ENPI 08-14 BLACK SEA LABOUR MARKET REVIEWS

ARMENIA COUNTRY REPORT

WORKING DOCUMENT

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Foreword

This report is the outcome of the Black Sea Labour Market Reviews project initiated and funded by the European Training Foundation (ETF) to collect information and analysis of selected labour market and related human capital issues in six countries of the Black Sea region (Armenia, Azerbaijan, Belarus, Georgia, Moldova and Ukraine).

This ETF project is planned in two phases: (i) preparation of country reports in 2008-09; and (ii) regional analysis with cross-country comparisons in 2009-10. The first phase included the drafting of a common thematic outline used as a basis for country reports that provided comparable quantitative data and relevant qualitative information as well as basic qualitative analyses. These country reports constitute the main preparatory work and stock-taking exercise for regional level analysis. The second phase consists of comparative cross-country analysis of labour markets under a regional Black Sea perspective on the basis of issues arising from the country reports.

A local company, AVAG Solutions Ltd, was contracted to work with the ETF on the Armenia country report. The following authors were involved in preparation of the report: Vahram Avanesyan (Team Leader), Armen Yeghiazaryan, Nairuhi Jrbashyan, Vardan Baghadasrayan and Melik Gasparyan. The draft report was reviewed by an ETF team of experts (Jesús Alquézar, Ummuhan Bardak, Xavier Matheu de Cortada, Eduarda Castel Branco and Milena Corradini), and Dr Constantin Zaman, an external expert, was also consulted.

The team would like to thank Sona Harutyunyan (Director), Simonyan Artak (Deputy Director), Anahit Parsadanyan and Hasmik Tadevosyan of the State Employment Service (SES) in the Ministry of Labour and Social Issues (MoLSI), and Lusine Kalantaryan, Head of the Labour Market Division of the National Statistical Service (NSS) for their contributions, support and commitment to cooperation in preparation of the report.

Abbreviations and acronyms

ALMP	Active Labour Market Programme
AMD	Armenian Dram
BEEPS	Business Environment and Enterprise Productivity Survey
BOP	Balance of Payments
CBR	Crude Birth Rate
CDR	Crude Death Rate
CEE	Central and Eastern Europe
CFRM	Competitiveness and Financial Resources Management Survey
CIS	Commonwealth of Independent States
CoE	Council of Europe
DFID	UK Department for International Development
ECA	Europe and Central Asia
EPF	Eurasia Partnership Foundation
ETF	European Training Foundation
FDI	Foreign Direct Investment
FSU	Former Soviet Union
GDP	Gross Domestic Product
GNI	Gross National Income
ILO	International Labour Organization
IFIs	International Financial Institutions
LFS	Labour Force Survey
ISCED	International Standard Classification of Education
ISLS	Integrated Survey of Living Standards
LMP	Labour Market Programme
MoES	Ministry of Education and Science
MoFE	Ministry of Finance and Economy
MoLSI	Ministry of Labour and Social Issues
NACE	Nomenclature générale des activités économiques dans les Communautés européennes
NSS	National Statistical Service
OECD	Organisation for Economic Cooperation and Development
OSCE	Organisation of Security and Cooperation in Europe
PLMP	Passive Labour Market Programme
PPP	Purchasing Power Parity
PRSP	Poverty Reduction Strategy Paper
SDP	Sustainable Development Programme
SES	State Employment Service
SITC	Standard International Trade Classification
SLI	State Labour Inspectorate
Tacis	Technical Aid to the Commonwealth of Independent States
TFR	Total Fertility Rate
TNC	Transnational Corporations
ULC	Unit Labour Cost
UNDP	United Nations Development Programme
UNECE	United Nations Economic Commission for Europe
UNFPA	United Nations Population Fund
USAID	United States Agency for International Development
USD	United States Dollar
VAT	Value Added Tax
VET	Vocational Education and Training

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Executive summary

Demographic and economic trends

In 2008 the estimated resident population of Armenia was 3.23 million. Population growth during 2007 was 7,200 or 0.22% with natural increase and net migration contributing 13,300 and -6,100 respectively. Since independence in 1991, Armenia has witnessed three distinct trends in its population changes: steep decline in the early 1990s when, during three years and mainly due to migration, the Armenian population shrank by more than 10%, followed by moderate to low negative growth in 1995-2002, when the Armenian population continued its contraction at an average annual rate of -0.19%, and finally a reversal to low positive growth in 2003-2007, with an estimated average annual population growth at 0.12%.

Recent demographic trends in Armenia have changed the shape of the country's age pyramid. Between 1991 and 2007, the share of the population under the working age declined from 30.5% to 19.7%, while during the same period the share of population above the working age increased from 5.8% to 10.8%. Between 1991 and 2007, the share of the working age population increased from 63.7% to 69.5%. It is predicted that natural growth will be positive at an annual average of 0.3% up until 2025. However, the structure of population is forecast to change by 2050. It is believed that the percentage of the working age population will shrink by almost 8%, while those above working age will increase in numbers by around 8.5%.

Armenia has experienced a profound shock during its transition from a command to a market-oriented economy. In the early 1990s the country went through a period of hyperinflation and high budget deficits. The break-up of the former Soviet Union led to a disintegration of traditional trade links. This in turn led to the collapse of national industrial sectors. Rapid implementation of economic reforms kick started economic recovery in 1994. Since then Armenia has enjoyed uninterrupted economic growth at an average annual rate of 8.8% between 1994 and 2008. As a result, by 2008 real GDP stood at about 166.2% of its 1990 level.

The two sectors which turned out to be the most resilient in the first years after independence were agriculture and services. In these sectors, 1990 levels of production had already been achieved by 1998 and 2002 respectively. The contraction in industry and construction was much deeper. The next five years of economic growth were driven by import substitution, exports expansion and construction recovery. In 1999-2003, industry and construction became the main driving force of development, accounting for 60.6% of overall GDP increase, whereas the share of agriculture and services declined to 30.5% (down from 53.8% in the period up to 1998). Economic growth between 2004 and 2008 resulted in accelerated wage increases which in turn brought a slowdown of exports.

In the early period of recovery-based growth, the role of foreign direct investment was rather insignificant. Between 1999 and 2003 however, the share of foreign direct investment in gross capital formation stabilised on an average level of 20% and remained there until 2007. During all these years, the top five investor countries accounted for around 78% of annual investment inflows. Russia led with more than USD 700M (more than 30% of inflows). Studies have documented the important role of the Armenian diaspora in attracting foreign direct investment. An estimated 70% of inflows to Armenia were at least to some extent connected with the diaspora.

Labour force and employment trends

Two principal domestic sources on labour market statistics have been used in the report: labour force surveys and establishment surveys. However, due to the different methodologies changed in LFS 2001-2006 and different definitions used in the establishment surveys, the activity and employment rates vary to a great extent from different LFS and establishment surveys. According to the 2007 LFS, the total activity rate is 70% (16-70 age group) while employment rate stands at 49%. The sectoral distribution employment is 36.5% in agriculture, 11.3% in industry, 7.7% in construction and 44.5% in services in the 2007 LFS results – while they are 46% in agriculture, 12.2% in industry, 2.8 in construction and 40% in services respectively according to the 2007 establishment survey.

Unemployment in Armenia (28% in 2007) remains very high, although it has declined substantially from its peak rate of 42.1% in 1999. The highest unemployment rate observed is among youths aged 16-24. Female unemployment for all ages is higher than male unemployment (13% more on average in 2007) except in the age group 60-64. In terms of regional patterns of unemployment, areas with a larger rural population have a lower unemployment rate. With only a few exceptions, regional unemployment rates correspond to poverty rates. There is a high incidence of long-term unemployment despite some positive trends in recent years. The average duration of unemployment was 12.5 months in 2002 for both sexes and only declined to 10.1 months in 2006.

Current figures show that labour market participation among youth aged 16 to 19 is low, reflecting a high level of enrolment in the education system. The activity rates for those above 65 is relatively high compared to OECD countries, mainly due to the low level of pensions and the high level of subsistence farming. Males are more active in the labour market than females. The highest gap observed is in the age group 20-34, more specifically ages 25-29. The gap is lowest for ages 16-19.

During 2001-2007, public sector employment continued its decline, but with a much lower magnitude than in the first years of transition. Overall, employment in the public sector and in public sector enterprises shrank by 72,000 or more than 25%, mainly reflecting continuing privatisation in the health and infrastructure sectors, as well as rationalisation in education, science and culture. As a result, in 2007 the share of employment in the public sector and public sector enterprises among total employment declined to 19.3%, down from 25.8% in 2002.

According to establishment surveys, in 2007 employment in the private non-agricultural sector accounted for 34.8% of total employment. This was about 5% more than in 2002. The main growth in private employment came at the expense of public sector employment through the privatisation of public enterprises. Exceptions include the trade and hospitality sectors which expanded due to increased economic activity.

Generally, service sectors recorded much better employment results than industry. Employment in manufacturing continued to decline between 2002 and 2007. This reflects on the one hand the continuing process of internal restructuring of old enterprises and on the other hand the poor performance in exports, particularly in such export-oriented industries like processed diamonds, jewellery and chemicals.

Estimating employment in Armenian agriculture constitutes a true challenge. The majority of agricultural production comes from over 320,000 non-registered self-employed farmers. As given before employment in agriculture makes up about 46% of total employment in 2007 according to establishment surveys, while it is 36.5% according to labour force surveys. It has been the most problematic sector in Armenia's economic development and poverty reduction. Very low productivity in the agricultural sector suggests that growth cannot be sustainable other than through serious restructuring and a dramatic increase in labour productivity. But agriculture also remains the main income source of the rural population in Armenia as there is very little non-agricultural activity outside of Yerevan. Finally, mixed incomes of farmers are very low and do not provide sustainable protection against poverty.

In recent years, employment in the informal non-agricultural sector has remained relatively stabile at 23%-25%, although the 2007 labour force survey recorded a substantial decline to 20%. The latter is surprising as the main sectors of informal activity in Armenia – such as construction, trade and transport – all witnessed substantial growth in 2007.

Mobility from old to new sectors

In 2007, employment in industry was down to 27% of 1990 levels. Employment in construction had fallen even more (down to 17%). Between 1990 and 2007, there were three distinct periods in the employment transition: a period that saw a major shift from non-agriculture to agriculture with an overall decline in employment (1990-1994); a second period in which agricultural employment remained stable while employment outside the agriculture sector continued to decline (1995-2001), and finally the most recent years when employment in both agriculture and non-agriculture remained nearly unchanged (2002-2007).

During the transition years, productivity increased in all sectors but mostly outside the agricultural sector. In terms of unit labour cost development, the competitiveness of the Armenian economy seriously declined in recent years.

Business environment

Over the past seven years the private sector has been the main source of economic growth and practically the only source of job creation beyond agriculture. So far the main engine of private sector growth has been increases in labour productivity, which averaged 13.5% annually between 2002 and 2006, while employment increased by only 4%. In these same years the business climate in Armenia has been relatively favourable. In *Doing Business 2009*, the country was ranked 44th out of 181 countries surveyed.

The government has adopted an ambitious programme to further improve the quality of the business environment. It aims to decrease and simplify regulatory procedures, decrease transaction costs, remove existing legislative barriers and minimise interactions between government and industry.

During the transition to a market economy Armenia has established a rather complex system of laws and institutions intended to protect employment and to ensure minimum living standards for the population. International comparisons and current labour market indicators imply that a relaxation of employment protection regulations may support Armenia's business climate. Although traditionally the impact of labour legislation on the labour market has not been strong due to a low level of enforcement (in 2005, only 2.9% of firms cited labour regulation as a major obstacle to growth), the enactment of a new law on state labour inspection in 2005 seems to be changing this situation.

Education trends

Since the late 1990s, the education sector has been considered one of priorities of the Armenian government. Education expenditure increased from 2% of GDP in 1997 to 3.1% in 2007. In 2005, the OECD average was 5% of GDP. Between 2003 and 2007 general education absorbed 70-75% of the total education budget, with some 10% reserved for secondary and tertiary professional education.

The share of the adult population with a level of education below upper secondary decreased from 28.3% in 1989 to 18.6% in 2001. The corresponding shares of population in the same age group with upper secondary (or post secondary, non-tertiary) and tertiary education increased to 59.8% and 21.6% respectively. Educational attainment at age 25 and over is considerably lower among the rural compared to the urban population. Participation in upper secondary technical and vocational education increased from 31.5% in 1979 to 41% in 2001 (and 42% in 2007).

Poverty rate stood at 27% in 2006, with a stated aim to bring this down to 8% in 2012. While access to basic education in Armenia is largely equitable, access to higher education is rather limited for children from poor families. With less money to spend on private tutoring, children from socio-economically disadvantaged homes and rural areas perform less well in schools, particularly at secondary level, which limits their access to tertiary education.

Labour migration

Since independence, Armenia has experienced significant outward migration, which was most severe in the early 1990s. In the three years following 1992, almost half a million Armenians emigrated. According to a 2007 migration survey, the main destination of Armenian emigrants was Russia (76.4%), followed by the EU (9.8%) and the USA (4.8%).

Outward migration resulted in an increased reliance of the Armenian economy on private transfers from abroad. According to balance of payments statistics, remittances increased by more than 10.6 times during 1998-2007 to reach USD1,410 M in 2007. The significant increase in private transfers from abroad had a

positive impact on the growth of GDP. However, distribution figures reveal that they may be regressive in nature as wealthier households benefit more from private transfers than poorer households.

Employment and labour market policy

Key employment legislation was passed in 1991, 1996 and 2004. In 2003, a Poverty Reduction Strategy Paper (PRSP) was adopted. The document included an analysis of labour market issues and highlighted policy priorities. The adoption of the Sustainable Development Programme (SDP) in October 2008 was a further important step towards the integration of the employment policy agenda into an overall policy framework. The SDP is an update of the PRSP with a wider coverage and extending the programme period to 2021. The key priorities and specifics of the labour market measures and policies specified in the programme can be summarised as follows:

- enhancement of employment, with a particular focus on increased formalisation in the non-agricultural sector;
- design and implementation of measures aimed at softening rigidity of labour market protection laws;
- implementation of active labour market programmes aimed particularly at lowering unemployment;
- stabilisation of the tax burden on wages with measures to reduce it for low incomes in the medium term;
- poverty reduction (and eventual eradication) among the employed population through a minimum wage policy;
- enhancement of the capacity of public agencies and institutions dealing with labour market issues and deepening the social dialogue between all stakeholders involved.

The Ministry of Labour and Social Issues (MoLSI) is the principal governmental agency responsible for employment policy in the country. Regulatory functions have been delegated to the State Employment Service since 1992. It designs and implements labour market programmes and collects and analyses labour market information. The average number of registered job seekers per staff member dealing directly with job seekers is estimated at 264 (varying from 64 to 679 in regional offices). Corresponding indicators are much lower in the majority of developed Western economies.

Labour market programmes implemented by the State Employment Service cover two main components: passive labour market programmes (including unemployment benefits and temporary cash assistance to the unemployed) and active labour market programmes (including training, job brokerage, public works and specific measures targeted at disabled people).

Despite the increased focus on labour market programmes, public expenditure on them continues to be low. Expenditure as a percentage of GDP remained nearly unchanged (0.1%) between 1998 and 2007. It is low compared to average indicators for OECD countries and corresponding indicators in the EU's new Member States.

1. Background: review of data sources and key demographic and labour market indicators

1.1 Review of data sources

General overview

The National Statistical Service (NSS) of the Republic of Armenia provided most of the data used in the present report. This data includes information collected in sample surveys and aggregated data from administrative sources.

Other governmental agencies and services in Armenia such as: the Ministry of Education and Science (MoES), Ministry of Finance and Economy (MoFE), and Ministry of Labour and Social Issues (MoLSI) (including the State Employment Service (SES), which operates under MoLSI) provided other specific data that was added to the collected and reviewed statistics provided by the NSS.

In some sections of the report, international comparisons have been made on the basis of data provided by international organisations, institutions and donor funded projects. These include databases and publications from: the Council of Europe (CoE), European Training Foundation (ETF), Eurostat, International Labour Organisation (ILO), Organisation for Economic Development and Cooperation (OECD), Organisation for Security and Co-operation in Europe (OSCE), United Nations Development Programme (UNDP), United Nations Population Fund (UNFPA), the United States Agency for International Development (USAID) and the World Bank. Some of the details used for data description are presented according to field and source in the sub-sections below.

Population

Demographic handbooks

Historical population data used in the report was mostly provided by *The Demographic Handbook of Armenia,* published annually by the National Statistical Service. The publication is available in Armenian and English, and the 2008 report can be accessed on-line.[1] Key sections of the handbook include:

- population
- births
- stillbirth and infant mortality
- Mortality
- marriage and divorce
- migration.

Table 1 below summarises the information provided in the “Population” section of the 2008 Demographic Handbook. It is important to note that population statistics based on population data for 1993-2000 have been adjusted in line with the 2001 Armenia Population Census.

[1] http://www.armstat.am/en/?nid=82&id=819

Table 1. Summary of population data available in the 2008 Demographic Handbook of Armenia

Statistics	Period coverage (beginning of the year)	Disaggregation
De jure population (thousand persons)	1926-2008	▪ Male/Female
	1993-2008	▪ By province ▪ Urban/rural
	1993-2008	▪ Male/female ▪ by age group
	2003-2008	▪ by age group ▪ by province ▪ Urban/rural
Changes in *de jure* population • Natural growth (net) • Migration (net)	1990-2008	n/a

The migration figures presented in the Handbook are based on statistical processing of the arrival and departures records presented by the Police territorial passport services. These record the addresses of individuals when they first register in Armenia and any departures from the country. Information on external passenger transportation (international arrivals and departures) is based on passenger turnover (including air, road and rail) as recorded at the Border Crossing Controls and these figures are provided by the Migration Agency of the Republic of Armenia Ministry of Territorial Administration.

Table 2. Summary of migration data available in the 2008 Demographic Handbook of Armenia

Statistics	Period coverage	Disaggregation
Migration • Migration (in) • Migration (out) • Migration (net)	2002-2007	▪ Male/Female ▪ By age group
Migration • Migration (in) • Migration (out)	2002-2007	▪ CIS/other countries ▪ Urban/rural

Population census

Various sections of the report refer to results from the three most recent population censuses in Armenia in 1979, 1989 and 2001. The first two were conducted while Armenia was still in the Soviet Union and the 2001 population census was the first in Armenia after independence. Population censuses in Armenia are guided by the Organic Law on Population Census adopted by the National Assembly in 1999. This Law dictates that population censuses are to be held in the country once every ten years, with the next full national population census scheduled for 2011.

It should be noted that there are some shortcomings in the 1989 USSR Population Census data for Armenia and it should be interpreted carefully. The 1989 population census was the last census under Soviet rule and it was implemented in January 1989, just a month after northern Armenia was hit by a serious earthquake in December 1988. Also, the census was undertaken during a period of great political instability (coupled with considerable changes in the ethnic structure of the population due to migration in and out of the country). All of these factors impacted negatively on the census results to the extent that they did not truly reflect the real situation in Armenia.

The results of the 2001 Armenian Population Census have been published and are available on the NSS website.[2] The results of the Census are published in 12 volumes (one for the capital city Yerevan, one for

[2] http://www.armstat.am/en/?nid=52

each of the 10 provinces, and other summarizing national results of the population census). The key sections of the 2001 Armenian Population Census include:

- distribution of population by administrative territorial units
- demographic characteristics of population
- educational attainment of *de jure* population
- economic characteristics of population (employment, economic activity, etc.)
- ethnic structure of population
- migration
- number and structure of households
- housing conditions.

Other relevant data sources reviewed

Other data sources on population and specific population characteristics reviewed and used in preparation of the report, include:

- United Nations Economic Commission for Europe (UNECE) Statistical Database - http://w3.unece.org/pxweb/Dialog/
- Demoscope Weekly: An electronic Bulletin of the Demographic Institute of the Higher School of Economics (Moscow, Russian Federation): http://demoscope.ru/weekly/pril.php
- Michigan State University Libraries - The Census Online: Internet Census Resources for Eastern Europe and the Former Soviet Union: http://guides.lib.msu.edu/page.phtml?page_id=1297

Labour market statistics

Two principal domestic sources on labour market statistics have been used in the report:

- Establishment surveys
- Labour force surveys

Establishment surveys

Establishment surveys are implemented by the NSS.

a) Title:

Survey on number of employees and earnings

b) Periodicity of the survey:

Monthly, quarterly, annual

c) Main labour topics covered:

Monthly – number of employees and earnings by branch of economic activity

Quarterly – number of employees, earnings, labour turnover, type of ownership by branch of economic activity

Annual – number of employees, cost of labour (earnings, social benefits, training etc.)

d) Reference period:

Monthly – reference month

Quarterly – three months, six months, nine months, twelve months (cumulative)

Annual – reference year

e) Geographical coverage:

The entire country

f) Industrial coverage:

All branches of economic activity (consistent with Nomenclature Générale des Activités Économiques dans les Communautés Européennes (NACE))

g) Establishments:

- Small and micro private enterprises
- Small and micro public enterprises
- Large- and medium-sized public and private enterprises
- Private entrepreneurs

h) Sample design:

- Sampling is used for small and micro private enterprises (in 2007, the sample size numbered about 3 500 and the generalised sample about 9 000)
- Complete enumeration for large-and medium-sized public and private enterprises (about 5 400 in 2007)
- Complete enumeration for private entrepreneurs (however, data available from the State register does not cover persons employed by private entrepreneurs)

i) Concepts and definitions:

Employment

Employees on payroll: all employees working under an employment contract and performing work on a permanent, seasonal or temporary basis (up to two months) for at least one day. All employees are covered, whether they are at work or temporarily absent from work, provided they maintain their affiliation with the establishment.

Gross earnings

- Direct wages and salaries for normal time worked or work undertaken, including any premium, bonuses and gratuities paid for the work performed
- Remuneration for time not worked as specified by law (holidays, vacation, sick-leave, other time off)
- Irregular bonuses and gratuities,
- Value of payments in kind (food and drink, fuel, free or subsidised housing)

j) Key reference publications:

- Statistical Yearbooks of Armenia for various years - available in Armenian, English and Russian (most recent: 2008 Statistical Year book[3]).
- Specific publications on labour markets – mostly available in Armenian only. (The two most recent comprehensive publications (in Armenian) include: Labour Markets in the Republic of Armenia 2003-2007[4] and Labour Markets in the Republic of Armenia 2003-2006.[5])
- Monthly statistical-analytical bulletins on the socioeconomic situation in Armenia, mostly available in Armenian and Russian (the most recent publication available in English in this series is: Socio-Economic Situation of the Republic of Armenia January-December 2006[6]).

Labour Force Surveys

The first Labour Force Survey (LFS) was implemented in Armenia in 1996 with financial support from ILO and UNDP. An LFS was implemented jointly with the Integrated Survey of Living Standards (ISLS) in 1999 and then yearly from 2001 using the same household samples as the ISLS. An exception to this occurred in 2004, when the survey was conducted with support from the EU Technical Assistance to the Commonwealth of Independent States (Tacis) programme.

Although there was a regular LFS in recent years and ILO definitions were used for key indicators, certain limitations raise doubts over the reliability, consistency and comparability of the data collected in several of the years, making it difficult to use and analyse the data effectively. The following factors can be counted amongst these limitations:

- different sample sizes
- high seasonality in particular years
- different durations
- absolute numbers for the overall population are unavailable (apart from the LFS 2007, only structural or relative indicators are provided, expressed in percentages)
- occasional changes in methodology

Table 3 provides a summary of the sample size, periodicity and representativity of LFS 2001-2007.

Table 3. Summary of the sample size, periodicity and representativity of LFS 2001-2007

	2001	2002	2003	2004	2005	2006	2007
Sample size, households	2 064	2 322	2 322	2 539	773	2 547	7 872
Level of representativeness	Country	Country	Country	Country	Country	Country	Country/ Province
Period covered by survey	6 months	6 months	6 months	Aug-2004	Nov-Dec 2005	6 months	12 months

Source: NSS – Labour Force in Armenia, 2001-2006; Labour Markets in the Republic of Armenia 2003-2007.

In most cases the results of the LFS are available on an annual basis. Most of the irregularities in terms of sample size, timing, regularity of publication, in these surveys are attributable to the lack of funding.

Given the importance of the reliability, consistency and comparability of key labour market statistics in policy making and evaluation, improvements in this field are a key issue that could largely be resolved through cooperation between government agencies and donor communities. The most recent published and available LFS results date from 2007. One of key advantages of LFS 2007 over similar surveys conducted in previous years is that the key indicators of the Armenian labour markets were published in

[3] Available at http://www.armstat.am/en/?nid=45
[4] Published 27 December 2008, available at http://www.armstat.am/en/?nid=81&id=821
[5] Published 30 November 2007, available at: http://www.armstat.am/en/?nid=81&id=643
[6] Published in January 2007, available at http://www.armstat.am/en/?nid=81&id=223

absolute terms for the first time in the history of such surveys in Armenia. The summary characteristics of LFS 2007 are presented below:

LFS 2007 Armenia

a) General

LFS 2007 formed part of the ISLS conducted by the NSS

b) Geographical coverage:

Urban and rural communities from all 10 provinces and Yerevan city

c) Persons covered:

All persons aged 16 and above present in the household at the time of interview

d) Timing of the survey:

2007; monthly

e) Reference period:

Last calendar week of each month

f) Sample design

- ISLS sample
- The sample is based on a two-stage random sampling design. The sample size was 7 822 households
- Households selected monthly on a rotation principle

g) Topics covered

- Employment
  - By age group and educational attainment
  - By age group and marital status
  - By age group and type of economic activity
  - By type of economic activity and educational attainment
  - By type of economic activity and sector (public/municipal/private/NGO)
  - By type of economic activity and employment status
  - By employment status and type of work (permanent/temporary/occasional)
  - By sector (public/municipal/private/NGO) and type of work (permanent/temporary/occasional)
  - By type of economic activity and type of work (permanent/temporary/occasional)
  - Secondary employment
- Employment rate
  - By gender
  - By age group
- Hidden employment
- Unemployment
  - By age group and educational attainment
  - By age group and marital status
  - By way of searching for job and age
  - By age group and gender

- Earnings

g) Concepts and definitions

Employment

Employed persons are:

- all persons who, during the reference week, did any work at all as paid employees, in their own business, profession, or on their own farm as well as persons who worked as unpaid family workers in an enterprise operated by a family member; and
- all those who were not working but who had jobs or businesses from which they were temporarily absent because of illness, bad weather, holiday, labour-management disputes, or personal reasons, where they were paid for the time off or were seeking other jobs.

Employment estimates based on LFS define more people as employed than is the case for establishment surveys. These groups include:

- employers not considered as paid employees or private entrepreneurs;
- legally non-registered employers and the self-employed;
- unpaid family workers in the non-agricultural sector;
- those employed in military service (except for those on compulsory military service).

Unemployment

Unemployed persons are all persons who had no employment during the reference week, had been available for work during the previous two weeks and who had taken specific steps to seek employment.

Additionally, the ILO standard definition LFS 2007 considers as unemployed those persons who had no employment and were available for work during the previous two weeks, but who took no steps to seek employment. Full- and part-time students, pensioners and disabled persons are considered unemployed where they satisfy the conditions given above.

j) Key reference publications:

- Social Snapshot and Poverty of Armenia 2008, available in Armenian and English (ISLS 2007 results; published 15 October 2008; available in English at: http://www.armstat.am/en/?nid=81&id=781)
- Labour Markets in the Republic of Armenia 2003-2007, available in Armenian (published on 27 December 2008; http://www.armstat.am/en/?nid=81&id=821)

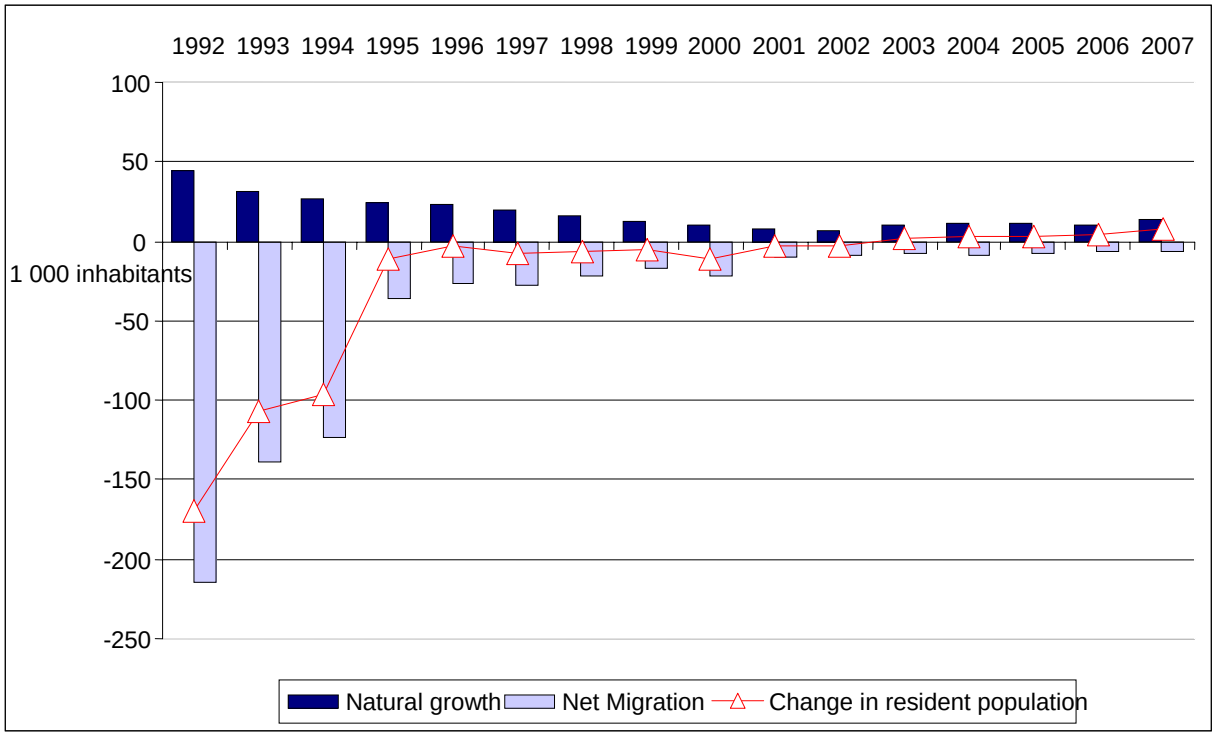
1.2 Demographic trends and demographic transition

Major trends and developments

NSS figures give the estimated resident population of Armenia as 3.23 million in early 2008. During 2007, there was population growth of 7 200 or 0.22%, a natural increase in population of 13 300 and net migration of 6 100.

There have been three distinct demographic trends since Armenian independence in 1991: three years of mass migration led to a steep decline of more than 10% in the early 1990s; followed by a period of moderate to low negative growth in 1995-2002 when the Armenian population contracted at an average yearly rate of -0.19%; finally, there was a reversal to low positive growth in 2003-2007 with estimated average annual population growth of 0.12%.

Figure 1. Trends in resident population, net migration and natural growth in Armenia 1992-2007 (index: 0=1991 figures)

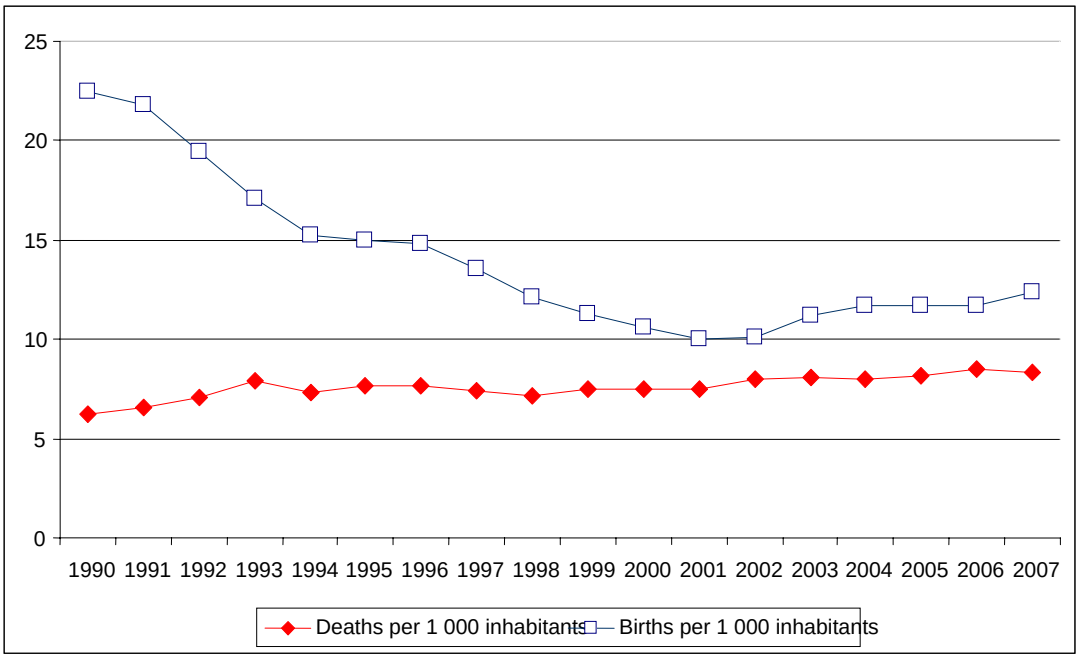


Source: NSS and author calculations.

