Chapter II. Labor Market Trends

During the transition years, labor market participation has passed through a profound transition. Low levels of economic activity and high unemployment rates have become a reality. Since social guarantees to the unemployed are quite limited, many individuals are in a transient status of employment, unemployment, and inactivity, and it may be even difficult to clearly determine the actual status of individuals. The data on labor force participation are controversial. While the official administrative data on employment, and the LFS data on unemployment, show some stability in labor market dynamics, the ILCS data confirm some improvement in the last year or so. The overall unemployment rate of 20.7 percent in 2004, according to the ILCS, and over 30 percent, by the LFS, is still very high by transition economies standards.

2.1. Labor Force Participation

In the pre-transition (socialist) period, every person of working age was required to be employed. Since vacancies were abundant in most Former Soviet Union (FSU) republics, participation rates were relatively high; on average, 85 percent of the working-age population in the USSR was employed. In the 1980s, at least 1.5 million vacancies were registered by the authorities in the USSR annually; the number of surplus work places was even estimated to be as high as 15 million to 17 million (Oxenstierna 1990; Kudo 1995). Although these figures reflect deficiencies in the planning system of the Soviet economy and thus contain caveats, the socialist economy based on extensive investment policies was able to absorb a significant number of laborers. At that time, a job was guaranteed to all graduates. Moreover, graduates had compulsory assignments for their first jobs and, as a rule, young specialists had to serve at least three years at their first assignment.

However, even at the end of 1980s, in republics such as Armenia, Azerbaijan, Georgia, Kazakhstan, Tajikistan, and Uzbekistan, more than a fifth of the working-age population was not employed in state-owned enterprises (SOEs) or other state institutions. Some were disabled, employed in home economics (especially mothers with many children), or involved in informal activities. Despite huge labor shortages, and in addition to frictional unemployment, disguised underemployment, hidden unemployment, and regional and seasonal unemployment were apparent in the USSR. This was determined by the rapid growth of the able-bodied population in many regions, monostructural economies in certain regions and cities, and deficiencies in investment policies to meet the requirements for new jobs.

The employment rates of the able-bodied population in Armenia were particularly low. Only 67 percent of the population aged 16–54/59 reported being employed during the 1989 population census, and 13 percent of working-age population indicated other sources of income (other than stipends, pensions, or being dependants) or did not indicate

11 Working age was defined as 16-54 years for females and 16-59 for males.
their source of income. Low participation rates in the 1980s can be partially attributed to the aftermath of the 1988 earthquake, in which thousands lost not only their jobs but their lives (Table 2.1). Thus, even at the onset of transition reforms, the labor market situation in Armenia was precarious, and the reforms hit the labor market especially hard.

Like in other transition countries, labor supply in Armenia in the last decade has been affected by many demographic factors. In particular, matrimonial and reproductive behavior and migration patterns underwent radical change. Explanations for the worsening demographic situation in the whole region have been proposed, including economic hardship and the drop in real income reflecting rapid inflation and the elimination of consumer subsidies; job insecurity; psychosocial stress; weakened social protections, including in health care and child care; and worsening nutrition patterns (see, for example, UNICEF 1995). Lately, Armenia’s average life expectancy has tended to increase, but two main changes in demographic behavior have affected or will affect the labor supply in coming years. One of them is the rapid decline in fertility rates, and another is a significant outflow of population—permanent or temporary—from the country. (Migration issues will be discussed in Chapter VI).

### Table 2.1. Employment of Population in the USSR and in Some of the National Republics (including in subsidiary household plots; 1989 population census, in %)

<table>
<thead>
<tr>
<th>At working age</th>
<th>USSR</th>
<th>Russia</th>
<th>Ukraine</th>
<th>Armenia</th>
<th>Georgia</th>
<th>Azerbaijan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males</td>
<td>86.6</td>
<td>86.2</td>
<td>85.5</td>
<td>66.8*</td>
<td>79.2</td>
<td>74.2</td>
</tr>
<tr>
<td>Females</td>
<td>82.5</td>
<td>84.7</td>
<td>84.6</td>
<td>62.5</td>
<td>73.6</td>
<td>66.2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Over working age</th>
<th>USSR</th>
<th>Russia</th>
<th>Ukraine</th>
<th>Armenia</th>
<th>Georgia</th>
<th>Azerbaijan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males</td>
<td>17.8</td>
<td>18.3</td>
<td>14.4</td>
<td>24.3</td>
<td>32.0</td>
<td>22.6</td>
</tr>
<tr>
<td>Females</td>
<td>23.2</td>
<td>23.8</td>
<td>19.7</td>
<td>32.2</td>
<td>39.5</td>
<td>33.5</td>
</tr>
</tbody>
</table>

1. In the 1989 population census, employment was defined as an economic activity that brought remuneration or income to the respondent (except income from subsidiary plot). Employees who during the census were in training courses, or mothers who were on maternity leave, seasonal workers, or people who worked less than three weeks due to transfer to another job, were also counted as employed.


* - Thirteen percent of the Armenian able-bodied population indicated that they had other sources of income (other than stipends, pensions, or being dependants) or did not indicate their source of income. In the USSR, the share of the working-age population that did not indicate their source of income was 0.3 percent.


Fertility rates are currently well below the level needed for a full replacement of the current population. The total fertility rates in Armenia have dropped from 2.6 in the mid-1980s to 1.2 in 2001 and 1.4 in 2004 (Annex Figure 7). A rise could occur if some of the existing barriers and disincentives to family formation and childbearing (related notably to labor market, housing, and child care) were removed.

---

12 Such trends could prove a fact well known to demographers—that in periods of hardship, some demographic indicators, such as infant or maternal mortality, and life expectancy, can actually improve.
As a result of these changes, the population age structure is significantly distorted. Three main cohorts can be identified that are less numerous: first, age group 0–10, reflecting decreasing fertility rates in the 1990s; second, age groups between 20 and 40, reflecting rapid outmigration; and third, age groups around age 60, reflecting the decline in birthrates during World War II. Consequently, while the overall number of working-age population will increase in the near future, the shrinking number of new labor market entrants will have a significant impact on labor supply and the structure of the working-age population (Figures 2.1–2.3).

