a score of 2.7, which is below the Bulgaria, Romania, Croatia average of 3.6 and the Northern Tier average of 4.5. (*Figure 51*)

Two additional indices are presented here to clarify important aspects of Armenia’s economic performance. *Figure 52* shows the percent of the total energy consumed by various countries as reported by the World Bank’s World Development Indicators. It is clear that Armenia depends on imports. Sixty-six percent of the country’s energy needs are imported, indicating a vulnerability to fluctuations in energy prices and stability of supplies. *Figure 53* presents the World Economic Forum’s Global Competitiveness Report’s ranking of Armenia and other countries in terms of the perceived quality of their

⁹ A. Heinegg, R. Murphy, and R. Sprout, *Labor Markets in Eastern Europe and Eurasia*, EE/USAID Working Paper #6 (January 2007), p. 34.

¹⁰ IMF, *Armenia: Selected Issues* (October 2006).

overall infrastructure.¹¹ Armenia ranks 87 out of 131 countries (1 is the best ranking while 131 is the worst). This standing is close to Bulgaria's ranking of 84, yet better than Romania's ranking of 100, while much short of Croatia's ranking of 53.

Human Capital

With a Human Capital Index score of 2.0, as measured by the MCP index, Armenia is around the median of Eurasian countries (*Figure 28*); a rating on par with its neighbors Georgia and Azerbaijan.

Figure 54 shows Armenia's human capital score over time. After a dramatic falloff in the early 1990s, Armenia has made gains in its human capital since 1997, although progress has stalled since 2000.¹²

Figure 55 disaggregates the human capital index and shows the gaps against the average of Romania-Bulgaria-Croatia in 2006.

In some areas, Armenia compares favorably. Life expectancy in Armenia was 73 years in 2005, the highest in Eurasia and comparable to that in many graduating countries (*Figure 56*). Armenia has the same life expectancy as Bulgaria, Hungary and Montenegro. Armenia's under five mortality rate was 29 deaths per 1,000 children in 2005. This rate is the fifth lowest among the 12 Eurasian countries, although higher than any transition country outside of Eurasia. (*Figure 57*) With a tuberculosis incidence rate of 52 per 100,000, Armenia is higher than Bulgaria (51) or Croatia (27), but far lower than Romania (131).

Armenia's per capita income of \$5,890 (PPP) is at the Eurasian median and slightly above the Eurasian average of \$5,508 (*Figure 58*). It most closely matches Azerbaijan with \$5,960. It is well below most non-Eurasian transition countries, with the exceptions of Serbia (\$5,660) and Montenegro (\$5,334).

Armenia scores poorly on vulnerable populations, as defined by poverty rates of children and elderly. At \$2.15 per day, the most recent poverty rate for children in Armenia is 54%, and for the elderly, 47%. These rates are comparable to those found in some of Eurasia's poorer countries, including Uzbekistan (50% and 40%, respectively), Georgia (55% and 53%), Moldova (6% and 2%), and below the Eurasian average (38% and 30%). The rate of institutionalized children (or the rate of children in residential care per 100,000 population aged 0–17) in Armenia is 714. This is comparable to the Northern Tier average 783; higher than the Southern Tier average 407; and lower than the Eurasian average of 888 in 2005.

¹¹ The World Economic Forum's Global Competitiveness Report "Infrastructure" Index is composed of the following indicators: 1) quality of overall infrastructure (survey data); 2) quality of roads (survey data); 3) quality of railroad infrastructure (survey data); 4) quality of port infrastructure (survey data); 5) quality of air transport infrastructure (survey data); 6) available seat kilometers (hard data); 7) quality of electricity supply (survey data); 8) telephone lines (hard data); and 9) quality of telephone infrastructure (survey data).

¹² The human capital index was changed in 2008 and historical trend lines were adjusted accordingly.

Figure 59 identifies where the worst areas of Armenian poverty are. Shirak, which contains the earthquake ravaged city of Gyumri is the worst, at 37%. Kotayk, Gegharkunik, and Armavir have poverty rates higher than 30%. Yerevan's poverty head count stands at 21%.

Education gaps in Armenia are significant. The education gap indicator in the Monitoring Country Progress human capital index draws from twelve indicators and attempts to measure both the quantity and the quality of education¹³.

At only slightly over 3%, public expenditure on education as a percent of GDP in Armenia leads the three Caucasus countries in public expenditure on education, but lags behind much of Eurasia. (*Figure 60*) A breakdown of the regions of Armenia shows that four Armenian Marzes, - Armavir, Aragatsotn, Kotayk and Vayot Tzor - spent less than \$2 per person on education in 2006. This contrasts with \$54.00 per person in Yerevan. (*Figure 61*)

A survey, which attempts to measure functional literacy (or the extent to which the education system produces educations which are relevant and effective in a market economy), shows Armenia's school system performs below OECD standards but is comparable to several southern tier countries such as Bulgaria, Serbia, and Romania. (*Figure 62*) As one of fourteen transition countries that participated in the Trends in International Mathematics and Sciences Study (TIMSS) in 2003, Armenia scored a 473, at the Intermediate Benchmark. Females outscore males on the TIMSS test in Armenia, a common pattern for the intermediate scoring countries, but unusual for those with higher scores (*Figure 63*).

(*Figure 64*) highlights secondary and tertiary gross enrollment figures for Armenia. With a secondary enrollment rate of 70%, Armenia is near the median for Eurasia. However, only Azerbaijan, Tajikistan, Turkmenistan and Uzbekistan have tertiary enrollment rates less than Armenia's 27%.

Figure 65 looks at public expenditures on health. Armenia spends 1.4% of its GDP on health, the lowest rate in Eurasia after Azerbaijan and Tajikistan.

Figures 66 and 67 examine domestic violence in Armenia. According to US State Department Human Rights Reports, 66% of Armenian women surveyed admitted they were the victim of psychological abuse by a family member, while 39% contend they were victims of physical abuse. This is a considerable increase in affirmative responses to these questions since 2001. Attitudes towards domestic violence are not encouraging. In three separate regions of Armenia, around half of all men surveyed agreed that it was acceptable to hit a wife if she argued. In two regions, around a third of women surveyed agreed with the same statement.

¹³. This measure was derived in the E&E Bureau's working paper, Education in Eastern Europe and Eurasia #2 (October 2005)

Peace and Security/Demography

Finally, we provide some very preliminary analysis in regards to peace and security in Armenia. As part of the Monitoring Country Progress system, and in attempt in part to better align our empirical system with the DFA foreign assistance framework, we are engaged in developing a peace and security index. It is very preliminary, both in terms of how we are proposing to measure peace and security dimensions as well what dimensions to include. *Figure 68* shows how Armenia compares on indices measuring Transnational Crime, Conflict Mitigation, Counter-narcotics, and Counter-terrorism. Given the unique circumstances faced by nations in the Caucasus, comparative scores for Azerbaijan are shown as well. Armenia has respectable scores on all of these indices with the exception of Conflict Mitigation. It outscores its neighbors on Counter-narcotics, and Counter-terrorism

Figure 69 disaggregates the Peace and Security indices and compares Armenia's score to the average score of Bulgaria, Croatia and Romania at graduation. In the case of Counter-narcotics, and Counter-terrorism, Armenia is on par with or exceeds the scores of the Southern Tier CEE graduates. Armenia's score of 2.0 in "trafficking in persons" is the weakest element on the transnational crime index. Armenia's score is weaker than the graduate countries on two elements of the Conflict Mitigation index of which it has little control – "bad neighborhood" and "conflict history."

Overall, Armenia falls into the Failed States Index "warning" range where most of the transition countries lie (*Figure 70*). Of the transition countries, only Uzbekistan falls into the "alert" range, and only the Northern Tier CEE countries plus Montenegro fall into the "moderate" range. No transition country is considered "sustainable" on the FSI index.

For Armenia, and its neighbor Azerbaijan, a thorough examination of Peace and Security issues necessitate a closer look at the military balance between the two countries. Although the Nagorno Karabakh War officially ended with the 1994 ceasefire, no peace treaty has been signed and the border between Armenia and Azerbaijan remains tense. *Figure 71* looks at the casualties on the border over the past few years. As recently as March 2008, around 10 soldiers were killed along the border (accounts vary between the two sides). Low grade border skirmishes continue to be a destabilizing factor in the region.

Figure 72 highlights recent arms purchases in Eurasia. With a \$151 million purchase in 2004, Armenia leads the CIS on recent arms imports. Only Azerbaijan, which purchased \$140 million in weapons in 2002 comes close. Given Azerbaijan's recent announcement of a major increase in military spending, it is clear both countries still perceive the other as a significant threat. *Figure 73* looks at military spending as a percentage of GDP. By this measure, both Armenia and Azerbaijan have been spending a smaller proportion of their GDP on the military than in the 1990s, although both show a small increase between 2004 and 2005. This chart may indicate the influence of the soaring GDPs for both Armenia and Azerbaijan in the past decade. Both countries spend a smaller proportion of

their GDP on the military than Russia – a country with an ongoing insurgency. Interestingly, Georgia has seen a surge in military spending as a percentage of GDP since the Rose Revolution, a rate that now exceeds both of its Caucasus neighbors.

Within the CIS, Armenia is tied with authoritarian Belarus regarding the percentage of military personnel in the total population: 3.8%. (*Figure 74*) By contrast, military personnel make up about 2% of the populations in Azerbaijan and Russia. Nonetheless, Azerbaijan, with its higher population, has a military population of 82,000 compared to Armenia's 49,000. *Figure 75*

Armenia may have a current military advantage over Azerbaijan, but demographic trends favor the Azeris – a situation that may alter the strategic balance over the long term. Population growth in Armenia has been negative since 1990. While no longer as low as the -2.5% growth of the early 1990s, Armenia continues to lose population annually – a serious situation for a country of only 3 million. By contrast, Azerbaijan, with its population of 8.3 million, continues to have positive population growth of between .75% and 1.5%. *Figure 76*

Figure 77 shows the regional patterns of out-migration. Every region of the country is losing population, with Yerevan leading the decline. The marzes of Shirak and Lori, the regions with the second and third largest cities of Gyumri and Vanadzor respectively, are next behind Yerevan in out-migration. This pattern is resulting in a disproportionate decline in Armenia's urban population. A larger proportion of the population is rural than at any time since 1989. (*Figure 78*) Out migration is a phenomenon throughout the Caucasus. In 2005, around 100,000 were leaving both Armenia and Azerbaijan. For Armenia, this is an improvement from 1995, when as many as half a million people left the country. (*Figure 79*) Finally, *Figure 80* uses population pyramid graphics to compare Armenia's population in 2006 to where it was fifteen years earlier, the year Armenia declared independence in 1991. The only age cohort to expand is over 65 years of age. Several age cohorts have declined dramatically, including the 25-40 year olds of 2006 who were 10-25 in 1991. Correspondingly, the numbers of the under 10 cohort have declined as well.



Appendix

Monitoring Country Progress Primary Indicators

I. Economic Reforms Index

The economic reform index is derived from the European Bank for Reconstruction and Development's annual *Transition Report*, from the Office of the Chief Economist. Nine indicators are included: (1) small-scale privatization; (2) price liberalization; (3) trade & foreign exchange reforms; (4) large-scale privatization; (5) governance & enterprise restructuring; (6) competition policy; (7) banking reform; (8) non-bank financial institutional reform; and (9) infrastructure reforms (which is itself an index of reform progress in 5 infrastructure sectors: telecommunications; railways; roads; electric power; and water & waste water). Scoring ranges from "1" to "5", where a "5" represents the most advanced standards worldwide (i.e., the standards of the advanced industrialized economies). Elaboration of the criteria for what defines the scoring (e.g., what constitutes a "2" in large-scale privatization) is provided in *Appendix 1* of the *Monitoring Country Progress in E&E*, No. 10 (August 2006) or in the EBRD report. The MCP report is available on E&E/USAID's internal and external websites.

II. Democratic Reforms Index

Freedom House, in its annual *Nations in Transit*, measures progress in the transition region in seven democratic reform areas: (1) electoral process; (2) civil society; (3) independent media; (4) national democratic governance; (5) local democratic governance; (6) rule of law; and (7) anti-corruption. Freedom House rates the progress on a seven-category scale where "1" represents the most advanced standards worldwide. In the Monitoring Country Progress system, these scores are reversed and re-scaled to range from "1" to "5", with "5" being the most advanced. Elaboration of the criteria for what defines the scoring is provided in *Appendix 1* of the *Monitoring Country Progress in E&E*, No. 10 (August 2006).

III. Economic Performance Index

The economic performance index includes: (1) private sector share of GDP; (2) share of employment in micro, small, and medium enterprises; (3) export share of GDP & composition of exports (the average of the ratio of exports to GDP, plus manufactured exports to total exports, and high technology exports as a percent of total exports); (4) foreign direct investment per capita, cumulative since 1989; (5) the most recent 5 year average annual economic growth rate; (6) macro stability (the average of 3 year inflation,

external debt as % of GDP, current account balance as % of GDP, and fiscal balance as % of GDP); (7) uneven development among groups of people across ethnic or religious lines; (8) long term unemployment as % of total employment; and (9) services as % of GDP. These indicators are drawn from the World Bank *World Development Indicators*, EBRD *Transition Report*, IFC & World Bank, *Micro Small and Medium Database*, Fund for Peace's *Failed States Index* and UNECE, *Statistical Division Database*. Data are converted to a "1" to "5" scale with "5" representing the most advanced standards worldwide. The five year economic growth rate is given twice the weight of each of the other indicators.

IV. Human Capital Index

Seven indicators go into the human capital index: (1) per capita income (purchasing power parity); (2) education gaps (the % of vulnerable education indicators to total education indicators); (3) public expenditures on education and health as % of GDP; (4) life expectancy; (5) under five mortality rate; (6) TB incidences per 100,000; and (7) vulnerable populations (the proportion of children and elderly in poverty at \$2.15 per day, and the rate of institutionalized children).

The education gap indicator is drawn from Murphy, Petric, and Sprout, *Education in Eastern Europe & Eurasia*, Working Paper No 2., E&E/USAID (October 2005) and updated. It consists of twelve indicators: (1) public spending on education as % of GDP; (2) pre-primary school enrollment; (3) primary school enrollment; (4) secondary enrollment; (5) tertiary enrollment; (6) test results from the Program for International Student Assessment or PISA; (7) country regional disparities in PISA scores; (8) the extent to which education infrastructure hinders learning, from the PISA survey; (9) test results from the Trends in International Mathematics and Sciences Study or TIMSS; (10) test results from the International Adult Literacy Survey or IALS; (11) test results from the Progress in International Reading Literacy Study or PIRLS; and (12) a proxy for brain drain (% change in research and development personnel per million inhabitants). The education gap indicator is given twice the weight of each of the other indicators.

The other indicators from the human capital index are drawn from World Bank, *World Development Indicators*; UNICEF, *TransMonee Database*; World Health, *Organization European Health For All Database*; and World Bank, *Growth, Poverty, and Inequality in Eastern Europe and the Former Soviet Union* (2005). The raw indicators are converted to a "1" to "5" scale with "5" representing the most advanced standards worldwide.

V. Peace and Security Index

This is intended to be the beginning of the creation of a Peace and Security index. Five indicators are proposed, focused on five areas: (1) counter-terrorism; (2) counter-narcotics; (3) transnational crime; (4) conflict mitigation; and (5) political engagement. The counter-terrorism indicator includes (a) a terrorism severity index (a combination of total incidents of terrorism and total victims of terrorism from 2006 through March 2007, from State Department's *Country Reports on Terrorism*; (b) Fund for Peace's *Security Apparatus Operates as a State with a State*; and (c) Fund for Peace's *Deterioration of Public Services*. The counter-narcotics indicator includes the production and seizure of illicit narcotics, including opiates, cocaine, cannabis, and amphetamines from UNODC. The transnational crime indicator includes: (a) trafficking in persons; (b) piracy of intellectual property rights; (c) money laundering (all State Department sources); and (d) Fund for Peace's *Criminalization of the State*. The conflict mitigation indicator includes: (a) all twelve indicators from the Fund for Peace's *Failed States Index*; (b) conflict history (from Marshall and Gurr, University of Maryland); and (c) bad neighborhood, as measured by the conflict history of a country's immediate neighborhood. The conflict history indicator attempts to measure the number, nature, magnitude and intensity of conflicts in a country's recent past through analysis of deaths and injuries, duration, damage to business, environment, health and societal well being and destruction of infrastructure and resources. The more intense the conflict, the lower the 1-5 score.

The political engagement indicator includes: (a) the number of memberships in international organizations; (b) the number of treaties ratified, and (c) a country's peacekeeping forces as a % of population and as % of GDP as an average, all drawn from A.T. Kearney's *Globalization Index*.

The Fund for Peace's *Failed States Index* includes: (1) demographic pressures; (2) refugees and IDPs; (3) group grievance or group paranoia (the degree to which ethnic or religious groups suffer injustices, atrocities, repression, and scapegoating); (4) chronic and sustained human flight; (5) uneven economic development along group lines (or group-based inequalities in education, jobs, and economic status, group-based impoverishments, and the rise of communal nationalism based on group-based inequalities); (6) sharp and/or severe economic decline; (7) criminalization and/or delegitimization of the state (including corruption or profiteering by ruling elites, and growth of crime syndicates linked to ruling elites); (8) progressive deterioration of public services; (9) suspension or arbitrary application of the rule of law and widespread violation of human rights; (10) security apparatus operates as a state within a state; (11) rise of factionalized elites (or the fragmentation of ruling elites and state institutions along group lines and the use of nationalistic political rhetoric by ruling elites); and (12) intervention of other states or external political actors.

Conversion scales for economic performance, human capital, and peace & security

The indices are derived by converting "raw scores" (such as percentages and growth rates) into scores which range from "1" to "5":

Economic performance.

(1) ***Private sector share in GDP*** (EBRD *Transition Report*): “0.5”: 30% of GDP or less; “1.0”: >30-40%; “1.5”: >40 to 45%; “2.0”: >45 to 50%; “2.5”: >50 to 55%; “3.0”: >55 to 60%; “3.5”: >60 to 65%; “4.0”: >65 to 70%; “4.5”: >70 to 75%; “5.0”: 80% or greater.

(2) ***Employment in MSME sector as % of total employment*** (IFC, MSME Database). “0.5”: 25% or less; “1.0”: >25-35%; “1.5”: >35-40%; “2.0”: >40-45%; “2.5”: >45-50%; “3.0”: >50-55%; “3.5”: >55-60%; “4.0”: >60-65%; “4.5”: >65-75%; “5.0”: greater than 75% of total employment.

(3) ***Export Sector*** (the average of the ratio of exports to GDP double weighted times, plus manufactured exports to total exports, plus high-tech exports as % of total exports; calculated from World Bank, *World Development Indicators*).

(3a) ***Export share***: “0.5”: 25% or less; “1.0”: greater than 25% to 37%; “1.5”: >37-43%; “2.0”: >43-46%; “2.5”: >46-51%; “3.0”: >51-58%; “3.5”: >58-61%; “4.0”: >61-66%; “4.5”: >66-77%; “5.0”: greater than 77%.

(3b) ***Manufactured exports to total exports***: “0.5”: 25% or less; “1.0”: greater than 25% to 35%; “1.5”: >35-40%; “2.0”: >40-45%; “2.5”: >45-50%; “3.0”: >50-55%; “3.5”: >55-65%; “4.0”: >65-70%; “4.5”: >70-75%; “5.0”: greater than 75%.

(3c) ***High-tech exports as % of exports***: “1.0”: >1%; “2.0”: 1->3%; “3.0”: 3->5%; “4.0”: 5->10%; “5.0”: 10% or greater.

(4) ***Foreign direct investment*** (per capita, cumulative, net in \$; EBRD *Transition Report*). “0.5”: \$100 or less; “1.0”: >\$100-200; “1.5”: >\$200-400; “2.0”: >\$400-600; “2.5”: >\$600-800; “3.0”: >\$800-1,000; “3.5”: >\$1,000-1,200; “4.0”: >\$1,200-1,500; “4.5”: >\$1,500-2,000; “5.0”: >\$2,000.

(5) ***GDP Growth, 5 year average*** (EBRD; weighed 2x; *Transition Report*). “0.5”: 0% or less; “1.0”: greater than 0% to 2.0%; “1.5”: >2.0-2.5%; “2.0”: >2.5-3.0%; “2.5”: >3.0-4.0%; “3.0”: >4.0-5.0%; “3.5”: >5.0-6.0%; “4.0”: >6.0-8.0%; “4.5”: >8.0-10.0%; “5.0”: greater than 10.0%.

(6) Macro Stability

(6a) ***3 year average annual inflation rate*** (EBRD *Transition Report*). “0.5”: >30%; “1.0”: >26-30%; “1.5”: >22-26%; “2.0”: >18-22%; “2.5”: >14-18%; “3.0”: >10-14%; “3.5”: >7-10%; “4.0”: >5-7%; “4.5”: >3-5%; “5.0”: 3% inflation rate or less.

(6b) ***external debt as % of GDP*** (EBRD, *Transition Report*). “0.5”: >95%; “1.0”: >85% to 95%; “1.5”: >75-85%; “2.0”: >65-75%; “2.5”: >55-65%; “3.0”: >45-55%; “3.5”: >35-45%; “4.0”: >25-35%; “4.5”: >10-25%; “5.0”: 10% or less.

(6c) *fiscal balance as % of GDP* (World Bank, *World Development Indicators*). “0.5”: -7% or less; “1.0”: < -5.0% to -7.0%; “1.5”: <-3.0 to -5.0%; “2.0”: <-1.0 to -3.0%; “2.5”: <1.0 to -1.0%; “3.0”: 1.0 to < 2.0%; “3.5”: 2.0 to < 3.0%; “4.0”: 3.0 to < 4.0%; “4.5”: 4.0 to < 5.0%; “5.0”: 5.0% or greater.

(6d) *current account balance as % of GDP* (World Bank, *World Development Indicators*). “1.0”: less than -9%; “2.0”: <-6.0 to -9.0%; “3.0”: <-3.0 to -6.0%; “4.0”: <0.0 to -3.0%; “5.0”: greater than 0%.

(7) *uneven development* (Fund for Peace, *Failed States Index*). “0.5”: 8.6 to 10; “1.0”: 7.7-8.5; “1.5”: 7.1 to 8.4; “2.0”: 6.6 to 7.0; “2.5”: 6.2 to 6.5; “3.0”: 5.7 to 6.1; “3.5”: 4.9 to 5.6; “4.0”: 4.0 to 4.8; “4.5”: 3.1 to 3.9; “5.0”: 0 to 3.0.

(8) *long term unemployment as % of total employment* (UNECE, *Statistical Division Database*). “0.5”: >14.0%; “1.0”: >12.0 to 14.0%; “1.5”: >10.0 to 12.0%; “2.0”: >8.0 to 10.0%; “2.5”: >7.0 to 8.0%; “3.0”: >6.0 to 7.0%; “3.5”: >5.0 to 6.0%; “4.0”: >4.0 to 5.0%; “4.5”: >3.0 to 4.0%; “5.0” <=3.0%.

(9) *services as % GDP* (World Bank, *World Development Indicators*). “1.0”: less than 45%; “2.0”: >45 to 55%; “3.0”: >55 to 60%; “4.0”: >60 to 70%; “5.0”: greater than 70%.

Human capital.

(1) *per capita income* (gross national income, purchasing power parity, World Bank, *World Development Indicators*). “0.5”: \$1,000 or less; “1.0”: >\$1,000 to \$3,000; “1.5”: >\$3,000-5,000; “2.0”: >\$5,000-7,000; “2.5” >\$7,000-9,000; “3.0”: >\$9,000-11,000; “3.5”: >\$11,000-13,000; “4.0”: >\$13,000-15,000; “4.5”: >\$15,000-17,000; “5.0”: >\$17,000 per capita.

(2) *education gaps* (the % of vulnerable education indicators to total education indicators). “0.5”: 80% or greater of education indicators with vulnerable outcomes; “1.0”: 70 to 79%; “1.5”: 60 to 69%; “2.0”: 50 to 59; “2.5”: 40 to 49%; “3.0”: 30 to 39%; “3.5”: >20 to 29%; “4.0”: >13 to 19%; “4.5”: >6 to 12%; “5.0”: 5% or less.

(3) *public expenditure on education and health as % of GDP* (average, World Bank, *World Development Indicators*). “0.5”: 2% or less; “1.0”: >2% to 2.5%; “1.5”: >2.5-3%; “2.0”: >3-3.5%; “2.5”: >3.5-4%; “3.0”: >4-4.5%; “3.5”: >4.5-5%; “4.0”: >5-5.5%; “4.5”: >5.5-6%; “5.0”: greater than 6% of GDP.

(4) *life expectancy* (years, World Bank, *World Development Indicators*). 0.5: less than 64 years; 1: 64 years to <65.5; 1.5: 65.5 to <67 years; 2: 67 to <68.5 years; 2.5: 68.5 to <70 years; 3: 70 to < 71.5 years; 3.5: 71.5 to <73 years; 4: 73 to < 74.5 years; 4.5: 74.5 to < 76 years; 5: 76 years or greater.

(5) **under five years mortality rate** (per thousand live births, World Bank, *World Development Indicators*). 0.5: greater than 93 deaths; 1: <82 to 93 deaths; 1.5: <71-82 deaths; 2: <60-71 deaths; 2.5: <49-60 deaths; 3: <38-49 deaths; 3.5: <27-38 deaths; 4: <16-27 deaths; 4.5: <5-16 deaths; 5: 5 deaths or less.

(6) **TB incidences per 100,000** (World Health Organization, *European Health For All Database*) “0.5”: greater than 150 incidences; “1.0”: >100 to 150; “1.5”: >75 to 100; “2.0”: >59 to 75; “2.5”: >45 to 59; “3.0”: >35 to 45; “3.5”: >25 to 35; “4.0”: >15 to 25; “4.5”: >11 to 15; “5.0”: 11 incidences or less.

(7) **Vulnerable populations** (the proportion of children and elderly in poverty at \$2.15 per day; World Bank, *Growth, Poverty, and Inequality: Eastern Europe and the Former Soviet Union* (2005) and UNICEF, *TransMONEE Database*; Countries are down-graded a “1” on the “1” to “5” scale on the poverty rates of the vulnerable population if the countries also have a high rate of institutionalized children (and if the score is not already a “1”)) “0.5”: greater than 60%; “1.0”: >30 to 60%; “2.0”: >19 to 30%; “3.0”: >10 to 19%; “4.0”: >3 to 10%; “5.0”: 3% or less.

Peace and Security

(1) Counter-Terrorism

(1a) **Terrorism Severity Index** (average of total incidents and total victims; State Department, *Country Reports on Terrorism* (2006 & 2007)): “1.0”: >500; “2.0”: >100 to 500; “3.0”: >40 to 100; “3.5”: >9 to 40; “4.0”: >3 to 9; “5.0”: 3 or less.

(1b) **Deterioration of Public Services** (Fund for Peace, *Failed States Index*): “0.5”: 8.6 to 10; “1.0”: 7.7-8.5; “1.5”: 7.1 to 8.5; “2.0”: 6.6 to 7; “3.0”: 5.7 to 6.1; “3.5”: 4.9 to 5.6; “4.0”: 4 to 4.8; “4.5”: 3.1 to 3.9; “5.0”: 0 to 3.0.

(1c) **State within a State** (Fund for Peace, *Failed States Index*): “0.5”: 8.6 to 10; “1.0”: 7.7-8.5; “1.5”: 7.1 to 8.5; “2.0”: 6.6 to 7; “3.0”: 5.7 to 6.1; “3.5”: 4.9 to 5.6; “4.0”: 4 to 4.8; “4.5”: 3.1 to 3.9; “5.0”: 0 to 3.0.

(2) Counter-Narcotics

(2a) **Seizure** (transit of opiates, cocaine, cannabis or amphetamines; UNODC, *2006 World Drug Report*): “1”: none or very low; “2”: low; “3”: medium; “4”: high; “5”: very high.

(2b) **Production** (production of opiates, cocaine, cannabis and/or amphetamines; UNODC, *2006 World Drug Report*). “1”: none or very low; “2”: low; “3”: medium; “4”: high; “5”: very high.

(3) Transnational Crime

(3a) **Trafficking in Person** (tiers from 1, 2, 2w and 3 are determined in the *Trafficking in Persons Report* (June 2006)): “1.0”: tier 3; “2.0”: tier 2w; “3.0”: tier 2; “5.0”: tier 1.

(3b) **Piracy of Intellectual Property Rights** (level of priority ranges from none, low or high; United States Trade Representative, *Special 301 Report, Intellectual Property*): “1.0”: high priority; “3.0”: low priority; “5.0”: no priority.

(3c) **Money Laundering** (major money laundering countries determined in State/INL, *International Narcotics Control Strategy Report* (March 2007)): “1.0”: yes; “5.0”: no.

(3d) **Criminalization of State** (Fund for Peace, *Failed States Index*): “0.5”: 8.6 to 10; “1.0”: 7.7-8.5; “1.5”: 7.1 to 8.5; “2.0”: 6.6 to 7; “3.0”: 5.7 to 6.1; “3.5”: 4.9 to 5.6; “4.0”: 4 to 4.8; “4.5”: 3.1 to 3.9; “5.0”: 0 to 3.0.

(4) Conflict Mitigation

(4a) **Failed States Index** (Fund for Peace, *Failed States Index*): “0.5”: 8.6 to 10; “1.0”: 7.7-8.5; “1.5”: 7.1 to 8.5; “2.0”: 6.6 to 7; “3.0”: 5.7 to 6.1; “3.5”: 4.9 to 5.6; “4.0”: 4 to 4.8; “4.5”: 3.1 to 3.9; “5.0”: 0 to 3.0.

(4b) **Bad Neighborhood**: the average of the conflict history score of country neighbors.

(4c) **Conflict History** (*Peace and Conflict, A Global Survey of Armed Conflicts, Self Determination Movements and Democracy* and Marshall, *Major Episodes of Political Violence 1946-2005*):

1.0: ongoing conflict over the last 0 to 3 years; 2.0: repressed conflict over the last 3 to 5 years; 3.0: repressed conflict over the last 5 to 10 years; 4.0: suspended conflict in the last 10 to 15 years; 5.0: no major conflict in the last 15 years

(5) Political Engagement

(5a) **Member of International Organizations** (Foreign Policy & A.T. Kearney, *Globalization Index 2007*): “1.0”: 1 to 4; “2.0”: 5 to 7; “3.0”: 8 to 10; “4.0”: 11 to 13; “5.0”: 14 to 15.

(5b) **Treaties Ratified** (Policy & A.T. Kearney, *Globalization Index 2007*): “1.0”: 1 to 2; “2.0”: 3 to 4; “3.0”: 5 to 6; “4.0”: 7 to 8; “5.0”: 9 to 10.

(5c) **Peacekeeping** (as % of Population & as % of GDP; Policy & A.T. Kearney, *Globalization Index 2007*): As % of population: “1.0”: 0 to .00009%; “2.0”: .0001 to .000249%; “3.0”: .00025 to .00099%; “4.0”: .001 to .0039%; “5.0”: .004% or greater.

As % of GDP: “1.0”: 0 to .00049%; “2.0”: .0005 to .00099%; “3.0”: .001 to .0049%; “4.0”: .005 to .0099%; “5.0”: .010% or greater.



USAID
FROM THE AMERICAN PEOPLE

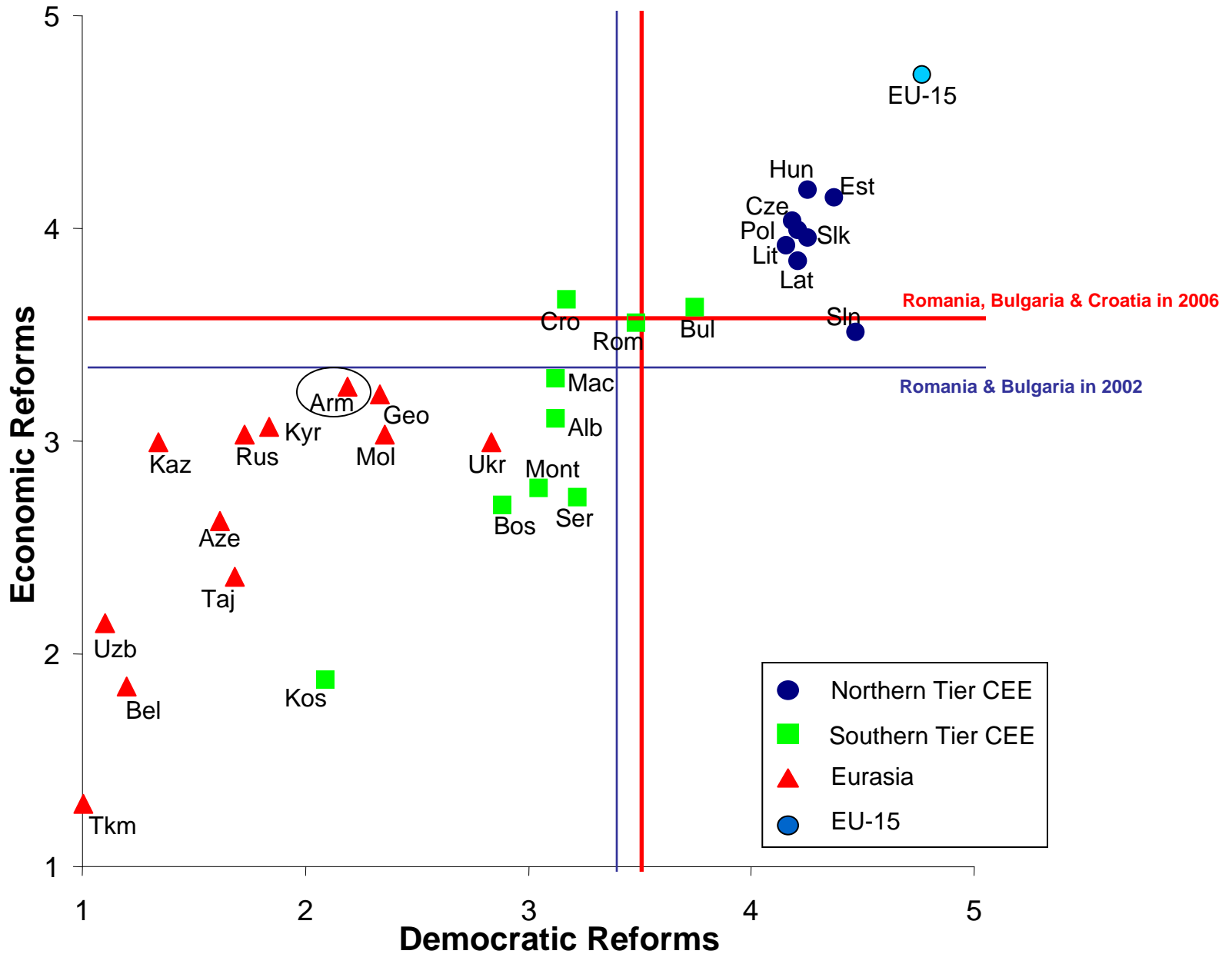
Figures 1 – 80 – Companion Presentation for “Gap Analysis of Armenia”

Analytical Team, Program Office
Bureau on Europe and Eurasia

May 13, 2008

Economic and Democratic Reforms in 2007

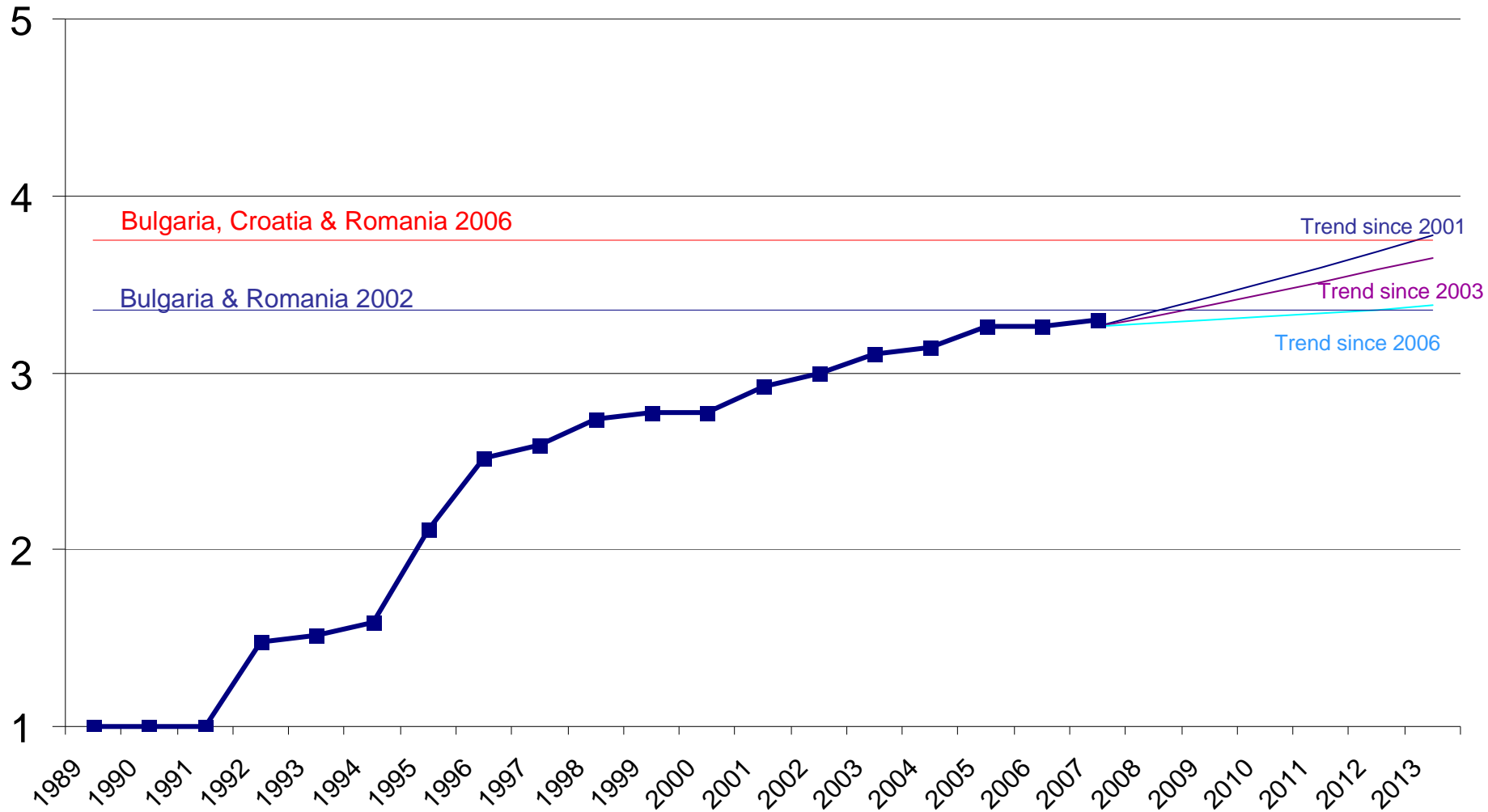
Figure 1



Ratings are based on a 1 to 5 scale, with 5 representing most advanced. Freedom House, *Nations in Transit 2007* (2007) and *Freedom in the World 2008* (2008); EBRD, *Transition Report 2007* (November 2007)

