

LABOUR MARKETS AND EMPLOYABILITY

**TRENDS AND CHALLENGES IN ARMENIA, AZERBAIJAN,
BELARUS, GEORGIA, MOLDOVA AND UKRAINE**

SHORT VERSION
UPDATED MARCH 2011



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INTRODUCTION

This paper presents a cross-country overview of the trends and challenges of labour markets and human capital employability in the six Eastern partners of the European Union (EU) – Armenia, Azerbaijan, Belarus, Georgia, the Republic of Moldova [hereafter Moldova] and Ukraine – over two decades of turbulent transition. It is based on a more extensive publication¹ and provides readers with a shorter version primarily focused on employment, education and training policies. Both publications are the outcome of the ETF Black Sea Labour Market Reviews project implemented between 2008 and 2010. This project included six country background papers followed by a comparative regional study analysing the major developments of two decades of transition. The project aimed at improving labour market analysis and forecasting in the Eastern partners and at supporting evidence-based policy making processes in employment, education and training in the light of the New Skills for New Jobs perspective (European Commission, 2008a).

These six countries on the shores of the Black Sea have been at the crossroads of traditional and modern trade and migration routes from the times of the Silk Road to the oil pipelines of the present, forming part of an important cultural, political and economic triangle connecting Europe, Central Asia and the Middle East. The region moved closer to Europe following the dissolution of the Soviet Union and became part of the 'European border' with the accession of Bulgaria and Romania to the European Union in 2007. All the Eastern partners belonged to the Soviet Union² and they are all directly or loosely connected with the Commonwealth of Independent States (CIS) system³. Thus, they are all 'transition economies' that are changing from a centrally planned model of Soviet heritage to free market economies.

The six Eastern partners have experienced enormous social, economic and political changes over the last two decades, with each taking a different path toward a free market economy and democracy. The end of the Soviet era and the transitional crises of the early 1990s resulted in a rapid deterioration in living standards and increasing political instability in all of these countries. Thus, the first decade of transition was characterised by a collapse in infrastructure; redistribution of ownership in economic enterprises and land; a sharp decline in production in terms of industrial and agricultural output; reductions in real income, consumption and capital investment; high unemployment; and widespread poverty. Many of the nations have also been forced to deal with issues that have challenged vital national interests, with regional conflicts and civil wars in Georgia (Abkhazia and South Ossetia), Moldova (Transnistria), Azerbaijan and Armenia (Nagorno-Karabakh).

For most of the group, the second decade of transition has largely been a period of stabilisation and recovery, although some have continued to experience political changes towards more reform-minded and Western-leaning administrations. Such moves included the 2003 Rose Revolution in Georgia, the 2004-05 Orange Revolution in Ukraine and the pro-European shift in foreign policy in Moldova. Increasingly assertive Russian policies toward the region, including periodic gas disputes with Ukraine (and some EU countries) and trade sanctions against Georgia and Moldova, also absorbed an enormous amount of national resources. Although the impact of Russian economy has continued to have an effect on all the countries, the process seems to have left Georgia, Moldova and Ukraine (despite recent changes) with aspirations for closer relations with the European Union, while Armenia, Azerbaijan and Belarus have their own vision of development and better relations with Russia.

This paper partially covers the impact of the 2009 crisis on economies, but does not include the longer-term effects on employment systems as the data used in the study was mostly collected early in the crisis. Although there is an overall regional focus, the report also recognises that the Eastern partners vary widely in terms of economic basis, economic restructuring policies and opportunities for future socio-economic development. While Belarus and Ukraine have opted for a gradual, slow transition to a market economy and have tried to protect their industrial economic basis, Armenia, Georgia and Moldova have undergone rapid de-industrialisation and deep transformation of their economic bases, while Azerbaijan has relied on its natural resources but has not yet achieved economic diversification. The main focus of this document is on the six countries, but some comparative data from their immediate neighbours (Russia, Poland, Romania, Bulgaria, Turkey and the EU-27) have been included in the analysis for benchmarking purposes.

¹ Summarised by Ummuhan Bardak from Bardak (ed., 2010a), *Labour markets and employability: trends and challenges in Armenia, Azerbaijan, Belarus, Georgia, Moldova and Ukraine* (forthcoming). It includes international and national data and information collected from the ETF country reports (2009a; 2009b; 2010a; 2010b; 2010c; & 2010d).

² There are 15 countries of the former Soviet Union: Armenia, Azerbaijan, Belarus, Estonia*, Georgia, Kazakhstan, Kyrgyzstan, Latvia*, Lithuania*, Moldova, Russia, Tajikistan, Turkmenistan, Ukraine and Uzbekistan (*the three Baltic states are EU members today).

³ The CIS was formed by Russia, Belarus and Ukraine by signing a Creation Agreement in 1991 on the dissolution of the Soviet Union and the creation of CIS as a successor entity to the USSR. In 1993 another agreement called CIS Charter was signed to formalise the membership of the countries. Currently nine official members signed and ratified both agreements, namely Armenia, Azerbaijan, Belarus, Kazakhstan, Kyrgyzstan, Moldova, Russia, Tajikistan and Uzbekistan. Turkmenistan is an unofficial associate member and Ukraine is officially not a member though it is de facto participating in the system. Note that Georgia left the CIS system in 2008 after the South Ossetian war and no longer has any links with the CIS.

1. SOCIO-ECONOMIC BACKGROUND

1.1 DEMOGRAPHIC CHARACTERISTICS

DECREASING AND AGEING POPULATIONS AND LOW-TO-MEDIUM-LEVEL HUMAN DEVELOPMENT SHOW SIGNIFICANT DIVERSITIES ACROSS THE COUNTRIES

TABLE 1.1 shows the demographic diversity of the Eastern partners where Ukraine had 46 million inhabitants in 2009; Armenia, Moldova and Georgia had 3-4 million each; and Azerbaijan and Belarus fell somewhere in between with 8.7 million and 9.6 million respectively. Most of the nations are small, especially when compared with neighbours like Russia, Turkey, Poland or Romania. Despite their different sizes, most of the countries face similar demographic challenges: their populations are shrinking and ageing due to low birth rates, increasing mortality and emigration.

In 2009, population growth rates were negative in all countries except Azerbaijan (1.2%) and Armenia (0.2%). Fertility rates (average number of children per woman) also reflect the same tendency, which is close to the EU-27 average of 1.5, with slightly higher rates in Armenia and Azerbaijan. By 2020, Belarus, Georgia, Moldova and Ukraine will have lower populations than they have today and while this is not yet the case for Armenia and Azerbaijan similar trends appear set for the longer-term.

TABLE 1.1 KEY DEMOGRAPHIC INDICATORS

Countries	Population (million) 2009	Population (million) 2020 ²	Population growth (%) 2009	Fertility rate ^a 2008	Infant mortality ^b 2009	Life expectancy 2008	Urban pop. (%) 2009
Armenia	3.082	3.175	0.2	1.7	19.6	73.5	63.8
Azerbaijan	8.781	9.838	1.2	2.3	29.6	70.2	52.1
Belarus	9.663	9.112	-0.2	1.4	10.9	70.6	73.9
Georgia	4.260	3.982	-1.1	1.6	26.0	71.5	52.8
Moldova*	3.603	3.378	-0.8	1.5	14.6	68.4	41.5
Ukraine	46.008	42.945	-0.5	1.4	13.3	68.3	68.0
Bulgaria	7.585	7.017	-0.5	1.5	9.8	72.7	71.4
Poland	38.146	37.497	0.1	1.4	5.6	75.5	61.3
Romania	21.482	20.380	-0.1	1.4	10.0	73.4	54.4
Russia	141.850	135.406	-0.1	1.5	11.1	67.8	72.8
Turkey	74.815	83.873	1.2	2.1	18.5	71.9	69.1
EU 27¹	499.700	732.952	0.4 (2008)	1.6 (2007)	4.7 (2006)	79.2 (2007)	NA

Sources: World Bank WDI database; (1) Eurostat; (2) UNDP medium variant projections.

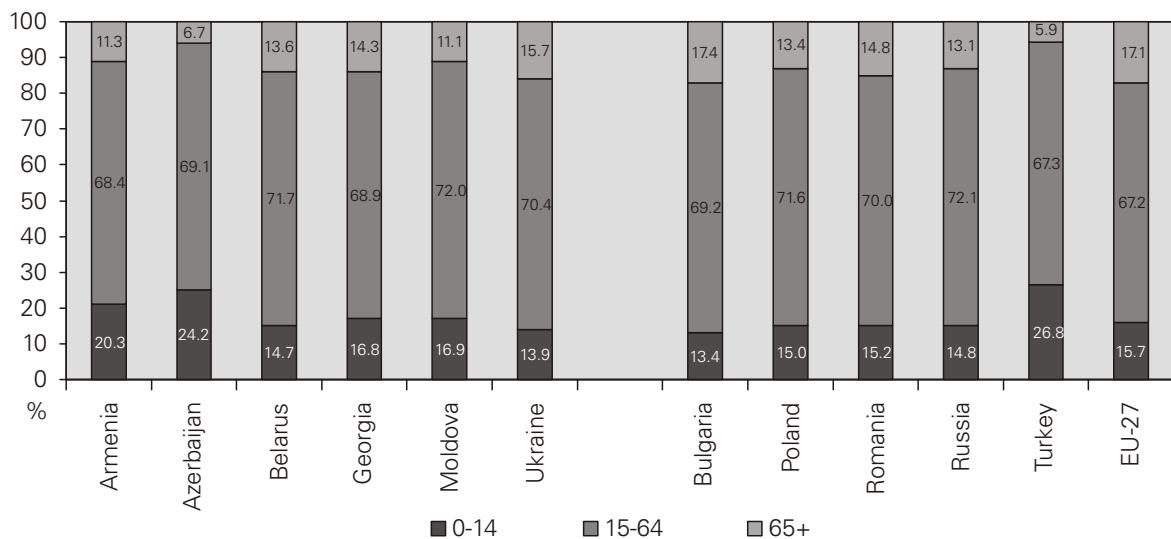
Notes: (*) Including Transnistria; (a) Births per woman; (b) Deaths per 1,000 live births.

The Eastern partners are marked by high and increasing mortality rates that persist even through periods of economic recovery. Infant mortality rates are relatively high compared to the EU-27 average, in Azerbaijan and Georgia in particular, and life expectancy at birth is an average of around 70 years – a rate lower than the EU-27 average of 79. Interestingly there is around a decade of difference between the life expectancy of males and females, in Belarus and Ukraine in particular. Similarly, adult mortality rates in most of the Eastern partners are significantly higher for males than females. These rates are partly due to deficient healthcare systems, but the following elements also play a part: diseases linked to unhealthy life habits like overwork or alcohol abuse; social illnesses such as tuberculosis and AIDS; violent death by

accidents, homicide and suicide; deteriorating living conditions; psychosocial stress; local conflicts; and even the long-term effects of the Chernobyl tragedy. Substantial emigration outflows worsen this picture further (Section 4.4).

The share of age groups within the population confirms similar trends (**FIGURE 1.1**). Indeed, the share of working age population (15-64 years) has been continuously increasing in all countries throughout the transition period, due to the baby booms of the 1970s and 1980s. In 2009, the share of the working age population was 72.0% in Moldova, 71.7% in Belarus, 70.4% in Ukraine, 68.9% in Georgia, 69.1% in Azerbaijan and 68.4% in Armenia (the EU-27 average is 67.2%). During the same period, the share of population under 15 years old has been decreasing in all countries to an average of 15% in 2009 (similar to the EU-27 figure) with relatively higher shares in Armenia (20.3%) and Azerbaijan (24.2%). The tendency toward growth in the working-age population is expected to continue for a few more years in all countries and they will all undergo an ageing process and slight feminisation of the labour force. In 2050, retired people aged 65+ are expected to total around one-quarter of the population in Belarus, Georgia, Moldova and Ukraine.

FIGURE 1.1 POPULATION BY AGE GROUP (%), 2009



Source: World Bank WDI database; EU-27, Eurostat.

The effects of demographic decline are expected to intensify in the future. This situation will have serious consequences for the labour market, education, health-care and pension systems of the countries, bringing into question their future fiscal sustainability and the availability of human resources for long-term economic development. Although this trend currently reduces supply-side pressure on the labour markets, some sources state that labour productivity increases could neutralise negative demographic effects (Chawla et al., 2007). Labour productivity is certainly an area ripe for improvement while the current extent of informality in the labour markets poses a challenge to future security; informal workers do not contribute to the social security systems – a situation that increases ‘real’ dependency rates and reduces the amount of public resources available for funding health, pensions and education services.

The transition period has had an enormous impact on social development with increasing poverty rates and limited access to social services traditionally provided by the state. Recession brought an exceptional drop in real wages which forced people to seek alternative sources of income in order to survive. **TABLE 1.2** shows that more than half of the populations of most Eastern partners were living in poverty in the early 2000s. In 2007, the share of people living on minimum subsistence or less was 18% in Belarus, 23% in Georgia, 25% in Armenia, 26% in Moldova and 29% in Ukraine (national rates)⁴. Improved economic performance since 2000 and increasing remittances from abroad have translated into better living conditions for the population. However, the reduction in poverty rates has been accompanied by increasing inequalities in terms of employment opportunities; access to education; regional disparities in development; large income differences between urban and rural areas; and a clear polarisation of societies. Moreover, work does not protect many families from poverty, as the working poor (defined according to employment status of the household head) constitute two-thirds of the poor (Alam et al., 2005). The recent global economic crisis has also reversed some of the gains of recent years.

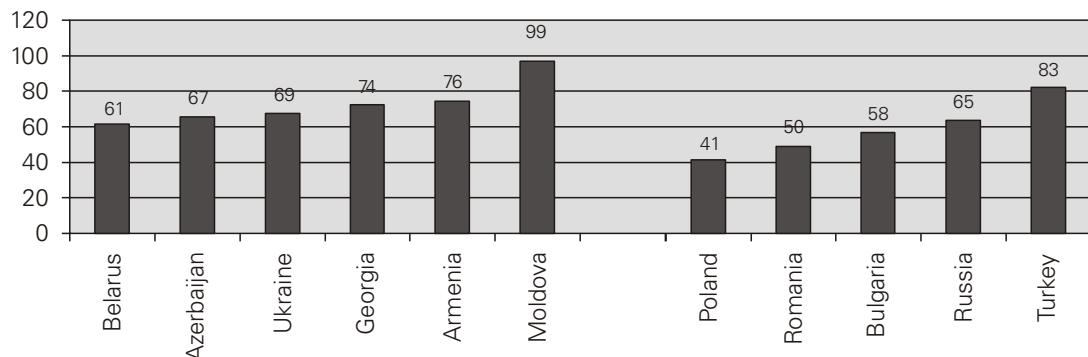
⁴ These are national poverty figures which may use a different threshold, based on different calculation methods.

TABLE 1.2 RANKING OF COUNTRIES IN DIFFERENT INTERNATIONAL COMPARISONS

Countries	Poverty headcount ratio at national poverty line ¹ (%)	Gini Index (last year available) ¹	Gender Gap Index Ranking 2010 ²	Knowledge Economy Index Ranking 2009 ¹	Global Competitiveness Index Ranking 2010-11 ²	Corruption Perceptions Index Ranking 2010 ³
Armenia	50.9 (2001)	30.3 (2007)	84	56	98	123
Azerbaijan	49.6 (2001)	16.8 (2005)	100	97	57	134
Belarus	17.4 (2004)	28.8 (2007)	34 (2009)	73	NA	127
Georgia	54.5 (2003)	40.8 (2005)	88	69	93	68
Moldova	48.5 (2002)	37.4 (2007)	34	71	94	105
Ukraine	19.5 (2003)	27.6 (2008)	63	51	89	134
Bulgaria	12.8 (2001)	29.2 (2003)	50	43	71	73
Poland	14.8 (2001)	34.9 (2005)	43	37	39	41
Romania	28.9 (2002)	32.1 (2007)	67	47	67	69
Russia	19.6 (2002)	43.7 (2007)	45	60	63	154
Turkey	27.0 (2002)	41.2 (2006)	126	61	61	56

Sources: (1) World Bank WDI database; (2) World Economic Forum website; (3) Transparency International website.

Most international comparisons give a picture of a heterogeneous situation among the six countries (Table 1.2). Most countries fare relatively well on the World Economic Forum's Gender Gap Index, with 2010 rankings high in Belarus and Moldova (34), but low in Azerbaijan (100), Georgia (88) and Armenia (84). Ukraine (51) and Armenia (56) rank well in the World Bank's Knowledge Economy Index, while the Corruption Perceptions Index indicates a poor ranking for most of the countries. **FIGURE 1.2** gives the 2010 UNDP Human Development Index (HDI) rankings and similarly shows three groups of countries in the region: Belarus (61st), Azerbaijan (67th) and Ukraine (69th) have the highest HDI ranking; Georgia (74th) and Armenia (76th) lie in an intermediate position; and Moldova brings up the rear (99th). All the countries are heavily penalized in this ranking by their low per capita gross domestic product (GDP) and life expectancy (both significantly lower than for the EU-10 new member states); however, literacy rates are particularly high in the region, with Georgia ranking first in the world. This shows that human capital is the most important asset available to these countries.