Limited job opportunities in Armenia have led to discouragement and massive labor force withdrawal, especially among younger and older cohorts and women. The labor force participation rate provides an indication of the relative size of the supply of labor available for the production of goods and services. (Summary data on the labor markets in Armenia and in some other countries are presented in Table 2.2). According to the 2004 ILCS data, the economic activity rate of the population aged 15–64 was 66 percent. This is higher than the level in Georgia, Hungary, and Poland but less than the level in the EU-15 countries. However, in Armenia the labor force participation rate is very high due to extremely high unemployment rates, which are among the highest in transition countries.

---

13 The first scenario of the Armenian population forecast is based on the assumption that current fertility (TFR of 1.176 on average during 1999–2003) and mortality rates will remain stable in the foreseeable future, while in the second scenario, the TFR will gradually increase to 1.475 during 2011–20, and 1.65 during 2021–30, and age-specific mortality rates will slightly decline. Net migration is assumed to be nil under both scenarios.

14 Although all the surveys use ILO definitions on employment and unemployment, there is a significant difference among the data from different sources. As noted in Box 2.1, for estimates of the general level of LFP rates, the 2001 census and 2004 ILCS seem to be a more reliable source, while the 2004 LFS provides more detailed data on particular characteristics of the labor force.

15 Hungary and the Czech Republic have among the lowest unemployment rates, and Poland and Slovakia have among the highest in Central and Eastern Europe.
Figure 2.1. Population Pyramid of Armenia, 2001 Population Census

Figure 2.2. Population Pyramid of Armenia in 2025, Scenario I

Figure 2.3. Population Pyramid of Armenia in 2025, Scenario II
Table 2.2. Employment/Population Ratios and Activity and Unemployment Rates in 2004 in Armenia and Georgia, and in some European Countries

<table>
<thead>
<tr>
<th>Age</th>
<th>Armenia 2001 Population Census</th>
<th>Armenia LFS</th>
<th>Armenia ILCS</th>
<th>Georgia LFS 2003</th>
<th>Hungary</th>
<th>Czech Republic</th>
<th>Poland</th>
<th>Slovakia</th>
<th>EU-15</th>
</tr>
</thead>
<tbody>
<tr>
<td>15–64</td>
<td>72.0</td>
<td>58.2</td>
<td>65.9</td>
<td>60.5</td>
<td>60.5</td>
<td>70.1</td>
<td>64.2</td>
<td>69.7</td>
<td>70.8</td>
</tr>
<tr>
<td>15–24</td>
<td>55.3</td>
<td>34.4</td>
<td>39.6</td>
<td>30.3</td>
<td>27.9</td>
<td>35.8</td>
<td>33.9</td>
<td>39.4</td>
<td>48.2</td>
</tr>
<tr>
<td>25–54</td>
<td>83.2</td>
<td>71.1</td>
<td>76.8</td>
<td>69.9</td>
<td>77.9</td>
<td>87.8</td>
<td>82.2</td>
<td>88.9</td>
<td>83.9</td>
</tr>
<tr>
<td>55–64</td>
<td>51.2</td>
<td>42.8</td>
<td>60.9</td>
<td>69.6</td>
<td>32.0</td>
<td>45.1</td>
<td>31.7</td>
<td>31.7</td>
<td>44.6</td>
</tr>
</tbody>
</table>

**Labor Force Participation Rates**

<table>
<thead>
<tr>
<th>Age</th>
<th>Armenia 2001 Population Census</th>
<th>Armenia LFS</th>
<th>Armenia ILCS</th>
<th>Georgia LFS 2003</th>
<th>Hungary</th>
<th>Czech Republic</th>
<th>Poland</th>
<th>Slovakia</th>
<th>EU-15</th>
</tr>
</thead>
<tbody>
<tr>
<td>15–64</td>
<td>45.6</td>
<td>40.5</td>
<td>52.2</td>
<td>52.5</td>
<td>56.8</td>
<td>64.2</td>
<td>51.9</td>
<td>57.0</td>
<td>65.0</td>
</tr>
<tr>
<td>15–24</td>
<td>28.7</td>
<td>14.6</td>
<td>22.6</td>
<td>22.7</td>
<td>23.6</td>
<td>28.5</td>
<td>20.0</td>
<td>26.5</td>
<td>40.7</td>
</tr>
<tr>
<td>25–54</td>
<td>54.5</td>
<td>51.0</td>
<td>63.6</td>
<td>61.1</td>
<td>73.6</td>
<td>81.4</td>
<td>68.3</td>
<td>74.7</td>
<td>77.8</td>
</tr>
<tr>
<td>55–64</td>
<td>37.2</td>
<td>44.3</td>
<td>52.5</td>
<td>64.7</td>
<td>31.1</td>
<td>42.6</td>
<td>28.0</td>
<td>26.8</td>
<td>41.8</td>
</tr>
</tbody>
</table>

**Employment/Population Ratios**

<table>
<thead>
<tr>
<th>Age</th>
<th>Armenia 2001 Population Census</th>
<th>Armenia LFS</th>
<th>Armenia ILCS</th>
<th>Georgia LFS 2003</th>
<th>Hungary</th>
<th>Czech Republic</th>
<th>Poland</th>
<th>Slovakia</th>
<th>EU-15</th>
</tr>
</thead>
<tbody>
<tr>
<td>15–64</td>
<td>36.8</td>
<td>33.2</td>
<td>20.7</td>
<td>13.2</td>
<td>6.1</td>
<td>8.4</td>
<td>19.3</td>
<td>18.2</td>
<td>8.2</td>
</tr>
<tr>
<td>15–24</td>
<td>48.1</td>
<td>57.6</td>
<td>43.0</td>
<td>24.9</td>
<td>15.5</td>
<td>20.4</td>
<td>40.8</td>
<td>32.7</td>
<td>15.6</td>
</tr>
<tr>
<td>25–54</td>
<td>34.5</td>
<td>28.3</td>
<td>17.2</td>
<td>12.6</td>
<td>5.5</td>
<td>7.3</td>
<td>16.9</td>
<td>16.0</td>
<td>7.3</td>
</tr>
<tr>
<td>55–64</td>
<td>27.2</td>
<td>31.0</td>
<td>13.7</td>
<td>7.0</td>
<td>3.1</td>
<td>5.4</td>
<td>11.6</td>
<td>15.4</td>
<td>6.3</td>
</tr>
</tbody>
</table>

**Unemployment Rates**

<table>
<thead>
<tr>
<th>Age</th>
<th>Armenia 2001 Population Census</th>
<th>Armenia LFS</th>
<th>Armenia ILCS</th>
<th>Georgia LFS 2003</th>
<th>Hungary</th>
<th>Czech Republic</th>
<th>Poland</th>
<th>Slovakia</th>
<th>EU-15</th>
</tr>
</thead>
</table>

*De jure population.