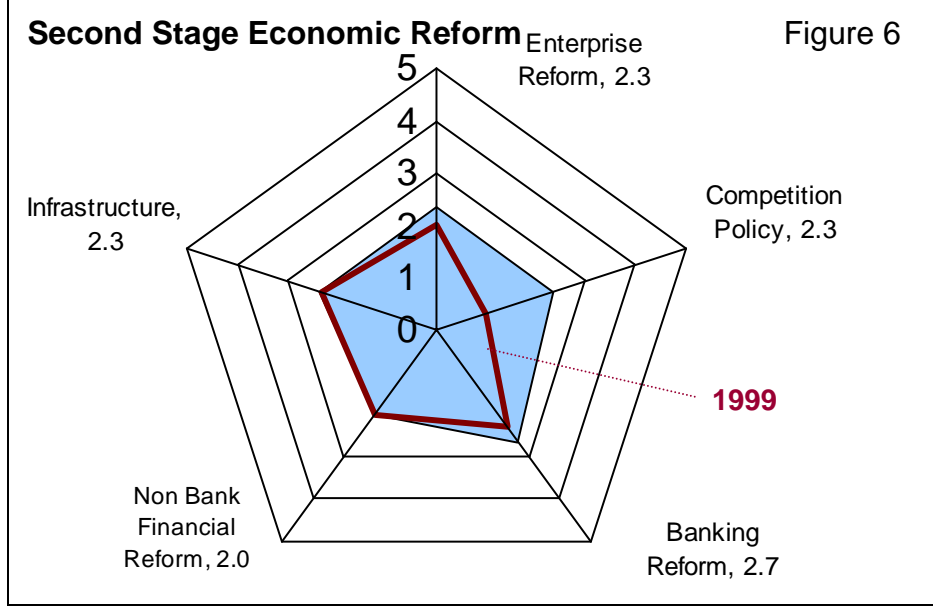
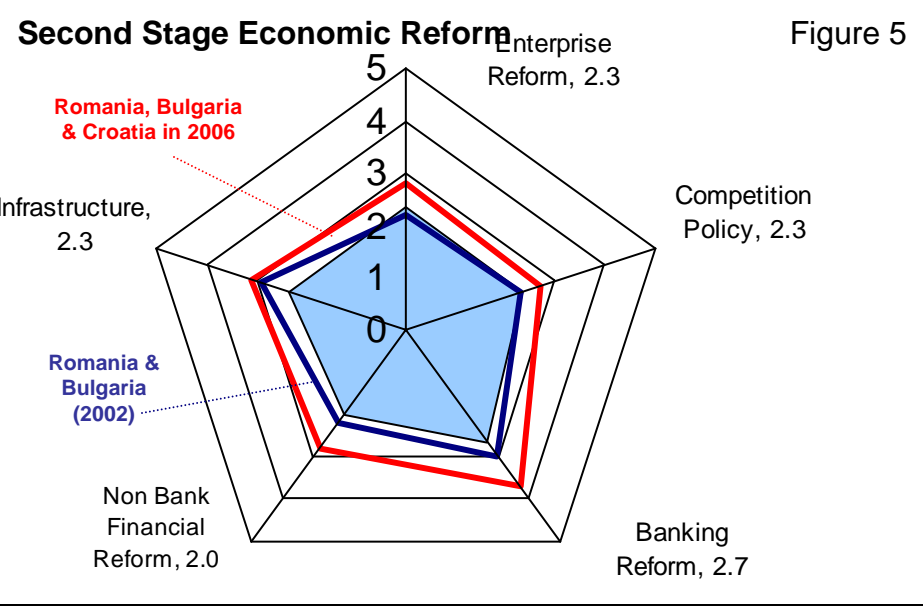
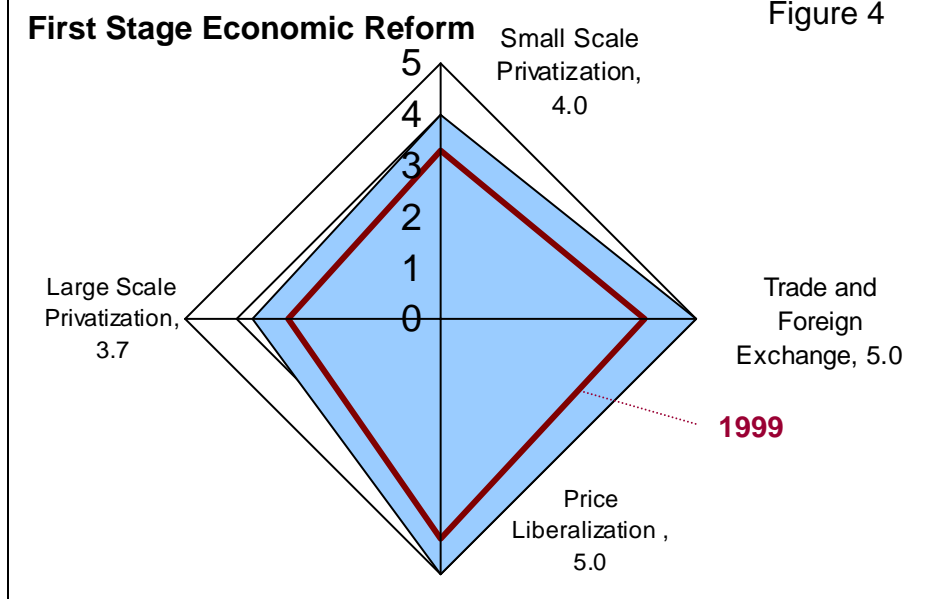
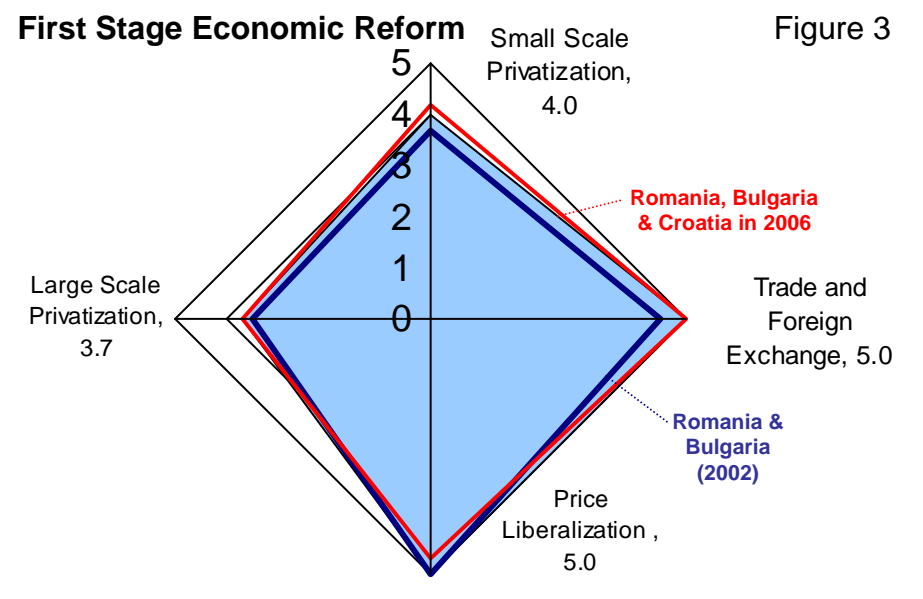
Economic Reforms in Armenia

Figure 2



Economic Reform in Armenia in 2007

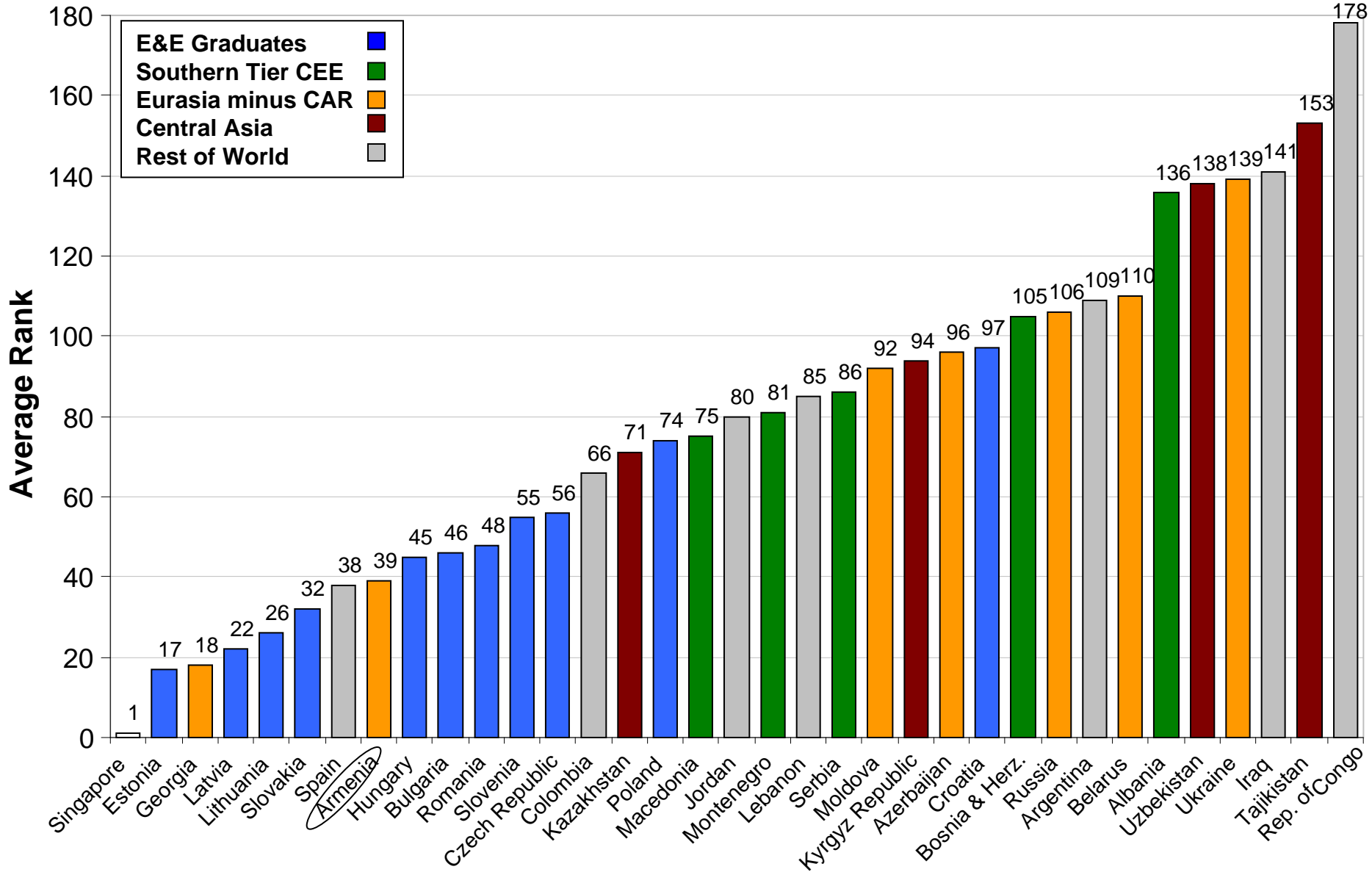
(versus Romania & Bulgaria in 2002, Romania, Bulgaria & Croatia in 2006 and Armenia in 1999)



Ratings are based on a scale from 1 to 5, with 5 representing the best score. USAID, *Monitoring Country Progress in CEE & Eurasia #11* (2008 forthcoming) drawing from EBRD, *Transition Report 2007* (November 2007).

Figure 7

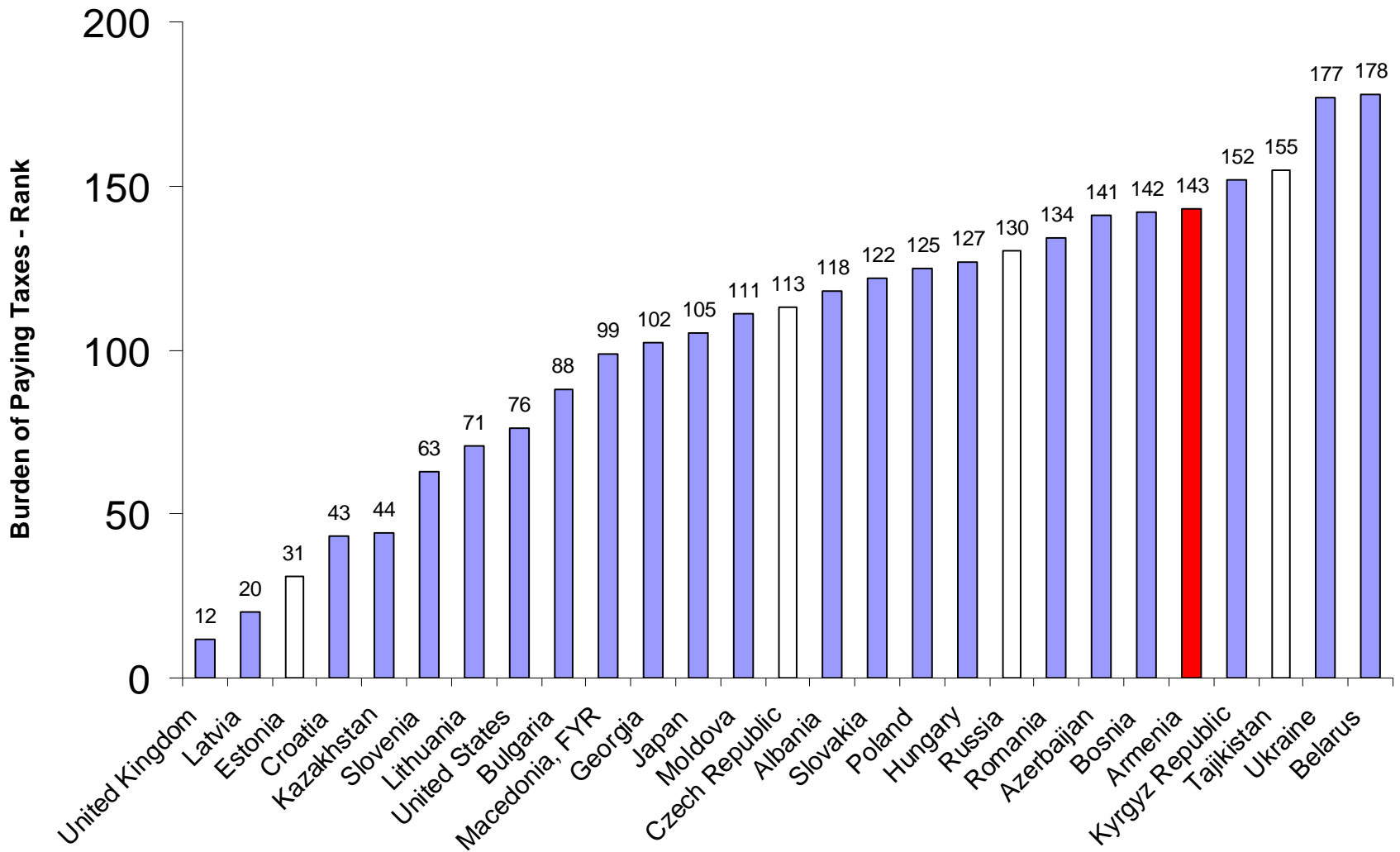
Business Environment in 2007



World Bank, *Doing Business in 2008* (2007). Worldwide scores range from 1 to 178 and include 10 topics: starting a business, dealing with licenses, hiring and firing workers, registering a property, getting credit, protecting investors, paying taxes, trading across borders, enforcing contracts, closing a business.

Figure 8

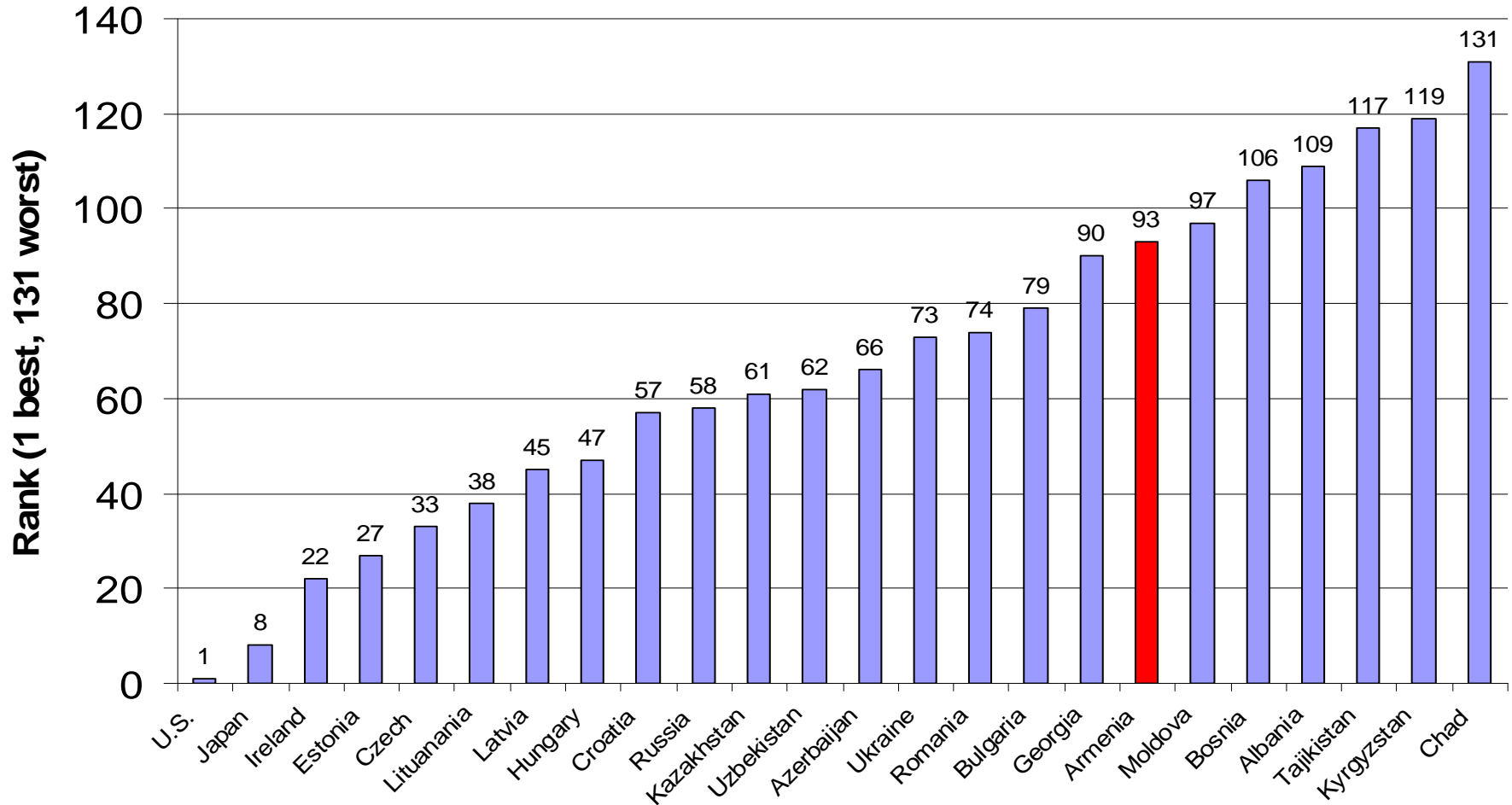
Paying Taxes in 2007



World Bank Doing Business 2008 (2007), rankings:1 is best, 178 is worst. Ranking consists of the following components: number of tax payments per year, time to prepare, file and pay the corporate income tax, the value added tax and social security contributions (in hours per year), amount of taxes on profits paid by the business as a percentage of commercial profits, amount of taxes and mandatory contributions on labor paid by the business as a percentage of commercial profits.

Figure 9

Competitiveness Rank



World Economic Forum Global Competitiveness Report 2008 (2007). The best ranking is one and the worst ranking is 131. The Report employs a methodology that combines publicly available data with survey data from the WEF Executive Opinion Survey. The indicators (123) are organized into 12 groupings of indicators called 'pillars' (e.g., institutions, macroeconomic stability, health and primary education, higher education and training, financial market sophistication, technological readiness, business sophistication and innovation).

Figure 10

Corruption Perceptions in 2007

(Transparency International)

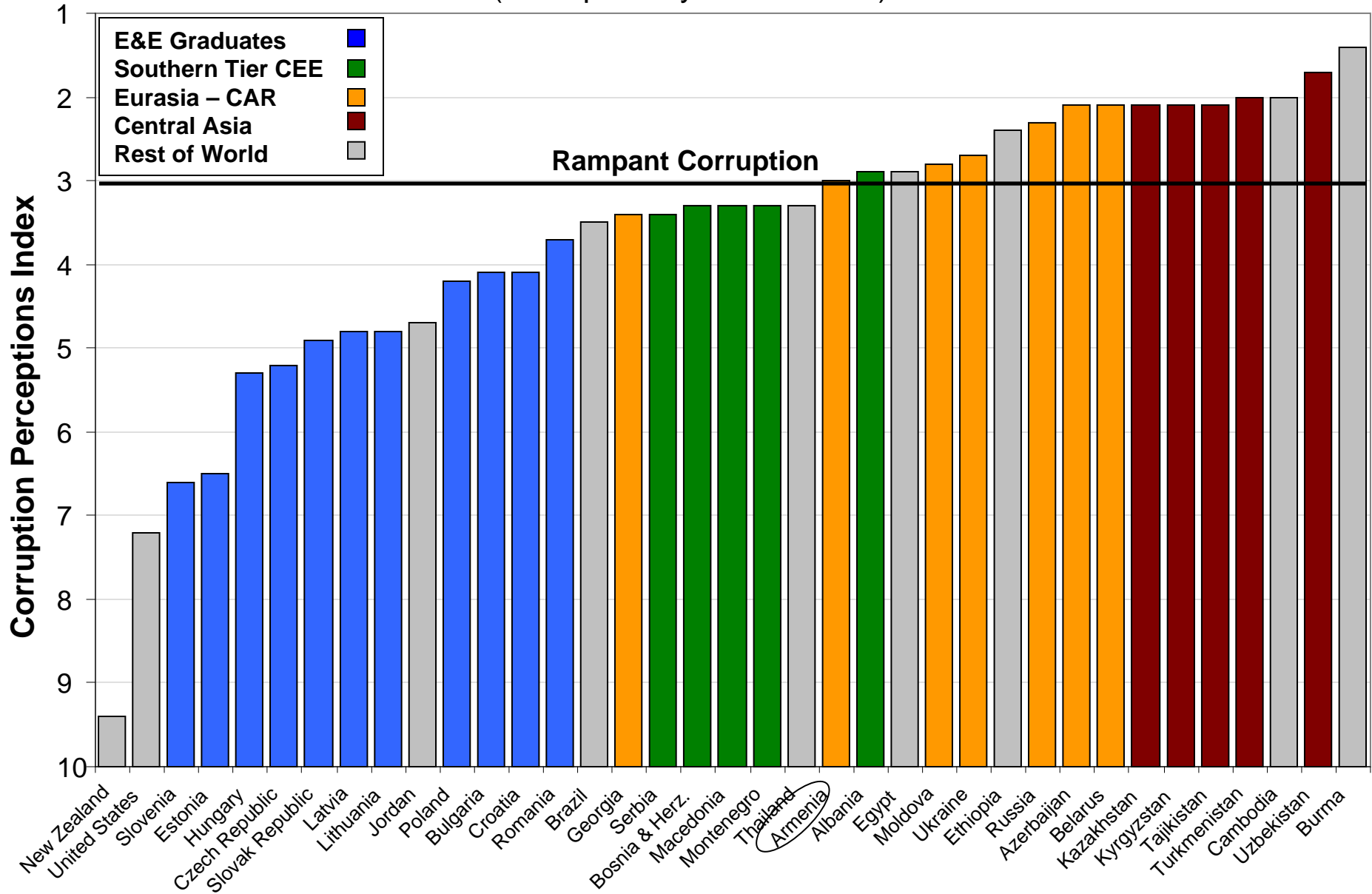
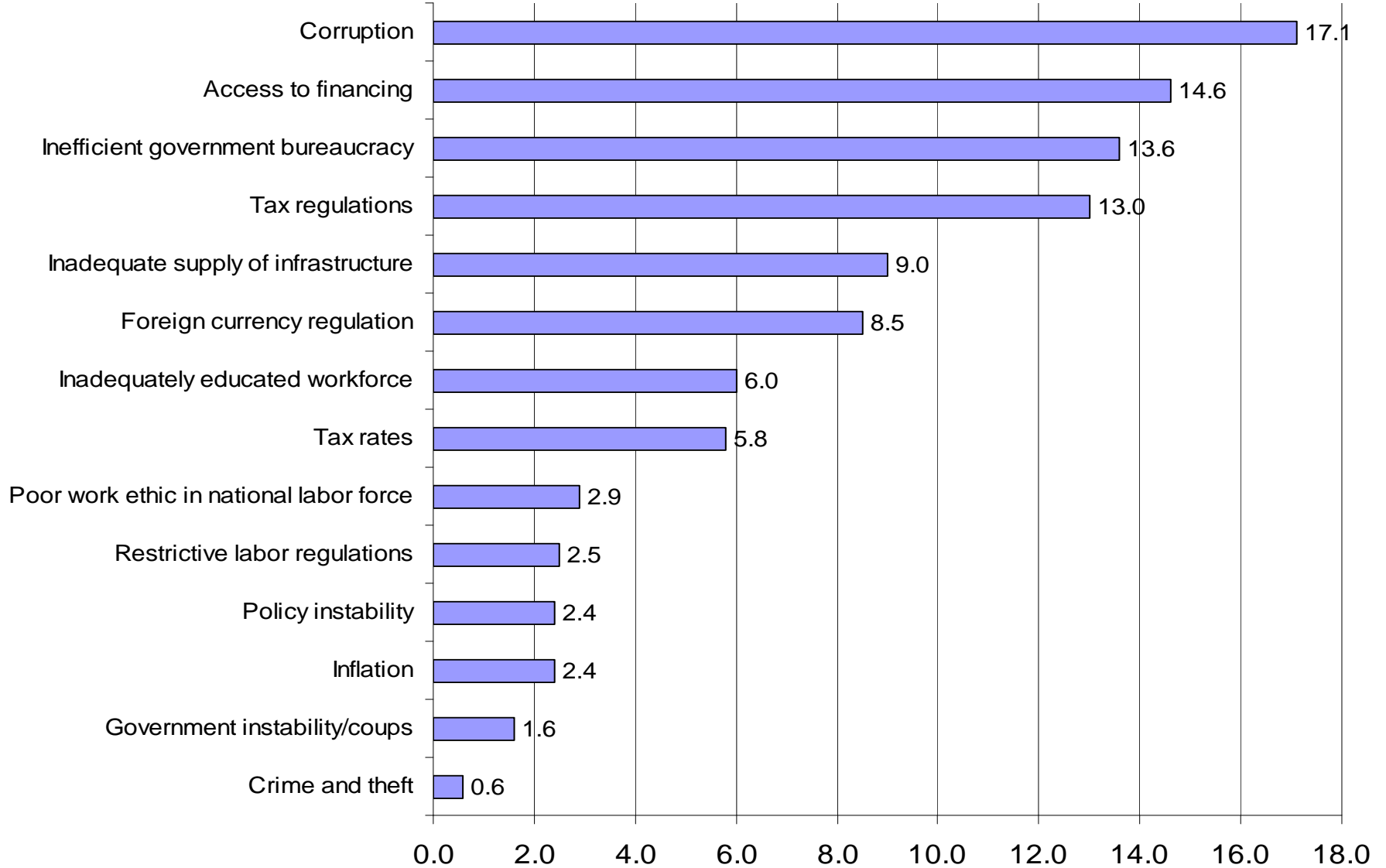


Figure 11

Competitiveness:

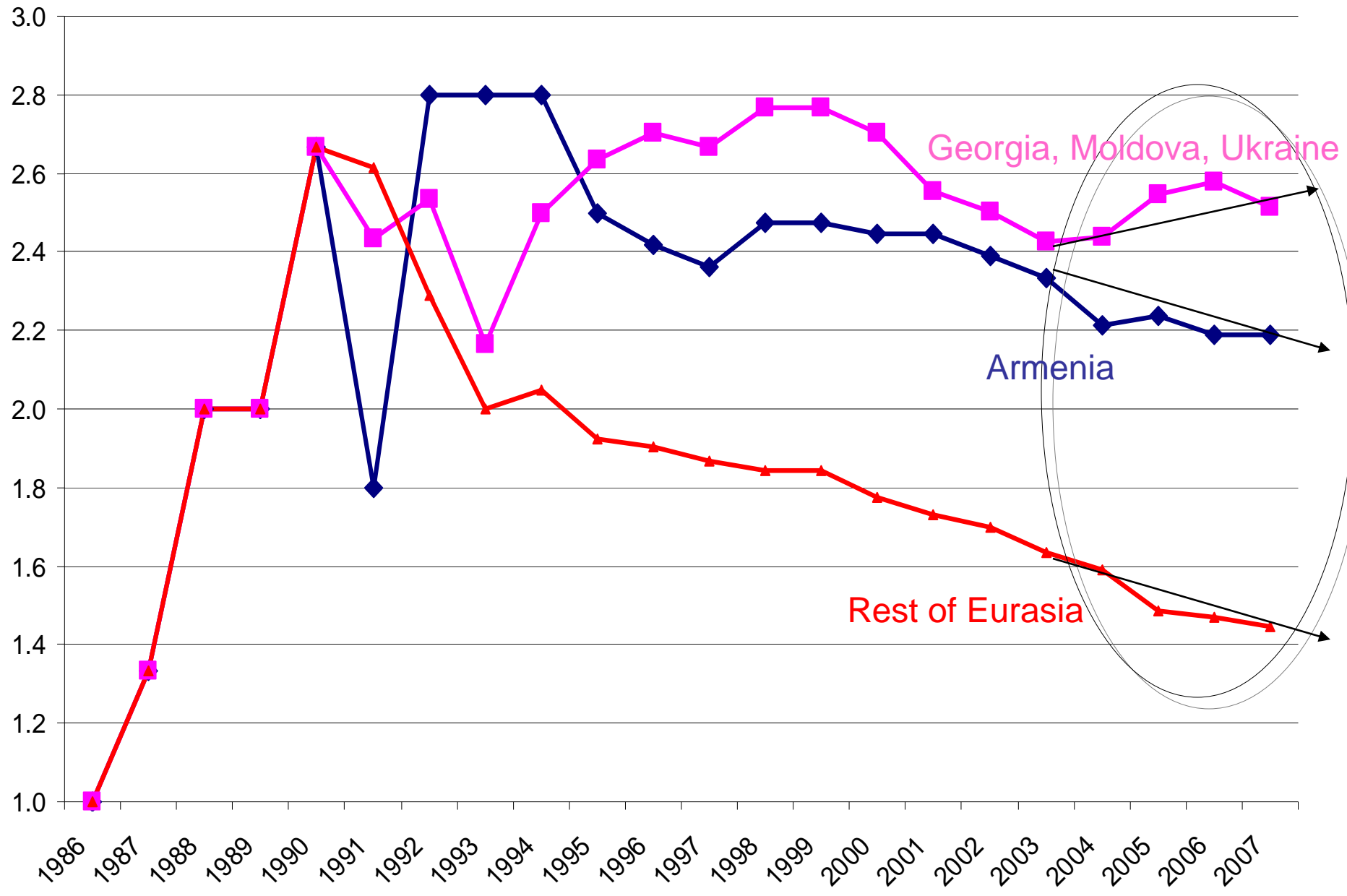
Most Problematic Factors for Doing Business in Armenia



World Economic Forum Global Competitiveness Report 2007-08 (WEF-GCR). The WEF Executive Survey reports in the WEF-GCR the percent of all businesses surveyed that indicate a specific problem as 'most problematic.'

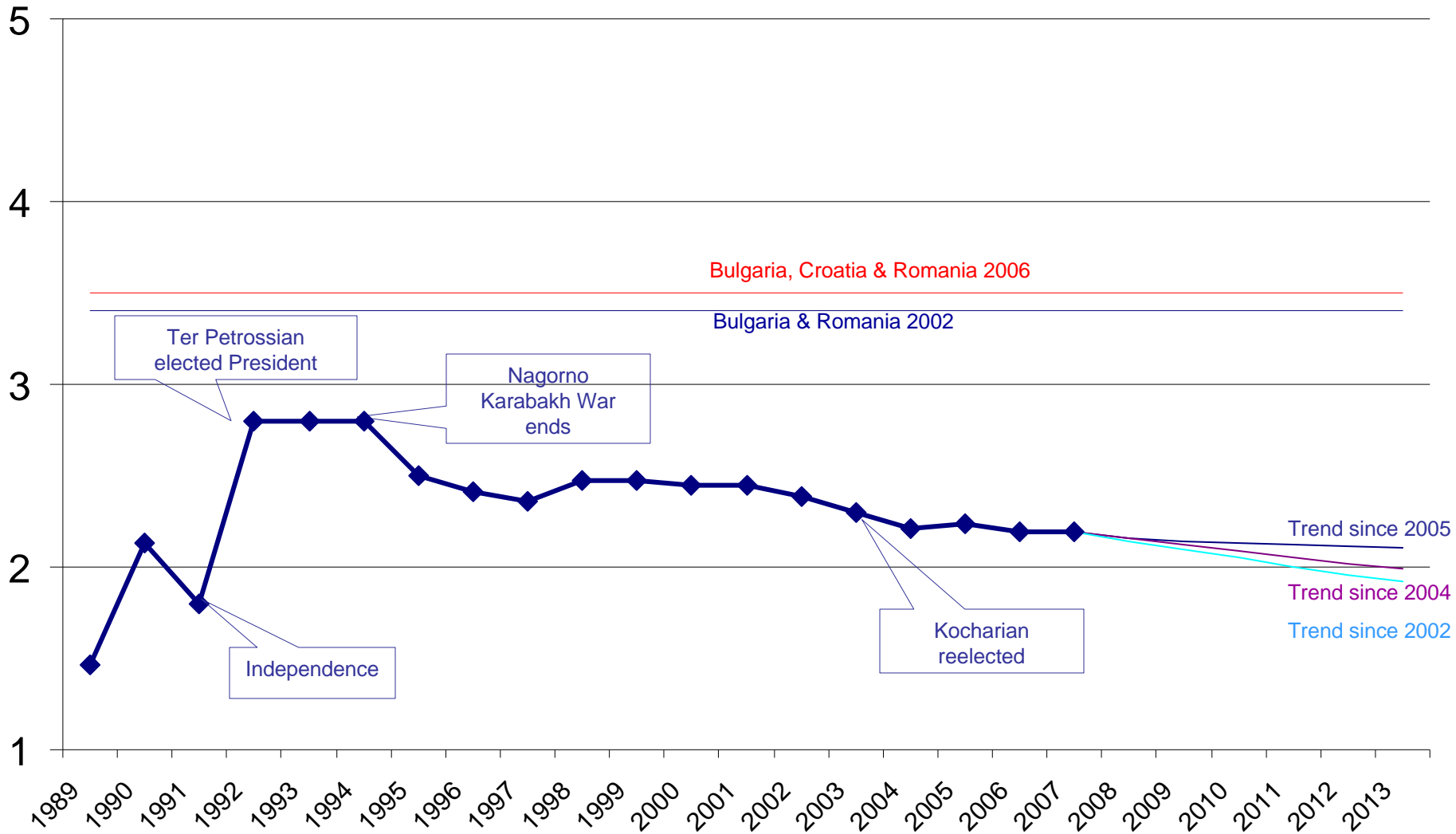
Democratic Reform Trends

Figure 12



Ratings are based on a 1 to 5 scale, with 5 representing most advanced. Freedom House, *Nations in Transit 2007* (2007) and *Freedom in the World 2008* (2008)

Democratic Reforms in Armenia



Ratings are based on a 1 to 5 scale, with 5 representing most advanced. Freedom House, *Nations in Transit 2007* (2007) and *Freedom in the World 2008* (2008)

Democratic Reforms in Armenia in 2006

Figure 14

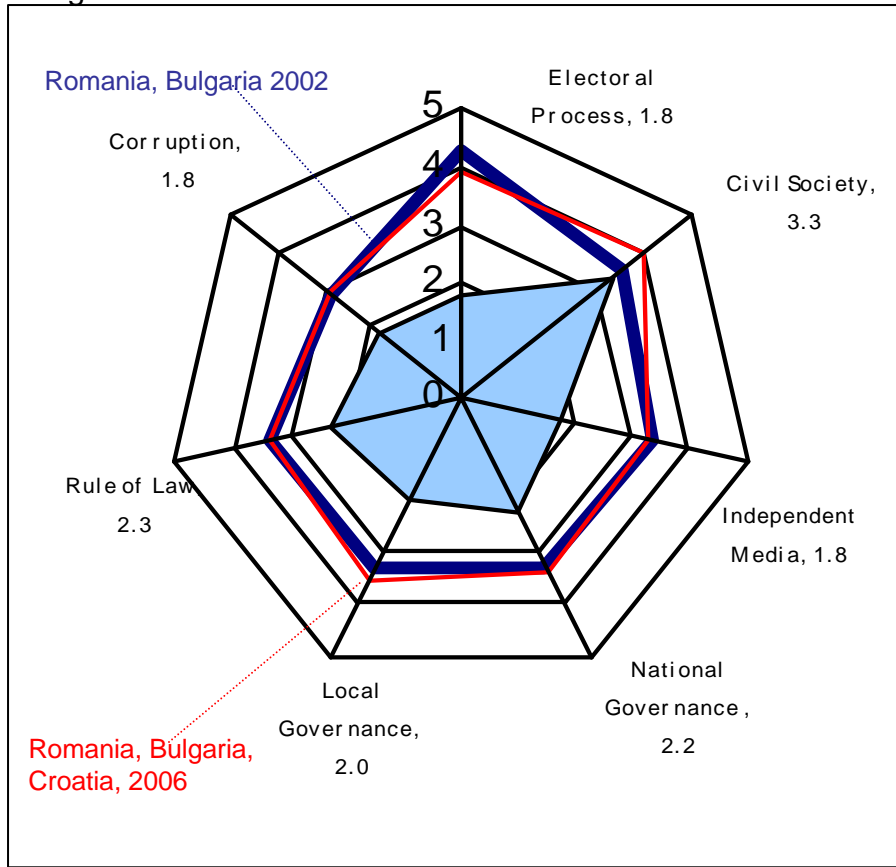
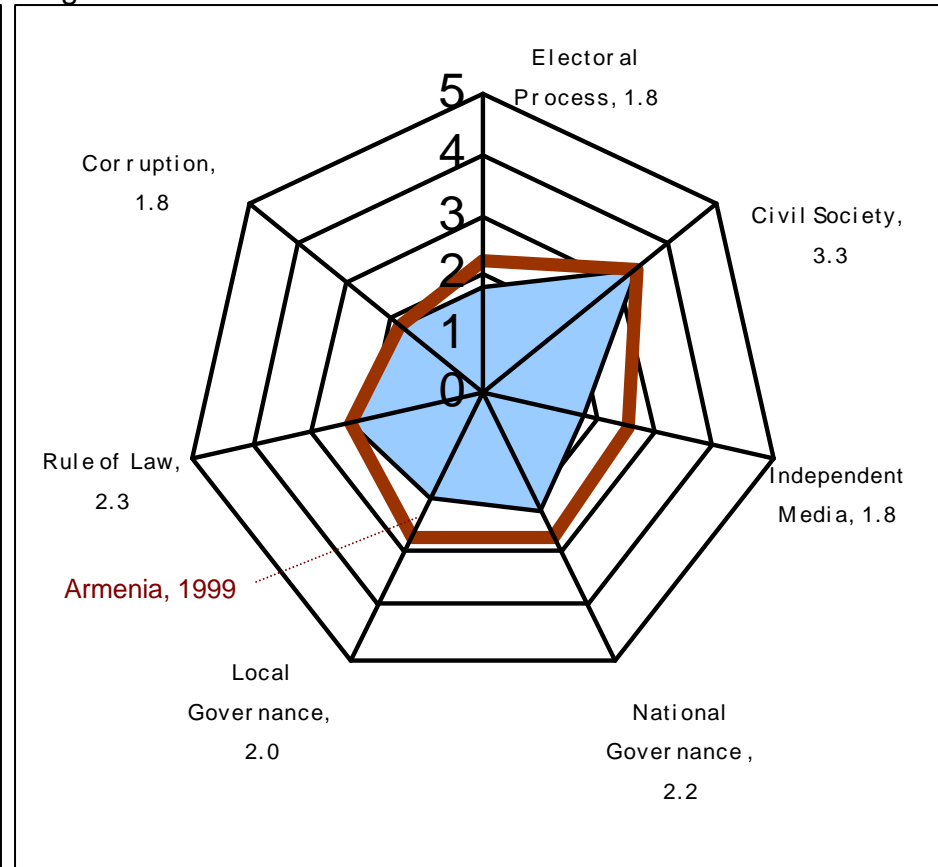
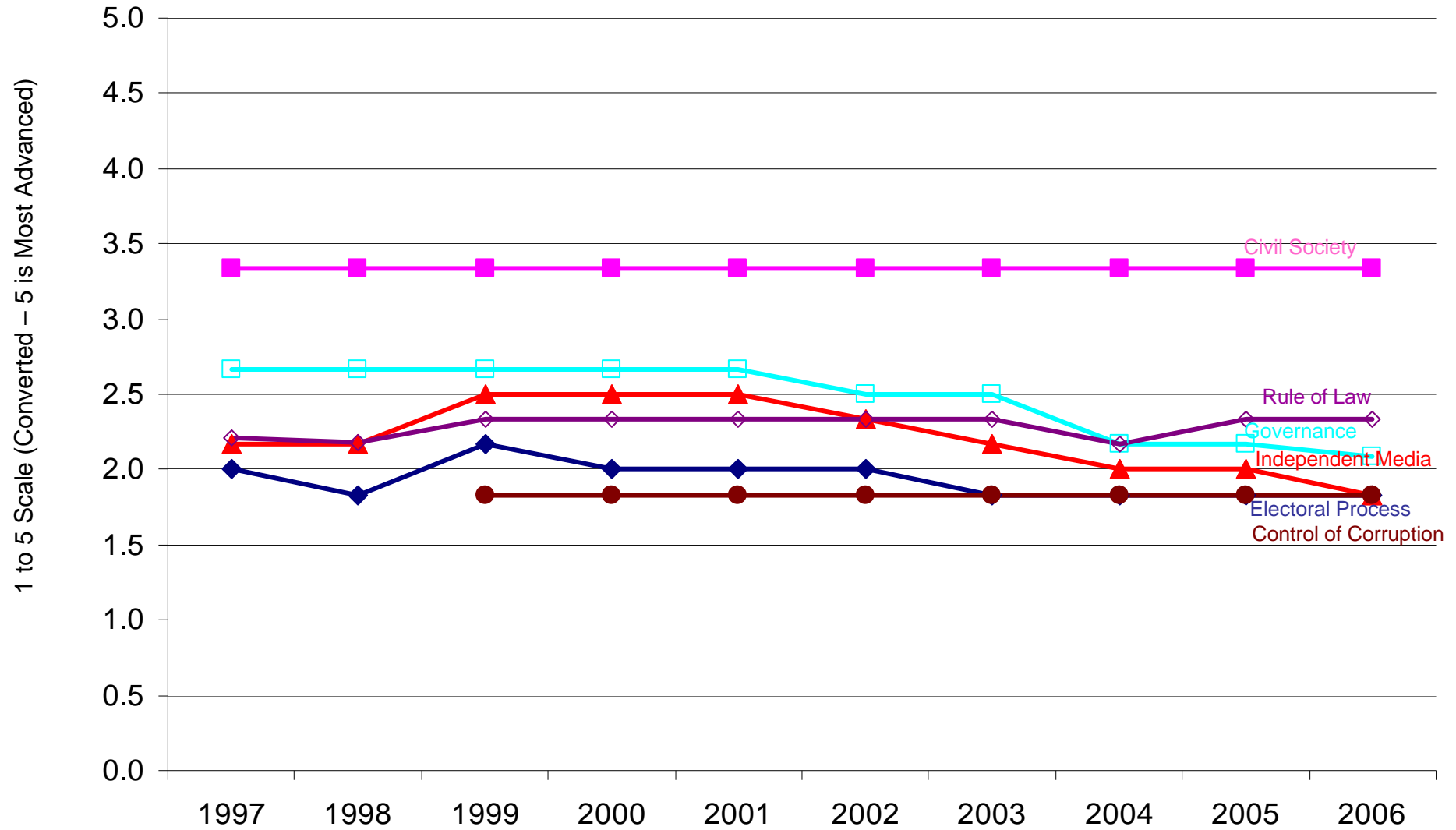