FIGURE 1.2 RANKING IN THE HUMAN DEVELOPMENT INDEX, 2010

Source: UNDP Human Development Index.

1.2 TRANSITION ECONOMIES

TRANSITION ECONOMIES AFFECTED BY THE RECENT GLOBAL ECONOMIC CRISIS DESPITE RECOVERY OF GROWTH IN PREVIOUS YEARS

The transition process forced the countries into economic reform and each country has taken a different path. The structural reforms in all six countries were biased toward economic liberalisation (foreign trade and prices) while there have been only rather modest achievements in institutional reforms. Governments gave a higher priority to macro-economic stability than to direct support for the business sector. Economic reforms mostly started with the mass privatisation of state enterprises, while land was de facto privatised through egalitarian distribution to rural residents (except in Belarus). Privatisation and land distribution have had a profound impact on the structure of labour markets and employment conditions. For instance; land distribution significantly atomised ownership, producing a large number of small farms that went over to subsistence agriculture. This skewed employment statistics as the new small farmers were classified as self-employed in the statistics.

The first decade of transition was marked by steep decreases in economic output but the Eastern partners started to recover from the mid-1990s or early 2000s with an average regional real GDP growth of well above 5% per year since 2000. Growth was particularly impressive in Armenia, Azerbaijan and Belarus (above the CIS average) up until the 2009 global economic crisis, with all of these countries recovering to 1989 GDP levels. However, the growth performance of Moldova, Georgia and Ukraine was less impressive (below the CIS average) and they have not yet recovered to 1989 GDP levels (55%, 65% and 75% respectively). The first group experienced a relatively less dramatic recession during the transition process while the latter group lost up to two-thirds of recorded pre-independence GDP. **TABLE 1.3** shows how the recent global crisis negatively affected economic growth, with most economies contracting again in 2009. The impact was strong in Armenia (-14.4%) and Ukraine (-15.1%), (-6.5%) and Georgia (-4.0%), while Azerbaijan continued to grow (9.3%) and Belarus recorded zero growth. Certain economic sectors (e.g. construction) were particularly hard hit. Estimates for 2010 indicate a relative recovery, but the growth rates are still far lower than previously recorded rates recorded, except for Azerbaijan.

TABLE 1.3 GDP GROWTH AND GDP PER CAPITA (PPP)

Countries	GDP growth (annual % change)					GDP based on PPP per capita (current international USD thousand)			
	2006	2007	2008	2009	2010*	2007	2008	2009	2010*
Armenia	13.2	13.7	6.8	-14.4	1.2	5.6	6.1	4.9	5.0
Azerbaijan	34.5	25.0	10.8	9.3	7.3	7.8	8.8	9.3	10.1
Belarus	10.0	8.6	10	0.2	1.8	10.9	12.3	12.4	13.0
Georgia	9.4	12.4	2.0	-4.0	2	4.7	4.9	4.7	4.9
Moldova	4.8	3.0	7.2	-6.5	0	2.6	2.9	2.7	2.8
Ukraine	7.3	7.9	2.1	-15.1	2.6	6.9	7.3	6.4	6.7
Bulgaria	6.7	6.2	6	-5.0	-2.5	11.2	12.4	11.7	11.6
Poland	6.2	6.7	4.8	1.7	2.1	16.1	17.6	17.9	18.6
Romania	7.9	6.0	9.2	-7.1	0.4	12.4	14.1	11.7	12.0
Russia	7.4	8.1	7.3	-7.9	1.5	14.7	16.1	15.0	15.6
Turkey	6.9	4.6	3.8	-4.7	3.7	13.1	13.9	12.3	12.8
EU-27	3.2	3.0	0.5	-4.2	1.0	—	—	—	—

Sources: World Bank WDI database; for EU-27, Eurostat <http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&plugin=1&language=en&pcode=tsieb020>.

Notes: (*) IMF estimations: IMF (2010), *World economic outlook – April 2010*.

Several factors contributed to the differences in economic performance. First, the initial conditions were different in each country despite the common heritage of a Soviet-style economy. While Armenia, Azerbaijan, Georgia and Moldova started the transition with a gross national income per capita of less than USD 3,000 (expressed in purchasing power parity [PPP]), Belarus and Ukraine recorded practically the same level of development as Bulgaria and Romania (USD 5,000+). Table 1.3 shows that in 2009 Belarus still had the highest GDP per capita (USD 12.4 thousand), followed by Azerbaijan (9.3) and Ukraine (6.4), while this was lower in Armenia (4.9), Georgia (4.7) and Moldova (2.7). The economic structures, natural resource stocks and human capital were also different when transition began: Belarus and Ukraine had significant industrial sectors that were largely protected during the transition period; Armenia, Azerbaijan, Georgia and Moldova had far less industry and a larger share of agriculture allowing them to de-industrialise rapidly and transform their economies; and Azerbaijan used its oil and gas resources to ensure extraordinary growth, but with little diversification of the non-oil economy and a long-standing extensive agricultural sector.

The second factor is linked to the speed and intensity of structural market reforms. The sudden disruption of the traditional economic links of their shared Soviet past has placed enormous pressure on the quest for new economic ties with the world. The initial differences have been further accentuated as the transition period has progressed and the six Eastern partners are now very different countries, with varied economy size and institutional characteristics. During the first decade of transition, Moldova and Georgia made very modest progress in structural reform. Armenia and Azerbaijan succeeded in catching up economically with Ukraine, which experienced a sinusoidal reform process with intermittent periods of acceleration and slow-down. Belarus is largely an outsider to this context as the country has been slow to adopt structural reforms, maintaining strong state control over the economy.

Thirdly, in some countries, the effects of the initial recession were amplified by disruptive political events (regional conflicts and civil wars in Armenia, Azerbaijan, Georgia and Moldova). These absorbed an enormous amount of resources that could have been used for economic and social development. Fourthly, post-independence economic relations with Russia also affected the growth patterns of the Eastern partners. Countries like Georgia or Moldova, given their tense relations with Moscow, have not benefited from growth spill over within the region as much as Belarus (which is highly dependent on the Russian economy), Ukraine (which saw its food processing industry boom after a decade of decline as a result of increased demand from Russia) and Armenia (which maintains very good economic relations with Moscow).

The main determinants of transitional growth differ between the six countries. Growth in Azerbaijan has been driven primarily by the booming export-oriented oil and gas sector, while in Georgia and Armenia increasing domestic demand has been the driver, largely financed by loans and transfers from abroad. In Belarus, the growth recorded from 2000 has mainly been driven by increasing exports to Russian markets while Ukraine was very much helped by booming world prices for its main commodity export (metals) and increased household income in real terms that stimulated consumption. The services sector has contributed most to economic recovery and GDP growth in all of the Eastern partners, while agriculture has seen a significant decline in importance. Industrial output fell victim to abrupt aperture to international markets in all countries, but also to inherent reforms that brought price liberalization, the abolition of subsidies, privatization and restructuring. The ownership structure of GDP has also changed; with Armenia, Azerbaijan and Georgia having lower public sector presence in the economy at around 25% while Moldova had a rate of 33% in 2008. Belarus and Ukraine, on the contrary, still record a lower private sector share of GDP (30% and 35% respectively).

Real wages experienced an initial period of drastic decline in all countries, followed by a recovery from 2000 in most. The wage differential has widened during transition but this was partially compensated by the introduction of a minimum wage in some countries. Overall economic liberalisation induced a process of wage deregulation (except in Belarus), leading to inequality in income distribution. Following an initial drop of GDP per employee, several years of growth brought a rapid increase in real wages from 2000 at a rate that overwhelmed the increase in productivity. Taking into account that the enhanced economic performance has not increased levels of employment, the improvement in productivity translated almost exclusively into better wages for insiders, with public sector wages increasing faster than private sector pay.

High economic growth in the second decade of transition has led to a significant increase in foreign trade in real terms in the region. The Eastern partners have increasingly opened their economies to the world, with particularly high growth in exports redirected from within the CIS to EU-oriented trade⁵. Ukraine had the best overall export performance, while Moldova trailed behind. Armenia and Moldova have higher penetration on EU markets than the other Eastern partners, but most of the products from this region are still low value-added. In 2007-08, Azerbaijan mainly exported crude oil, diesel fuel and motor oil; more than 45% of Ukrainian exports were minerals and steel products; Moldova exported mostly agricultural goods (beverages, vegetable products, raw tobacco and seeds); Georgia concentrated on iron and steel, beverages, spirits and vinegar; almost half of Armenian exports were metals and mineral products; and nearly 57% of Belarusian exports were mineral products, rubber and chemicals.

Exports outside the former Soviet Union are generally goods with a relatively low degree of manufacturing and consequently incorporate little value added. Although industry forms a significant sector in Ukraine and Belarus, the export of machinery, equipment and technical appliances is almost exclusively intra-regional or directed toward less developed markets. This is due to the low quality and lack of sophistication of the manufactured goods produced throughout the CIS region. Although trade among the six countries themselves is extremely limited, increased economic integration in the global context together with existing regional links with the CIS proved beneficial as long as the world economy performed well. Unfortunately, the downside of integration was a proportional increase in exposure of domestic economies to international shocks. Remittances stimulated domestic consumption and implicitly impacted on growth while they increased economic vulnerability to external factors. This was proven by the strong and persistent impact of the 2009 economic crisis, although a return to positive growth rates is expected in 2010-11.

⁵ While the CIS is still an important export destination (close to half of exports from Belarus, Moldova and Ukraine), the EU is becoming another important destination (50% of exports from Armenia and Moldova). Moldova (2001), Georgia (2002) Armenia (2003) and Ukraine (2008) have joined the World Trade Organisation (WTO). Belarus and Azerbaijan are still negotiating entry.

2. LABOUR MARKETS

2.1 KEY FEATURES

TURBULENT LABOUR MARKETS WITH PERIODS OF LOW ACTIVITY, HIGH UNEMPLOYMENT AND FREQUENT CHANGES OF EMPLOYMENT STATUS

Labour markets in the Eastern partners have been through a turbulent transition, with periods of low economic activity, high unemployment and underemployment, and frequent job changes for individuals. These changes, however, have been essential to the economic transformation process, leading to productivity increases and consequently better wages for employees. The end of Soviet era full employment initially led to declining participation and employment rates, significant underemployment, the emergence of 'unemployment' as a new concept and increasing wage differentials in all countries. Although a relative recovery was subsequently experienced in some countries with increased employment and decreased unemployment rates, there was never a return to the security of the old system.

TABLE 2.1 shows relatively high activity rates in Armenia, Georgia and Azerbaijan in 2009 (66.3%, 63.7% and 63.0% respectively), while rates were more modest in Belarus and Ukraine (60.2% and 58.1% respectively) (based on ILO data). Belarus maintained stable rates during the transition through the whole 1995-2008 period due to the lower level of national reforms, while Ukraine experienced an initial decrease and subsequent increase. Conversely, the figure has declined drastically in Moldova, sinking to 49.6% in 2009, partially due to the high number of labour emigrants classified as inactive in national statistics. It must be emphasised that the reference age group used for labour market indicators in this region is 15+, while the EU-27 data refers to the 15-64 age group. This creates inherent differences between figures. Hugely varying statutory and actual retirement ages in each country further distort the real picture. In fact, all of the six Eastern partners have a retirement age of less than 65 years, but the activity rate of people aged 65+ is generally quite high in most countries mainly due to low levels of pensions and social assistance, poverty and extensive subsistence agriculture. Almost half of the Georgian elderly continue to work, as do large numbers in Azerbaijan, Moldova and Ukraine. Belarus is an exception to this trend as it provides relatively generous retirement pensions.

Non-participation is generally the outcome of extended study for most young people (around one-third of inactive people in the case of Azerbaijan, Moldova and Ukraine) or housekeeping and childcare responsibilities for women (particularly in Armenia, and to a lesser extent in Georgia and Ukraine). Emigration is also another cause of 'inactivity' that accounts for around 20% of the figure recorded in Moldovan statistics, although emigrant workers are most likely to be included in the 'active' population of most countries. Finally, discouragement due to the insufficient supply of job opportunities and/or very low-pay is another important factor that cannot be precisely accounted for. This phenomenon seems to play an important role in Armenia, Moldova and Ukraine particularly among young people and women. The vast majority of discouraged workers join either the informal sector or the outflow of migrants.

TABLE 2.1 KEY LABOUR MARKET INDICATORS – REFERENCE AGE: 15+ (%)

Countries	Total activity rate 2009	Female activity rate 2009	Total employment rate 2008	Female employment rate 2008	Total unemployment rate 2008	Female unemployment rate 2008	Youth ⁴ unemployment rate 2008
Armenia	66.3	59.6	38.1	32.1	28.0 (2007) ¹	NA	NA
Azerbaijan	63.0	59.5	60.0	55.9	6.5 (2007) ³	5.3 (2007) ³	14.0 (2007)
Belarus	60.2	54.8	52.3	47.0	1.0 ²	NA	NA
Georgia	63.7	55.1	54.3	47.2	13.3 (2007)	12.6 (2007)	31.5 (2007)
Moldova	49.6	46.5	44.7	43.7	4.0	3.4	14.5 (2007)
Ukraine	58.1	52.0	53.5	48.3	6.4	6.0 (2007)	14.9 (2005)
Bulgaria	54.5	48.2	46.3	41.0	5.7	5.8	12.7
Poland	53.7	46.2	48.2	41.3	7.1	8.0	17.3
Romania	52.4	45.4	48.1	42.5	5.8	4.7	18.6
Russia	62.8	57.5	56.7	51.3	6.1 (2007)	5.8 (2007)	14.5 (2007)
Turkey	46.8	24.0	42.3	21.7	9.4	9.4	18.1
EU-27	57.7	50.6	53.7	46.6	7.0	7.5	15.3 (2007)

Sources: ILO-KILM for all countries except EU-27; for EU-27, Eurostat.

Notes: (1) National data from the ETF Armenia country report; (2) Only registered unemployment; (3) Reference age: 15-61; (4) 15-24 age group.

A significant feature of labour market participation in the region is that female activity is high in all countries – compared to Bulgaria and Romania (where female participation declined considerably over the transition period) – and the rate of female participation is comparable to that of the EU-27 in some Eastern partners (Table 2.1). Youth participation on the other hand is lower than the EU average, partially due to high enrolment rates in university education. The relatively comparable activity rates are, however, superficial as they are significantly distorted by the large contribution of rural self-employment and high degree of small-scale involvement in informal activities. Employment rates are generally low, with male employment rates always higher than female employment rates. In 2008, Armenia (38.1%) and Moldova (44.7%) had the lowest employment rates, while Azerbaijan (60%) had the highest. Employment rates are modest in Belarus (52.3%), Georgia (54.3%) and Ukraine (53.5%). Only Armenia and Azerbaijan recorded a net increase in employment rates throughout the 1995-2008 period, while Moldova experienced a large drop in employment and Georgia and Ukraine recorded a moderate reduction.

Unemployment does not necessarily operate in a manner diametrically opposite to employment, and both rates record a declining tendency in all countries except Armenia and Georgia. The highest unemployment rate for the region was the 28% recorded in 2007 in Armenia, followed by Georgia (13.3% in 2007). Ukraine, Azerbaijan (both around 6.5% in 2008), and Moldova (4.0%) had moderate rates, while Belarus reported a mere 1% on the basis of the Public Employment Service (PES) registers (there is no labour force survey (LFS)). Economic growth contributed less to unemployment reduction than emigration. Moldova recorded the steepest drop with emigration rates among the highest in the region. The low rates are also partly explained by the consideration of small land-owners as self-employed in total employment rates. Unemployment is inversely correlated to age, with young people far more affected than older groups. Youth unemployment is particularly high in Armenia (48% in 2001) and Georgia (31.5% in 2007), while it stands at around 15% in Azerbaijan, Moldova and Ukraine. Women seem to be harder hit by unemployment than men in Armenia, but the opposite is true for Azerbaijan, Georgia, Moldova and Ukraine.