**Employed: including people temporarily absent (up to six months) from the republic for work.

Note: In Armenia, the 2001 population census was conducted in October; the 2004 LFS was conducted in August.

Source: OECD (2005); Armenia: LFS 2004; ILCS 2004; Georgia: 2003 LFS.

According to the 2004 ILCS and the 2001 census data, youth (especially young females) aged 15–24 have the lowest participation rates. (See also the 2004 LFS data in Annex Figure 8). Nevertheless, youth participation rates tend to be higher than for the same groups in the EU-15 and successful transition countries. Typical of other Trans-Caucasus countries, in Armenia participation rates of older workers are higher than in most other transition countries. This is attributed to high involvement of older members of the population in subsistence agriculture. Especially for youth, high labor force participation rates are determined by significant unemployment rates. More specifically, 43 percent of youth aged 15–24 in the labor force are unemployed (World Bank and NSS 2006; Annex Tables 7 and 8).

During the next decade, the labor supply will significantly increase while the generation of youth born at the peak of high birthrates in the 1980s will enter the labor force (Figure 2.4). The population aged 15–64 is expected to increase from 2.121 million in 2001 to 2.451 in 2015 (according to the first scenario of population forecast; Annex Table 9). The economy must absorb a significant number of new entrants in order to maintain the current employment level.
2.2. Employment Ratio

The combination of unemployment and labor force withdrawal led to a substantial fall in the employment-to-population ratio. Out of the able-bodied population aged 15–64, only around 52 percent according to the 2004 ILCS data, and 46 percent according to the 2001 population census data, are employed. This indicates the low ability of the Armenian economy to create jobs. According to the 2004 ILCS and the 2001 population census data, however, the employment rates of older workers aged 55–64 are higher than in other comparator countries, as is the case with labor force participation (Table 2.2).

Work arrangements in Armenia are among the most diversified and flexible in the transition countries. The number of workers who are employed in atypical work-hour arrangements is significant. Based on the 2004 LFS data, 23.3 percent of the employed worked part time. This is a much higher share than on average in EU-15 countries, and sevenfold to tenfold the ratio in more developed Central European transition countries (Table ii). This was mainly involuntary part-time employment: only 12 percent of those working part time were unwilling to take full-time work, 33 percent were unable to take full-time work, 49 percent were unable to find full-time work, and 7 percent worked part time on orders of their administration/employer. Overtime work is very common: 26.0 percent of the workforce is working 51 or more hours per week (Figure 2.6). Adjustments in the labor market and the flexibility of labor have also taken the form of flexibility in amount of time worked (internal numerical flexibility of labor). In transition countries,

16 The forms of labor flexibility include external numerical flexibility, or adjustments in the number of employees; internal numerical flexibility, or adjustments in the number of working hours; functional flexibility, when workers’ job assignments are modified; wage flexibility, when labor costs and thus wages are adjusted; and externalization, when part of a firm’s work is contracted to other companies (Dijk 1995). Standing (1988) distinguishes four forms of labor mobility: geographical, employment (or interfirm), job (intrafirm), and skill mobility.
typically adjustments in working hours are less common, largely explained by the low level of real wages, which means that workers cannot “afford” to work part time.

Figure 2.5. Employment-to-Population Index in Armenia; 1990 = 100

![Employment-to-Population Index in Armenia](image)

Source: National Statistical Service.

The ratio of self-employed and unpaid family workers—29 percent and 13 percent of the total employment, respectively—is also very high by the standards of transition countries. Moreover, according to the 2004 LFS data, for 23 percent of the employees (hired labor), their work arrangements were based on an oral agreement with their employer—typically without social contribution payments and without any insurance against sickness, work injury, unemployment, or retirement (NSS 2005b).

Figure 2.6. Employed by Actually Worked Hours; 2004 LFS

![Employed by Actually Worked Hours](image)


The greatest change since transition has been the shift from stable wages and salaried jobs to casual and less-formal jobs and self-employment. Only around two-thirds of the employed population have permanent jobs, while one-tenth have temporary jobs, and more than one-fifth participate in seasonal (mostly agricultural) jobs (Figure
2.7). Wages are still the main source of household income, on average 47 percent of the total but income from self-employment is also significant, on average 19 percent of the total household income. (Annex Table 10).

**Figure 2.7. Employed, by Gender and Type of Work, in Percent, 2004 LFS**

<table>
<thead>
<tr>
<th>Type of Work</th>
<th>Total</th>
<th>Males</th>
<th>Females</th>
</tr>
</thead>
<tbody>
<tr>
<td>Permanent</td>
<td>66%</td>
<td>63%</td>
<td>67%</td>
</tr>
<tr>
<td>Temporary</td>
<td>11%</td>
<td>13%</td>
<td>7%</td>
</tr>
<tr>
<td>Seasonal</td>
<td>24%</td>
<td>23%</td>
<td>25%</td>
</tr>
<tr>
<td>One-time, occasional</td>
<td>2%</td>
<td>3%</td>
<td>1%</td>
</tr>
</tbody>
</table>

*Source: NSS (2005b).*

To a large extent these flexibility arrangements are of a forced nature (involuntary) due to very high and fluctuating unemployment in the labor market, and many workers are not satisfied with their current employment status. According to the 2004 LFS, 48.6 percent of those employed wanted to change their work situation, for example, to work full time or to have a permanent position. The dominant motivation of 81 percent of those who wanted to change their employment situation was to earn a higher income, followed by the feeling that their work did not correspond to their specialty. Among the self-employed, 63.1 percent were not satisfied with their employment situation. (Annex Table 11). This indicates that a significant portion of employment in the Armenian labor market cannot be classified as decent work. (See Box I.1).