Figure 15



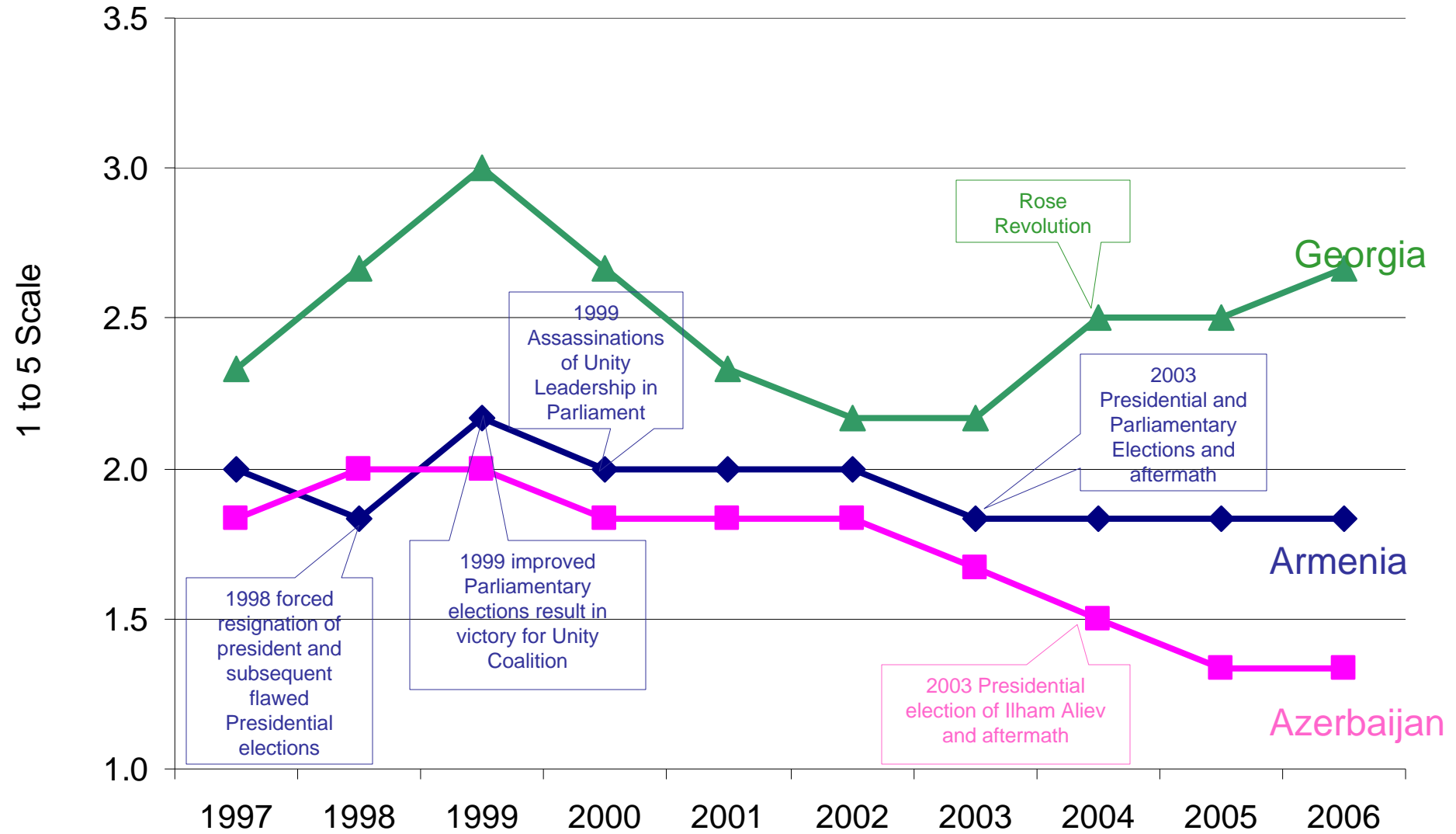
Democracy in Armenia over Time

Figure 16



Electoral Process Trends in the Caucasus

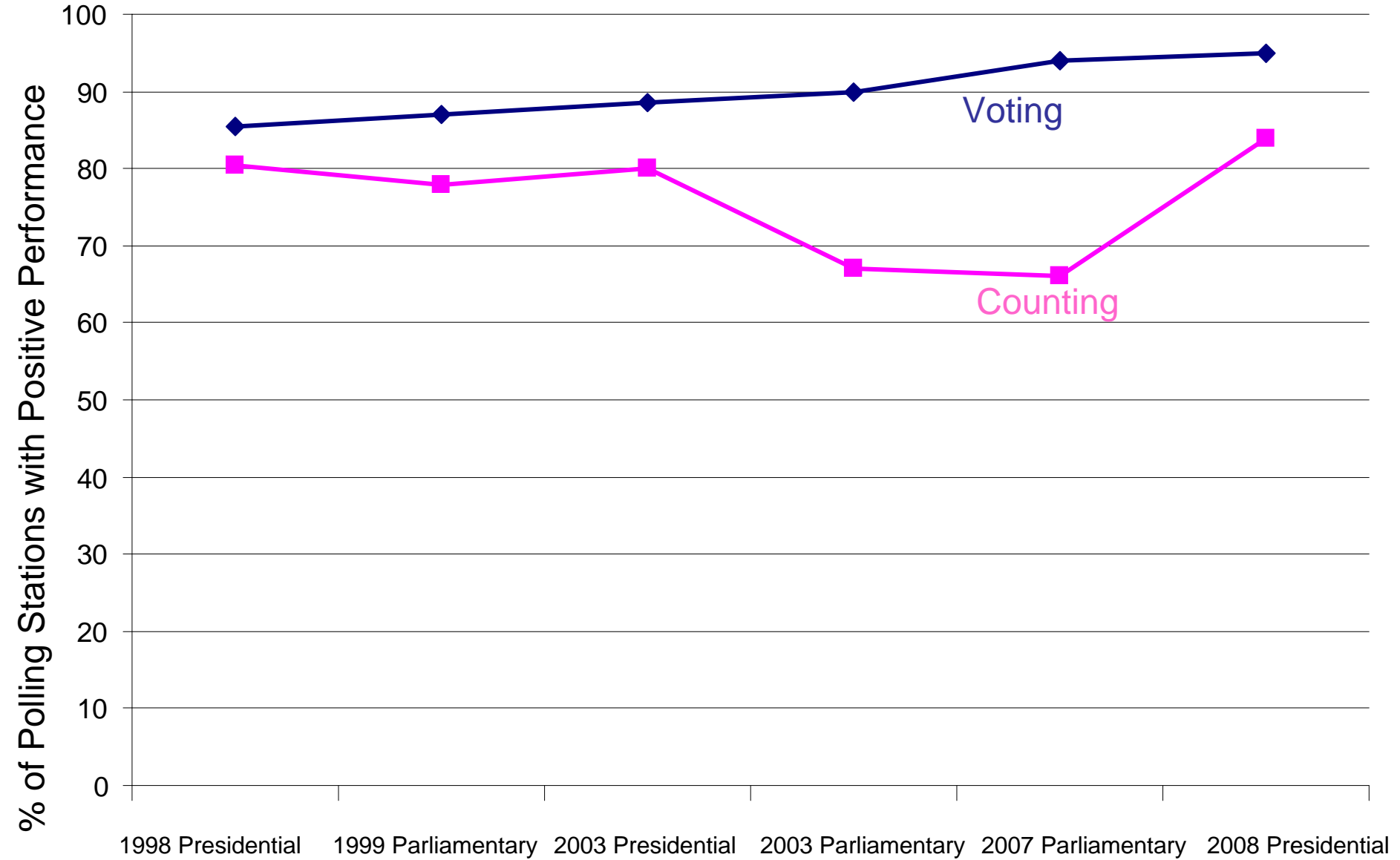
Figure 17



Ratings are based on a scale from 1 to 5, with 5 representing the best score. USAID, *Monitoring Country Progress in CEE & Eurasia #11* (2008 forthcoming) drawing from Freedom House, *Nations in Transit 2007*.

Performance of Polling Stations in Armenian Elections

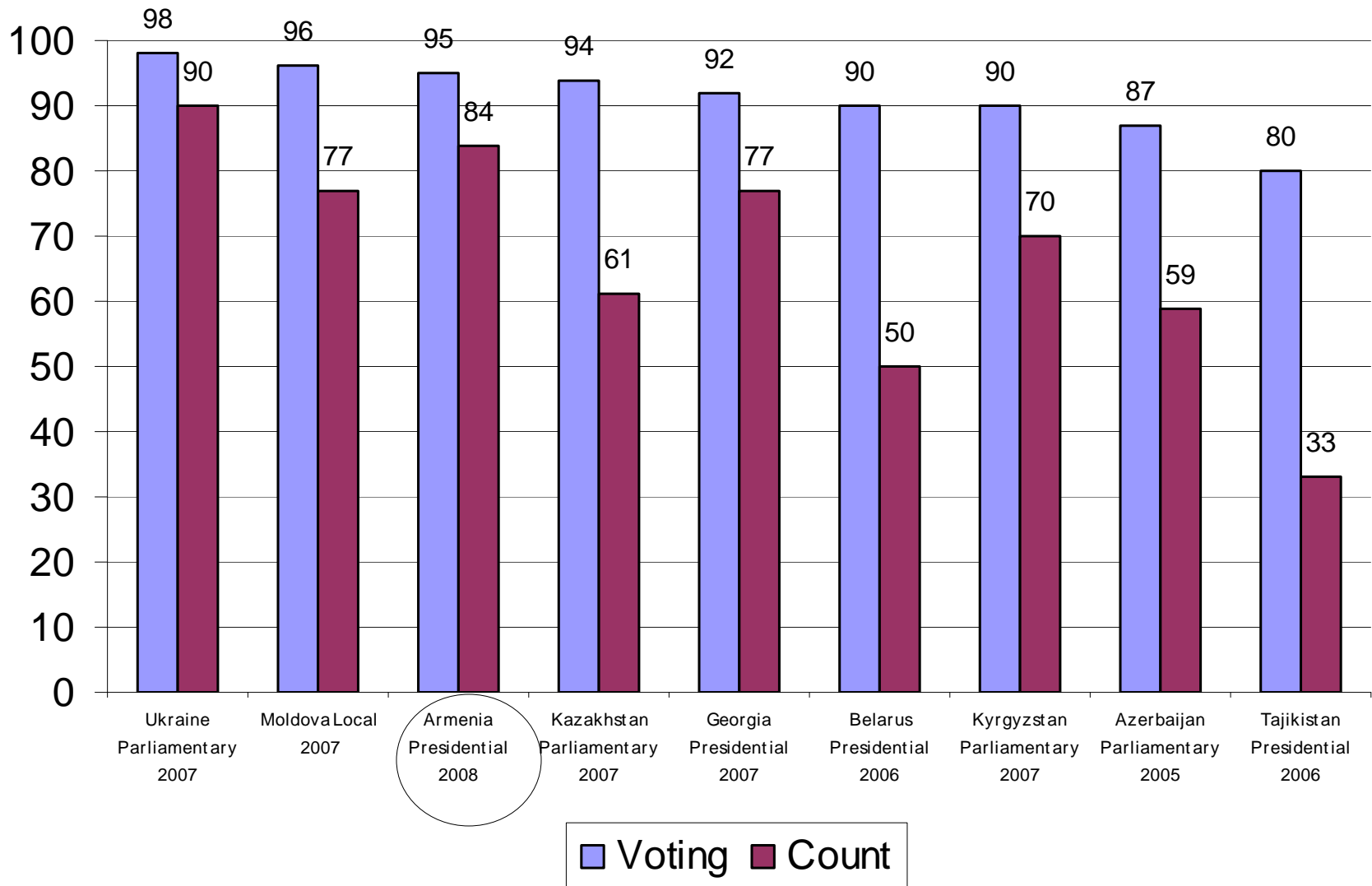
Figure 18



ODIHR Reports, 1998, 1999, 2003, 2007, 2008 - % of Observers rating precinct as good or very good;

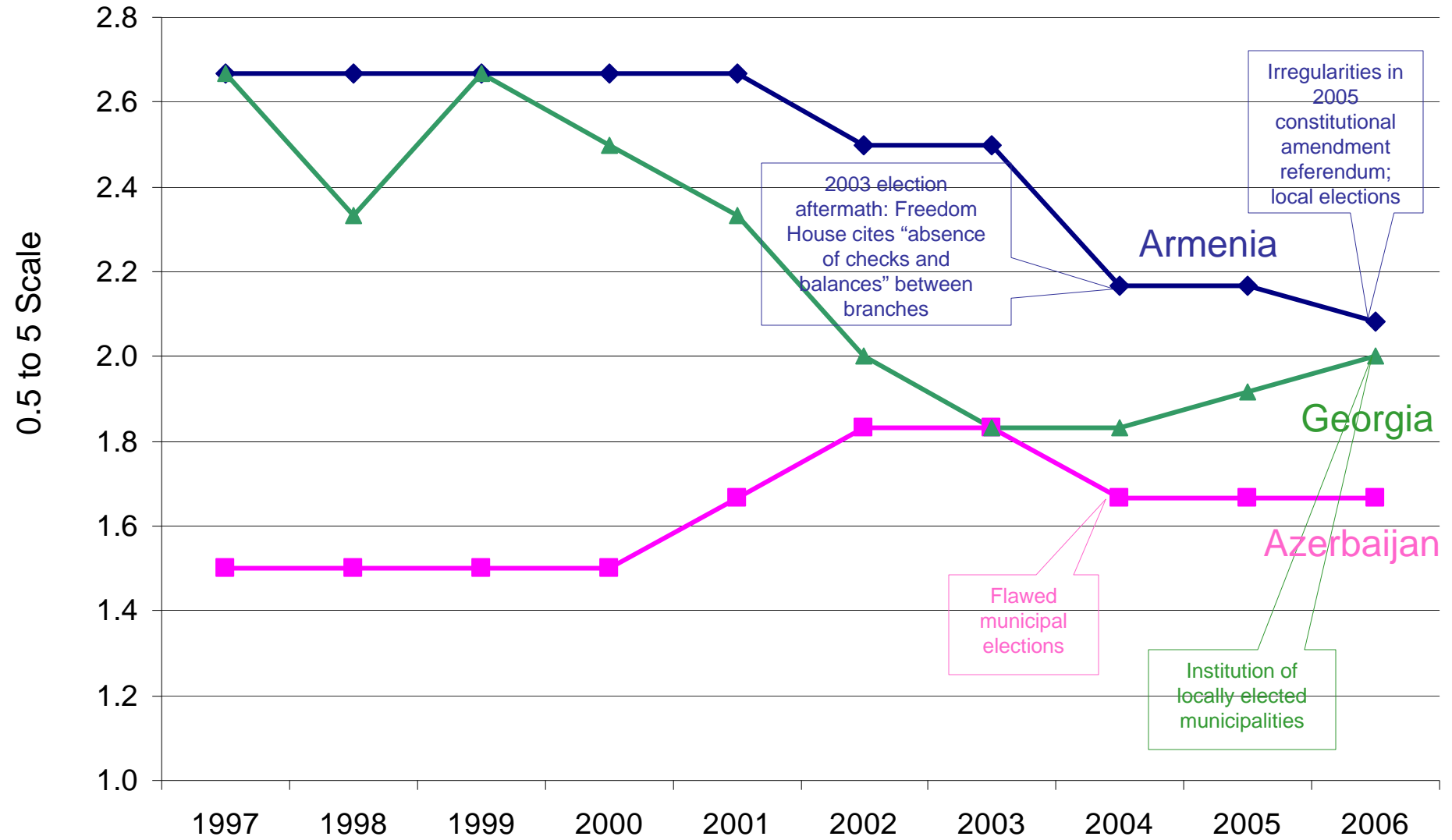
% of Polling Stations Rated Favorably by OSCE in Most Recent Election

Figure 19



Governance Scores over Time - Caucasus

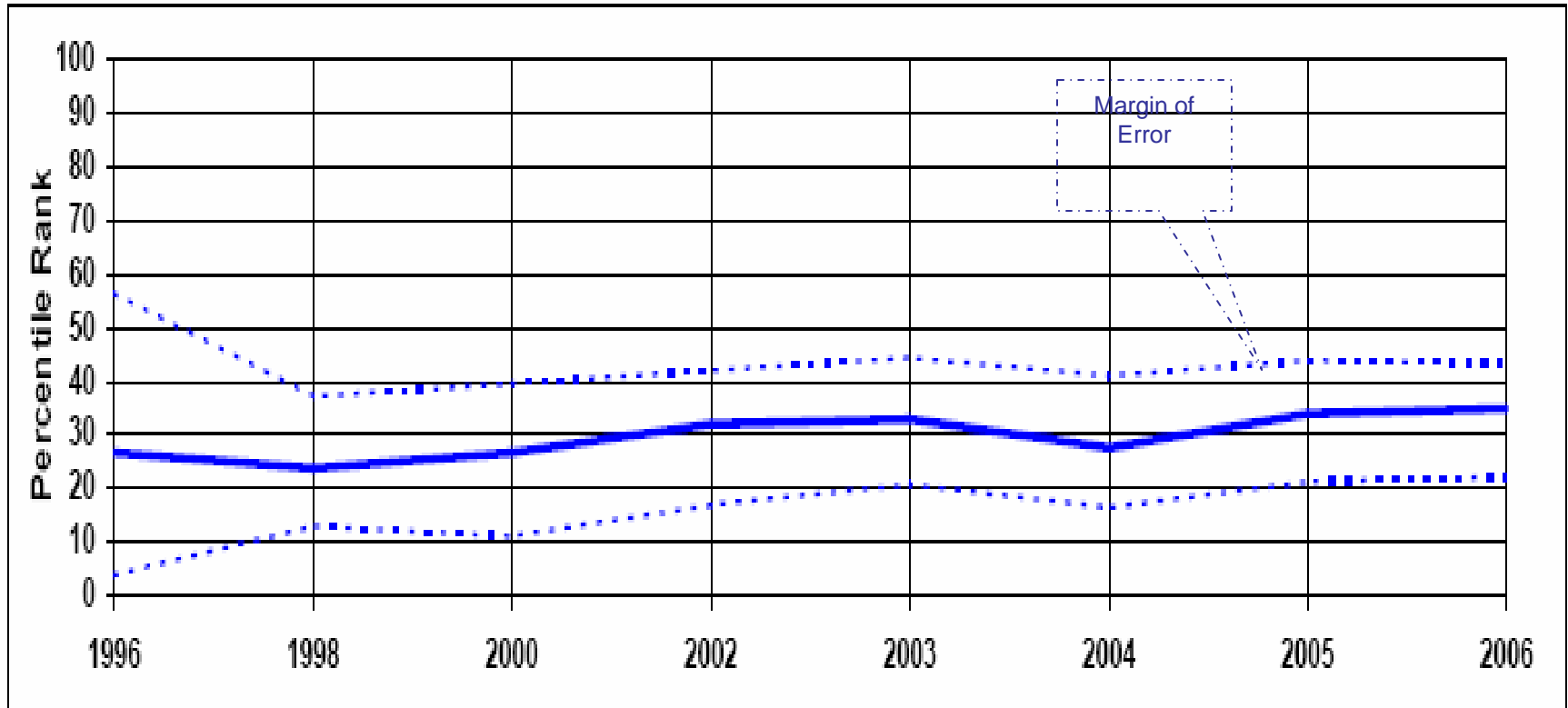
Figure 20



Control of Corruption: World Bank Institute

ARMENIA, 1996-2006

Aggregate Indicator: Control of Corruption



Independent Media Scores over Time - Caucasus

Figure 22

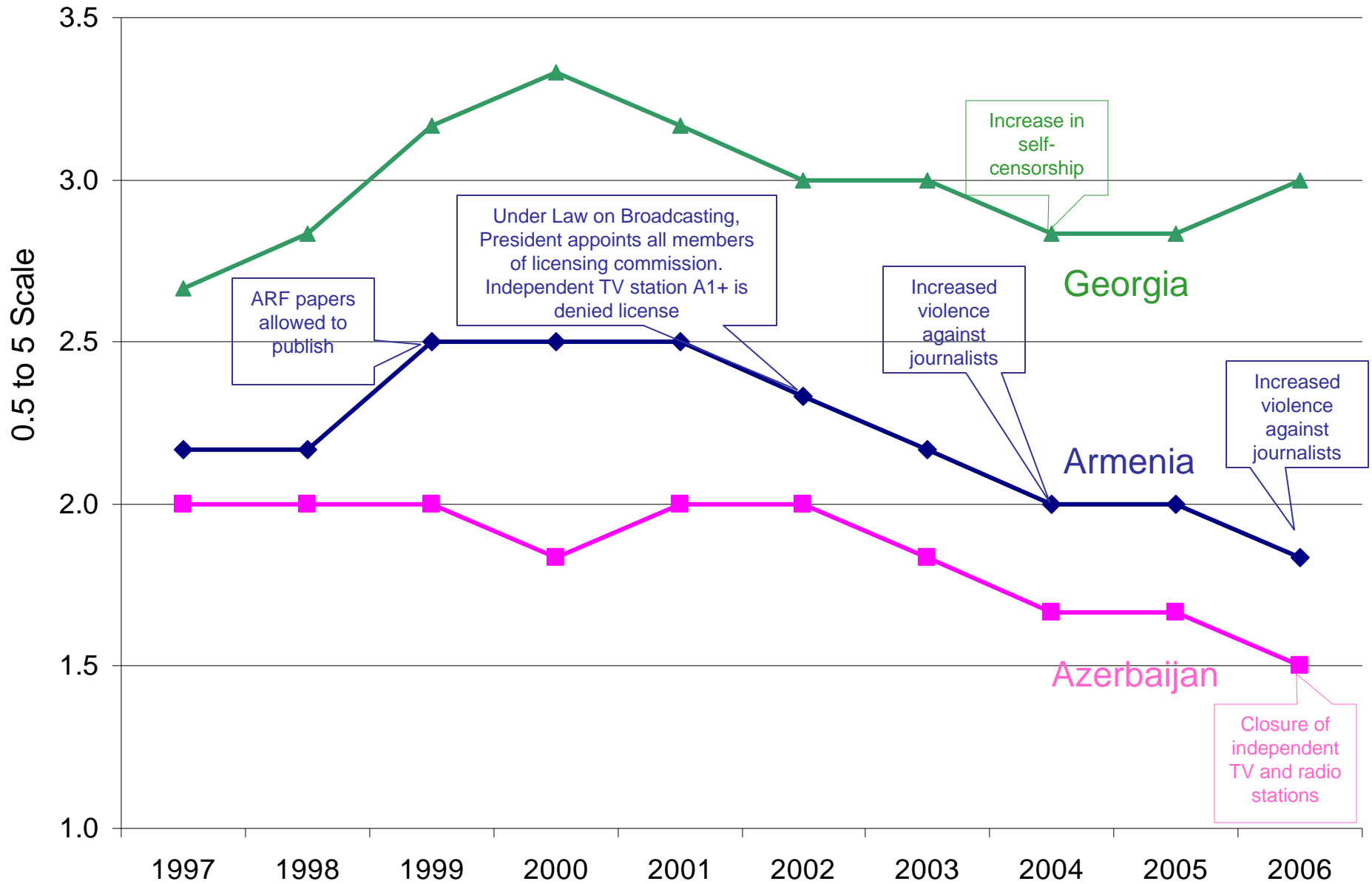
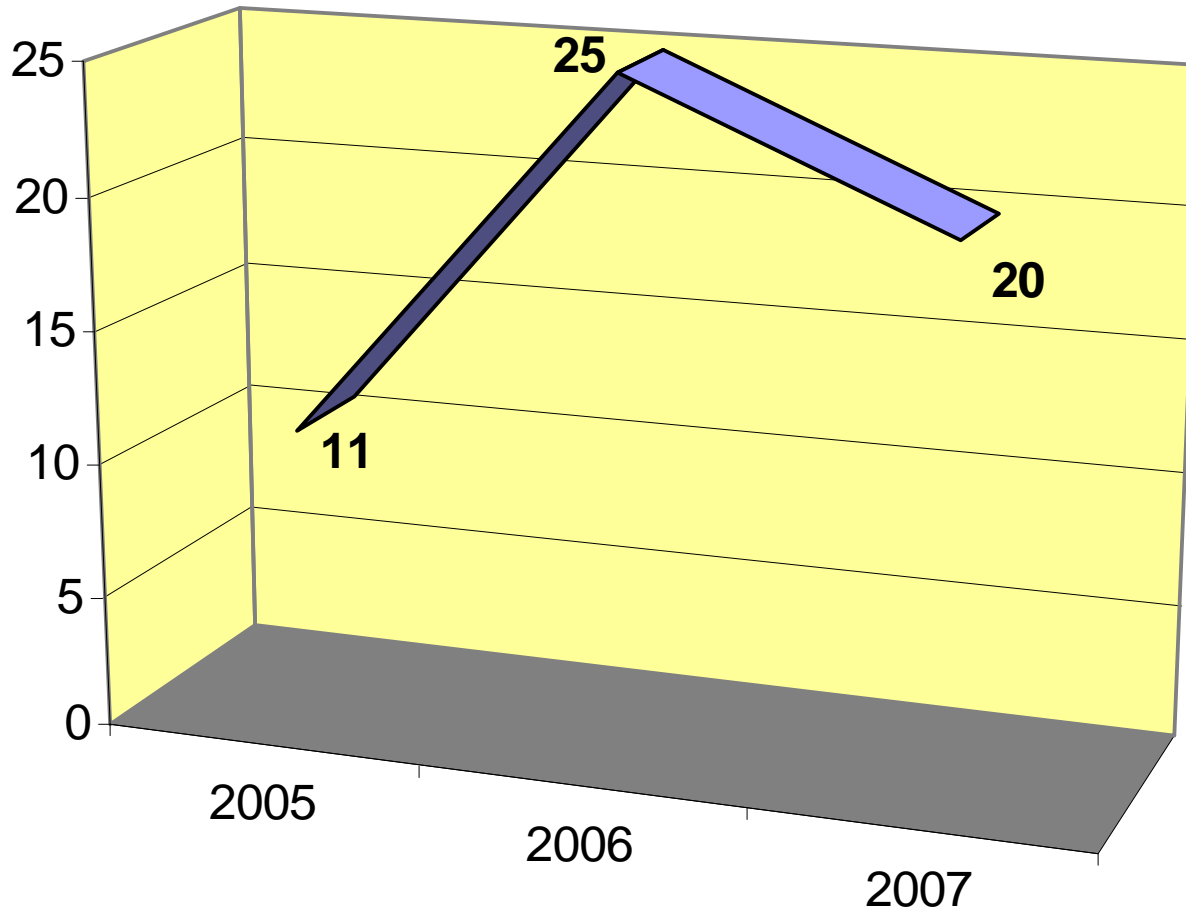
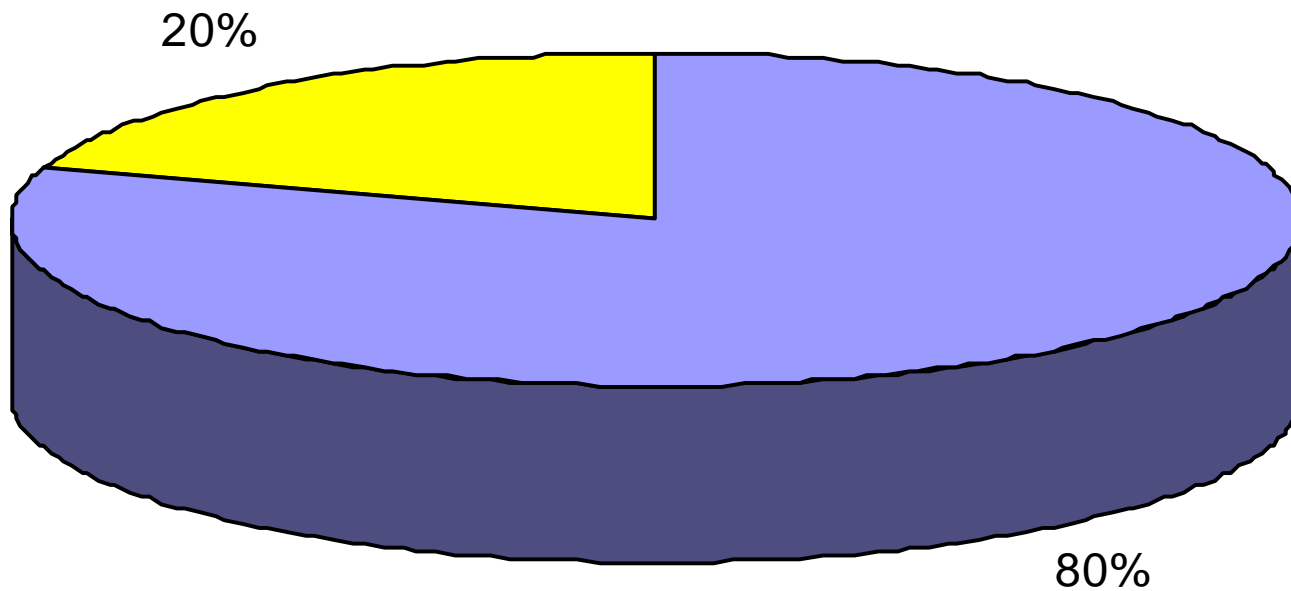


Figure 23

Pre-Trial Detainees % in Armenian Prison System



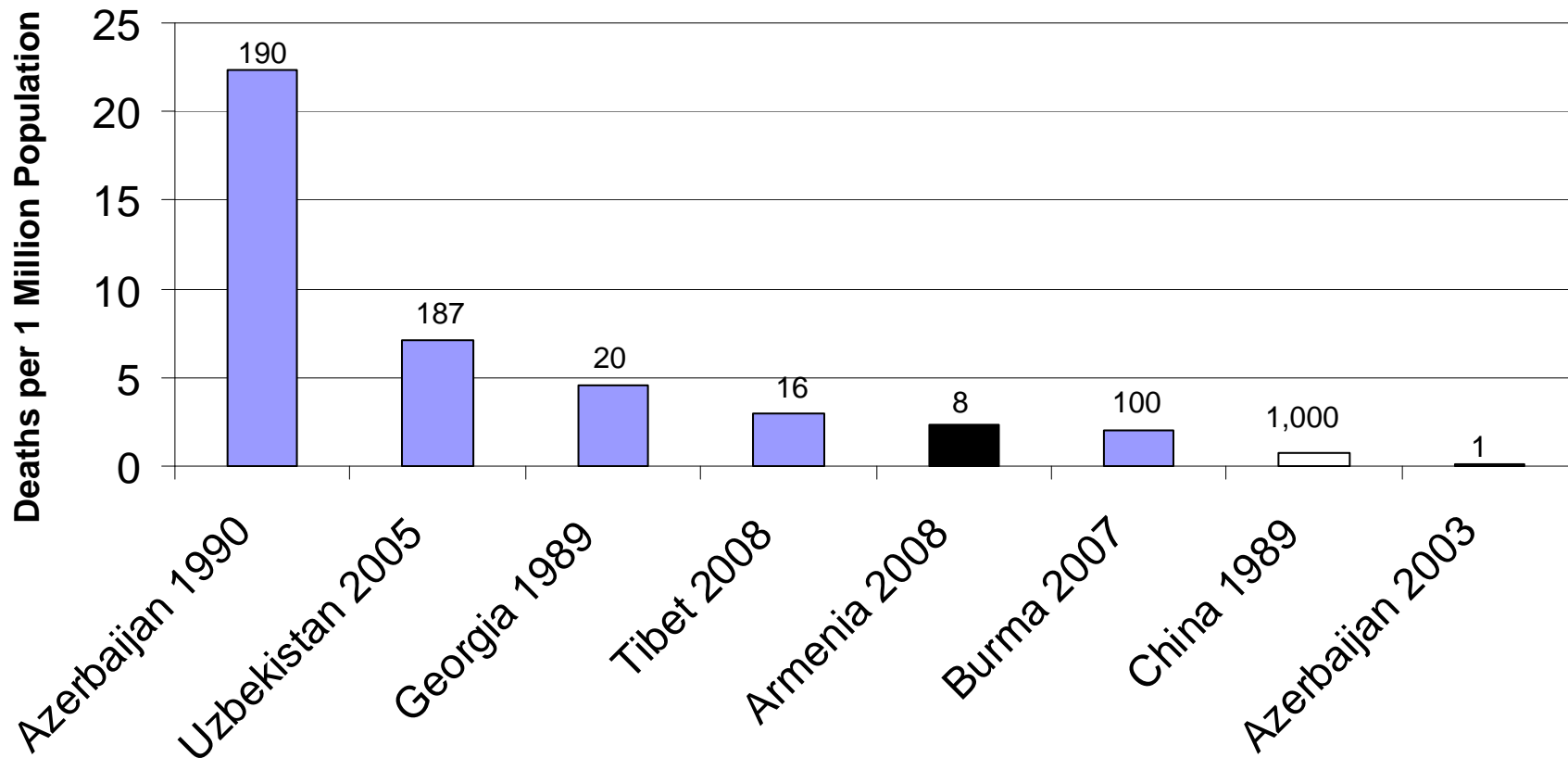
Pretrial Detention in Armenia



80 % of criminal trial defendants recant testimony given during pretrial investigation, claiming they had confessed under torture or duress.

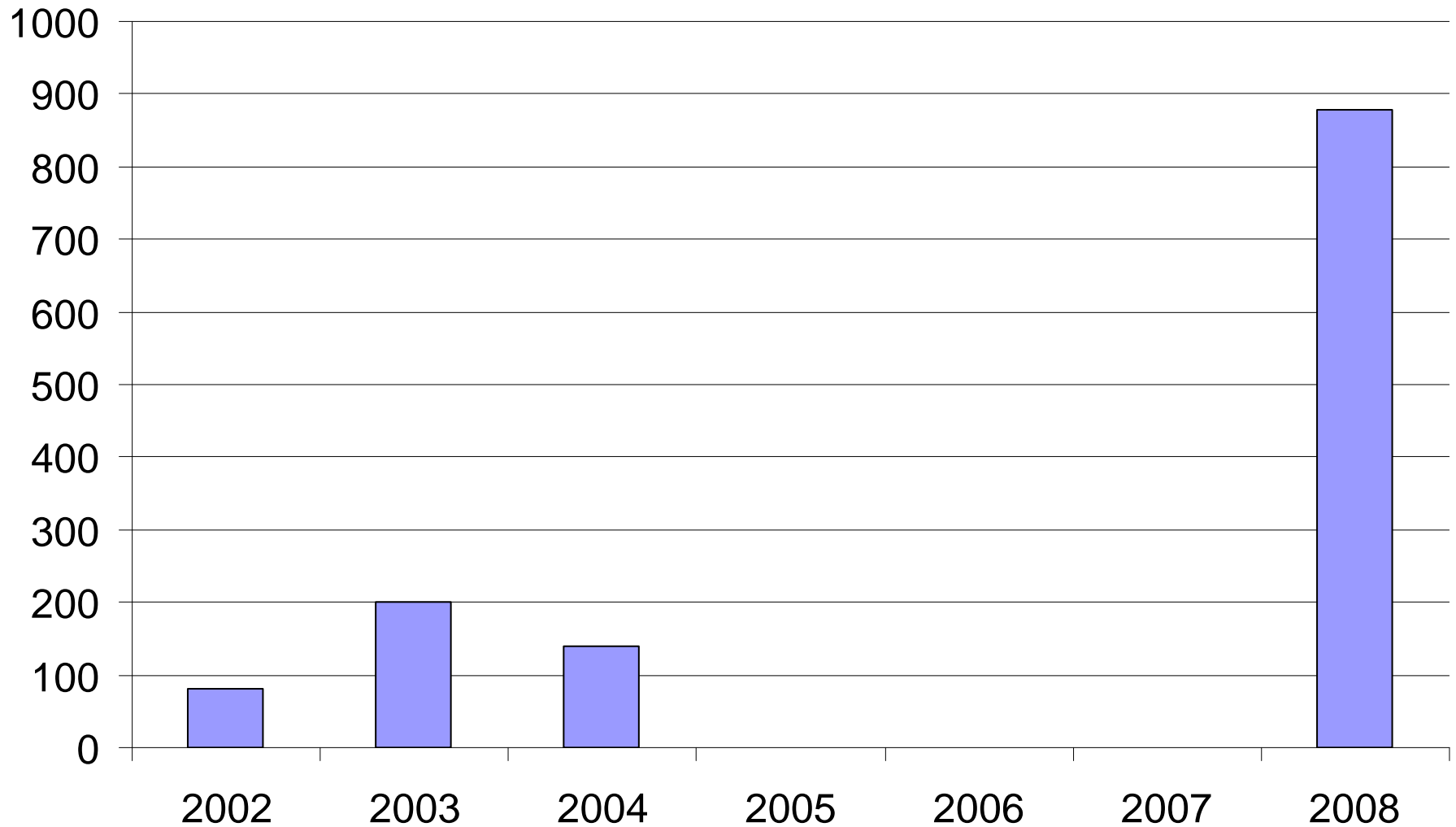
Deaths in Political Demonstrations Weighted by Population

Figure 25



Each bar represents deaths inflicted by national police or military against demonstrations perceived to be anti-government. Numbers represent specific historical events including: Anti Soviet demonstration in Azerbaijan SSR, 190 deaths, pop. 8.5 m, (US State Dept).; Protests in Andijan, Uzbekistan, 187 deaths, pop. 26.2 m, (US State Dept, Uzbek Gov. figures); Anti Soviet demonstration in Georgia SSR, 20 deaths, pop. 4.4 m. (Georgia Embassy); Anti Chinese demonstration in Tibet, 16 deaths, pop. 5.3 million, (Chinese Regional Government figure); Anti Government demonstration in Armenia, 7 protesters and one policeman killed, pop. 3 m. (Armenian Government figure) Anti-Government Demonstration in Burma, 100 deaths, pop. 51 million, (UN investigation); Anti-Government demonstration in China, 1000 deaths, 3.3 billion pop, (Amnesty International); Azerbaijan Anti Government post-election demonstrations, 1 death, pop. 8.5 million, (US State Dept).

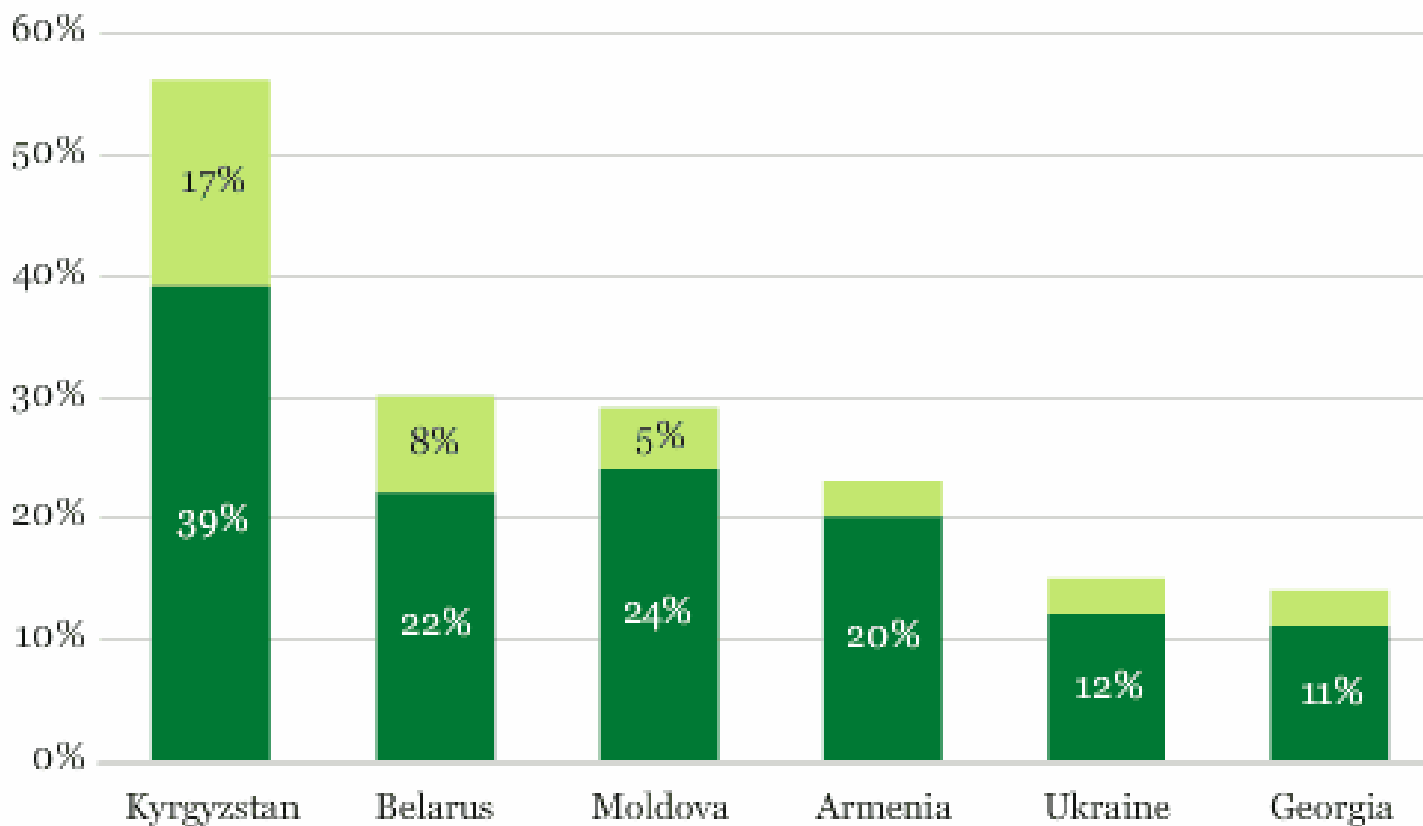
Arrests/Detentions of Demonstration Participants Armenia



Public Opinion on Democracy

How satisfied are you with the way democracy works in this country?