2.2 EMPLOYMENT STRUCTURE

VULNERABLE EMPLOYMENT DOMINATED BY SMALL-SCALE INFORMAL ACTIVITIES AND SELF-EMPLOYMENT IN SUBSISTENCE AGRICULTURE

Employment status is characterised by the low proportion of waged employment in most countries. Bardak (ed., 2010a) gives the share of salaried workers as 33.7% in Georgia, 41.8% in Azerbaijan, 49.7% in Armenia, and 66.7% in Moldova

in 2007. Only Ukraine with 80.7% waged employment is somehow comparable with the EU-27 average of 87.7%. No information is available for Belarus in this respect. Furthermore, the share of waged employment decreased between 2000 and 2007 in Armenia, Georgia and Ukraine, while Moldova experienced a slight increase. This means that self-employment has a much higher incidence: in fact 58.2% of Azeris and 50.3% of Armenians were working for themselves, while the rate was 31% in Moldova and 19% in Ukraine. At the upper extreme, self-employment and family working in Georgia together account for 63.3% of total employment, indicating the great fragility of the labour market there. The situation in Georgia is mostly due to the limited opportunities for waged employment prompting people to adopt the survival strategy of working in small self-employed informal activities or subsistence agriculture on small plots of land.

The structure of employment by sector also confirms this vulnerability in most countries as agricultural employment still accounts for a high share. **TABLE 2.2** show that in 2007, agriculture played a key role in absorbing employment in Georgia (53.4%), Armenia (46.2%), Azerbaijan (38.7%) and, to some extent, Moldova (32.8%, though rapidly decreasing). This high share of agricultural employment is the direct consequence of the land privatization completed in five countries and still incipient in Belarus. However, the value added of agriculture to GDP is extremely low (around 10%) in all countries except Armenia, indicating low productivity and possibly high poverty. In fact, half of the population still lives in rural areas in Azerbaijan, Georgia and Moldova (and around 40% in Armenia) (Table 1.1). The lowest levels of agricultural employment are in Belarus (11.8%) and Ukraine (16.7%), where industry is still an important employer (28.4% and 23.9% respectively) particularly for the male labour force. The rest of the group has a much lower share of industrial employment, mainly at around 10-15%. Finally, all countries (except Georgia and Armenia) record a high employment rate in the services sector, mostly at above 50% of employment and reaching almost 60% in the case of Ukraine.

TABLE 2.2 MAIN ECONOMIC SECTORS BY THEIR VALUE ADDED TO GDP AND THEIR EMPLOYMENT SHARE (% OF TOTAL), 2009

Countries	Agriculture		Industry ¹		Services	
	GDP share	Employment share ²	GDP share	Employment share ²	GDP share	Employment share ²
Armenia	20.7	46.2	34.6	15.6	44.8	38.2
Azerbaijan	8.2	38.7	60.0	12.8	31.8	48.4
Belarus	10.0	11.8	45.2	36.7 ³	44.8	51.5
Georgia	9.6	53.4	21.4	10.4	69.0	36.0
Moldova	10.5	32.8	10.4	18.7	79.0	48.4
Ukraine	9.8	16.7	52.1	23.9	38.1	59.4

Source: World Bank WDI database.

Notes: (1) Including construction; (2) Reference year: 2007; (3) In ETF country report (2010c): industry 28.4% and construction 8.3%, which together make up 36.7%.

At the sector level, the Eastern partners have maintained and even expanded relatively low value added labour intensive activities that do not require high levels of qualification. Employment restructuring took place mostly at inter-sector level with movement from one economic sector to another and between the public and private sectors. These can be distinguished into agriculture versus non-agriculture shifts and reallocations within the non-agriculture sectors. The level of employment declined continuously in certain sectors throughout transition with no subsequent recovery. The public to private shift was much more significant during the first decade of transition due to mass privatisation and land distribution.

High levels of informality were fuelled by a reduction in formal public employment largely due to the impact of privatization and subsequent restructuring; land reform that encouraged self-employment style activities; an abundant supply of labour on the market due to closures, allowing employers to establish informal or semi-formal arrangements; erosion of incomes that forced many people to look for alternative income sources; and cost-cutting strategies in enterprises. This means that a significant share of the labour market operates in low-productivity and low-wage conditions. Furthermore, around 60% of the new jobs created between 2000 and 2007 were in the informal sector. Although national definitions vary greatly, the extent of informal employment in 2007 was estimated at 66% in Azerbaijan, 50% in Armenia, 33% in Moldova and Belarus (where the official figure is 10%), 26% in Georgia and 23% in Ukraine (**TABLE 2.3**).

TABLE 2.3 INFORMAL SECTOR: SIZE AND FEATURES

Countries	Date	Size and features
Armenia	2002-07	Undeclared work: 23-25% of non-agriculture employment. Agriculture: 98%. Total economy: 50%.
Azerbaijan	2007	Employment 66%, but with a broader definition. Manufacturing 44%. Youth 15-24 75%.
Belarus	2007	Employment 33%. GDP 28-43%. Official figure is around 10%*.
Georgia	1999 2007	Up to 70% of salaried workers. Employment 26%. 60% of informal workers have higher education.
Moldova	2007	Employment 33%, mostly in agriculture (45.7%). 11% of informal work in formal firms, but legislation allows for non-declaration of small activities (trade).
Ukraine	2002 2007	36% of GDP. 17.3% of employment. 32% of GDP. 22.3% of employment (71% in agriculture). Frequent under-declaration of wages.

Sources: ETF country reports (2009a, 2009b, 2010a, 2010b, 2010c, 2010d).

* The official figure was provided by the Belarusian Ministry of Labour and Social Protection to ETF staff in Minsk on 3-7 February 2010.

The labour markets are heterogeneous and heavily localized as a result of varying speed of reform across the region; unequal investment activities; geographical patterns of demand for goods and services; and other factors that have led to regional disparities. They are peppered with dualities in many respects: formal versus informal, with most self-employment in the informal sector; and rural versus urban, with a higher rural than urban rate of participation and informality due to high rates of subsistence agriculture. Serious discrepancies exist between regions and between the major cities and hinterlands, with employment opportunities concentrated in the large conurbations. These regional discrepancies persist due to low interregional labour mobility as a result of deficiencies in transport infrastructure, a shortage of accommodation and significant regional differences in real estate prices.

Analysis of job creation trends in the countries shows that a considerable number of the new private jobs created are simply replacements of the public jobs destroyed or transformed through privatisation, mainly in agriculture and industry. The services sector has been the most dynamic field and the sub-sectors that created most new jobs include: transport and communication; trade and repair; construction; hotels and restaurants; and public administration, in some cases. However, even in these sectors the rate of job creation has not been impressive and the most dynamic sectors in other transition countries (financial intermediation, real estate, hotels and restaurants) have developed far more slowly in the Eastern partners. The de novo private sector has played a relatively small part in job creation despite their higher productivity compared to privatised firms. Thus, economic growth did not bring major inter-sector change despite privatisation and the emergence of new businesses. Many countries maintained a rather traditional outlook on diversifying economic activities and new sectors have found expansion difficult.

Within the context of highly vulnerable employment explained above, it is obvious that more and better jobs offering decent working conditions need to be created in all Eastern partners. However the existing business environment is not always conducive to the creation of decent jobs and particularly for the growth of SMEs. Many institutional and legal impediments against businesses remain, including high levels of formalities and procedures required in the process of operating a business and the length of time required to deal with these. When comparisons are drawn with international benchmarks (World Bank Doing Business surveys; European Bank for Reconstruction and Development (EBRD)-World Bank Business Environment and Enterprise Performance Survey; Transparency International and World Bank Governance Indicators), this situation can be seen to result from insufficient restructuring of government institutions, bureaucratic structures within those institutions, corruption and, in some cases, staff incompetence.

Consequently, job creation and destruction processes have not been sufficiently dynamic for an efficient reallocation and readjustment of labour in the countries. Thus, the labour market restructuring ended up with many losers. After two decades of reform it is important to ask why the transformations have not been less socially costly and why the shortage of employment opportunities has persisted for so many years, forcing people to either emigrate or risk living in poverty. There is no clear and universal answer to this dilemma, but it is clear for the Eastern partners that the transition process has not as yet been able to create enough decent jobs in their economies.

2.3 MONITORING AND DATA ISSUES

The reliability and comparability of labour market data is crucial when analysing labour market trends and challenges. A well-functioning labour market information system is an important institutional aspect of labour markets and is essential for developing evidence-based labour market policies. The six Eastern partners have all undergone a 'statistical transition', developing or improving key statistical tools – censuses, labour force surveys, household budget surveys, establishment surveys and administrative registers. An assessment of existing data based on factors such as periodicity, national comparability over time and international comparability shows that most of the countries have been able to develop a quite complete set of labour-related statistical resources, in some cases comparable with EU standards (Moldova and Ukraine). Belarus is the exception with no labour force survey as yet in the country, whereby all labour market-related information here comes from administrative data that is largely incomparable to data from the other countries.

The other three countries are at different levels of development. In Azerbaijan and Armenia, methodological problems persist in labour force surveys despite some positive developments and repeated changes in methodologies renders data comparability over time highly problematic. In addition, the results of the Labour Force Survey in Armenia are significantly different from those of the Establishment Survey, which raises questions on data reliability. In both of these countries, the labour force survey is carried out and disseminated only on a yearly basis, while Georgia, Moldova and Ukraine conduct such surveys quarterly or even monthly. Thus, the comparability (and sometimes reliability) of data for labour market analysis is not always ensured.

All of the countries need to improve the transparency and timely dissemination of data (including micro-datasets). Hard-copy publication remains the most widespread form of dissemination, while websites are used to present a limited picture of survey outcomes. Access to datasets is generally restricted, reducing possibilities for the development of independent research capacities and skills. Meta-data is an under-developed field; it is very difficult to obtain accurate and up-to-date information on the methodologies and definitions used and thus to assess weaknesses and limitations. Furthermore, a cultural change is needed within the public authorities and among all stakeholders, to make them fully aware of the essential role of reliable and transparent statistics for: the good management of public affairs; as a catalyst for analysis and public debate; and to increase international credibility (in particular, vis-à-vis potential investors). Another potential area for development could include the use of comparable methodologies and definitions for measuring the informal economy. This issue is crucial to labour market analysis in the Eastern partners due to the large informal sector.

3. HUMAN CAPITAL STOCKS AND FLOWS

3.1 EDUCATION LEVELS

HIGH LITERACY AND EDUCATIONAL ATTAINMENT LEVELS AS LEGACIES OF THE PAST, BUT DECREASED PUBLIC SPENDING TODAY

The Eastern partners enjoyed high levels of human capital development by international standards at the beginning of the transition process. They inherited illiteracy rates of close to zero from the Soviet era and a vast majority of the population achieved medium skill levels (ISCED 2-4) that permitted them access to employment. Despite the different national classifications of education levels, particularly for secondary education, and huge variance in the figures available, analysis of labour market participants by educational level shows an average two-thirds of the labour force with secondary education (lower and upper) and one-fifth with tertiary education. Full literacy in entire populations in all countries means the share of those with primary and less education is small in most countries. Moreover, the lack of any significant gender difference across education levels confirms gender equality in the education systems.

These figures represent the great achievements of past education systems and clearly constitute a comparative advantage with respect to other countries at a similar level of economic development. The high level of human capital could form a key pillar of the long-term economic growth and competitiveness of the six Eastern partners, particularly when compared to that of developing countries with high illiteracy rates and labour forces with a high share of primary and lower education. **TABLE 3.1** shows that the blanket full literacy does however cloak other differences between countries: Georgia has a higher proportion of tertiary educated labour force (30%), while Moldova comes last in the group with the highest share of primary and lower educated (18%) and a relatively lower share of tertiary educated (20%).

TABLE 3.1 EDUCATIONAL ATTAINMENT OF PARTICIPANTS IN THE LABOUR MARKET (% OF TOTAL), 2007

Countries	ISCED 0-1			ISCED 2-4			ISCED 5-6		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Armenia	2.9	2.4	3.4	72.2	77.7	74.5	20.9	19.9	22.1
Azerbaijan	3.6	3.0	4.3	74.1	72.1	76.2	22.3	24.9	19.5
Belarus				76.8			23.2		
Georgia	2.2	1.8	2.6	67.6	68.6	66.6	30.0	29.3	30.6
Moldova	18.3		18.0	61.9		60.3	19.8		21.7
Ukraine	0.8	0.6	0.9	74.9	77.3	72.4	24.3	22.1	26.7

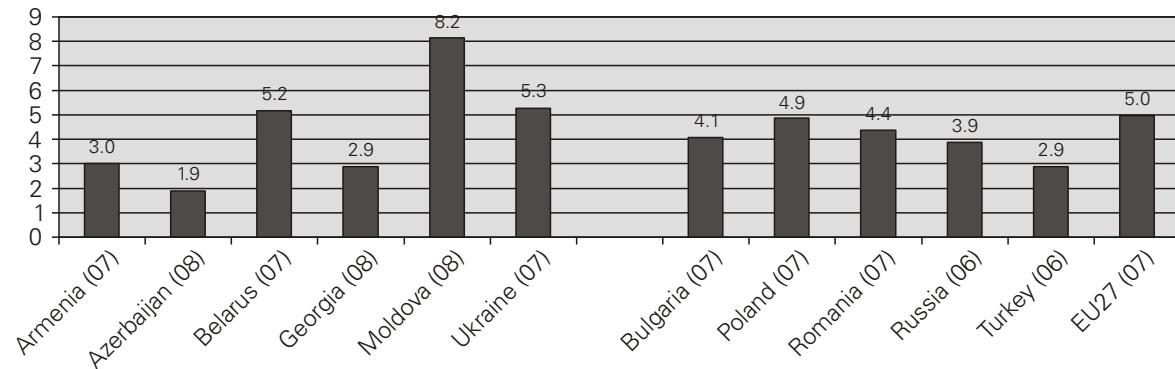
Sources: ETF country reports; Azerbaijan: State Statistical Committee; Moldova: National Bureau of Statistics.

The transition process has caused a serious shock to the education and training systems, just as it has to all other systems, and it has led to significant changes in all countries. In the early transition process in particular, the significant economic hardships and social turmoil experienced by the six countries forced governments and households to cut spending on education. The public budget for education decreased and investment in human capital was given a low priority against other survival concerns in spite of the fact that the training needs of individuals and enterprises changed and increased considerably with the move toward a free market economy. The quality of education and training systems has deteriorated in most countries as a direct result.

Indeed, during the last two decades, public expenditure on education (as % of GDP) declined substantially in Armenia, Azerbaijan, Georgia and Moldova remaining low by EU standards even during the economic growth of the 2000s (**FIGURE 3.1**). Only Moldova overcame the period of extensive underinvestment, substantially increasing the weighting

of education in GDP to above the EU average in 2008. Given the small size of its economy, however, this increase was not sufficient to cater effectively for the younger generations. Ukraine and Belarus were the only two countries to maintain education budgets at EU comparable levels. General secondary education absorbs the largest percentage of public expenditure on education while budgets for (primary and secondary) vocational education and training (VET) have been repeatedly reduced to such a minimal percentage of funding that underinvestment in this type of education is clearly demonstrated. Studies also indicate that efficiency gains can be achieved in education expenditure in all countries (World Bank, 2008a & 2009b; Borisova & Kuusela, 2009; ETF country reports).

FIGURE 3.1 PUBLIC EXPENDITURE ON EDUCATION (% OF GDP)



Source: World Bank WDI database; EU-27, Eurostat estimates.

In these circumstances, negative trends in participation rates (as expressed by gross enrolment rates) were noted at all levels of education during the two decades of transition. Enrolment rates in pre-primary education decreased in most countries. **TABLE 3.2** shows that gross enrolment rates in pre-primary education were high (close to 100%) only in Belarus and Ukraine in 2009, while they stood at around 62-74% in Moldova and Georgia. Especially low levels were reported in Azerbaijan (26%) and Armenia (33%), with possible negative effects on female labour force participation. Access to primary education is free in all countries and the duration of compulsory schooling is between nine and twelve years. Gross enrolment rates in primary education are high, covering almost the entire age cohort, but Moldova has fallen slightly behind (94%), reflecting unequal access to education among vulnerable children mainly in rural areas. Indeed, negative trends have been noted since 2000 in Belarus, Moldova and Ukraine, where there have been slight decreases in participation rates at primary level.

Lower secondary education forms part of compulsory education and gross enrolment rates are generally high. The lowest enrolment rates at this level are seen in Moldova with 89.3%. The upper secondary education level suffered more during the initial stages of the transition process but participation at this level has shown an upward trend in Belarus, Georgia and Moldova since 2000. In Armenia and Azerbaijan rates are fairly stagnant and they are decreasing in Ukraine. In 2009, the gross enrolment rate at upper secondary level was high in Azerbaijan (116% [national estimate]) and Georgia (124%), followed by Ukraine (91%) and Moldova (86%). These rates are relatively low in Armenia (83%) and Belarus (78%), indicating vulnerability and possible unequal access to education for some children (Table 3.2). Participation patterns in upper secondary education have been changing in favour of general secondary education (Section 3.2). The importance of VET at secondary level has decreased since the beginning of the transition in all Eastern partners to less than one-third of total enrolment in upper secondary education today. All countries have experienced a higher participation of girls to boys in education (except Azerbaijan where there is a deficit of girls in upper secondary education).