The labor market is dual in several dimensions, the most striking being between the formal and informal sectors. The estimates by NSS indicate that a significant proportion of jobs (40 to 45 percent) are informal sector jobs. These data indirectly reflect the extent of collapse of the formal sector of the economy. The majority of workers in the informal sector are in marginalized economic activities and in labor-intensive sectors such as agriculture, construction, retail trade, catering, and domestic

---

17 The NSS defines the employed in the informal sector as people who work in an organization or firm without registration as a legal person. Informal employment is typically estimated as a residual: employment in establishments of more than 10 workers (obtained from establishment surveys) is subtracted from total nonagricultural employment (obtained from labor force or household surveys). This method misses workers in large firms who are hired informally without the benefit of employment contracts or social insurance.
services. Self-employment accounts for the bulk of employment in the informal sector, especially subsistence agriculture.

**Figure 2.8. Employed by Employment Status, 2004 LFS, in Percent**

![Bar chart showing employment status by gender and employment status in 2004 LFS, in percent](chart.png)

*Source: NSS (2005b).*

The European Union (EU) is using the concept of “undeclared work,” described as “any paid activities that are lawful as regards their nature but not declared to the public authorities” (EU 2004b). This definition excludes criminal activities and work that does not have to be declared. In particular, as far as the Law on Mandatory Social Insurance Contributions is concerned, social contributions are paid by employers, hired employees, and entrepreneurs. Since 2002, people who are engaged in agriculture and in scientific and creative work can be excluded from paying social contributions. According to SSI data, in 2004, 420,100 individuals paid their social security contribution, or 39 percent of the total employment, by the official statistics. Rural households are obliged to pay only land tax. On the other hand, as for the workforce in the formal sector of employment is reported for tax purposes, the rate of tax compliance in Armenia is the highest among ECA countries: 95.9 percent of the actual employment that has to be taxed by law is reported by employers to tax authorities. With respect to the wage bill reported for tax purposes, Armenia has the second-highest ratio—95.6 percent—after Uzbekistan (Figure 2.9). Tax discipline in Armenia is high, but many workers avoid, legally or illegally, being taxed.
Nevertheless, the share of labor undeclared for tax purposes or not obliged to report their economic activities is significant. The main attraction of the undeclared economy is financial. This type of activity allows employers, paid employees, and the self-employed to increase their earnings or reduce their costs by evading taxation and social contributions. The combination of the minimum wage and the tax and benefit systems should be made sufficiently attractive for people to take a job in the formal economy. Furthermore, the issue of undeclared work should be addressed. The size of undeclared work reduces social security contributions and leads to a high tax burden on registered labor.

Underemployment and the increased number of subsistence jobs in the informal sector are of great concern. This situation means that large parts of the population are essentially unprotected against economic risk and receive no help from the State. On the other hand, self-employment is a very important category of employment, both in the sense that displaced workers from old enterprises might find livelihoods working independently, and because it may represent the beginnings of entrepreneurship.

Given the current age structure of the population, the Armenian economy should grow particularly fast, with the focus on labor-intensive sectors and activities, to absorb an increasing supply of the able-bodied population. The population forecast for Armenia indicates that in order to maintain the current employment-to-population level at age 15–64 of 55.9 percent, by 2015, around 120,000 more people should be placed in jobs, compared to the current number of employed. To raise the employment rate to the current EU-15 level of 65 percent, 340,000 new jobs should be created, and 470,000 new jobs are needed to reach the EU Lisbon target of 70 percent of employment of the able-bodied population. Only by 2030 will the number of able-bodied population decline to the level in 2005 (Box 2.1).

18 It is assumed that the net migration of population is nil.
Box 2.1. Employment Targets in EU Member States

The EU Lisbon Summit in March 2000 adopted the employment scenario, “From combating unemployment to activating economically inactive human resources,” for the period until 2015, with the aim of making the EU the most competitive and dynamic knowledge-based economy in the world, capable of sustainable economic growth with more and better jobs and greater social cohesion (EC 2003a). The strategy that followed had three main dimensions—employment targets, competitiveness, and social inclusion—and was designed to enable the EU to regain the condition of full employment and to strengthen cohesion by 2010.

EU member states aim to achieve full employment by 2010 by implementing a comprehensive policy approach incorporating demand- and supply-side measures, and thus raise employment rates toward the Lisbon and Stockholm targets as follows (on average for the EU):

— An overall employment rate of 67 percent in 2005 and 70 percent in 2010
— An employment rate for women of 57 percent in 2005 and 60 percent in 2010
— An employment rate of 50 percent for older workers (55–64) in 2010.

National targets in member countries should be consistent with the outcome expected at the EU level and should take into account particular national circumstances.

2.3. Unemployment Trends

Armenia’s labor market, despite certain notable improvements in recent times, still has a supply and demand gap, which is fairly large by any international comparison. In the last decade, the unemployment rate (ILO definition) in Armenia exceeded 30 percent of the labor force, according to the 2001 population census data and LFS data, which are significantly higher than average indicators for developed and transition countries. The 2004 ILCS survey indicates that the unemployment rate among
the able-bodied population is 20.7 percent, which is still high by transition economies standards. Only some transition countries in the Balkan region, such as FYR Macedonia, and Bosnia and Herzegovina, have higher unemployment rates (Table 2.2). The unemployment rate has declined mostly among the prime age and older workers, while it remained high among the youth (Table 2.3 and Annex Table 7). Under these conditions, finding employment in Armenia is much more complicated, especially for young people.19

Based on the available information, two main periods and trends of unemployment can be identified. Both the overall and youth unemployment rates in 1996–2001 had an increasing trend, followed by a continuous decline during 2002–04.