During the first years of transition, Armenia experienced steep decline in crude birth rate (CBR) and a surge in crude death rate (CDR), a feature common to all transition countries. In 1991-2002, the CBR fell by more than 60% while the CDR increased by almost 30%. The falling birth rate trend has somehow reversed since 2002. In 2007, there was a CBR of 12.4 per 1 000 inhabitants, or an increase of 22.5% on 2002. However, crude death rates in 2002-2007 increased slightly from eight per 1 000 in 2002 to 8.3 per 1 000 in 2007. Forecasts state that CBR will rise to 15.1 per 1 000 in 2015 and stabilise at 12.4 per 1 000 by 2050. Global CBR was 20.15 per 1 000 in 2005. Given that a CBR of more than 30 per 1 000 is considered high and less than 18 per 1 000 is considered low;[7] there is clearly a slow trend toward an ageing population in Armenia although this is not yet apparent in the present distribution and the rate of change is slower than in other ageing societies.

[7] CBR was 8.33 per 1 000 in Germany and 14.14 in the United States in 2005. For the EU as a whole it was 9.90, with Spain at 9.72 and Italy at 8.18.

Figure 2. Trends in crude birth and death rate per 1 000 inhabitants in Armenia 1990-2007

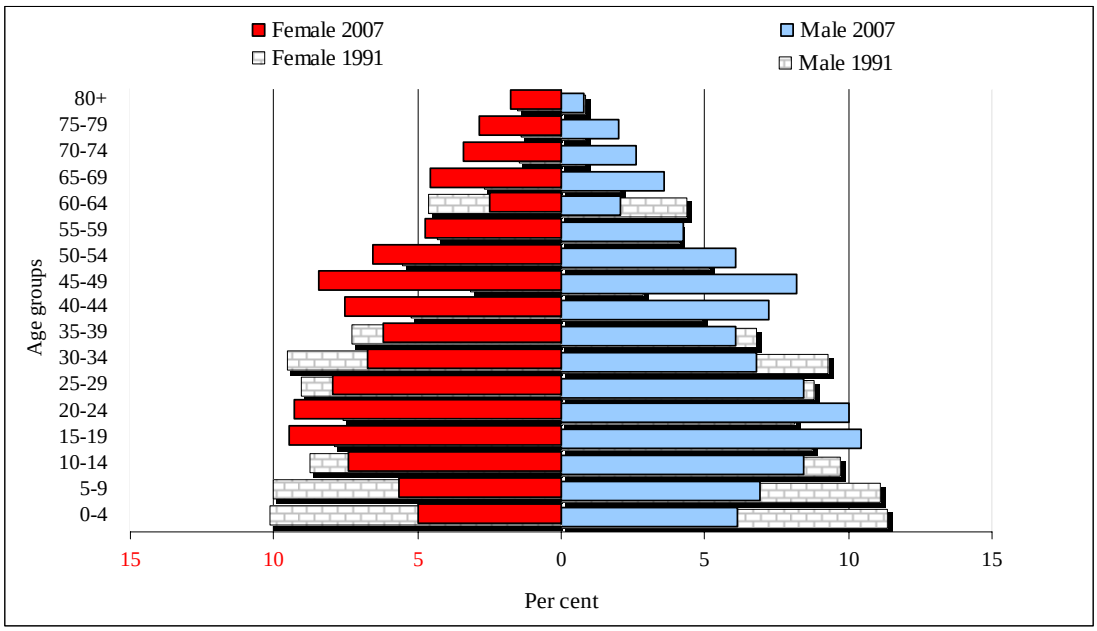


Source: NSS and author calculations.

Recent demographic trends in Armenia have changed the shape of the Armenian age pyramid (Figure 3). Between 1991 and 2007 the population under working age[8] has declined from 30.5% to 19.7% of the total, while the population above working age has increased from 5.8% to 10.8% of the whole in the same period. Between 1991 and 2007, the working age population increased from 63.7% to 69.5% of the total.

These trends are a clear indication of an ageing population, but the major factors behind the trend are related to more specific elements of "transitory demographic shock" in Armenia and are different from those observed in OECD countries. The most notable of these was the decline in total fertility rates (TFR) observed in all transition countries mainly as a result of economic turmoil - a scale of change unprecedented in terms of timing and magnitude. Armenia experienced the highest decline of all transition countries.

Figure 3. Armenia age pyramid in 1991 and 2007



Source: NSS and author calculations.

[8] In this report, under working age means under 15-years-old, above working age is 65-years-old and older. Working age is 15- to 64-years-old.

Population projections over time

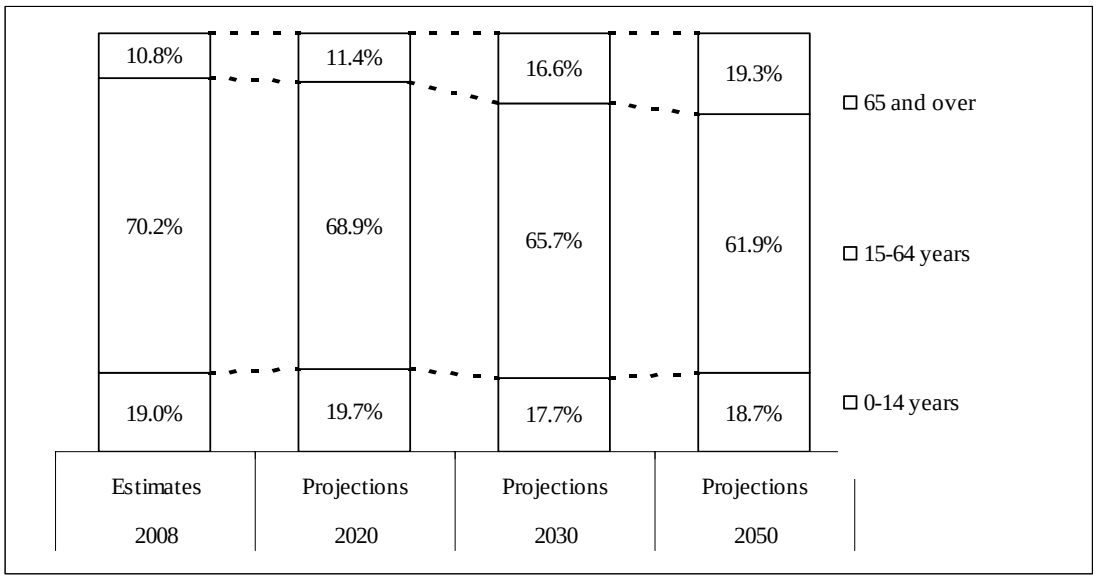
There are very limited published sources for population projections in Armenia. Population forecasts are not produced by the NSS or any other State agency. The most recent population forecasts were conducted with the support of the United Nations Population Fund (UNFPA) in partnership with AVAG Solutions Ltd for preparation of the Sustainable Development Programme (SDP) of Armenia approved by the Government in October 2008. In general, projections take recent trends into account and are based on key assumptions made with respect to mortality, fertility and migration according to sex and age group.

Here we present an extended version of one scenario of the population projection used in the SDP preparation process. This extended version of the population projections prepared by AVAG Solutions Ltd for the SDP report covers 2009-2050.

According to the forecast scenario:

- During the forecast period crude birth rate per 1 000 inhabitants will continue to rise and will peak at 15.1 per 1 000 in 2015 before slowly declining to 10.7 per 1 000 in 2027. The rate will then stabilise at 12.4 per 1 000 until 2050, mainly in reflection of anticipated changes in the number of women of reproductive age on the assumption that recent TFR trends will continue to the end of the forecast period and will reach 2.1 in 2050.
- The crude death rate will mainly reflect the anticipated increase in life expectancy at birth and changes in population structure. CDR is predicted to increase slightly over 2009-2050 from 8.5 per 1 000 to 9.3 per 1 000 in 2021. Life expectancy at birth is predicted to increase by 4.5 years for both sexes between 2007 and 2050 to reach 74.5 years for men and 80.9 for women in 2050.
- In the light of these assumptions, average annual positive natural growth of 0.3% will be expected until 2025 when it will become negative for all forecast periods up until 2050.
- Crude net migration will remain negative over the forecast period, although it will be halved over the 2007 to 2025 period to reach -1.0 per 1,000 in 2025. After that, negative net migration will continue to decline to 0 in 2050. Net migration projections are based on recent trends, projections of the per capita gap in Gross Domestic Product (GDP) between Armenia and main destination countries and the assumption that the geopolitical situation will not deteriorate within the forecast period.
- According to the population forecast, population structure will change substantially between 2008 and 2050. It is predicted that the working age population will shrink by almost eight percentage points over the forecast period, while those above working age will increase by around 8.5 percentage points (Figure 4).

Figure 4. Projected structure of population up to 2050



Source: Extended version of SDP population projections prepared by AVAG Solutions Ltd for "Black Sea Labour Market Reviews – Armenia" project assignment purposes.

Labour force

LFS 2001-2006 methodology in Armenia calculated the labour force as a sum of all employed and unemployed persons aged 16-70, plus employed persons above 70-years-old.[9] In addition, every LFS from 2001-2006 was conducted at a different time of year resulting in serious data compatibility problems related to seasonal effects. Consequently, it is not only difficult to make international comparisons on the basis of Armenia LFS data, but even comparisons of data from different years are rendered meaningless. Moreover, the LFS methodology, coverage and survey frequency were changed substantially in 2007, making the data even less comparable with previous LFS data. We present labour force participation rates for 2001-2007 with two different age categories (16-64 and 16-70 years old) in the table below to reflect these changes as competently as possible considering the shortcomings of the data.

Table 4. Economic activity rate by gender 2001-2007 (%)

Age groups	2001	2002	2003	2004	2005	2006	2007
Both sexes							
16-64	67.5	66.9	68.1	66.0	64.4	63.1	70.8[10]
16-70	65.6	64.8	65.9	63.6	61.0	60.6	68.3
Male							
16-64	81.9	82	83.5	80.4	80.6	78.9	82.9
16-70	79.5	79.8	80.6	78.1	76.8	75.9	78.9
Female							
16-64	56.4	55.5	56.6	54.4	51.5	50.9	62.1
16-70	54.8	53.5	54.8	52.1	48.5	48.8	60.0

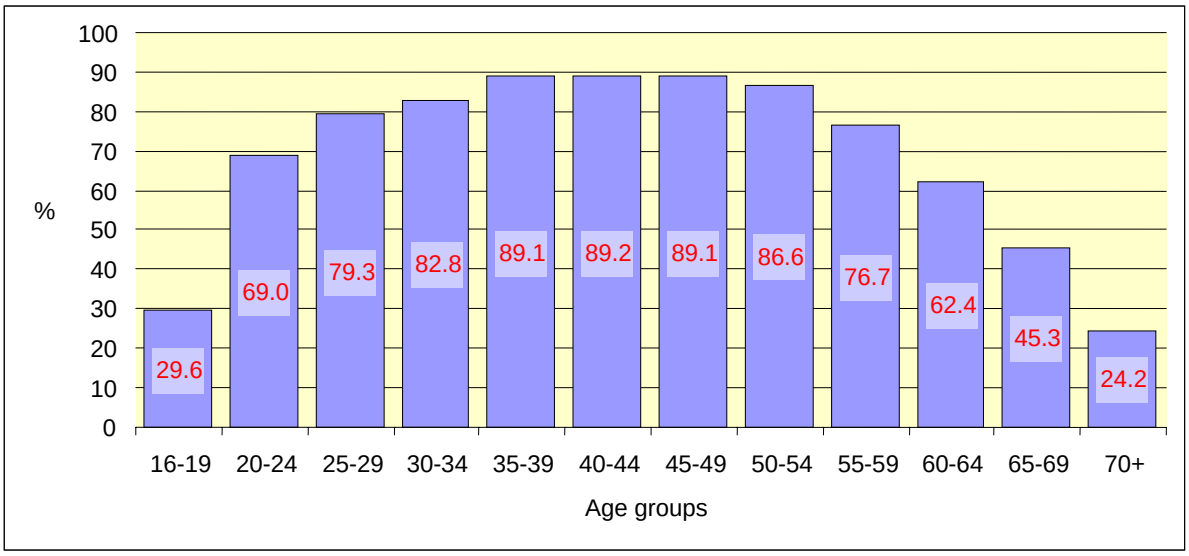
Source: NSS – LFS for various years.

Table shows that labour force participation rates for both sexes declined between 2001 and 2006 contributing to an overall decline of 4.4 percentage points. In 2007, labour force participation rates increased substantially for both sexes, but particularly amongst women, where there was an increase of almost nine percentage points. As was mentioned previously, it is likely that this dramatic increase in labour force participation rates in 2007 was related more to methodological changes in LFS administration than to differences in the real situation.

Although there are serious reservations as to the overall reliability of all LFS data in Armenia these surveys still provide the only source of information on labour supply distributed by main age groups. According to the latest LFS (LFS 2007), participation rates for those aged 16-19-years are far lower than average, reflecting the high level of enrolment in higher education. Rates are higher in the prime working ages for both sexes (Figure 5). It should be noted that activity rates for those aged 65 and over are relatively higher in Armenia than in OECD countries, mainly due to the low level of social security, especially retirement pensions, and also to the high level of subsistence farming.

[9] Adjustment cannot be made for ages 15-64 is not possible as there are no compatible population data.
[10] Author estimate based on LFS 2007.

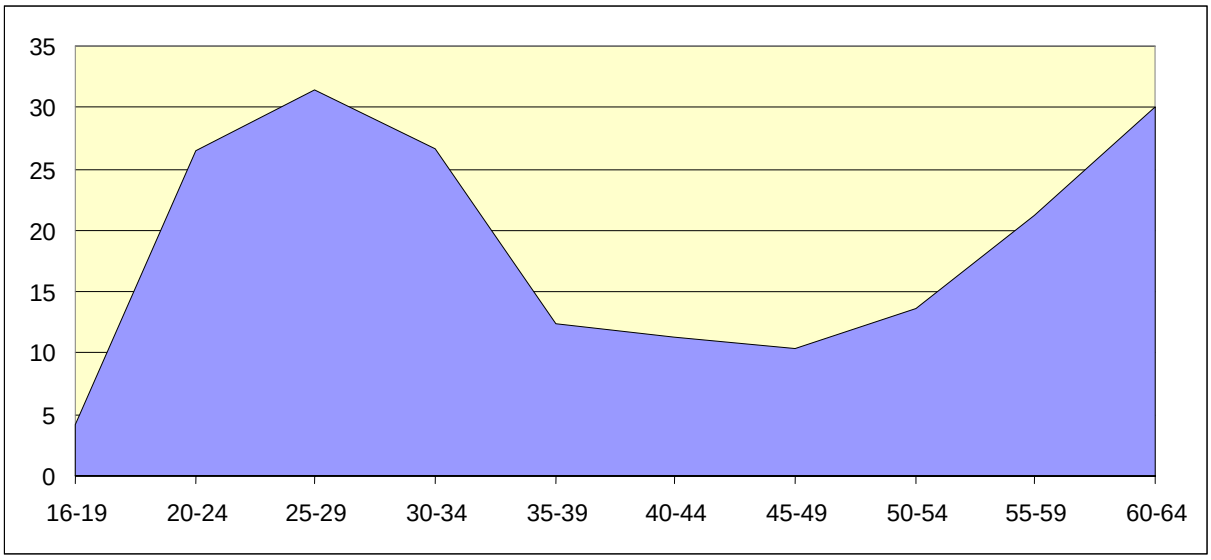
Figure 5. Labour force participation (% of age group)



Source: NSS – LFS 2007 and author calculations.

The discrepancy in male-female participation in the labour force was evident as men recorded higher participation rates than women in all age groups. The gap is lowest in the 16-19 age group, reflecting the equal opportunities in education. The largest gap is seen in the 20-34 age group, where the breach is greatest for those aged 25-29.

Figure 6. Activity rate gap between men and women by age group (percentage points)



** Axes X – Age group, Y - % difference between men and women.*
Source: NSS – LFS 2007 and author calculations.

Non-participation

As was already noted, it is very difficult to produce accurate analysis and depict meaningful trends on inactivity rates when the data is either unavailable or incomparable. However, it is patently clear that continued education has become a far more important factor in inactivity among young people in recent years, with a substantial increase in enrolment in higher education. As the LFS for several years shows that higher education strongly increases the activity rate, it can be assumed that recent trends will most likely push these rates up in the future, particularly amongst women. According to LFS 2007, the activity rate amongst women with higher education is nearly 14 percentage points higher than their average activity rate.

One of the major issues in any analysis of inactivity is estimation of the "discouraged workers" factor and related trends. Discouraged workers are defined as people who has lost their jobs but not made an effort to get a new employment. LFS 2007 provides estimates for discouraged workers at 9.6% of those not in the labour force, but the earlier surveys do not include this factor. It is important to note that about two-thirds of the estimated 74 400 people in this category are women. It should be also noted that women in Armenia probably postpone their entry into the labour market as a result of marriage and child-raising, or they may even start a family because they are discouraged at being unable to find a decent job - this situation makes them highly vulnerable in the labour market afterwards because of their lack of employment record and work experience. The main reasons given for inactivity in 2001 and 2007 are presented in Table 5.

Table 5. Distribution of main reasons for non-participation in the labour force in 2001 and 2007 by gender (%)

	Both sexes		Male		Female	
	2001*	2007	2001	2007	2001	2007
Education	9.4	22.0	9.5	31.9	9.3	17.9
Retirement and disability	33.4	42.0	34.8	50.7	32.5	38.4
Looking after household	19.8	21.2	1.8	1.4	30.3	29.2
Other	37.4	5.2	53.9	7.2	27.8	4.4
Discouraged workers	N/A	9.6	N/A	8.7	N/A	10.0
Total	100	100	100	100	100	100

** 2001 data was adjusted by adding the non-active population aged 71+ in order to make data for 2001 and 2007 comparable.*
Source: NSS – LFS 2001, LFS 2007 and author calculations.

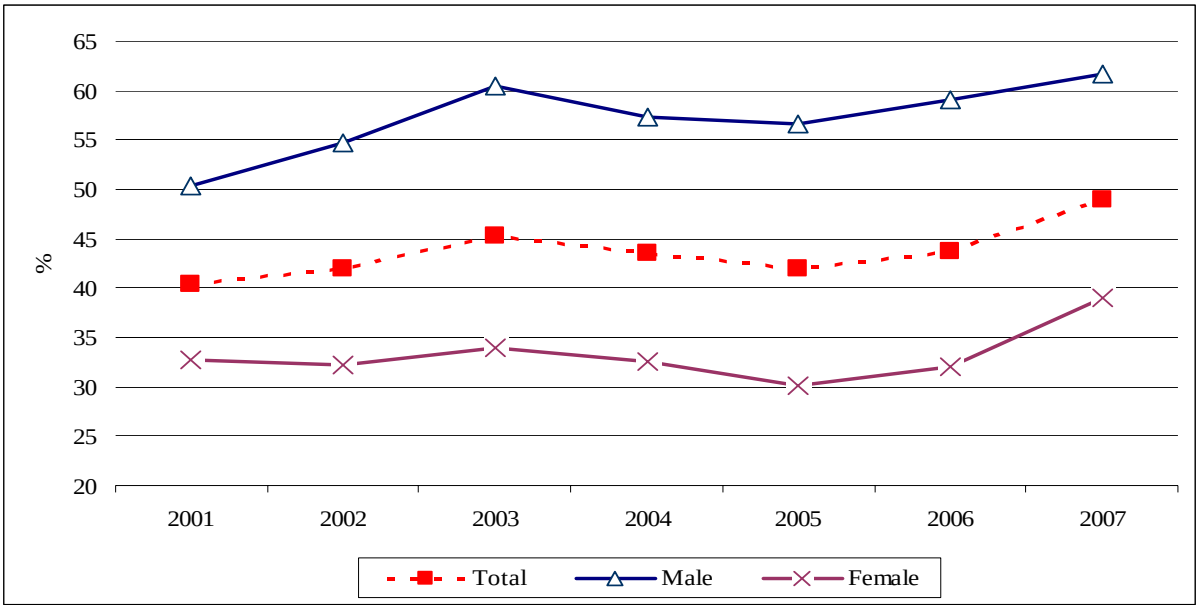
1.3 Employment trends

Employment: major developments

Both LFS and establishment surveys - the two main sources for employment estimates - have serious shortcomings. LFS data on employment before 2007 are available only in relative terms and no distribution by sector is available for 2004 and 2005. Meanwhile, establishment survey methodology does not allow for data capture on informal employment and employment in the informal sector, which can result in a serious underestimation of total employment in the case of Armenia.

According to LFS data, the employment-to-population ratio (population aged 16 -70) was volatile at 40%-43% during the 2001-2006 period, but increased substantially to 49% in 2007 mainly due to a notable increase in the female employment-to-population ratio as can be seen in Figure 7.

Figure 7. Employment-to-population ratio total and by sex in 2001-2007 (%)



Source: NSS – LFS 2001-2007 and author calculations.

According to establishment surveys, employment in Armenia decreased slightly from 1 106 400 in 2002 to 1 101 500 in 2007,[11] but recent impressive economic growth has not yet led to total employment. There are also variations in the picture of employment provided by the two main sources of employment statistics in Armenia. LFS statistics and establishment surveys provide substantially different conclusions on the structure of employment by sector both in terms of the current situation and recent trends. Table 6 shows the main differences for 2007.

Table 6. Employment structure by sector in 2007 according to LFS and establishment surveys

Sectors	ISIC Rev.3	LFS 2007	2007 Establishment Survey
Agriculture and fishery	A+B	36.5%	46.0%
Industry	C+D+E	11.3%	12.2%
Construction	F	7.7%	2.8%
Trade, transport and communication	G+H+I	16.8%	15.1%
Financial and business services	J+K+O	2.6%	2.8%
Other services	L+M+N	25.1%	21.0%

Source: NSS.

It is clear that the main differences between the two sources are basically attributable to the agriculture and construction sectors. As far as recent trends and dynamics in employment structure are concerned, the main difference between the two sources lies in the construction sector. According to the establishment survey, employment in the construction sector declined in absolute terms from 41 000 in 2002 to 31 000 in 2007 and in relative terms from 3.7% to 2.8% of total employment. In contrast, the LFS stated there were about 91 000 employees in the construction sector in 2007, constituting about 7.7% of total employment or nearly double the 2002 figure. Taking into account that gross value added in the construction sector - in current prices - increased by almost 4.5 times during the same period and the construction sector share of GDP almost doubled, it seems likely that the LFS data provide the more realistic picture of employment trends in the sector.

[11] After the 2001 census, the employment data from the establishment survey for 2001 was substantially revised by more than 10% increase.

Public sector and public enterprise sector

Public sector employment continued to decline throughout 2001-2007, but at a far slower rate than in the first years of transition. According to establishment surveys between 2002 and 2007, 72 000 people lost their employment in the public sector and public sector enterprises – an overall reduction of more than 25%. The change mainly reflected on-going privatisation of the health and infrastructure sectors and rationalisation of the education, science, culture and public health systems. As a result, employment in the public sector and public sector enterprises declined from 25.8% of total employment in 2002 to 19.3% in 2007.

It should be noted that LFS data differs from establishment surveys here, as in all other respects. LFS 2007 stated that employment in public sector and public sector enterprises stood at 41.6% in 2002 and now accounted for more than 33% of total employment. The higher figures given for public sector employment in the LFS can to some extent be attributed to inclusion of employment by the military while establishment surveys define public employment exclusively in terms of the civil services.

Private non-agricultural sector

Establishment surveys for 2007 found employment in the private non-agricultural sector accounted for 34.8% of total employment - about five percentage points higher than 2002 figures. Table compares the composition of employment in the non-agricultural sectors for 2002 and 2007. Table 6 clearly shows that while employment in the private non-agriculture sector expanded by about 60 000 between 2002 and 2007, most of the growth in private employment occurred at the expense of public sector employment, mainly as a result of the privatisation of public enterprises. Exceptions include the trade, hotels and restaurant sectors, were the expansion of employment can be mainly attributed to increased economic activity in those sectors.

Table 7. Structure of employment in non-agriculture sectors in 2002 and 2007 based on establishment surveys

	ISIC Rev.3	2002			2007		
		Private 1 000 persons	**Total**, 1 000 persons	**Private**, **%** of total	**Private**, 1 000 persons	**Total**, 1 000 persons	**Private**, **%** of total
Total non-agricultural sector		326.1	605.6	53.8%	383.6	594.6	64.5%
Mining and quarrying	C	4.4	7.9	55.7%	8.6	8.6	100.0%
Manufacturing	D	116.5	118.7	98.1%	103.5	103.6	99.9%
Electricity, gas and water supply	E	14.2	25.1	56.6%	19.7	22.7	86.8%
Construction	F	32.7	36.1	90.6%	30.3	31.1	97.4%
Transport and communications	I	22.5	40.2	56.0%	34.2	47.6	71.8%
Trade, hotels and restaurants	G-H	98.3	99.6	98.7%	114.4	114.5	99.9%
Real estate, rentals and business activities	K	22.7	30.2	75.2%	14.6	26.3	55.5%
Financial intermediation	J	3.9	5.2	75.0%	8.3	8.9	93.3%
Other services		10.9	242.6	4.5%	50.0	231.3	21.6%

Source: NSS – 2001 and 2007 establishment surveys.

The service sectors overall recorded far better employment outcomes than industry. Employment in manufacturing continued to decline during 2002-2007. This decline reflected ongoing internal restructuring of old enterprises and poor performance in exports, particularly export-oriented industries like those producing polished diamonds, jewellery and chemicals.

According to establishment surveys, employment in the construction sector declined slightly over the 2002-2007 period. However, as was noted earlier, employment rates in the construction sector recorded by establishment surveys appear to be substantial underestimates largely due to high levels of informal employment.

Agricultural sector

Attempts to estimate employment in agriculture in Armenia can be very challenging. Most agricultural goods are produced by over 320 000 unregistered self-employed farmers - a situation that creates serious difficulties for both LFS and establishment survey methodologies. Consequently, the two surveys produced completely different data on agriculture employment. Establishment surveys show that the agricultural sector accounts for about 46% of total employment, where LFS 2001-2006 give figures of no more than 24% and LFS 2007 estimates agricultural employment at 36.5%.

Agricultural employment is, in many respects, one of the main obstacles to economic development and poverty reduction in Armenia. Firstly, the extremely low productivity of the agriculture sector suggests sector growth will not be sustainable without serious restructuring and increases in labour productivity. Secondly, agriculture is still the main source of income for the rural population in Armenia as there are very few opportunities for non-agricultural activities outside of Yerevan. Finally, the mixed income of farmers is very low and does not provide sustainable protection against poverty.

Informal sector

Employment in the informal sector (or informal employment) refers to two categories of employment:

- employees with no formal employment contracts
- unregistered self-employed and employers

Employment in the informal non-agricultural sector has stood at a relatively stable 23-25% in recent years. Although LFS 2007 recorded a substantial decline to 20%, this can mainly be accounted for by the decline in the category of unregistered self-employment and employers. This fall is surprising, given that the main sectors of the informal economy in Armenia - construction, trade and transport - all recorded substantial growth in activity in 2007 compared with 2006. Figure 8 presents the trends in informal employment during 2002-2007.

Figure 8. Employment in the informal non-agricultural sector in 2002-2007 (% of total employment)

Source: NSS – LFS 2002-2007 and author calculations.

It should be noted that by definition almost 97% of employment in the agricultural sector can be described as “informal employment”. When agriculture is classed as part of the informal economy its share of total employment increases substantially up to 50% of the total economy. Table 8 shows the intensity of informality in 2007 by sector.

Table 8. Informal employment intensity by sector and by gender in 2007

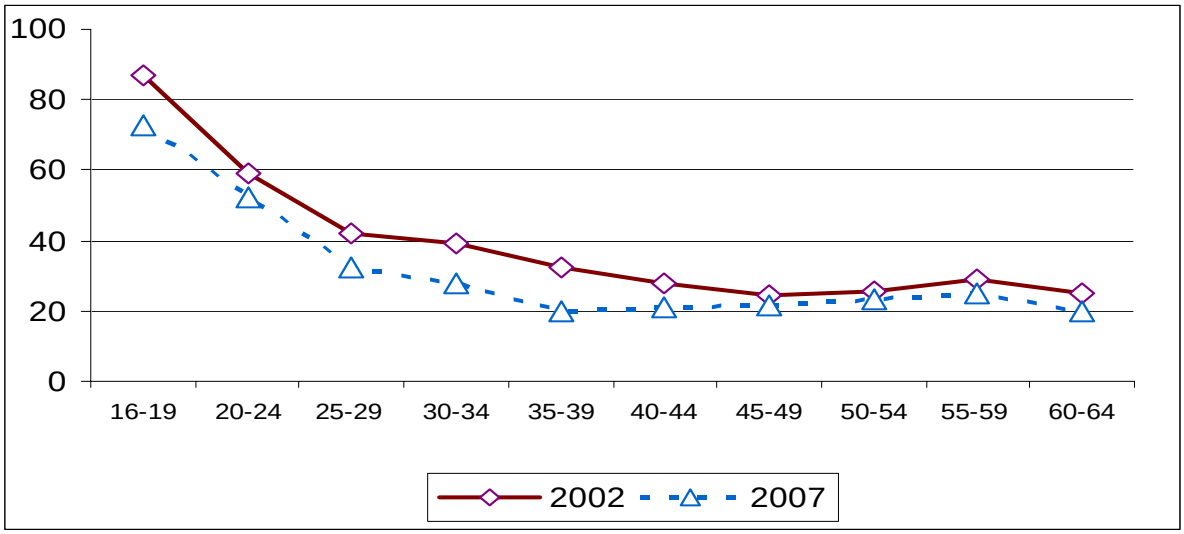
	Informal employment, %	of which:	
		Male	Female
Agriculture	98.0	96.9	98.9
Industry	21.3	19.0	26.9
Construction	74.4	75.0	47.3
Trade, hotels and restaurants, transport and communication	50.6	49.4	53.3
Financial and other business services	11.1	12.3	9.5
Other services	12.8	14.1	11.9

Source: NSS – LFS 2007.

Unemployment

The unemployment rate in Armenia was 28% in 2007 - a rate that is very high by all international comparisons. However, this has declined substantially from a peak of 42.1% in 1999. The highest unemployment rate is observed among youths aged 16-24.

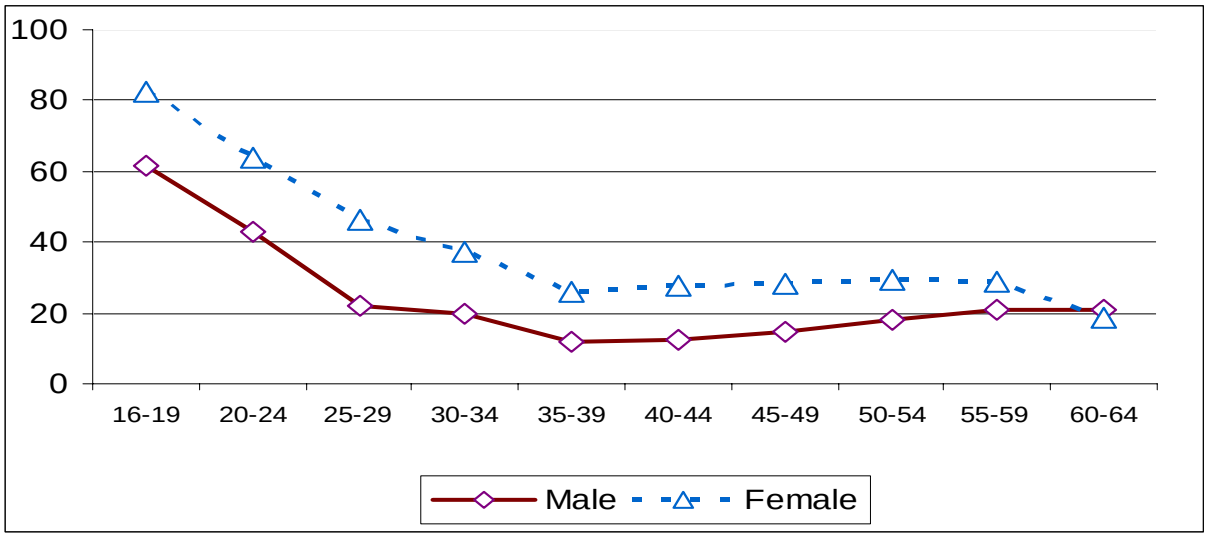
Figure 9. Unemployment rate (%) by age groups in 2002 and 2007



Source: NSS – LFS 2002 and 2007.

Unemployment was higher for women than men in all age groups and average unemployment amongst women was higher than that of men by about 13 percentage points in 2007. This gap was highest in the 16-34 (24 percentage points) and but was negative for the 60-64 age group.