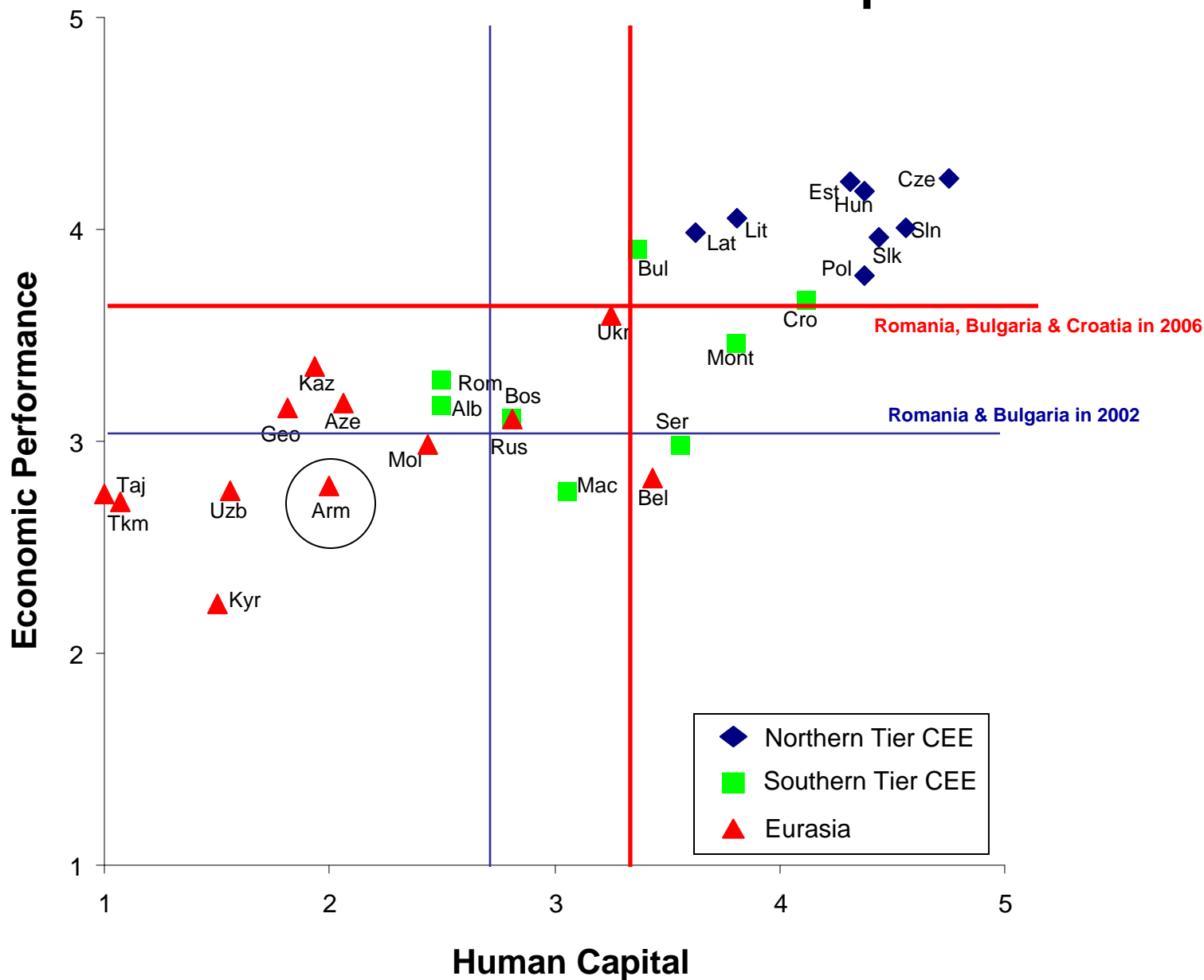
■ Somewhat satisfied
 ■ Very satisfied



GALLUP POLL

Results are based on face-to-face interviews conducted between April and August 2007 with at least 1,000 adults, aged 15 and older, in each of the 6 countries studied. Margin of sampling error is ± 3 percentage points.

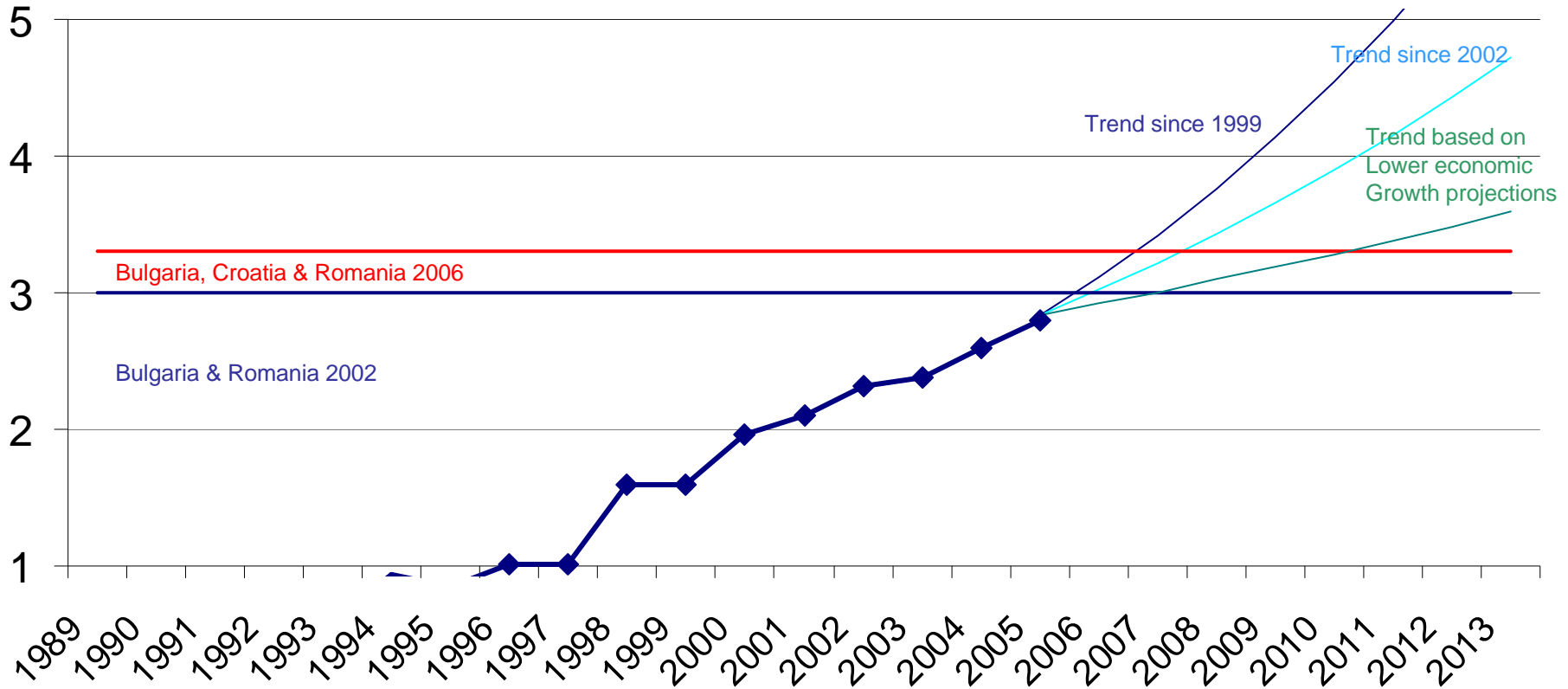
Figure 28 **Economic Performance and Human Capital in 2005-2007**



Ratings are based on a scale from 1 to 5, with 5 representing the best score. USAID, Monitoring Country Progress in CEE & Eurasia #11 (2008 forthcoming) drawing from World Bank, *World Development Indicators 2007* (2007); EBRD, *Transition Report* (November 2007), UNECE, *Statistical Division Database* (2007); Fund for Peace, *Failed States Index* (2007); IFC & World Bank, *MSME Database* (2007); UNICEF, *TransMONEE Database* (2007); World Health Organization European Health For All Database (2007); IEA, *TIMSS 2003 International Mathematics Report* (2004), *TIMSS 2003 International Science Report* (2004) and *PIRLS 2001 International Report* (2003); OECD, *Literacy Skills for the World of Tomorrow: Further Results from PISA 2000* (2003), *First Results from PISA 2003* (2004) and *International Adult Literacy Survey* (2000).

Figure 29

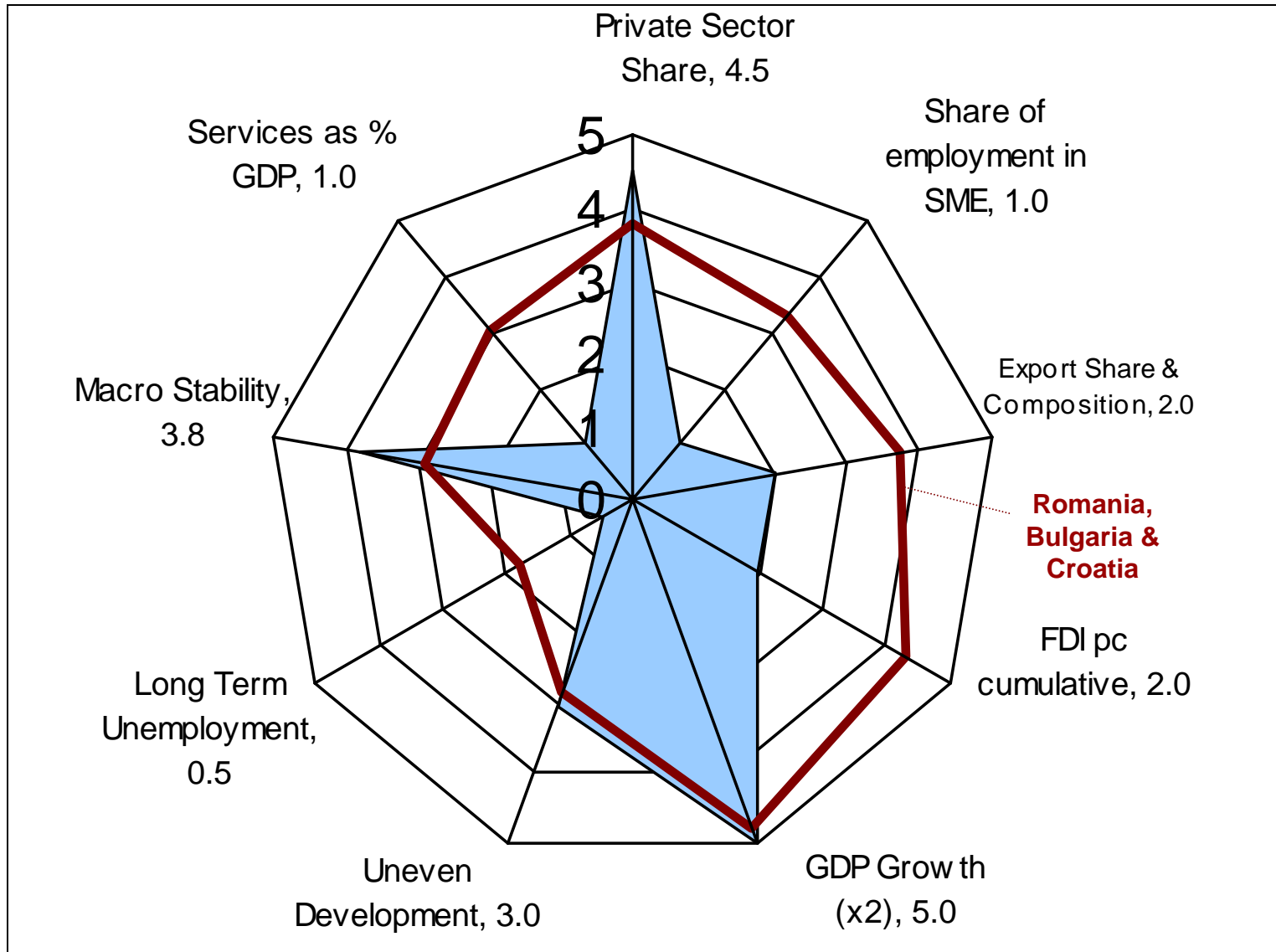
Economic Performance in Armenia



Ratings are based on a 1 to 5 scale, with 5 representing most advanced. USAID, Monitoring Country Progress in CEE & Eurasia system drawing from EBRD, *Transition Report 2006* (November 2006); World Bank, *World Development Indicators 2007* (2007) and *Micro, Small and Medium Enterprises Database* (2007). Note: Index was changed in 2008, and historical data was adjusted down accordingly.

Figure 30

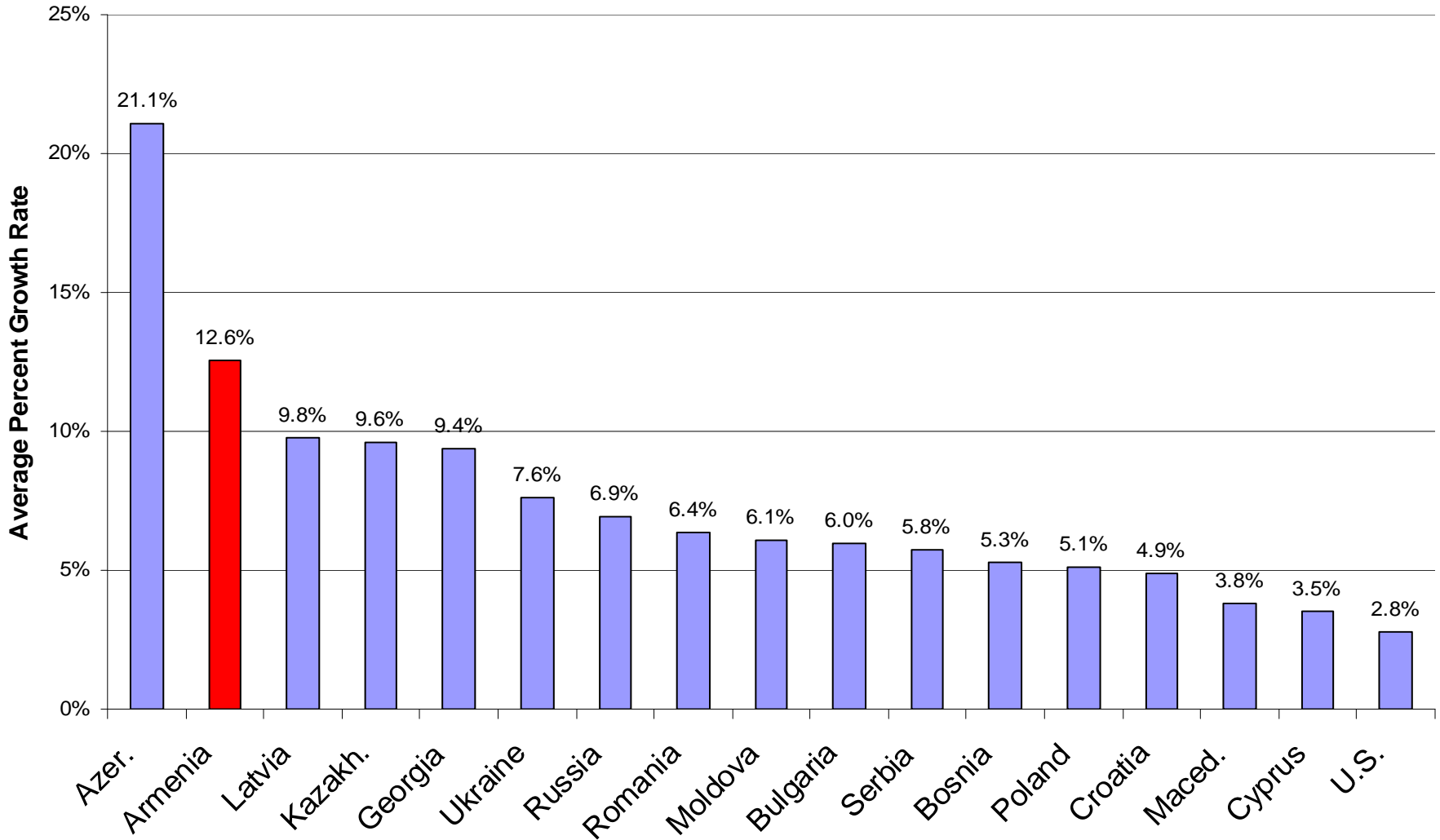
Economic Performance in Armenia



Ratings are based on a scale from 1 to 5, with 5 representing the best score. USAID, Monitoring Country Progress in CEE & Eurasia #11 (2008 forthcoming) drawing from World Bank, *World Development Indicators 2007* (2007); EBRD, *Transition Report* (November 2007), UNECE, *Statistical Division Database* (2007); Fund for Peace, *Failed States Index* (2007); IFC & World Bank, *MSME Database* (2007).

Figure 31

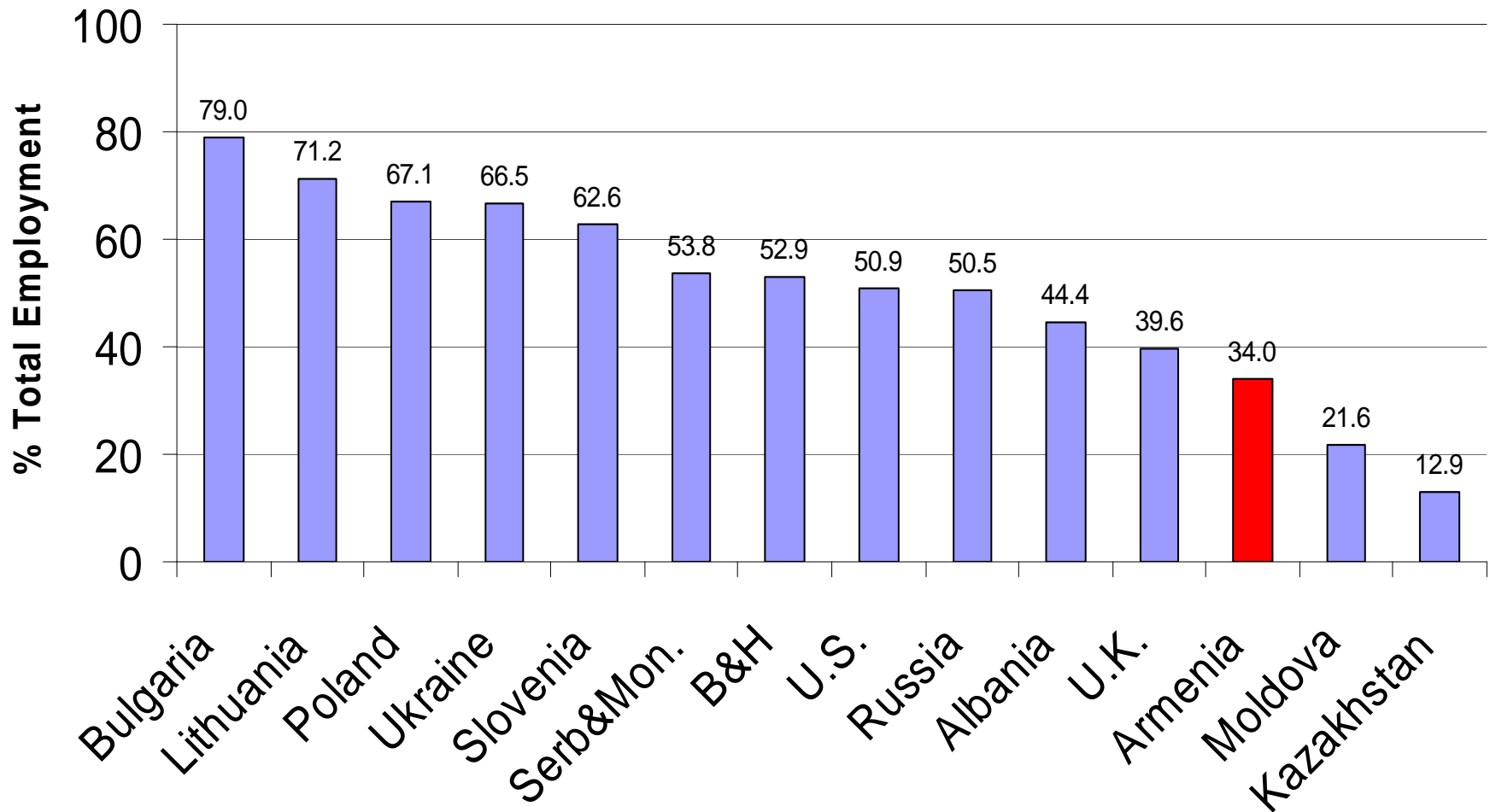
Growth Rates (Average 2003-07)



International Monetary Fund's World Economic Outlook (WEO), which presents staff's analysis and projections of economic developments and statistical forecasts for individual countries, groups of countries and globally. The WEO is released in April and September each year.

Figure 32

Medium, Small and Micro-Enterprises - % Total Employment



International Finance Corporation MSME Database calculates micro, small, and medium enterprises' participation in the economies of over 70 countries along with selected business environment indicators.

Export Percentage – Total GDP

Figure 33

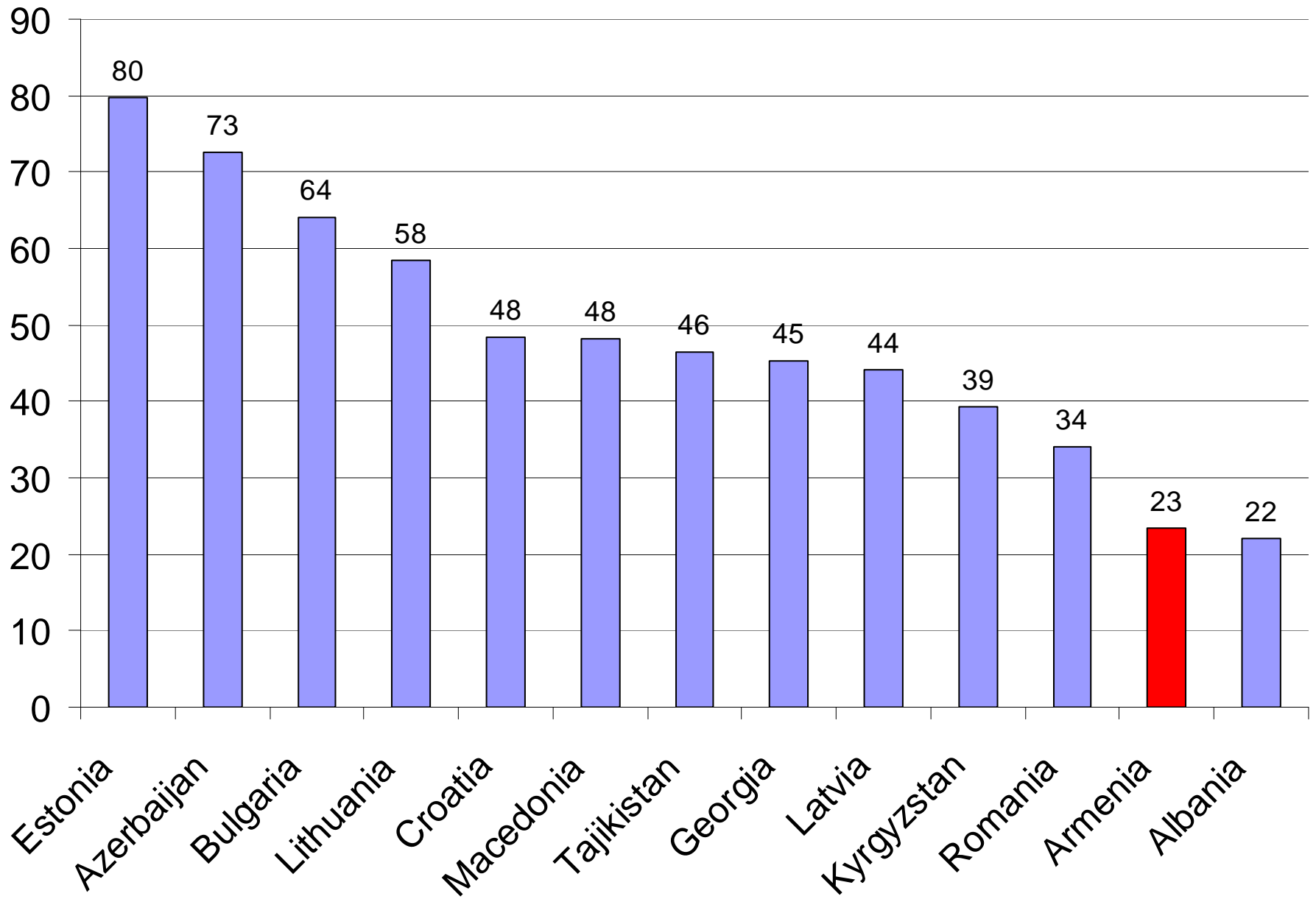


Figure 34

Manufacturing Exports % Total

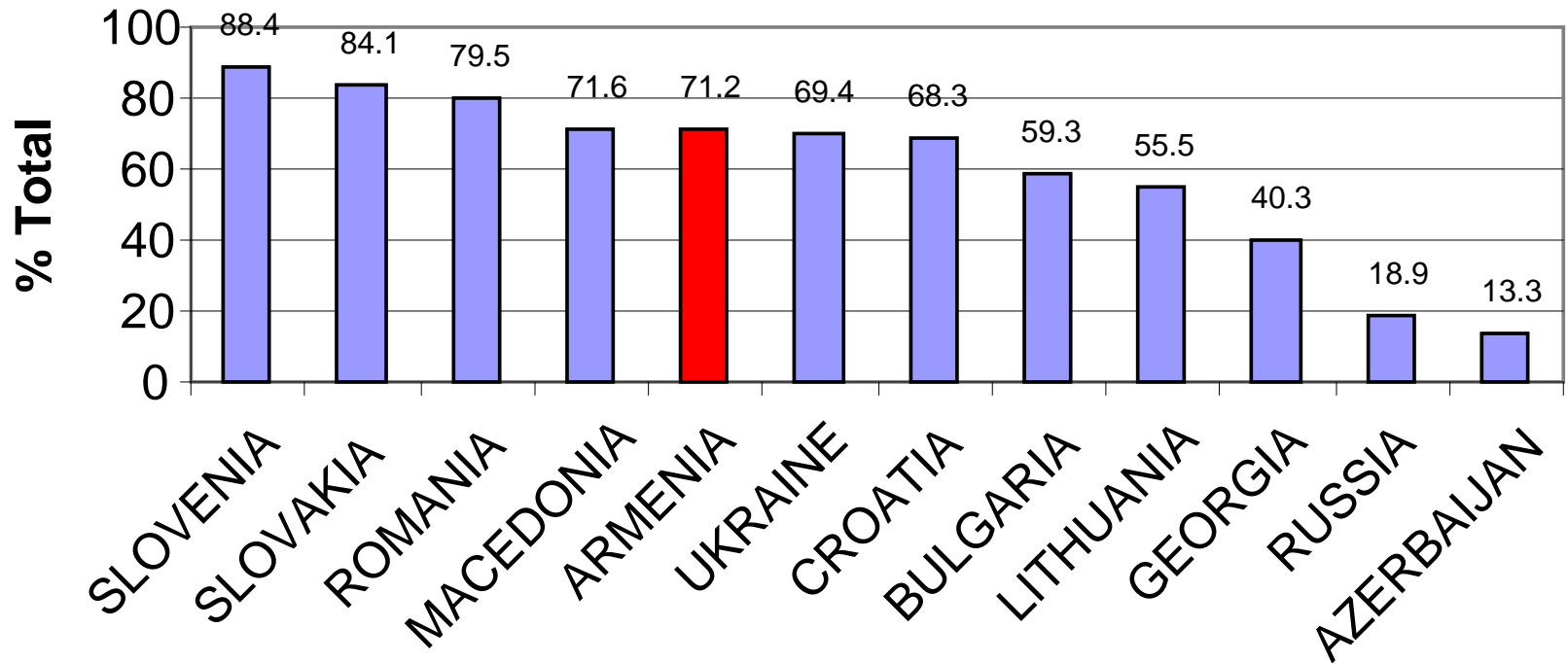
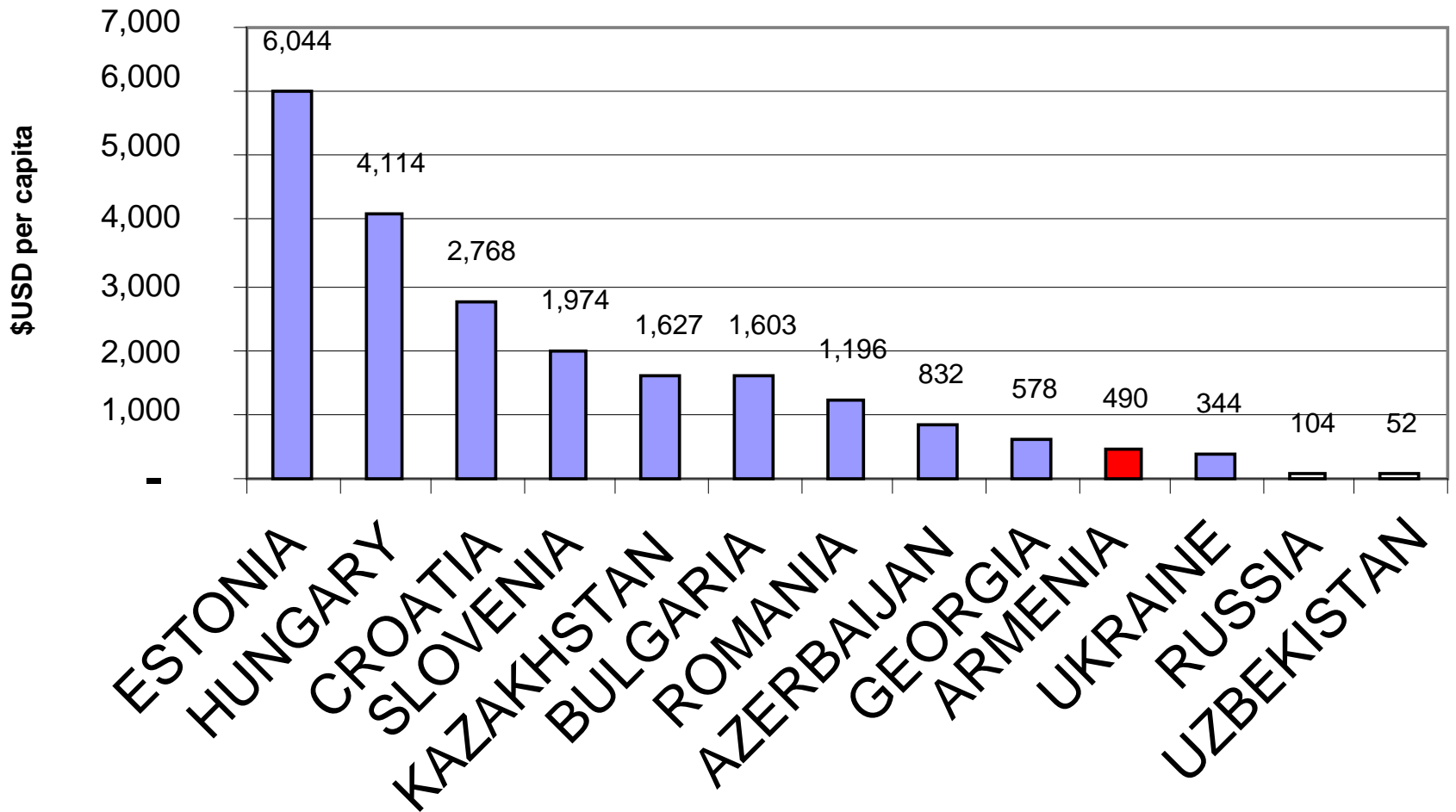
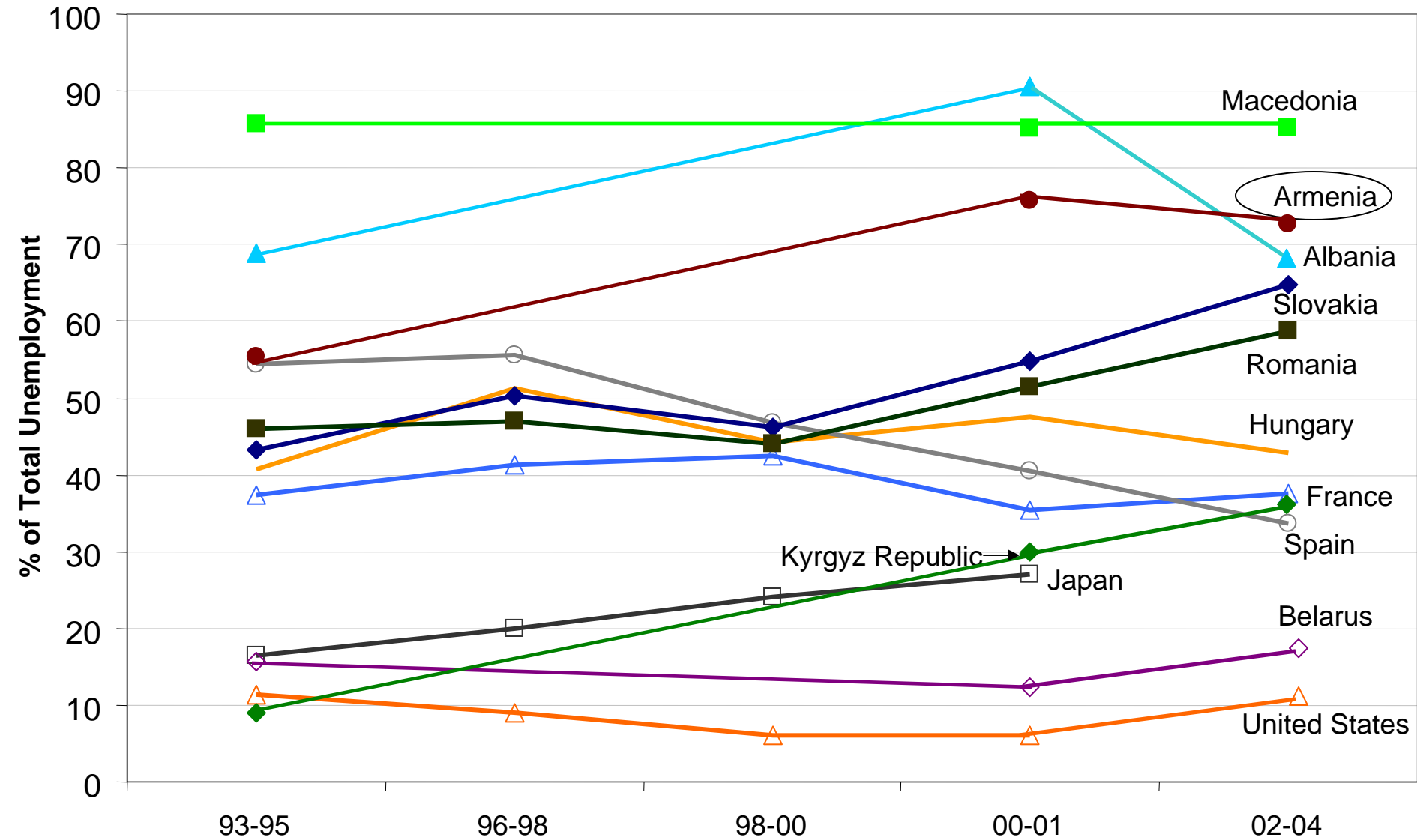


Figure 35

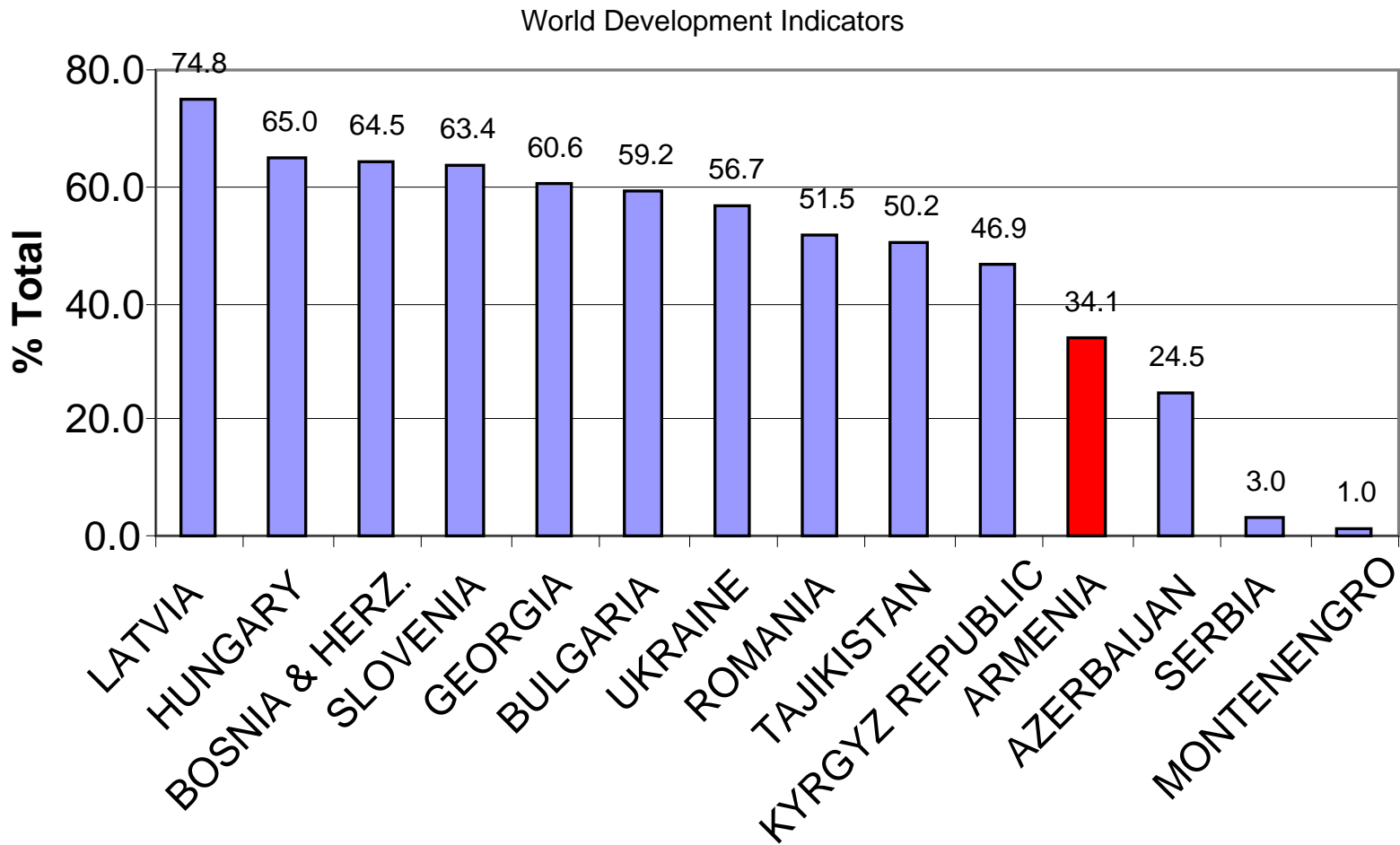
Cumulative Foreign Direct Investment: 1989-2006