### Table 2.3. Unemployment Rate Estimates from Different Sources, 1996–2005 (population aged 15+)

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>HHS</td>
<td>ILCS</td>
<td>LFS</td>
<td>LFS</td>
<td>LFS</td>
<td>LFS</td>
<td>LFS</td>
<td>LFS</td>
<td>LFS</td>
</tr>
<tr>
<td>Total</td>
<td>29.2</td>
<td>27.0</td>
<td>38.4</td>
<td>36.8</td>
<td>35.2</td>
<td>31.2</td>
<td>31.6</td>
<td>20.7</td>
<td>31.3</td>
</tr>
<tr>
<td>Youth (15–24)</td>
<td>46.4</td>
<td>45.9</td>
<td>48.1</td>
<td>60.0</td>
<td>60.0</td>
<td>57.6</td>
<td>43.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

HHS = Household Surveys.
LFS = Labor Force Surveys, 2001 census data.
ILCS = Integrated Living Conditions Survey.

Source: NSS; www.armstat.am.

By the mid-1990s, the unemployment rate in Armenia was already close to 30 percent. According to the results of the 1996 household survey of 10,702 working-age respondents, self-reported unemployment rates (the first data based on the ILO definition) among various age groups in Armenia for 1996 were as follows: 29.2 percent for the active population aged 17–64, 46.4 percent for the population aged 17–24, and 18.8 percent for the population aged 50–64. Also, the first labor force survey was conducted in 1996, according to which the unemployment rate equaled 29.1 percent (Ministry of Statistics 1997; World Bank 1999).

The 2001 population is particularly informative with regard to the assessment of unemployment rates and labor supply. This is especially true for the main indicators of the supply side in the labor market—for the assessment of absolute numbers of the economically active population, employed individuals, and unemployed individuals. The census indicated an overall unemployment rate at a high 36.8 percent. Most probably the 2001 census data are the most reliable source on the scope of labor force participation, employment, and unemployment.

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19 The first attempt to quantify unemployment in Armenia was made only in 1996, within the framework of the household survey. Preceding attempts were more of a qualitative nature and could not be viewed as reliable assessments of the unemployment rate. Assessments of unemployment rates are not available for the years following 1996, and some years have a number of significantly varying assessments.
The most common reason for becoming unemployed (40 percent) is liquidation or bankruptcy of enterprises, followed by staff reduction (NSS 2005b). Ninety percent of job seekers are looking for paid work; only 4.0 percent tried to start their own business, of which 6.0 percent were male and 2.5 percent were female. Most job seekers are desperate in their job search and ready to accept any job with decent wages. According to the 2004 LFS, 57 percent of the unemployed are seeking any kind of work with a high salary; 20 percent of the job seekers want the work to correspond to their qualifications, and the remaining 23 percent are looking for any kind of work, irrespective of salary level.

Like in other transition countries, the negative effect of high unemployment rates is especially damaging for youth. Relative to prime-age workers, youth are especially likely to be more affected by negative output shocks because their productivity is generally lower due to differences in skills and experience. According to the 2001 population census data, the youth unemployment rate was 48.1 percent, and according to the ILCS 2004 it was 43.0 percent. This is much above the average for the country (36.8 percent and 20.7 percent, according to the two sources, respectively). Young females are especially vulnerable. Their unemployment rates are almost 50 percent higher than the rates for young males (World Bank and NSS 2006). Also, young, uneducated people are in the worst situation in the labor market. This group, with no vocational education and experience, is so uncompetitive that even considerable improvement in labor market conditions and employment growth may not improve their situation. Unemployment early in a person’s working life has been shown to increase the probability of future joblessness and lower future wages and can lead to alienation, social unrest, and conflict. (Youth unemployment is discussed in detail in Chapter V).

Another dimension of unemployment is the trend/dynamics of registered job
seekers. The data on officially registered unemployment became available in 1992, after passage of the Employment Act of Armenia in December 1991. Two main conclusions can be drawn from these data. First, the economic growth recorded during 1994–99 was accompanied by a rapid increase in the registered unemployment as a result of a wide-scale restructuring of the economy (predominantly in urban areas), reaching its peak in 1999, followed by a clear declining trend during 2000–06. Second, the number of unemployed adults of prime age (30 and over) in 2006 was 1.5-fold the figure for 1994 (69,200 and 44,800 individuals respectively in December 2006), whereas the number of young unemployed, aged 16–29, declined by more than three times (47,000 and 15,400 persons respectively). As a result, during 1994–2006, the share of unemployed youth aged 16–29 in the total number of registered unemployed declined sharply to around 18 percent in 2006, compared to around 49 percent in 1994 (Figure 2.12).

**Figure 2.12. Officially Registered Youth and Adult Unemployment, 1994–2003 (end-year data)**

Source: National Statistical Service.

The pool of unemployed is relatively highly educated. According to the 2004 LFS, one in eight registered unemployed have higher education (13.3 percent in 2004), and 81.5 percent have secondary specialized or secondary general education (NSS 2005c). The share of young people looking for jobs is relatively high, but a large percentage are recent graduates of different types of schools. Both cases reflect the mismatch between the skills and knowledge of job seekers, and labor demand, which has altered in the transition years with developments in the structure of the economy. Surveys show that the education system generates significant skills inadequacies, which contribute to a very large unemployment rate among recent graduates. (See Chapter V). As result of this skills mismatch, firms must incur the high cost of training new hires, which may take several months, without any productive input from these workers.
Hidden (concealed) unemployment is very high, and self-reported unemployment rates are significantly higher than unemployment rates recorded at employment services. According to the 1996 household survey, only 25 percent of the unemployed were registered at employment services. According to the 2001 population census data, 570,500 unemployed were self-reported, including 562,500 aged 15–64, while the State Employment Service (SES) had 146,500 officially registered unemployed on the roster. Based on those data, it can be estimated that only around 26 percent of the job seekers are registered by the SES, and around three-fourths of unemployment is hidden from authorities. Discrepancies between the two indicators are also impacted by the fact that, according to the Employment Act of Armenia, the status of unemployed is not granted to individuals who had not been employed for at least one year. Understandably, this provision refers, first of all, to young people, and together with other factors results in significant differences in age compositions of registered and self-reported unemployment.