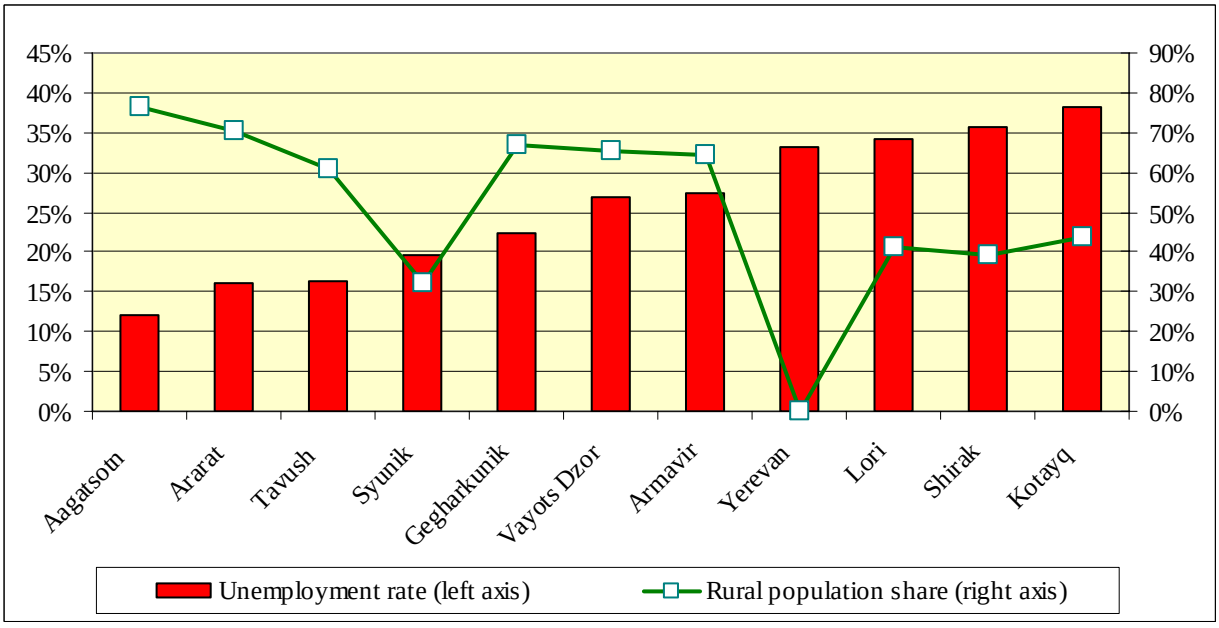
Figure 10. Unemployment rate (%) by age groups and gender in 2007



Source: NSS – LFS 2007.

In terms of the regional pattern of unemployment, provinces with higher levels of rural population had lower unemployment rate (with the exception of Syunik, where the mining industry provides substantial employment in urban areas). Kotayk, Shirak and Lori are the provinces with the highest unemployment rates (Figure 11).

Figure 11. Unemployment rate by province in 2007



Source: NSS–LFS 2007

It is interesting to note that the unemployment rate in regions largely corresponds to poverty incidence. For example: the two provinces, of Kotayk and Shirak have both the highest unemployment rate and high estimated poverty incidence. The one exception is Yerevan (the capital of Armenia) which ranks 4th highest in terms of unemployment, but also has the lowest poverty incidence and highest per capita GDP.

One of the major issues is the high incidence of long-term unemployment, despite some positive trends in recent years. The average duration of unemployment in 2002 was 12.5 months for both sexes, a figure that declined to 10.1 months in 2006. Women were unemployed for about one month more than men. The number of those in unemployment for more than one year also decreased from 51.3% to 39.7% between 2002 and 2006, and again, women seemed to be far more vulnerable to long-term unemployment than men. In 2006, incidence of long-term unemployment among women was 16 percentage points higher than it was among men.

Data on unemployed persons who do not actively search for work also clearly display the vulnerability of women in the labour market as compared to men.[12] Women made up 73% of those who cited difficulties in searching for a job, and about 70% of those who stated they had no hope of finding a job.

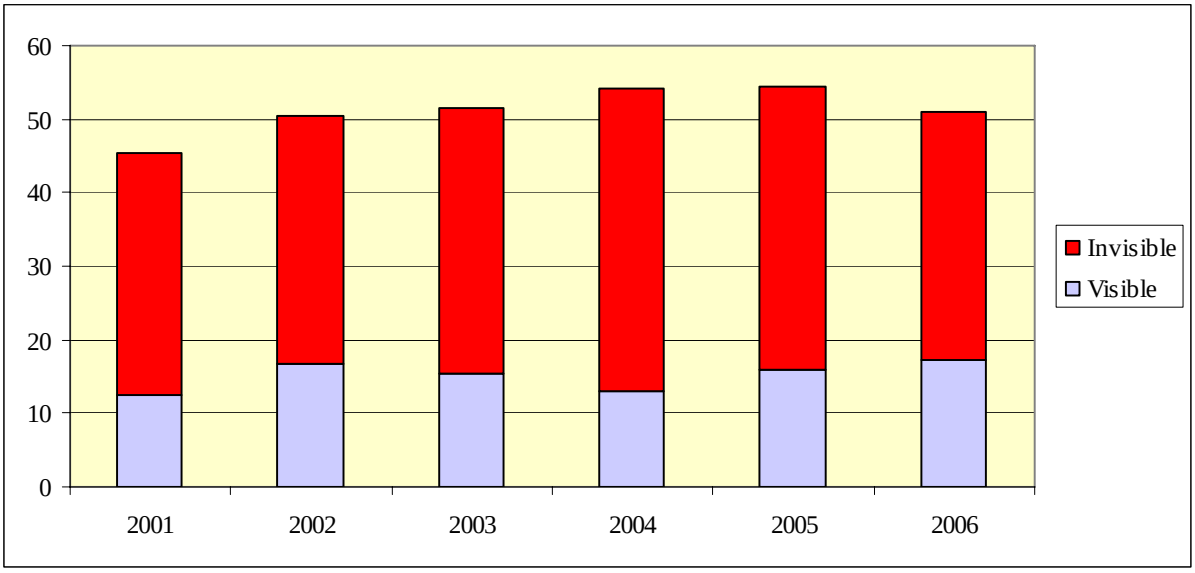
The methods regularly used for finding a job have remained unchanged in recent years: in 2007 more than 53% of the unemployed reported using social networks, friends and family members to find a job; 20% went through the mass media; and 12.5% applied to employment services both state and private.

Underemployment – dynamics and perspectives

Time–related or "visible" underemployment in Armenia increased from 12.4% in 2001, through a stable plateau of 14%-15% between 2003 and 2005, to a high of 17.4% in 2006. Only very limited information on underemployment is available in Armenia. LFS 2001-2006 in particular do not provide information on underemployment disaggregated by sex, age and region, and LFS 2007 provides no information at all on underemployment. The only information even partially related to the issue of underemployment in LFS 2007 is that relating to the number of employed persons who sought to change their current job for some reason. The report states that about 110 000 people - around 10% of the employed - tried to change job in that year and that low earnings were the main motive cited for changing jobs. It is interesting to note that this category accounted for almost 49% of all employment in LFS 2004 - a rate five times higher than that of 2007. However, differences in LFS methodology each year again make it hard to judge whether the observed trends really indicate substantial improvements in working conditions in just 3 years.

It is also interesting to note, that LFS 2001-2006 all provide estimates for what they term "invisible underemployment". If these two categories of underemployment are added together throughout the 2001-2006 period, underemployment comes out at extremely high rates of between 45% and 55% (Figure 12).

Figure 12. Visible and invisible underemployment rates (%) in 2001-2006



Source: NSS–LFS 2002-2006.

[12] It should be noted that LFS 2007 methodology follows the "relaxed" definition of unemployment in terms of criterion of seeking work. In 2007, only 128 000 of the 470 000 unemployed reported actively searching for work and about 274 000 reported that they did not actively seek work as they had no hope of finding it or did not know how to search for work. The latter group would fall into the category of "discouraged workers" or "hidden unemployment" if the standard definition of unemployment were applied.

Multiple job holding

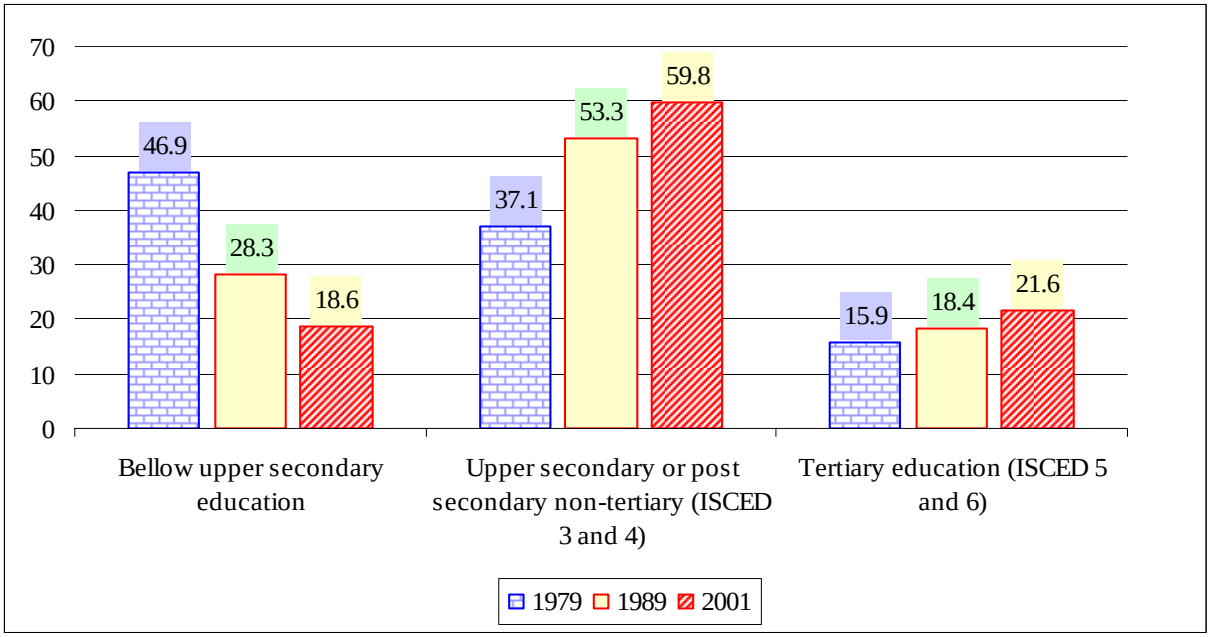
According to LFS findings, employment in multiple jobs remained stable throughout 2002-2007 at 6-7% of employment and agriculture is the sector where multiple job holding is most common. In 2007, 80% of multiple job holders worked in agriculture, an outcome that is hardly surprising given the characteristics of agricultural labour - high seasonality and low requirement for hiring external labour in many small farms with very small land holdings.

2. Human capital

2.1 Educational attainment

Comprehensive and reliable statistics are available on educational attainment in Armenia from population census data. Comparative analysis of 1979, 1989 and 2001 population census data shows that educational attainment during the reference period improved continuously. In particular, the share of adult population aged 25+[13] with a level of education below upper secondary decreased from 28.3% in 1989 to 18.6% in 2001, while corresponding shares of population in the same age group with upper secondary (or post secondary, non-tertiary) and tertiary education increased respectively from 53.3% to 59.8% and 18.4% to 21.6% between 1989 and 2001 (37% and 16% in 1979) (Figure 13).

Figure 13. Distribution of adult population aged 25+ (%) by highest level of education attained

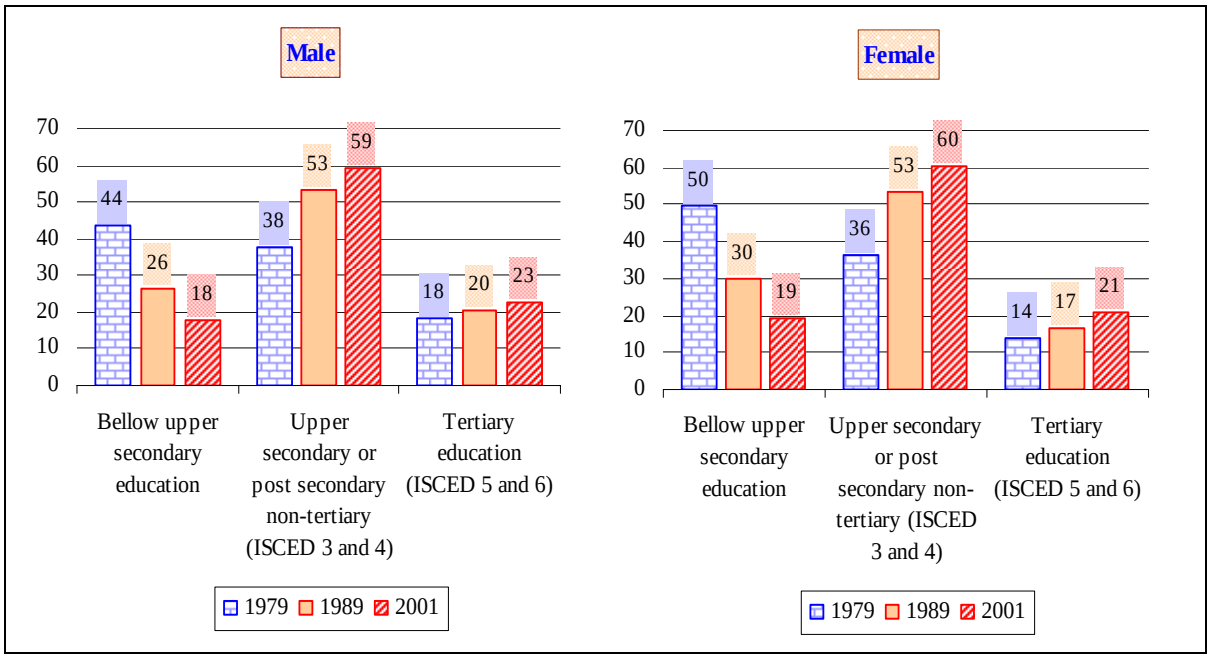


Note: population aged 26+ is considered for 2001.
Source: 1979 USSR Population Census, 1989 USSR Population Census, 2001 Armenia Population Census (NSS) and author calculations.

The same general pattern of improvement in educational attainment is observed when considering the population by gender; however some specific developments should be highlighted: from 1989-2001, the proportion women aged 25+ with a level of education below upper secondary decreased faster (from 30% in 1989 to 19% in 2001) than that of men (a decrease from 26% to 18%); meanwhile, the female population has grown faster than the male population resulting in a narrower gap between men and women with tertiary level education in 2001 (22.8% men and 20.6% women in 2001, compared to 20.2% men and 16.7% women, in 1989 (Figure 14)).

[13] 2001 figures show educational attainment for the population aged 26+ due to a change in format of Armenia population census data.

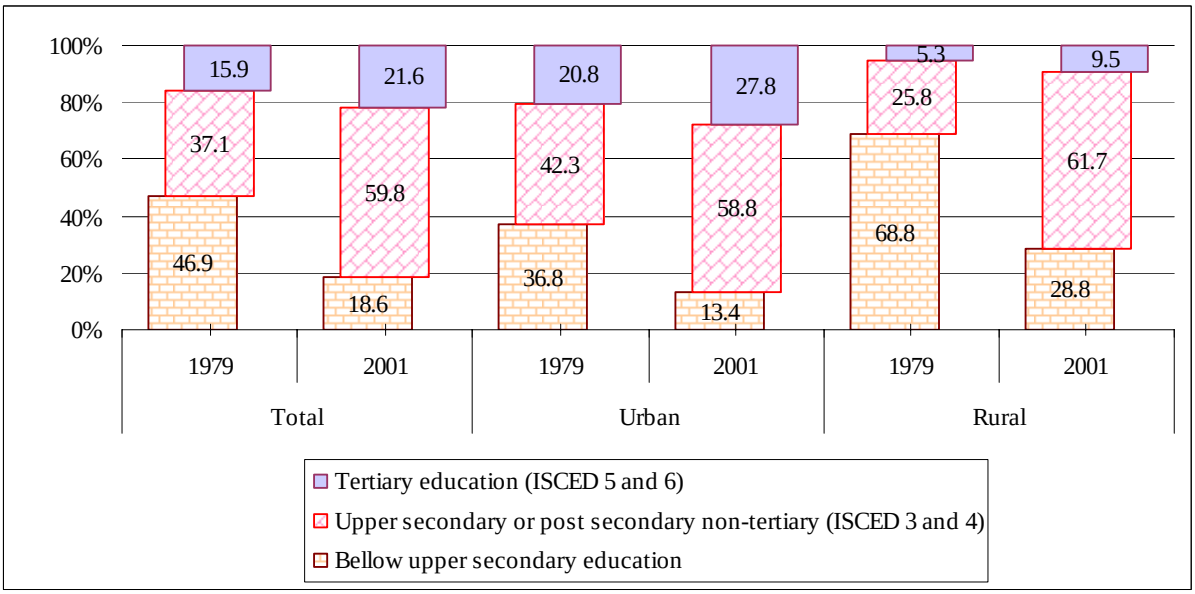
Figure 14. Changes in the educational attainment of adult population aged 25+ (%) by gender, between 1979-2001



Note: population aged 26+ is considered for 2001.
Source: 1979 USSR Population Census, 1989 USSR Population Census, 2001 Armenia Population Census (NSS), and author calculations.

Although improvements are observed in the educational attainment of both urban and rural populations in the reference period, the gap still persists. In 2001, in particular, the rural population aged 25+ was characterised by a higher proportion of people with an education level below upper secondary and a considerably lower share of people with tertiary education completed when compared to the corresponding characteristics of the urban population in the same age group (Figure 15).

Figure 15. Educational attainment of Armenian population aged 25+ in urban and rural area, 1979-2001

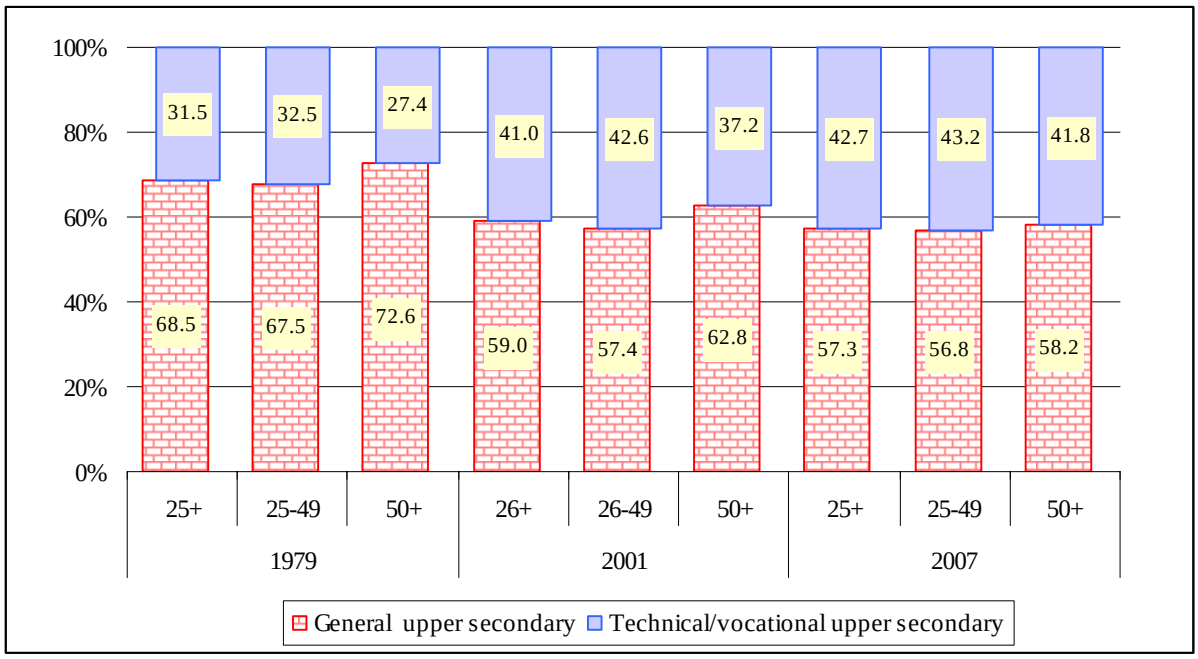


Note: population aged 26+ is considered for 2001.
Source: 1979 USSR Population Census, 2001 Armenia Population Census (NSS) and author calculations.

When considering the distribution of adult population aged 25+ that has attained upper secondary or post secondary non-tertiary education (International Standard Classification of Education (ISCED) 3 and 4) by programme orientation it is important to note the large increase in the number of people undertaking

technical and vocational upper secondary education programmes. These numbers have risen from 31.5% in 1979 to 41% in 2001. Although there might be some data comparability issues, it should be noted that according to LFS 2007, the corresponding indicator for 2007 was nearly 42% (Figure 16).

Figure 16. Distribution of adult population aged 25+ (%) with upper secondary education: general versus technical/vocational upper secondary or post-secondary non-tertiary education



Source: 1979 USSR Population Census, 2001 Armenia Population Census (NSS), LFS 2007 Armenia (NSS) and author calculations.

Table 9 provides information on educational attainment of the population by gender and specific age group (including youth) in 2001 and 2007.

Table 9. Educational attainment by gender and specific age group in 2001 and 2007

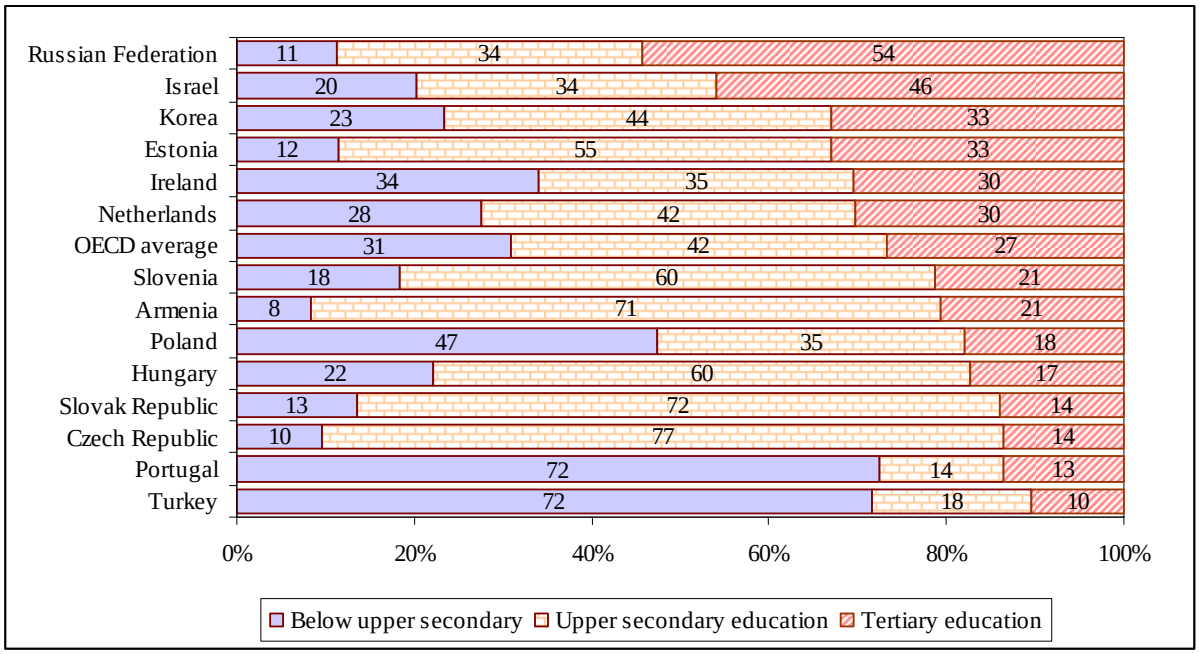
Educational level attained	2001						2007					
	15–24		25– 49		50+		15–24		25– 49		50+	
	F	M	F	M	F	M	F	M	F	M	F	M
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Below lower secondary education	3.9	5.8	1.6	2.2	23.0	17.7	1.4	2.2	0.5	0.7	14.1	10.8
Lower secondary (ISCED 2)	22.4	28.1	5.8	8.4	13.7	13.5	23.2	30.1	4.1	9.1	13.2	13.6
Upper secondary or post secondary non-tertiary (ISCED 3 and 4)	60.7	56.3	69.1	66.0	46.6	47.4	57.2	53.1	71.8	66.5	54.9	54.8
Tertiary education (ISCED 5 and 6)	13.0	9.8	23.5	23.4	16.7	21.4	18.2	14.6	23.6	23.7	17.8	20.8

Source: NSS 2001 Armenia Population Census, NSS ISLS 2007 and author calculations.

In 2008, the NSS released the LFS 2007 data accompanied by information on the educational attainment of the de facto working age population for the first time in recent years. This included information disaggregated by sex. LFS 2007 statistics conclude that only 8% of the adult population have educational attainment below upper secondary level, while 71% of the population aged 25-64 attained upper secondary levels and 21% went on to tertiary education, although the number of those with below upper secondary education may have been underestimated. General conclusions from international comparisons show the proportion of the adult population attaining tertiary level education in Armenia is lower than the average in OECD countries (27% in 2006) and other selected countries such as Russia (54% in 2002), Israel (46% in 2006) and Estonia (33% in 2006). The situation looks more favourable when the comparison is made with

selected Eastern European countries (Figure 17). However, it is more accurate to use this quantitative comparison in relation to skill needs of the economies of respective countries and their absorption capacity at a given moment or as a trend.

Figure 17. Educational attainment of adult population in Armenia and in selected countries: distribution of population aged 25-64 by highest level of education attained



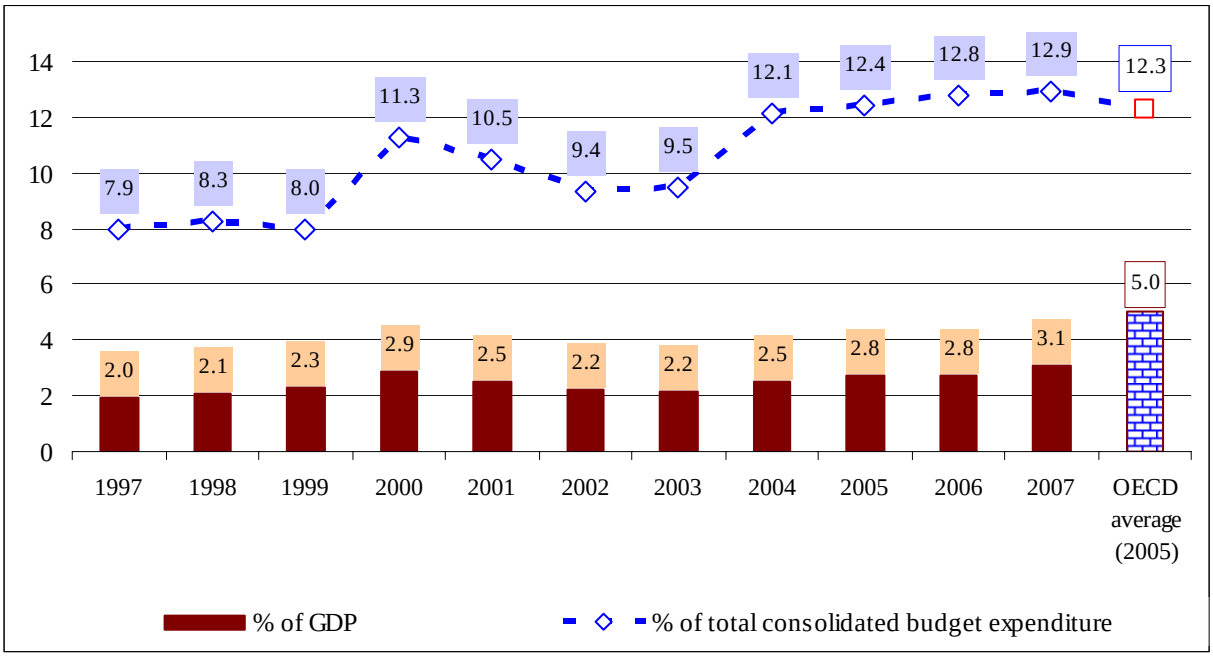
Reference period: Armenia – 2007, Russia - 2002, other countries – 2006.
Source: Armenia – NSS – LFS 2007, other countries - Education at a Glance 2008: OECD Indicators.

2.2 Investment in education

The education sector has been a government priority since the late 1990s, as is reflected in both the national and sector level programme documents. The education sector is a particular priority in both the Poverty Reduction Strategy Paper (PRSP) approved by the Government in 2003 and the Sustainable Development Programme (SDP) (which is an updated poverty reduction strategy document) approved by the government in 2008. Both documents prioritise the education sector with a particular focus on policies and specific measures to address existing issues in the medium- to long-term.

This prioritisation of the education sector is clearly reflected in public spending policy and the distribution of funds between sectors. Consolidated budget expenditure in the education sector increased from 2% of GDP in 1997 to 3.1% of GDP in 2007. Spending on education increased by five percentage points as total expenditure in the consolidated budget over the same period, going from about 8% in 1997 to nearly 13% in 2007. Education sector finance also improved due to the expanded resource envelope of the consolidated budget and considerable improvements in public spending management and budgetary discipline.

Figure 18. Dynamics of consolidated budget expenditure in the education sector in Armenia (on a commitment basis) 1997-2007



Source: Ministry of Finance, NSS, Education at a Glance 2008: OECD Indicators and author calculations.

Despite improvements in the dynamics of public expenditure in the education sector, the level of expenditure as a percentage of GDP is considerably lower than the average indicator for OECD countries (5% of GDP in 2005).

In recent years, general education absorbed 70-75% of all public spending on education, while public spending on professional education (Vocational Education and Training (VET) and tertiary) accounted for only an average of 10% of total sector expenditure each year in the 2003-2007 period.

No information has been published on aggregated private expenditure on education. Estimates based on ISLS data show that total household expenditure on education ranged from 1.8% of GDP in 2004 to 2.4% of GDP in 2007. When this is taken into account, total GDP spent on education in 2007 was 5.5%, a figure close to the OECD rate of 5.8%. This outcome indicates that there are similar rates of investment (at the country level) but with a different proportions of public and private involvement. While such a situation has implications in terms of equity and access to education, total investment is remarkably similar.

Table 10. Estimated total expenditure on education in Armenia and OECD countries 2004-2007

	Public expenditure, % of GDP	Private expenditure, % of GDP	Total, % of GDP	Private expenditure as % of total expenditure
Armenia				
2004	2.5	1.8	4.3	69.0
2005	2.8	1.7	4.4	61.0
2006	2.8	1.9	4.6	67.6
2007	3.1	2.4	5.5	78.9
OECD (average)				
2004	5.0	0.7	5.8	14.5
2005	5.0	0.8	5.8	16.9

Note: For Armenia, private expenditure on education is estimated on the basis of ISLS statistics and only covers household expenditure.
Source: Ministry of Finance, NSS, Education at a Glance 2007; 2008: OECD Indicators (Table B.2) and author calculations.

Although there are certain differences in the method and coverage of private spending on education in Armenia and OECD member countries, as presented in Table 10, the share of national wealth spent on education in Armenia is comparable to average indicators for OECD countries. However, household spending on education in Armenia constitutes a far larger share of total expenditure on education than the average for OECD countries, compensating to some extent for the comparably low level of public spending on education. Such a pattern could lead to the gradual development of differentiation or inequity in Armenia in the longer term, where the socioeconomic characteristics of households become a defining factor in an education system largely based on private expenditure.

2.3 Poverty and equity in education

Data from the 2005 and 2006 Household Surveys state that poverty incidence is higher in: provinces affected by the earthquake; the border regions; regions with conditions unfavourable to agriculture, especially where there is little irrigated agricultural land; and provinces with a predominantly urban population. The major factors conditioning poverty reduction are the progressive growth of labour incomes among the poor population and levels of employment. The progressive growth of pensions paid and increased targeting of the social protection system also contribute to this. The second PRSP - adopted for the 2008-2012 period through the SDP - will identify further priorities, strategies and target indicators up to 2021. These will ensure further reduction of poverty and the elimination of extreme poverty and regional disparity through the development of integrated territorial policies. The aim is to reduce material poverty from 26.52% in 2006 to 8% in 2012.

Recent data shows access to basic education in Armenia is broadly equitable, whereas access to higher education is quite limited for children from poor families. Considering the low income levels, Armenia has achieved impressive educational development. Nearly all children of basic education age (grades one to eight) in all quintiles are enrolled in some level of education (pre-primary to secondary).

The VET system has undergone several phases of reform, in particular after the new Law on Education was adopted in 1999 and the ensuing rationalisation programme reduced the number of less relevant VET schools. During the pre-2004 reform phase, preliminary VET was practically destroyed. Two important steps have been taken in terms of VET governance in 2008, namely: the establishment of a National Council - a tripartite body to drive system reform - and the creation of the National Centre for the Development of VET - an instrument to implement decisions made by the Council. Sector Policy Support provided by the EU in 2006 and 2007 has played a vital role in strengthening governance of the system through pilot measures implemented at school level. The key issue will be to build on the outcomes of these pilot initiatives and to disseminate these throughout the rest of the system in order to make VET more attractive to young people and their families. Further support was provided to complete VET reform and disseminate the pilots to system level in 2009.

Higher education is the only sub-sector of education that has registered clear growth in the number of entrants, students and graduates. However, university enrolments are quite inequitably distributed, with an over-representation of rich households. As there is limited money to spend on private tutoring, children from socioeconomically disadvantaged homes and rural areas perform less well at school, particularly at secondary level, thus limiting their access to tertiary education.

In 2005 the non-tertiary VET system comprised: 26 Preliminary (Craft) VET schools[14] (28 in 2006-2007), with enrolments of 6 100 students in 2006-2007; 83 public secondary VET schools (colleges), with 27 800 students (2005-2006); 34 private secondary VET schools; 3 universities providing secondary VET programmes (University Colleges). After craft education was reinitiated in 2004, 28 vocational profiles were offered in various types of establishments in the 2006-2007 academic year. Secondary VET schools offer approximately 185 of the 257 vocational profiles available in the classifier - the list of officially recognised

[14] Professions for craft education includes three layers: (i) 8 broad sections (economic or technical branches), subdivided into groups; (ii) 50 groups (occupational fields), each with a number of specialisations (jobs); (iii) 230 narrower 'qualifications' (narrow professional title) covering all groups. For more information see http://www.pedz.uni-mannheim.de/daten/edz-tr2/esb/07/NOTE73UGPG.pdf

occupations for which VET programmes exist - which has been subjected to on-going review and update over the last three years.