Long Term Unemployment

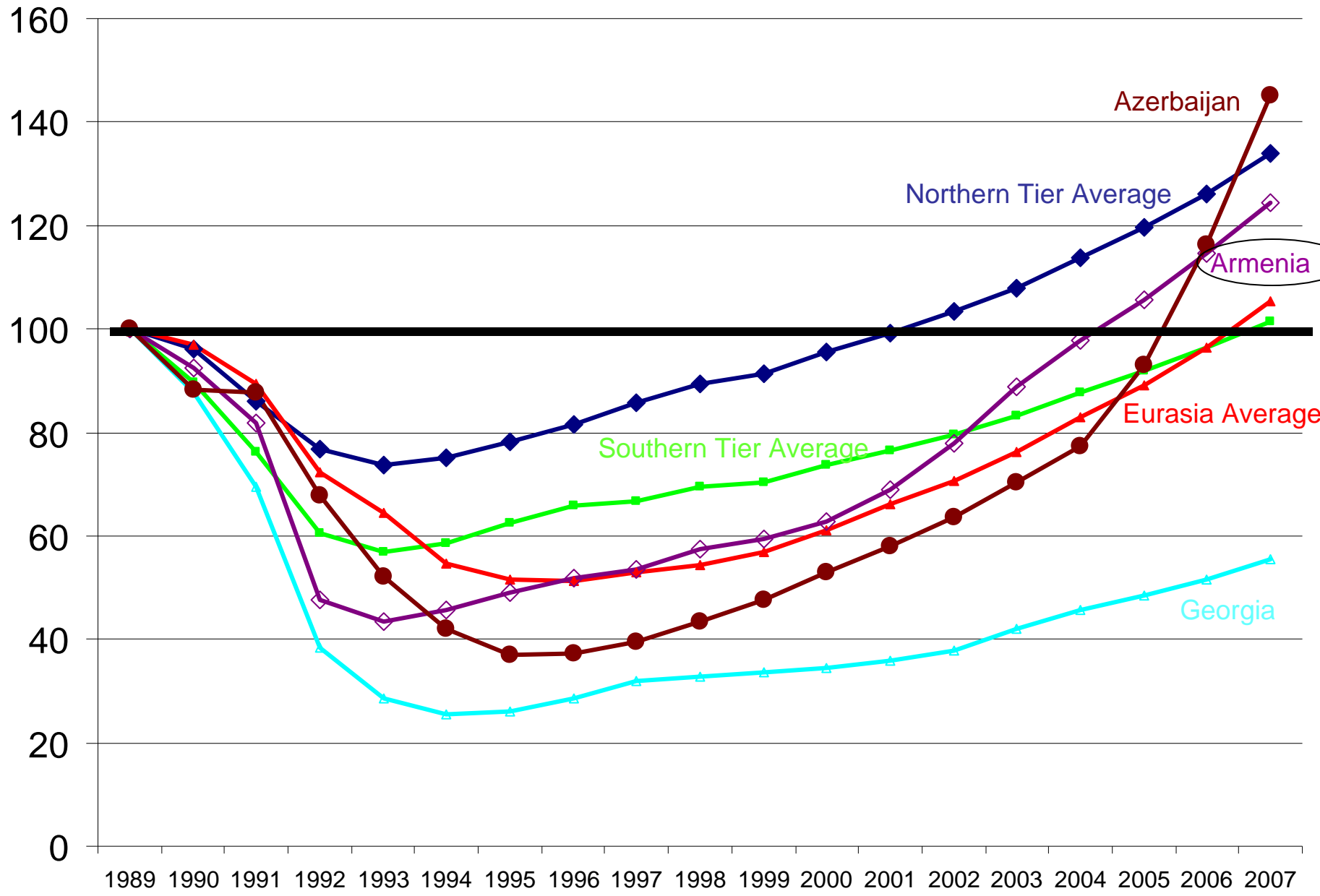


Services % Total Economy

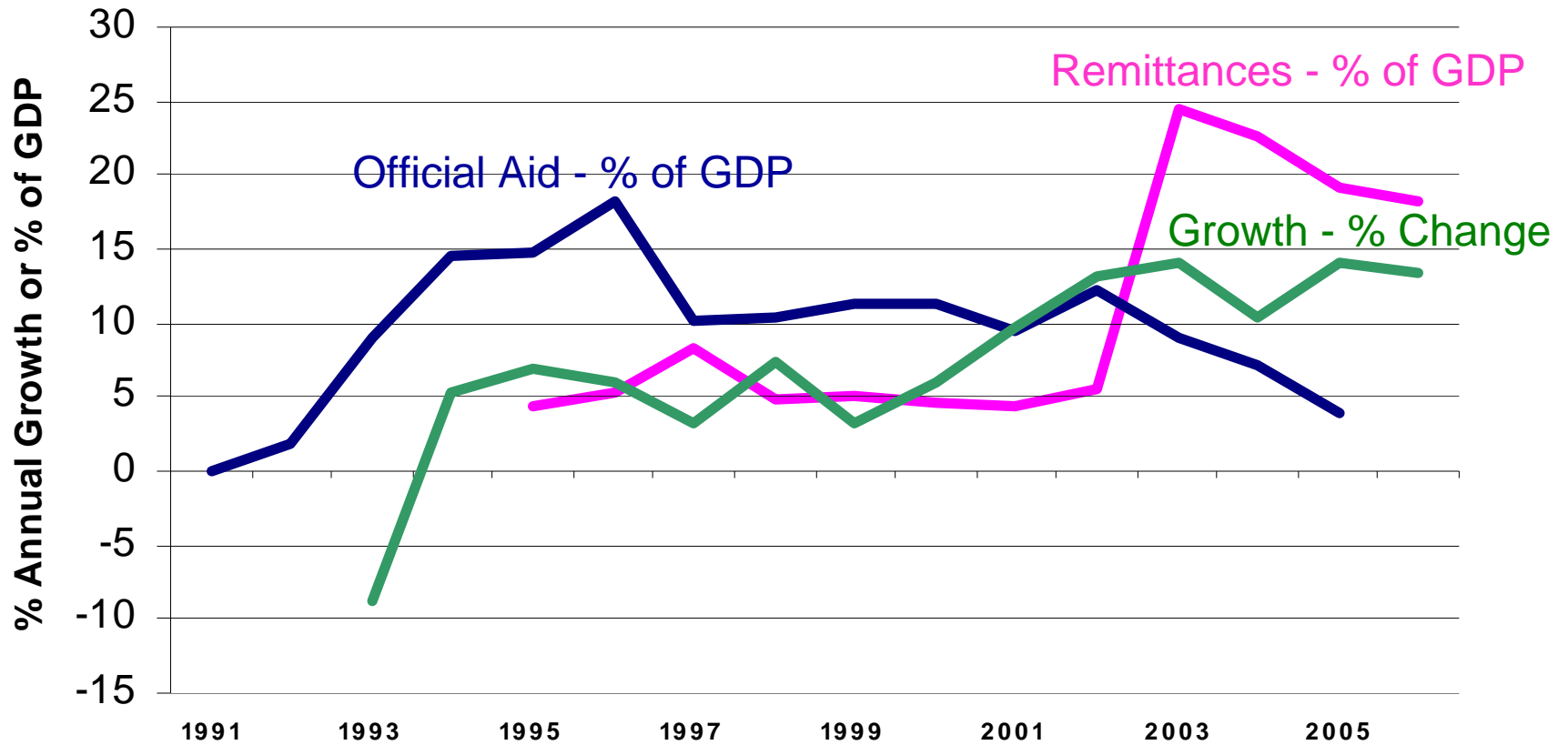


World Bank's World Development Indicators, 2007

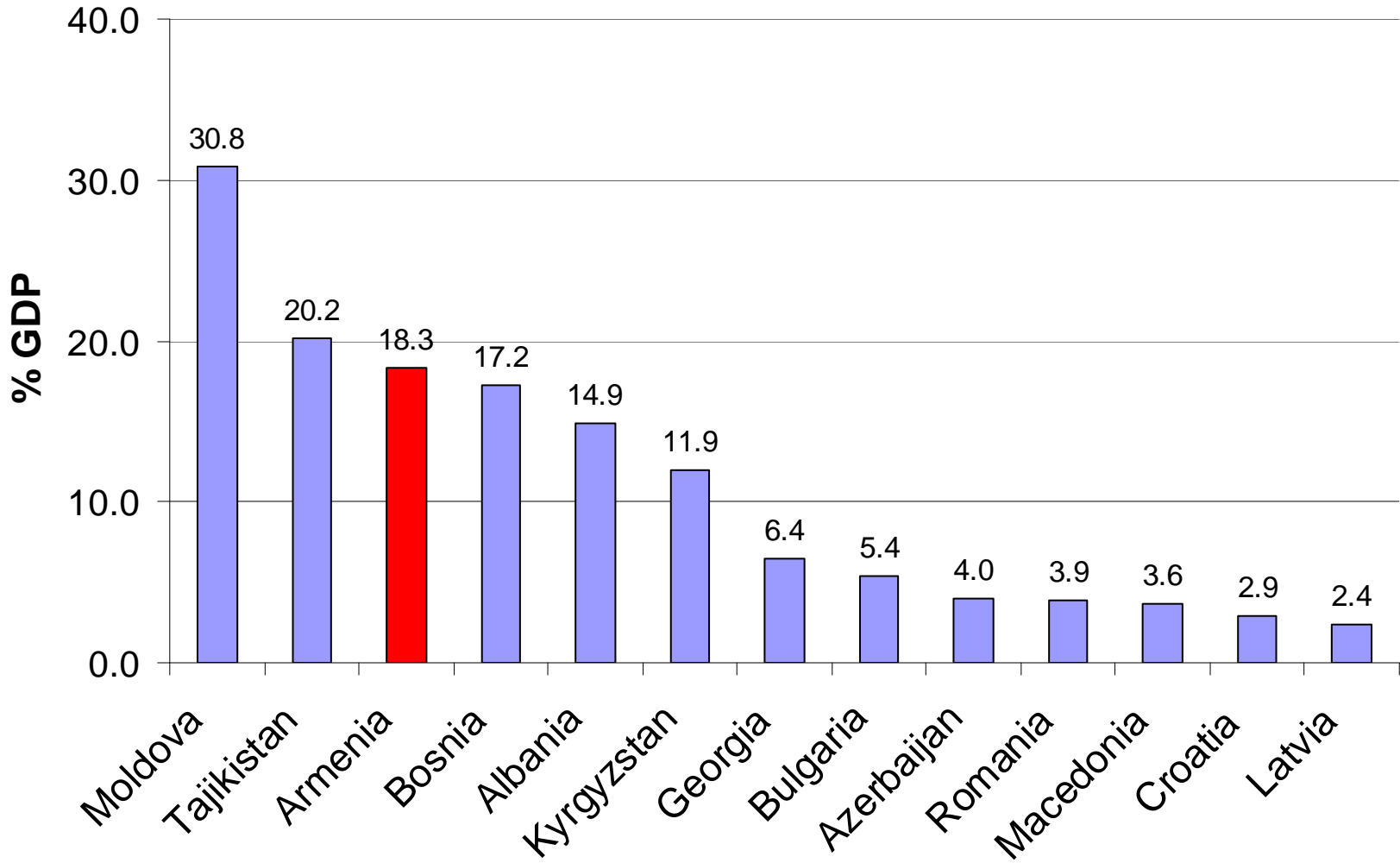
GDP as Percentage of 1989 GDP



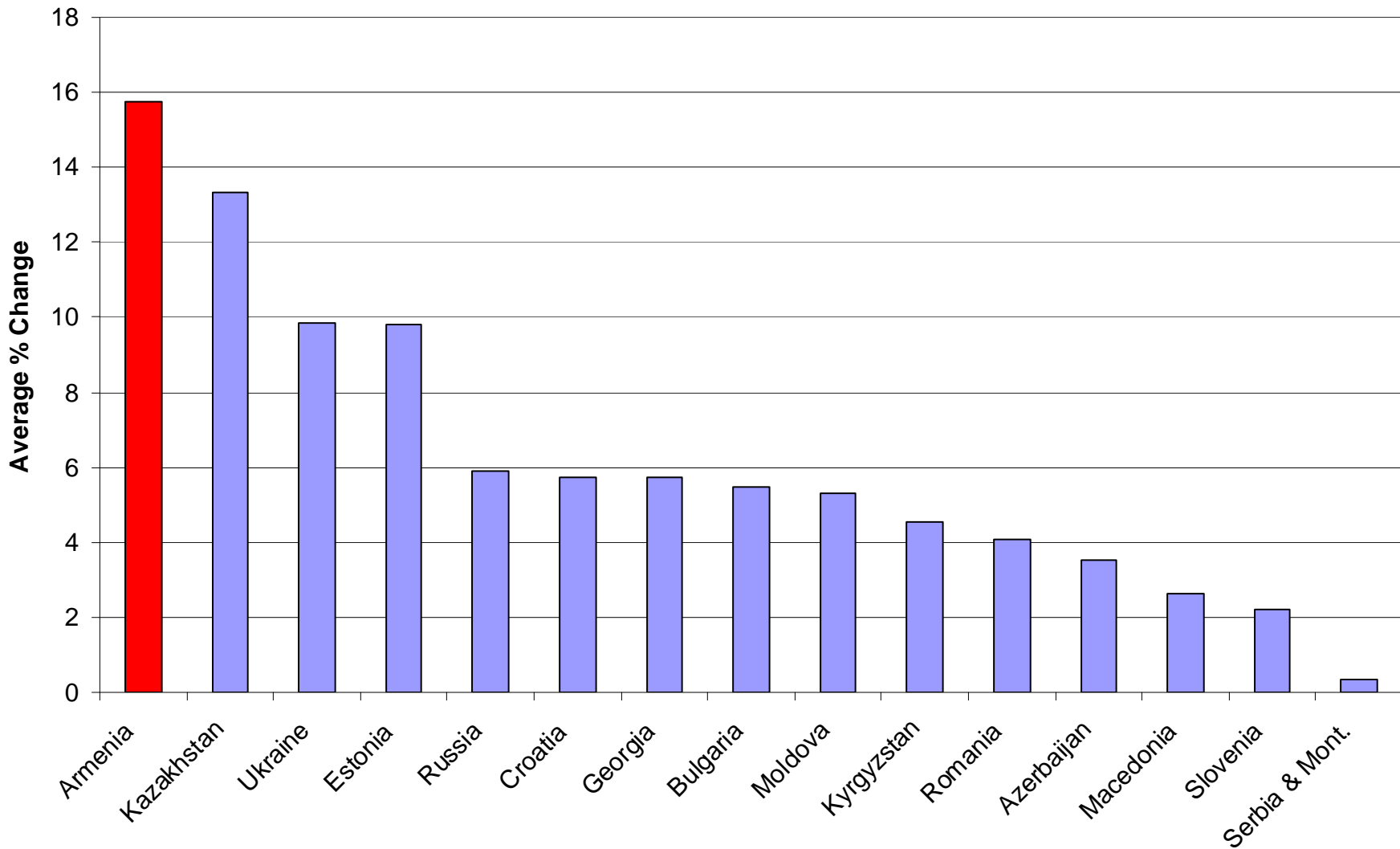
Armenia GDP, Official Aid and Remittances



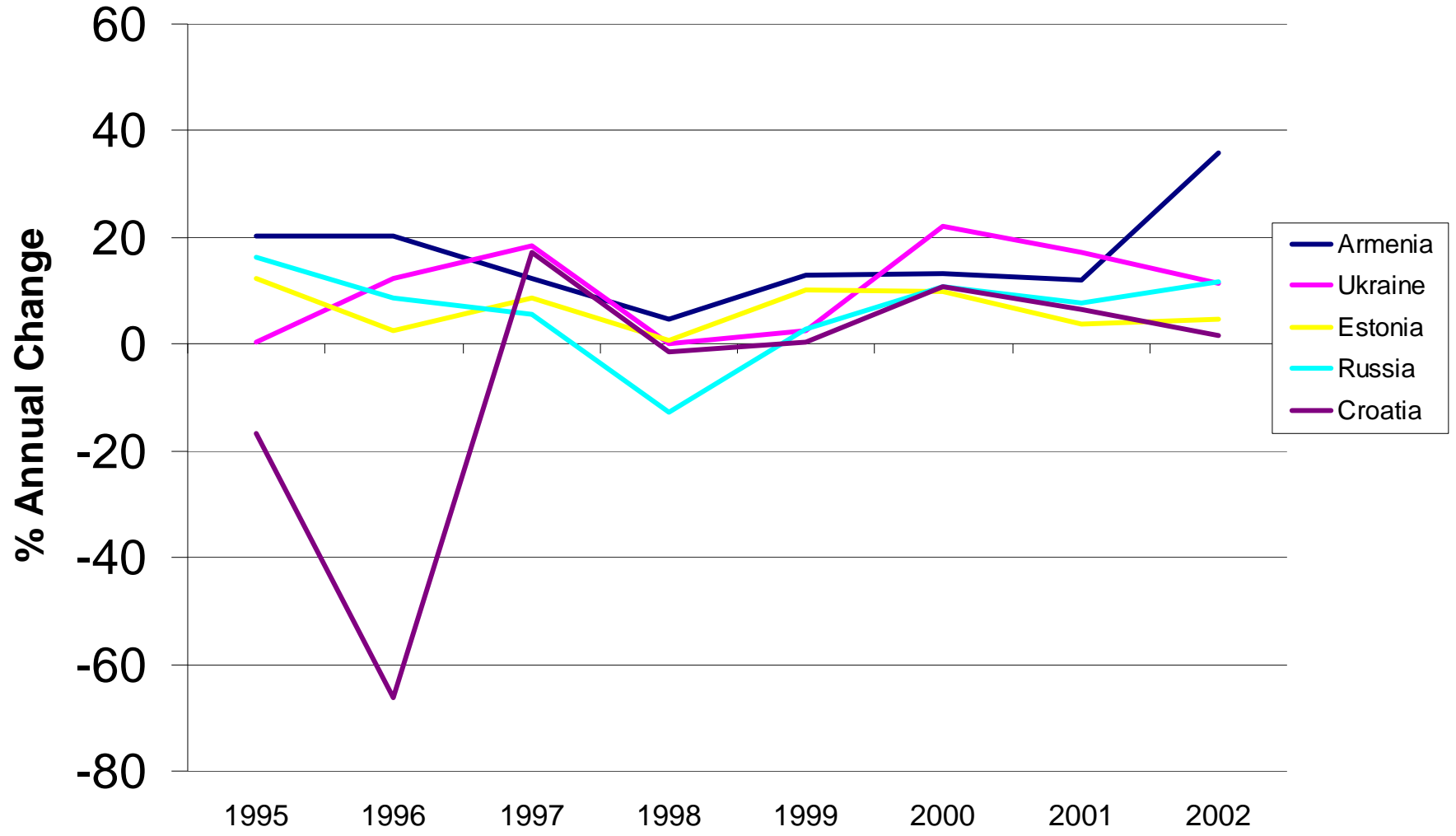
Remittances % GDP



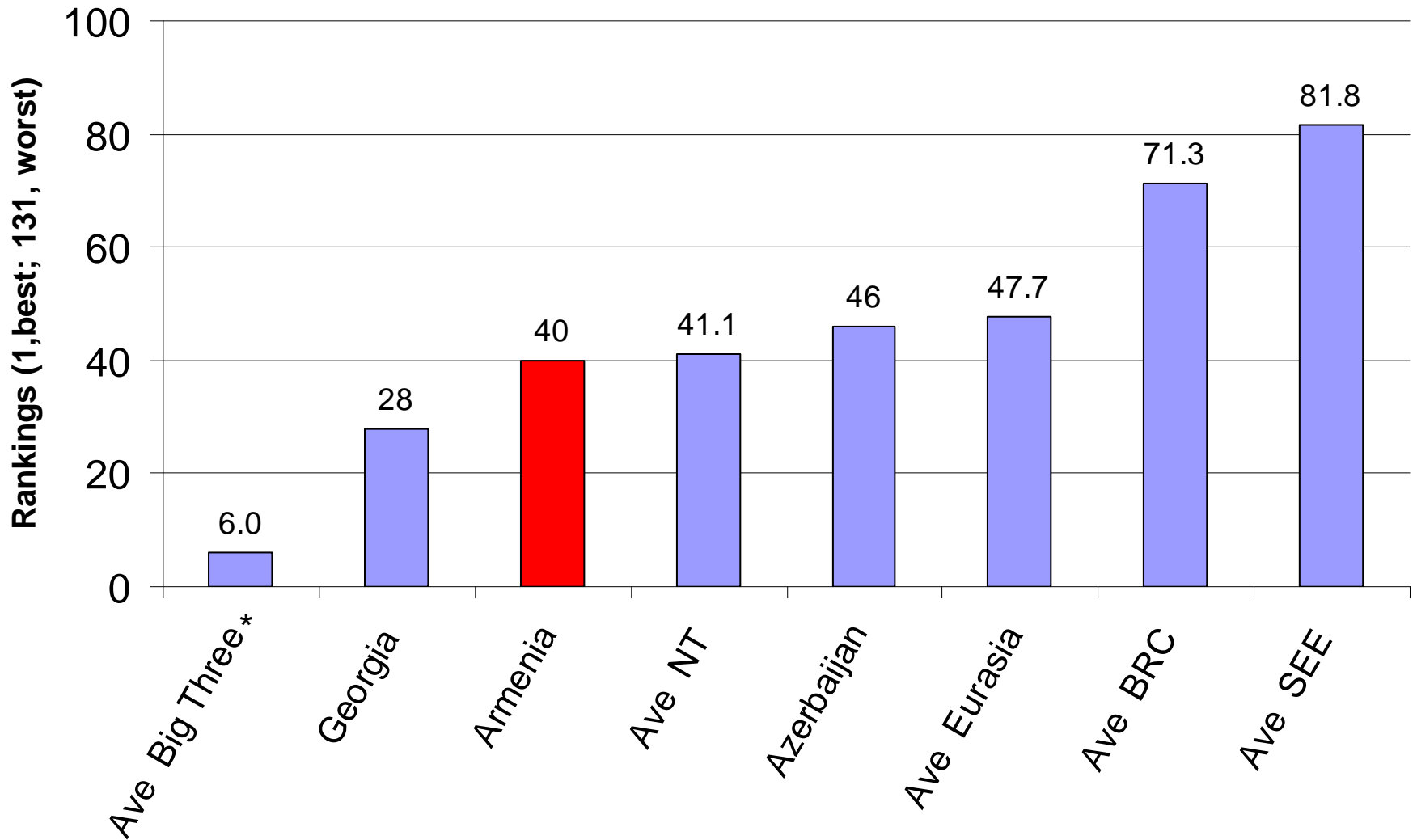
Labor Productivity Average: 1998-2002



Labor Productivity Changes

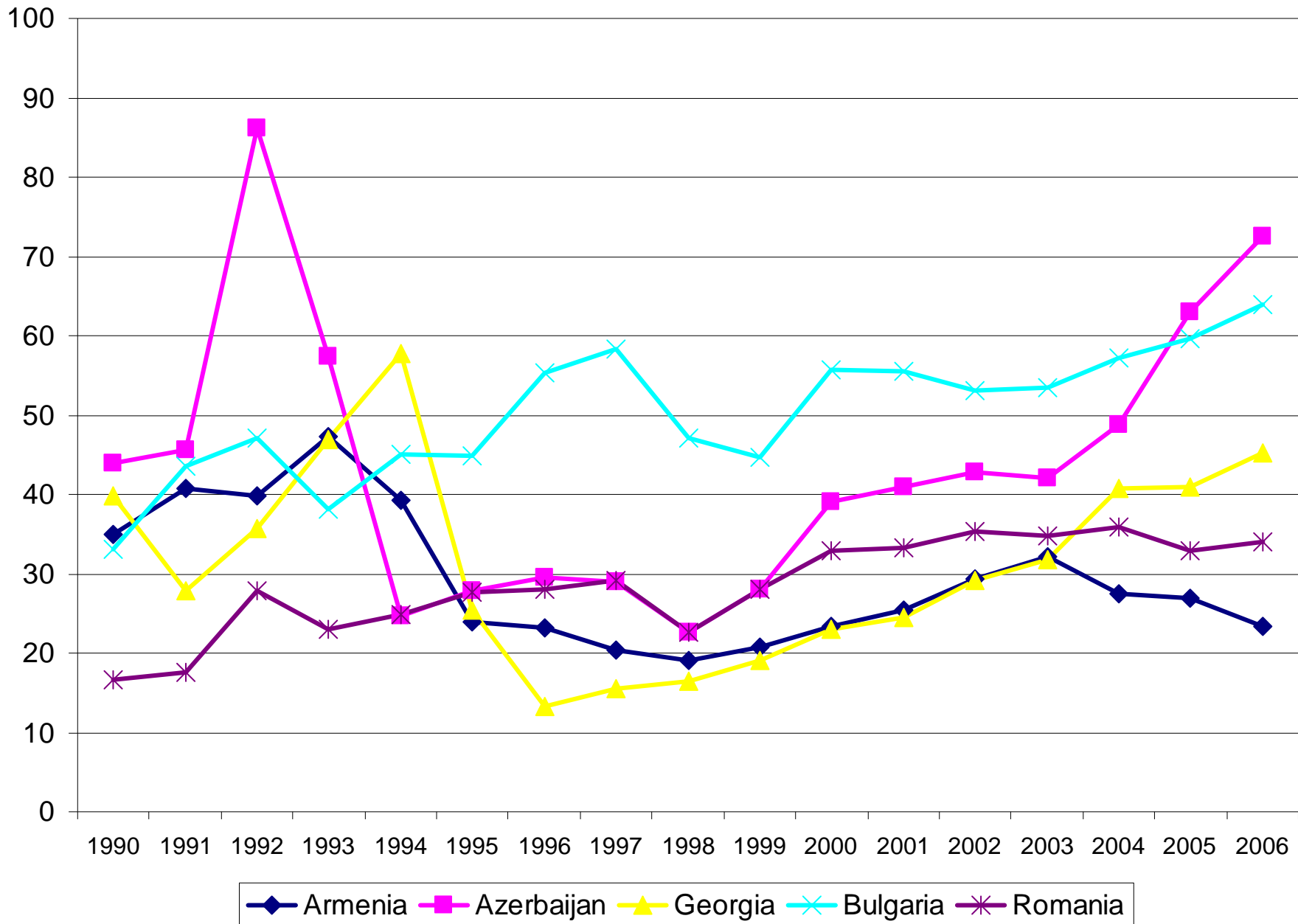


Labor Market Efficiency Rankings

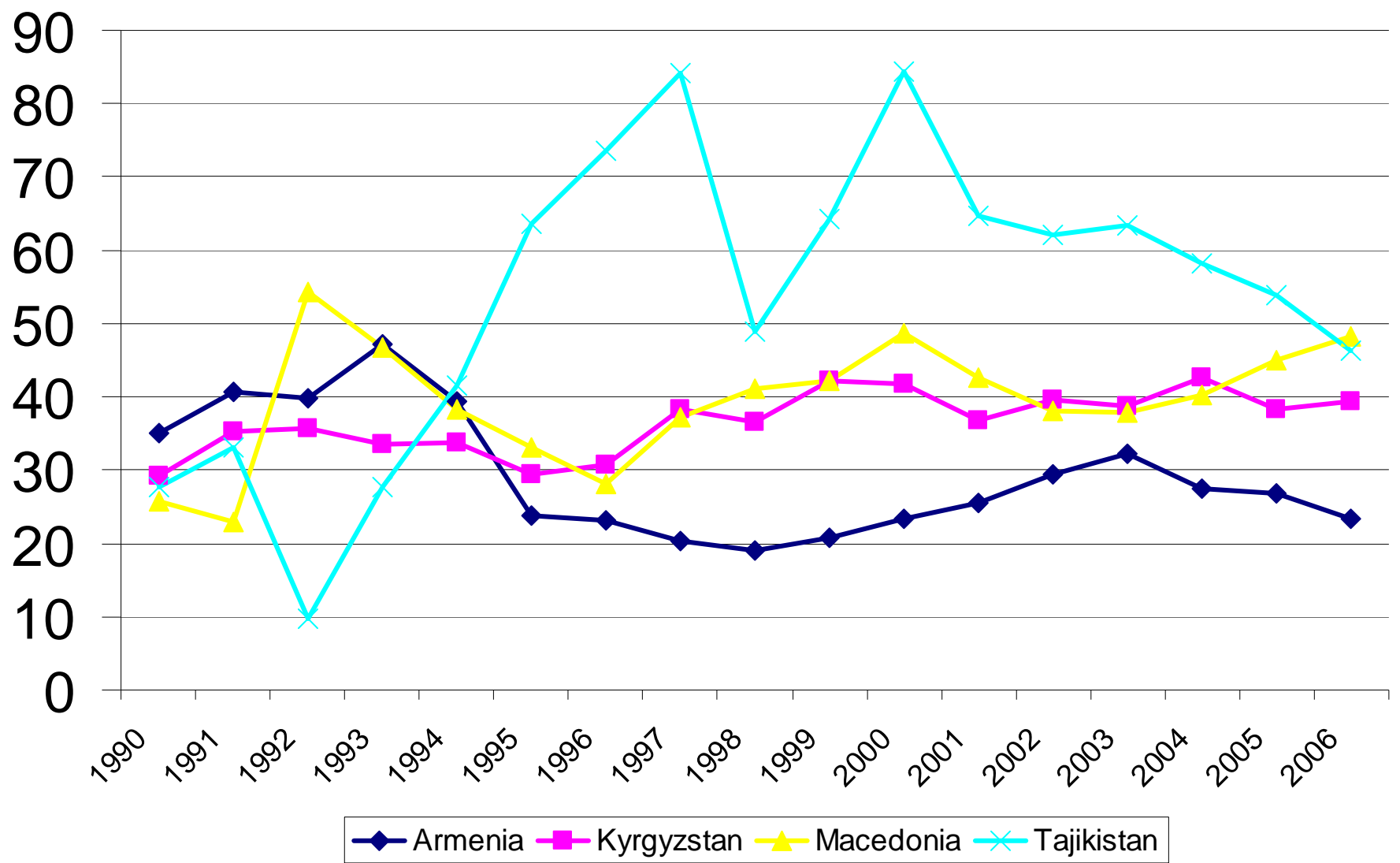


World Economic Forum Global Competitiveness Report 2007-2008. The Big 3 = US, UK and Japan; NT = the Northern Tier transition economies; BRC = Bulgaria, Romania, and Croatia; SEE = Southeast Europe.

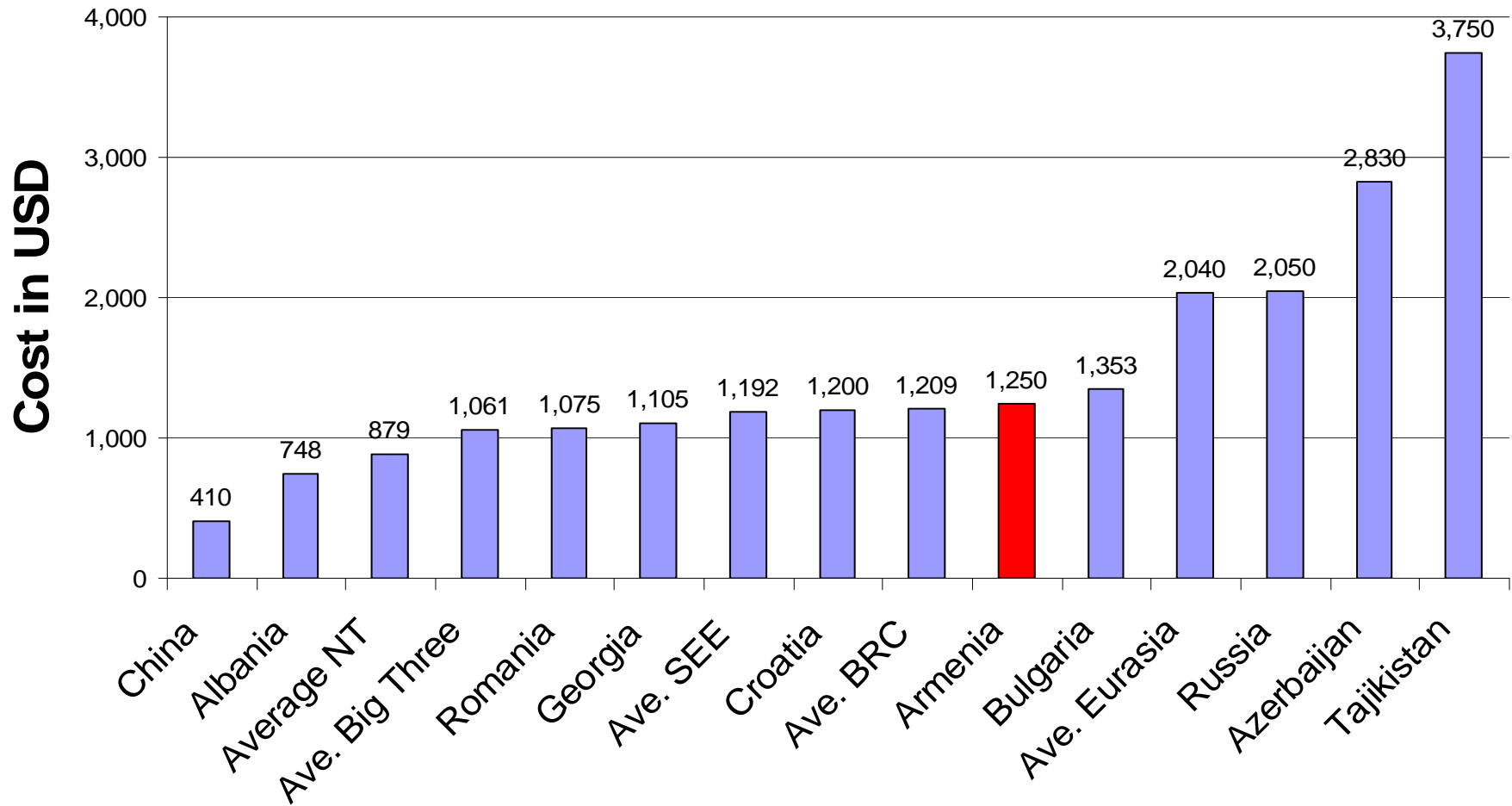
Exports % of GDP



Exports % of GDP

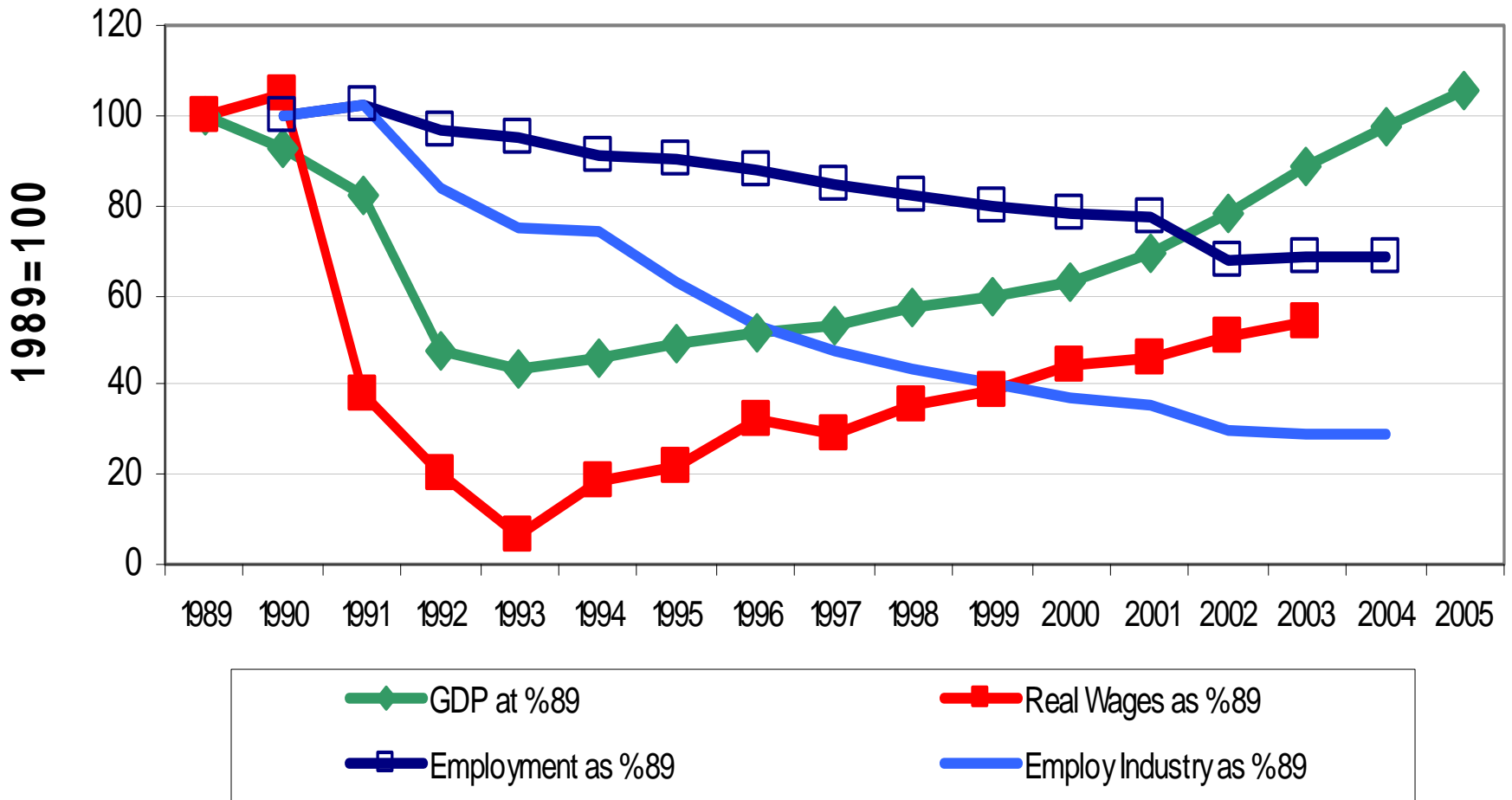


Average Cost of Exporting and Importing a Standard Container

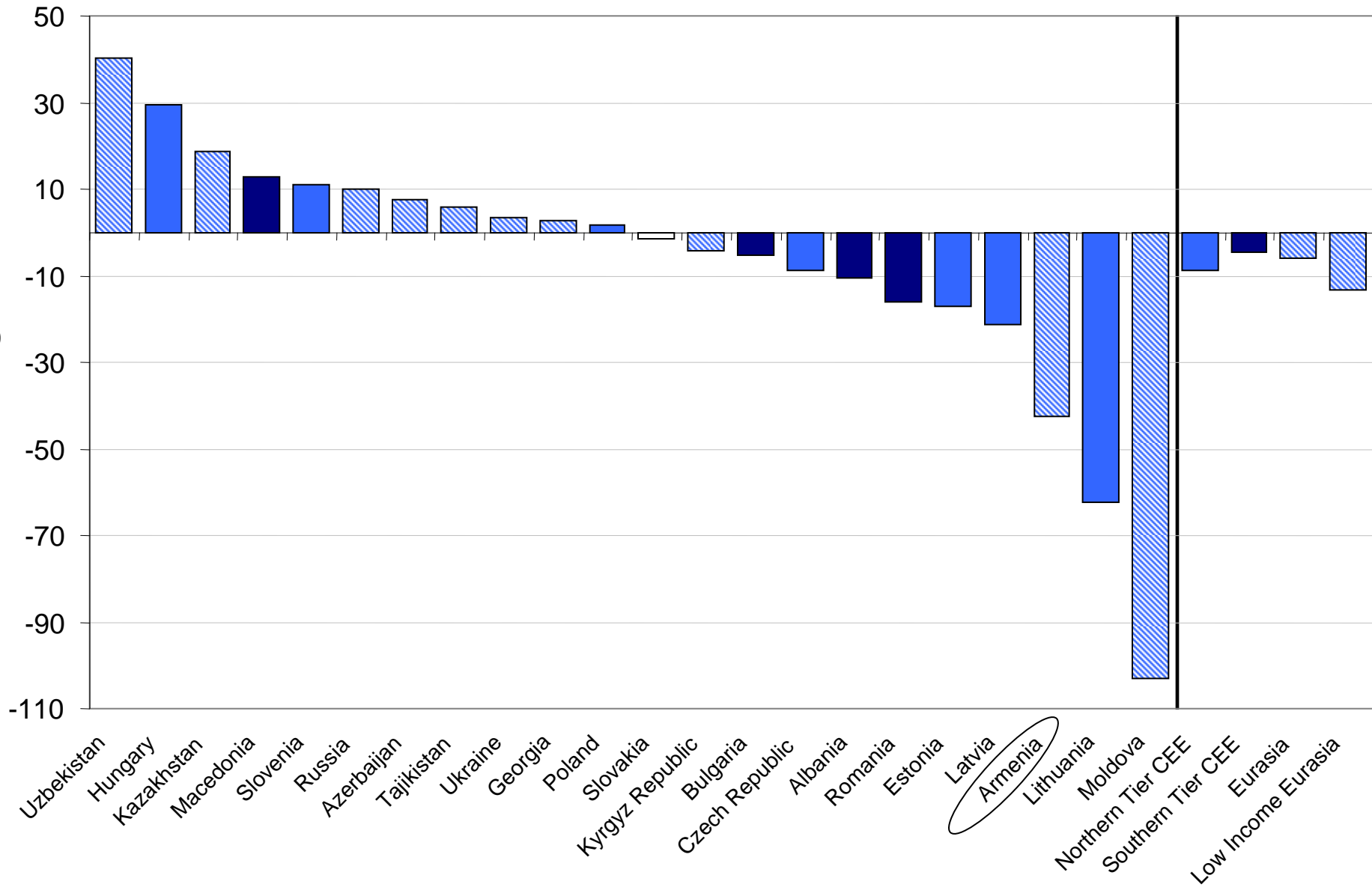


World Bank Doing Business Report 2008 (2007). Cost levied to ship a standard 20-foot container. Costs included cover documentation and fees for customs clearance and technical control, terminal handling charges and inland transport but not tariffs or trade taxes. The Big 3 = US, UK and Japan; NT = the Northern Tier transition economies; BRC = Bulgaria, Romania, and Croatia; SEE = Southeast Europe.

Employment, Real Wages and GDP in Armenia (as % of 1989)

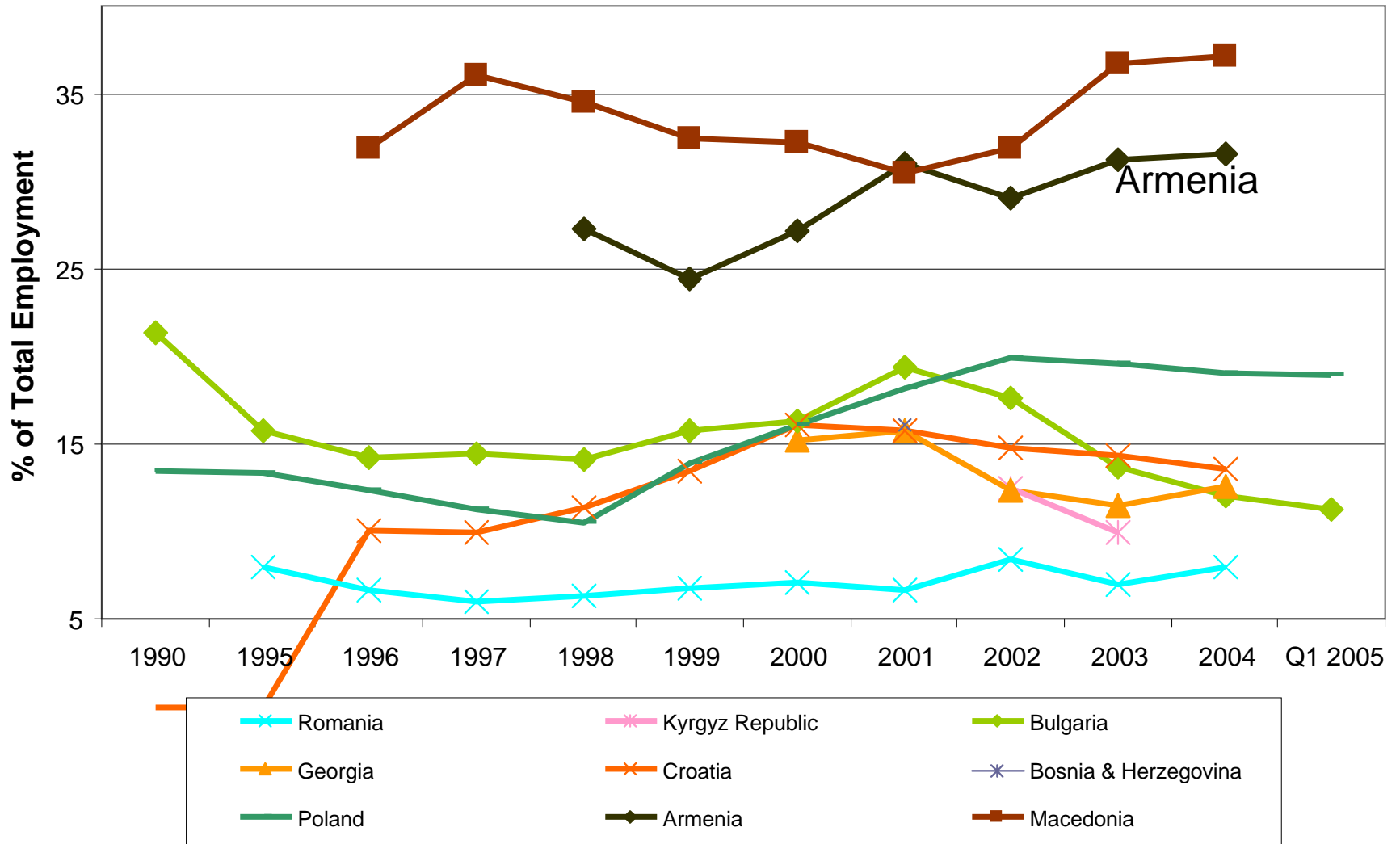


Responsiveness of Employment to Economic Growth

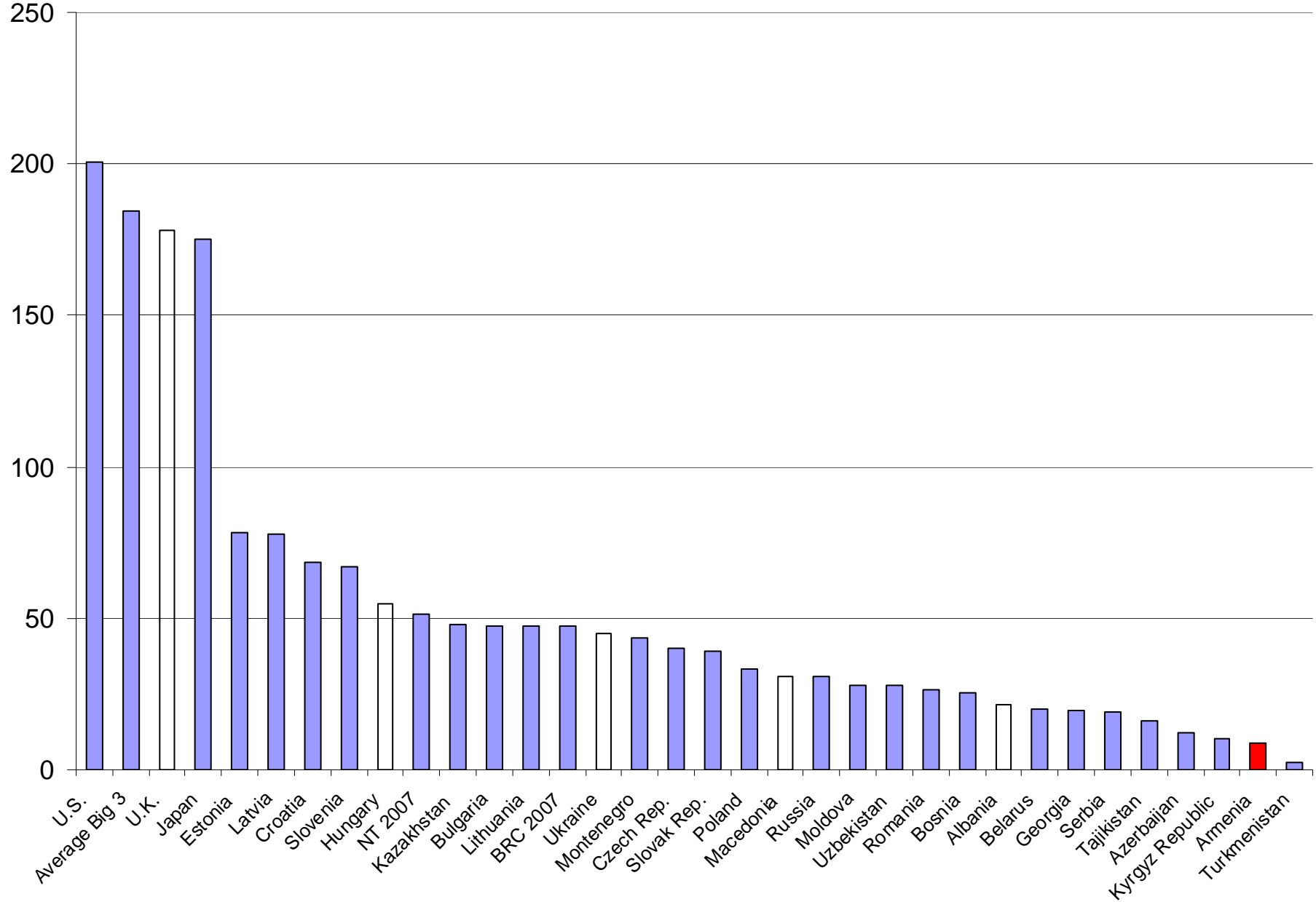


Heinegg, Murphy & Sprout, *Labor Markets in Eastern Europe & Eurasia*, USAID Working Paper #6 (January 2007) drawing from EBRD, *Transition Report 2005* (November 2005). UNICEF, *TransMONEE Database* (December 2005).