Figure 2.13. Structure of Registered and Self-reported (ILO definition) Unemployment, by Selected Age Groups, 2003

Source: National Statistical Service.

The duration of unemployment remains extremely high, with nearly two-thirds of the unemployed looking for a job for one year or longer. In 2006, the average uncompleted unemployment spell was 14.6 months both for men and for women. (NSS 2006). The long average duration of unemployment for most workers may indicate a stagnant unemployment pool in Armenia. Long-term unemployment is a serious problem,

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20 According to the 2002 Law on Employment Promotion, only the able-bodied population at working age can be registered by the NES as officially unemployed.

21 The major disadvantage of the LFS data on unemployment lies in the fact that the data do not represent a panel, so it is not possible to monitor the same individuals over time and investigate changes in their labor market status.
since many of those who wait several years for a job eventually become inactive, which represents a waste of human capital and an additional burden on social funds and on the family.

**A marked reduction in long-term unemployment must be a priority for Armenia.** The extent to which long-term unemployment is a reflection of low aggregate demand, a mismatch between the skills of the unemployed and the skills demanded by enterprises, or a consequence of incentives and social benefits that hinder job search, are matters for closer scrutiny. In general, the longer a person of working age and in the labor force stays out of active employment, the likelier that the person’s skills will become obsolete.

**Figure 2.14. Unemployed by the Duration of Job Seeking, 2004 LFS, in Percent**

![Bar chart showing unemployed by duration of job seeking.](image)

Source: NSS 2005b.

### 2.4. Inactive Population

**In analyzing labor force dynamics, we cannot ignore the labor potential of the currently inactive population.** Although a vast majority of the economically inactive population aged 15 and over, or around 75 percent according to the 2004 LFS, do not want to work, cannot work, or are unable to work (students, retirees, disabled, household members taking care of children or other dependants), around one-quarter of the inactive population at that age can be considered discouraged workers who want to work and would be ready to start working, but for various reasons they are not actively looking for a job. In most cases such respondents report that they have lost any hope of finding work, or do not know where or how to look for work. While the general labor market situation might improve, a large portion of the discouraged workers might enter the labor market, thus putting additional pressure on the workforce and wages.

**The reasons for inactivity vary according to gender and age.** According to the 2004 LFS, four major groups of almost equal size (aged 15 and over)—housekeepers, pensioners, discouraged workers, and students—formed the group of inactive people, and the category of discouraged people equaled 24.4 percent of the inactive population (or 7.4
percent of the total survey sample aged 15 and over). According to the 2001 population census, the number of discouraged workers aged 15 and older (those with no hope of finding a job) equaled 63,300, and constituted 7.5 percent of the inactive population, or 2.6 percent of the total population at that age. The number of discouraged males and females was approximately equal, but in relative terms, there were more discouraged males (10.3 percent of all inactive males compared to 6.0 percent of discouraged females out of all inactive males and females, respectively). Although currently not in the labor force, they might potentially start actively searching for a job when the economic situation improves, and join the rank of employed or unemployed.

Table 2.4. Economically Inactive Population, 2001 Population Census Data; '000

<table>
<thead>
<tr>
<th>Reason for Economic Inactivity</th>
<th>Total</th>
<th>Home-maker</th>
<th>No Hope of Finding Job</th>
<th>No Need to Work</th>
<th>Student</th>
<th>Age, Health</th>
<th>Other Reason</th>
<th>Not Stated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>841.7</td>
<td>99.4</td>
<td>63.3</td>
<td>16.5</td>
<td>164.6</td>
<td>407.0</td>
<td>37.1</td>
<td>53.8</td>
</tr>
<tr>
<td>Males</td>
<td>279.4</td>
<td>2.6</td>
<td>30.8</td>
<td>5.4</td>
<td>70.5</td>
<td>144.7</td>
<td>16.7</td>
<td>26.7</td>
</tr>
<tr>
<td>Females</td>
<td>544.3</td>
<td>96.8</td>
<td>32.5</td>
<td>11.1</td>
<td>94.1</td>
<td>262.3</td>
<td>20.4</td>
<td>27.1</td>
</tr>
<tr>
<td>Urban</td>
<td>611.2</td>
<td>77.8</td>
<td>45.5</td>
<td>12.2</td>
<td>123.1</td>
<td>283.2</td>
<td>29.5</td>
<td>39.8</td>
</tr>
<tr>
<td>Rural</td>
<td>230.5</td>
<td>21.6</td>
<td>17.8</td>
<td>4.3</td>
<td>41.5</td>
<td>123.8</td>
<td>7.6</td>
<td>14.0</td>
</tr>
</tbody>
</table>


2.5. Older and Disabled Workers

For the economy as a whole, the increase in the employment rate of older workers is crucial for sustaining economic growth, tax revenues, and social protection systems, including adequate pensions. This reflects the fact that the structure of society is changing radically: there are more older workers (aged 55–64), elderly people (aged 65–79), and very elderly people (aged 80 and over), and fewer children, young people, and working-age adults. According to the population forecast for Armenia, under one scenario, in which the fertility and mortality rates do not change, the share of able-bodied population aged 15–64 will drop from 69.0 percent in 2005 to 66.5 percent in 2030, and the share of population aged 65 and older will increase from 11.1 percent to 18.4 percent\(^\text{22}\) (Annex Table 9). The aging of the population will have a major impact on public finances, especially for health services, long-term care, and social transfers in general. At the same time, a continuous drop in the number of school-age youth, aged 7–17, would require further adjustments in the education system.

The share of older workers in the total working population is also increasing due to a move away from the culture of early retirement so as to encourage older workers to remain in the labor force. According to the 2002 Law on State Pensions, the retirement age for females will gradually increase from 60 in 2005 to 63 in 2011 (the

\(^{22}\) Under another scenario, in which fertility and mortality rates improve, in 2030 the working-age population is expected to equal 66.7 percent, and the population over age 65, 18.1 percent.
retirement age for males has already reached this benchmark). Also, the retirement age for service under especially harmful working conditions will be increased from 55 in 2005 to 58 in 2011 for males, and from 49 to 55 (and to 59 for less-harmful working conditions) for females. International practice confirms that the two main arguments used to justify the use of early retirement are invalid: (a) there is no proof that older workers cannot participate fully in the employment growth of expanding sectors, and (b) there is no proof that young workers and older workers are interchangeable (EC 2005a).