The 2008-2012 PRSP also includes the development of human capital as a third priority. This covers education, health, culture and environment. The education objectives stated in the national programme include:

- increase the duration of education for the age group 6-21 to an average of 12.5 years;
- enhance the quality of education by improving the physical and technical conditions of school buildings (including proper heating mechanisms and computer technologies). Total public expenditure on investment in education in the mid-term should increase by 2012. The percentage of the budget spent on education has grown substantially over recent years - from 7.9% of total expenditure in 1997 to 14% in 2006;
- ensure that foreign languages and computer skills are taught from primary school level;
- establish a national centre for the quality assessment in order to increase the efficiency of education;
- improve the effectiveness of training, retraining and the professional career path for teachers;
- improve links between the world of education and the world of work, through the introduction of best European practices in assessing the demand for skills;
- improve the integration of children with special needs through adequate educational measures;
- increase participation in pre-school education in particular for children from vulnerable families;
- reform higher and vocational education in accordance with the principles of the Lisbon Declaration and introduce a national qualification system at internationally accepted quality standards from 2010. Fundamental steps will be taken toward modernisation of the management of universities, including the qualifications of scientific staff and enhancement of the PhD education system;
- increase availability of services in professional education through the introduction of student scholarships and loan mechanisms;
- increase public expenditure to 3.5% of GDP by 2012 (from 2.5% in 2005);
- foster the development of scientific research, form better links between universities and research institutes and clarify the role of the National Academy of Sciences;
- introduce modern methods for assessing scientific programmes and awarding degrees with the allocation of adequate budget resources;
- strengthen co-operation and integration with international centres;
- improve distance learning through the development and application of interactive e-education.

The SDP also redirects efforts towards the “activation policy” in Armenia. The activation policy includes:

- improvement of personal, social and vocational skills and capacities, and support to social integration;
- individually tailored participation in projects on the basis of the age, experience, needs and priorities of the person;
- beneficiary use of resources and capacities;
- networking with labour market services, social services, health services, the housing sector and communities; and
- cooperation and interaction between beneficiaries and agencies in planning, shaping and implementation of projects.

State employment policy is focused on: sustainable and continued improvement of labour force competitiveness; mitigation of imbalance between supply and demand in the labour force; the creation of job opportunities for young people; and ensuring employment opportunities for non-competitive groups of the population – particularly people with disabilities.

2.4 EU and other donor interventions in the education sector

The 2008-2012 PRSP has provided the major forum for donor dialogue and coordination in relation to the overarching socioeconomic development programmes of Armenia. Since the PRSP was adopted, several donors – particularly UN organisations, the UK Department for International Development (DFID) and USAID – have aligned their country strategies in close coordination with the government. The Ministry of Finance and Economy (MoFE) leads the coordination of donor funding (grants and loans) and the National Aid Coordinating Unit reports to the Ministry of Trade and Economic Development. MoFE has introduced a unified information system for donor strategies and projects. However, the government is still in the early stages of developing leadership and ownership and has yet to achieve effective coordination of donor strategies relating to the VET system and policy priorities adopted.

There are approximately 20 donors active in the field of education and vocational education and training in Armenia. Support ranges from wider systemic reform, funded by the EU and the World Bank, to bilateral assistance for a specific school or college. The main donors are listed below.

The World Bank: World Bank Education Sector Reform is based on the implementation of the "Education, and relevance of education" project, which has helped with revision of basic education curricula, teacher training and the production of textbooks as part of the goal to extend compulsory education from nine to 12 years. A new loan has been agreed with the Armenian Government, which should provide further support for increased participation and quality in pre-school, secondary (both general and vocational) and tertiary education. Implementation of the new programme should be initiated in mid-2009.

UNDP: In 2006, UNDP started the "Support the Modernisation of Vocational Education and Training (VET) system in Armenia" project, involving pilot school renovation, competency-based standards, curriculum development in some selected sectors and provinces.

UNICEF: The following projects are jointly implemented with the Ministry of Education and National Institute of Education: (i) national study of school wastage and absenteeism in Armenia; (ii) training to support the transition to twelve-year schooling for teachers of second grade students; (iii) revision of preschool curriculum; (iv) development and publishing of a guidebook for training of pre-school administrators and educators; (v) preschool education administrative statistical data management system; (vi) assessment of boarding schools and transformation of 17 special schools into mainstream schools or temporary boarding schools (jointly with the Ministry of Labour and Social Issues); (vii) advocacy for integration of healthy lifestyle into the national curriculum.

The British Council: The British Council is involved in Armenia through the implementation of a regional vocational education and training project in South East Europe known as skills@work. The aim of the project is to promote closer links between the world of work and vocational education and training.

GTZ: GTZ has been supporting the middle level agriculture VET department since 2003 with training and the provision of equipment (e.g. computers, tractors, soil analysis equipment). Practical training through demonstration of field activities is of a high priority in this assistance. Revenue from the sale of agricultural products is re-invested into these colleges, providing an incentive for both teachers and students. Student enrolment in the colleges has doubled since 2003 as a result of the project. The duration of the project has been extended to 2009 and the success of the project led to an assessment of highly satisfactory by the Ministry of Agriculture.

USAID: USAID/Armenia is developing educational aspects within other objectives across the mission portfolio to ensure that critical gaps in the programming of formal education are systematically addressed. Educational interventions include: the American University of Armenia (AUA) endowment; economics education in secondary schools; a law faculty development programme at Yerevan State University (YSU); development of accounting and auditing curricula at the YSU, State Institute of Economy (SIE), and the Slavonic University; development of a unified family medicine curriculum at the State Medical University (SMU); development of a business curriculum at the State Engineering University of Armenia (SEUA); assistance for curriculum reform, adult education, and outreach programmes in computer science departments at three universities – YSU, SEUA, and SIE; and assistance to the Ministry of Education and

Science in strategic planning and institutional reform. These USAID-managed activities complement the US Embassy education activities in Armenia.

Eurasia Partnership Foundation (EPF): USAID/Armenia is continuing to fund EPF activities in Armenia in line with its core grant. The EPF Grant and Loan Programme focus on: development and growth of private sector, promotion of good governance and strengthened civil society; enhanced media and communications capacity; strengthened regional cooperation; and the promotion of social science research. The Armenia-Turkey Cross-Border Dialogue and Cooperation Programme, launched by the EPF in 2006 aims to contribute to the normalisation of relations between Armenia and Turkey by strengthening the capacities of non-governmental, local government and business sectors to develop and maintain cross-border partnerships, and by supporting initiatives that establish cross-border links.

France: France is very active in the education field providing support to a French secondary school (lycée) and university established in co-operation with the University of Lyons, France, releasing 50-60 lecturers for a short period of time each year. The main objectives of the University are:

- to help open higher education to international relations;
- to create a French speaking elite to remain in Armenia; and
- to promote partnerships with the world of work.

The university has faculties of law, management, commerce and marketing and French becomes the working language from the 3rd year. The courses run over four years - leading to a baccalaureate diploma recognised in both Armenia and France – or six years – for a French Masters. During the 4th year, students have an internship with a private company in France that provides them with insight into a real work environment.

The European Union: Armenia joined the European Neighbourhood Policy in 2004**,** and the Armenia–European Union Action Plan (to 2010) was approved on 14 November 2006. Closer integration with the EU in key political, legal, social and economic areas will be given new impetus over the coming decade. The country strategy for 2007-2013 prioritises reform and upgrade of the education system in line with EU standards and practices in order to strengthen democratic development, social stability and economic competitiveness. EC assistance to Armenia for 2007**-**2010 is based on the National Indicative Programme, which identifies three strategic objectives:

- strengthen democratic structures and good governance;
- further support the regulatory framework and administrative capacity building;
- support poverty reduction efforts.

In higher education EU support has been provided to higher education through the Tempus programme. This has provided total funding of about EUR 5.5 million from 1995 – 2006, covering 32 projects of 1-3 years duration and 60 individual mobility schemes. A total of 96 institutions participated in the scheme, including: 70 EU universities, two US universities, one from Japan, 10 Armenian State universities, 10 non-academic organisations and three universities from the Caucasus region. Tempus activities have been developed in the following areas in accordance with the priorities set by the European Commission and local authorities:

- reforms of university management systems;
- curriculum development and training of teaching staff in such spheres as: social sciences; medicine; engineering sciences; IT in library, audit and international banking systems; air transportation; the economics of sustainable energy; biomedicine; agriculture; occupational therapy; strategic planning; library development; and modern European languages;
- networking and multiplier projects.

In the light of Bologna Process, Tempus support has enabled Armenian universities to improve their administrative and organisational structures and study programmes by experiencing EU academic culture. Significant steps will be made toward the European Higher Education Area as the universities promote:

teacher training, student mobility, language ability, consultation with the entrepreneurial world and cooperation with stakeholders.

In vocational education and training EU support to Armenia entered a new phase in 2007. Non-targeted budget support of EUR 3.5 million was provided by Tacis assistance in 2006 and EUR 16 million was contributed by ENPI 2007 Sector Policy Support Programmes for poverty reduction policies through the development of human resources in a modern and efficient vocational education and training system. The programmes aim to strengthen and modernise the system through:

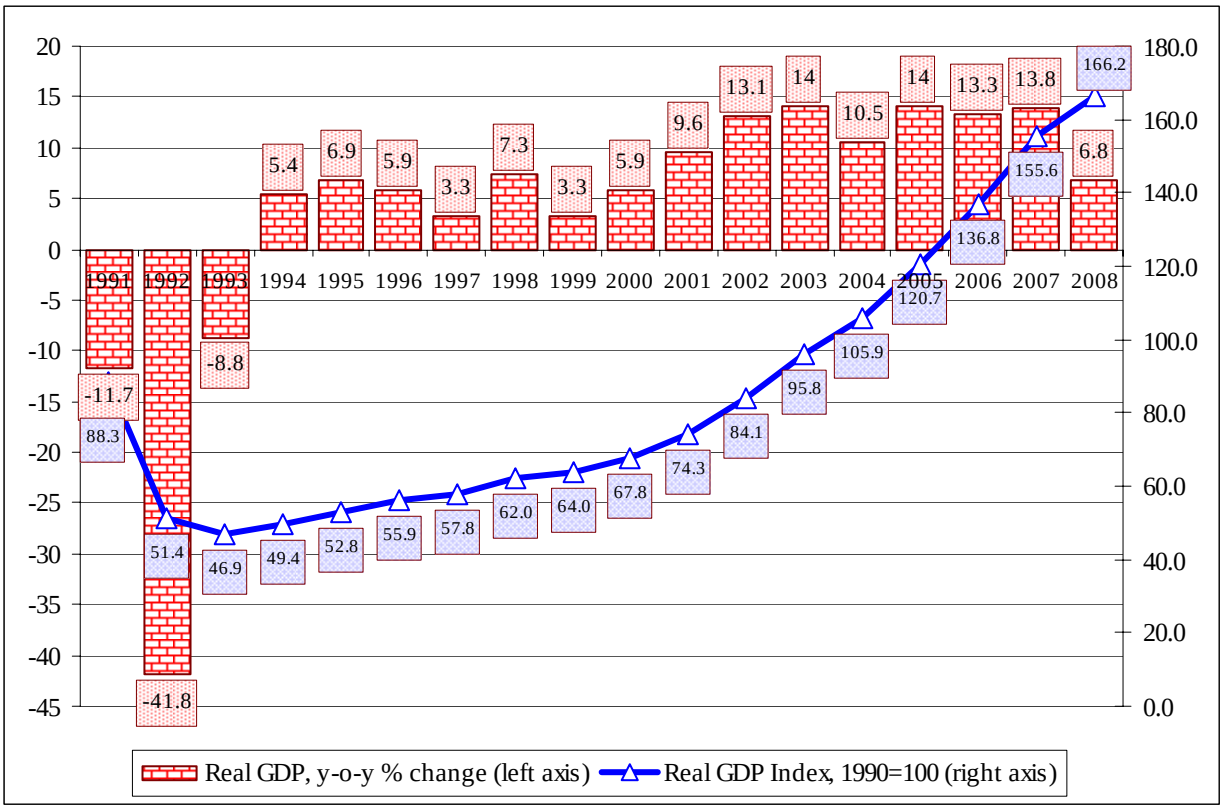
- enhanced institutional capacities for policy definition, implementation and monitoring;
- improved quality, efficiency and accountability of the delivery system to meet the demands of the labour market;
- strengthened social dialogue;
- improved donor co-ordination;
- optimised VET financing and governance of the system.

3. Restructuring labour markets and changing employment patterns

3.1 Macro-economic situation and economic restructuring

Armenian GDP is growing and has exceeded pre-transition levels. Armenia has experienced what is probably the most profound "transformation shock" of all transition countries on its path from command to market economy. In the early 1990s the country experienced a period of hyperinflation and high budget deficits.[15] The dissolution of the former Soviet Union meant the disintegration of production and trade links between former Soviet republics and determined the collapse of national industrial sectors. However, to economic recovery was made possible from 1994[16] through the rapid implementation of the first wave of economic reforms including: price and trade liberalisation; the privatisation of agricultural land and enterprise; macroeconomic stabilisation; and the easing of external conditions. Armenia has enjoyed uninterrupted economic growth ever since, at an average annual rate of 8.8% over the 1994-2008 period. As a result, real GDP was about 166.2% of its 1990 level by 2008 (Figure 19).

Figure 19. Annual real GDP growth 1991-2008 (%)[17]



Source: NSS.

The severe economic decline and ensuing recovery was experienced in all economic sectors, although with varying magnitude and contributions to national economic growth.

[15] In 1993, 1994 and 1995 consumer prices rose by 1 923%, 5 062% and 276% respectively. In 1993 the overall budget deficit amounted to 11.7% of GDP.

[16] Economic growth resumed in Poland in 1992, in the Czech Republic, Slovakia, Slovenia and Romania in 1993, and in Hungary, Bulgaria and the Baltic States in 1994.

[17] Real GDP growth rate, Y to Y – left scale, GDP level index: 1990=100 – right scale

Table 11. Economic growth by sector (index: 1990=100)

	1991	1992	1993	1994	1995	1996	1997	1998	1999
Agriculture	98.0	89.5	84.3	89.2	92.7	94.6	90.3	102.0	103.4
Industry and energy	96.0	38.7	42.1	48.5	49.8	50.3	51.0	49.8	52.5
Construction	75.3	27.2	21.7	19.9	18.7	23.4	24.4	26.9	29.0
Services	96.7	72.1	60.0	59.4	68.1	71.3	73.2	78.1	81.2
Net taxes	45.3	26.3	18.2	21.7	27.7	39.3	59.4	72.9	70.0
	2000	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**
Agriculture	102.3	114.2	118.6	123.6	141.1	157.0	157.7	173.8	176.1
Industry and energy	56.0	58.2	66.3	76.6	78.3	82.4	82.1	84.6	86.7
Construction	37.4	39.2	55.4	80.7	93.0	119.0	165.3	196.0	210.1
Services	82.8	93.1	101.8	109.8	126.6	146.4	168.5	191.5	208.1
Net taxes	79.5	93.0	106.3	114.7	117.4	129.8	144.3	190.6	222.6

Source: NSS.

Sector decline and growth rates reflect the deep structural changes experienced from 1990 and these predetermined employment dynamics to a large extent. Agriculture and services were the two sectors most resilient to the systemic crisis during the early transition period and these were also the sectors where pre-crisis production levels were recovered first - 1998 and 2002 respectively. The contraction in industry and construction was far deeper. Table 11 shows pre-crisis levels were achieved by 2005 in construction, whereas industry has yet to recover and the volume of industrial value-added (including energy) in 2008 comprised only 86.7% of its 1990 level.

Table 12. GDP and sector average annual growth rates by periods (%)

	1991-1993	1994-1998	1999-2003	2004-2008	1994-2008	1991-2008
GDP	-22.3	5.8	9.1	11.6	8.8	2.9
Value added in agriculture	-5.5	3.9	3.9	7.3	5.0	3.2
Value added in industry	-25.1	3.4	9.0	2.5	4.9	-0.8
Value added in construction	-39.9	4.4	24.5	21.1	16.3	4.2
Value added in services	-15.7	5.4	7.1	13.6	8.6	4.2
Net taxes	-43.4	32.1	9.5	14.2	18.2	4.5

Source: NSS and author calculations.

Table 13. Sector contribution to economic contraction and growth by periods (%)

	1991-1993	1994-1998	1999-2003	2004-2008	1994-2008	1991-2008
Value added in agriculture		23.2	10.0	11.0	11.3	16.9
Value added in industry		16.3	26.9	4.6	11.9	-6.4
Value added in construction		6.9	33.7	36.6	31.4	33.1
Value added in services		30.6	20.5	35.6	31.6	41.6
Net taxes		23.0	9.0	12.3	13.7	14.8
Total		**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Source: NSS and author calculations.

Tables 12 and 13 show that post-independence GDP dynamics in Armenia can be divided into four different periods according to the sources and engines of economic growth. The contraction period lasted about three years and resulted in substantial structural change. The dramatic contraction in industrial production and construction and the almost total disintegration of the tax system were accompanied by a serious energy crisis and disruption of the transportation infrastructure. Tables 14 and 15 also show the comparative contribution of each sector to GDP production and employment.

Table 14. Structure of GDP production by sector 1990-2008 (%)

	1990	1994	1999	2003	2007	2008
Value added in agriculture	14.7	26.5	24.2	18.9	16.4	15.6
Value added in industry	31.9	31.3	25.7	25.5	17.4	16.6
Value added in construction	19.9	8.0	8.7	16.8	25.1	25.2
Value added in services	25.5	30.6	32.1	29.2	31.4	31.9
Net taxes	8.0	3.5	9.4	9.6	9.8	10.7
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Source: NSS and author calculations.

Table 15. Comparison of GDP production and employment shares by sectors, 2007 (%)

SECTORS	Value added to GDP*	Employment share (2007 Establishment survey)	Employment share (LFS 2007)
Agriculture	16.4%	46.0%	36.5%
Industry	17.4%	12.2%	11.3%
Services	31.4%	38.9%	44.5%
Construction	25.1%	2.8%	7.7%

** Excluding taxes. Source: NSS and author calculations.*

Recovery growth started in 1994 and lasted about five years. Agriculture and services were the main contributors to recovery growth, providing about 53.8% of overall GDP increase compared with only 22.3% from industry and construction. The introduction of Value Added Tax (VAT) and VAT taxing on the border (in 1997) were mainly responsible for the substantial increase in net taxes. Recovery growth was driven by several factors. An initial wave of economic reforms included mass privatisation and energy sector reforms. The privatisation process gained momentum in 1994-1995 and was mostly completed by 1998. Macroeconomic stability was established in 1995 and then sustained with the help of mass external funding from by the International Financial Institutions (IFIs) and more favourable external and internal conditions for development (easier transportation, overcoming the energy crisis[18] and a ceasefire in the Nagorno-Karabakh conflict). From the foreign trade perspective, the main result was import substitution affecting both exports and imports and somehow diminishing national dependency on foreign trade.

The next five years of economic growth were driven by import substitution[19], expanding exports and recovery of the construction sector. In 1999-2003, industry and construction became the main driving force for development accounting for 60.6% of overall GDP increase compared with only 30.5% for agriculture and services (down from 53.8% in 1994-1998). The period was characterised by continued macroeconomic stabilisation, low inflation and favourable nominal exchange rate dynamics - a trend that allowed the country to use the comparative advantage of low labour costs and reduce dependence on external funding. Foreign funding did however continue in the form of external development assistance and remittances.

Economic growth for 2004-2008 was largely demand-driven with substantial appreciation of the national currency[20] (Armenian Dram (AMD)). This resulted in accelerated wage growth in the economy in terms of USD,[21] up from USD 74.2 per month to USD 373.6 between 2003 and 2008. The USD values increased five-fold compared to only a nearly three-fold increase in AMD.[22] This difference was mainly the outcome government policy to keep inflation down in the face of substantial increases in money inflows to the

[18] As a result of energy sector reforms, more reliable gas supply and reopening of the Armenian Nuclear Plant in 1996

[19] To a somewhat lesser degree than in the previous period

[20] In 2003-2008, in nominal terms, the value of AMD almost doubled against USD – or by 88%.

[21] In the non-agricultural sector of the economy.

[22] Labour productivity in the non-agricultural sector increased by 234.6% in the same period, a level lower than that of wage increases.

country in the form of remittances[23] and private investments, mostly for the construction of housing.[24] They also faced price increases on leading imported commodities such as solid fuel, foods and metals by tightening monetary policy and fighting external trade shocks by allowing the national currency to appreciate against the USD. However, this resulted in export stagnation and almost crushed the nascent export sectors of jewellery and diamond cutting, software and service outsourcing in 1999-2003, while imports increased substantially.

Table 16. Exchange rate, non-agricultural wages, labour productivity and unit labour cost 1995-2008

	1995	1996	1997	1998	1999	2000	2001
USD per 1 000 AMD	2.46	2.41	2.03	1.98	1.87	1.85	1.80
Average monthly wage in AMD, y-o-y % change		151.1	154.2	145.9	108.1	112.9	106.0
Average monthly wage in USD, y-o-y % change		148.0	129.7	142.0	102.3	111.8	103.0
Labour productivity, y-o-y % change		135.9	127.6	113.7	111.4	125.0	95.6
Unit labour cost	0.27	0.27	0.31	0.38	0.36	0.31	0.34
	2002	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**
USD per 1 000 AMD	1.74	1.73	1.87	2.18	2.40	2.92	3.27
Average monthly wage in AMD, y-o-y % change	112.59	124.22	127.80	121.55	113.77	114.65	131.28
Average monthly wage in USD, y-o-y % change	109.00	123.06	138.66	141.67	125.16	139.44	146.77
Labour productivity, y-o-y % change	119.67	123.65	116.83	123.19	119.26	116.79	118.21
Unit labour cost	0.28	0.27	0.29	0.29	0.28	0.27	0.31

Source: NSS and author calculations.

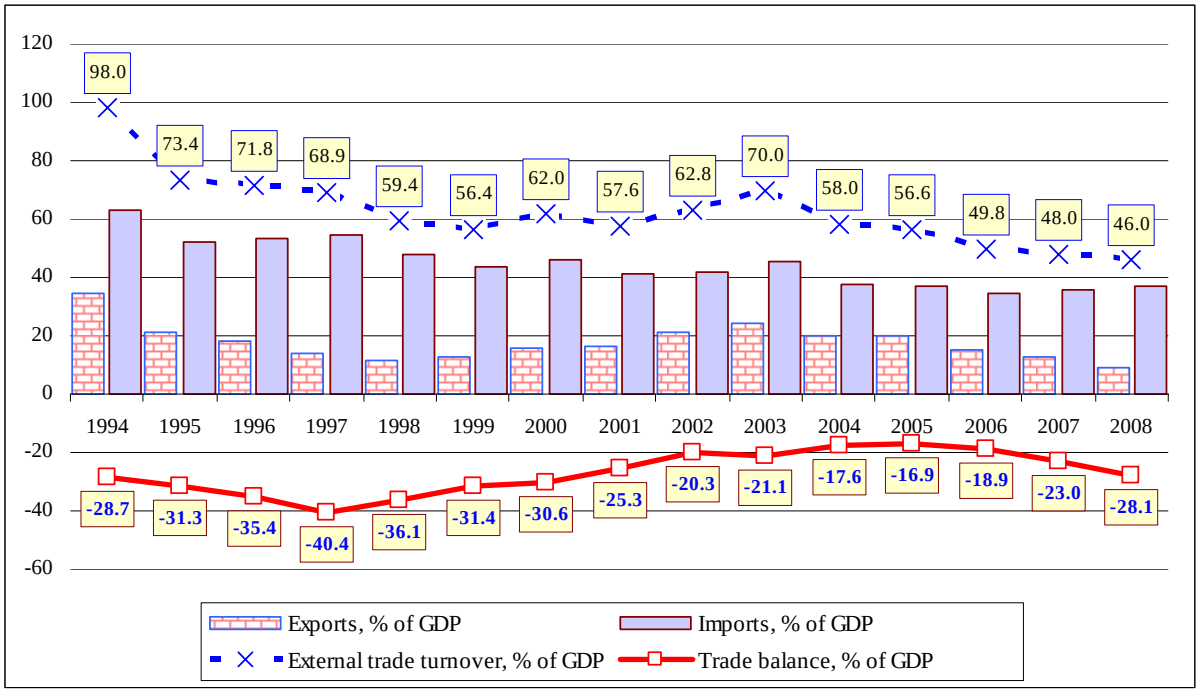
The main drivers of growth during that period were the non-tradable sectors, especially construction and services (in the domestic market). These two elements contributed about 72.2% of all growth, whereas industry provided only 4.6% compared with 26.9% in the previous five years. However, developments in 2008 - especially the substantial decline in the Armenian economy in the last quarter of the year as part of the widening global crisis - indicate that this development model requires attention.[25] The crisis indicates that this model of development is not sustainable and the authorities should act to increase national competitiveness in view of probable reductions in external funding of the country especially in the form of remittances and private investments. A comparison of Commonwealth of Independent States (CIS) countries recorded the following decline in GDP when compared to the first semester of 2008: Armenia (83.7%), Russia (90.2%[26] and 86.6%[27] depending on the source), Moldova (93.1%) and Georgia (94.1%), with the lowest performance registered in the Ukraine (79.7%).[28]

The dynamics of the external trade component of GDP in economic growth 1994-2008 corresponds to the various types of growth, described in Figure 20. The 1994-1998 recovery growth period was based mostly on agriculture and services without substantial investments, and the behaviour of the external trade component here was determined by a declining tendency of GDP share for both exports and imports. This element may have been related to import substitution and sluggish industrial recovery as this sector lost its traditional markets and was slow to find new niches or developing clusters. As a result, the share of exports in GDP fell threefold in 1994-1998 and imports by 32 percentage points. Exports picked up from 11.7% of GDP in 1998 to 24.4% in 2003, which - in line with quite stable imports in the range of 41%–46% of GDP -

[23] Some estimates rate the inflow of remittances at USD 2 billion in 2008, mostly from Russia, approximately USD 1.3 billion in registered money transfers and USD 700 million in cash.
[24] Actually 2003-2008 inflation in Armenia in was the lowest of all CIS countries.
[25] According to NSS, the growth rate in the first three quarters of 2008 was 10.1% compared to the same period of 2007, whereas the annual growth rate in 2008 comprised only 6.8%.
[26] http://www.stat.kg/
[27] http://www.cisstat.com/
[28] http://www.stat.kg/ and http://www.cisstat.com/

brought the trade deficit down from 36.1% of GDP in 1998 to 21.1% in 2003. During this period, between 40% and 50% of exports were provided by the fast growing jewellery and diamond cutting sector. However, most of the 2004-2008 growth was generated by non-tradable sectors and unfavourable exchange rate dynamics meant exports fell dramatically about 2.5 fold. The leading role of non-tradable sectors in the accelerated economic growth also resulted in a reduction in the import share to GDP.

Figure 20. Armenian external trade in 1994-2008 (% of GDP)



Source: NSS and author calculations.

Even with the permanent increase of import prices, the combined effects of these two processes meant the level of country integration to the world trade system (measured as external trade to GDP ratio) declined substantially from 70% in 2003 to 46% in 2008 - the lowest level of this indicator since independence. Poor export performance led to an increased trade deficit to GDP ratio from 21.1% of GDP in 2003 to 28.1% in 2008.

Table 17. Dynamics of external trade by period (annual average change %)

In current USD	**1991-1994**	**1995-1998**	**1999-2003**	**2004-2008**	**1995-2008**
Export growth rates	-74.6	0.6	25.5	9.3	11.1
Import growth rates	-61.0	23.0	7.2	28.1	15.6
External trade growth rates	-66.2	16.5	11.8	22.8	14.5
Trade balance growth rates	-37.8	39.8	-2.8	41.4	17.7
GDP growth rate	-17.3*	32.0	8.2	33.6	18.7
In current AMD					
Export growth rates		14.5	28.9	-3.8	13.3
Import growth rates		40.1	10.1	12.8	20.6
External turnover growth rates		32.7	14.9	8.1	18.6
Trade balance growth rates		59.2	-0.1	24.5	25.5
GDP growth rate		50.3	11.2	17.6	25.7

** In constant 2005 prices. Source: NSS and author calculations.*

An overall understanding of Armenian external trade performance can be gathered from analysing import and export structure by main product groups and countries of destination and origin.

Import characteristics. Merchandise import and import of commercial services have grown roughly at the same pace during 1998-2007, increasing by almost 3.8 times from 1998 to 2007 (Table 8).

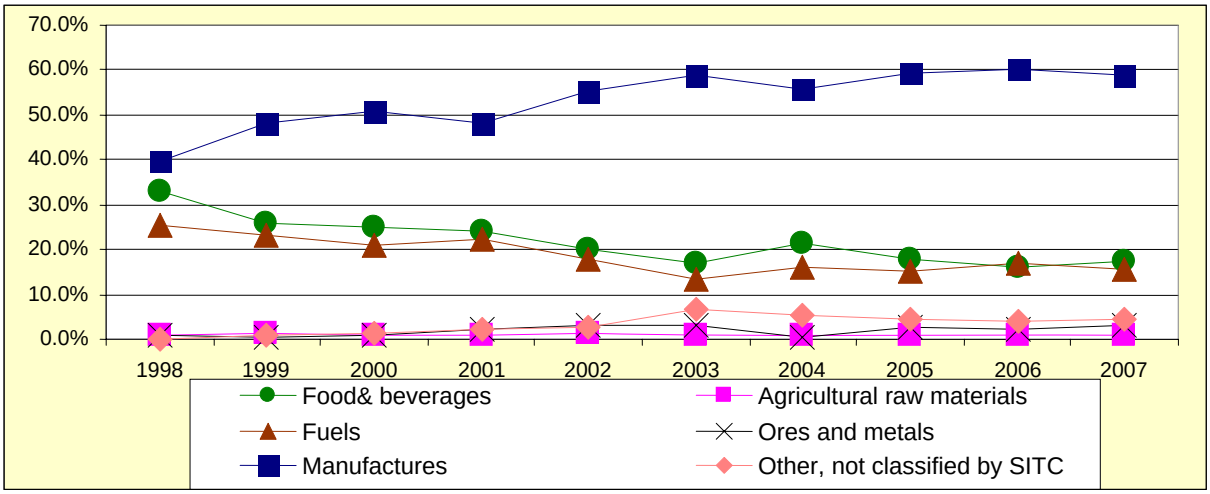
Table 18. Import of commercial services and merchandise during 1998-2007 (USD million)

USD millions	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Total commercial services	193.6	197.8	192.7	204.3	224.5	275.7	431.5	531.1	615.1	718.3
Total merchandise	796.0	749.5	840.3	837.5	949.1	1 247.5	1 303.7	1 725.4	2 092.1	3 052.6

Source: Balance of Payments, NSS (publications for various years).

At the same time, merchandise import has undergone serious structural shifts during this period. Thus, the relative share of food products& beverages and fuel in the overall imports has declined quite considerably (almost 50% decrease in the case of fuel), whereas the share of other manufactured products (chemical products, machinery and transport equipment, miscellaneous manufactured products and other items) increased from 40% in 1998 to 60% in 2007. Agricultural raw materials and ores and metals have held virtually the same somewhat negligible level (Figure 21).

Figure 21. Percentage shares of merchandise trade product groups (excluding trade by physical persons) in overall import structure

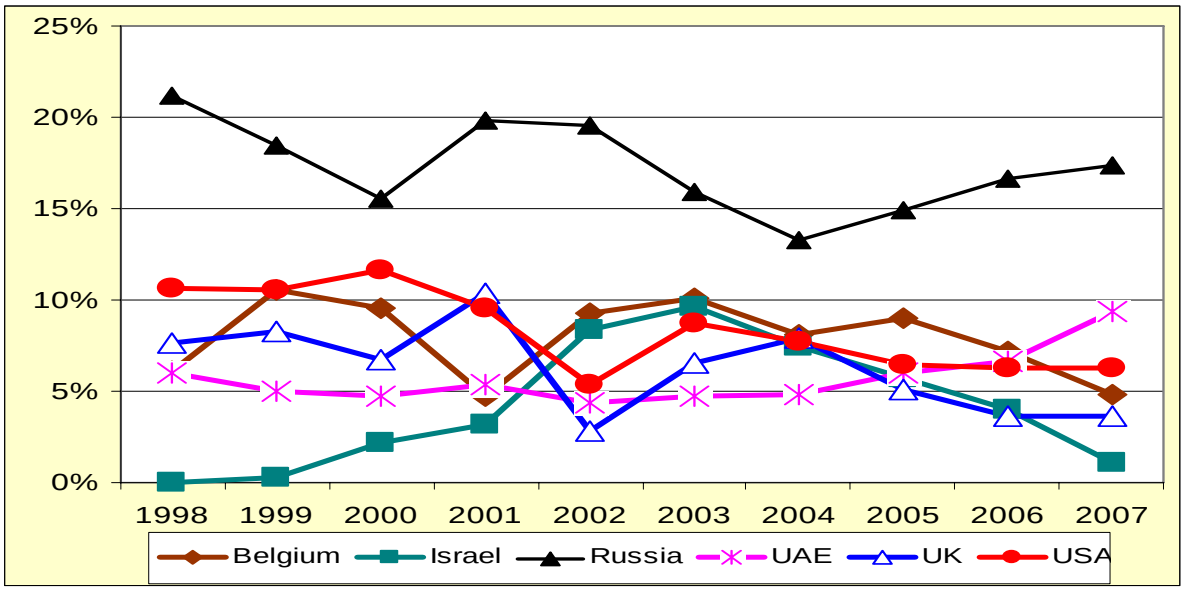


Source: Foreign trade of Republic of Armenia, NSS (publications for various years).