Higher education was the winning sector in the educational changes of the transition in all countries except Azerbaijan. The ever-increasing demand for higher education led most countries to opt for liberalized higher education systems by opening the sector up to private investment and increasing the capacity of the fee-based public education system in order to ensure a maximum intake of upper secondary graduates. These developments were widely supported by increased private household spending on higher education. As a result, private higher education became a profitable business and increased its share in Armenia, Georgia and Moldova, despite persistent issues with quality resulting from the rapid growth of the sector. Private higher education remained small in Belarus and Ukraine, while fee-based public education was greatly extended in Belarus, Moldova and Ukraine. Azerbaijan is the only country to maintain strong restrictions on entry to higher education, allowing private and fee-based public education only a very marginal role. As a consequence, very few numbers of upper secondary graduates can attend university in Azerbaijan.

TABLE 3.2 GROSS ENROLMENT RATES IN EDUCATION BY LEVEL, 2009

Countries	Pre-primary	Primary	Lower secondary	Upper secondary	Total secondary	Total tertiary	Tertiary: Gender Parity Index
Armenia	33.3	98.5	98.4	82.7	93.1	50.1	1.3
Azerbaijan¹	26.4	116.2	100.8	115.6	105.6	15.8	0.8
Belarus	97.4	99.2	95.7	78.4	90.1	77.0	1.4
Georgia	62.5	107.4	95.5	124.8	108.5	25.5	1.2
Moldova	74.4	93.6	89.3	85.7	88.1	38.3	1.4
Ukraine	100.0	97.5	95.9	91.4	94.4	79.4	1.3
Bulgaria²	80.67	101.27	86.39	90.43	88.64	51.03	1.30
Poland³	60.24	97.07	100.47	99.23	99.82	66.91	1.4
Romania²	73.31	99.83	101.87	83.81	91.55	65.56	1.34
Turkey²	17.73	99.30	91.11	72.47	81.96	38.00	0.78
Russia²	90.08	96.83	85.15	84.19	84.81	77.19	1.36
France²	110.41	109.78	110.05	117.27	113.20	54.58	1.28
Germany²	109.12	104.77	100.18	104.39	101.70	NA	NA

Source: UNESCO Institute for Statistics database.

Note: (1) National estimates for 2008; (2) Reference year: 2008; (3) Reference year: 2007.

Table 3.2 shows that the gross enrolment rate for tertiary education in 2009 was particularly high in Ukraine (79%) and Belarus (77%). The rate was 50% in Armenia, 38% in Moldova and 25% in Georgia, while it stood at only 16% in Azerbaijan where access to university is restricted by demanding entrance examinations and a low number of places. Georgia also saw a reduction in enrolment rates from 2004 as a result of a process for the accreditation of higher education institutions (on the basis of quality). Increased participation in tertiary education overall was mainly due to female participation exceeding that of males in all countries. Much of the increase in participation was funded by households and there was related growth in private higher education and fee-paid public education. In Armenia, more than 20% of enrolment in tertiary education was in private institutions, while the rate for Georgia was 21%. In Belarus, 15% of higher education participants are in private higher education institutions and about 55% are in fee-based public education (European Commission, 2009). In Moldova, more than 75% of students pay fees, mostly in public institutions or more rarely in private ones, but private education remains marginal in Azerbaijan and Ukraine (ETF, 2009a, 2009b, 2010b).

Education pays off even when people have insufficient specific human capital. A higher level of education – even if this additional education is general rather than specialized in nature – offers higher returns on the labour market. This particularity has led to a significant increase in demand for education, especially tertiary degrees in all countries. Also, the appetite for learning is an established cultural tradition in the region where there have been highly educated populations since Soviet times. Employment uncertainty also fuels the increasing demand and the pursuit of more and better education is often viewed as an appropriate risk reduction strategy. As a result, an average of nearly one in four economically active people in most of these countries had a tertiary degree in 2007. Women account for a higher proportion of university enrolment than men in all countries except Azerbaijan, where continued traditions lead to the enrolment of more men than women.

The vast majority of enrolment is in academic higher education (ISCED 5A level) while entry to practically-oriented higher education (ISCED 5B level) stands at 9.5% in Georgia, 12.7% in Moldova, 15.5% in Ukraine, 19.8% in Azerbaijan, 20.6% in Armenia and 26.8% in Belarus (see **TABLE 3.3**). However, this type of higher education has been decreasing since the early 2000s. Enrolment in the different fields of study have increased at varying rates across countries but it is important to note that science, engineering, manufacturing and construction have experienced the lowest or even

negative increases in comparison with other fields of study (UNESCO Institute for Statistics database)⁶. This trend may be linked to the development of private tertiary education which tends to focus on the 'soft' fields that require a lower level of investment, the feminisation of tertiary education as increasing numbers of women opt for 'softer' fields, and an increasing demand in these fields after their historical and ideological marginalisation during the communist area.

3.2 VOCATIONAL EDUCATION AND TRAINING

REVIVAL OF VOCATIONAL EDUCATION AND TRAINING AFTER A PERIOD OF NEGLECT

The situation of vocational education and training (VET) deserves special mention here. It plays a very important role in the skill formation processes as it can (i) enhance the technology absorption and diffusion capacity of countries; and (ii) increase employability. The VET system lost credibility and attractiveness due to the closure of big enterprises (the main users of the skills it produced) and the rapid deterioration of its relevance to emerging labour market requirements. Its importance at secondary level has decreased since the beginning of the transition in all Eastern partners where most effort has been focused on rationalising vocational school networks and programmes through closures and mergers on the basis of improved efficiency – with a real reduction in the number of vocational schools and students. Thus the VET section of the secondary school system was the net loser from transitional changes in all countries.

It must be stressed that it is difficult to construct a complete picture of VET within the education system as a whole because each country has its own definition and classification of VET and the corresponding ISCED levels (2, 3, 4, 5B). VET at lower secondary level (ISCED 2) has completely disappeared in all six countries and the share of VET at upper secondary level (ISCED 3) has also been decreasing. The current trend in the VET systems of most countries is likely to be towards a post-secondary non-tertiary model (ISCED 4) rather than an alternative secondary education experience. When national and international figures are considered, VET enrolment rates vary extensively in each of the six countries, depending on the level of VET included in the statistics (ISCED 3, 4 or 5B). The VET enrolment rates given here combine ISCED 3 and 4 levels – 'upper secondary' and 'post-secondary' – to reflect the true size of the system. These two levels are mostly called 'primary/preliminary VET' and 'secondary/middle specialised VET' respectively in the countries themselves.

Table 3.3 shows VET enrolment rates by ISCED level (3, 3+4, 5B) for 2009. Focusing on the second column, the combined VET enrolment rate at ISCED 3+4 levels (upper secondary and post-secondary non-tertiary VET) accounted for one-third of the system (ISCED 3+4 levels) in Belarus, Moldova and Ukraine, while it accounted for one-fourth in Armenia and almost one-fifth in Azerbaijan. Georgia has a small VET component (10%) in 2009 compared to 2007 (22%), mainly due to a re-classification of higher professional education from ISCED 4 level to ISCED 5B. Despite varying national statistics, it is interesting to note there is a small share of VET at ISCED 3 (upper secondary) level in Armenia, Belarus and Georgia and a higher share of VET at higher (post-secondary, non-tertiary) levels. Conversely,

TABLE 3.3 VET ENROLMENT SHARES BY ISCED LEVEL (3, 3+4, 5B), 2009

Countries	VET enrolment in ISCED 3 as % of total enrolment in ISCED 3 (primary VET)	VET enrolment in ISCED 3+4 as % of total enrolment in ISCED 3+4 (secondary specialised VET)	VET enrolment in ISCED 5B as % of total enrolment in ISCED 5+6
Armenia	4.2	24.6 (2007)	20.6
Azerbaijan	38.4 (2008)	18 ¹	19.8
Belarus	2.1 (2010)	36.8 (2010)	26.8
Georgia	2.9	10 (22 in 2007) ²	9.5
Moldova	36.7	37.8	12.7
Ukraine	25.7	34.9 (2008)	15.5

Source: UNESCO Institute for Statistics database.

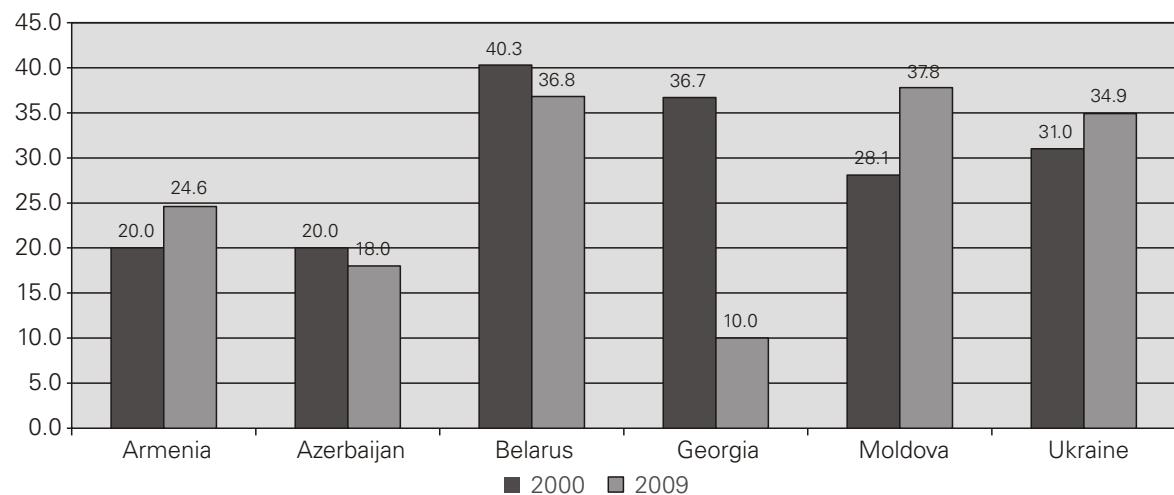
Notes: (1) VET enrolment rate in ISCED 3+4 for Azerbaijan is based on the ETF estimates on the basis of data from the State Statistical Committee of Azerbaijan; the corresponding figure from UNESCO Institute for Statistics database is 47.7%, which is highly unlikely; (2) There is a big difference between the figures of 2007 and 2009 and this is due to a re-classification of participation of higher professional education from ISCED 4 level to ISCED 5B.

⁶ It is interesting to note that these are the qualifications most in demand in the EU and that they are given a prominent role in the EU New Skills for New Jobs agenda (see www.uis.unesco.org/).

Moldova and Ukraine have a relatively bigger share of VET at ISCED 3 level. In Azerbaijan the classification of VET levels and types were changed in 2008, hence figures from that date appear to show sudden wholesale change. VET enrolment in ISCED 3+4 for Azerbaijan is 18% based on ETF estimates of the data from the State Statistical Committee of Azerbaijan, although the corresponding figure from the UNESCO Institute for Statistics database is 47.7% which is highly unlikely.

There is clear evidence of renewed interest in VET (particularly at post-secondary level) almost everywhere since the mid-2000s following a decade of neglect. Most Eastern partners have taken steps to modernise their VET systems within the lifelong learning perspective tackling issues of governance, institutions and curricula in order to improve the quality, relevance and efficiency of VET and increase access and participation. **FIGURE 3.2** shows changes in VET enrolment from 2000 to 2009 (the combined VET enrolment rate at ISCED 3 and 4 levels, including upper secondary and post-secondary together). Armenia, Moldova and Ukraine show an increasing trend in VET participation. The trend in Armenia is due to government efforts to revive this type of education and in Moldova is a response to signs of re-industrialisation. Levels of VET enrolment have been relatively stable in Belarus and Azerbaijan, while Georgia has seen a dramatic reduction in figures from 36.7% to 10.0% in this period – partly due to a re-classification as explained before, but also the system is shrinking even if the figure of 2007 is taken (22%).

FIGURE 3.2 VET ENROLMENT SHARES BY ISCED 3+4 LEVEL AS % OF TOTAL ENROLMENT IN ISCED 3+4, 2000 AND 2009



Source: UNESCO Institute for Statistics database.

Note: For Armenia, Belarus and Ukraine, year 2007, 2010 and 2008 respectively instead of 2009.

Improvements in VET systems have mostly occurred within the broader modernisation of the entire education system. A number of VET strategies, action plans and laws were adopted in the countries and VET-related institutions (VET councils or VET development centres) were established or improved. The main objective was to enhance the attractiveness of VET as a valid alternative pathway to the labour market, while increasing its relevance to emerging skill needs within local economies. Work with employers on new occupational standards has progressed in all countries with the support of EU, World Bank and bilateral assistance projects. All of the Eastern partners have also initiated discussions on the development of national qualification frameworks (NQF) to guarantee transparency, quality and relevance to labour market needs and to provide opportunities for skill upgrading for learners. Progress is at a different stage in each country. In Armenia, Azerbaijan and Ukraine the conceptualisation of the NQF has been completed and they are now in the design phase; while Belarus, Georgia and Moldova remain in the conceptualisation phase.

Despite intense activity in rethinking and reshaping the VET system over recent years, many challenges must be met for VET provision to be of adequate quality, sufficiency and flexibility. These changes include: (i) system governance (countries like Moldova and Belarus have highly centralised systems that prevent training providers from becoming more adaptable to local needs); (ii) system financing (countries like Armenia, Georgia and Moldova need to become more efficient and mobilise large amounts of funding to counteract years of underfunding and proceed with reform); (iii) institutional capacities to implement reforms and new approaches in teaching and learning; and (iv) capacities for monitoring labour market developments and to anticipate future skills requirements given that statistical systems are weak and social partnership is underdeveloped.

3.3 CHALLENGES IN EDUCATION

EMERGING CHALLENGES RELATED TO UNEQUAL ACCESS TO EDUCATION AND THE DECREASING QUALITY OF PROVISION

Although the education systems perform quite well in comparison to many developing countries, there are some signs that the Eastern partners may rapidly lose this comparative advantage as human capital will deteriorate due to:

- (i) insufficient quality in an education system unable to adapt quickly to the social and economic changes of transition and to keep abreast of international developments; (ii) the lack of funding for education in a time of serious economic contraction; and (iii) the limited numbers of high-skilled job opportunities that could maintain and eventually enhance existing skills during transition.

Some of the regional education systems signal problems in equal access to education and training opportunities for certain youth groups. The gross enrolment rate in pre-primary level education is low in Armenia and Azerbaijan which is especially important for the future of children and female labour force participation. Enrolment in primary education is incomplete in Moldova where some children from rural areas are known to be missing out. Armenia, Belarus and Moldova show lower enrolment in the upper secondary level which could lead to a polarisation of skills among the youth of these societies. Despite recent developments showing increasing higher education in most countries, university enrolment rates are low in Armenia and Georgia relative to EU standards, and figures for Azerbaijan show that access is restricted to a mere 16% with open gender inequality against females. Thus, sectors of the younger and less well-off population may well be left unskilled and/or poorly educated as is the case in Moldova, Georgia and Azerbaijan. These young people are at a high risk of entering a vicious circle of under-education, reduced access to gainful employment and poverty that will only increase socioeconomic inequality.

Moreover, most of the countries still face problems in school improvements as their restricted education budgets prevent them from undertaking repairs and maintenance on school buildings and infrastructure. Rural areas are suffering especially badly from low quality education provision and reduced access to education and training. Poor school infrastructure seems to be particularly important in Georgia where the World Bank poverty assessment report (World Bank, 2009a) reports more than 50% of schools in need of repair, and Armenia where there are major problems with heating. The slow pace of modernisation in the curriculum and teaching and learning materials is also an issue of concern. Interestingly, there does not appear to be any problem with high pupil teacher ratios impeding the educational process. In fact, pupil teacher ratios at secondary level are lower than the EU or OECD average, and they are set to become even lower given the negative demographic trends in these countries.

Low VET participation levels lead to only a small proportion of students completing secondary education with the appropriate skills to compete in the labour market. In Azerbaijan, in 2004/05 higher education took in 19% of general education graduates while 5.7% enrolled in post-secondary VET. The remaining 75% of secondary general education graduates remained outside recognised education and training for employment or were made to wait another year to apply again for higher education. In Georgia in 2007/08, 40% of secondary education graduates continued their studies in higher education and 8% in post-secondary VET. The remaining school leavers (52%) were provided with no immediate skill development opportunities for employment (Castel-Branco, 2008). The problems facing secondary education graduates are documented in transition from school to work surveys in some countries. In Azerbaijan the 2005 State Statistical Committee's survey of 15-29 years old showed that the majority of unemployed youth (57.1%) are graduates of general secondary education followed by those with basic education (low qualified) and higher education. In Ukraine, the results of the ETF 2007 survey on youth transition from school to work showed those with secondary general education to be the most problematic category of school leavers (ETF, 2008b).