**Figure 2.15. Population Projection for Age Groups 7–17, 65–79, and 80 and Over, in Armenia**

Employment rates of older workers in Armenia (aged 55–64) are relatively high. In fact, according to the ILCS 2004 data, the employment rate at that age, 53 percent, exceeds not only the rate for most other transition countries, but also the employment-to-population rate for older workers in the EU-15 of 42 percent (Table 2.2). The employment rate of people aged 55–64 in Armenia even exceeds the target established by the EU at Stockholm of employment of 50 percent of older workers by 2010. Also, the relatively high employment rates of population aged 65 and older of 29 percent, according to ILCS data, are a peculiarity of the Armenian labor market, but these high rates largely reflect high employment of older workers and the elderly in subsistence agriculture.

One of the main “incentives” for older age groups to continue working is very low pensions received from the state social security system. Compared to other Commonwealth of Independent States (CIS) countries, pensions are low in both absolute and relative terms. In Armenia, the ratio of average pension to average wage is only around 20 percent, while in Belarus, the ratio exceeds 40 percent, and in Ukraine, it is more than one-third of the average wage (Annex Table 12).

Disabled persons belong to groups whose job opportunities on the open labor market are considerably restricted. The labor market situation of these people is determined by two main factors: their relatively low level of education and vocational preparation, and their low level of economic activity. During the socialist period, the
system of protected employment (the so-called protected work establishments) for the
disabled was an alternative to the employment of these people on the open labor market.
However, this system encouraged the undesirable isolation of the disabled from
mainstream vocational and social life. Currently, disabled individuals have to compete
for jobs on a par with other employees and job seekers. While, according to 2004 LFS
data, the employment rate of the population aged 15 and older was 45.0 percent for men
and 28.1 percent for women, the employment rate for disabled men was 15.6 percent, and
for disabled women, 7.7 percent, for example, employment rates among the disabled are
threefold and fourfold lower than for the general population. (NSS 2005b).

**Figure 2.16. Employment Rates of Older Workers, 2004 LFS and 2004 ILCS Data**

![Employment Rates Chart]

*Source:* NSS 2005b; World Bank and NSS 2006.

### 2.6. Child Labor

**Compared to other countries at the same economic level, child labor is not very common in Armenia; still, the number of working children is significant.** According to the 2004 LFS, around 5 percent of children aged 7–17 (more than half of them aged 15–17) were employed in the last three months preceding the interview (7.6 percent of boys and 2.3 percent of girls). This corresponds to around 30,000 working children. The main reason for working for half of the children, according to parents’ answers, was acute financial shortage of the family, while in 38 percent of the cases it was the child’s own initiative and willingness. However, the majority of children were engaged in housekeeping work: 72 percent of children reported that they are involved in cleaning, cooking, washing, ironing, and food purchases (housekeeping responsibilities were shared almost equally among all the age groups between ages 7–17); 3.6 percent took care of younger siblings or ill family members, but 20 percent of children aged 7–17 worked on family plots and did other household work. Only one-quarter of children reported that they were not engaged in housekeeping work. (NSS 2005b).
It is worrisome that quite a significant share of working children—more than one-fifth—work more than 35 hours per week. One-third of the working children thought that they had performed hard manual work. More than half of the children were paid for the work performed, but while most boys (56 percent) earned money for their work, most girls (89 percent) worked without remuneration.

**Figure 2.17. Hours Worked by Employed Children in a Week, 2004 LFS**

![Bar chart showing hours worked by employed children in a week, 2004 LFS.](image)


### 2.7. Gender Segregation

Especially since the early 1990s, there have been significant gender differences in the participation of males and females in the Armenian labor force, which reflects the duality of the labor market. According to the ILCS 2004 data, the employment rate of females aged 15–64 is 45.0 percent compared to 67.9 percent for males; for prime age adults (aged 25–54) the rates are 53.1 percent for females and 76.2 percent for males. Coping strategies and social protection systems based on the model of the male breadwinner, given the rapid drop in fertility rates and gender differences in longevity, may result in many older women receiving drastically insufficient pensions. Today women account for almost 60 percent of those over age 65, but the number of females at that age will almost double from 185,000 in 2001 to 342,000 by 2030.

Both horizontal and vertical segregation are characteristics of female employment. Horizontal segregation is indicated by the high concentration of female labor in some sectors and professions that pay worse than the average. More than two thirds of the employees in health care, social security, and education are women, which is partly explained by the low wages in these sectors, and partly by working conditions, which are more favorable to reconciling family and work. (Annex Table 1). Vertical segregation is indicated by the fact that in the private and public sector, only about one-fifth of the senior government officials and managers fillings the top positions of the employment hierarchy are women, and women represent only 16 percent of employers, but women fill...
78 percent of clerk positions and 60 percent of technician and associate professional positions (Table 2.5).

### Table 2.5. Employment, by Occupation and Gender, in Percent, 2004 LFS

<table>
<thead>
<tr>
<th>Occupation and Gender</th>
<th>Total Males</th>
<th>Total Females</th>
<th>Including Males</th>
<th>Including Females</th>
</tr>
</thead>
<tbody>
<tr>
<td>Legislators, Senior Government Officials, and Managers</td>
<td>100</td>
<td>78.6</td>
<td>21.4</td>
<td>5.8</td>
</tr>
<tr>
<td>Professionals</td>
<td>100</td>
<td>38.2</td>
<td>61.8</td>
<td>14.0</td>
</tr>
<tr>
<td>Technicians and Associate Professionals</td>
<td>100</td>
<td>40.1</td>
<td>59.9</td>
<td>9.6</td>
</tr>
<tr>
<td>Clerks</td>
<td>100</td>
<td>21.9</td>
<td>78.1</td>
<td>2.7</td>
</tr>
<tr>
<td>Service Workers and Sales Workers</td>
<td>100</td>
<td>56.3</td>
<td>43.7</td>
<td>12.5</td>
</tr>
<tr>
<td>Skilled Agricultural and Fishery Workers</td>
<td>100</td>
<td>52.3</td>
<td>47.7</td>
<td>27.3</td>
</tr>
<tr>
<td>Craft and Related Trade Workers</td>
<td>100</td>
<td>86.4</td>
<td>13.6</td>
<td>12.9</td>
</tr>
<tr>
<td>Plant and Machine Operators and Assemblers</td>
<td>100</td>
<td>96.7</td>
<td>3.3</td>
<td>5.6</td>
</tr>
<tr>
<td>Workers without Qualification</td>
<td>100</td>
<td>65.9</td>
<td>34.1</td>
<td>9.7</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>58.5</td>
<td>41.5</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: NSS (2005e).