In the commercial services import structure, meanwhile, travel and transport related services account for about 80% of all commercial service imports, a pattern unchanged since 1998. There has been a slight increase in the import of financial services, but this is still below the 10% level.

In 1998-2007 an average of six countries (the Russian Federation, USA, UK, United Arabian Emirates, Israel and Belgium) were providing around half of Armenian imports and the top three importing countries in each of those years came from that list of countries. At the same time, import concentration has tended to decline. Thus, by the end of the 1990s these six nations were securing more than 52% of total imports, while this figure fell to 43% in 2007 (Figure 22). It should be stressed, that the relative share of non-CIS countries in the structure of Armenian imports (and external trade as a whole) declined considerably during the second half of the 1990s.

Figure 22. Shares of top 6 merchandise product importing countries in 1998-2007



Source: Socioeconomic situation of the Republic of Armenia for January-December, NSS (publications for various years).

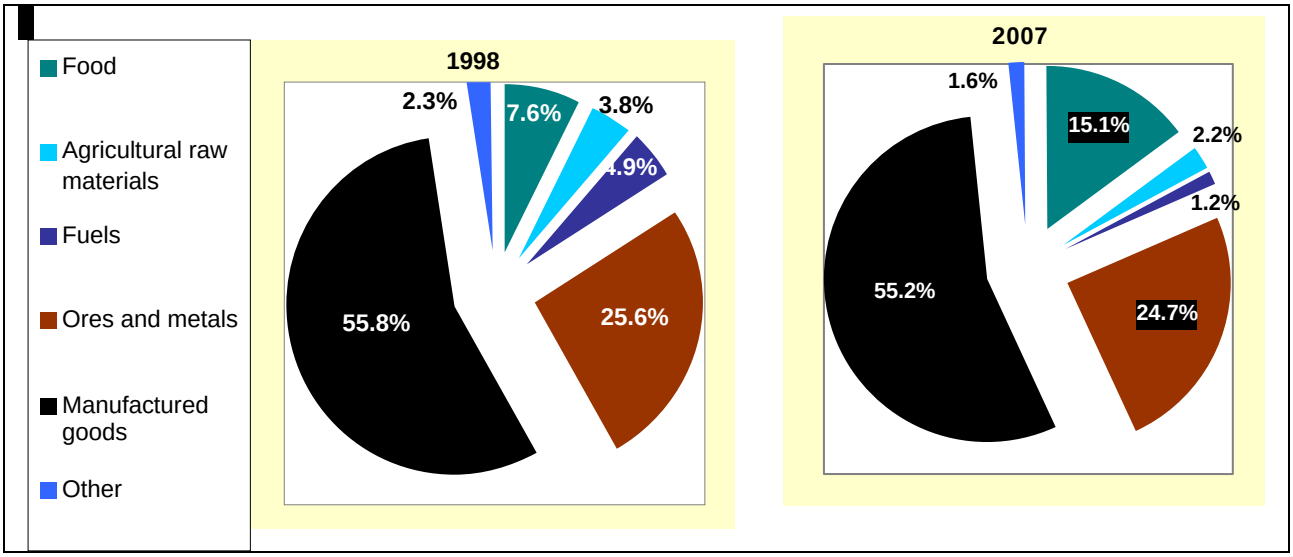
Analysis of the structure of products imported from these top six partner countries is presented in Annex 2. A main item of import from both Belgium and Israel is precious stones. These are processed in Armenia and exported back to these countries. Since 2005, the worldwide decline in the industry and local currency appreciation has led to substantial reductions in import volumes from Israel and Belgium. The other four countries have more diversified input in the import structure.

Russia is the sole provider of gas to Armenia and also a main importer of crops. These two items accounted around half of all Russian exports to Armenia. The most diversified imports come from the United Kingdom and UAE, which provide various products for the Armenian market, ranging from raw materials for industrial purposes to furniture and drugs.

Export characteristics. Merchandise export has grown around five-fold during 1998-2007 up from USD 209 million to USD 1 121 million. When looking at broad merchandise groups, there have been no major changes in 2007 compared to 1998. Thus the main change is that the share of food production export has doubled to 15%. Another tendency observed is the further decline of agricultural raw materials (Figure 23).

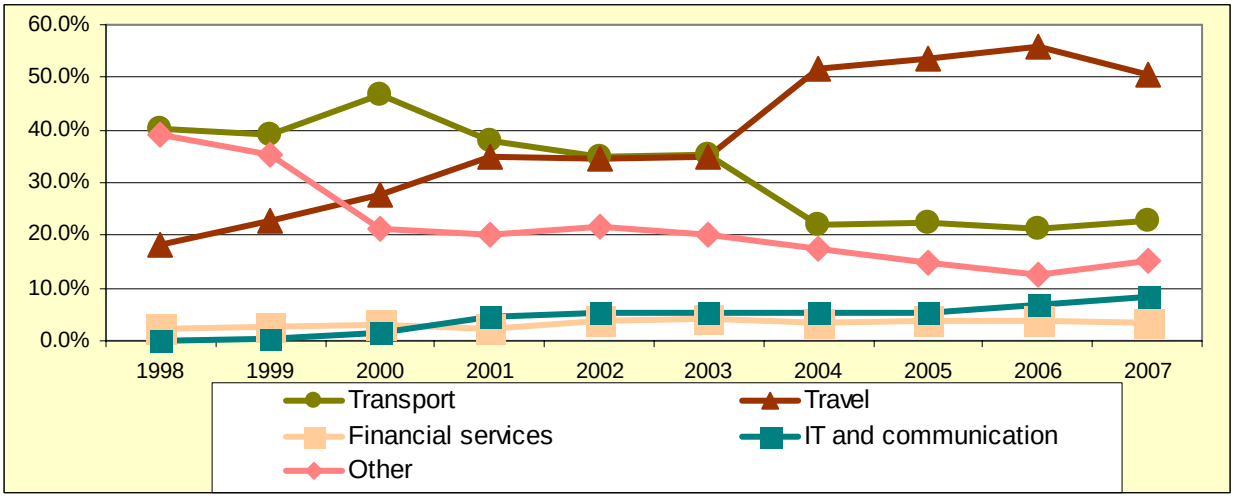
Conversely, commercial service exports have undergone serious structural shifts during 1998-2007. The share of travel services has been increasing gradually over the period to reach around 50% of overall service exports in 2007. At the same time the share of transport services has halved (from 40% to 20%). A tendency toward the growth of financial and IT related services has also been observed over this period (Figure 24)

Figure 23. Shares of merchandise trade product groups (excluding trade by physical persons) in overall export structure in 1998 and 2007



Source: Foreign trade of Republic of Armenia, NSS (publications for various years).

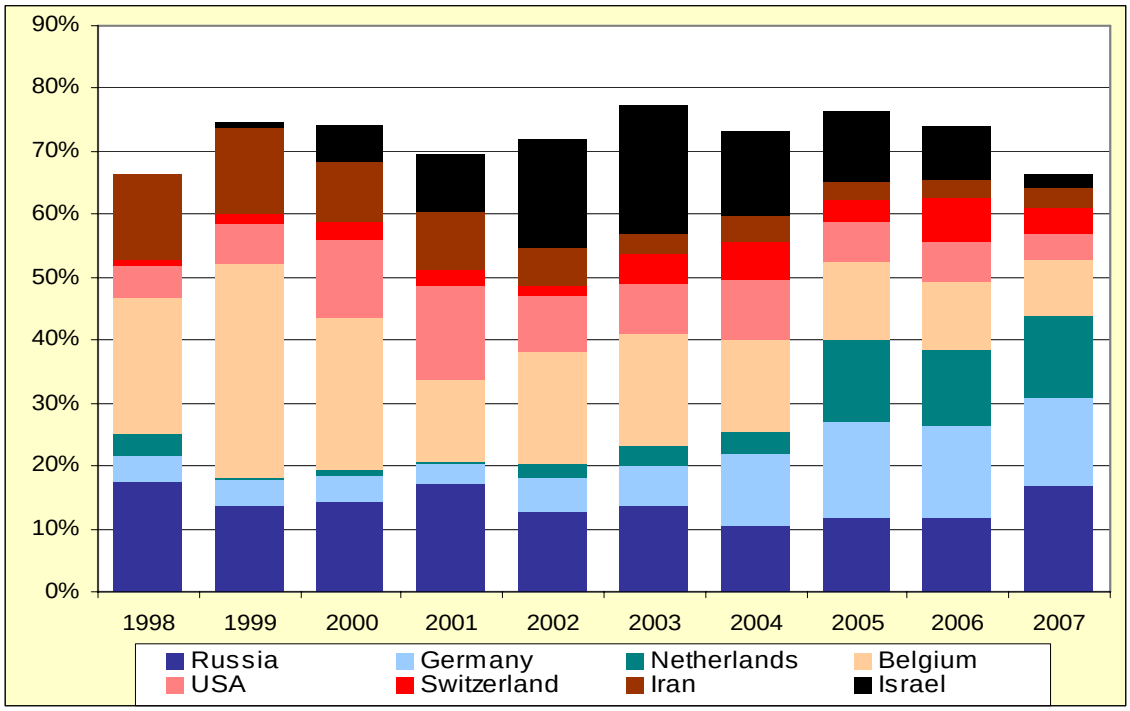
Figure 24. Structure of commercial service exports in 1998-2007



Source: Balance of Payments, NSS (publications for various years).

The concentration of export destination countries is almost equally as high. In 1998-2008 more than 70% of Armenian exports went to eight countries, although the relative shares of each country varied from year to year (Figure 25). As was mentioned in the import country analysis section above, imports from and exports to Belgium and Israel are predominantly precious stones that are effectively only processed in Armenia. Hence, the patterns of export to these two countries simply mirror import trends. Meanwhile, Germany and the Netherlands have gained considerable shares in the export structure since 2001 as the main recipients of black metals and other non-precious metals and ores. These items altogether accounted for around 34% of total merchandise exports. As can be inferred from the figure below, the export of precious stones and metals to Belgium and Israel during 1999-2004 held a share comparable to current exports of metals.

Figure 25. Percentage shares of top eight merchandise export destination countries 1998-2007.



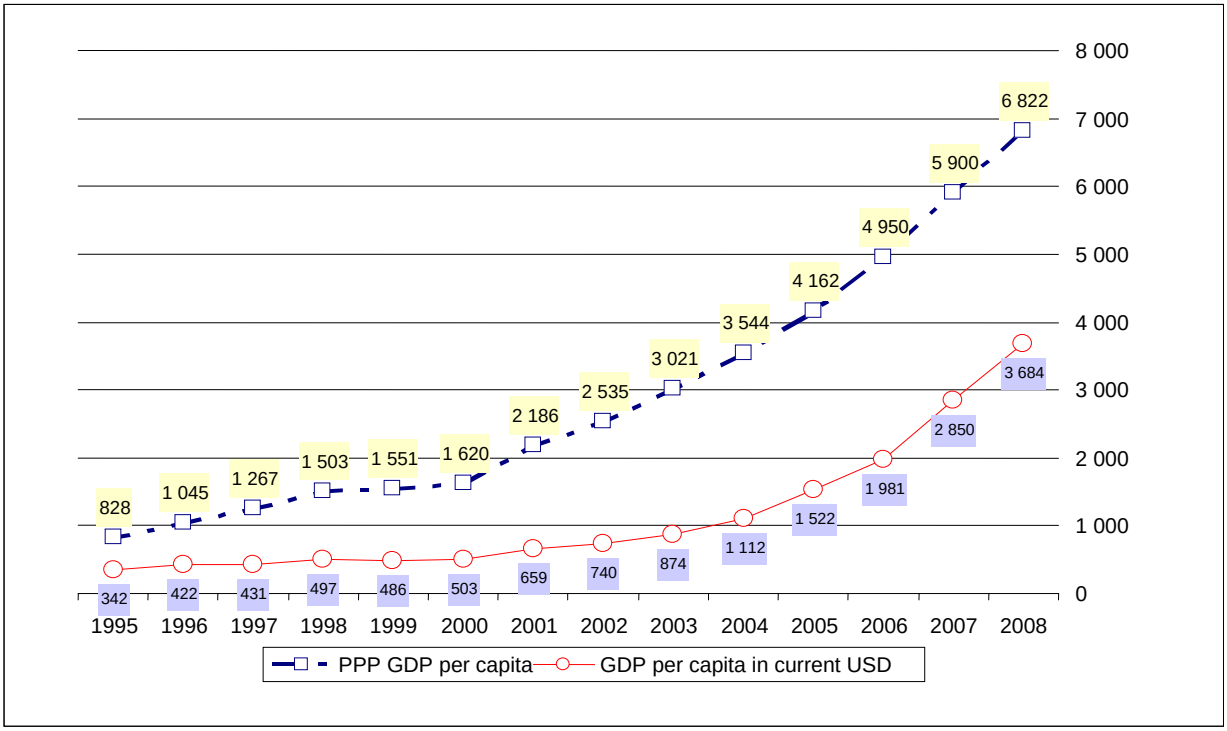
Source: Foreign trade of Republic of Armenia, NSS (publications for various years).

Export to Russia and USA is slightly more diversified and includes such items as alcoholic and non-alcoholic beverages, carpets, fruit and vegetables, electrical equipment and machinery, and chemical products (Annex 3). Analysis has shown there is a tendency for export consolidation in terms of both destination countries and the products exported. The share of listed products exported to each country has increased in overall export volumes in 2007 compared to 2001.

Despite strong uninterrupted economic growth for 14 consecutive years, Armenia lags behind OECD countries and most transition countries in terms of GDP per capita. GDP per capita was USD 6 821 in 2008 (at 2005 prices and Purchasing Power Parity (PPP))[29].

[29] GDP is still low compared to most countries in the region. As of 2007 PPP adjusted GNI per capita in Armenia was USD 5 900. This was lower than in Azerbaijan (USD 6 370), Belarus (USD 10 740), Kazakhstan (USD 9 700), the Russian Federation (USD 14 400) and Ukraine (USD 6 810). Compared with EU new member countries, the PPP adjusted GNI per capita in Armenia in 2007 was about half that of Bulgaria (USD 11 180) and Romania (USD 10 980) and about a third that of Baltic countries.

Figure 26. GDP per capita in 1995-2008



Source: Word Development Indicators, World Development Report 2009 and author calculations.

During the entire period (with the exception of 1999-2003) economic growth was increasingly demand-driven and mostly externally funded. The world financial and economic crisis that started in September 2008 and affected Armenia from October 2008 is proving this model to be unsustainable even in the short-term. Analysis of the demand-side composition of Armenian growth in 1994-2007 shows the same periods of growth as the sector analysis performed above.

Table 19. Dynamics of GDP and its components in 1995-2007 (index: 1994=100)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Final consumption	108.0	111.5	118.5	123.9	125.7	135.3	144.9	156.8	168.8	184.1	202.3	220.5	248.1
Private consumption	109.1	113.2	121.5	128.0	129.7	140.5	151.2	164.6	176.5	192.2	209.1	226.5	254.0
Public consumption	97.7	95.5	93.3	93.2	94.5	97.8	101.2	104.1	115.4	127.7	151.1	172.1	197.2
Gross capital formation	84.0	92.7	97.2	102.2	97.7	102.8	119.6	146.0	190.8	224.2	284.6	376.2	445.1
Net exports	90.8	89.3	105.1	99.9	88.2	100.6	104.6	103.1	104.1	118.5	134.2	168.7	196.7
GDP in market prices	106.9	113.2	116.9	125.5	129.6	137.3	150.4	170.2	194.0	214.3	244.4	276.9	315.1

Source: NSS and author calculations.

The contribution of GDP final use components to overall change of GDP is presented in Table 20.

Table 20. GDP use component contribution to economic growth (%)

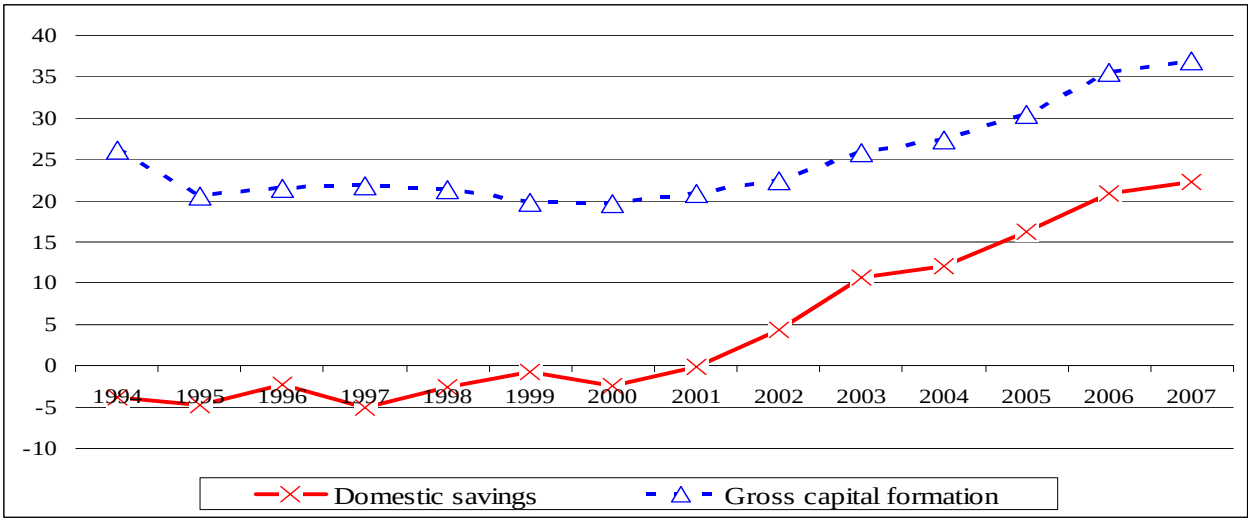
	1995-1998	1999-2003	2004-2007	1995-2007
Private consumption	102.6	62.4	56.4	63.5
Public consumption	-4.9	5.6	11.7	7.9
Gross capital formation	2.4	33.8	54.9	42.3
Net exports (trade deficit)	-0.1	-1.8	-23.0	-13.6
Total	**100**	**100**	**100**	**100**

Source: NSS and author calculations.

Table 20 clearly shows that the main contribution in the recovery growth period was from household consumption with a very low share of increased investment, a somewhat reduced trade deficit and a substantial decrease in government spending. The second period of import substitution and export expansion included a pick-up in construction and the beginnings of investment-based growth which had

been almost entirely absent in the previous period. In 2004-2007, growth was mostly driven by construction and services based on the expansion of investments, while the contribution of private consumption was lower here than in any other period. About half of the gross capital formation of this period was funded by external sources.

Figure 27. Domestic savings[30] and gross capital formation in 1994-2007 (% to GDP in 2005 constant prices)



Source: NSS and author calculations.

The economic growth of 1994-2001 was almost completely externally funded in conditions of negative domestic savings. Domestic savings started to be generated in 2002 and experienced rapid growth from 4.4% of GDP in 2002 to 22.2% of GDP in 2007. Foreign Direct Investments (FDI) increasingly serves as an important source of external funding for economic development in Armenia.

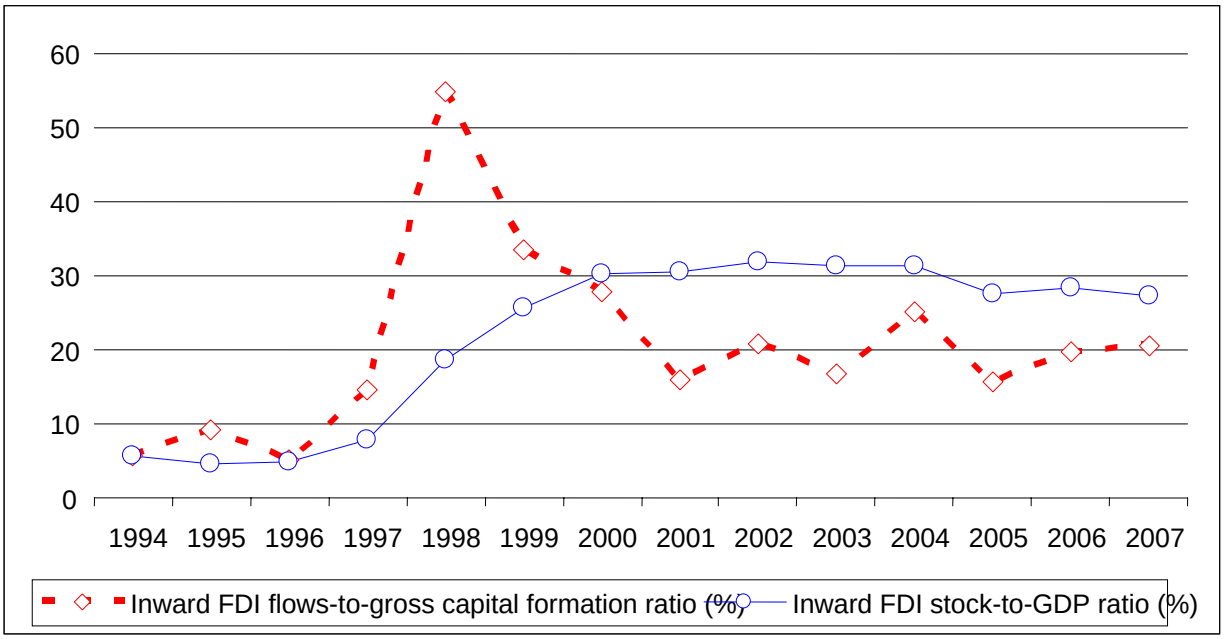
Table 21. Inward FDI flows and FDI stock in 1990-2007 (USD million)

	1990	1991	1992	1993	1994	1995	1996	1997	1998
Inward FDI flow	3.9	19.6	2.4	0.8	9.2	24.4	17.6	51.9	220.8
Inward FDI stock	3.9	23.5	25.9	26.7	35.9	60.3	77.9	129.8	350.6
	1999	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**
Inward FDI flow	122	104	69.9	110.7	120.9	245.6	232.7	450.1	700.9
Inward FDI stock	472.6	576.6	646.5	757.2	878.1	1 123.7	1 356.4	1 806.5	2 507.4

Source: NSS and author calculations.

[30] Final consumption minus GDP.

Figure 28. Inward FDI flows-to-gross capital formation and inward FDI stock-to-GDP ratios in 1994-2007(%)[31]



Source: NSS and author calculations.

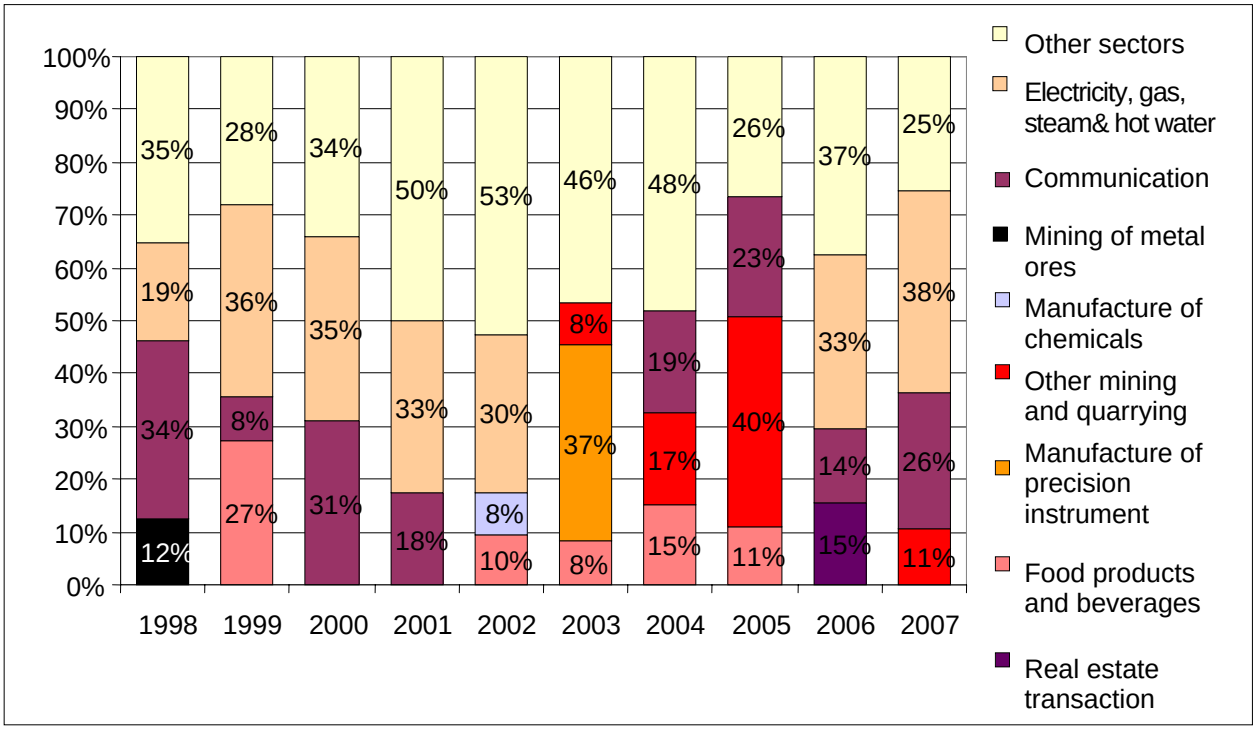
In the recovery growth period, the role of FDI is generally insignificant except for 1997-1998 when privatisation to strategic investors started and gained momentum. The share of FDI in gross capital formation stabilised at an average of 20% of investment-based growth in 1999-2003 and also remained at the same average level in 2004-2007.

There are a number of specific features of FDI in Armenia which have an impact on both sector composition and country of origin of investment inflows. Thus, NSS data state the following four sectors were mainly responsible for attracting FDI to Armenia: communication; electricity and gas production; mining related industries; and the production of food and beverages. During the 1998-2007 period (excluding 2003[32]), the average share of these sectors was around 50% of overall FDI inflows. Before 2002, the main inflows were to electricity production and the telecommunications sector, but mining and industry later gained a considerable share. FDI inflows analysis can produce the following observations: first, there have been considerable investments in infrastructure which have made real contributions to increased quality and the expansion of services in the provision of telecoms and energy; secondly, food and beverages were the only branches of manufacturing to attract considerable investments as the result of the import replacement strategy implemented during the period considered; thirdly, tangible investments in the mining industry resulted in that sector playing a serious role in securing the economic growth of recent years.

[31] Calculations are based on aggregates denominated in USD.

[32] In 2003 there was around USD 60 million FDI in the sector of manufacturing of precision instruments. But this investment was actually a transfer of ownership of Armenian state-owned companies to the Russian Federation against outstanding public debt.

Figure 29. Sector composition of FDI inflows 1998-2007 (share in total annual inflows)



Source: NSS - Socioeconomic situation of the Republic of Armenia for January-February (publications for various years) and author calculations.

The composition of FDI origin-country compared to destination sectors is highly concentrated in Armenia. In the 1998-2007 period, the top five investor countries accounted for an average of around 78% of annual FDI inflows. Russia was the leading provider with more than USD 700 million (more than 30% of inflow), followed by Greece with USD 270 million and Germany with USD 240 million. These three countries accounted for more than 50% of accumulated FDI stock in 1998-2007. In Greece and Germany the main destination sectors were easily identifiable, but Russian investments were somewhat more diversified covering sectors such as: electricity and gas production, telecoms, metal production and others (Table).

There are two other specific factors in terms of FDI flows in Armenia. Firstly, studies have proven the important and to some extent even decisive role of the wider Armenian diaspora in attracting FDI. One survey from 2006 showed that around 70% of FDI inflows to Armenia were at least to some extent connected with diaspora links. The main three countries of diaspora-led FDI were Russia, USA and Iran with the main sectors of interest being information technology, precious stones, jewellery and food and beverages.[33]

Secondly, there is comparatively less interest in Armenia from transnational corporations (TNCs). Even though the study of TNC preferences in Armenia is somewhat outdated, the survey did show that most representatives of TNCs in Armenia were not interested in organizing manufacturing production here, but were concentrated in the service and utilities sectors (air transportation, tourism, hotels, gas distribution, electric energy and telecoms). These companies have assessed Armenia as being an unsuitable destination for export-oriented FDI.[34]

[33] M.Hergnyan, A. Makaryan, "The Role of the Diaspora in Generating FDI in Armenia," Economy and Value Research Centre, 2006.
[34] Armenian-European Policy and Legal Advisory Centre, Armenian Trends periodical (Q2/04) "TNS in Armenia", 2004.

Table 22. Share of top 5 FDI origin-countries during 1998-2007 (% of total inflows) and main destination sector

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	Main sector(s) of interest
Russia	18.6	32.9	35.9	38.1		44.6	21.5		35.3	50.4	-
Greece	33.5	9.0	32.3	17.7	6.6	6.6	19.0	20.1	8.1		Telecoms
Germany							17.1	39.8	11.0	9.5	Mining
USA	15.2		6.3	23.7	8.1	7.0		5.6	5.7	4.4	-
France	7.0	19.6			8.0	6.1	12.4	8.3		3.2	Food and beverages
Canada	13.4	8.3	9.0		35.6	7.4					Food, beverages and tobacco
Lebanon								4.8		14.2	Telecoms
Argentina							10.8		7.7		Air transport
United Kingdom					13.7						Chemical industry
Luxembourg		8.3									-
Share of top 5 countries	**87.7**	**78.1**	**83.5**	**79.5**	**71.9**	**71.6**	**80.7**	**78.6**	**67.9**	**81.7**	
Total annual FDI inflow[35]	*232.4*	*130.3*	*120.1*	*75.9*	*141.0*	*153.5*	*226.7*	*244.4*	*434.7*	*582.3*	

Source: NSS - Socioeconomic situation of the Republic of Armenia for January-February (publications for various years) and author calculations.

Global economic crisis: first evidence of impact on the Armenian economy

According to the latest data available, the impact of the global economic crisis was felt on the Armenian economy from the fourth quarter of 2008. In the OECD countries the crisis started in the financial sector before affecting the real economy, but in Armenia the crisis impact hit the real sector first while the banking sector[36] remained relatively resilient.

Table 23. Quarterly dynamics of GDP and external trade in 2008 -2009 (% as compared with the same period of the previous year)

	2008				2009*
	Q1	Q2	Q3	Q4	Q1
GDP	109.9	110.5	110.5	98.8	96.3
Net taxes	131.2	128.8	123.3	102.5	91.5
Value added	106.4	108.5	110.1	98.3	97.8
Agriculture	100.3	112.8	110.3	95.7	94.1
Industry	100.7	100.1	110.8	97.4	82.6
Construction	119.4	116.3	117.3	85.7	93.0
Services	108.3	104.7	107.4	111.0	108.6
Exports	101.5	97.3	102.6	73.2	55.0
Imports	131.5	148.3	146.9	118.2	78.7

** January – February 2009, preliminary data. Source: NSS and author calculations.*

Table 23 shows the Armenian economic recession began in the fourth quarter of 2008 and deepened in early 2009, affecting all macroeconomic sectors and external trade. The biggest drop was in industry

[35] The FDI inflows indicated here are only for the real sector of the economy.

[36] Most of the financial sector, accounting for about 90% of its assets.

(including energy[37]) and exports. There was a substantial decline in the volume of imports for the first time since 2004. According to CBA data, there was an almost 20% decrease in net private transfers to Armenia in January 2009 compared with January 2008 (from USD 55.8 million to USD 44.4 million). The authorities reacted to the expanding crisis with a return to the floating exchange rate regime on 2 March 2009, a move that resulted in an almost immediate 20% nominal depreciation of the national currency against the USD. The exchange rate has remained relative stable since then. However, it is too early to speculate on how long and how deeply the economic crisis will impact on the Armenian economy, although negative growth rates in the range of -4% -5% could be expected in 2009.