The reduction of public funding for education has meant countries like Armenia and Moldova have discontinued the provision of free public education at post-compulsory level. There are a limited number of free places in post-secondary education and these are filled on a competitive basis. These governments also presented new options for fee-paying places in public institutions and opened the education market up to private institutions. The number of private institutions at secondary and post-secondary level and the number of fee-paying students in public and private institutions has increased immensely over recent years. Azerbaijan and Belarus (and Ukraine to some extent) buck the trend as private education is not supported and it constitutes only a minimal part of the system. This reliance on private funding for education has increased inequality in the education system and some lower socioeconomic groups, particularly in rural areas, are unable to fund the education of their children. This is exacerbated by the practice of private tutoring – which is widely reported to be a strategy for teachers to increase their income rather than a response to a real need – and gifts (or bribes) for preferential treatment in most countries (ETF, 2009a; 2009b; 2010a; & 2010d).

The above implies that the shortfall in state investment in education has been filled by contributions from private household expenses. In Armenia, annual tuition fees in 2006 stood at between USD 136 and 819 for VET and between USD 519 and 2,185 for higher education. This constitutes an especially heavy burden to families in view of the level of wages and GDP per capita in the country. In 2005, private expenditure on fees, books, transportation and private

tutoring in education represented 1.9% of GDP – a substantially higher percentage than the 2004 OECD average of 0.7% (World Bank, 2008a). In Georgia, household cash expenditure on education was estimated at roughly 4% in 2007. In Moldova, a 2007 study by the Institute for Public Policy demonstrated that 17% of total household expenditure goes on pre-university education. This category includes: formal payments to cover fees, books and accommodation; and informal payments for additional individual or group private tuition and bribes. Even in Ukraine where there is guaranteed public education for the population, out of pocket payments for higher education are estimated at 0.75% of GDP, while a conservative estimate of spending on pre-university education would equal 0.7-0.8% of GDP (World Bank, 2009b).

Reduced public funding for education also had an important impact on the quality of education offered at all levels. At basic education level, student achievement in mathematics and science as measured by the Trends in International Mathematics and Science Study (TIMSS) surveys (**TABLE 3.4**) shows that Moldovan and Armenian children at grade 4 score close to the international average in mathematics but lag behind children in Russia and other former Soviet Union countries (Kazakhstan, Latvia and Lithuania). However, their achievement deteriorates in comparison with the international average by grade 8, indicating shortcomings in the quality of education in the later years. The analysis of the Progress in International Reading and Literacy Study (PIRLS) results (**TABLE 3.5**) on student achievement in literacy in Georgia and Moldova indicates that children in those countries trail their peers in Russia and the Baltic countries. Azerbaijan is the only country covered by the Programme for International Student Assessment (PISA) 2006 and 2009, where it performed poorly (ranking 64th out of 65 participating countries in PISA 2009 assessment)⁷.

TABLE 3.4 TIMSS – AVERAGE SCORES IN MATHEMATICS AND SCIENCE, 2007

Countries	Mathematics				Science			
	Grade 4	Grade 8	Grade 4	Grade 8	Grade 4	Grade 8	Grade 4	Grade 8
Average Score	Standard Deviation	Average Score	Standard Deviation	Average Score	Standard Deviation	Average Score	Standard Deviation	
Armenia	500	90	499	85	484	119	488	101
Georgia	438	88	410	96	418	85	421	83
Moldova	504	87	460	81	496	85	472	74
Ukraine	469	84	462	89	474	83	485	84
Int. average	500	100	500	100	500	100	500	100
Bulgaria			464	102			470	103
Czech Rep.	486	71	504	74	515	76	539	71
Hungary	510	91	517	85	536	85	539	77
Kazakhstan	549	84			533	74		
Latvia	537	72			542	67		
Lithuania	530	76	506	80	514	65	519	78
Romania			461	100			462	88
Russia	544	83	512	83	546	81	530	78
Turkey			432	109			454	92

Source: Trends in International Mathematics and Science Study.

⁷ The Azerbaijan scores for mathematics, science and reading were 431, 373 and 362 respectively according to PISA 2009 results (see www.oecd.org/document/2/0,3343,en_32252351_32236191_39718850_1_1_1,00.html for more information).

TABLE 3.5 PIRLS – READING ACHIEVEMENT (GRADE 4), 2006

Countries	Average score	Standard deviation
Georgia	471	75
Moldova	500	69
PIRLS scale average	500	100
Latvia	541	63
Lithuania	537	57
Romania	489	91
Russia	565	69

Source: *Progress in International Reading Literacy Study*.

Quality problems at secondary level mainly relate to VET where curriculum improvement has been insufficient to respond to the new socioeconomic needs. The curricula and qualifications provided by the present VET system in both public and private institutions are recognised as obsolete in all the analyses undertaken by the countries themselves in their VET strategies developed during the 2000s. Links between the education sector and businesses within the economy were destroyed during transition and never really replaced. This forms a great impediment to improving VET quality and relevance. However, there is a growing recognition of the need to accelerate improvements in the quality of VET at upper secondary and post-secondary non-tertiary level.

Quality problems at tertiary level are linked to underfunding combined with a rapid increase in enrolment and the slow modernisation of education programmes and fields of study. Student to teacher ratios have worsened in state universities in almost all countries. Corruption in the form of gifts and bribes for preferential treatment is reported at this level of education and this can be seen as a parameter of low quality as it shifts the focus from the educational process and student achievement to personal gain (ETF country reports). At the same time, private higher education institutions in Ukraine, Georgia and Moldova appear to be performing at low quality levels as the poor infrastructure and low salaries prevent them from attracting the best professionals. The Bologna process⁸ subscribed to by all EU Eastern partners except Belarus has been a major driver of increased quality in tertiary education, establishing accreditation procedures and mechanisms. The full impact of these has yet to be seen.

Low teacher salaries are often used to explain low quality in education as this prevents the system from attracting and retaining good professionals and reduces teacher motivation for better delivery. Moreover, low teacher salaries also indicate the poor and decreasing status of education as a profession within these societies. Evidence from the ETF country reports shows the average wage in the education sector in Azerbaijan to be around 40% of the national average wage, while in Moldova the rate is 25% and 78% in Ukraine (or 70% of the average wage in industry). In Armenia, teacher salaries are currently lower than teacher pensions (World Bank, 2008a) and although teacher starting salaries have been increasing, the average teacher salary remains extremely low (the lowest public service income in some cases). Teacher salaries seem to be less of a problem in Belarus.

Finally, efforts to enhance the skills of the adult population have so far been limited and inadequate in terms of both access and quality. Ageing societies and expected further economic restructuring mean that more systematic efforts must be made to address the skill needs of the adult population and to provide incentives for adults to undertake training. Education and training must be brought closer to the emerging social and economic needs of the countries through better understanding of the demand for skills. Education and training provision must be adapted to match this demand and increase the employability of all population groups.

⁸ The Bologna Process is the process to create the European Higher Education Area (EHEA) and is based on cooperation between ministries, higher education institutions, students and staff from 46 countries, with the participation of international organisations. The three main objectives of the process are: easily readable and comparable degrees organised in a three-cycle structure (bachelor-master-doctorate); quality assurance standards and guidelines; and fair recognition of foreign degrees and other higher education qualifications in accordance with the Council of Europe/UNESCO recognition Convention.

4. EFFECTIVE USE OF HUMAN CAPITAL IN PRODUCTIVE WORK

An exclusive focus on levels of educational attainment gives only a partial picture of the quality of human capital as it overlooks the knowledge and actions of individuals in the workplace. Increased education and qualification levels of a population do not necessarily lead to a linear improvement in human capital if available employment opportunities do not offer individuals the opportunity to use their skills and knowledge or to upgrade, enhance or adapt them, and if the quality of education and training provision for young people and adults does not adapt to the changing economic needs of the country in an ongoing manner.

In the case of the six Eastern partners, reduced economic output and the process of de-industrialisation during early transition led to many job losses and subsequent high levels of unemployment (e.g. Armenia), and underemployment and hidden unemployment in countries that deliberately adopted policies to avoid high levels of unemployment (e.g. Moldova, Ukraine). Job destruction in the public sector has not been balanced by job creation in the private sector. Industry has largely lost its role in employment except for in Belarus and Ukraine. The substantial increase in the service sector role in total employment has mainly been in low added value areas such as trade and repair and personal services, with a small share going to higher added value sectors in business and finance.

Agriculture, and subsistence agriculture in particular, increased in importance for employment by acting as a buffer against joblessness together with non-agricultural informal activities in petty-trade and personal services. Agriculture continues to provide a substitute for the lack of employment opportunities in other sectors and currently accounts for between 30% and 50% of employment in the region except for in Belarus and Ukraine. All the above processes have led to the deskilling of a section of the labour force whose mainly industrial skills were no longer needed and who were either unwilling or unable to retrain in those skills useful to or needed for income generation in the economy. Moreover, the early transition period led to sudden and dramatic changes in the range of skills needed in the economies and these new skills for new jobs were not readily available. This process was further aggravated by the lack of alternative job opportunities, shortage of re-training opportunities and slow pace of change within the education and training systems. Overall job reallocation during the transition has not yet been strongly in favour of highly skilled jobs.

4.1 RETURNS TO EDUCATION

EDUCATIONAL INVESTMENT YIELDS RETURNS DESPITE PROVIDING NO GUARANTEE OF LABOUR MARKET INTEGRATION AND GOOD QUALITY JOBS

The slow creation of higher added value jobs does not prevent education from yielding returns in the six countries. **TABLE 4.1** shows that people with higher education generally have higher employment rates followed by those with vocational qualifications. However, trends in the various countries have followed different patterns. In the 2005-08 period employment rates in Armenia increased for all educational groups but far more for those with a high level of attainment. In Ukraine they remained relatively stable, while in Georgia some reduction was recorded.

More education is also rewarded by higher salaries as can be seen from the rates of return on education. The return on an extra year of education for those in waged employment is 9% in Georgia and 9.5% in Moldova. These levels are equal to those of some advanced transition economies like Hungary and even higher than those of Poland. Ukraine is the only Eastern partner for which data are available that has a relatively low rate of return on an extra year of schooling (5%) in mid 2000 – possibly as a result of wage compression policies – but the rate increased to 8.6% in recent calculations based on Household Budget Survey 2006 data.

Finally, education reduces the risk of exposure to poverty. Analysis of the Household Budget Survey for Azerbaijan in 2003 shows that poverty incidence is lower among higher educated households. Some 28% of households headed by an individual with higher education were in poverty compared to 38.3% of those with secondary education and 45% of those with less than secondary education. In Moldova, the risk of poverty is 0.5% for higher educated people, 28% for those with secondary education, and 41% for those with primary or less than primary education. In Georgia, poverty incidence among the highly educated was 12.1%, among VET graduates 21.7%, among general secondary graduates 29% and 31.8% among the poorly educated.

TABLE 4.1 EMPLOYMENT RATES BY EDUCATION LEVEL (%)

Countries	2005			2008		
	Low ISCED 2	Medium ISCED 3-4	High ISCED 5-6	Low ISCED 2	Medium ISCED 3-4	High ISCED 5-6
Armenia¹	28	Gen 42.8 Voc 52.2	ISCED 5 40.9 ISCED 6 60.5	35.8	Gen 52.7 Voc 61.7	ISCED 5 57.7 ISCED 6 89.7
Georgia	39.5	Gen 55.2 Pri. voc 66.1 Sec. voc 61.8	59.4	35.4	Gen 52.9 Pri. voc 68.8 Sec. voc 57.7	55.4
Ukraine²	34	60.8	73.4	35	60.8	74.2

Sources: National labour force surveys.

Notes: (1) ISCED 5 level includes middle vocational, incomplete tertiary and tertiary education. (2) Data refer to the years 2004 and 2007 respectively. ISCED 5-6 includes complete higher and basic higher education; ISCED 3-4 includes incomplete higher and complete secondary general education.

Despite the positive correlation between level of education and labour market outcomes, education is no guarantee of labour market integration. The better labour market prospects offered to individuals by education do not mean that education protects them against labour market risks: in Armenia and Georgia, for example, more than 20% of highly educated people are unemployed (**TABLE 4.2**). Neither does it mean that the economy makes full use of this investment in education: in Azerbaijan, for example, 70% of higher education graduates are working in the public sector and if we exclude those in unemployment, less than 25% of the remaining higher education graduates use their skills in the high-productivity private sector; also 9.1% of highly educated people were underemployed in Georgia.

TABLE 4.2 UNEMPLOYMENT RATES BY EDUCATION LEVEL (%)

Countries	Reference year: from 2001 to 2005			Latest year available: 2007 or 2008		
	Low ISCED 2	Medium ISCED 3-4	High ISCED 5-6	Low ISCED 2	Medium ISCED 3-4	High ISCED 5-6
Armenia¹ 2005 & 2008	37.6	Gen 31.8 Voc 35.4	ISCED 5 25.0	29.8	Gen 30.8 Voc 31.3	ISCED 5 28.1
Azerbaijan 2003 & 2007	7.4	Gen 3.7 Voc 7.0	5.1	11.3	7.0	4.4
Georgia 2005 & 2008	8.5	Gen 11.3 Pri. voc 12.4 Sec. voc 15.5	20.1	9.8 Pri. voc 11.2 Sec. voc 17.4	Gen 14.5	22.2
Moldova 2001 & 2007	7.1	10.8	7.8	6.2	5.2	5.1
Ukraine² 2004 & 2007	10.0	9.7	4.8	5.9	7.1	4.8

Source: National labour force surveys.

Notes: (1) ISCED 5 level includes middle vocational, incomplete tertiary and tertiary education. (2) ISCED 5-6 includes complete higher and basic higher education; ISCED 3-4 includes incomplete higher and complete secondary general education.

When considering unemployment rates by educational attainment level, Moldova and Ukraine seem to make better use of their highly educated people over time. However, there is some evidence that medium and highly qualified people are not in jobs that correspond to their level of education in those countries. For example, the ETF transition survey among young people in 2007 in Ukraine showed that 49% of university graduates are in jobs that require a lower qualification level (ETF, 2008b). This is higher than the 30% experienced in countries like Poland, Slovakia or the United Kingdom.

Also around 40% of college graduates and 40% of secondary vocational education graduates are in jobs that really require only lower levels of qualification. This trend can be referred to as the 'substitution effect' of over-education in economies.

In Moldova the 2008 Survey on Inter-sectorial Mobility and Transition from School to Work of youth (18-34 years old) found that, despite easy access to employment, 80% of graduates from post-secondary non-tertiary education and 28% of graduates from higher education did not find a job in the field of their specialisation. Graduates of business, law and social sciences were among those who had most difficulties in finding a job in their field of specialisation, followed by those in engineering, industry and construction (ETF, 2009a). These observations lead to the conclusion that the better labour market outcomes of more well educated people are not entirely due to the mobilisation of their higher skills in high-skilled jobs, but are also due to a 'crowding out' effect on lower-educated people. The extent of this phenomenon is difficult to measure with the information available at present, but the more extensive this is, the less effective is the use of human capital for both the individual and society.

4.2 SCHOOL-TO-WORK TRANSITION

DIFFICULT TRANSITION FROM EDUCATION TO WORK FOR YOUNG PEOPLE

Although not available for all the countries, some recent surveys show signs of difficult transition for youth. In Azerbaijan, the results of an ETF 2005 survey on the employment status of 2000-02 graduates from vocational and technical schools in Baku and Sumgait showed that only 28% of the sample was employed at the time of survey, 6% were undertaking further study and 65% were unemployed. While the employment share of young men and women was almost equal, more young women were unemployed (61.8%) and more young men continued in education (55.2%). A total of 64.1% of young people were employed in the private sector and 35.9% in the public sector. Only 28.5% were working in their specialisation, while 59.4% worked completely outside their area of study. Employment status by education level indicates that technical school graduates predominated among the employed (43%) while around 70% of secondary specialized and vocational school graduates were unemployed (Castel-Branco, 2008).

Another school-to-work transition survey conducted in Azerbaijan by the International Labour Organisation (ILO) in 2005 shows a relatively low youth unemployment rate of 19% (Matsumoto & Elder, 2010). Only 27% of young people had completed the transition and there were signs of weaknesses in the youth labour market in Azerbaijan; educational enrolment is possibly lower than it could be, and many of those who drop out early do so for economic reasons. The share of young people who were neither economically active nor in school is comparatively high (27%). Social networks are the most common means of seeking and gaining employment even though young people who used the Public Employment Services found jobs more quickly and ended up in higher paying jobs than those who found work through social networks.