Unemployment (Labor Market Survey)

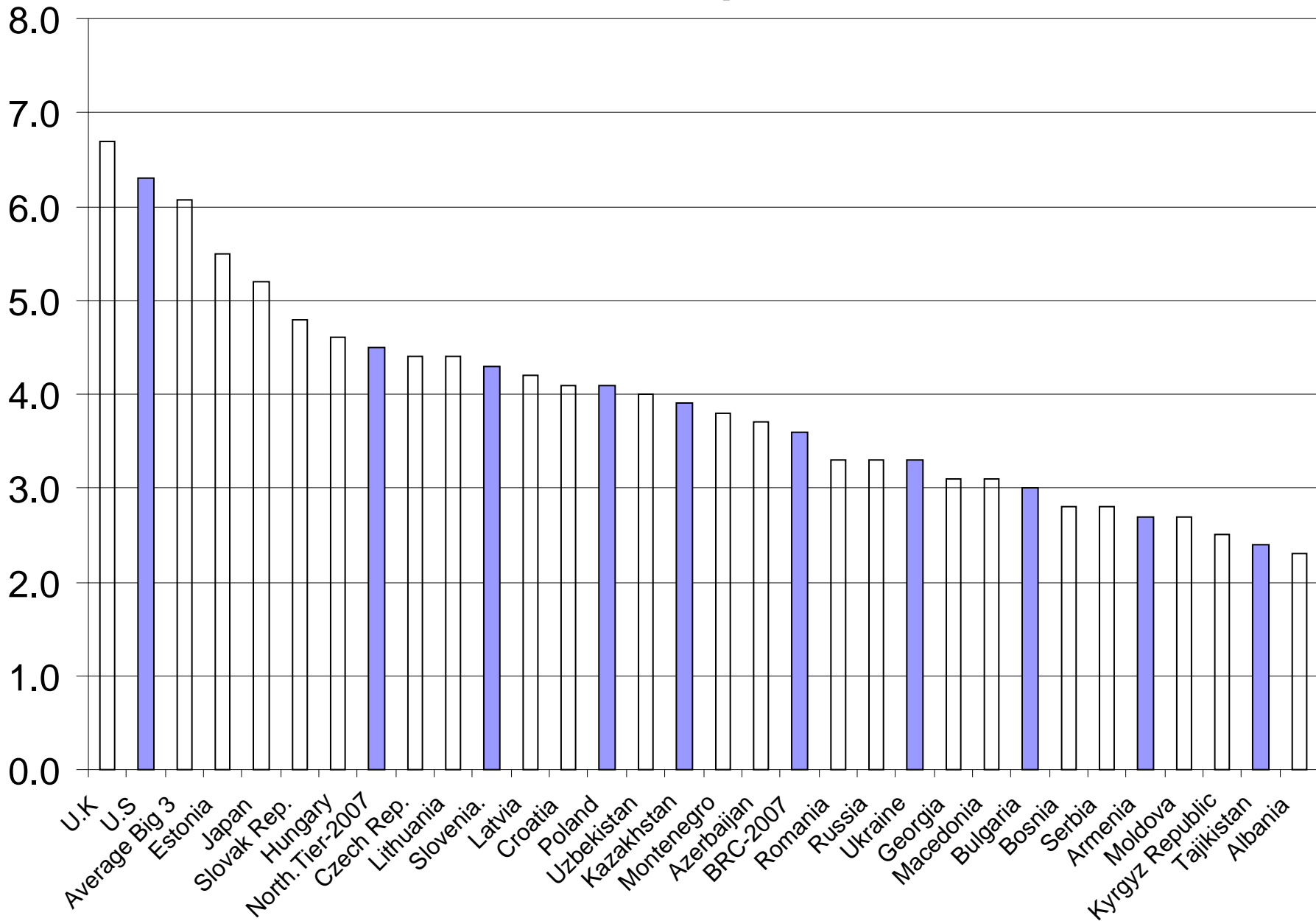


Domestic Credit to the Private Sector

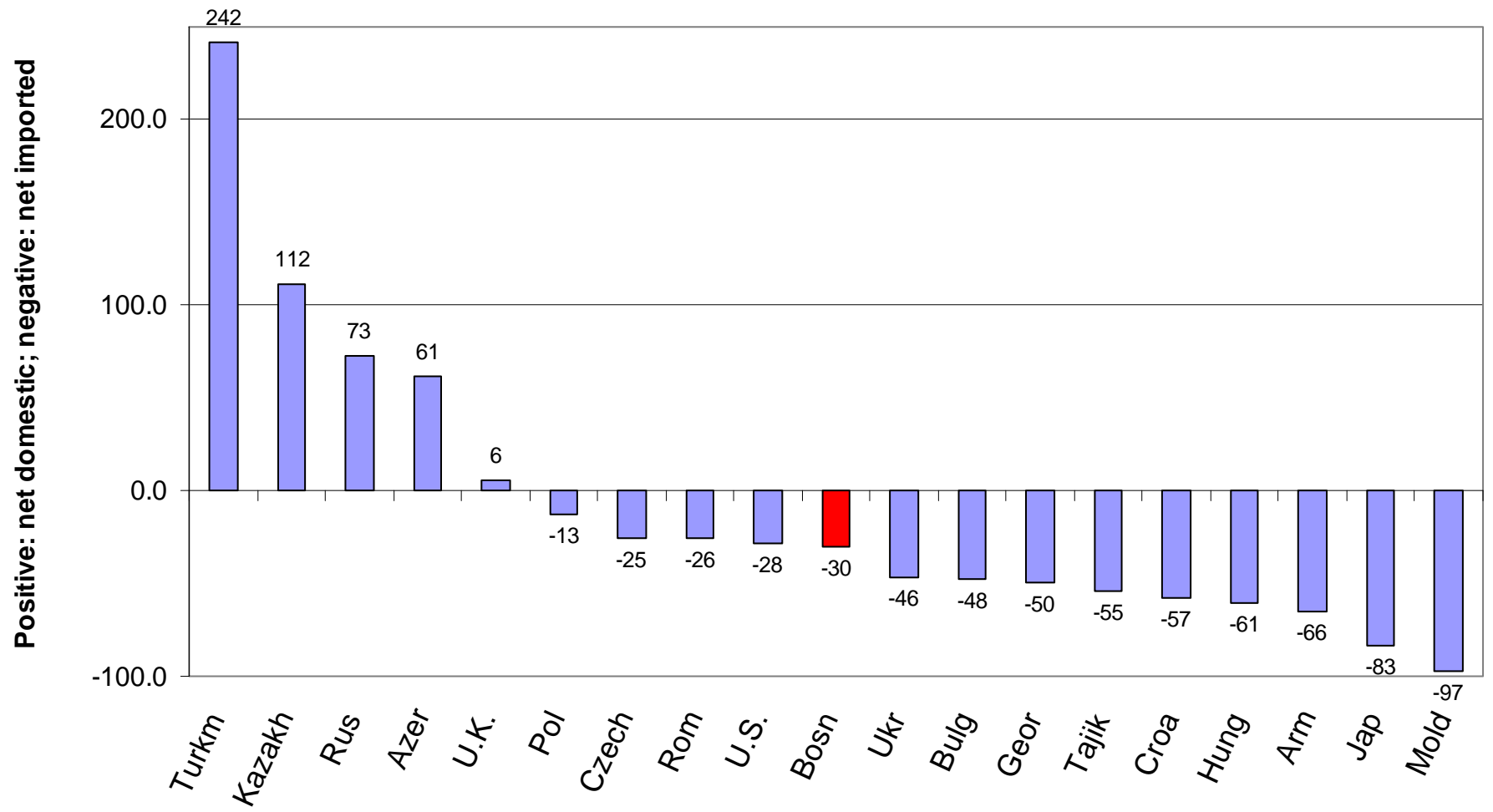


World Bank's World Development Indicators

Financial Market Sophistication



Energy: Percent Sourced Domestically or Imported



Quality of Overall Infrastructure

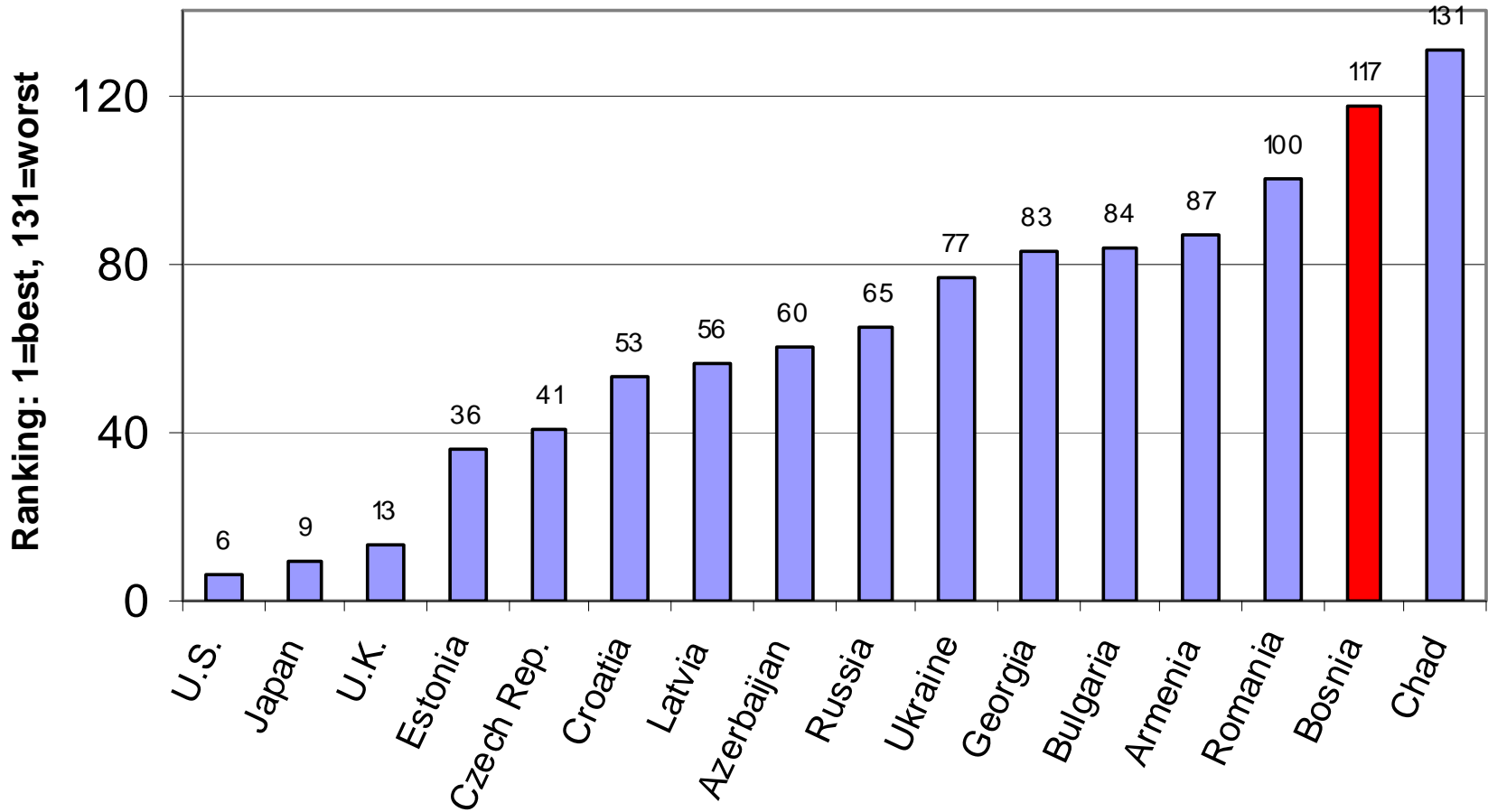
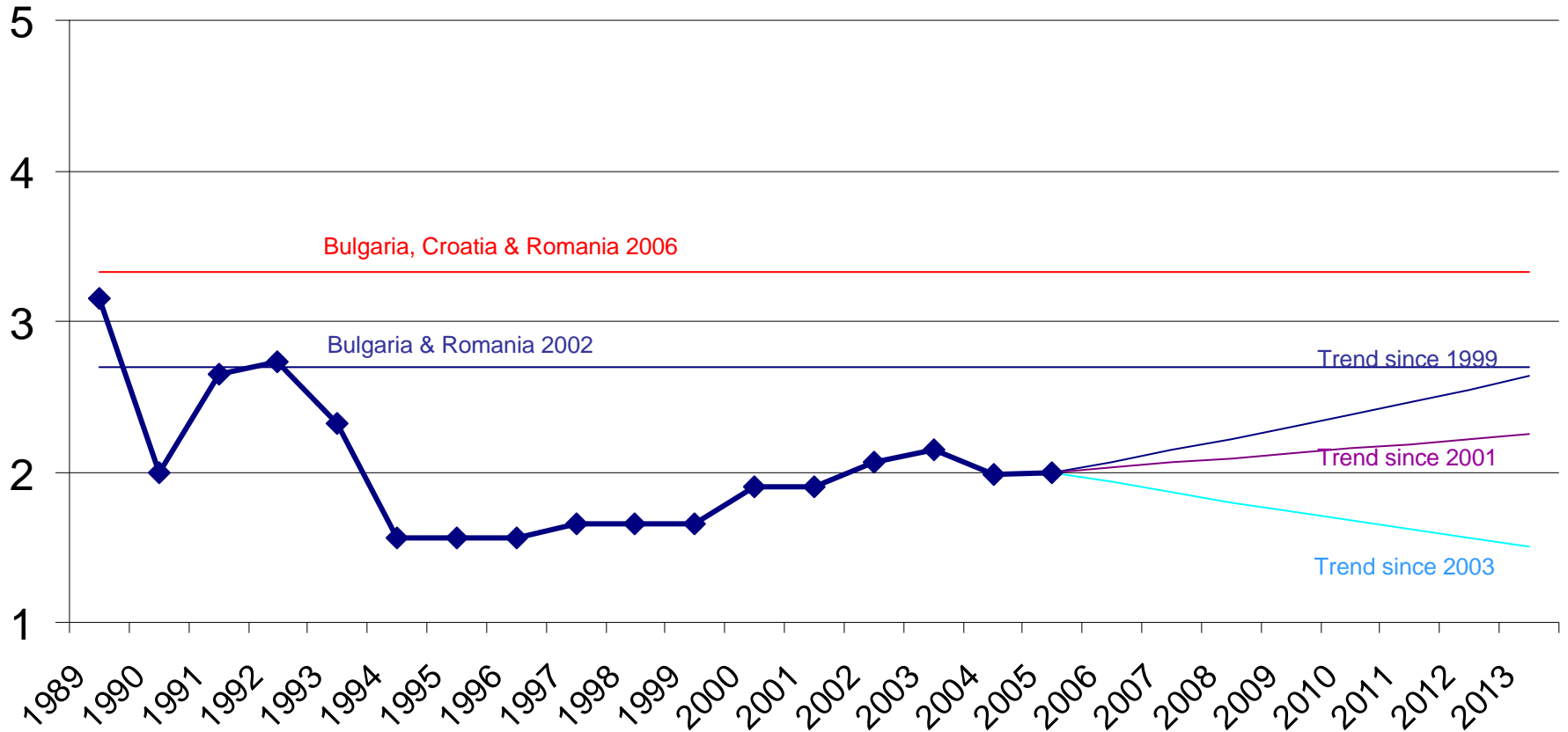


Figure 54

Human Capital in Armenia

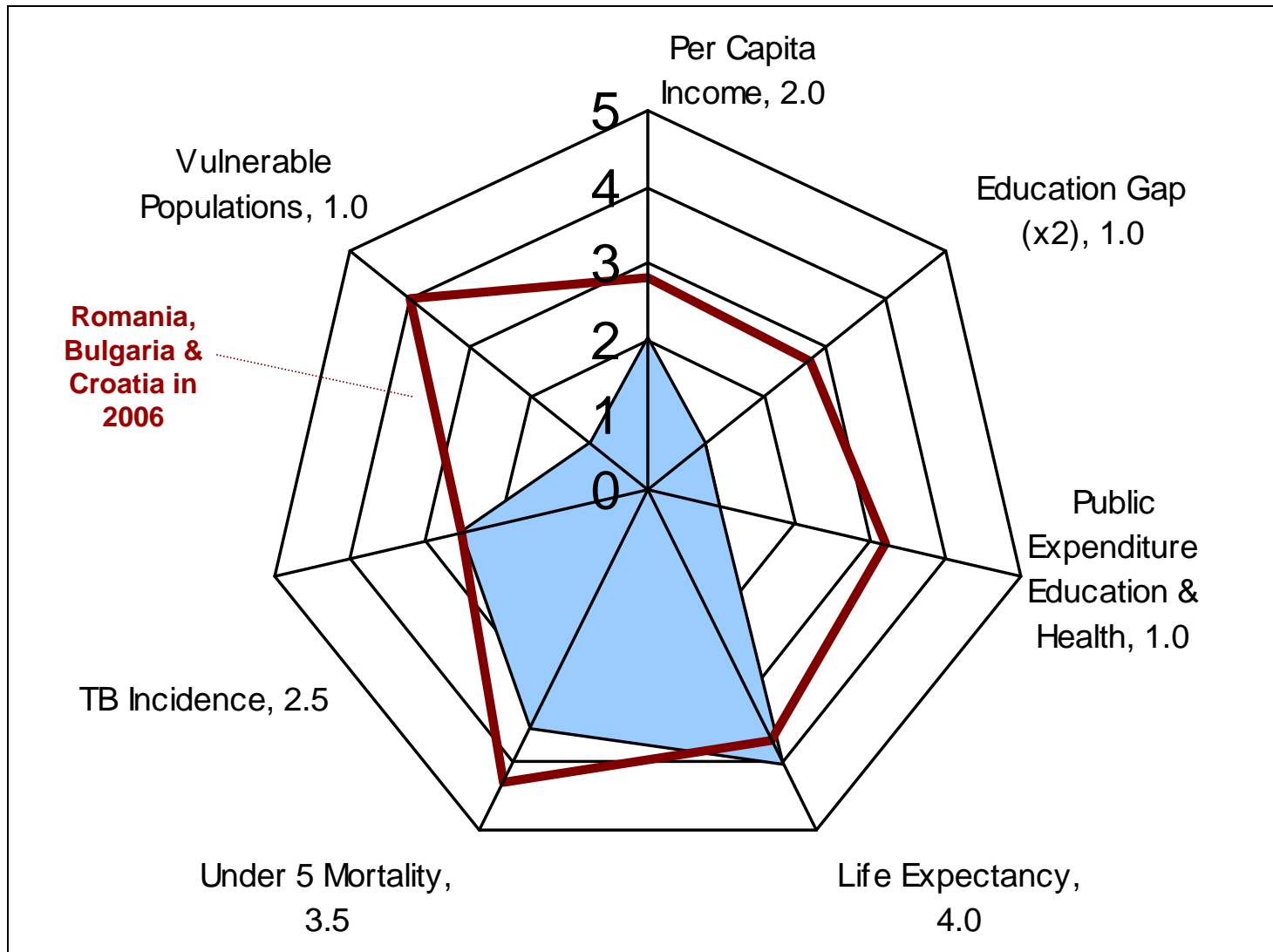


Ratings are based on a 1 to 5 scale, with 5 representing most advanced. USAID, Monitoring Country Progress in CEE & Eurasia system drawing from World Bank, *World Development Indicators 2007* (2007); UNICEF, *TransMONEE Database* (2007).

Note: Index was changed in 2008 and historical data was adjusted down accordingly.

Figure 55

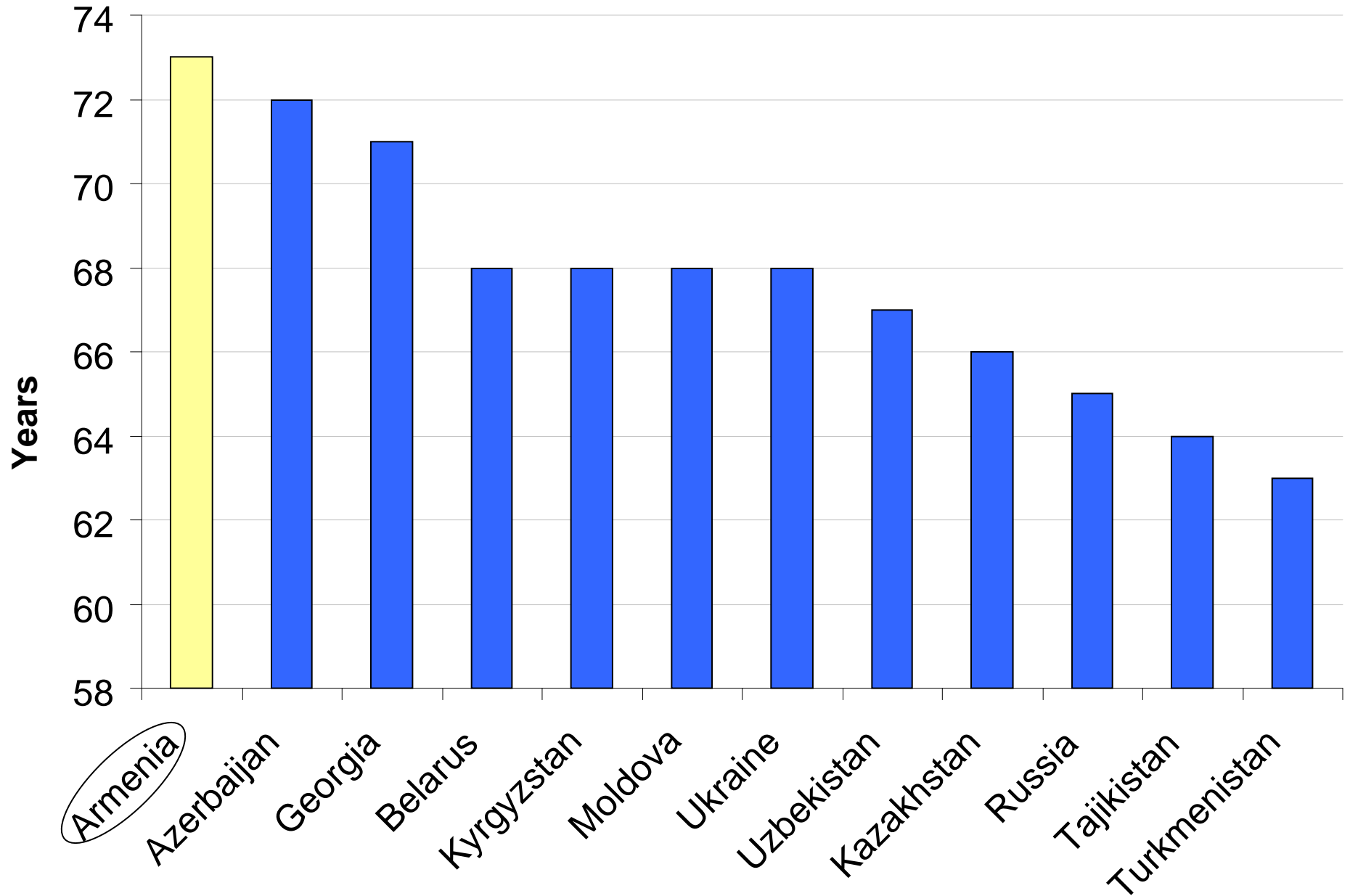
Human Capital Index in Armenia



Ratings are based on a scale from 1 to 5, with 5 representing the best score. USAID, Monitoring Country Progress in CEE & Eurasia #11 (2008 forthcoming) drawing from World Bank, *World Development Indicators 2007* (2007); UNICEF, *TransMONEE Database* (2007); World Health Organization European Health For All Database (2007); IEA, *TIMSS 2003 International Mathematics Report* (2004), *TIMSS 2003 International Science Report* (2004) and *PIRLS 2001 International Report* (2003); OECD, *Literacy Skills for the World of Tomorrow: Further Results from PISA 2000* (2003), *First Results from PISA 2003* (2004) and *International Adult Literacy Survey* (2000).

Life Expectancy in 2005

Figure 56



Under 5 Mortality Rate in 2005

Figure 57

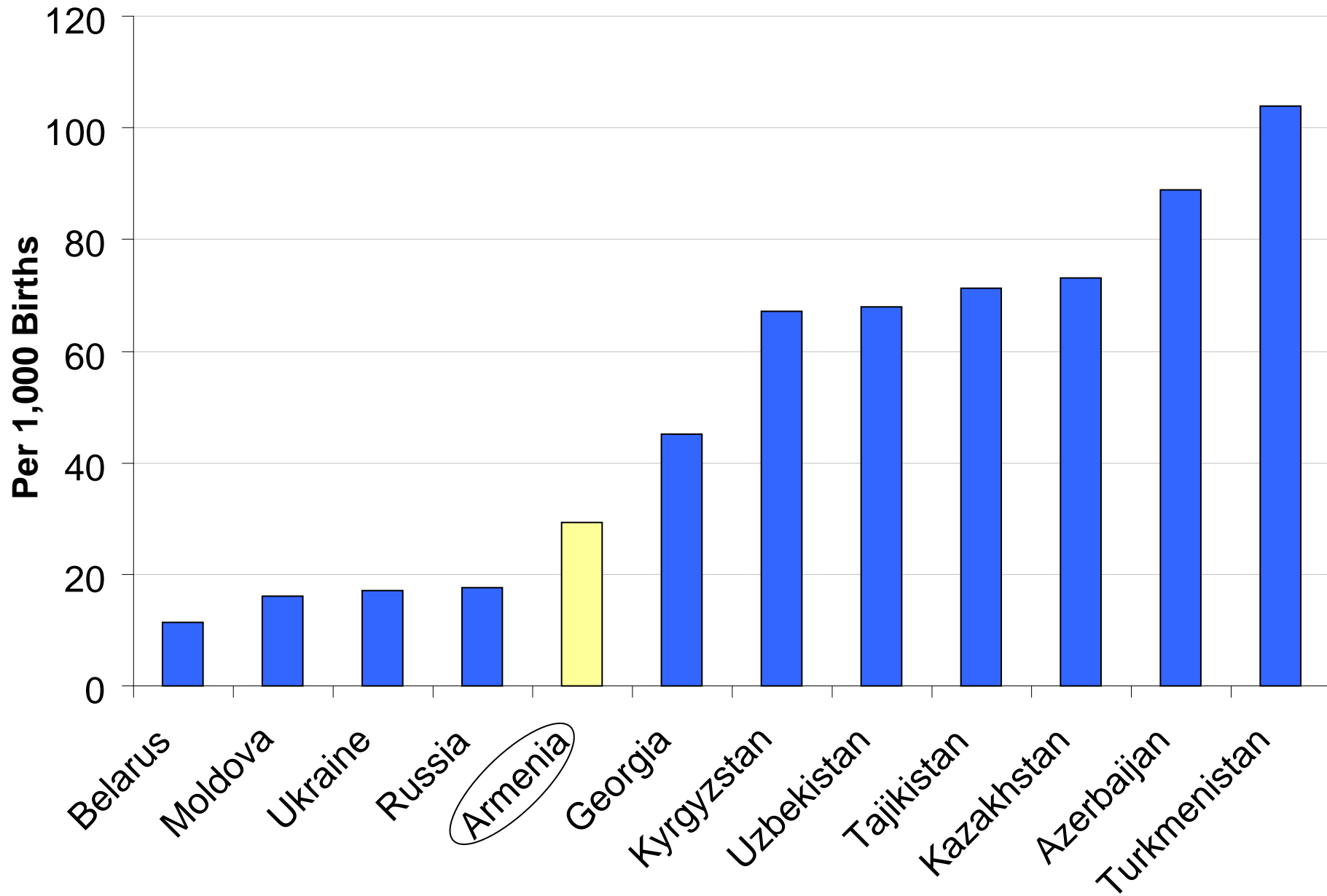


Figure 58

Per Capita Gross National Income in 2006

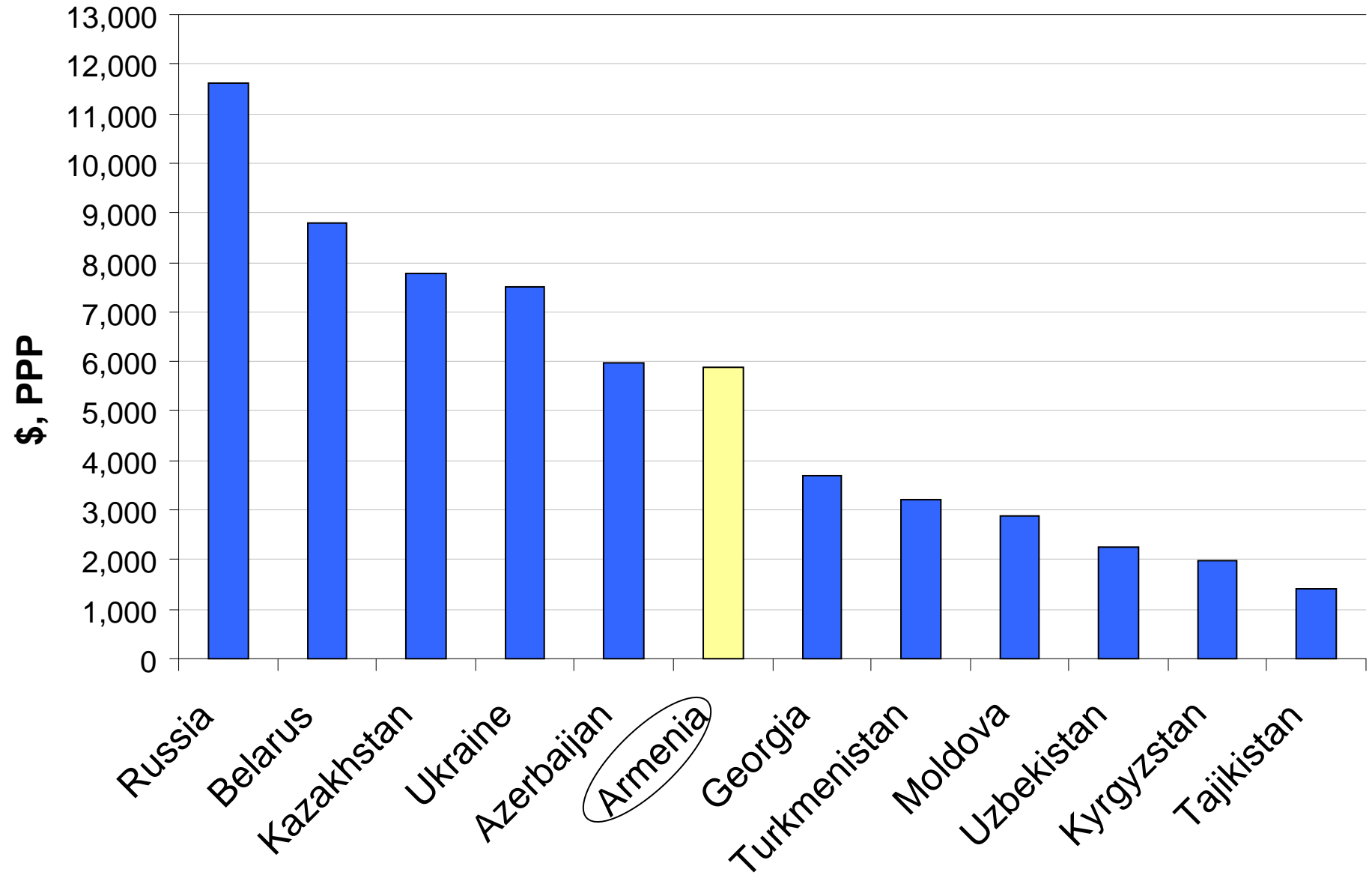
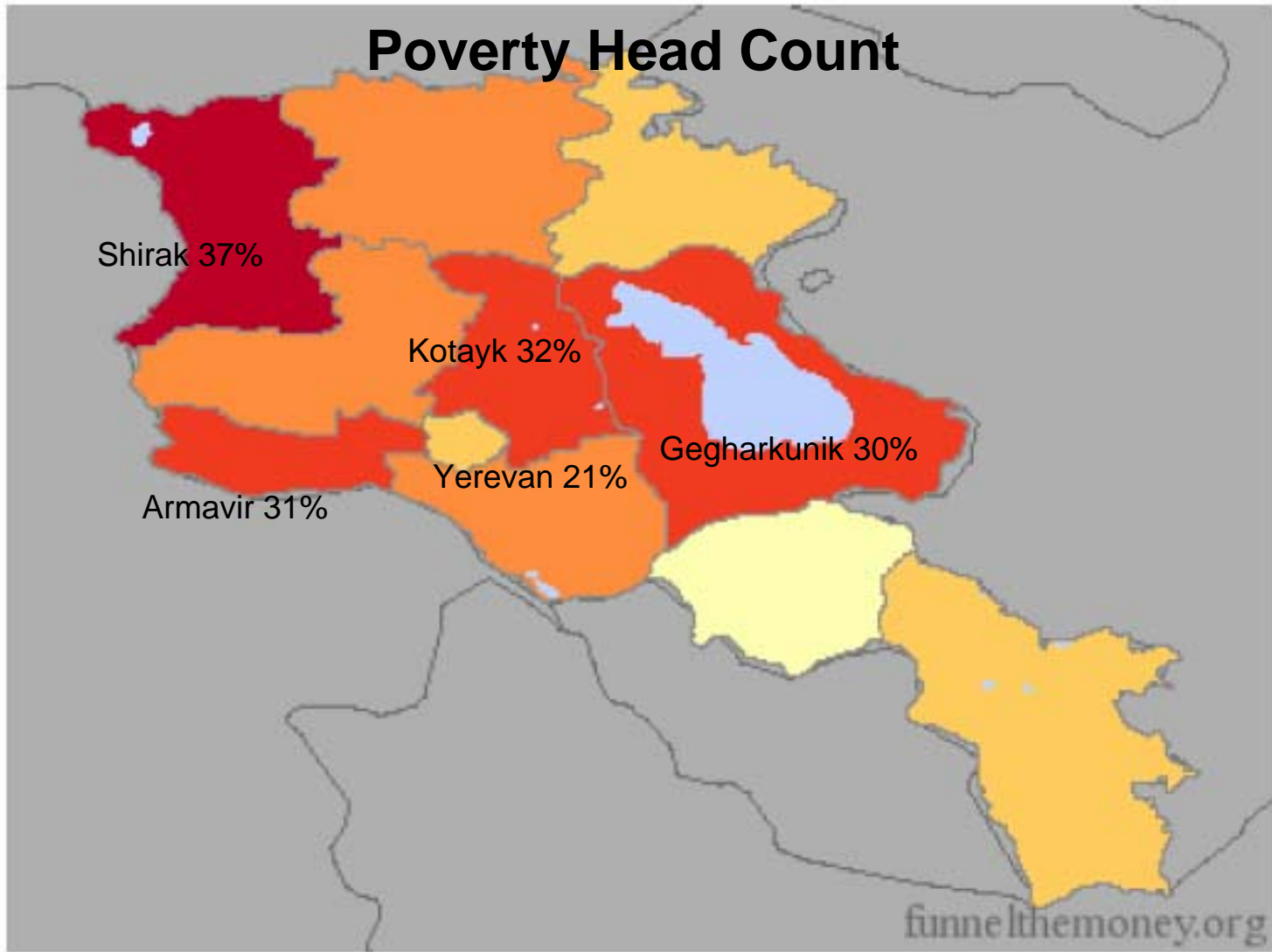
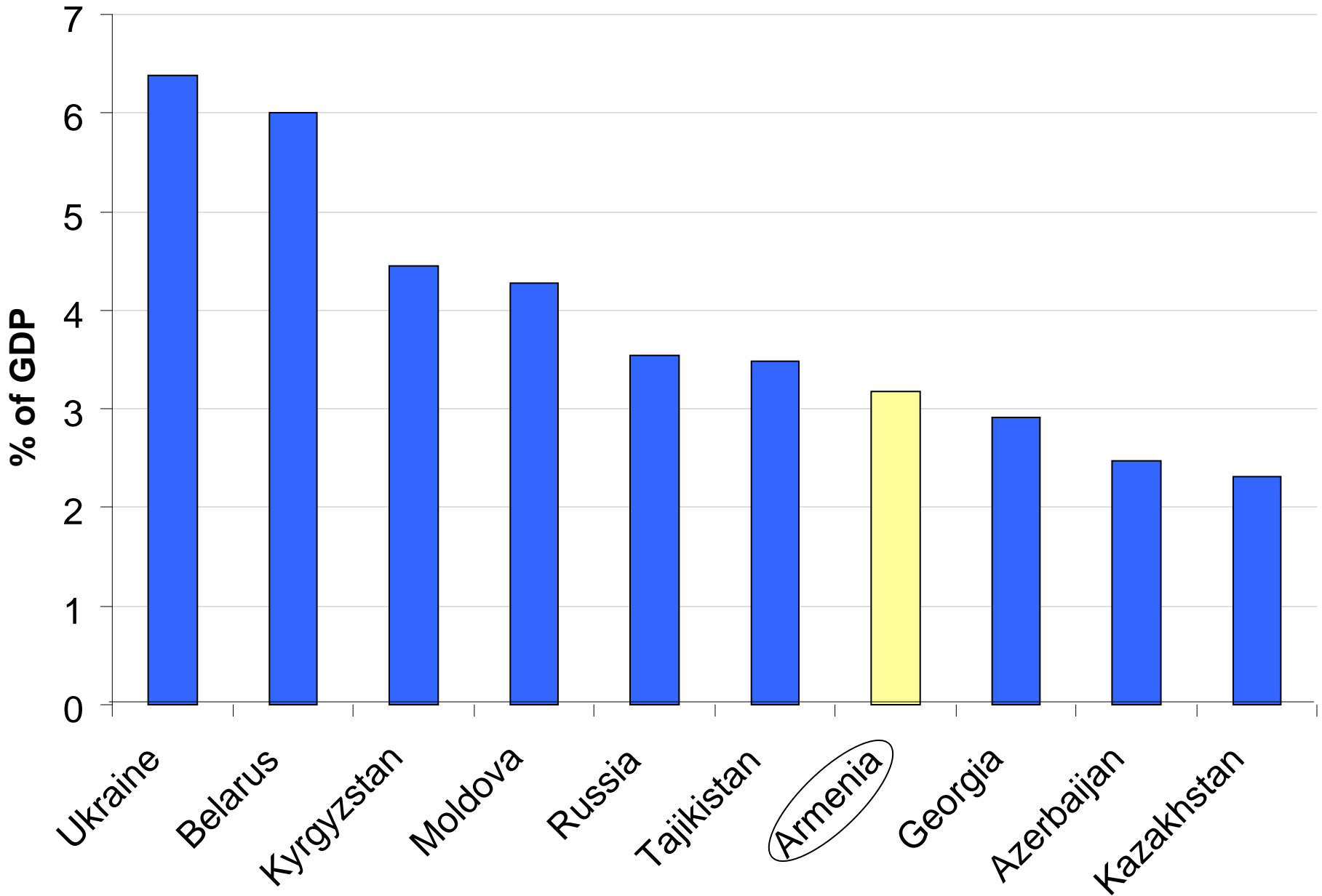


Figure 59



Public Expenditure on Education in 2005

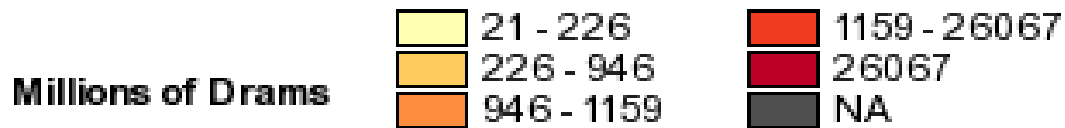
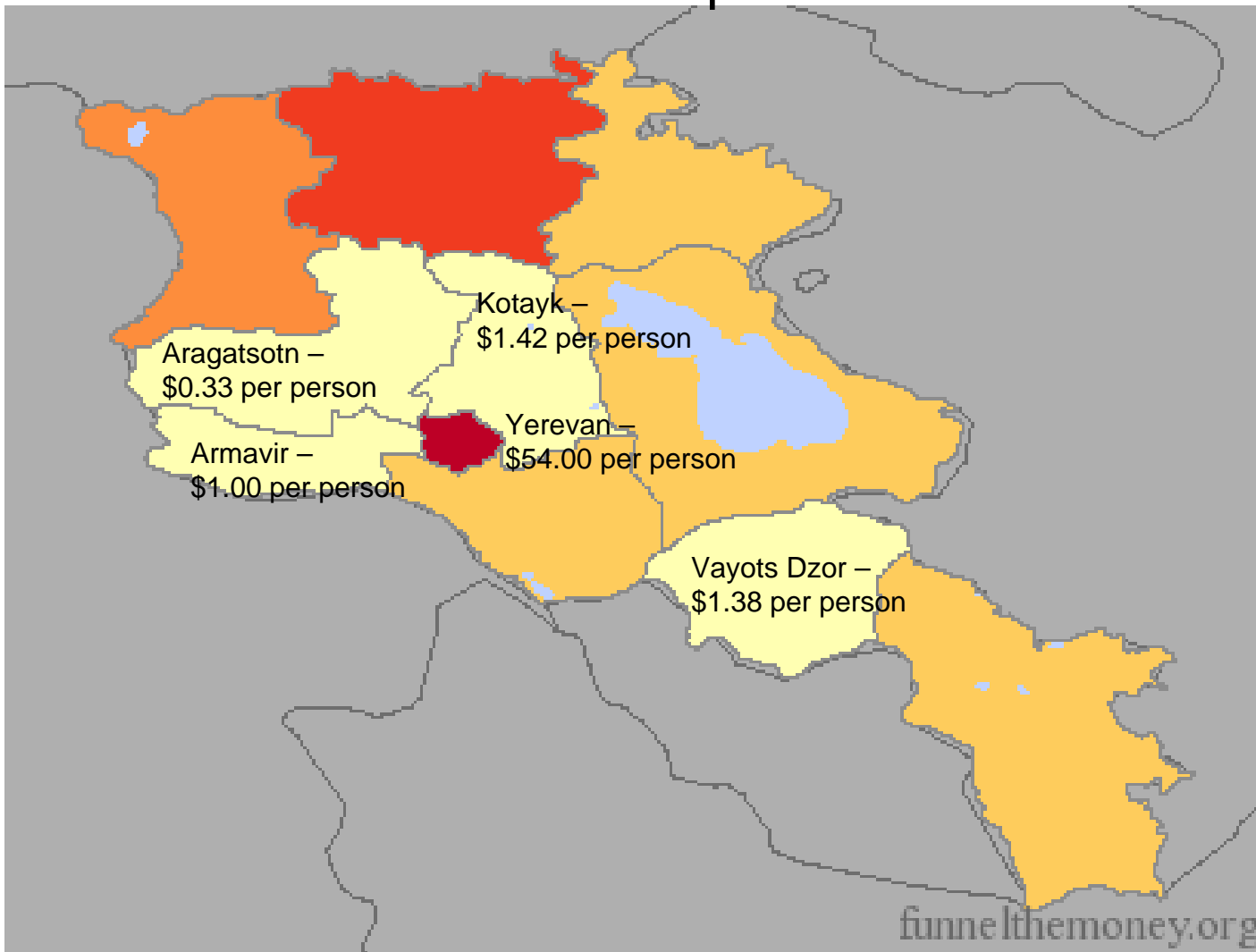
Figure 60



World Bank, *World Development Indicators 2007*. Data for Moldova & Georgia are 2004, Tajikistan 2003 and Ukraine 2001.