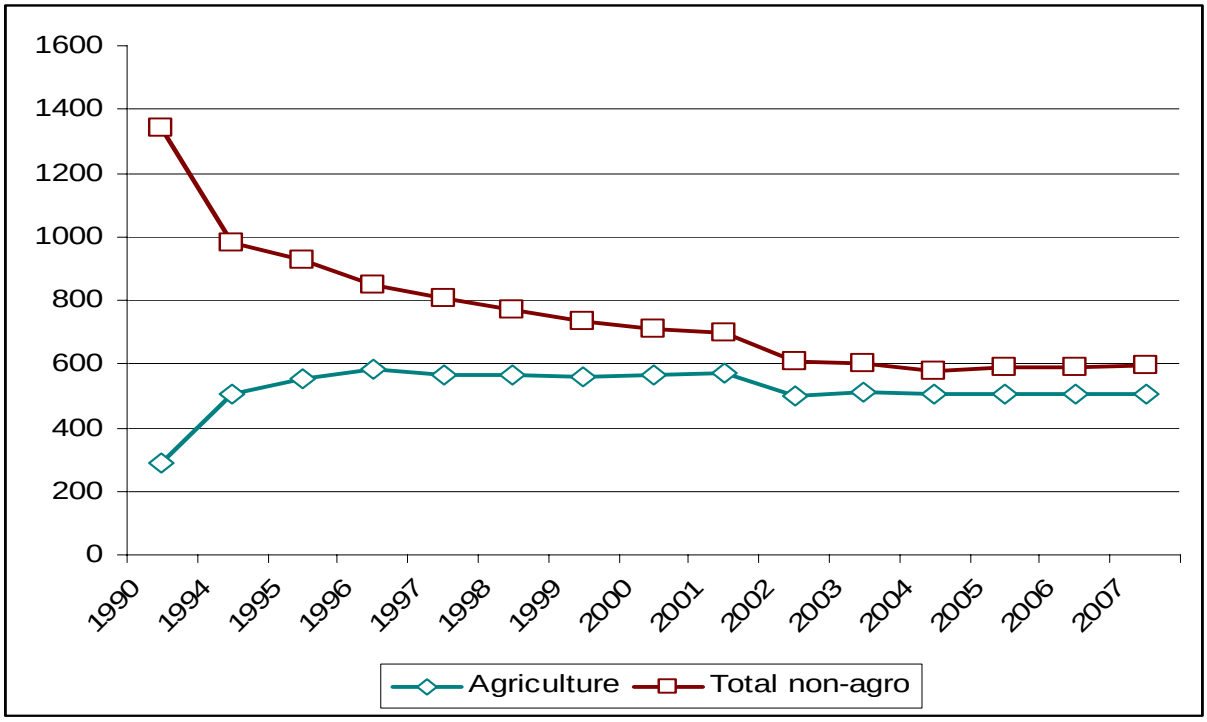
3.2 Mobility from old to new sectors

Armenian employment contracted by more than 528 000 jobs or nearly 47%[38] overall between 1990 and 2007. During the same period, employment in agriculture increased by about 217 000, or nearly 75%, while almost all non-agricultural sectors (with the exception of trade and financial intermediation) recorded losses of 746 000 jobs. Major non-agriculture sectors, namely industry and construction jointly contributed to nearly 70% of the total. According to establishment surveys in 2007, employment in industry fell by almost 3.6 times in relation to 1990 figures to 27% and employment in construction fell even by nearly six times to 17%. However, employment data from LFS 2007 showed employment in the construction sector contracted less than this in 1990-2007. In these new calculations, employment in construction in 2007 was estimated at 50% of its 1990 level.[39]

As can be seen in Figure 30, establishment surveys in 1990-2007 identified three distinct trends in terms of employment structure: a period characterised by major shift from the non-agricultural to agricultural sectors with an overall decline in employment (1990-1994); a second period in which agricultural employment remained stable while non-agricultural sector employment continued to decline (1995-2001); and finally, a more recent period in which employment in both agricultural and non-agricultural sectors remained nearly unchanged (2002-2007).[40]

[37] One of the main reasons for the decline in energy production in early 2009 was the relatively mild winter, which substantially diminished energy demand.
[38] Source: NSS 1990 - 2007 establishment surveys.
[39] In terms of employment in industry, LFS and establishment surveys data are the same for 2007 (both surveys state there were 134 000 people employed in industry in 2007).
[40] It should be noted again that establishment surveys seriously underestimate employment in the construction sector and most probably overestimate employment in agriculture.

Figure 30. Employment trends in the agricultural and non-agricultural sectors 1990-2007

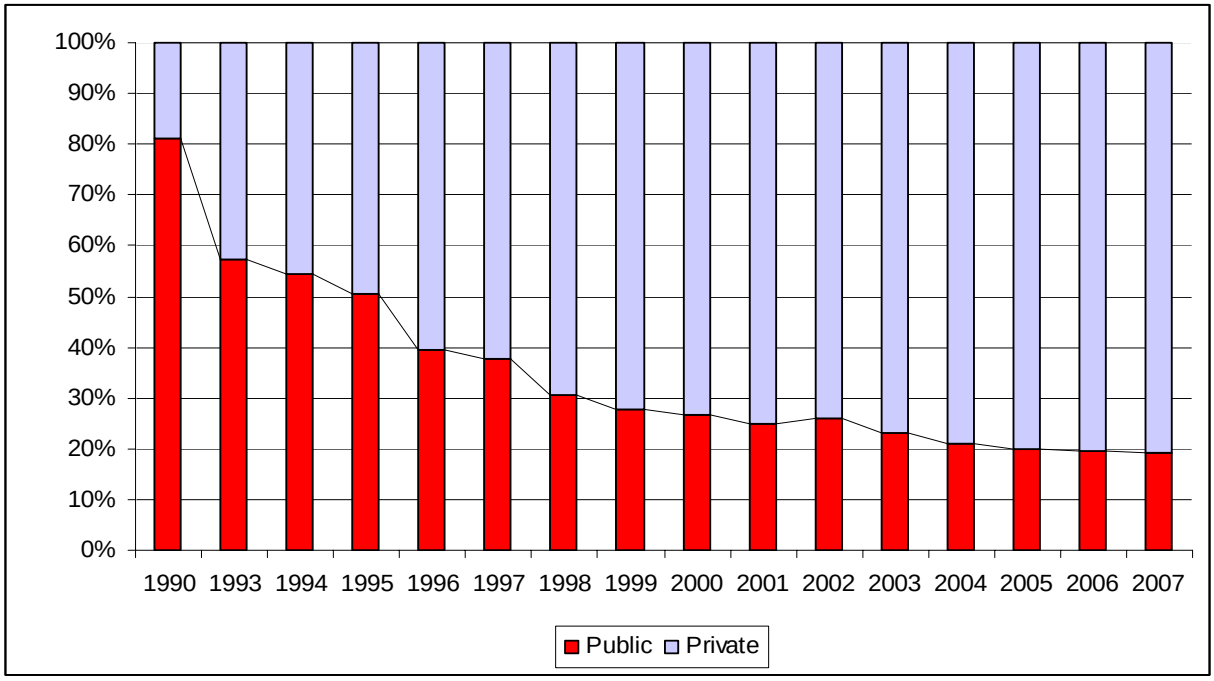


Source: NSS – 1990-2007 establishment surveys and author calculations.

In Armenia in the early 1990s there was a major shift in employment reallocation from the public[41] to private sectors, mainly due to the mass free privatisation of land and, to a lesser extent, to the voucher privatisation of small establishments in the industry, transport, construction, retail trade and restaurant sectors. Employment share of private sector increased by 41.6 percentage points from 18.9% in 1990 to 60.5% in 1996. Major privatisation in the industry, construction, financial intermediation and telecommunications sectors in 1995-1999 resulted in another substantial shift of employment from the State to private sector with the share of private sector employment reaching 72.5% of total employment in 1999. These trends have continued to a lesser extent in recent years. In 2007, the private sector share of total employment reached 80.7% putting the Armenian indicator on a par with that in the advanced private economies of the world.

[41] In this report the public sector also includes public enterprises and public non-commercial organisations.

Figure 31. Employment shift from the public to private sectors 1990-2007



Source: NSS – 1990-2007 establishment surveys and author calculations.

Two factors other than privatisation have played a major role in the move from public sector to private sector employment in the post-1990 period. Firstly, there has been a substantial decline in employment in the main social sectors such as education, health, culture, sport and science. This is mainly due to demographic changes, but also reflects efforts by the Armenian government to impose tough budget constraints and ensure macroeconomic stability. Employment in the social sectors has declined by more than 130 000 jobs overall in 1990-2007.

The second factor relates to the emergence of the so-called "de novo" private sector as the driving force of economic growth and job creation during transition. According to World Bank estimates,[42] in 2001 the non-agricultural de novo sector accounted for about 47% of non-agricultural GDP and about 30% of non-agricultural employment. The lower share in employment than in GDP of the de novo sector is explained by the substantially higher productivity of these firms, particularly in the industrial sector. According to the same source, labour productivity in industrial de novo firms was as much as eight times that of traditional large industrial enterprises. The trend toward non-agricultural job generation in the de novo sector and job destruction in traditional enterprises continued up until 2002-2003, although it was unable to absorb job losses from the public sector. In 1999-2003 newly established firms in industry and construction generated about 50,000 jobs while in the same period more than 130,000 jobs were eliminated in the traditional sector, some 44% of which were in state-owned enterprises and the remainder in privatised large industrial and construction enterprises.[43] As a result, net employment growth is negative despite continuous economic growth from 1995. The outcome of these events provides a model of "jobless growth."

The trend of reallocation of employment from the State to private sector has continued at a much slower pace in recent years and was also less closely linked to factors attributable to the transition processes. Overall, public sector employment declined by 72 700 between 2002 and 2007 while private sector employment increased by 67 800, resulting into negative growth in employment of -4 900. Over 85 000 jobs were created in the private sector in the same period, with the following three sectors leading private employment generation: trade, hotels and restaurants; transport and communications; and, health and social work. It should be noted that increased private employment in the health sector was mainly due to the privatisation of State hospitals. In contrast, about 98 000 public sector jobs were eliminated with

[42] World Bank Report No. 22854-AM, "Armenia: Growth Challenges and Government Policies", (World Bank team headed by L. Freinkman, 2002).
[43] "Armenia: Labor Market Dynamics" (World Bank team headed by A. Kuddo, 2006).

education, health and industry experiencing the highest levels of job destruction. Trends in job creation and destruction in 2002-2007 are presented in Table 24.

Table 24: Job reallocations between 2002 and 2007 based on establishment surveys

	2002			2007			Difference		
	State	Private	**Total**	State	Private	**Total**	State	Private	**Total**
Total Employment	285.8	820.6	1 106.4	213.1	888.4	1 101.5	-72.7	67.8	-4.9
Agriculture, forestry, fishing	6.3	494.5	500.8	2.1	504.8	506.9	-4.2	10.3	6.1
Industry	16.6	126.5	143.1	3.1	131.8	134.9	-13.5	5.3	-8.2
Construction	3.4	32.7	36.1	0.8	30.3	31.1	-2.6	-2.4	-5
Transport and communications	17.7	22.5	40.2	13.4	34.2	47.6	-4.3	11.7	7.4
Trade, hotels and restaurants	1.3	98.3	99.6	0.1	114.4	114.5	-1.2	16.1	14.9
Real estate, renting and business activities	7.5	22.7	30.2	11.7	14.6	26.3	4.2	-8.1	-3.9
Health and social work	62.5	4.4	66.9	35.2	15	50.2	-27.3	10.6	-16.7
Education	141.8	9.7	151.5	97.4	3.8	101.2	-44.4	-5.9	-50.3
Financial intermediation	1.3	3.9	5.2	0.6	8.3	8.9	-0.7	4.4	3.7
Public administration	22.1	1.7	23.8	37.8	0.1	37.9	15.7	-1.6	14.1
Other activities	5.3	3.7	9	10.9	31.1	42	5.6	27.4	33
Job creation	**Sum of all positive numbers**						25.5	85.8	79.2
Job destruction	**Sum of all negative numbers**						-98.2	-18	-84.1
Job turnover	**Sum of positive and negative in absolute terms**						123.7	103.8	163.3
Employment growth	**Difference between job creation and job destruction**						-72.7	67.8	-4.9

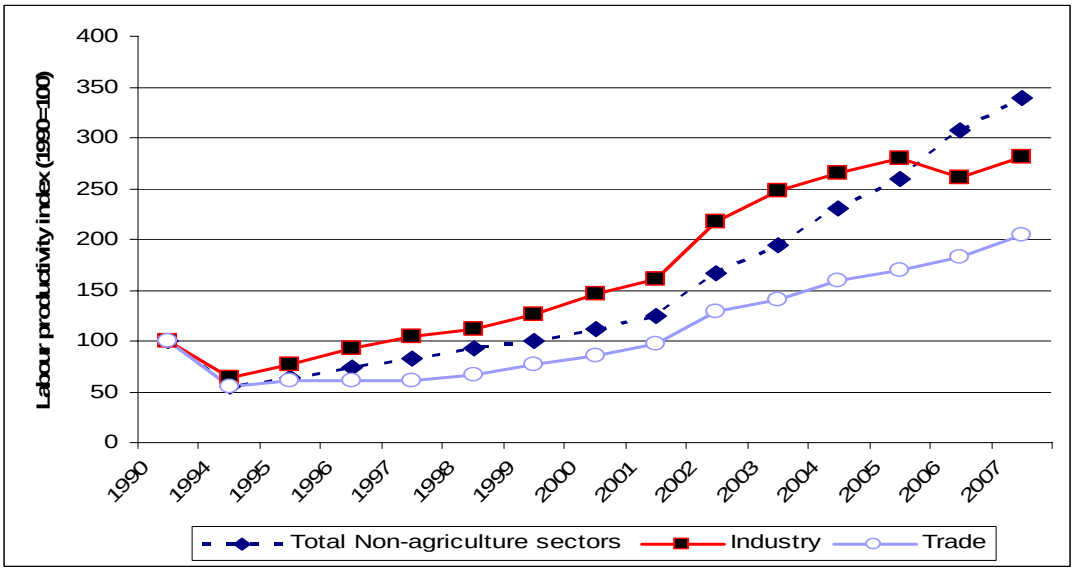
Source: NSS – 2002 and 2007 establishment surveys and author calculations.

Table 24 shows the reallocation from education to other sectors resulting from the State programme to downsize the sector and assist reintegration of redundant teachers into other activities. It should be noted that agricultural employment in the private sector also appeared to grow, probably due to increasing self-employment activities. Public administration has also grown substantially, by approximately 70%, while construction has declined in contrast with its growing contribution to GDP.

3.3 Labour productivity and unit labour costs

Labour productivity has increased in all sectors during the transition, particularly in the non-agricultural sectors. The main driving force behind growth in labour productivity was the restructuring of the old traditional sectors caused by privatisation and the emergence of the de novo private sector. However, Armenia lags behind advanced transition countries in almost all industrial sectors in spite of the substantial increase in labour productivity. Annex 1 provides comparative analysis of productivity and labour unit cost levels by some branches of industry in Armenia and in new EU member states.

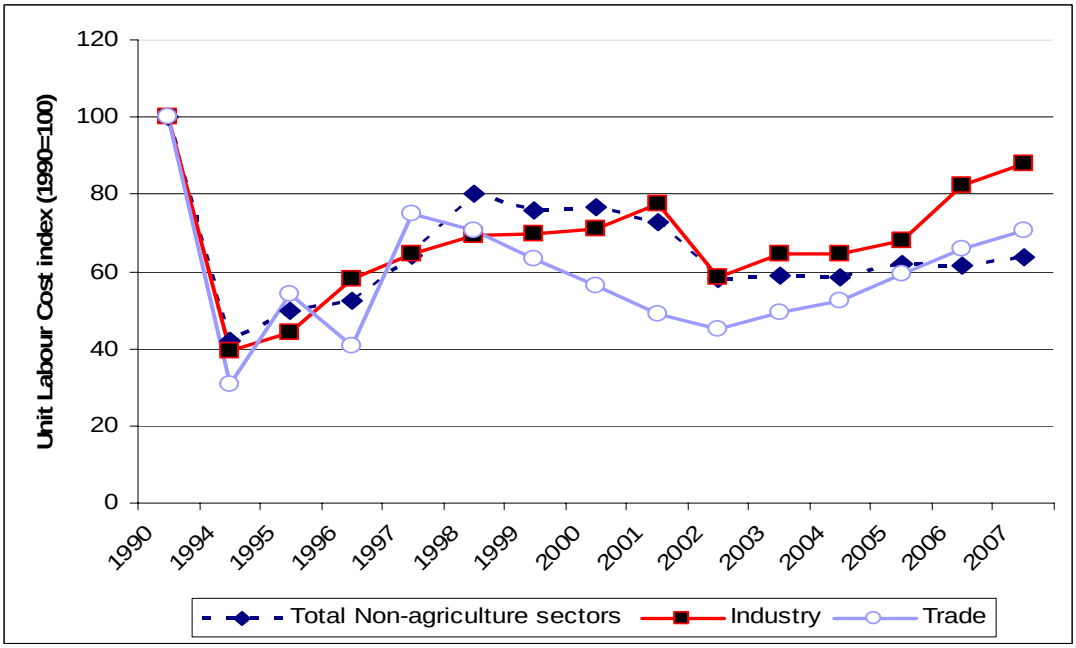
Figure 32. Labour productivity index in non-agricultural sector 1990-2007



Source: NSS and author calculations.

The competitiveness of the Armenian economy has seriously declined in recent years in terms of developments in unit labour cost (ULC). This is mainly due to the significant appreciation of the national currency against the USD and the EUR and the fact that there has been a trend for real wages to outperform labour productivity. As a result, export growth in the early 2000s reversed to export decline in recent years constituting a major challenge for Armenian economic policy.

Figure 33. Unit labour cost dynamics in the non-agricultural sector 1990-2007



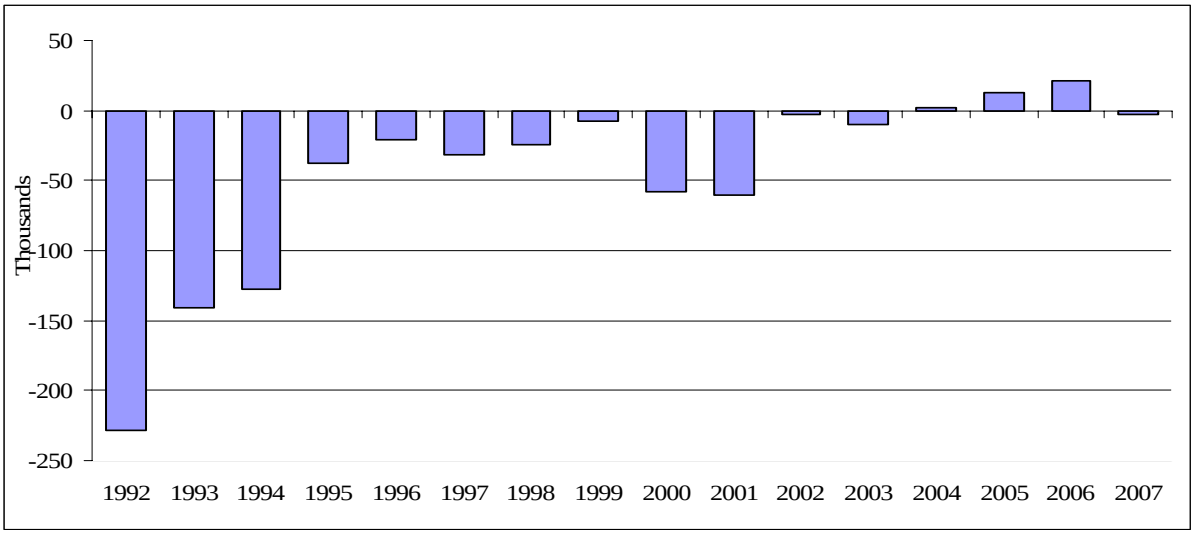
Source: NSS and author calculations.

4. Labour migration

4.1 International migration

Armenia has experienced significant outward migration since independence, peaking in the early 1990s. According to departure and arrival statistics collected at Armenian international borders over 495 000 resident Armenians emigrated from the country in the three years from 1992 to 1994 alone. There have been several contributory factors, the most significant of which have been the deteriorating economic conditions and regional conflicts, but also the "weakened" borders following the collapse of the Soviet Union. The emigration trend continued at a slower pace after 1995 and has even reversed in recent years. Overseas net outflow dropped from 495 000 for 1992-1994 to only 250 000 in the 1995-2003 period and a net inflow of 34 000 in 2004-2007.

Figure 34. Armenia: International Migration in 1992-2007



Source: NSS – External departure and arrival statistics.

It is hard to estimate what proportion of early emigrants could be classed as labour migrants as the information is unavailable. The most recent household surveys and surveys on migration conducted by the NSS shed some light on labour migration, but this data was only included from 1998.

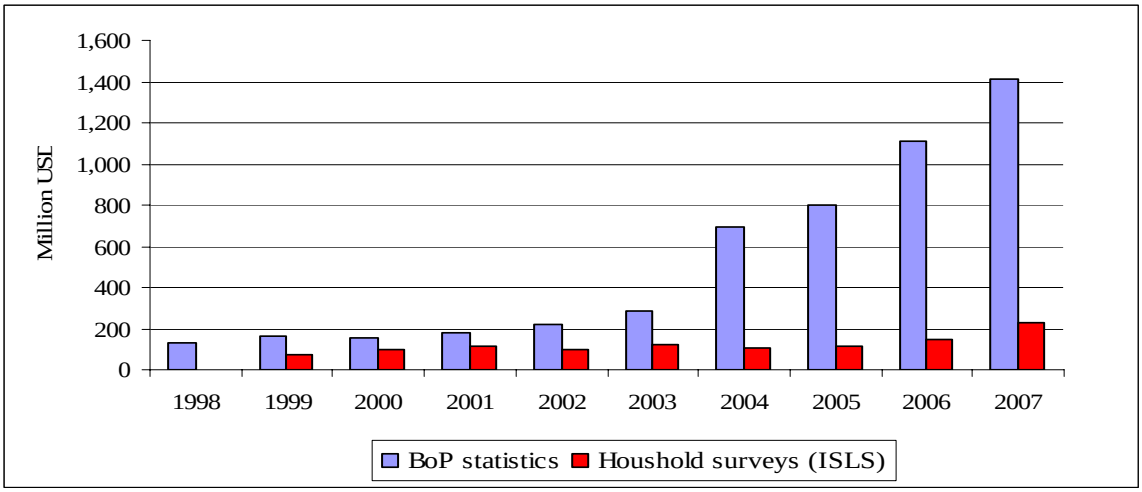
According to household surveys regularly implemented by the NSS since 1998, about 6%-10% of households indicate having a member of the household temporarily resident outside the country for work reasons, although this is a declining trend. Similar results were produced in the NSS 2001 migration survey. According to this survey, an estimated 6% of the resident population had emigrated in 2007, and about 85% of these stated that they had sought work overseas.

The 2007 migration survey showed the main destinations of international migrants to be Russia (76.4%), the EU (9.8%) and the USA (4.8%).

The higher level of population mobility is largely a positive element and alleviates the consequences of the economic and social shocks to some extent. Labour migration in periods of economic downturn can help reduce unemployment and generate private remittances, hence reducing poverty. However, huge net outflows of population can also have negative impacts, as they substantially reduce the economic potential of the nation; particularly if it is those with higher educational attainment and skills who are leaving the country – leading to the so-called "brain drain" effect.

In the cost benefit context, this significant outward migration, including labour migration has increased the reliance of the Armenian economy on private transfers from abroad. According to balance of payments statistics, current remittances have increased by more than ten-fold during 1998-2007 to 1.41 billion USD in 2007.

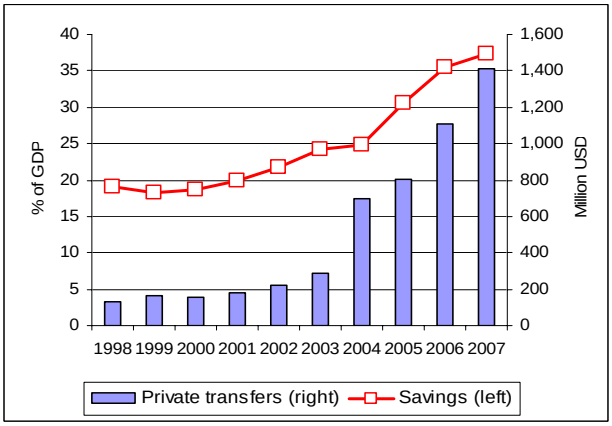
Figure 35. Current remittances based on BOP statistics and household surveys 1998-2007

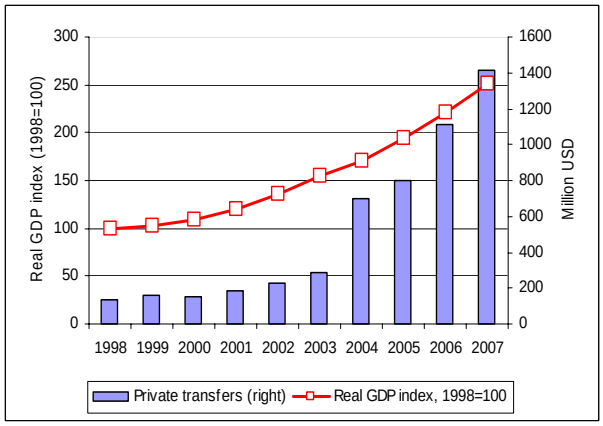


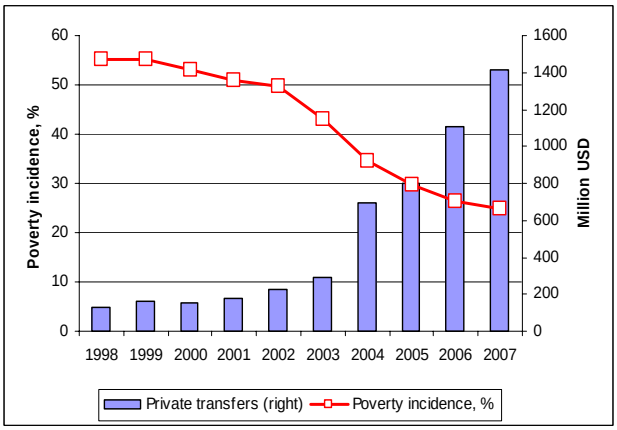
Source: NSS and author calculations.

The significant increase in private transfers from abroad appeared to have a positive impact on GDP growth, increased gross domestic savings and reduced incidence of poverty in Armenia during 1998-2007 (Figure 36).

Figure 36. Private transfers, savings, GDP growth and poverty incidence in Armenia 1998-2007





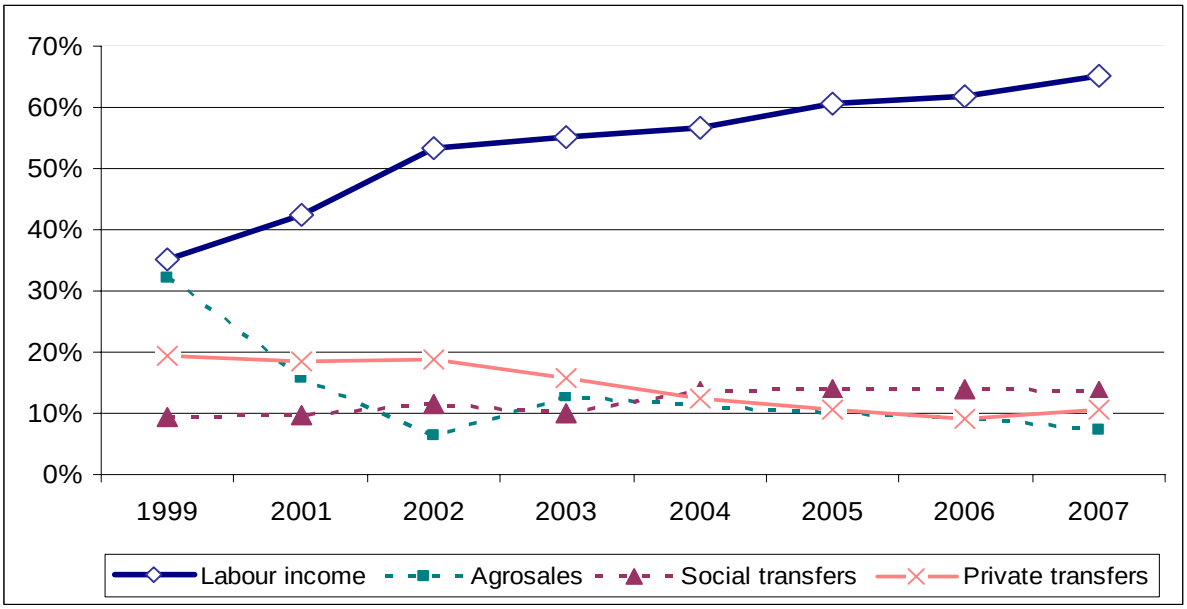


Source: NSS and author calculations.

Meanwhile, the major negative macroeconomic impact of increased private transfers can be attributed to the substantial increase in real wages and appreciation of the national currency, which in turn resulted in increased ULCs and weakened the international competitiveness of Armenia.

Private transfers, especially from abroad, still play important role in reducing poverty despite their declining role in the income structure of the population. According to ISLS 2007, private transfers from abroad reduce the risk of poverty by 16%.

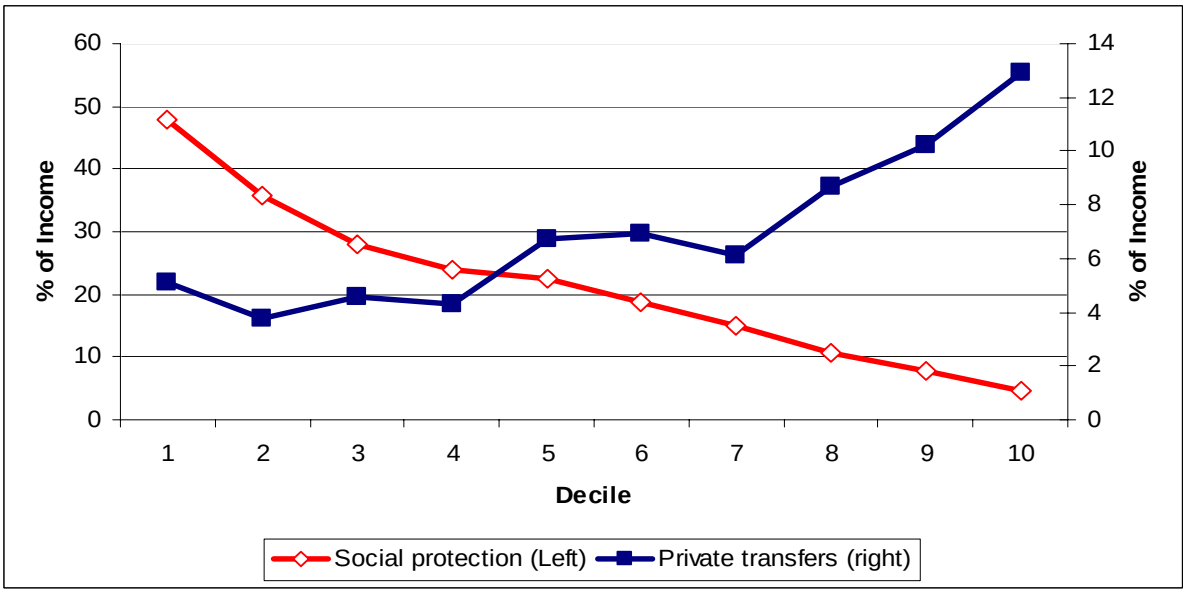
Figure 37. Trend in income structure of population 1999-2007



Source: NSS – ISLS 1999-2007.

However, mapping the distribution of private transfers by income deciles revealed that they are regressive in nature, as wealthier households benefited more from private transfers (Figure 38).

Figure 38. Distribution of private transfers and social protection by deciles 2007



Source: NSS – ISLS 2007 and author calculations.

4.2 Internal migration

Armenia has three main sources of base data for estimates of internal migration: the 2001 population census, the Police Department administrative data base and the 2007 migration survey. All three sources have serious limitations in terms of estimates of internal migration by regions, and only the 2007 migration survey provides any information on labour migration.

The 2001 population survey is probably the most appropriate basis for estimates of permanent or long-term internal migration by those changing their permanent place of residence during 1991-2001. However, the published data of the 2001 population survey does not provide information on the previous place of residence by region, only place of birth. Thus it is not possible to estimate internal migration by provinces (regions). Finally the 2001 census does not separate migrants according to the purpose of their move and therefore does not provide information on labour migration.

Official data published by the Police Department Passport Agency distinguishes only urban and rural internal migration and only list those persons who officially applied for change of permanent address. Table 25 presents information on internal migration for urban and rural settlements in 2002-2007. As can be observed, during the 2002-2007 period, over 100 000 persons migrated and rural settlements posted total positive net migration (NM) of 7 692 persons. Most probably this net migration from urban to rural areas reflects the on-going socioeconomic problems of small cities.

Table 25. Internal migration by urban and rural settlements 2002-2007

	Urban			Rural		
	IN	OUT	NM	IN	OUT	NM
2002	4 274	4 942	-668	3 393	2 725	668
2003	4 329	5 572	-1 243	3 571	2 328	1 243
2004	4 502	5 769	-1 267	3 646	2 379	1 267
2005	4 694	6 517	-1 823	4 250	2 427	1 823
2006	4 256	5 407	-1 151	3 535	2 384	1 151
2007	4 651	6 191	-1 540	4 032	2 492	1 540
Total	26 706	34 398	-7 692	22 427	14 735	7 692

Source: NSS – 2008 Demographic Handbook based on information from the Police Department.

According to the 2007 migration survey, about 3.2% of the Armenian population was engaged in migration. The 2007 migration survey distinguishes three categories for internal migrants.

- Those who returned from a place other than their usual place of residence to their usual place of residence within Armenia after absence of three months or more during 2002-2007. Estimated number of migrants for this category: 9 696.
- Those who had been absent from their usual place of residence for more than three months at the time of survey (17-30 September 2007). Estimated number of migrants for this category: 70 700.
- Those who had migrated from other settlement within Armenia at the time of survey. Estimated number of migrants for this category: 27 518.

The 2007 migration survey produces estimates of labour migrants at only 15% of all migrants. Interesting patterns emerged when the data on migrants is disaggregated by age. In category 2 in particular more than 76% are in the 15-24 age group clearly indicating that most of the migration captured by this survey is related to three main purposes: education in tertiary institutions mainly located in the capital; a change in marital status; or temporary compulsory military service. However, the data does not allow quantification of each strand.

Overall, it can be stated that current sources of information are insufficient for systematic analysis of internal migration, particular in terms of inter regional migration and labour migration in Armenia.