In Moldova two small-scale surveys (a separate inter-sectoral mobility and transition from school to work module and a youth labour market situation survey) were conducted in 2008 and these proved school-to-work transition to be difficult for graduates especially when looking for their first job (ETF, 2009a). Some 56.1% and 60.5% of higher education and post-secondary non-tertiary education graduates respectively were in employment, compared to a mere 42.4% of secondary professional graduates. More than half of all respondents (mostly higher education graduates) found jobs relatively easily, but around 30% reported first jobs with little relevance to their core specialism (in secondary professional graduates and post-secondary non-tertiary graduates), and another 30% took 'low-skilled' first jobs. Informal sources and personal connections (such as relatives, friends and acquaintances) were the most popular method used to find the first job. The impact of migration was also felt on youth transition. Many graduates have parents or other relatives working abroad and this enables them to leave the country more freely than was the case for first waves of migrants (social networks and multiple citizenship ease the process considerably) and they expect much higher entry salaries than did previous cohorts.

In Ukraine, an ETF school-to-work transition survey in 2007 suggested low unemployment but high inactivity rates (ETF, 2008b). The transition process appeared short for almost 60% of school graduates who found a significant job within six months after leaving education, but another 43% of individuals were still unable to find a significant job two years on. Education is important in finding work rapidly: university graduates do fairly well (74% finding a job in six months), followed by secondary vocational graduates (52%), while secondary general graduates perform poorly (38%). Men find work relatively more quickly than women, and young people benefit from the protective provisions of labour legislation. However, their entry into the workforce is facilitated by the substantial informal jobs market. The proportion of young people in self-employment appears to be small and the vast majority of the self-employed are skilled and unskilled blue-collar workers and shop or restaurant owners. Most importantly, the quality of jobs available to young people is generally poor, with low-pay, low qualifications and little training. These findings strongly suggest that only low quality jobs are available to Ukrainian youth (ETF, 2009b).

In Belarus a distribution system was introduced through an appointments board for graduates of state-run education institutions, providing them with an advantage over graduates of private education institutions in finding a job. Under the Regulation about the placement of graduates of education establishments, specified by the Resolution No 1702 of the Council of Ministers of Belarus of 10 December 2007⁹, young experts are appointed to state enterprises where they are expected to work for two years. In 2007, 21,703 of the 30,349 state-funded graduates from state-run higher education institutions were appointed, as were 20,825 of the 25,446 state-funded graduates from specialised secondary and technical education schools (ETF, 2010c).

4.3 SKILLS SUPPLY AND DEMAND

'SKILL MISMATCH' MAY EXPLAIN UNEMPLOYMENT AND UNDEREMPLOYMENT

Educational attainment levels in the Eastern partners have improved. This has led to better labour market outcomes for better educated people although many of those with various levels and types of qualifications still have trouble entering the labour market and making use of their skills. Although this is partially a problem of aggregate demand for labour, 'skill mismatch' is often proposed as an alternative explanation¹⁰. Unfortunately, the data available is insufficient for a detailed analysis of skill mismatches in the labour markets of the Eastern partners. However, an approximation can be made of quantitative mismatch in terms of the level of qualifications through the use of a rough indicator that calculates the difference between the share of employed and unemployed qualification holders (Bartlett, 2007).

As seen in **TABLE 4.3**, the ETF calculations show a general trend for higher education graduates to be in excess demand in all countries apart from Georgia, but this demand for higher education graduates is decreasing over time, except for in Belarus where graduates are legally guaranteed access to employment. However, this trend should be interpreted with caution as it does not take into account the 'substitution effect' of over-education. Graduates of secondary education are in excess supply in Armenia, Belarus and Ukraine but this excess supply is also decreasing over time. Moldova is an interesting case as there was a change in the relative position of secondary education graduates between 2000 and 2007 where they have been in excess demand more recently. It is not clear, however, whether this is due to migration or to an increased demand for those skills by the economy.

The medium level category includes upper secondary general education graduates and graduates from upper secondary and post-secondary non-tertiary VET, in other words, people with different kinds of skills and different labour market perspectives. In Azerbaijan and Georgia, the two countries that provide data by sub-category, we see mixed results that reflect the characteristics of job offers (Castel-Branco, 2008; ETF, 2010d; ed. Bardak, 2010a). Azerbaijan presents a strong excess supply of general education graduates while in Georgia they are in excess demand. This means that people with low and no qualifications can falsely appear to have a relatively 'good' position in the labour market even though in reality they are often living in poverty and making a living from subsistence agricultural or non-agricultural activities as they cannot afford to remain unemployed.

The EBRD-World Bank Business Environment and Enterprise Performance Survey (BEEPS) presents more evidence of skill mismatch in the labour markets of the Eastern partners. Despite relatively high levels of unemployment or underemployment in the Eastern partners, the results of this survey show that 55% of Belarusian and 43% of Ukrainian and Moldovan enterprises consider the lack of skills to present a problem to the performance and development of their enterprise. Percentages are lower but still significant in Armenia (24%), Azerbaijan (12%) and Georgia (27%). Moreover, a comparison of the results of the 2005 and 2009 surveys demonstrate an upward trend of enterprises looking for skills in all of the Eastern partners except Georgia (**FIGURE 4.1**).

⁹ See the website of the Belarusian Helsinki Committee, www.belhelcom.org/?q=en/node/3056

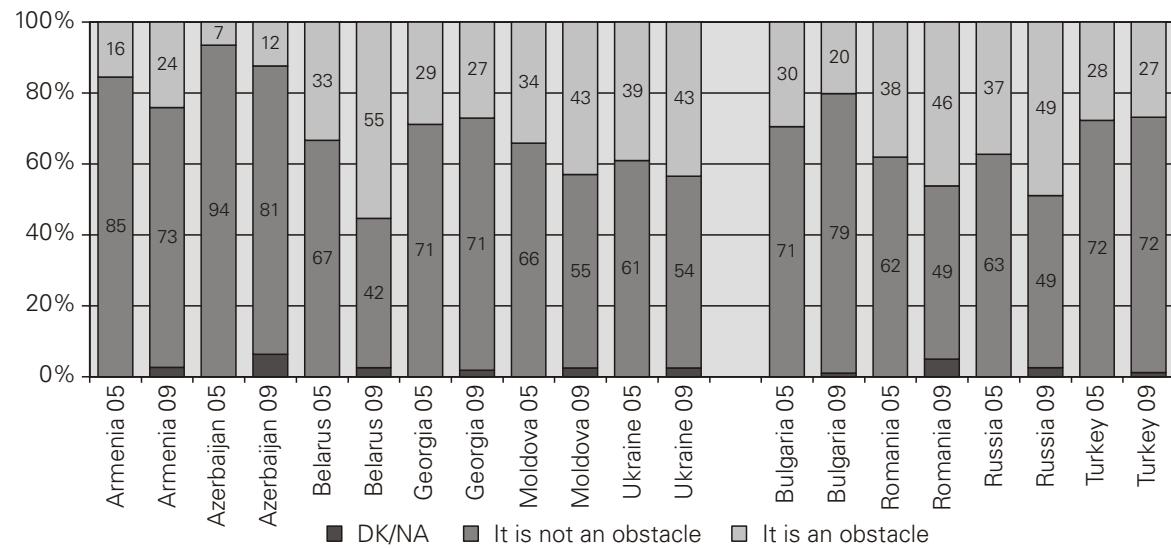
¹⁰ 'Skill mismatch' can be approached from two perspectives. The first is quantitative and concerns matching between the number of people with certain qualifications and the number of available jobs corresponding to those qualifications. This matching can be at the level of qualifications (e.g. low, middle, and higher) or by occupational profile (e.g. doctor, secretary, plumber). If the number of people with certain qualifications is lower than the available jobs requiring those qualifications we talk about 'skill shortages'. If the number of people who hold certain qualifications is higher than the available jobs requiring those qualifications we talk about 'skill oversupply'. An oversupply of highly-educated people would be referred to in the specific case of matching lower-level jobs. The second perspective takes into account the quality of skills people hold and the type of skills required by different jobs in the labour market. Divergence between the two will reveal 'skill gaps'. Skill gaps appear in periods of economic restructuring when the new jobs created require different types of skills compared to the old destroyed jobs and the education and training system is not sufficiently modernised to keep up with the pace of change.

TABLE 4.3 EXCESS SUPPLY OF LABOUR BY EDUCATIONAL ATTAINMENT LEVEL (%)

	Employed	Unemployed	Excess supply	Employed	Unemployed	Excess supply
Armenia¹	2001*				2007	
Low (ISCED 0-2)	14.0	13.6	-0.4	11.3	9.2	-2.2
Medium (ISCED 3-4)	62.7	71.3	8.6	67.8	73.8	6.0
High (ISCED 5-6)	23.3	15.1	-8.2	20.9	17.1	-3.8
Azerbaijan²	2003				2006	
Primary and less	1.1	0.6	-0.5	1.7	0.6	-1.1
General secondary	58.6	77.5	18.9	64.5	71.9	7.4
Vocational (primary + secondary)	20.1	12.9	-7.2	15.4	13.3	-2.1
Higher (complete and incomplete)	20.2	9.3	-10.9	18.3	14.4	-3.9
Belarus	2000				2007	
Low (ISCED 0-2)	8.2	11.0	2.8	5.2	11.6	6.4
Medium (ISCED 3-4)	72.9	80.1	7.2	71.6	78.5	6.9
High (ISCED 5-6)	18.8	8.8	-10.0	23.2	9.9	-13.3
Georgia³	2005				2007	
Primary	3.8	0.3	-3.4	2.6	0.2	-2.4
Basic	7.6	4.4	-3.2	7.7	4.9	-2.8
General secondary	40	31.8	-8.2	40	31.8	-8.2
VET primary	9.5	8.4	-1.1	6.3	3.9	-2.5
VET secondary	13.8	15.8	2	15.6	16.9	1.3
Higher	25	39.2	14.2	27.6	42.4	14.8
Moldova	2000				2007	
Low (ISCED 0-2)	24.1	15.0	-9.1	18.1	20.5	2.4
Medium (ISCED 3-4)	63.9	75.0	11.1	62.0	60.6	-1.5
High (ISCED 5-6)	11.9	10.0	-1.9	19.8	18.9	-0.9
Ukraine	2004				2007	
Low (ISCED 0-2)	11.8	8.6	-3.1	9.9	8.5	-1.3
Medium (ISCED 3-4)	64.2	79.1	14.9	65.4	73.2	7.8
High (ISCED 5-6)	24.0	12.2	-11.7	24.7	18.2	-6.5

Sources: Labour force surveys except Belarus (administrative data).

Notes: (1) National Statistical Service of Armenia (Census 2001); (2) Labour Force Survey 2003 and 2006 reports (ETF calculation, see ETF, 2007); (3) Department for Statistics (see ETF, 2010d).

FIGURE 4.1 HOW ENTERPRISES VIEW SKILLS AND EDUCATION IN TERMS OF THEIR DEVELOPMENT (%)

Source: EBRD-World Bank Business Environment and Enterprise Performance Survey.

A more detailed analysis of skill mismatch in Ukraine by the World Bank (2008c & 2009c) demonstrates that there is a strong shift in the demand for labour from unskilled manual labour (25% of newly created jobs) and non-manual jobs (20% of newly created jobs) to skilled manual labour (50% of newly created jobs are for craftsmen and machine operators). The structure of the demand for labour combined with the skill structure of unemployment creates an excess supply of manual and non-manual lower skills and an excess demand for higher skills (both manual and non manual). Belarus also reports a lack of blue collar workers (European Commission, 2009) where there is an unfulfilled demand (as measured by vacancies for blue collar workers).

4.4 LABOUR EMIGRATION

LABOUR EMIGRATION AS A REMEDY TO EMPLOYMENT CHALLENGES: 'BRAIN DRAIN' OR 'WIN-WIN-WIN' SOLUTION?

Another sign of the dysfunctional labour markets of the region can be seen in substantial labour outflows that have a profound impact on demography, domestic labour markets and human capital stocks and flows. These outflows are mainly directed to the CIS region and EU countries. Indeed, three quarters of all movements are intra-regional (CIS), with Russia alone as the destination of more than half of the migrants from all Eastern partners. Moldova and Ukraine show distinctive bipolar outflows, with the Russian-speaking populations of the eastern parts of Moldova and Ukraine going to Russia, and people from the western parts mainly migrating to Europe. Some trans-border movements were also facilitated in the Ukrainian-Polish and Moldovan-Romanian border regions.

It is important to remember that finding reliable and comparable international migration data is a challenge in this region. Data are often missing, outdated, or lacking in cross-country comparability. The huge social, political and economic transformations of the Eastern partners over the last 20 years and their recent history of mass migration has made the reporting on migrants numbers very difficult. The main reasons for this are difficulties in the collection of statistical data (regular vs. irregular), differing definitions of the term 'migrant' (according to residency, nationality, or country of birth) and 'migration' (permanent, temporary or short-term moves) and confusion in migrant stocks and flows data. **TABLE 4.4** uses data from the World Bank database and the International Organisation for Migration (IOM) country profiles for comparability reasons, but the figures must be taken only as estimates. Ukraine has the highest total number of emigrants abroad of all six countries, with more than 6.5 million emigrants in 2010. Belarus, Azerbaijan, Georgia, Armenia and Moldova follow on in that order. When the numbers are checked as a percentage of total population, however, the countries with the highest population loss are Armenia (28.2%) and Georgia (25.1%), followed by Moldova (21.5%), Belarus (18.6%), Azerbaijan (16.0%) and Ukraine (14.4%) (World Bank, 2008b & 1011; IOM, 2008).

TABLE 4.4 EMIGRATION STOCKS AND MAIN DESTINATION COUNTRIES, 2010

Countries	Emigrant stocks	Main destination countries ¹
Armenia	870,200 (28.2% of total population) Emigration of tertiary educated: 8.8%	Russia, USA, Ukraine, Azerbaijan, Georgia, Germany, Israel, Turkmenistan, Greece, Spain, Belarus, France
Azerbaijan	1,432,600 (16.0% of total population) Emigration of tertiary educated: 2.0%	Russia, Ukraine, Armenia, Israel, Kazakhstan, Germany, Turkey, USA, Georgia, Turkmenistan
Belarus	1,778,900 (18.6% of total population) Emigration of tertiary educated: 3.2%	Russia, Ukraine, Poland, Lithuania, Latvia, Kazakhstan, USA, Israel, Germany, Estonia
Georgia	1,057,700 (25.1% of total population) Emigration of tertiary educated: 1.6%	Russia, Armenia, Greece, Ukraine, Israel, Germany, USA, Cyprus, Turkey, Latvia, Spain
Moldova	770,300 (21.5% of total population, 1/4 of labour force) Emigration of tertiary educated: 3.4%	Russia, Ukraine, Romania, USA, Israel, Germany, Kazakhstan, Italy, Greece, Spain, Latvia, Portugal, Belarus, Canada, Turkey
Ukraine	6,563,100 (14.4% of total population) Emigration of tertiary educated: 3.5%	Russia, Canada, USA, Moldova, Kazakhstan, Poland, Belarus, Italy, Czech Republic, Israel, Germany, Portugal, Spain, Slovakia, Turkey; Eurostat gives a total of 508,000 in the EU

Sources: World Bank (2008b & 2011), *Migration and remittances factbook*; (1) IOM 2008 country profiles on Azerbaijan, Armenia, Georgia, Moldova and Ukraine.

Different socioeconomic, ethnic and political factors played a role in the first migratory flows of the 1990s to 2000s (including refugees fleeing civil wars, trans-border conflicts and diaspora returning ethnic homelands)¹¹. Early in 2000, these factors were replaced by economic ones as a result of the rapid deterioration of living standards and widespread poverty. Migrant outflows from then on have been increasingly for work reasons and have become a regular income-generating activity due to the limited availability of jobs and low wages in poorly functioning labour markets, insufficient capital, and a lower quality of life. Typical characteristics of labour emigration include relatively high formal education levels (although quality remains an issue), a considerable share of females, diversified age groups, jobs held abroad mainly in labour-intensive sectors with low skill requirements and low pay such as construction, agriculture, hotels and catering and domestic services (house cleaning, home care for children or the elderly) (Alquézar Sabadie et al., 2010).

Emigration profoundly affects domestic labour markets in sending countries through a variety of closely linked channels. It is taking place against a background of depopulation, a critical decline of fertility rates (except in Azerbaijan) and higher than average mortality rates (adult males). Thus it worsens the demographic imbalance, but also helps people to cope with continuing economic hardships, limited jobs and unemployment in the region (ETF, 2007 and 2008a). One obvious contribution comes from increasing remittances that help reduce poverty. **TABLE 4.5** shows that the amount of remittances received in 2007 was highest in Armenia and Moldova, followed by Azerbaijan, Ukraine and Georgia. Remittances have increased tremendously in all six countries against 2000 levels, but a reduction and subsequent recovery were seen following the economic crisis in 2009. The GDP share of remittances in 2006 was highest in Moldova (36.2%) and Armenia (18.3%) where these play an important role in the economy, followed by 6.4% in Georgia and 4.0% in Azerbaijan.