Education Expenditures

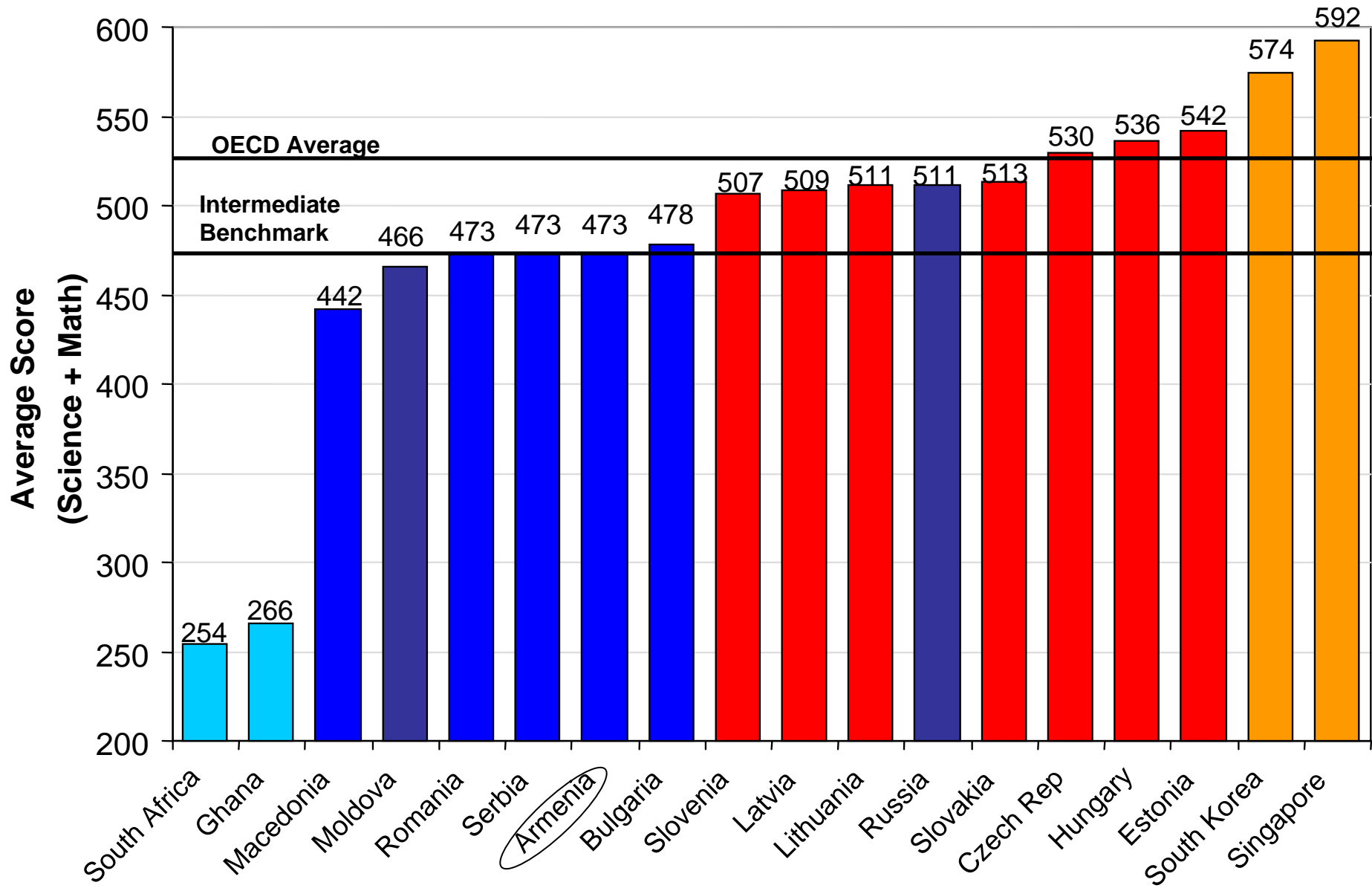
Figure 61



Total amount spent on educational services; National Statistical Service Republic of Armenia. 2006. Marzes of the Republic of Armenia in Figures, 2001-2005: Statistical Handbook. Republic of Armenia, Yerevan.

Trends in International Mathematics and Sciences Study (TIMSS)

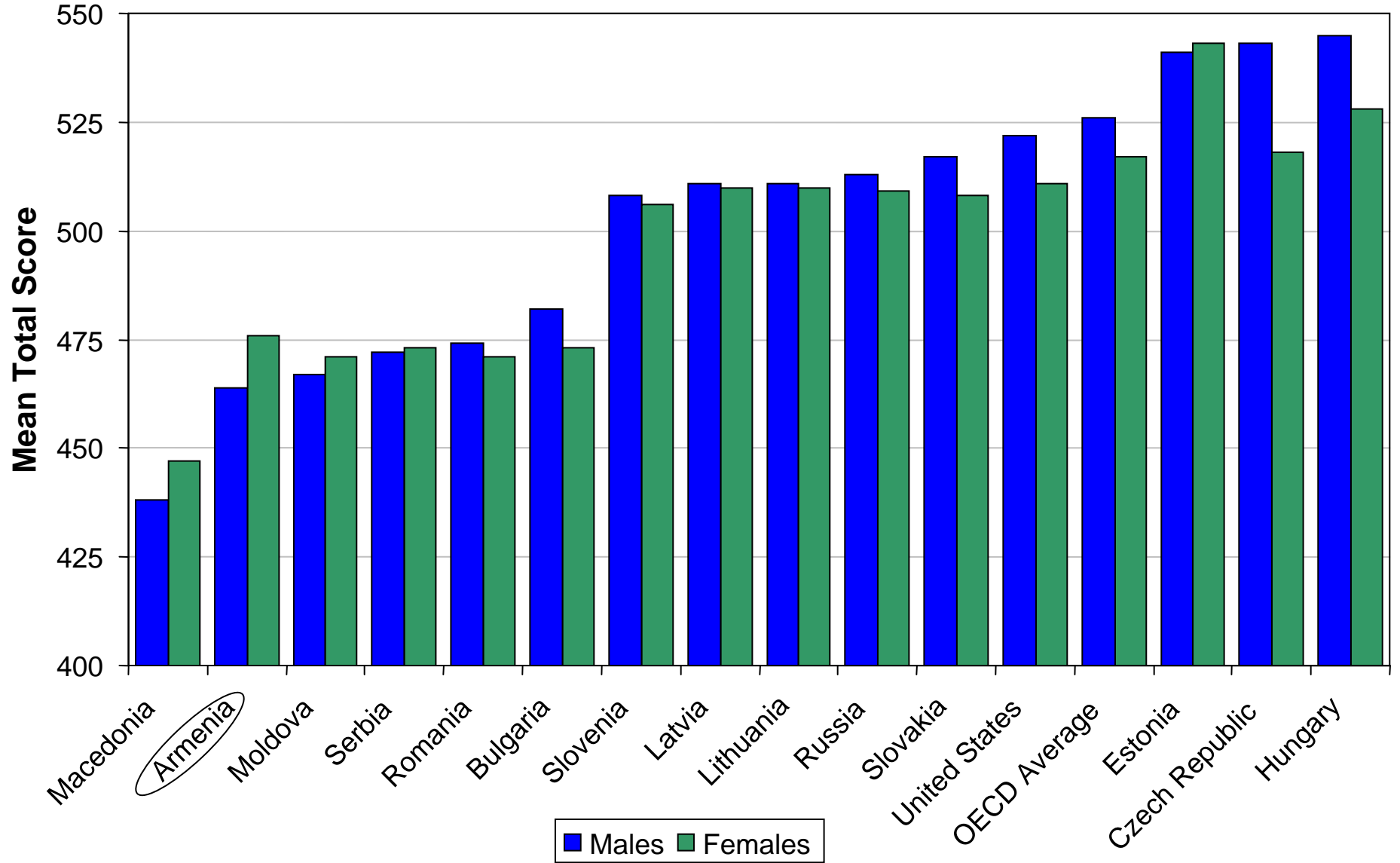
Figure 62



Average scale score is the average of the math and science domains. All countries use results from TIMSS 2003, except the Czech Republic which uses TIMSS 1999 results. The 2003 OECD average was 527. The intermediate international benchmark is defined as scores at or above 475. IEA, *TIMSS 2003 International Mathematics Report* (2004). IEA, *TIMSS 2003 International Science Report* (2004).

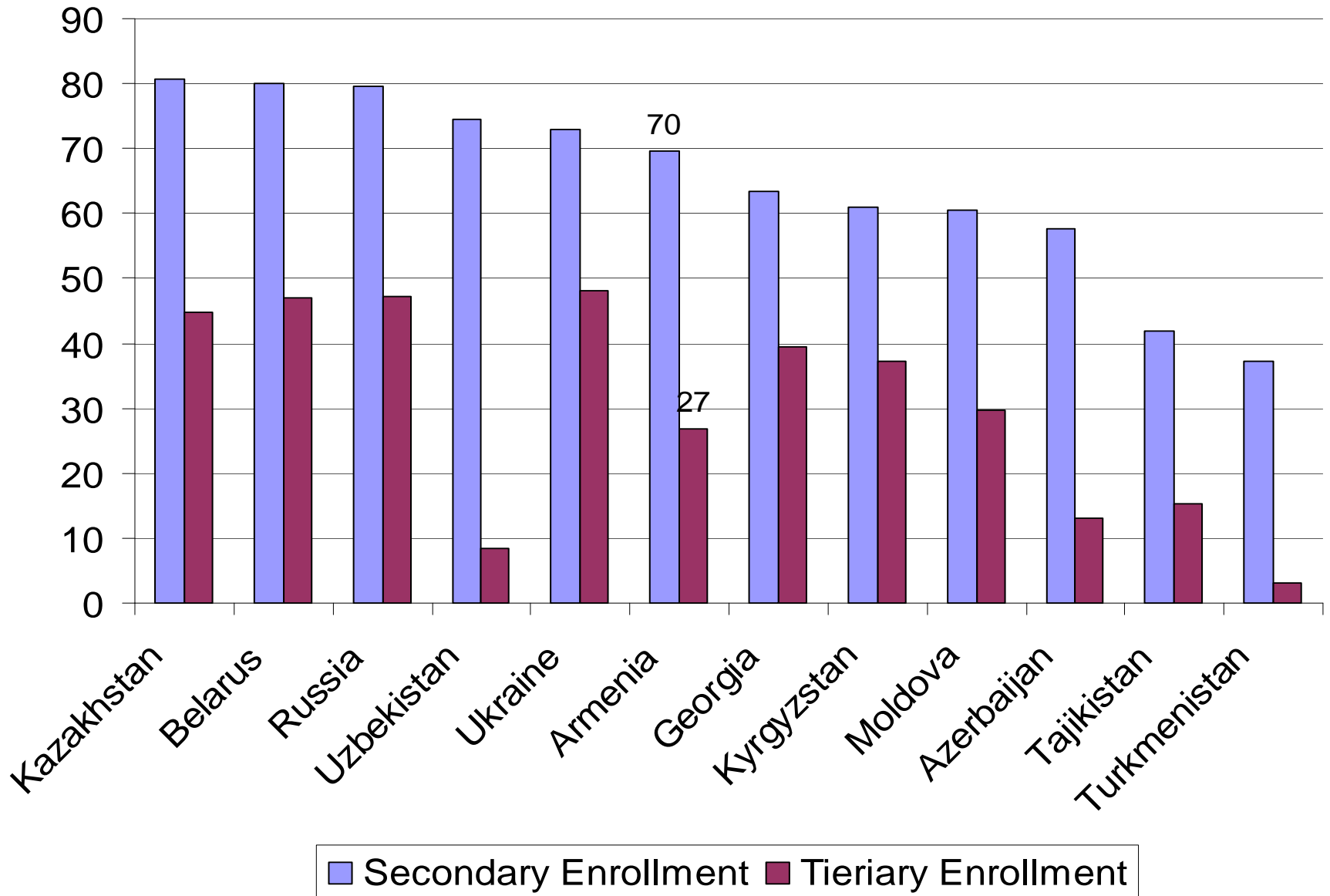
Figure 63

TIMSS Performance by Gender



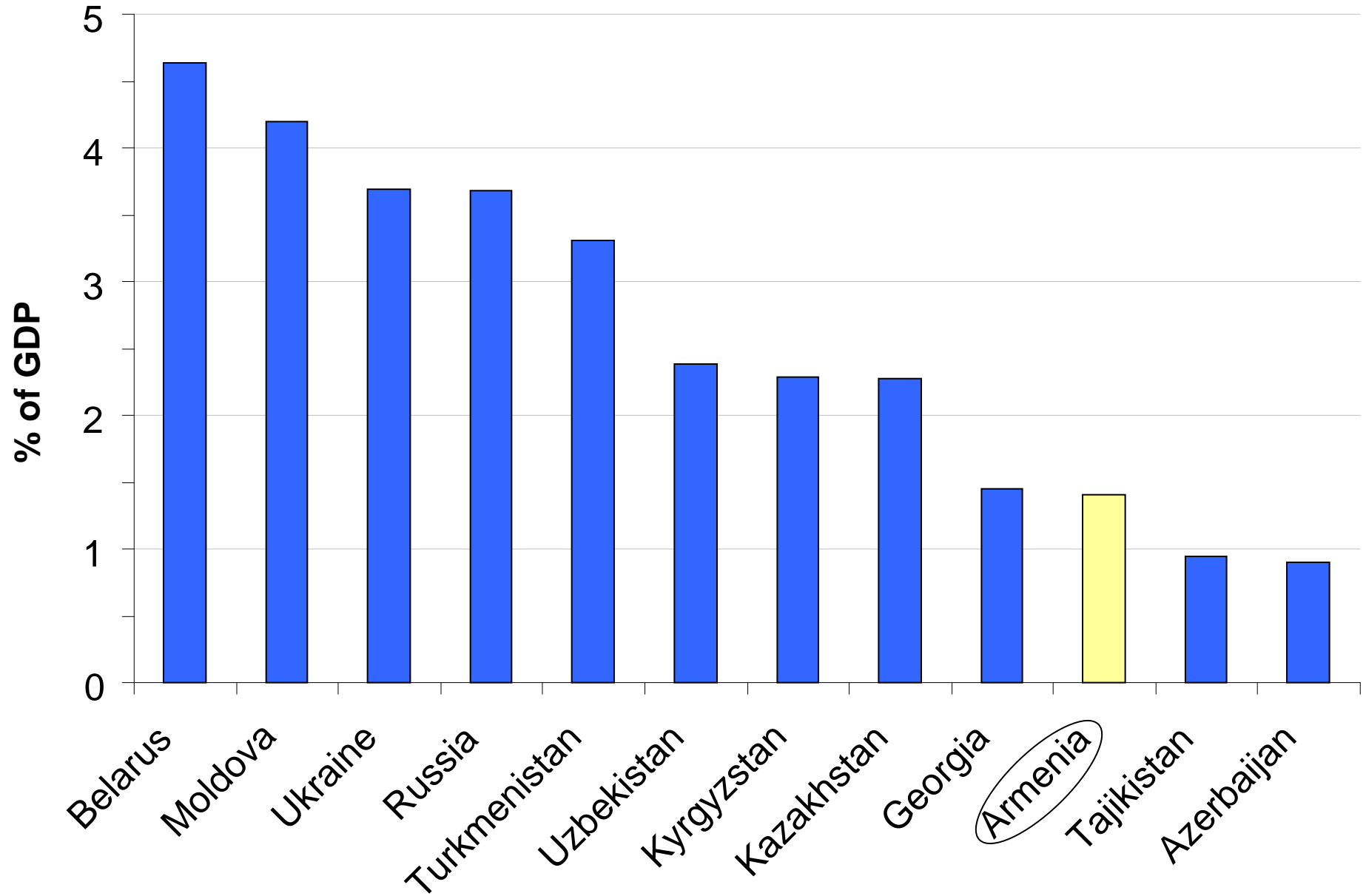
Average scale score is the average of the math and science domains. All countries use results from TIMSS 2003, except the Czech Republic which uses TIMSS 1999 results. IEA, *TIMSS 2003 International Mathematics Report* (2004). IEA, *TIMSS 2003 International Science Report* (2004).

Secondary and Tertiary Enrollment



Public Expenditure on Health in 2004

Figure 65



Domestic Violence in Armenia

Figure 66

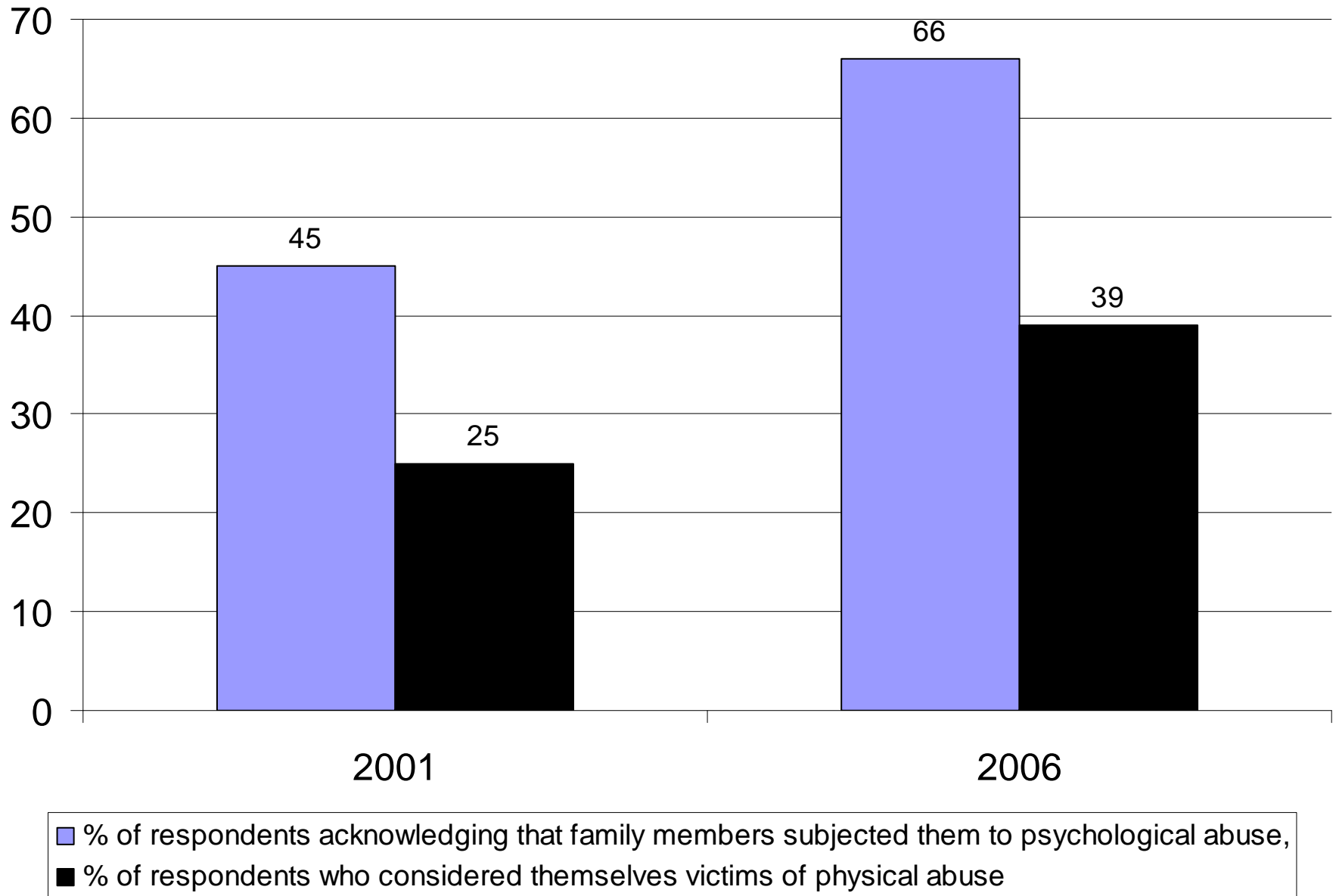
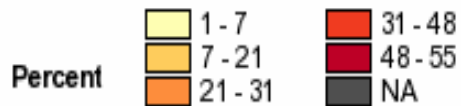
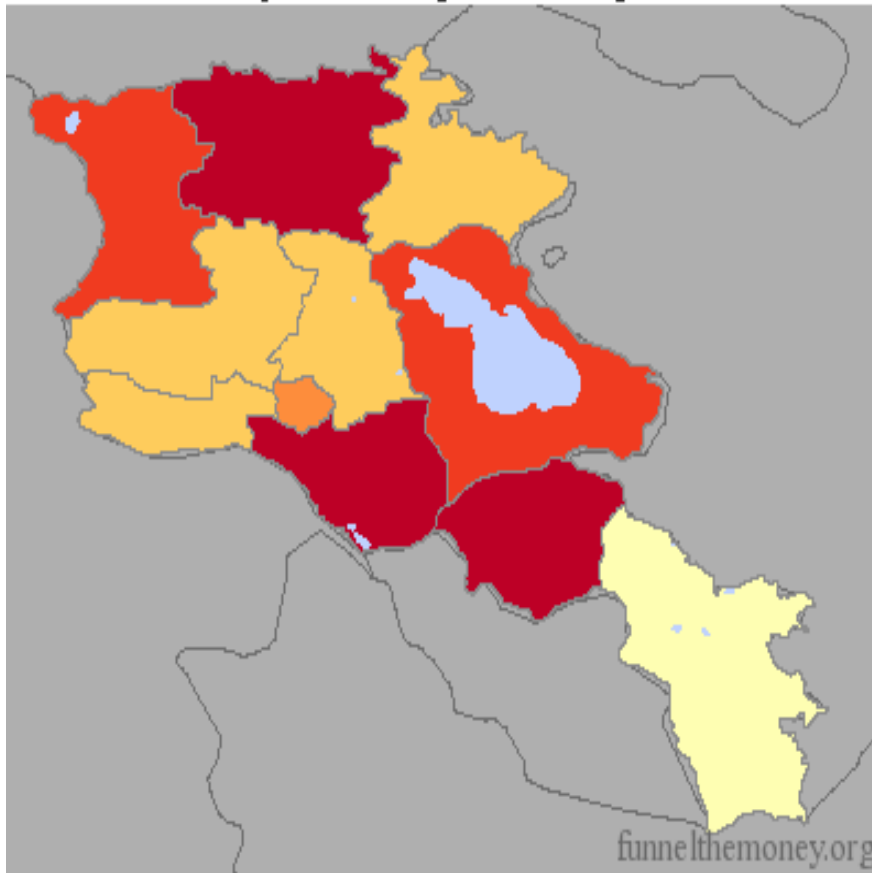
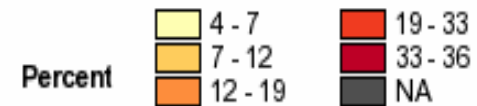
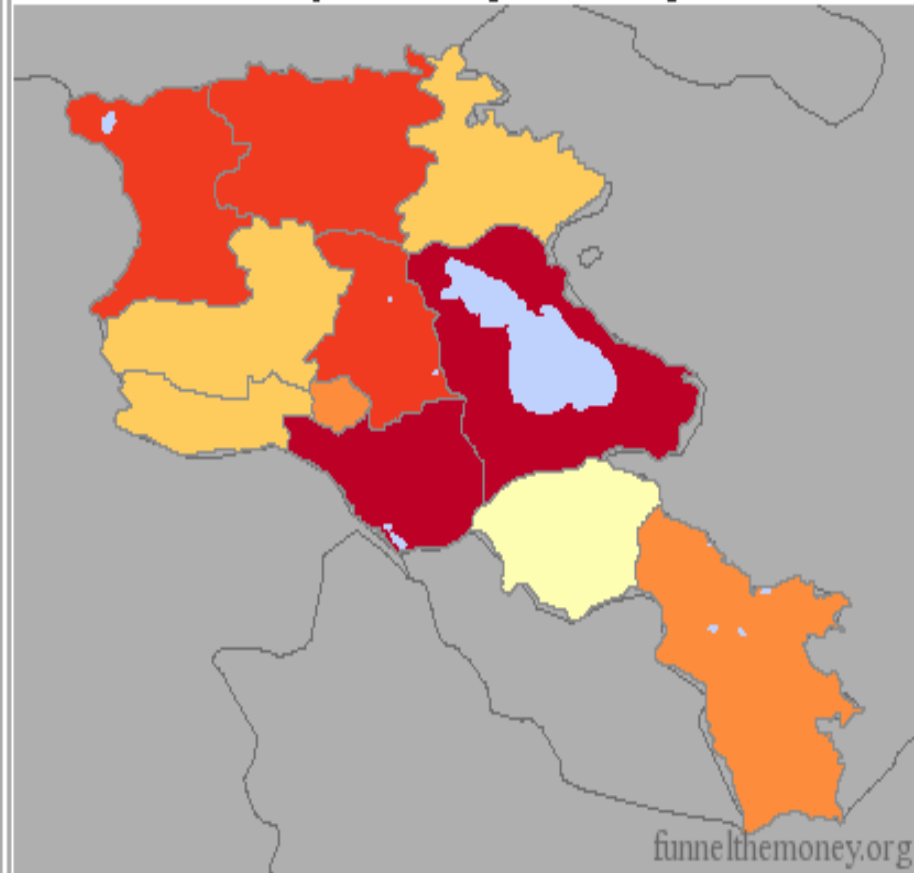
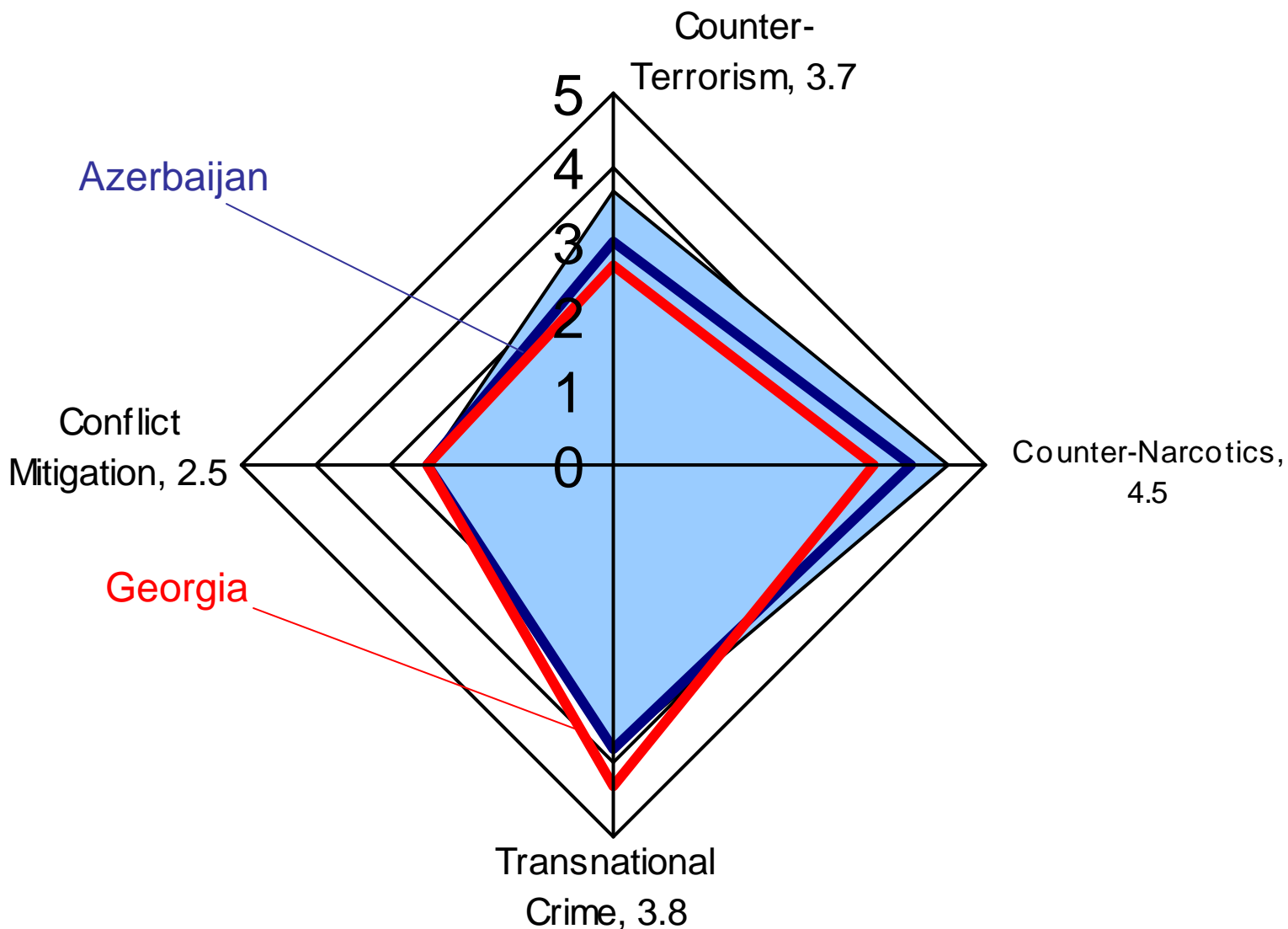


Figure 67

Domestic Violence Attitudes

Abuse-men-justified hitting wife if she argues, 2005

Abuse-women-justified hitting wife if she argues, 2005


Peace and Security in Armenia

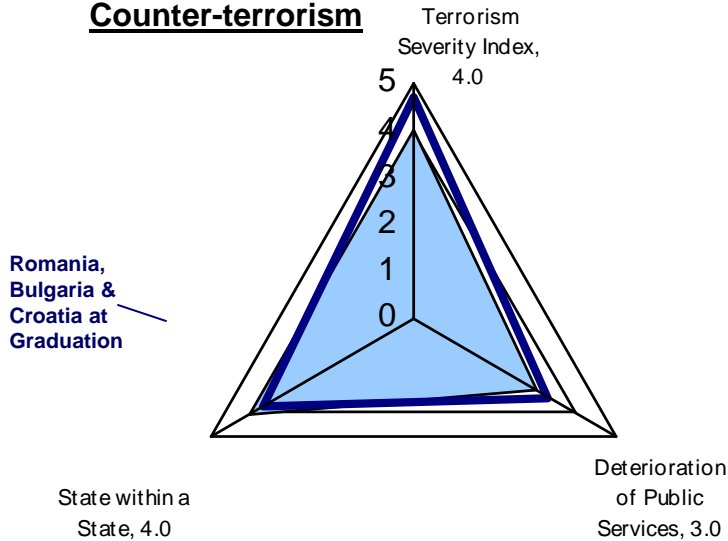


Ratings are based on a scale from 1 to 5, with 5 representing the best score. USAID, Monitoring Country Progress in CEE & Eurasia #11 (2008 forthcoming) drawing from Fund for Peace, *Failed States Index* (2007); The United Nations Office on Drugs and Crime (UNODC), *2006 World Drug Report*; State Department, International Narcotics and Law Enforcement Affairs, Strategy Report (March 2007); Marshall & Gurr, *Peace & Conflict, A Global Survey of Armed Conflicts, Self Determination Movements and Democracy*, Foreign Policy & A.T. Kearney, *Globalization Index 2007*.

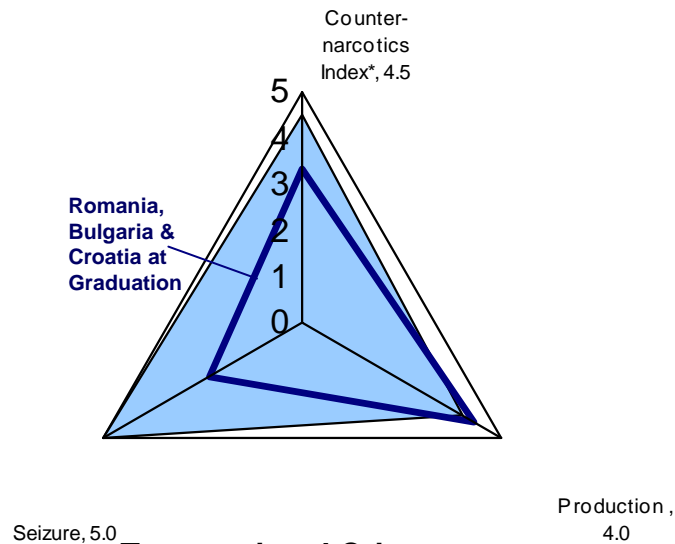
Peace & Security in Armenia

Figure 69

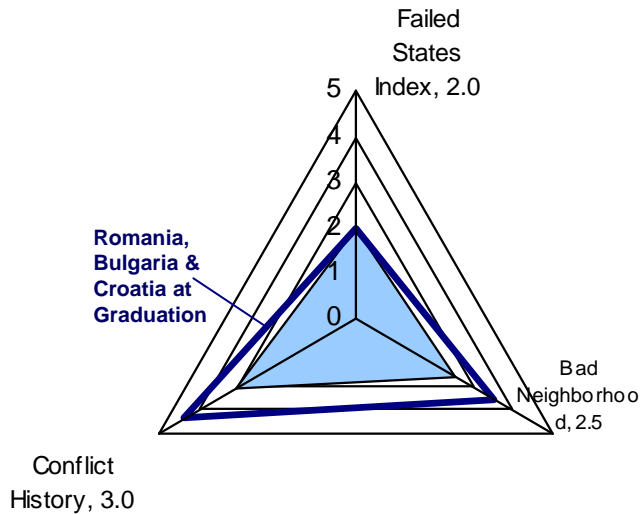
Counter-terrorism



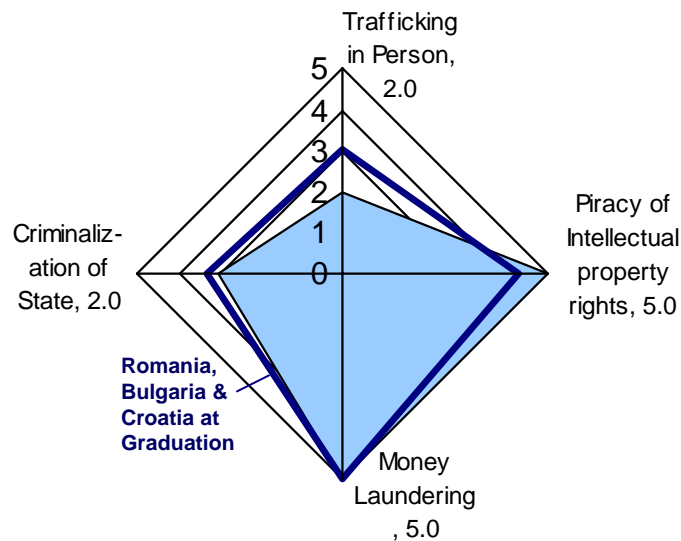
Counter-narcotics



Conflict Mitigation



Transnational Crime



Ratings are based on a scale from 1 to 5, with 5 representing the best score. USAID, Monitoring Country Progress in CEE & Eurasia #11 (2008 forthcoming) drawing from Fund for Peace, *Failed States Index* (2007); The United Nations Office on Drugs and Crime (UNODC), *2006 World Drug Report*; State Department, International Narcotics and Law Enforcement Affairs, Strategy Report (March 2007); Marshall & Gurr, *Peace & Conflict, A Global Survey of Armed Conflicts, Self Determination Movements and Democracy*; Foreign Policy & A.T. Kearney, *Globalization Index 2007*. *Counter-narcotics index is the average of seizure and production.