5. Employment policy framework and recommendations

5.1 The place of employment policy in the overall policy agenda

Steps have been taken toward establishing labour market institutions and corresponding regulations in line with comprehensive reforms aimed at the introduction of an economic system with market-oriented principles. The first Law on Employment was adopted by the Armenian Parliament in 1991 and the State Employment Service was established in 1992. A new Law on Employment was passed in 1996.

However, during the 1990s, when major economic liberalisation and restructuring reforms were initiated and implemented, employment policy mainly concentrated on the passive aspects of labour market policy (basically: the provision of unemployment benefits and temporary cash assistance). This was particularly evident in the structure of public spending on labour market programmes (LMPs), and 70%-85% of total employment programme funding was allocated to passive labour market programmes (PLMPs) up until 2000.

In 2003, the Government of Armenia adopted the PRSP: a comprehensive document outlining the main priorities of Government policies for socioeconomic development and poverty reduction in the mid- to long-term. The document particularly concentrated on analysis of labour market issues and highlighted leading priorities for labour market policies aimed at enhancing employment and reducing the rate of unemployment with a specific focus on structural unemployment issues. The document also stressed the importance of links and highlighted the main ways forward to coordinate labour market policy measures with corresponding reforms of the professional education system (including VET).

These new developments were reflected in the new Labour Code adopted in 2004. The 1996 Law on Employment was replaced by the new Law on Employment and Social Protection in Case of Unemployment passed by the National Assembly in 2005 and in effect since 1 January 2006. The new Law on Employment and Social Protection in Case of Unemployment particularly highlighted the role of annual employment programmes. These must be approved by the Government and then passed by the National Assembly when they are considering the draft annual budget law for any particular year.

Another important step forward came with the Government adoption of the SDP in October 2008, moving toward further integration of employment policy into the overall policy framework. SDP is the updated version of PRSP, but has far wider programme coverage than the first PRSP, particularly in terms of the economic policy section of the document. The programme period has been extended and the new SDP now covers 2008-2021. The key priorities and details of the labour market measures and policies specified in the programme are summarised as follows:

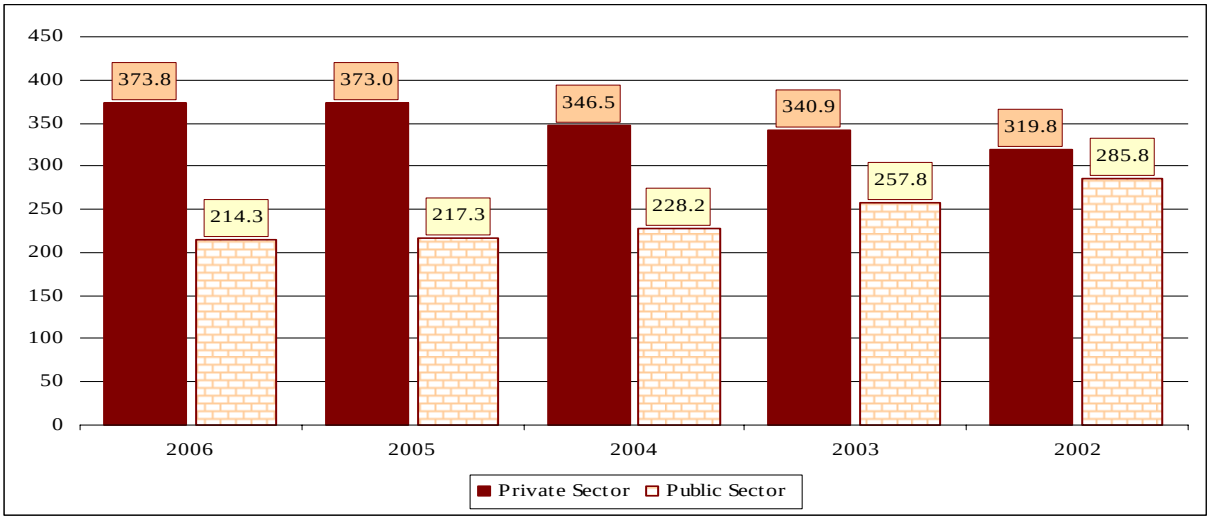
- enhancement of employment, with a particular focus on increased formalisation in the non-agricultural sector;
- design and implementation of measures aimed at softening rigidity of labour market protection legislation;
- implementation of active labour market programmes (ALMPs) particularly aimed at reducing unemployment, being guided primarily by and with the design of corresponding policy responses based on the behaviour of self-reported unemployment (ILO definition) rate;
- freezing of tax burden on wages; moreover measures to reduce the burden on low earners are envisaged to be designed and implemented in the medium-term;
- reduction and, in the longer-term, avoidance of poverty among the employed population through an appropriately designed minimum wage policy;
- appropriately designed LMPs to reflect the current specifics of regional development in the country aimed at approaching current disparities in development between the capital and provinces;
- enhancement of capacities in public agencies and institutions dealing with labour market issues (including those of the SES) and extension of the role of social dialogue between all stakeholders.

5.2 Business environment and investment climate

Private sector as a source for job creation

Private sector development was the main source of economic growth in Armenia and practically the only source of job creation[44] in the non-agricultural sector in 2002-2006. The employment pattern in the non-agricultural sector of the Armenian economy in 2002-2006 closely followed the GDP growth pattern; there was a gradual increase of private sector share of non-agricultural value added, accompanied by a somewhat slower increase in the number of people employed in the private non-agricultural sector. Conversely, the number of people employed in the rather inflated public sector decreased in line with the gradual decrease of public sector share of non-agricultural value added. The "jobless growth" seen in Armenia in the last 7-8 years is largely due to the fact that job creation in the private non-agricultural sector did not fully compensate for the more intense destruction of public sector jobs.

Figure 39. Employment in private and public sectors in non-agricultural sector in Armenia in 2002-2006 (thousand)



Source: NSS establishment surveys and author calculations.

Figure 39 shows there was a certain increase of private sector employment from 319 800 in 2002 to 373 800 in 2006 (16.9% in five years). Employment in the public sector decreased by 25% over the same period, from 285 800 in 2002 to 214 300 in 2006. This was due to downsizing of the public sector leading to cuts of 71 500 jobs that were not compensated for by the creation of just 54 000 jobs in the expanding private non-agricultural sector.

Labour productivity increase was the main engine of private sector growth in 2002-2006 at an average of 13.5% annually. Employment increased by 4%, and the two factors combined to provide an 18% annual average increase in the value added of the non-agricultural private sector.[45]

[44] According to official employment statistics: agricultural employment in Armenia is almost entirely private and was relatively constant in the range of 500 000–507 000 per year in 2002-06. However, there are problems in the agricultural employment measuring methodology in Armenia. Periodical agricultural employment surveys in 2003-06 showed actual employment in agriculture in the range of 240 000-250 000 per year, or about half of that reported in official statistics. Official statistics consider all working age registered owners of agricultural land as employed and they are considered to be part of the economically active population regardless of their actual involvement in agricultural production. This is the main reason why agricultural employment has been excluded from analysis in this part of the report. The analysis provided covers only 2002-06, as official employment data for the time periods before and after 2002 are not comparable. The 2001 population census showed there were substantially lower numbers of people employed than was stated in the official estimates.

[45] In other words: the labour productivity increase was responsible for 77.9% of non-agricultural value added growth on average for the period and employment growth provided the remaining 22.1%.

This analysis shows that non-agricultural private sector development in Armenia was the only source of the job creation and will remain so for the foreseeable future, despite the fact that this has not kept pace with job destruction in the public sector and increased productivity has not led to broader job creation. However, government policy could realistically increase employment in Armenia in the medium- and long-term by fostering accelerated development of the private sector and removing existing obstacles to job creation as far as possible.

That said, Armenia already faces rather hard constraints on business efficiency that increase the burden for businesses operating here: the country is landlocked, has high transportation costs and is a substantial distance from leading international markets. The quality of the business environment (the standard of State regulations on business and investment activities) and investment climate (implementation of the regulations and conditions in the existing physical business infrastructure) also play a crucial role in development of the private sector and, hence, job creation.

Regulations for starting up and investing in new businesses

The business climate in Armenia has been relatively favourable in recent years. According to Doing Business 2009[46] the country was ranked 44th for general ease of doing business out of 181 countries surveyed (Armenia ranked 39th out of 178 countries in 2007). However, the relative standing of Armenia has deteriorated in comparison with other Former Soviet Union (FSU) republics. In 2006, Armenia was ranked first amongst the FSU countries (except the Baltic States) for general ease of doing business, whereas it came third after Georgia and Azerbaijan in 2008.

The two main obstacles in the Armenian business environment are shown in the indicators for trading across borders and the payment of taxes. The relative standing of the country deteriorated from 131st in 2007 to 143rd in 2008 for trading across borders and from 147th in 2007 to 150th in 2008 for the ease of paying taxes, indicating serious unsolved problems in tax and customs administration. The relative deterioration of Armenian ranking from 2007 to 2008 can be mainly attributed to the general slowdown in government reform of business regulations in recent years. Some improvements were seen in licensing (construction permits) but other fields remained practically unchanged.

The government has now adopted an ambitious programme[47] for substantial improvements in the quality of the business environment. The aim is for Armenia to be ranked within the first 5% of countries for ease of doing business in 2010 and for the country to maintain this position for the 10 following years. The general tenets of the reforms may be described as follows:

- decrease and simplify of the number of regulatory procedures;
- decrease the transaction costs involved in doing business;
- remove existing legislative barriers;
- minimise interactions between businesses and government officials by the intensive use of 'one-stop shops', e-governance mechanisms and Internet based procedures.

Regulations for business start-ups According to "Doing Business – 2009" Armenia is ranked 66th for the ease of starting a business (49th in 2007). On average, registration requires nine procedures, takes 18 days to complete and costs 3.6% of per capita Gross National Income (GNI). There is no empirical evidence showing entry regulations as the obstacle to the creation of new businesses, but under the SDP the government intends to:

- remove the general requirement for the statutory minimum paid-in capital;
- remove the mandatory requirement for the seal of legal entity;
- decrease the number of procedures required for the registration of new businesses;
- gradually transfer to on-line registration procedures starting from the capital (Yerevan).

[46] See 'Doing Business 2009' and 'Doing Business 2009. Country Profile for Armenia'.
[47] Armenia Sustainable Development Programme (SDP) for 2008-2021 adopted by the government in October 2008.

Licensing procedures (based on the example of obtaining a construction permit to build a warehouse) were substantially simplified in 2008 (ranking: 42nd in 2008 compared with 73rd in 2007). Further reforms aim to reduce the number of procedures and number of days required to obtain a permit.

Ease of getting credits Armenia ranked 28th for this element in 2008 compared with 25th in 2007. According to the Business Environment and Enterprise Performance Survey (BEEPS) – 2005[48] access to credits was considered a major obstacle for business and investment activities by 18.1% of the enterprises surveyed, whereas the high cost of borrowing was considered a major obstacle by 22.6% of companies. The high cost of collateral (177% of the average loan) and the limited number of assets accepted as collateral are also considered major obstacles to private sector development. The Armenian financial intermediation system is currently rather small and almost exclusively consists of the banking system and non-banking financial institutions (other sectors of the financial system are practically non-existent). As of end-2007, financial system assets to GDP ratio stood at 26%, almost all of which (24.3%) were banking system assets to GDP. Domestic credit to GDP ratio stood at 13.5% - one of the lowest figures in all the FSU countries. The banking system is characterised by a high spread of 10.8% (the spread between interest on loans and interest paid on deposits). As a result of this situation, acceleration of growth rates in the financial system should be one of the highest priorities in medium- and long-term economic policy. This policy would also have an impact on job creation and private sector development. Government-planned reforms should proceed toward legislative changes on collateral, bankruptcy and banking laws in order to: increase the number of assets serving as collateral; simplify collateral registration; and improve protection for those holding collateral. Private credit bureaus should be promoted and their coverage increased.

Levels of investor protection are relatively weak in Armenia (ranked 88th in 2008) as a result of the very low level of corporate governance culture, a factor that hinders minority portfolio investments (including foreign investments). This also plays a large role in the concentration of property and hampers development of securities markets. To this end, the government intends to modify company legislation in order to clarify requirements for disclosure of potential conflict of interest deals and to increase the responsibilities of company Chief Executive Officers to shareholders.

The Armenian business environment is severely hampered by very high taxpayer transaction costs. In 2008 Armenia was ranked 150th by the ease of paying taxes (147th in 2007). An average company pays taxes in about 50 instalments annually and will spend about 958 hours (about 120 working days) on the task. The cost of paying taxes comprised 45% of GDP per capita. The latest research on the Armenian economy demonstrates that the current situation of tax payments and the low quality of the tax administration are the main factors behind the high level of shadow activities and the resulting low level of tax collection.[49] Reforms to tax administration should thus concentrate on a dramatic decrease in the number of tax payments and tax-paying transaction costs.

For a small landlocked country like Armenia, maximal liberalisation of trade and removal of trade barriers (including Technical Barriers to Trade) is required to mitigate the high transportation costs. However, the country was ranked 143rd in 2008 (131st in 2007) for the ease of trading across borders in spite of this liberal trade regime[50] mostly as a result of poor customs administration and high transportation costs. Urgent reform is needed to substantially reduce the number of documents required for import and export and reduce the time spent on preparing and obtaining these documents. Public investment in the road and rail infrastructure is also essential in order to ease inland transportation costs.

Armenia was ranked 61st in 2008 (63rd in 2007) for contract enforcement. Legislative improvements are needed to reduce the number of procedures and time required for courts to consider contract enforcement issues. The efficiency of the courts must also be addressed.

As was stated above, business climate quality indicators reflect the main obstacles to business and investment activities and limitations on material infrastructure as identified by the national business community. In Armenia, the quality of the investment climate is much lower than the rather favourable business environment indicators would seem to suggest. In 2005 (the most recently available BEEPS) Armenia ranked 18th out of the 26 countries of Europe and Central Asia (ECA) for the general quality of the

[48] BEEPS: see www.enterprisesurveys.org.
[49] "The Caucasian Tiger: Sustaining Economic Growth in Armenia," The World Bank, Washington DC, 2007
[50] The effective custom tariff in Armenia is in the range of 2.5%-3%, which is very low by international standards.

investment climate.[51] The Armenian investment climate is plagued by huge differences depending on the size of the business involved: Armenia would be ranked sixth if large companies alone were considered; ninth for medium size concerns; and 21st for smaller businesses.

These differences are indicative of implementation problems in the generally favourable business regulations, mostly as a result of: low efficiency in the government and court system; high levels of endemic corruption and nepotism; the absence of an efficient anti-monopoly and pro-competition system; and problems in tax and customs administration. Other relevant issues include infrastructure problems, particularly the weak financial system and the low level of services provided by infrastructure sectors.

The investment climate could be substantially improved with wider ranging reforms particularly targeted to: foster competition and effectively restrict monopolies; increase the quality of the business environment; increase the quality of public governance and fight corruption; accelerate development of the financial intermediation system; further liberalise trade and remove technical barriers to trade; and increase the quality of infrastructure by directing public investments and providing public-private partnerships.

Armenia ranked seventh out of ECA countries on the infrastructure component of investment climate indicators in 2005. Transportation costs were considered the biggest obstacle to development (ranked 23rd). When the factor of high transportation costs is removed from the equation, Armenia ranked fourth out of the 26 ECA countries, once more proving the need for prioritisation of investments in the transport infrastructure and the need for regulatory reforms in the open sky aviation, rail and energy sectors.

Armenia ranked 20th in the access to finance component. The main issues here were access to loans and the high cost of borrowing and collateral. In quality of public governance, the main obstacle is the volume of informal payments made by companies to various government bodies (ranked 20th), and the country also ranks 25th out of 26 ECA countries in the field of unofficial payments to tax officials.

The quality of the court system is more favourable (ranked 10th) but there are two main problems indicated. Although there is a relatively high declared level of trust in the courts for contract enforcement issues (52.5% or 11th among ECA countries) only 7.6% of companies enforce contracts through the court system (the lowest level for all ECA countries). This could be explained by the rather low level of contract enforcement disputes and efforts made by companies to resolve these by other means (large companies in particular rarely apply to the courts). Government policy in this field should therefore concentrate on helping the courts to take a more active role in contract enforcement.

External trade regulations (ranked 25th) also present a problem. Given the advantages offered by the liberal trade regime and the absence of quantitative restrictions, the main causes of the problem must be seen to lie with the tax administration which is plagued by poor quality procedures and nepotism. Drastic improvements in customs administration should be considered of the highest priority.

5.3 Labour legislation

General overview and profile of labour legislation

During the transition to a market economy Armenia has established a rather complex system of laws and institutions to protect employment and ensure the minimum living standards of the population.

The Constitution of the Republic of Armenia was adopted by referendum on 5 July 1995 and then amended by referendum on 27 November 2005. The Constitution provides the main principals and grounds for labour legislation. Article 32 of the Constitution stipulates:

> 'Everyone shall have the freedom to choose his/her occupation. Everyone shall have the right to fair remuneration in the amount no less than the minimum set by the law, as well as the right to working conditions in compliance with the safety and hygiene requirements. The employees shall have the right to strike for the protection of their economic, social and

[51] Calculated as a simple sum of the seven subcomponents of the investment climate indicators: quality of infrastructure; access to finance; labour market; corruption and the quality of the public regulations; court system and crime; information and technologies; external trade.

employment interests, the procedure and limitations thereof shall be prescribed by the law. The children under the age of 16 shall not be allowed to work full time. The procedure and conditions for their hiring to a part-time job shall be defined by the law. Compulsory employment shall be prohibited.'

The Constitution (Article 48 2) further emphasises that the State shall contribute to employment for the population and the improvement of working conditions.

Current labour and social security legislation of the Republic of Armenia has been developed and shaped during the 1995-2005 period and includes, but is not limited to, the following main laws.

Labour legislation

- The Civil Code, 1998
- The Trade Unions Act, 2000
- The Law on Civil Service, 2001
- The Employment Wages Act, 2001
- The Law on Public Associations, 2001
- The Law on Remuneration of Civil Servants, 2002
- The Law on Remuneration of the High Ranked Officials in Legislative, Executive and Judicial Branches, 2002
- The Minimum Wage Act, 2004
- The Labour Code, 2004
- The Law on State Labour Inspection, 2005
- The Law on Employment of Population and Social Protection in case of Unemployment, 2005

Social security and labour tax related legislation

- The Law on Social Protection of Disabled Persons, 1993
- The Law on Personal Income Tax, 1997
- The Law on Mandatory Social Contributions, 1997
- The Law on State Pensions, 2002
- The Law on Minimum Living Basket and Minimum Living Budget, 2004

The Labour Code of the Republic of Armenia was adopted on 9 November 2004 and is the most important generic legislative act dealing with all the main issues related to employment protection and other various aspects of individual and collective labour relations. Armenia ratified 29 ILO Conventions as of 2008 and the European Social Charter was also ratified in 2004.

Strictness of employment protection regulations

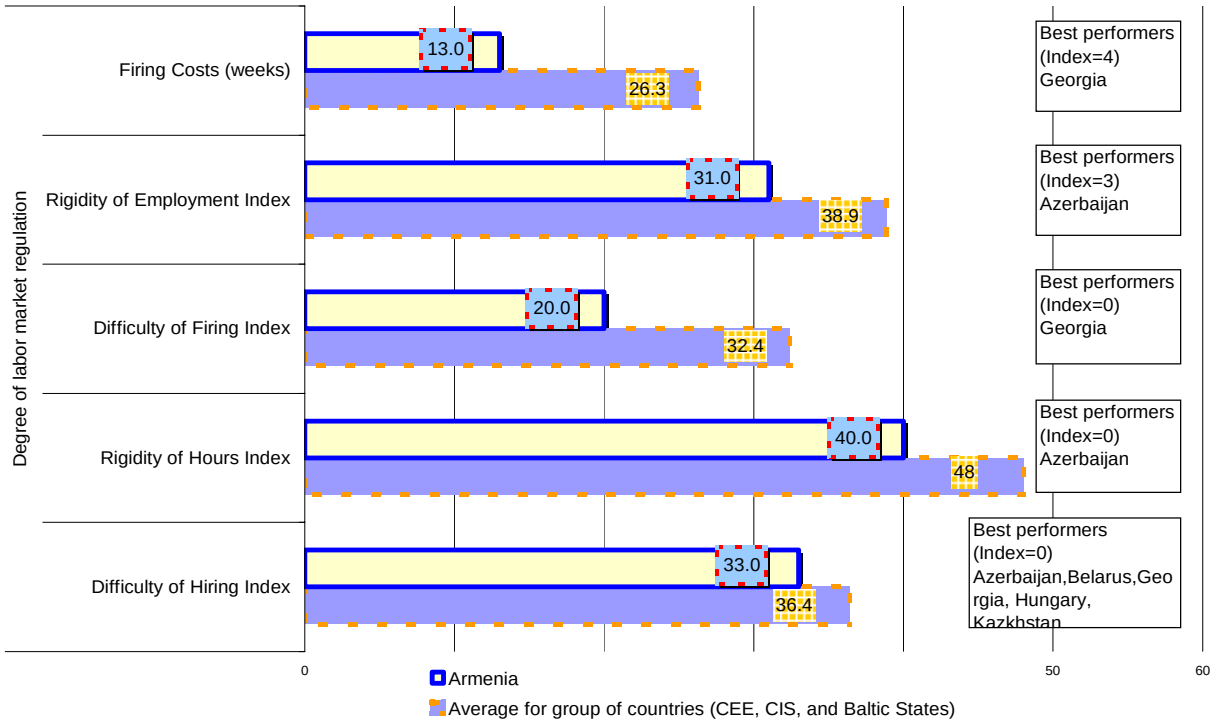
The literature suggests that restrictive labour legislations initially intended to protect employees from exploitation by employers may contribute to high unemployment and segmentation of the labour market with high levels of informal employment. Studies undertaken in some OECD countries indicate that the strictness of hiring and firing regulations correlate negatively with employment rates and formalisation of employment, particularly for young people and low-skilled labour. Although this information should be treated with caution

for a transition country like Armenia,[52] this section provides *ex ante* review and prospects to reform Armenian labour legislation using methodology used by the World Bank in the Doing Business series.

According to Doing Business 2009, Armenia employment protection regulation became more flexible in 2007 than it was in 2004, mainly as a result of enactment of the 2004 Labour Code. The rigidity of employment index declined from 36 to 31 and firing costs declined from 17 weeks to 13 weeks. The increased flexibility was largely due to the relaxation of restrictions on firing staff (with difficulty to fire reduced from 50 to 20), whereas rigidity of hours remained unchanged at 40 and difficulty of hiring deteriorated from 17 to 33. The latter was mainly due to the Labour Code prohibition on fixed term contracts for permanent jobs.

Armenian labour regulations seem to be generally more flexible than those of similar countries in Central and Eastern Europe (CEE), the CIS and the Baltic States (Figure 40). However, Armenia has much more rigid employment protection regulation than its direct neighbours: Azerbaijan and Georgia. Both Azerbaijan and Georgia are very similar to Armenia in terms of size, the educational attainment of the labour force and historical background of the legal and economic system inherited from USSR, but they also both benefit from comparative advantages in relation to Armenia: one with rich oil and gas reserves and other with direct access to the sea. It is crucially important for Armenia to keep up with the business environment and investment climate of its neighbours, although this has not been achieved in the last five years.

Figure 40. Comparison of employment protection regulation in Armenia and the group of countries in the CEE, CIS and Baltic States



Source: Doing Business 2009 and author calculations.

These international comparisons and other current labour market indicators (unemployment rate, youth unemployment rate and extent of informal employment) imply that greater relaxation of employment protection regulations may help the wider population to find and maintain jobs in Armenia, especially if this is accompanied by more inclusive and effective active employment measures. The following section cites areas of labour legislation where the situation in Armenia can be improved without seriously compromising the minimum acceptable level of employment protection, current practices and international conventions ratified by the country.

[52] Developments in Georgia make an interesting case study at this point: full de-regulation of the labour market in Georgia was followed by an absolute decrease in waged employment, substituted by a huge rise in self-employment. As a result, industrial relations have largely become commercial relations, very liberal but with very little protection for the rights of workers.

Difficulty of hiring index Armenia's score of 33 is due to a ban on fixed contracts for permanent jobs. However, the language used in Labour Code Article 95 is very vague and there is no clear definition of what exactly constitutes permanent employment. The same Article states that no worker should be employed on consecutive fixed contracts for more than five years, but the five year limitation only applies if the contracts run successively without any break of more than one month between two fixed contract terms. It is logical to assume that this limitation on fixed contract terms is the only definition of permanent employment justified within the law. Hence, removal of the prohibition on fixed term contracts would not in fact work against employees who have had consecutive contracts for five years and would not affect current practices.

Rigidity of hours index Armenia has a score of 40 due to the prohibition of night work (20) and restrictions on weekly holiday (20). Armenia has not ratified the ILO C171 Night Work Convention 1990. The C171 Night Work Convention does not in fact prohibit night work, but merely provides safeguarding measures for night workers such as medical examinations and appropriate working conditions. As for the restrictions on weekly holiday, Armenia ratified the ILO C14 Weekly Rest (Industry) Convention 1921 in 2006. However, Armenian Labour Code provisions are more restrictive than those recommended by the ILO Convention: where the latter demands a minimum of 24 hours uninterrupted rest once every seven days, Armenian Labour Code Article 155 1 restrictively states that the holiday must occur on a Sunday, with exemptions for given industries. In both cases our recommendation is for Armenia to follow the ILO conventions, thereby reducing the rigidity of hours index to 0.

Difficulty of firing index Armenia has a score of 20. There are two provisions of Labour Code which contribute to this index score: firstly, the employer obligation to notify a third party before making a group of 10 workers redundant (score 10); and secondly, the employer obligation to offer retraining or reassignment before making a worker redundant (score 10). In our opinion, the first point should not be changed as it provides no serious burden to employers. However, second point is a restrictive provision that should be removed from the Labour Code and replaced by policies to improve the relevant employment assistance stipulated in The Law on Employment of Population and Social Protection in Case of Unemployment 2005.

Table 26. Envisaged impact of recommended reforms on rigidity of employment index

Employing workers indicators	Current situation (2007)		Envisaged impact of recommended reforms[53]	
	Answer	Score	Answer	Score
Rigidity of employment index		**31**		**3**
Difficulty of hiring index		**33**		**0**
Are fixed-term contracts prohibited for permanent tasks?	Yes	1	No	0
What is the maximum duration of fixed-term contracts (including renewals)? (in months)	60	0	60	0
What is the ratio of mandated minimum wage to the average value added per worker?	0.19	0	0.15	0
Rigidity of hours index		**40**		**0**
Can the working week extend to 50 hours (including overtime) for two months per year to respond to a seasonal increase in production?	Yes	0	Yes	0
What is the maximum number of working days per week?	6	0	6	0
Are there restrictions on night work?	Yes	1	No	0
Are there restrictions on "weekly holiday" work?	Yes	1	No	0
What is the paid annual vacation (in working days) for an employee with 20 years of service?	20	0	20	0
Difficulty of firing index		**20**		**10**
Is the termination of workers due to redundancy legally authorised?	Yes	0	Yes	0
Must the employer notify a third party before terminating one redundant worker?	No	0	No	0
Does the employer need the approval of a third party to terminate one redundant worker?	No	0	No	0
Must the employer notify a third party before terminating a group of 25 redundant workers?	Yes	1	Yes	1
Does the employer need the approval of a third party to terminate a group of 25 redundant workers?	No	0	No	0
Is there a retraining or reassignment obligation before an employer can make a worker redundant?	Yes	1	No	0
Are there priority rules applying to redundancies?	No	0	No	0
Are there priority rules applying to re-employment?	No	0	No	0

In summary, the strictness of employment regulation in Armenia could be relaxed substantially and still be in line with all ILO international conventions. The summary results of the impact of recommendations are presented in

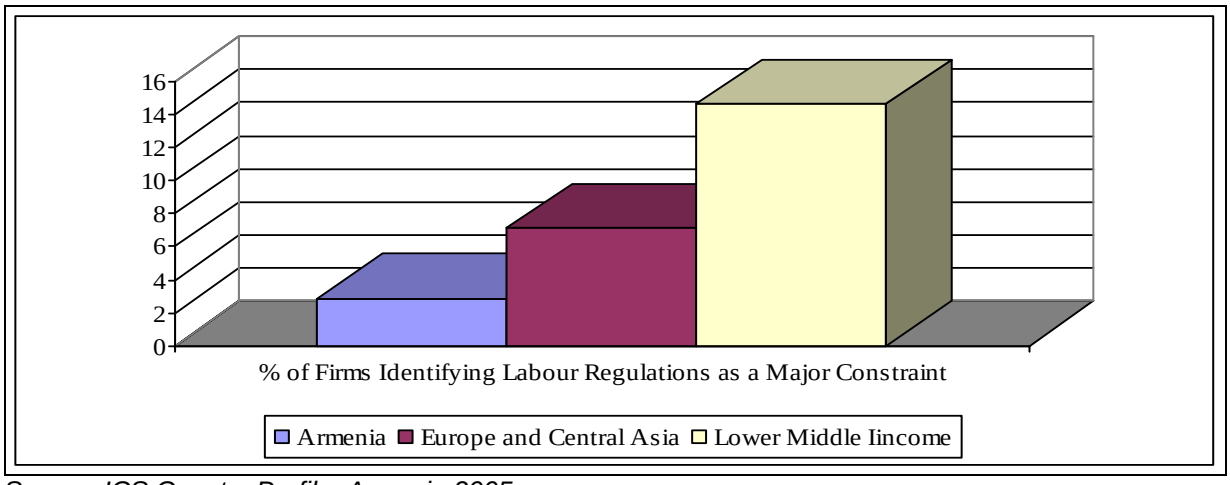
[53] Author estimates based on recommended reforms.

Table 6.

Some aspects of labour legislation implementation

In Armenia, the de facto impact of labour legislation on the labour market may be far less prominent than it initially appears due to low levels of enforcement. The same is true for other laws and regulations. In fact, an Investment Climate Survey (ICS) conducted by the World Bank in 2005 revealed that labour regulations do not constitute major constraint for businesses as only 2.9% of firms perceive labour regulation as a major obstacle. Armenia compares favourably with average indicators on this issue for Europe and Central Asia and Low Middle Income countries (Figure 41). This outcome is consistent with results from previous BEEPs, which also reported minimal government intervention in the employment and wage setting affairs of companies.

Figure 41. Comparison of private sector perception related to strict labour regulation in Armenia, Europe and Central Asia and lower middle income countries average



Source: ICS Country Profile: Armenia 2005.

In this situation, further relaxation of labour regulations would possibly not be an effective measure in practice. However, the situation appeared to change following enactment of the law on State labour inspection in 2005. In 2007 alone, the State Labour Inspectorate (SLI) conducted more than 4 000 inspections. Recent surveys[54] for the USAID SPSS project reveal interesting facts on company manager perceptions of the Labour Code. One major finding was that managers had great difficulty in applying the Labour Code in terms of employment contracts. The outcomes of the survey did not show whether firms were becoming more concerned about labour regulation in general, but most of those surveyed expressed at least some concerns relating to various aspects of the Labour Code.

SLI inspections also delivered another important set of findings. Firstly, companies identified a strong need for clarification of the functions and responsibilities of the SLI, and secondly, it appeared that SLI procedures were not well established and the capacity to undertake tasks assigned them by the law is weak.

Informal employment and undeclared work

The extent of informal employment in Armenia is still high and constitutes a major challenge to policymakers dealing with employment policy and labour legislation. The SDP envisaged the substantial reduction of informal employment by almost three percentage points every five years to a level of 15% by 2021.

It is important to understand that informal employment is a complex phenomenon that cannot be reduced merely by specific labour market policies. Moreover, most of the policies presented in the SDP are important preconditions for long-term economic growth, increased employment and poverty reduction, and

[54] The State of Labour Legislation and Institutions in Armenia, USAID SPSS Project, February, 2008.

are on the whole also conducive to increases formal employment. General and specific policies to motivate formal employment include: increased flexibility in labour legislation; the introduction of contribution-based pension schemes and parametric reforms of the current scheme; changes to the current setting for social contributions to lower the tax burden for lower earners; increased unemployment benefits and stronger links between benefits and social security contributions; enhanced financial intermediation services; improved business environment and investment climate; and measures to improve the effectiveness of enforcement of labour, tax and social security regulations.

5.4 Labour market policy

Policy framework and institutions

The general framework for employment policy is set out in the Law on Employment and Social Protection in Case of Unemployment (2006). According to this Law, employment policy should be implemented in line with annual employment programmes designed by the Government and submitted to the National Assembly for approval.

The Ministry of Labour and Social Issues (MoLSI) of the Republic of Armenia is the principal government agency responsible for employment policy in the country. The State Employment Service (SES) is an agency within the MoLSI structure to which regulatory functions in the sphere of employment are delegated.

The SES was established in 1992. It consists of a central office in Yerevan and 51 regional or territorial employment centres, 41 of which are located in the provinces and 10 in Yerevan. The main functions of the SES include the design and implementation of both active and PLMPs, and regular collection and analysis of data on the labour markets.