The temporary and seasonal nature of many flows is another feature; mainly as a result of geographical proximity, easy travel connections and the visa-free entry to CIS countries that made temporary migration a feasible option. Gender and age seem to relate strongly to destination and sector of work abroad. More middle-aged men emigrate to Russia, Germany and Portugal to work in construction, whereas younger women emigrate mainly to Italy, Spain, Greece, Cyprus and Turkey to take up domestic positions (cleaners and carers). Although the skill levels of migrants are spread across all levels, a considerable number of emigrants of both sexes are young (between the ages of 20 and 40) and educated in most of the Eastern partners. In countries like Moldova and Ukraine, emigration is partially

¹¹ Unique examples of population movements in the region include: the outflow of 2 million ethnic Germans, 1.5 million Jews, and 1.1 million Poles; a significant number of ethnic Russians living outside Russia (26 million); and the movement of 0.9-1 million people from Armenia, around 2 million from Azerbaijan and 1.9 million from Georgia due to the ethnic and political tensions in Nagorno-Karabakh, South Ossetia, Abkhazia and Chechnya.

TABLE 4.5 REMITTANCES IN 2000 AND 2010 AND THEIR SHARE OF GDP IN 2006

Countries	2000 remittances (USD million)	2010 remittances (USD million)	2006 share of GDP (%)
Armenia	87	824 (9.4-fold increase)	18.3
Azerbaijan	57	1,472 (25-fold increase)	4.0 (9 non-oil)
Belarus	139	387 (2.7-fold increase)	0.9
Georgia	274	824 (3-fold increase)	6.4
Moldova	179	1,316 (7.3-fold increase)	36.2
Ukraine	33	5,289 (160-fold increase)	0.8
Neighbour countries for comparison			
Bulgaria	58	1,602 (27.6-fold increase)	5.4
Poland	1,726	9,080 (5.2-fold increase)	1.3
Romania	96	4,517 (47-fold increase)	5.5
Russia	1,275	5,590 (4.3-fold increase)	0.3
Turkey	4,560	950 (4.8-fold decrease)	0.3

Source: World Bank (2008b & 2011), *Migration and remittances factbook*.

associated with 'brain drain' and 'brain waste' phenomena (ETF, 2007 and 2008a). There are signs that most migrants work in low-skilled or unskilled jobs abroad (or outside their expertise) irrespective of their education. Those who go to the European Union have lower expectations of being able to use their skills abroad and there is a common pattern of 'skills waste'. Thus, education and skills acquired at home seem irrelevant and are probably lost to migrants, host and home countries, rendering the migration process less efficient for all parties concerned (Alquézar Sabadie et al., 2010).

Increasing labour outflows recently prompted the Eastern partners to open dialogue on migration with some destination countries in the CIS region and the European Union. This dialogue is fundamental for the countries of the region to coordinate and effectively implement migration management. The recent EU initiative of signing a Mobility Partnership with Moldova (European Commission, 2008b) forms an important step in such cooperation, followed by a similar arrangement with Georgia in 2009 and another proposed for Armenia in the near future. Although it is too early for any evaluation, this device has the potential to provide a good basis for comprehensive migration management dialogue between the Eastern partners and EU countries. The mobility partnership deals explicitly with labour mobility and return migration within the notion of circularity, but also brings together many diverse areas of cooperation (illegality, border controls and refugees) under the umbrella of migration management.

Whether viewed as a curse or a blessing, migration is a reality in the region. Given the sheer size of outflows, better management of labour migration is a valuable policy option with mutual benefits for the Eastern partners and destination countries. Many studies already highlight the need for migrant labour within the European Union (and Russia). A 'win-win-win' situation may be possible for all stakeholders involved in the migration process if a 'virtuous circle' is created for the benefit of all through better management of labour migration and its skills-matching dimension. In fact the process of 'skills-matching' between migrant workers and jobs abroad is crucial for efficient labour mobility. In this context, comprehensive cooperation mechanisms are needed both to reduce the exploitation and skill waste of migrants and provide better skills-matching for productivity in destination countries. The six countries also need to work harder on pro-actively encouraging expatriates to return, become entrepreneurs and create environments conducive to the more productive use of their skills, knowledge and savings at home.

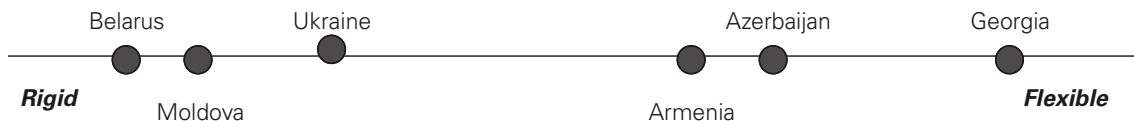
5. EMPLOYMENT POLICY FRAMEWORK

5.1 LABOUR MARKET POLICIES

ADDRESSING LABOUR MARKET (IN)FLEXIBILITY AND MAIN LABOUR MARKET POLICIES IMPLEMENTED: ACTIVE VERSUS PASSIVE MEASURES

Employment protection has been an important objective in all the countries given the high levels of job destruction and subsequent high unemployment experienced since the beginning of the transition. Actions to support employment have focused on three main fields. The first concerns labour market regulation with the aim of reducing the labour market rigidity of the Soviet era and facilitating labour turnover from less productive to more productive jobs. All Eastern partners revised their labour legislation during the transition period. A brief overview of the labour codes confirms the different paths taken by the six countries, from more rigid (Belarus, Moldova, and Ukraine) to relatively more flexible (Armenia, Azerbaijan and Georgia) approaches (**FIGURE 5.1**). Georgia is the champion of the most liberal labour market policy; while Belarus, Moldova and Ukraine opted for the other end of the spectrum, protecting employees in jobs even at the cost of underemployment and rigidities in labour turnover. However, the effective application of legal provisions is not always respected in practice even in countries where labour legislation is supposed to be quite flexible. This implies a further flexibilization of labour market operations beyond that provided by labour legislation.

FIGURE 5.1 LABOUR CODES: FROM RIGIDITY TO FLEXIBILITY



The second field concerns the formulation of employment policies with ambitious objectives, although these are not accompanied by specific action plans or provided with adequate financial envelopes to enable them to achieve their objectives. All countries (except Georgia) have introduced labour market policies to address the impact of unemployment. **TABLE 5.1** shows that public spending on active and passive measures in 2008 was much lower than the EU-27 average (1.6% of GDP) despite the higher unemployment levels of the Eastern partners. This type of spending accounts for around 0.1% of GDP in Armenia, Azerbaijan, Ukraine and Belarus and even less in Moldova (0.05%) and Georgia (not existed as a category). Most countries experienced increased spending on labour market measures except for Belarus where there was a decrease from 0.15% of GDP in 2006 to 0.09% in 2008. Georgia interrupted all labour market measures following the abolition of the Public Employment Services in 2007, and the limited programmes of 'cheap credits' and social assistance for poor families were suspended in 2009 in the wake of the economic crisis.

TABLE 5.1 EXPENDITURE ON LABOUR MARKET POLICIES, PUBLIC EMPLOYMENT SERVICES AND REGISTERED UNEMPLOYED (% OF GDP), 2008

	Armenia	Azerbaijan	Belarus	Georgia	Moldova	Ukraine	EU-27
Total spending on labour market policies (active and passive), % of GDP	0.1 (2007)	0.1	0.09	NA	0.05	0.1	1.6
Spending on ALMPs, % of total spending on labour market policies	40	15	90	NA	44	30	Appx. 30 (0.45% of GDP)
Unemployment rate, % (LFS data, except Belarus)	29	6.5	NA (0.8%)*	13.3	4	6.4	7.0
Number of unemployed (LFS)	285,000		NA 1,657,000				
Registered unemployed in PES	One-fourth of de facto unemployed	47,301	335,000 869,000	NA		2,420,000	
Recipient of unemployment cash benefits		4,350	111,000	NA			
% of unemployed receiving cash benefits	4	1	NA	NA	7.4		

Note: (*) Based on registered unemployment.

Sources: ETF country reports; for Belarus, European Commission (2009) and the Belarusian Ministry of Labour and Social Protection; for Azerbaijan, Feiler (2009) and Wynn et al. (2004); for the EU-27, Eurostat (http://epp.eurostat.ec.europa.eu/portal/page/portal/product_details/dataset?p_product_code=TPS00076).

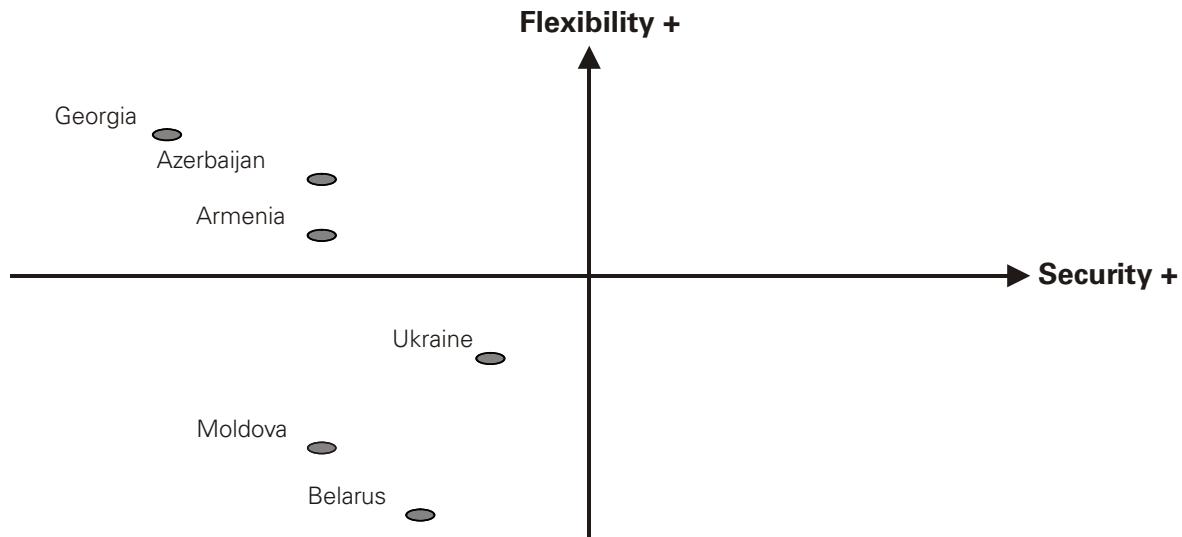
All the countries except Georgia have unemployment insurance systems in place and most labour market funding is dedicated to unemployment benefits. This option does not imply income security for a large number of the unemployed as strict eligibility criteria reduce the number of unemployed who can access them and the level of the benefit is too low to be considered a measure that provides income security during spells of unemployment. In fact, only 1% of the unemployed received cash benefits in Azerbaijan, 4% in Armenia and 7.4% in Moldova in 2008 (Table 4.5). The number of registered unemployed is quite low compared to the total number of unemployed as calculated in the Labour Force Survey. The funds for active labour market measures are too low to cover the employability enhancement needs of the unemployed. Only 15% of total public spending for labour market policies is spent on active measures in Azerbaijan, 30% in Ukraine, 40% in Armenia, 44% in Moldova and 90% in Belarus. No information is available on the existence of active labour market policies (ALMPs) for Georgia (ETF country reports and European Commission, 2009).

The menu of active labour market measures is quite rich in most Eastern partners (except in Georgia where they are not applicable). Job creation measures (in specific public works and employers' subsidies for the recruitment of specific population groups) are most common, absorbing most of the funds available; however, employability measures (such as training) and job search facilitation (also including job clubs and job fairs) are also common. The problem is that the reach of those measures is quite limited given the funds available. No impact evaluation was made on the effectiveness of ALMPs but the mix of measures is widely viewed as not fitting the nature of unemployment in the countries and appropriate design is also missing. Where evaluations are available (Moldova and Ukraine), training measures seem to have good work placement outcomes. The impact of employment policies on employment enhancement has been insignificant overall for the reasons given above.

Using the EU concept of flexicurity (European Commission, 2007) as an underlying principle for the design of labour market policies, with its four components of flexible contracts, modern social protection, effective ALMPs, and comprehensive lifelong learning, an attempt was made to roughly position the six countries along the flexibility and security axis (**FIGURE 5.2**). The exercise showed that all of the labour market systems of the six countries can be

placed in the 'less secure' left region of the horizontal security axis, while in the vertical flexibility axis some countries (Georgia, Azerbaijan, Armenia) would fall into the 'more flexible' top part and the others (Ukraine, Moldova, Belarus) into the 'less flexible' bottom area. It is clear that all Eastern partners must work on a better balance between labour market flexibility and security through active and passive labour market measures. The desired form of flexibility must avoid labour market segmentation, lead to a better allocation of human resources and avoid encouraging greater informality. Flexibility must be combined with decent work and the type of social 'safety nets' that do not seem to be functioning very well at the moment.

FIGURE 5.2 POSITIONING OF LABOUR MARKETS FROM THE FLEXICURITY PERSPECTIVE



Azerbaijan, Armenia, Moldova and Ukraine have signed Decent Work Country Programmes (DWCPs)¹² with the ILO while Belarus and Georgia do not have such programmes. DWCPs have been the main vehicle for delivery of ILO support to these four countries in promoting decent work in national development strategies. On the other hand, both Belarus and Georgia have been criticised during sessions of the International Labour Conferences on the initiative of their trade unions, for different reasons (Georgia for its 2006 Labour Code which is considered too liberal, and Belarus for its policies on the independent trade union activities). Some decent work programmes have been fully implemented but the process is still ongoing in others. However, their actual impact on real employment rates and quality of jobs is not so straightforward.

5.2 LABOUR MARKET INSTITUTIONS

LOW CAPACITY OF LABOUR MARKET INSTITUTIONS FOR EFFECTIVE EMPLOYMENT POLICIES AND WEAK FOCUS ON JOB CREATION MEASURES

The third field concerns the improvement of labour market institutions in policy making and implementation. The Ministries of Labour in all the countries are rather weak institutions within the cabinet and their financial and human resources are limited. However, differences exist between the countries and Ukraine leads in terms of capacity. Also, the involvement of social partners in policy formulation is still in need of further development. Trade unions exist in all countries to some extent and their influence varies, although their influence is low even in Ukraine which has the highest rate of unionisation (75%). In Azerbaijan and Belarus trade unions generally follow the official political line, while in Ukraine they perpetuate the Soviet tradition to a large extent. They are much less important in the private sectors of Armenia, Georgia and Moldova where they are concentrated in the remaining state enterprises and public sector.

Public Employment Services exist in all the countries (except Georgia) providing brokerage, job-search and counselling and implementing active and passive labour market measures including the administration of unemployment benefits.

TABLE 5.2 shows that the largest PES structure exists in Ukraine, where even the relatively lower caseload of 179 clients per front office member of staff compares poorly to a rate of below 100 in EU countries. The Ukrainian Public Employment Services also has a special internet portal known as 'trud' (labour) that provides online services for

¹² The ILO concept of decent work is defined as promoting opportunities for women and men to obtain decent and productive work in conditions of freedom, equity, security and human dignity. Thus decent work for all is made an objective of ILO and national policies of countries that have signed these programmes (see the country programmes, www.ilo.org/public/english/bureau/program/dwcp/countries/index.htm

job-seekers and employers. Other countries have smaller PES structures, with 405 staff in total in Armenia, 577 in Azerbaijan, 249 in Moldova and 1,060 in Belarus. Georgia has had no PES structure in the traditional sense since 2007. PES offices outside the major cities are generally insufficiently equipped and staffed, bound by bureaucracy and a passive approach to employment promotion and limited in their coverage of unemployed populations (Wynn et al., 2004).

Finally, there is a significant gap in employment policies in the Eastern partners represented by their weak focus on job creation through the development of a business-friendly environment. Up until now, governments have been far more concerned with limiting job destruction than supporting the creation of new jobs. The existing business environment is not always conducive to decent job creation, and particularly for the growth of small and medium-sized enterprises, although more and better job creation (with decent working conditions) is badly needed in all the countries.

Business-friendly environments imply deep behavioural changes among administrators and policy-makers, with a shift towards service-orientation and transparency. In the current globalised economy, investors must be attracted from both within the countries and abroad, credibility and positive expectations form the pillars of investor attraction. Credibility can be gained when a nation has clear and easy administrative procedures, a lack of corruption and clear and stable state policies that enable investors to establish long-term strategies.