For women, the greater responsibility for housework represents a barrier to entering and participating in the labor market. While out of work, females look for a job for a longer period of time: more than 68 percent searched for a job for 12 months and more compared to 58 percent among unemployed males. Women take on more responsibility for work relating to the home and family. Men have greater freedom to allocate time to work when necessary. According to the Armenian Time Use Pilot Survey conducted in July 2004, 65 percent of men and 34 percent of women are gainfully employed on an average day (Annex Table 13). This means that the average working day for men was almost 8 hours and 12 minutes, but only 5 hours and 4 minutes for women.23 Housework, or unpaid work, also differs considerably between the sexes, with almost 6 hours for women and 1 hour and 45 minutes for men.

### 2.8. Urban-rural Dimension and Regional Disparities

In analyzing labor markets and designing effective labor market policies, it is important to note that internal labor markets in Armenia can hardly be considered homogeneous. Rather, they are heavily localized and have individual and specific characteristics. The varying speed of reforms across the regions, unequal investment activities, geographical patterns of demand for goods and services, and other factors have led to regional disparities in employment and unemployment. Within the regional markets, more specific territories can often be identified in terms of urban-rural labor.

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23 According to the August 2004 LFS, the average daily working hours for men were 6 hours and 18 minutes, and for women, 4 hours and 48 minutes (NSS 2005b).
markets, or the characteristics of the workforce. Demand for labor was also unequal across regions; labor force participation varies significantly by region, including by urban and rural area.

One of the dimensions of a dual labor market in Armenia is that labor force participation and employment rates in rural areas are much more favorable than in cities. Employment rates of rural population were almost 30 percentage points higher than in urban areas, 67.2 percent and 38.4 percent, respectively, for population aged 16 and older (Annex Table 8). However, these data may not reflect the real dimensions of the disparities. Although formally rural areas have better employment and unemployment rates, the jobs are mostly low paid and seasonal (see Chapter IV).

For the entire period starting in 1996, the urban unemployment rate has been significantly higher than the rural unemployment rate. The urban unemployment rate in 1996 was three times higher than the rural unemployment rate. The largest gap between the two indicators was recorded during 1998–99, when, according to the results of household surveys, the urban unemployment rate was around 8 times higher than the corresponding indicator for rural areas. Significant differences between urban and rural unemployment rates were recorded by the 2001 census. According to the census, urban unemployment was at 48.4 percent, while the rural unemployment rate was only 17.4 percent, or 2.8 times lower. According to ILCS 2004 data, the unemployment rate in rural areas was 6.7 percent, while in Yerevan and in other cities the rate was close to 30 percent (population aged 15 and older) (Figure 2.18; Annex Table 8).

Data on labor force participation, education levels, and wages show considerable regional disparities by marz (district). According to 2001 population census data, the employment rate in Yerevan of 34 percent for those aged 15–64 was much below the national average of 45.6 percent, but also lower than in any other marz in the country. At the same time, the level of unemployment in Yerevan was the highest, at 32.4 percent, or
almost equal to the employment level of the able-bodied population, despite the fact that the capital has the highest concentration of professionals with higher or secondary specialized education. Regional differences in labor market outcomes by marz are also enormous: 1.8-fold in employment rates, 2.2-fold in unemployment rates (according to 2001 population census data), and 1.7-fold in average wages (Table 2.6). There is no compelling evidence that regional wages are sensitive to regional unemployment rates (the so-called “wage curve”), as in mature market economies. The highest average wage levels are in Yerevan and Kobaik—the regions with the highest unemployment rates. Wage setting might still be less competitive, largely due to the still-dominant role played by the “old” sector, including public and privatized enterprises, and by public and civil services with their unified wage scales.

Interregional labor mobility, including commuting, is still restricted. This is due to the deficiencies of the transport infrastructure, especially at the level of microregions, and the extremely high transportation costs. Moreover, the shortage of low-rent flats, the high duties on purchasing and selling flats, and the significant regional differences of real estate prices limit the opportunities for domestic migration. Regional disparities are also caused by the fact that the supply of vocational training is not adjusted properly to the economy of the regions. The retraining and vocational training providing more advanced skills and adjusted to the specific economic and social environment of the various regions are often not available.

2.9. Education Level and Labor Market Outcomes

Growth in labor productivity will also require a highly qualified workforce. With regard to the education status of the population, Armenia enjoys impressive educational outcomes for a country with its income level. Armenia inherited relatively good education indicators compared to countries with similar gross domestic product (GDP) per capita. It also has high enrollment rates at all levels of education regardless of gender, poverty level, or geographic location. The high levels of educational attainment can be confirmed by the 2001 census data, according to which, in the most active working-age groups of 26–49, 23.4 percent of the population had higher and incomplete higher education, and almost the same percentage (23.8 percent) had secondary specialized (professional) education (NSS 2003).

While the number of graduates with tertiary education has significantly increased, part of the workforce is quickly losing its skills, or the existing skills are becoming obsolete. Also, the new labor market entrants have lower levels of education. Continuing investment in education will be required to develop a skilled and well-educated labor force. Typically, real wages are higher for more-educated than less-educated workers, and highly educated individuals have a lower rate and duration of unemployment than less-educated workers. The available official data suggest that an increasing number of vocational and technical graduates are more likely to become unemployed in a changing labor market (see Chapter V).