Considerable efforts have been made to enhance the capacities of the SES in recent years, both in terms of an improved resource base and improved quality of staff. Government funding has been complimented by funds from donors (including funding and technical assistance from multilateral agencies and bilateral donors such as the World Bank, EU, USAID and the governments of Sweden and Lithuania). Technical assistance has particularly reflected on improved human resources and technical capacities within the central office of the SES, as well as at the number of regional employment centres in various regions of the country. However, further investment will be needed to address current challenges facing the SES, including greater enhancement of SES technical capacities (particularly at the regional level) and improved staff skills, in aspects of employment policy, the design and implementation of policies and programmes, the introduction of modern approaches and technologies for the provision of labour market brokerage services.

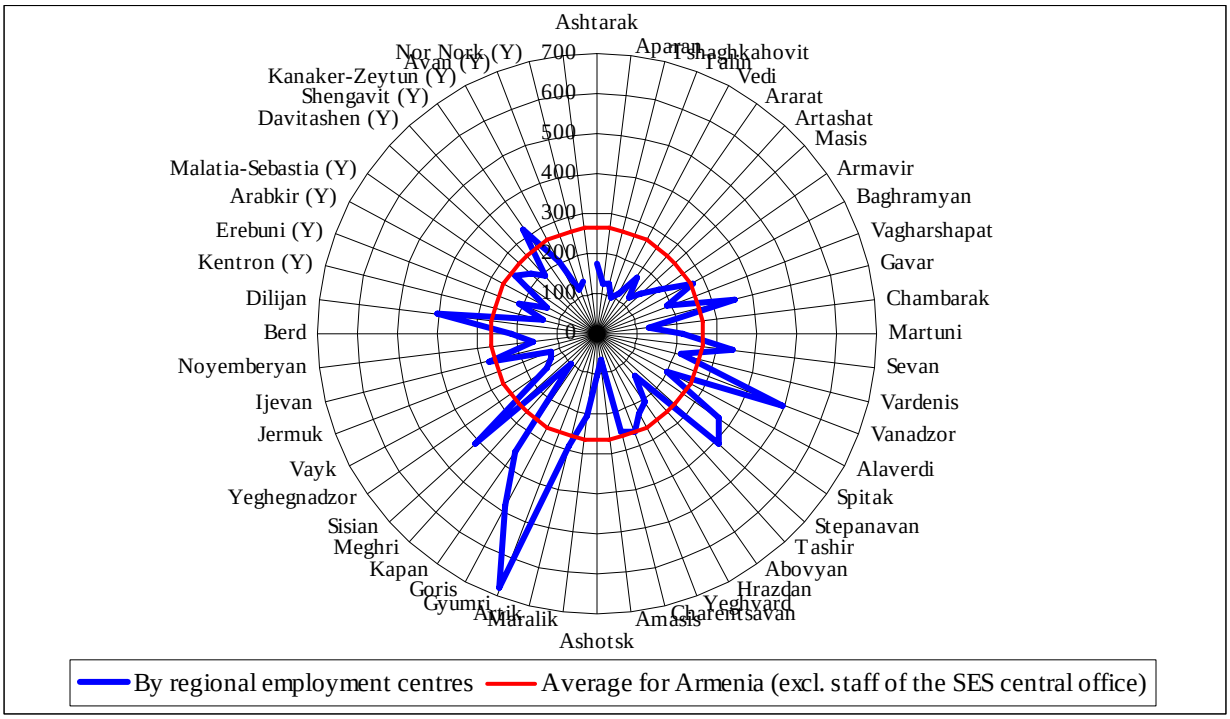
State employment service: staffing

There are a total of 405 employees of the SES (including all regional centres but excluding support staff) 37 of whom work in the central office in Yerevan.[55] Comparisons across regional SES employment centres show huge differences in staff workload measured as the number of registered job seekers per SES employee dealing directly with job seekers and employers (Figure 42).[56]

[55] Data provided by the State Employment Service (August 2008).

[56] The number of SES staff dealing directly with job seekers and employers is estimated as the difference between the total number of SES staff (excluding support personnel) and the number of staff in the SES central office.

Figure 42. Registered job seekers per number of SES staff directly dealing with job seekers and employers by regional employment centres (2008)



Note: "Y" in parentheses corresponds to territorial employment centres located in municipal communities within Yerevan city. Source: SES and author calculations.

According to the figure 42, the average number of registered job seekers per SES member of staff dealing directly with job seekers is estimated at 264, ranging from 679 in Gyumry (the second largest city in Armenia) to 64 in the Amasia regional employment centre. Reference to the international comparisons shows that corresponding indicators are much lower in the majority of developed Western economies, but they are comparable to those in the countries of Europe and Central Asia region.

Labour market programmes: content and public expenditure

The SES labour market programmes (LMPs) have quite wide coverage consisting of two main components: (i) passive labour market programmes (PLMPs) including the provision of unemployment benefits and temporary cash assistance to the unemployed; and (ii) active labour market programmes (ALMPs) including, but not limited to training, job brokerage, public works, and specific measures targeted at people with disabilities. Table 27 provides a summary of employment programmes defined by the Law on Employment and Social Protection in Case of Unemployment.

Table 37. Summary of labour market programmes in Armenia

Grouping of programmes	ALMPS	PLMPs
1. Mandatory social protection (insurance) in case of unemployment	▪ Analysis/projections of developments in the labour markets ▪ Vocational training for the unemployed (with one year job tenure and social security contributions) ▪ Vocational training and rehabilitation of skills for unemployed disabled persons registered as job seekers in the SES (for persons with one year job tenure and social security contributions) ▪ Vocational training for individuals with long job tenure and privilege (early) retirement and registered as job seekers with the SES ▪ Compensation of costs linked with geographical job mobility	▪ Payment of unemployment benefits ▪ Early retirement (for individuals with 35 years of job tenure with only one year to go before retirement age) ▪ Funeral Costs/Cash assistance
2. Employment promotion programmes	▪ Vocational training for unemployed with no job tenure or with job tenure (and social security contributions) of less than one year ▪ Vocational training, rehabilitation of skills, and financial support for state registration of entrepreneurial activities for unemployed disabled persons registered as job seekers with the SES (for persons with no job tenure or with job tenure and social security contributions of less than one year) ▪ Financial support to unemployed for state registration of entrepreneurial activities ▪ Partial salary compensation to employers for job promotion – for disadvantaged job seeking unemployed individuals (e.g. disabled people, the long-term unemployed (more than three years), demobilised soldiers, persons released from prison, refugees, etc) ▪ Paid public works	

Source: Law on Employment and Social Protection in Case of Unemployment (2006).

Despite increased attention to the definition and content of LMPs, public expenditure in the sector has continued to be extremely low. In 2007, public expenditure on LMPs amounted to AMD 3 073 million, up from AMD 973 million in 1998. However, public expenditure to GDP ratio has remained nearly unchanged and in 2007 accounted for a mere 0.1% - a rate considerably lower than the average indicators for OECD countries and corresponding indicators in the EU new member states (

Table 48).

Moreover, the nominal increase in public expenditure is largely attributable to increased allocations for unemployment compensation (particularly the payment of unemployment benefits) with the knock-on effect of a considerable increase in the share of public expenditure on PLMPs (nearly 60% of total expenditure on LMPs in 2007). Meanwhile, almost the half of the resources allocated for ALMPs has been absorbed by paid public works in recent years.

The potential impact of these employment programmes is severely limited by extremely low levels of public spending in the sector. In the medium-term, increased public expenditure on LMPs is needed, as are appropriate measures to enhance the capacities of employment services to absorb increased funding and transform labour market outcomes. Policy makers should prioritise such programmes and consider them a pre-condition for increasing the role of public employment services as a lead player in the labour markets.

Table 48. Armenia: public expenditure on labour market programmes in 1998-2008

		1998	2001	2004	2005	2006	2007	2008*
	AMD million							
1	Public employment services and administration **	211.2	182.6	267.8	300.1	326.6	356.5	397.1
2	Labour market training	22.4	30.3	27.7	76.8	80.8	110.8	144.7
3	Subsidised employment	24.1	256.4	486.4	584.3	679.6	712.6	752.3
	including:							
	Public works	0.0	256.4	486.4	584.3	679.5	692.0	700.0
4	Measures for the disabled	0.5	15.0	2.7	4.5	7.5	6.4	14.8
5	Unemployment compensation***	714.7	349.3	379.7	487.5	816.8	1 886.4	2 649.3
	TOTAL	**972.9**	**833.7**	**1 164.3**	**1 453.2**	**1 911.3**	**3 072.7**	**3 958.3**
	Active measures (1-4)	258.2	484.4	784.6	965.7	1 094.5	1 186.3	1 308.9
	Passive measures (5)	714.7	349.3	379.7	487.5	816.8	1 886.4	2 649.3
	% of total expenditure on LMP							
	TOTAL	**100**	**100**	**100**	**100**	**100**	**100**	**100**
	Active measures (1-4)	26.5	58.1	67.4	66.5	57.3	38.6	33.1
	Passive measures (5)	73.5	41.9	32.6	33.5	42.7	61.4	66.9
	% of total expenditure on active measures							
	Active measures (1-4)	**100**	**100**	**100**	**100**	**100**	**100**	**100**
	Public employment services and administration	81.8	37.7	34.1	31.1	29.8	30.1	30.3
	Labour market training	8.7	6.3	3.5	8.0	7.4	9.3	11.1
	Subsidised employment	9.3	52.9	62.0	60.5	62.1	60.1	57.5
	Measures for the disabled	0.2	3.1	0.3	0.5	0.7	0.5	1.1
	% of GDP							
	TOTAL	0.10	0.07	0.06	0.06	0.07	0.10	0.11
	Active measures (1-4)	0.03	0.04	0.04	0.04	0.04	0.04	0.04
	Passive measures (5)	0.07	0.03	0.02	0.02	0.03	0.06	0.07
	*ratio of GDP expenditure to unemployment rate****							
	TOTAL	0.011	0.007	0.006	0.008	0.010	0.014	…
	Active measures (1-4)	0.003	0.004	0.004	0.005	0.005	0.005	…
	Passive measures (5)	0.008	0.003	0.002	0.003	0.004	0.008	…
	Memorandum item							
	Public expenditure on LMPs in OECD countries (unweighted average), % of GDP	1.96	1.64	1.68	1.64	1.52	…	…

* Corresponding to 2008 annual budget. ** For 2004-2008, author estimate.
*** Including expenditure on "Funeral Costs".
**** Calculated based on officially registered unemployment rate.
Source: NSS, SES, Ministry of Finance, OECD Employment Outlook 2008 and author calculations.

Annexes

Annex 1. Comparison of productivity levels in some branches of industry in Armenia and EU new member states

Annex 1 provides a comparison of productivity levels in some branches of industry in Armenia and EU new member states (those that joined the EU from 2004).[57] Data for Armenia was obtained from the enterprise survey conducted in 2006-2007 for those branches of industry with a representative sample of enterprises surveyed.[58] These branches used for comparative analysis include[59]:

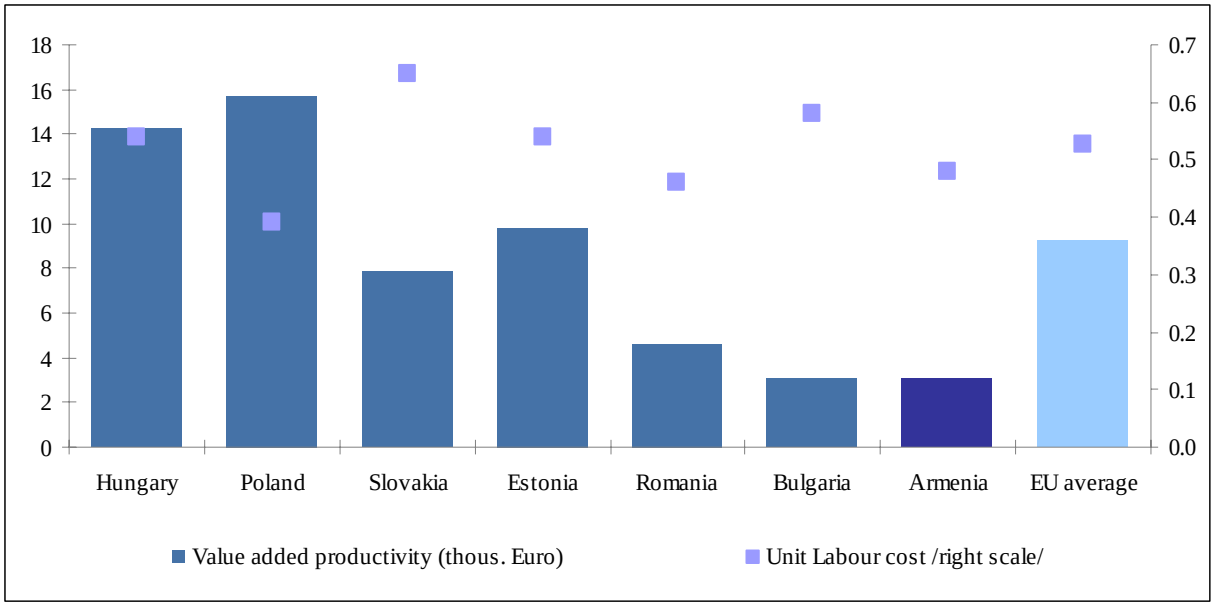
- manufacture of machinery and equipment (NACE 29);
- manufacture of clothing (NACE 18) and manufacture of textiles (NACE 17) (combined);
- manufacture of rubber and plastic products (NACE Division 25) and manufacture of chemicals and chemical products (NACE Division 24) (combined);
- manufacture of food products and beverages (NACE Division 15);
- manufacture of tobacco products (NACE Division 16).

Comparisons were drawn for absolute values of valued added productivity (EUR thousand) and the ULC indicator was used to evaluate productivity and competitiveness.[60] ULC was calculated by dividing total staff costs per employee (wages plus social contributions made by the employer) divided by value added per employee.

Armenia lags far behind member states that joined the EU in 2004 on value added productivity. When it comes to Romania and Bulgaria, however, the differences are less tangible and Armenia is at the same level in some sectors (Figure A1 on food products and beverages).

[57] Data on EU new member states was obtained from the Eurostat, Facts and Figures 2006 annual. The productivity indicators represent the situation as of 2003.
[58] "Competitiveness and financial resources management survey of Armenian enterprises" (CFRM Survey) – a research project implemented by Chair of Economy and Finance of Russian-Armenian (Slavic) State University, contracted by the Central Bank of Armenia, 2006-08, Armenia.
[59] These branches were selected as they constituted a representative sample and data was available on these for EU member states.
[60] The indicator for Armenia was the maximum of the 2005-07 average and the 2007 figure.

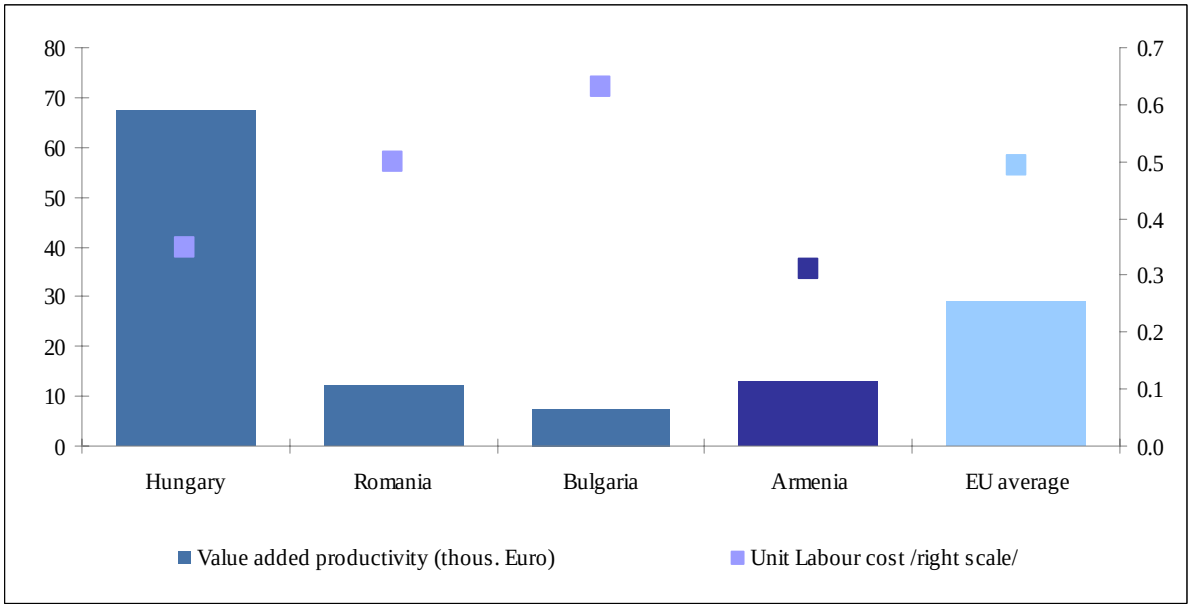
Figure A1. Manufacture of food products and beverages



Source: Eurostat and 2006 – 2008 CFRM Survey.

Armenia is only ahead of Bulgaria and Romania in terms of value added productivity in the manufacturing of tobacco products.

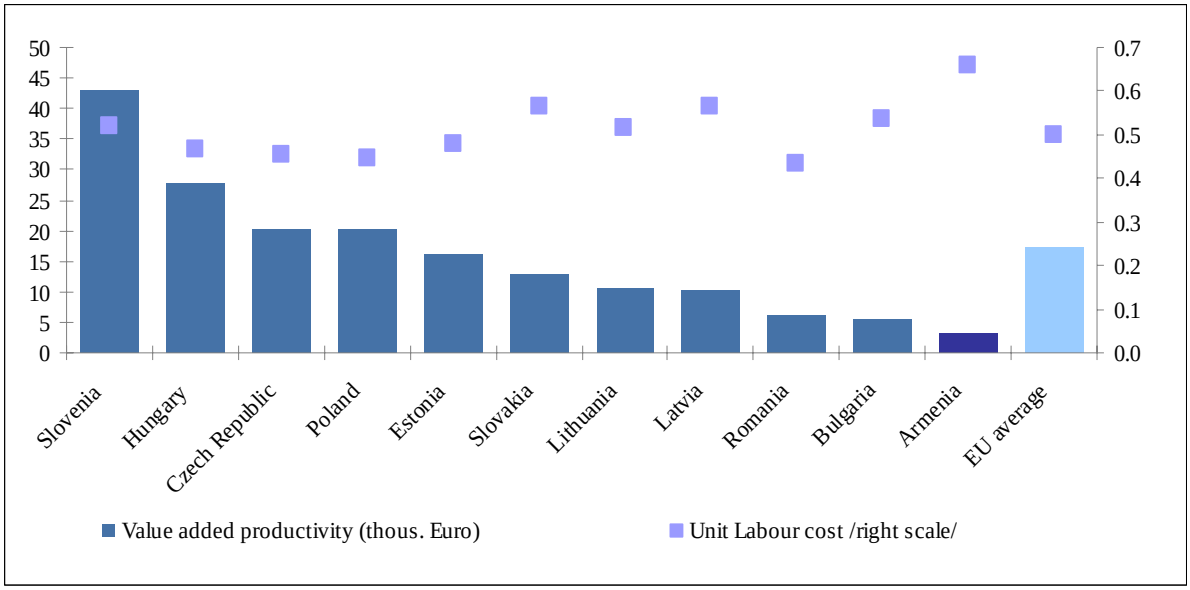
Figure A2. Manufacture of tobacco products



Source: Eurostat and 2006 – 2008 CFRM Survey.

ULC for almost all the branches covered is lower in Armenia, which indicates comparatively lower spending on the workforce in Armenia compared to EU member states. The only exception is in the manufacturing of chemicals and plastics (combined), where Armenia has a higher ULC. This can be explained by the fact that productivity is very low for this branch and much of the value added is used for paying the workforce (Figure A3).

Figure A3. Manufacture of rubber and plastic products (NACE Division 25) and manufacture of chemicals and chemical products (NACE Division 24) (combined)

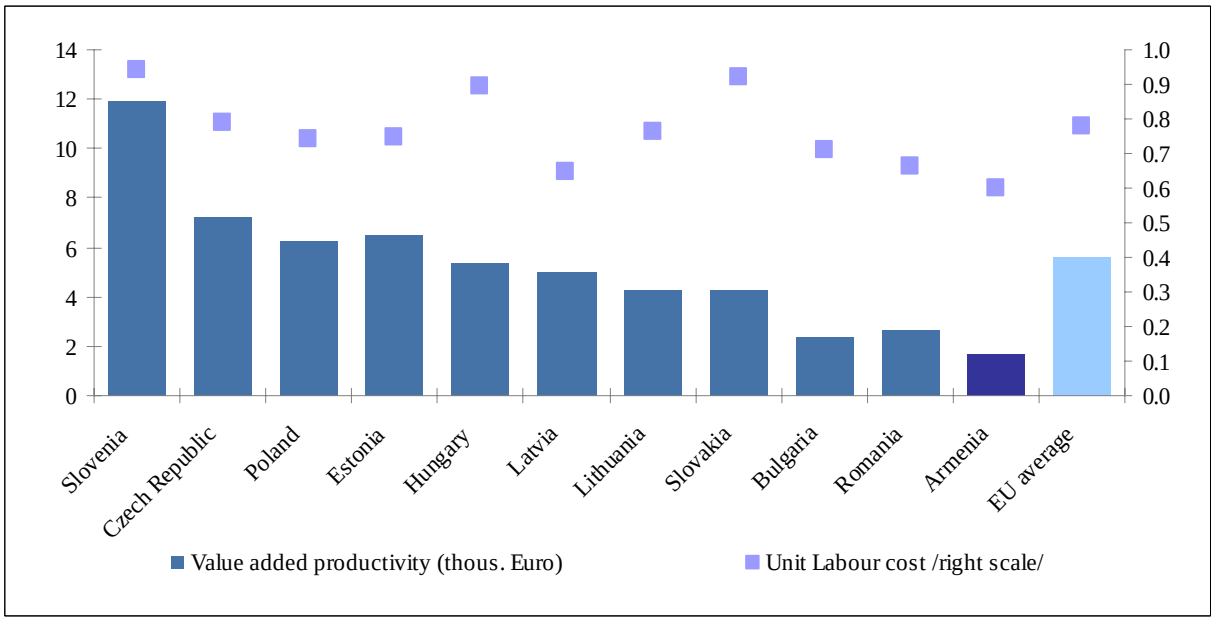


Source: Eurostat and 2006-08 CFRM Survey.

In the remaining branches (machinery and equipment, food and textiles), Armenia has lower ULC than the EU average, granting the country a limited competitive advantage although overall value added productivity is still very low. The results do, however, indicate that Armenia can mostly compete with external markets by having lower staff costs, although this cannot be regarded as a strategic competitive advantage in the medium- to long- term.

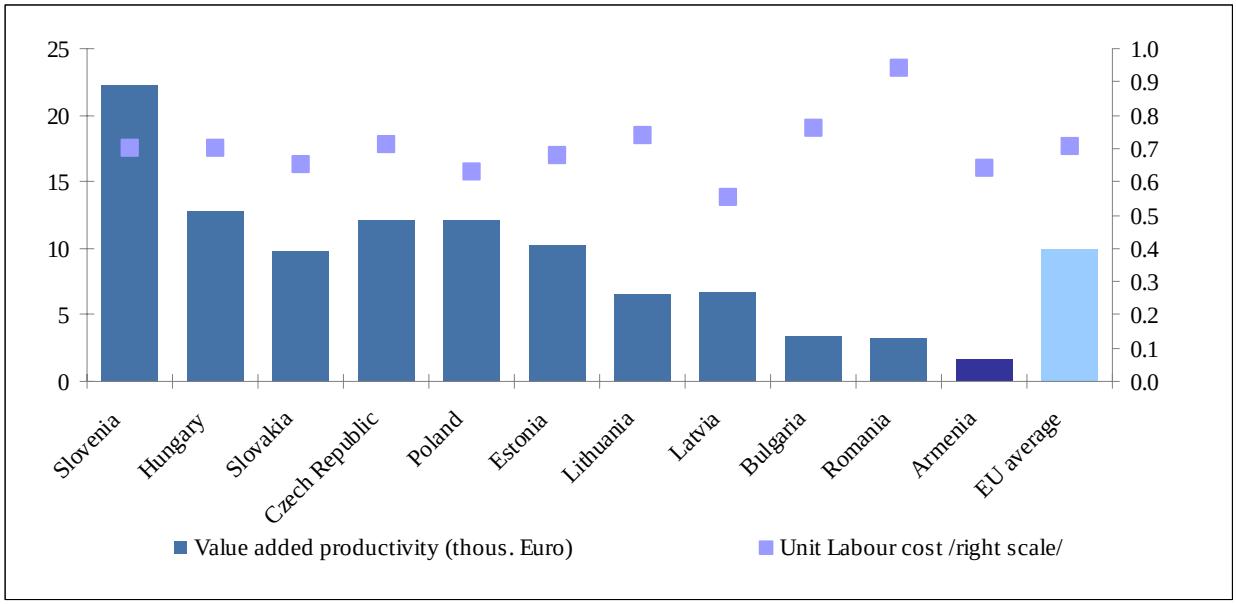
Overall, the value added productivity level differences are really tangible. Thus in the manufacture of clothing (NACE 18) and manufacture of textiles (NACE 17) (combined) the average EU value added productivity is more than three times the Armenian level (Figure A4), whereas in the manufacture of machinery and equipment it is about six times the size (Figure A5). Only the food and tobacco sectors have indicators comparable to Bulgaria and Romania to some extent.

Figure A4. Manufacture of clothing (NACE 18) and manufacture of textiles (NACE 17) (combined branches)



Source: Eurostat and 2006-08 CFRM Survey.

Figure A5. Manufacture of machinery and equipment



Source: Eurostat and 2006-08 CFRM Survey.

If productivity growth rates calculated on the basis of surveyed data for the given branches in 2005-2007 are taken as a baseline, Armenia will need the following amount of time to achieve EU average indicators for the following branches:

- **Manufacture of machinery and equipment**
  - Average annual (2005-2007) productivity growth rate: 26%
  - Time required to achieve 2003 EU average indicator: 7.5 years
- **Manufacture of clothing (NACE 18) and manufacture of textiles (NACE 17) (combined branches)**
  - Average annual (2005-2007) productivity growth rate: 30%
  - Time required to achieve 2003 EU average indicator: 4.5 years
- **Manufacture of food and beverages (NACE 15)**
  - Average annual (2005-2007) productivity growth rate: 17%
  - Time required to achieve 2003 EU average indicator: seven years[61]

[61] These time periods were calculated only for those branches in which there was growth in value added productivity in 2005-07 in Armenia.

Annex 2. Structure of imports for top six importing countries by product groups

	2001	2005	2006	2007
Russia				
Fuel, oil, gas[62]	47.1%	3.5%	5.2%	36.7%
Crops	3.6%	18.6%	16.1%	10.5%
Transport	6.7%	20.6%	16.1%	8.6%
Black metal production	0.4%	1.2%	1.7%	7.7%
Aluminium	7.1%	1.2%	6.5%	5.7%
Equipment and mechanical parts	3.7%	8.6%	8.6%	5.2%
Precious stones and metals	7.5%	9.9%	7.9%	0.8%
Total share of above items	**76.1%**	**63.5%**	**62.1%**	**75.1%**
Total Import (USD thousand)	*173 648.0*	*242 632.4*	*304 170.8*	*720 440.4*
USA				
Drugs	22.1%	13.5%	20.0%	29.0%
Transport	0.7%	7.0%	9.8%	12.4%
Optical, photo and other equipment	7.4%	7.4%	11.6%	10.4%
Precious stones	14.8%	21.1%	23.3%	9.9%
Meat products	7.5%	6.4%	2.5%	8.4%
Equipment and mechanical parts	4.9%	3.4%	8.0%	6.9%
Total share of above items	**57.4%**	**58.8%**	**75.2%**	**77.1%**
Total Import (USD thousand)	*84 152.6*	*111 310.6*	*106 271.3*	*144 995.7*
Belgium				
Precious stones	87.3%	94.1%	90.8%	89.7%
Total Import (USD thousand)	*41 783.4*	*144 254.1*	*119 977.7*	*116 437.6*
UK				
Transport	0.1%	12.0%	15.4%	24.9%
Equipment and mechanical parts	3.2%	16.2%	18.6%	14.3%
Optical, photo and other equipment	0.8%	3.2%	3.4%	13.5%
Electric machines and equipment	0.4%	4.2%	6.0%	12.1%
Drugs	0.9%	10.9%	5.1%	5.9%
Chemical tissue	0.0%	8.7%	15.5%	4.3%
Precious stones and metals	1.1%	0.0%	12.0%	1.4%
Fuel, oil, gas	70.3%	3.7%	1.3%	1.1%
Sugar	11.9%	0.2%	0.0%	0.0%
Total share of above items	**88.8%**	**59.0%**	**77.3%**	**77.5%**
Total Import (USD thousand)	*91 225.2*	*11 279.0*	*22 117.5*	*42 253.4*
Israel				
Precious stones	97.2%	97.8%	97.8%	84.3%
Total Import (USD thousand)	*27 593.2*	*103 796.9*	*87 776.9*	*34 755.0*
UAE				
Precious stones and metals	0.6%	13.3%	7.0%	28.5%
Plastics	2.4%	5.8%	18.9%	18.9%
Furniture	4.5%	15.7%	12.7%	7.9%
Painting materials	1.9%	6.8%	10.9%	6.8%
Equipment and mechanical parts	15.4%	3.6%	4.5%	4.7%
Electric machines and equipment	25.5%	9.4%	3.6%	1.5%
Ceramics	2.7%	9.1%	7.6%	0.7%
Total share of above items	**53.0%**	**63.7%**	**65.3%**	**68.9%**
Total Import (USD thousand)	*47 421.6*	*21 334.5*	*19 143.7*	*19 124.0*

Source: Foreign trade of the Republic of Armenia, NSS (publications for various years) and author calculations.

[62] The huge deviation in gas imports is due to the fact that Russian gas was listed as an import from Kazakhstan in 2006, but was attributed to Russia in 2007.

Annex 3. Structure of exports for top eight export destination countries by product groups

	2001	2005	2006	2007
Russia				
Alcoholic and non-alcoholic beverages	52.1%	60.0%	50.2%	53.0%
Precious stones and metals	1.8%	8.6%	8.6%	14.0%
Glass and glass made products	0.1%	1.8%	2.6%	5.2%
Electrical equipment and machinery	8.4%	5.0%	4.4%	4.1%
Caoutchouc and rubber	14.6%	4.5%	6.4%	3.8%
Equipment and mechanical parts	4.6%	2.4%	2.8%	2.2%
Total share of above items	**81.7%**	**82.2%**	**75.0%**	**82.3%**
Total Export (USD thousand)	*60 501.3*	*119 004.2*	*121 155.6*	*201 542.5*
Germany				
Black metals	59.4%	59.6%	34.1%	43.7%
Copper and copper production	5.5%	28.3%	48.2%	36.7%
Other non precious metals	16.1%	4.1%	9.8%	14.4%
Ore	0.0%	4.9%	3.7%	0.0%
Total share of above items	**81.0%**	**96.9%**	**95.8%**	**94.8%**
Total Export (USD thousand)	*11 122.3*	*152 108.0*	*148 027.8*	*169 676.9*
Netherlands				
Black metals	0.0%	85.2%	77.7%	88.8%
Ore	67.1%	3.2%	13.4%	11.0%
Other non precious metals	0.0%	8.8%	8.8%	0.0%
Total share of above items	**67.1%**	**97.2%**	**99.9%**	**99.8%**
Total Export (USD thousand)	*1 263.8*	*133 110.4*	*126 946.4*	*156 007.4*
Belgium				
Precious stones	93.9%	95.1%	99.3%	96.3%
Total Export (USD thousand)	*46 489.2*	*124 598.3*	*108 846.4*	*100 223.0*
USA				
Precious stones and metals	40.9%	80.0%	78.2%	58.8%
Aluminium	0.1%	0.0%	0.7%	12.0%
Caoutchouc and rubber	0.1%	0.0%	2.7%	5.0%
Alcoholic and non-alcoholic beverages	2.3%	2.4%	3.9%	4.4%
Carpets	1.0%	2.8%	2.3%	2.3%
Fruits and vegetables	1.3%	2.0%	2.4%	2.1%
Total share of above items	**45.7%**	**87.1%**	**90.2%**	**84.6%**
Total Export (USD thousand)	*52 268.2*	*62 219.1*	*65 055.7*	*51 400.3*
Switzerland				
Watch and assembly parts	4.3%	4.6%	22.5%	40.5%
Precious stones and metals	34.8%	65.0%	36.0%	25.9%
Ore	52.3%	7.3%	38.3%	22.5%
Black metals	0.0%	21.8%	3.0%	10.1%
Total share of above items	**91.4%**	**98.8%**	**99.7%**	**98.9%**
Total Export (USD thousand)	*8 937.3*	*34 666.0*	*72 099.5*	*49 255.9*
Iran				
Aluminium	36.9%	10.3%	15.9%	29.4%
Fuel, oil and gas	29.7%	34.4%	34.3%	25.4%
Black metal	2.7%	4.4%	3.7%	8.8%
Production from black metal	1.3%	11.5%	4.2%	7.7%
Cement	0.0%	0.0%	21.5%	6.5%
Total share of above items	**70.7%**	**60.6%**	**79.6%**	**77.9%**
Total Export (USD thousand)	*31 870.4*	*28 513.3*	*29 642.9*	*38 507.5*
Israel				
Precious stones	98.2%	99.8%	99.8%	90.7%
Total Export (USD thousand)	*33 390.8*	*112 240.6*	*87 447.6*	*26 432.6*

Source: Foreign trade of Republic of Armenia, NSS (publications for various years) and author calculations.