Overall, there is scope for improvement of employment policies through: (i) a right balance between job creation measures like an improved business environment and supply side measures such as labour market measures; (ii) strengthening the institutional setting for policy development by enhancing the capacity of ministries of labour, ensuring the greater involvement of social partners and creating synergies and links with other policy areas for policy coherence; (iii) strengthening the role of the Public Employment Services in the implementation of labour market measures and enhancing their capacity in matching skills to jobs; and (iv) developing the right instruments for labour market monitoring and evaluation of the effectiveness of policy measures.

TABLE 5.2 KEY DATA ON PUBLIC EMPLOYMENT SERVICES, 2008

Countries	Name and website (where available)	Number of staff (staff directly working with clients)	Number of regional and local offices	Caseload (clients per front office staff)	Admin. of unemployment benefits	Respons. for ALMPs
Armenia	State Employment Service Agency – SESAA (Ministry of Labour and Social Issues) http://employment.am/en/index.html	405 (368)	1 central office 51 regional/ territorial offices	264 (2007)	Yes (60% of min. wage, max. 12-month payment)	Yes
Azerbaijan ¹	General Employment Department – GED (Ministry of Labour and Social Protection) www.ses.gov.az/view.php?lang=aaz&menu=0	577 (not available)	1 central office 83 regional/ territorial offices	Not available	Yes (higher than min. wage)	Yes
Belarus ²	Department of Employment Services to the Population (Ministry of Labour and Social Protection)	1,060 (not available)	1 central office 130 local offices in 7 regions (incl. Minsk)	Not available	Yes	Yes
Georgia ³	No PES, but limited authority of State Agency for Social Protection and Employment (Ministry of Labour, Health and Social Affairs)	Not applicable	Not applicable	Not applicable	No benefits	No ALMP
Moldova ⁴	National Employment Agency (Agentia Națională Pentru Ocuparea Forței de Munca) – ANOFM (Ministry of Labour, Social Protection and Family) http://en.anofm.md/	249 (213)	1 national agency 35 territorial employment agencies	372 (2007)	Yes (higher than min. wage)	Yes
Ukraine ⁵	State Employment Service of Ukraine (Ministry of Labour and Social Policy) www.dcz.gov.ua/control/en/index www.trud.gov.ua	15,754 (14,166)	1 national agency 27 regional centres 645 centres in total in the whole territory	179 (2007)	Yes (80% of min. wage)	Yes

Sources: ETF country reports; national statistics offices; PES websites of those countries; World Association of Public Employment Services – WAPEs website, of which Armenia, Azerbaijan, Moldova and Ukraine's Public Employment Services are members (Belarus and Georgia are not WAPEs members).

Notes: (1) The information is taken from Feiler (2009). (2) Most of this information was provided directly to ETF staff by the Belarusian Ministry of Labour and Social Protection during a mission in Minsk on 3-7 February 2010. Other information came from the European Commission (2009). (3) Georgia reorganised its Public Employment Services and integrated it into the State Agency for Social Protection and Employment in 2005, but the employment section was abolished in 2007. Since then it does not have Public Employment Services in the traditional sense. There is very few staff dealing with labour market issues in the Ministry of Labour, Health and Social Affairs, with no specific labour market policies implemented. Instead, the Ministry of Economic Development has some authority on limited training and cheap credit programmes under the Poverty Reduction Strategy. (4) Moldovan ministries were restructured in late 2009 following the general elections and responsibility for labour market policy moved from the Ministry of Economy and Trade to the Ministry of Labour, Social Protection and Family. (5) The Ukrainian Public Employment Services has an internet portal entitled trud (labour) that provides online services to job-seekers and employers (see www.dcz.gov.ua/file/link/173177/file/broschura.doc).

A SUMMARY OF CONCLUSIONS

This paper provides a cross-country overview of the labour market trends and challenges and employability of human capital in the six Eastern partners. They all started with a shared Soviet legacy and underwent two decades of turbulent transition where each has taken a different path towards social and economic development. The economies differ in terms of their economic basis, economic restructuring and future opportunities. Belarus and Ukraine opted for a gradual, slow transition to a market economy and tried to protect their industrial economic base, while Armenia, Georgia and Moldova undertook rapid de-industrialisation and deep transformation of their economic bases and Azerbaijan has relied on its natural resources but has not yet achieved economic diversification.

All countries are experiencing decreasing and ageing populations (to a lesser degree in Armenia and Azerbaijan) and are struggling with low-to-medium-level human development (Belarus and Ukraine are in a slightly better position, while Moldova is the laggard of the group). The transition period has led to a tremendous increase in poverty and social inequality, and so far only Armenia, Azerbaijan and Belarus have succeeded in recovering GDP levels equal to those of 1989. The current global economic crisis has eroded some of the gains and the Armenian and Ukrainian economies have been particularly hard hit, with serious negative implications for future employment and human development trends.

Labour markets in the Eastern partners have been through a period of turbulent transition, with spells of low economic activity, high unemployment and frequent changes in the employment status of individuals. The end of Soviet style full employment led to declining participation rates, the emergence of unemployment as a new concept and increasing wage differentials in all countries with the partial exception of Belarus. Activity and employment rates are generally modest in all countries (with higher rates in Armenia, Azerbaijan and Georgia), while a dramatic decline has been seen in Moldova. Female activity and employment rates are generally high and this is a specific feature of the region. Unemployment has not necessarily evolved in parallel with employment. Unemployment rates are relatively low in all countries except Armenia and Georgia, probably due to high emigration and the inclusion of small land-owners as self-employed in total employment rates. Another characteristic is the low share of waged employment in the region (only one-third in Georgia and around half in Azerbaijan and Armenia) and the high level of self-employment in subsistence agriculture which still accounts for a high share of employment in Georgia, Armenia, Azerbaijan and Moldova to some extent. Industry is an important employer only in Belarus and Ukraine, while services account for more than half of employment in all of the countries except Georgia.

The six countries have enjoyed a Soviet legacy of high levels of human capital by international standards (as expressed by full literacy and high educational attainment levels), but the current situation indicates a deterioration in human capital that carries the risk of losing competitive advantage. Pre-primary enrolment is low in Armenia and Azerbaijan, and in Moldova some children do not enrol at primary level. Enrolment in upper secondary education is relatively lower in Armenia, Belarus and Moldova than in the other three countries. The importance of secondary VET has decreased in all countries to a present maximum of one-third of total enrolment. Higher education in all countries except Azerbaijan has benefitted most from the changes, and enrolment rates were particularly high in Ukraine and Belarus. Although there is no gender gap in education, there are emerging challenges related to unequal access to education and decreasing quality. There are particular issues with: (i) early school leavers from rural areas generally from low socio-economic backgrounds; (ii) the lack of funding and poor school infrastructure; (iii) growing skill polarisation among young people; and (iv) low quality educational provision. VET has recently experienced a revival following a long period of neglect, but adult training provision is still limited and inadequate in view of the ageing societies and economic restructuring.

The effective use of human capital in productive work has a weighting that is equally as important as educational attainment levels in the overall assessment. Economic contraction, de-industrialisation, unemployment and underemployment, the high share of subsistence agriculture and small-scale informal activities, low value-added service jobs and high labour emigration all indicate the low use of human capital in the economies. Educational investment still yields returns despite the lack of guaranteed labour market integration and shortage of good quality jobs, but there are signs of difficulties in youth transition from education to work, slow transition to career jobs, the low quality of first jobs generally not in the field of studies, substitution among qualified people and the crowding out of people with medium level qualifications by those with higher education. Although this is partly a problem of aggregate demand for labour, 'skill mismatch' is often proposed as an alternative explanation. The results of the EBRD-World Bank Business Environment and Enterprise Performance Survey would seem to confirm this, as a significant number of enterprises state that the lack of skills is an obstacle to business development. High labour outflows from the region could provide a partial remedy to employment challenges, but it is not yet entirely clear whether this leads to 'brain gain', 'brain drain', 'brain waste' or a 'win-win-win' situation for all the parties involved.

Employment support has been an important policy objective for all the countries since the early transition period due to extensive job destruction. The Eastern partners initially had to address the issues of labour market (in)flexibility and each took a different path. Labour codes remained more rigid in Belarus, Moldova and Ukraine, while Georgia championed a

liberal labour market policy and Armenia and Azerbaijan followed suit. However, legal provisions are not always respected in practice even in the most flexible frameworks. Employment policies were not always supported by adequate financial resources and public spending on active and passive labour market measures is at a low level in all countries (particularly Georgia and Moldova). All the countries apart from Georgia have implemented unemployment insurance systems and active labour market measures, but the number of beneficiaries and rate of benefits are extremely low.

Weak institutional capacity further undermines effective employment policies, although some PES services, like those of Ukraine, are more successful than others. Job creation measures, particularly the promotion of a business-friendly environment for SMEs, are an area in need of development. Overall, the Eastern partners must work on a better balance between labour market flexibility and security: while more security can be offered in terms of employability measures and income security through active and passive labour market policies, care must be taken to ensure that the increased flexibility avoids labour market segmentation, leads to a better allocation of human resources, and prevents further expansion of the informal sector.

ACRONYMS

ALMPs	active labour market policies
CIS	Commonwealth of Independent States
DWCP	Decent Work Country Programmes
EBRD	European Bank for Reconstruction and Development
ETF	European Training Foundation
EU	European Union
GDP	gross domestic product
HDI	Human Development Index
ILO	International Labour Organisation
IOM	International Organisation for Migration
ISCED	International Standard Classification of Education
LFS	Labour Force Survey
NA	not available/not applicable
NQF	National Qualification Framework
OECD	Organisation for Economic Cooperation and Development
PES	Public Employment Services
PIRLS	Progress in International Reading Literacy Study
PPP	purchasing power parity
TIMSS	Trends in International Mathematics and Science Study
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organisation
USD	US dollar
VET	vocational education and training
WAPES	World Association of Public Employment Services
WDI	world development indicators

REFERENCES

Alam, A., Murthi, M. and Yemtsov, R. (2005), *Growth, poverty, and inequality: Eastern Europe and the former Soviet Union*, International Bank for Reconstruction and Development/World Bank, Washington, DC.

Alquézar Sabadie, J., Avato, J., Bardak, U., Panzica, F. and Popova, N. (2010), *Migration and skills: the experience of migrant workers from Albania, Egypt, Moldova, and Tunisia*, World Bank-European Training Foundation, Washington, DC.

Bardak, U. (ed.), European Training Foundation (2010a), *Labour markets and employability: trends and challenges in Armenia, Azerbaijan, Belarus, Georgia, Moldova and Ukraine*, Publications Office of the European Union, Luxembourg (forthcoming).

Bardak, U., European Training Foundation (2010b), 'Legal migration and its skills dimension', *Inform*, No 5, May 2010, ETF, Turin.

Bartlett, W. (2007), 'Economic restructuring, job creation and the changing demand for skills in the Western Balkans', in Fetsi, A. (ed.), European Training Foundation, *Labour markets in the Western Balkans: challenges for the future*, Office for Official Publications of the European Communities, Luxembourg, pp. 19-50.

Borisova, G. and Kuusela, T. (2009), European Training Foundation, *Review of education sector developments in Belarus*, working document, ETF, Turin.

Castel-Branco, E. (2008), European Training Foundation, *Vocational education and training: challenges and opportunities in the Southern Caucasus*, cross-country report for Armenia, Azerbaijan and Georgia, working paper, ETF, Turin.

Chawla, M., Betcherman, G. and Banerji, A. (2007), *From red to gray: The 'third transition' of aging populations in Eastern Europe and the former Soviet Union*, International Bank for Reconstruction and Development/World Bank, Washington, DC.

EBRD (European Bank for Reconstruction and Development) and World Bank (n.d.), *Business environment and enterprise performance survey*, accessed September 2010 at www.enterprisesurveys.org or www.ebrd.com/pages/research/analysis/surveys/beeps.shtml.

ETF (European Training Foundation) (2007), *The contribution of human resources development to migration policy in Moldova*, working paper, ETF, Turin.

ETF (European Training Foundation) (2008a), *The contribution of human resources development to migration policy in Ukraine*, working paper, ETF, Turin.

ETF (European Training Foundation) (2008b), *Transition from education to work in EU neighbouring countries*, Office for Official Publications of the European Communities, Luxembourg.

ETF (European Training Foundation) (2009a), *Black Sea labour market reviews: Moldova country report*, working paper, ETF, Turin.

ETF (European Training Foundation) (2009b), *Black Sea labour market reviews: Ukraine country report*, working paper, ETF, Turin.

ETF (European Training Foundation) (2010a), *Black Sea labour market reviews: Armenia country report*, working paper, ETF, Turin.

ETF (European Training Foundation) (2010b), 'Black Sea labour market reviews: Azerbaijan country report', working paper, ETF, Turin (unpublished).

ETF (European Training Foundation) (2010c), 'Black Sea labour market reviews: Belarus country report', working paper, ETF, Turin (unpublished).

ETF (European Training Foundation) (2010d), *Black Sea labour market reviews: Georgia country report*, working paper, ETF, Turin.

European Commission (2007), *Towards common principles of flexicurity: more and better jobs through flexibility and security*, COM(2007) 359 final, Brussels.

European Commission (2008a), *New skills for new jobs: anticipating and matching labour market and skills needs*, COM(2008) 868 final, Brussels.

European Commission (2008b), *The European Union and the Republic of Moldova enter into a mobility partnership*, IP/08/893, press release, Luxembourg/Brussels, accessed September 2010 at <http://europa.eu/rapid/pressReleasesAction.do?reference=IP/08/893&guiLanguage=en>.

European Commission (2009), *Social protection and social inclusion in Belarus*, Minsk, accessed September 2010 at <http://ec.europa.eu/social/main.jsp?langId=en&catId=750&newsId=662&furtherNews=yes>.

Feiler, L. (2009), *Reform of labour market policies in a transition country: the case of Azerbaijan*, paper presented at the Activation and Security Conference, Brno, 20-21 March 2009, accessed September 2010 at <http://aspen.fss.uu.nl/conference2009/docs/LizziFeiler.doc>.

IMF (International Monetary Fund) (2010), *World economic outlook – April 2010: rebalancing growth*, IMF, Washington, DC.

IOM (International Organisation for Migration) (2008), *Migration in the Black Sea region: an overview 2008*, IOM, Geneva.

Matsumoto, M. and Elder, S. (2010), *Characterizing the school-to-work transitions of young men and women: evidence from the ILO school-to-work transition surveys*, Employment working paper No 51, International Labour Office, Geneva.

World Bank (2008a), 'Armenia public expenditure review – Education sector', Draft version 5, April/March 2008, Human Development Department, Europe and Central Asia Region, World Bank (unpublished).

World Bank (2008b), *Migration and remittances factbook 2008*, online database compiled by Dilip Ratha and Zhimei Xu, Migration and Remittances Team, Development Prospects Group, World Bank, Washington, DC, www.worldbank.org/prospects/migrationandremittances.

World Bank (2008c), 'Ukraine education, skills and employment study', World Bank, Washington, DC.

World Bank (2009a), *Georgia poverty assessment*, Report No 44400-GE, World Bank, Washington, DC.

World Bank (2009b), *Overcoming fiscal, efficiency and equity challenges in Ukraine*, World Bank, Washington, DC.

World Bank (2009c), 'Ukraine labour demand study', World Bank, Washington, DC.

World Bank (2011), *Migration and remittances factbook 2011*, World Bank, Washington, DC.

Wynn, A., Wind, T., Attström, K., Boel, C. and Sidelman, P. (2004), *Strengthening public employment services in Armenia, Georgia and Moldova*, Sida Evaluation 04/34, Swedish International Development Cooperation Agency, Stockholm.

WEBSITES

Doing Business survey, www.doingbusiness.org/

Eurostat, <http://epp.eurostat.ec.europa.eu/portal/>

ILO database on labour statistics, <http://laborsta.ilo.org>

National statistics offices:

- Armenia, www.armstat.am/en/
- Azerbaijan, www.azstat.org/indexen.php
- Belarus, www.belstat.gov.by/homep/en/about/about.php
- Georgia, www.statistics.ge/main.php?pform=62&plang=1
- Moldova, www.statistica.md/category.php?l=ro&idc=107&
- Ukraine, www.ukrstat.gov.ua/

TIMSS, <http://timss.bc.edu/>

Transparency International, www.transparency.org/policy_research/surveys_indices/cpi/2009

UNDP Human Development Index, <http://hdr.undp.org/en/humandev/hdi/>

UNESCO Institute for Statistics database, www.uis.unesco.org/ev.php?ID=2867_201&ID2=DO_TOPIC

WAPES, www.wapes.org

World Bank WDI database, <http://data.worldbank.org/data-catalog/world-development-indicators/>

World Economic Forum, www.weforum.org/en/initiatives/gcp/index.htm



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