Peace & Security: Failed States Index

Figure 70

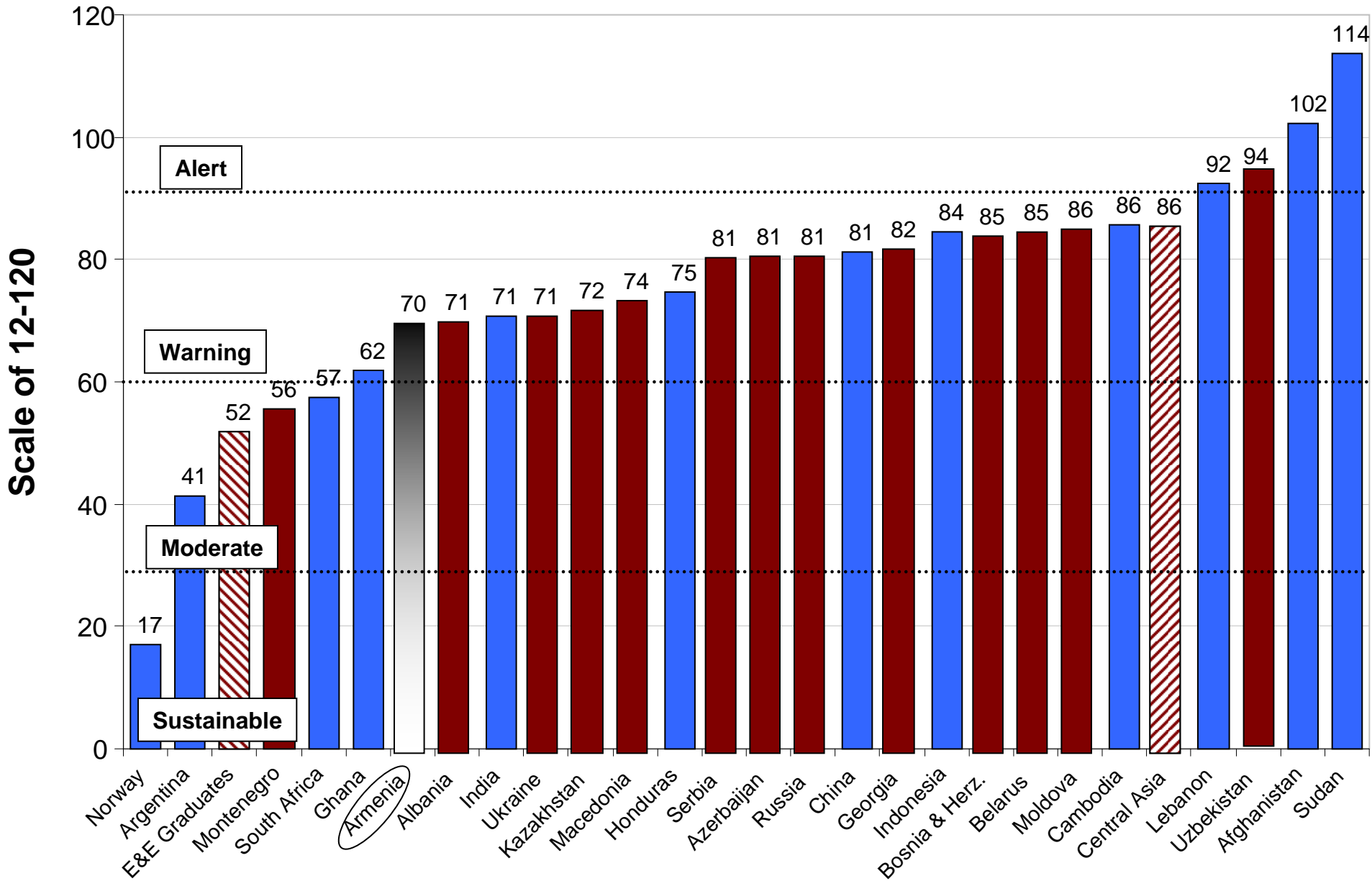
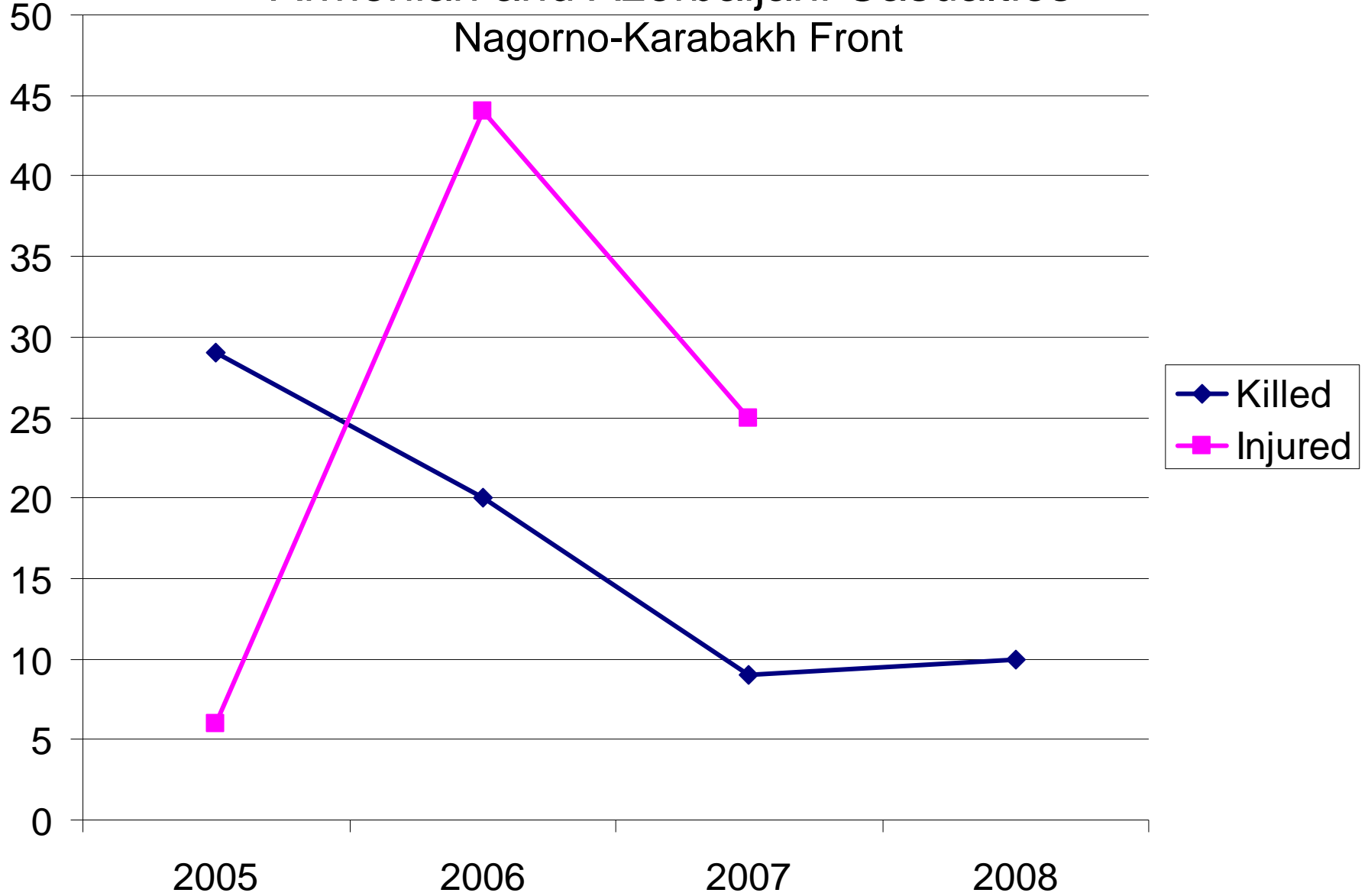


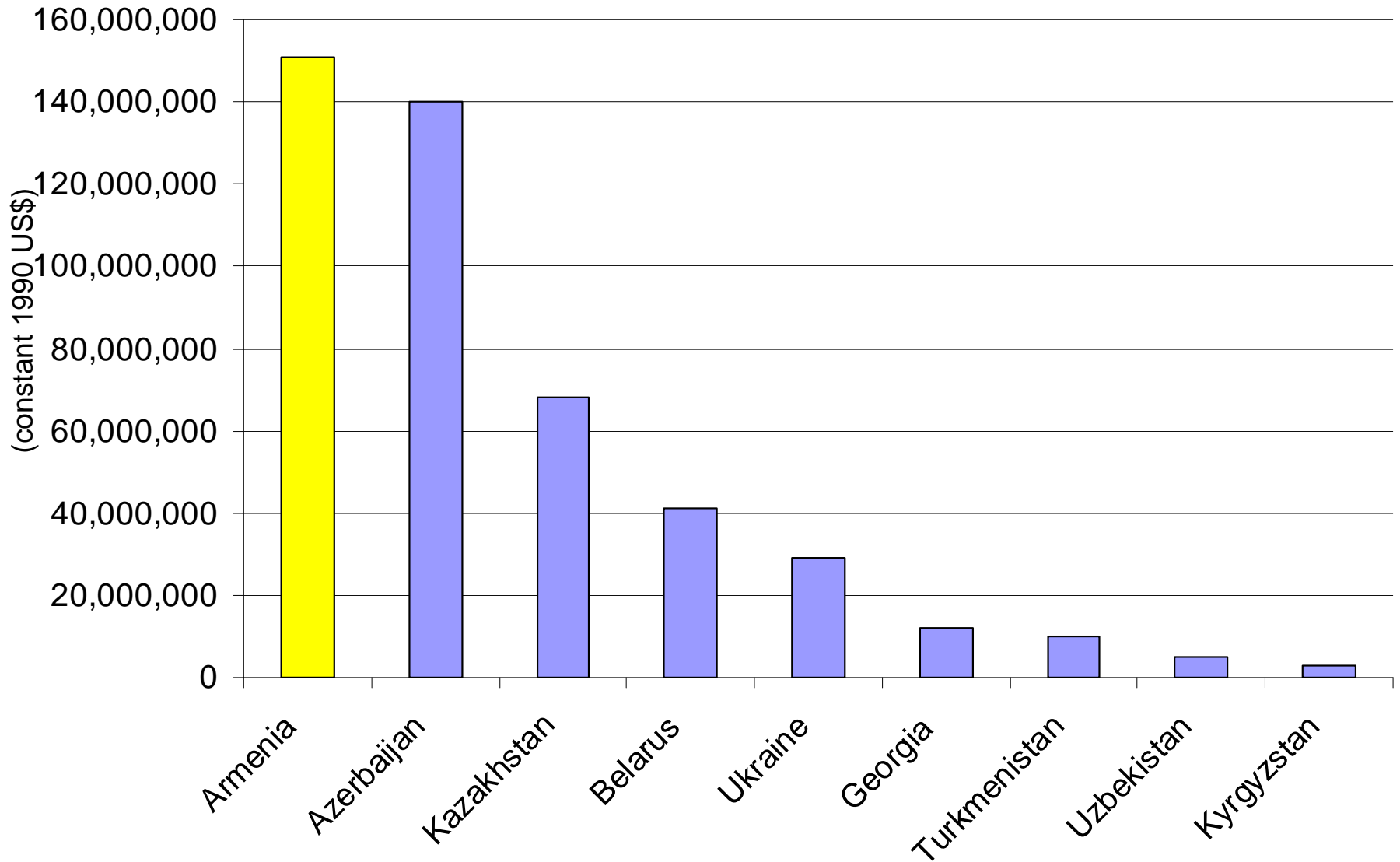
Figure 71

Armenian and Azerbaijani Casualties

Nagorno-Karabakh Front

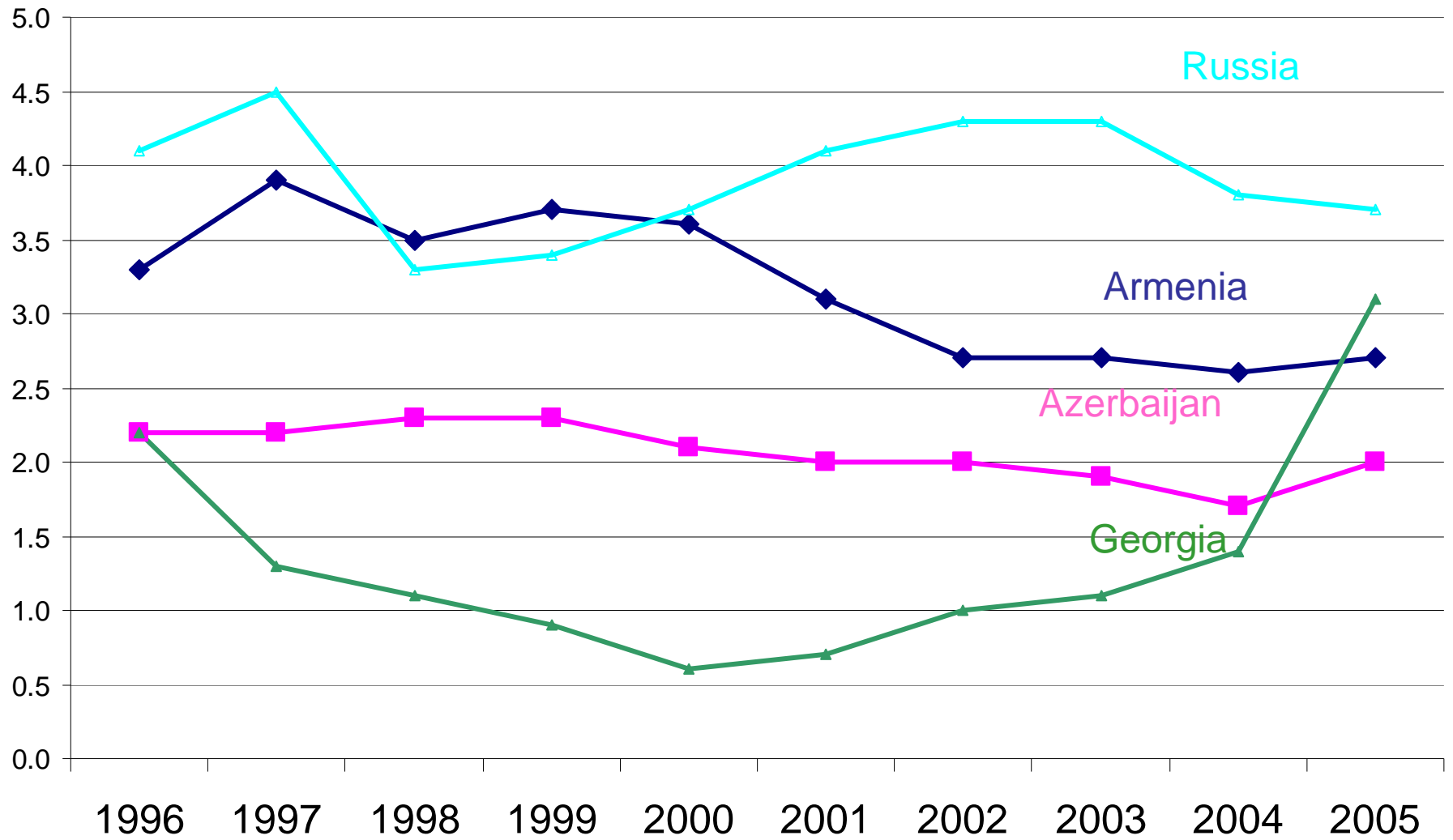


Arms Imports – Most Recent Year Data

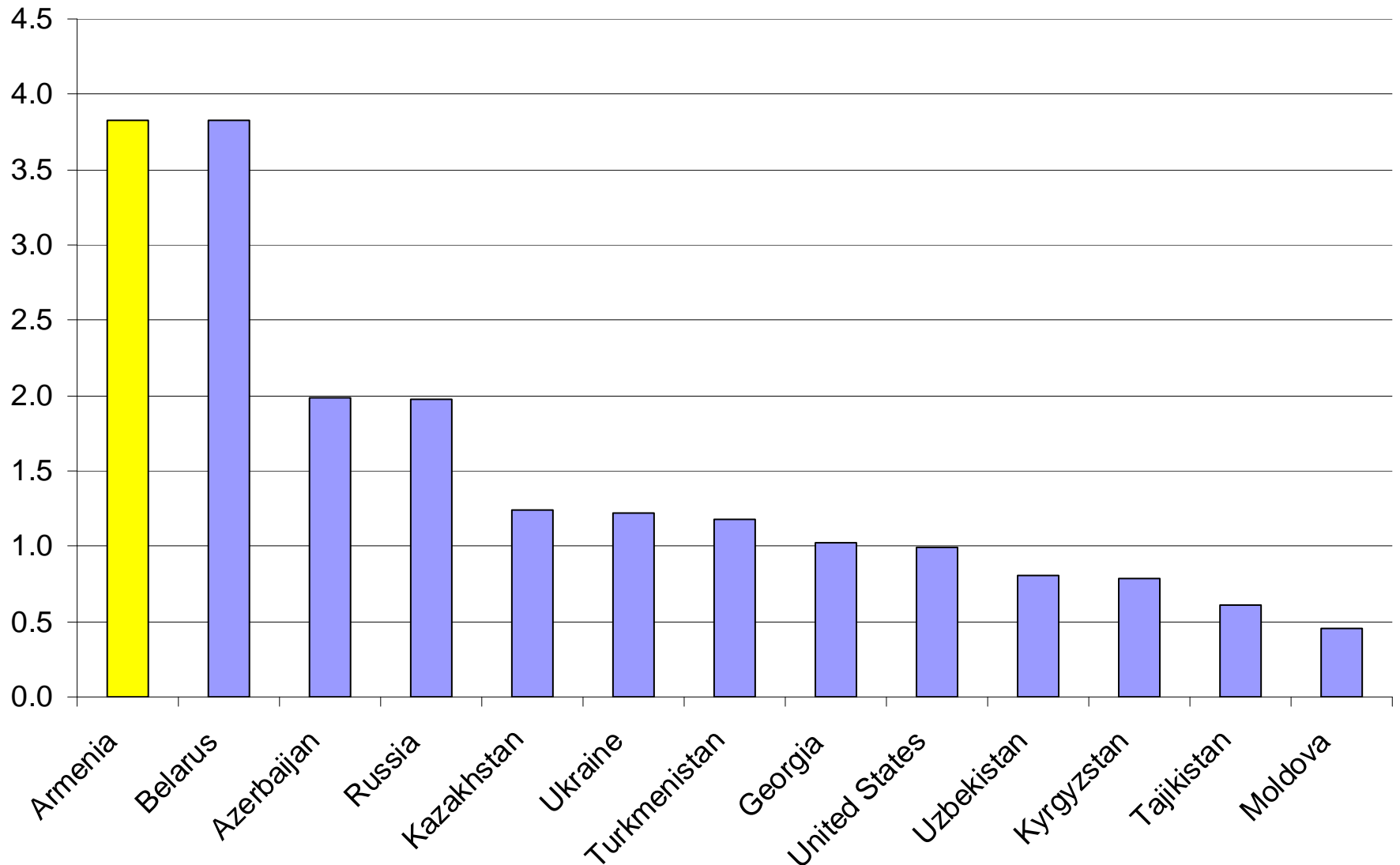


World Development Indicators, 2007; Most recent data; Kazakhstan, Kyrgyzstan, 2005; Armenia, Georgia, Turkmenistan, Ukraine, 2004; Azerbaijan, Uzbekistan, 2002. Arms transfers cover the supply of military weapons through sales, aid, gifts, and those made through manufacturing licenses. Data cover major conventional weapons such as aircraft, armored vehicles, artillery, radar systems, missiles, and ships designed for military use. Excluded are transfers of other military equipment such as small arms and light weapons, trucks, small artillery, ammunition, support equipment, technology transfers, and other services.

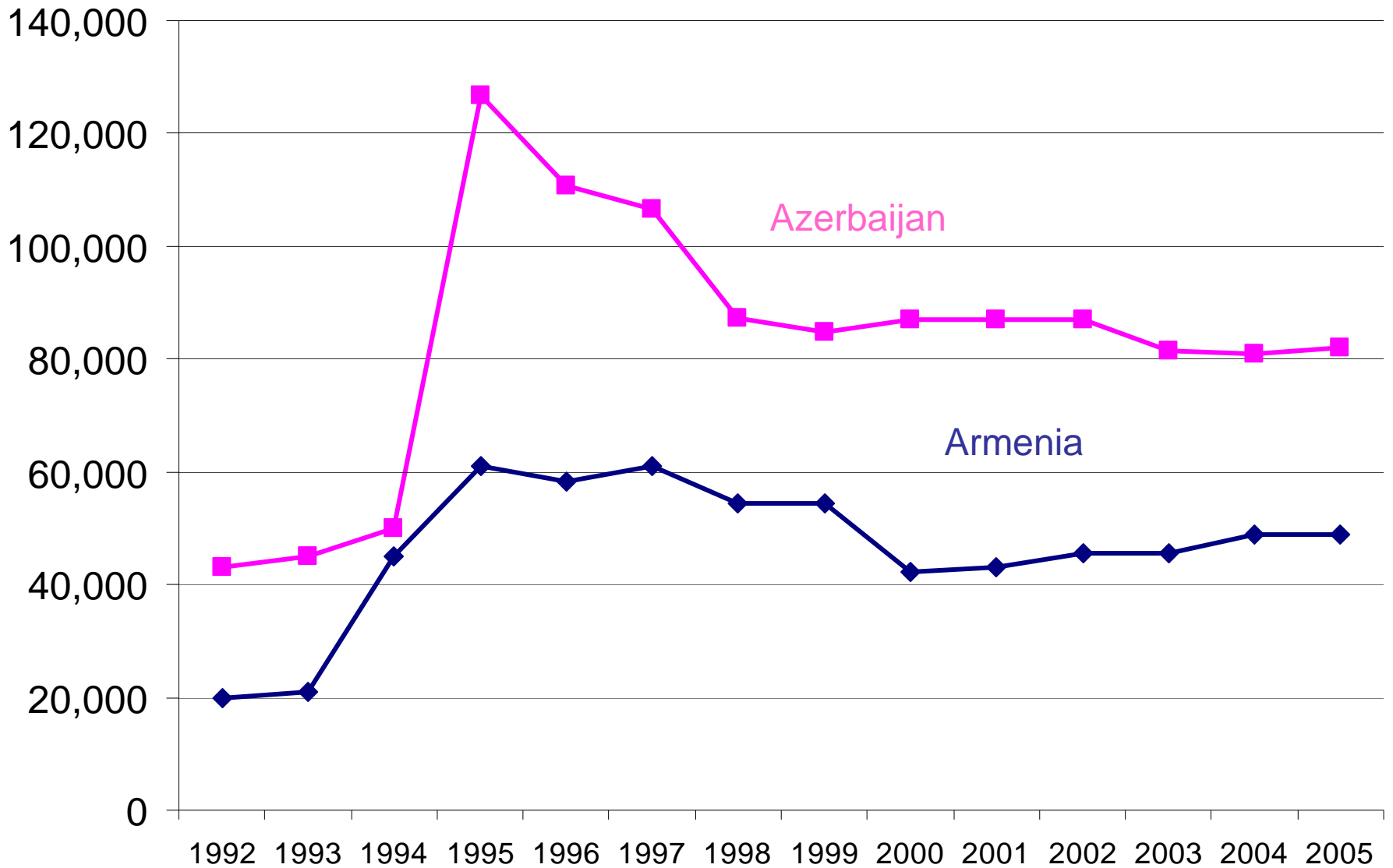
Military Expenditure - % of GDP



Military Personnel as % of Total Population

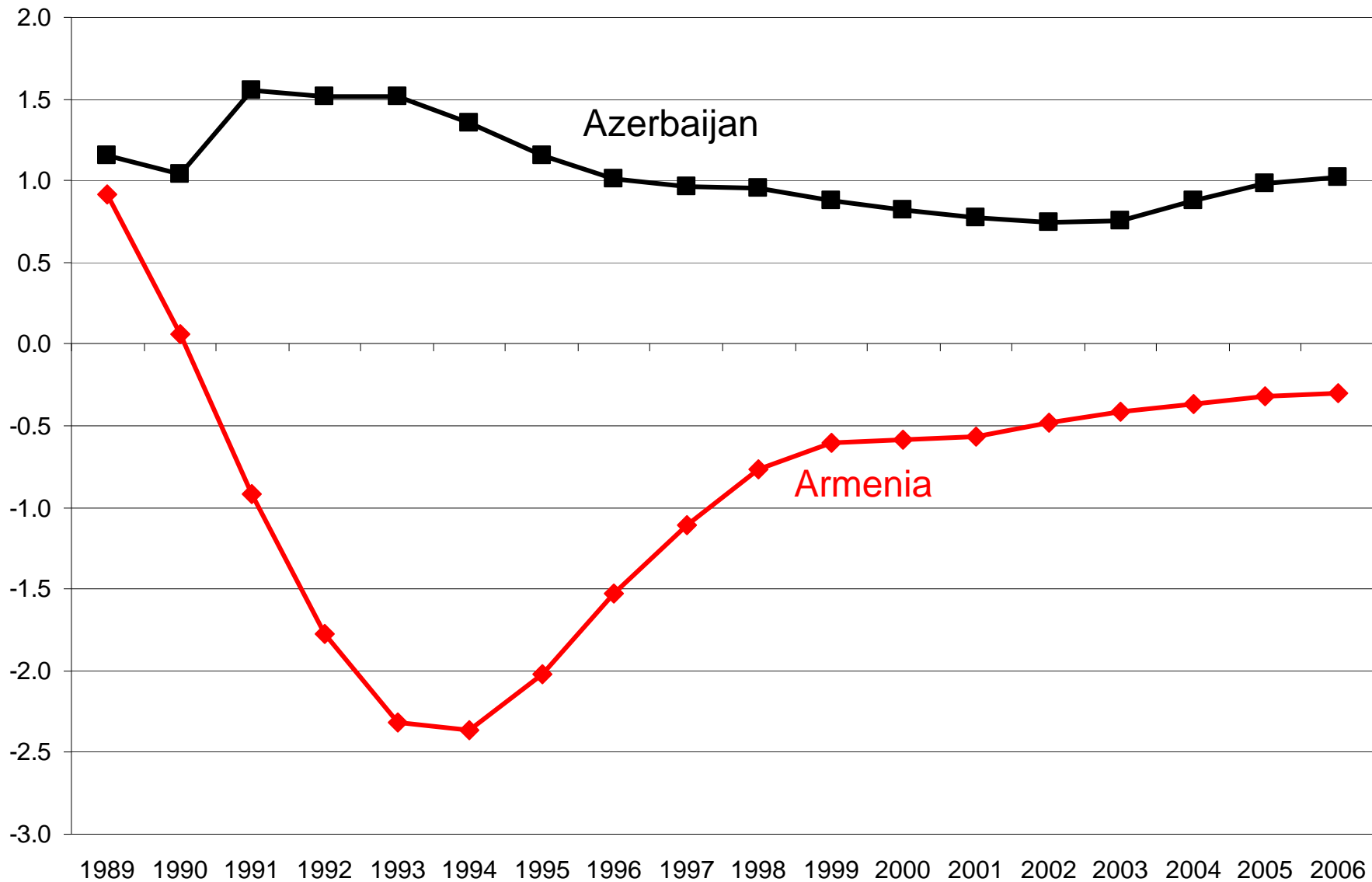


Military Personnel – Total

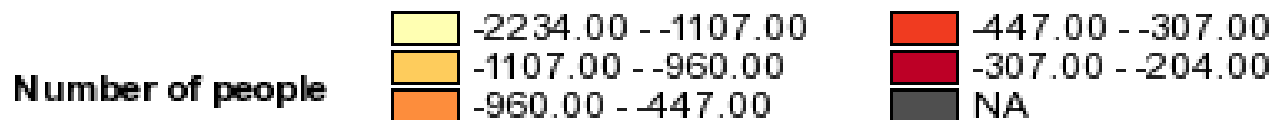
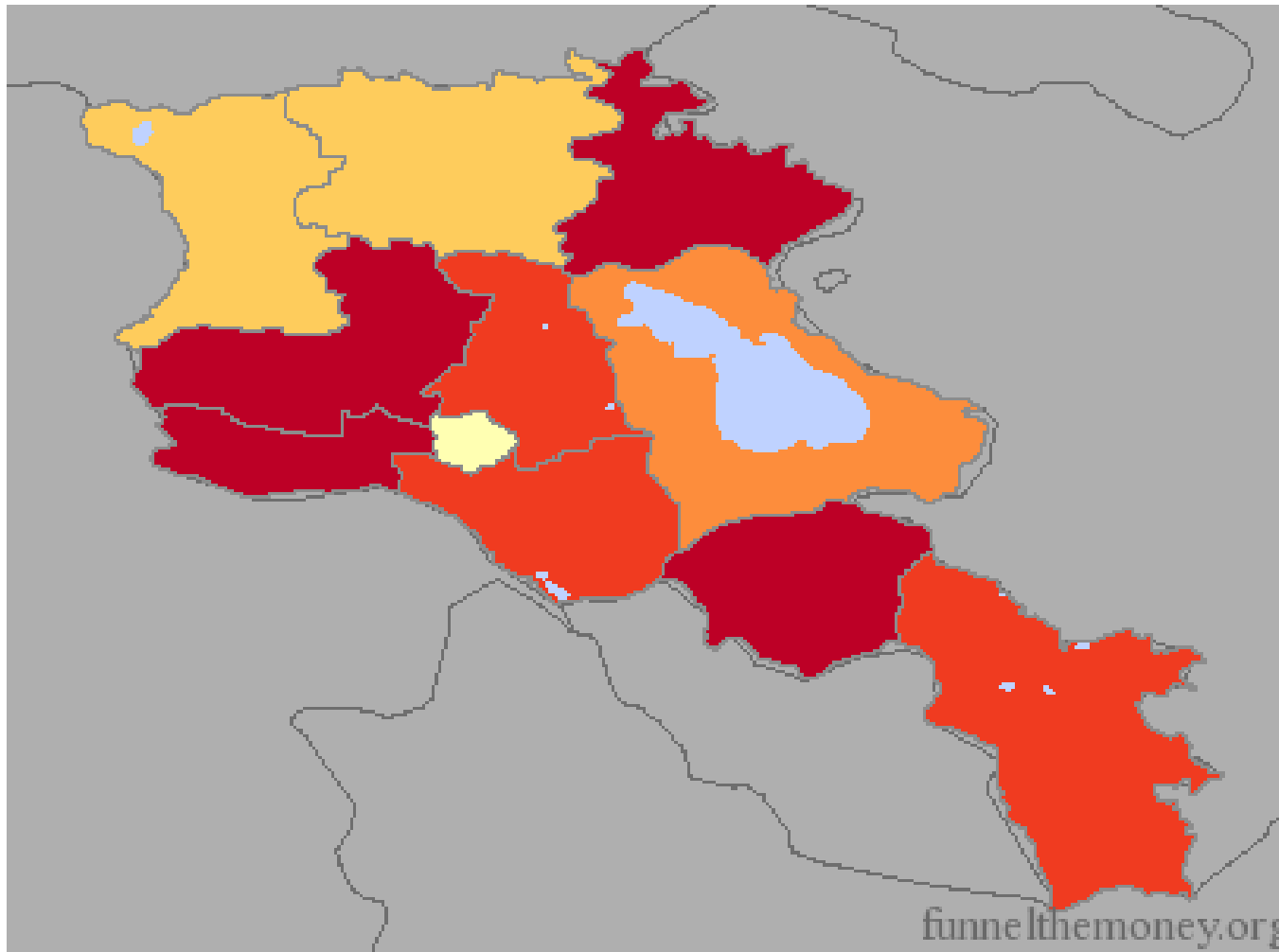


World Development Indicators, 2007; Armed forces personnel refer to active duty military personnel, including paramilitary forces if those forces resemble regular units in their organization, equipment, training, or mission.

Population Growth Rates: Armenia and Azerbaijan



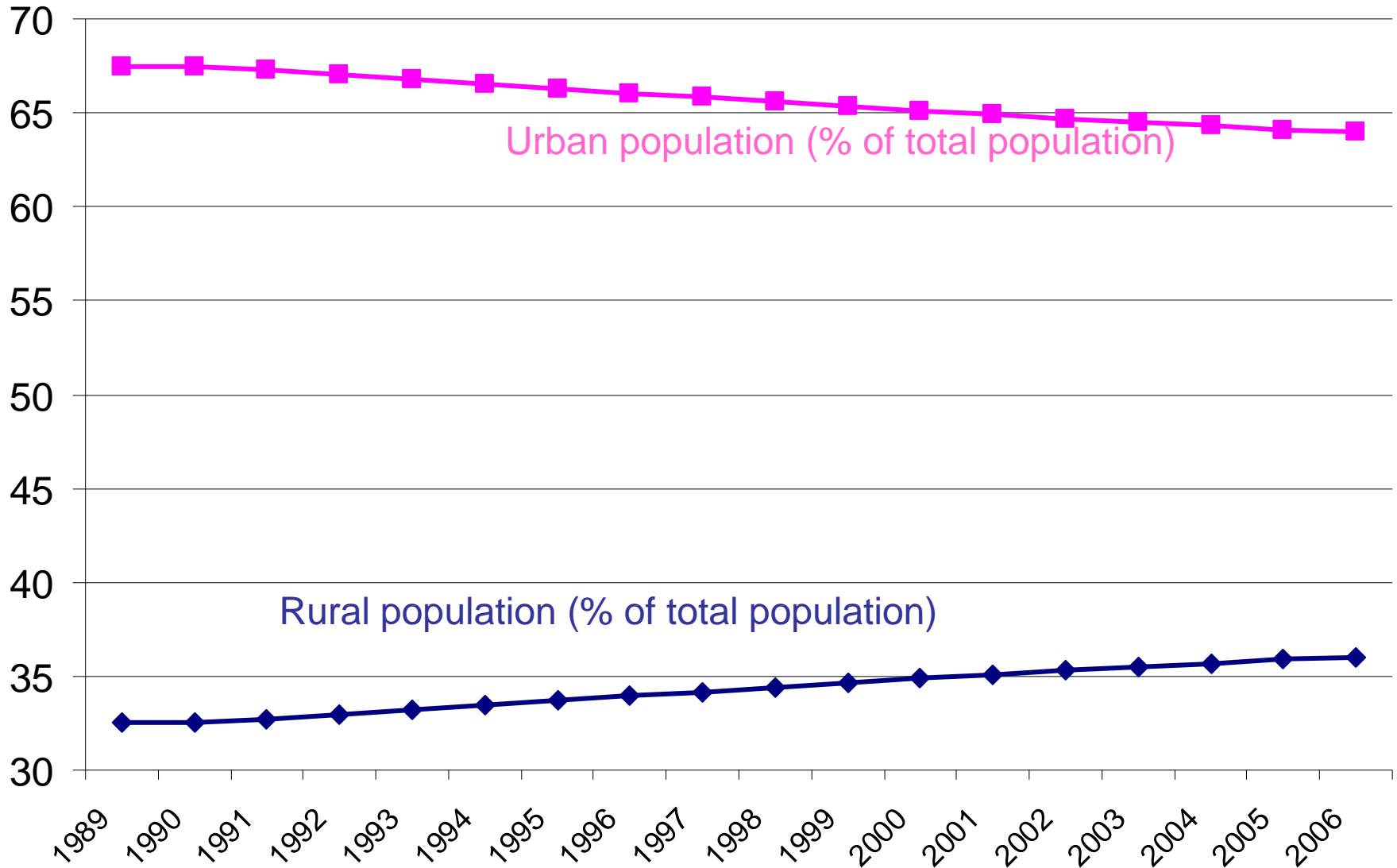
Net Migration



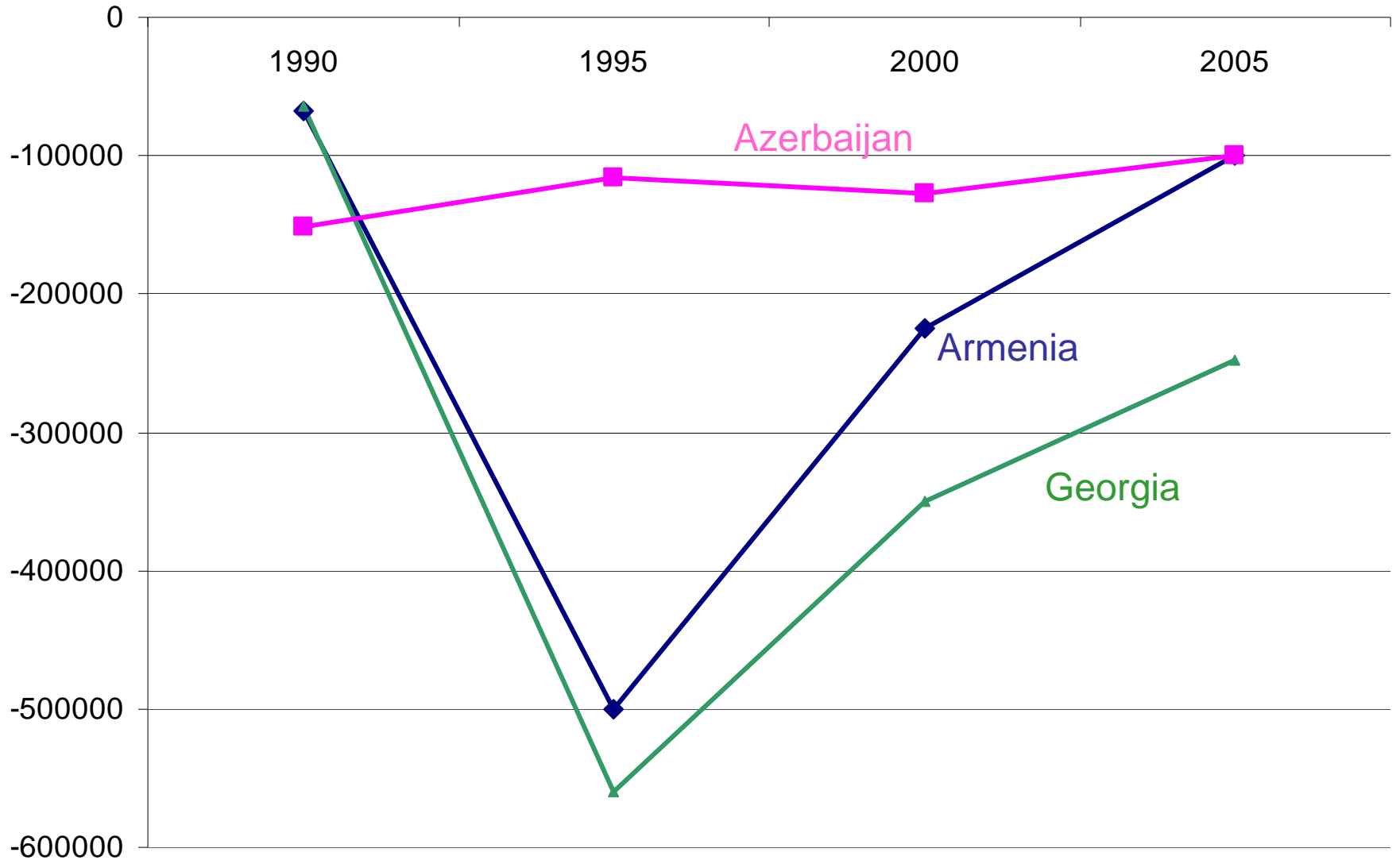
Description: Net migration is number of emigrants subtracted from the number of immigrants. A negative number indicates a net outflow of people.

Source: National Statistical Service Republic of Armenia. 2006. Marzes of the Republic of Armenia in Figures, 2001-2005: Statistical Handbook. Republic of Armenia, Yerevan.

Urban/Rural Population – Armenia



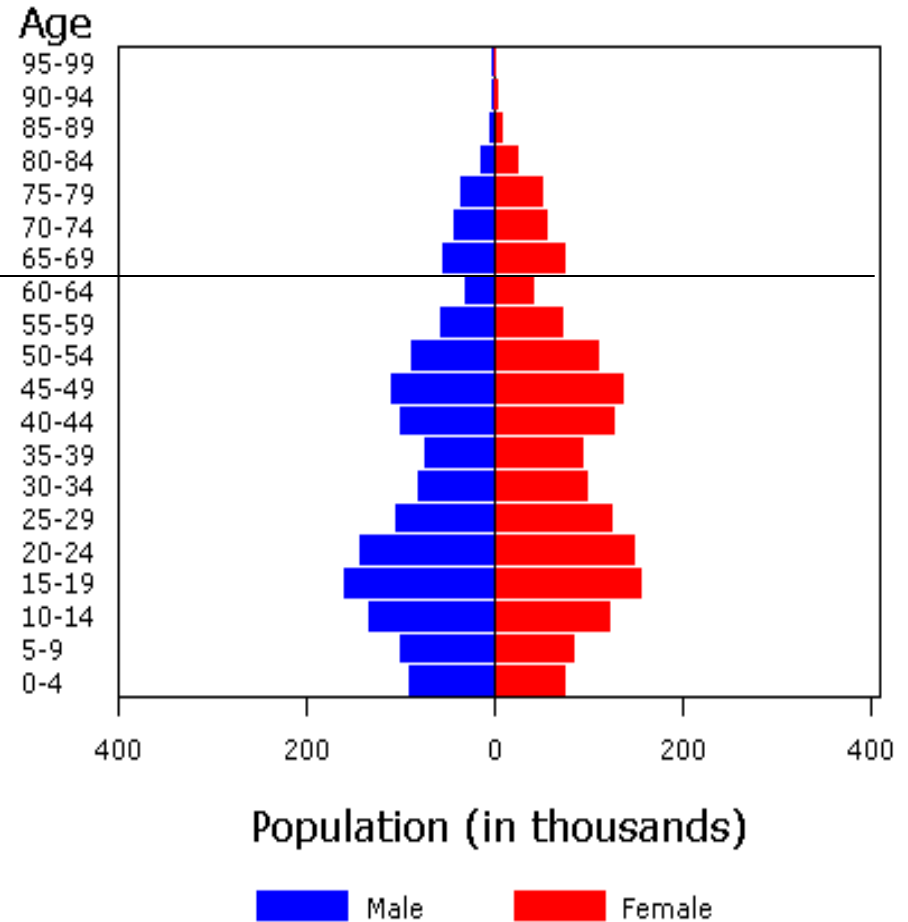
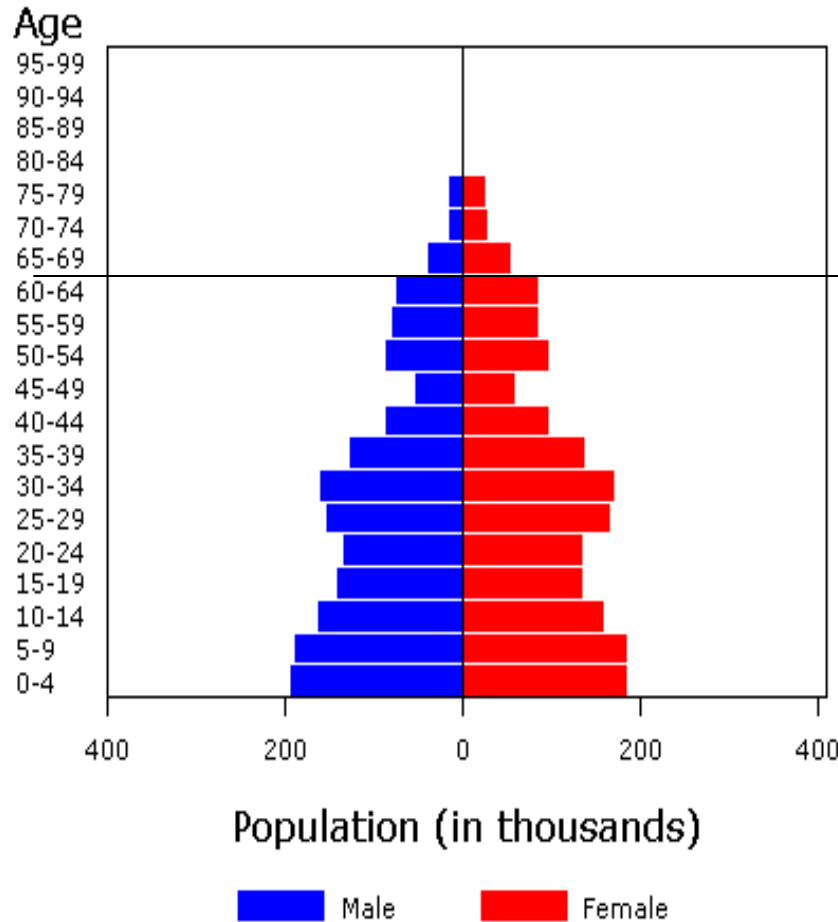
Net Migration - Caucasus



Population Distribution – Armenia over 15 Years

Population Pyramid of Armenia, 1991

Population Pyramid of Armenia, 2006



Source: UN World Population Prospects
 Prepared by USAID Economic Analysis and Data Services

Source: UN World Population Prospects
 Prepared by USAID Economic Analysis and Data Services