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# WORK FOR A BETTER FUTURE IN ARMENIA

## AN ANALYSIS OF JOBS DYNAMICS

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## Overview

**In Armenia, promoting job creation and inclusive access to jobs is a society-wide concern and a top priority for the government.** More than one in three respondents in the 2017 Caucasus Barometer indicated that unemployment, at 18 percent in 2017, was the most important issue facing Armenia<sup>1</sup> The Program of the new government, adopted in February 2019, prioritizes job creation through entrepreneurship, innovation, improved investment climate, exports and enhanced human capital potential. The government is also in the process of developing the new Labor Market Strategy 2019-2024 and recently launched the *Work, Armenia!* initiative to coordinate efforts to promote employment by different ministries, government agencies, educational institutions and employers. This will require institutional reforms to improve the quality of employment services, the quality of data for evidence-based policy making and the coverage of supply-side interventions.

**This report aims to provide a comprehensive package of timely and relevant inputs to the Government's initiatives on agenda.** In doing so, brings together into one coherent framework and story-line both new analysis and previous work undertaken for the World Bank's policy dialogue – in particular the Armenia Systematic Country Diagnostic and Drivers of Dynamism on constraints to growth, international integration, and poverty reduction, and the Skills Towards Employment and Productivity (STEP) surveys on the demand and supply of skills for the Armenian labor market.<sup>2</sup> New analysis includes an updated view of the labor supply situation, labor productivity developments, and the links with recent overall macro and global trends. Because of data limitations, the demand side of the jobs agenda remains insufficiently explored, including analysis of the characteristics of job-creating firms, the drivers of firm level productivity, and the constraints to firm growth, and hence to job creation. Ongoing data collection initiatives will help close these gaps over the short-to-medium term.

**Investment in human capital is a critical factor that affects the population's employment prospects.** Recognizing the critical role of human capital in inclusive economic growth and labor market inclusion, the government of Armenia has committed to participate actively in the World Bank Group's Human Capital Project (HCP), putting Armenia among the early adopter countries together with Georgia, Poland, Ukraine and 24 other countries. Inclusive growth, productivity and well-being are increasingly connected with human capital—the knowledge, skills and health that people accumulate over their lives. With the changing nature of work, there is growing recognition that human capital is a driver of country prosperity and quality of jobs (World Bank 2019c). A large body of recent empirical work also documents the importance of skills (cognitive and non-cognitive) in fostering employment and raising productivity. Developing skills increases individuals' employability and enables workers to carry out their jobs more efficiently, use new technology and innovate. Hiring people with better skills allows firms to increase their productivity. Armenia is at a disadvantage, however. On the World Bank's Human Capital Index (HCI), Armenia ranks lower than all other transition countries except Tajikistan and significantly lower than the average for the Europe and Central Asia (ECA) region.<sup>3</sup> Major investments, especially in education and health, will be necessary to further Armenia's ambition to increase international integration and raise productivity.

**More jobs, and better jobs, are needed for Armenia.** Jobs are central to shared prosperity. More and better jobs are necessary to raise overall welfare levels, reduce poverty and inequality, and help the economy transition toward a modern and globally integrated economy. Armenia needs to reinvigorate job creation to tackle challenges such as stagnating poverty, an aging and shrinking population, and rapid global changes in the demand for skills.

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<sup>1</sup> Figures prior to the GFC derive from World Bank staff estimates based on Income and Living Conditions Survey (ILCS) data for the working-age population ages 15-64. In 2017, the unemployment rate, based on the Labor Force Survey (LFS), was, at 18 percent. For comparability over time, ILCS data are relied on, as the LFS was only launched in 2014.

<sup>2</sup> See World Bank, 2017; Bartsch and De Rosa; 2015, World Bank, 2015; and Valerio et al., 2015.

<sup>3</sup> The HCI measures the amount of human capital that a child born today can expect to attain given the risks of poor education and poor health that prevail in the country in which he or she was born. Armenia's HCI was 0.57 in 2018, which should be interpreted as a human capital-induced 43 percent gap in the productivity of the next generation. The average for ECA was 0.70.

**Improved job opportunities have been a significant instrument for poverty reduction in the past.** Poverty fell significantly in Armenia between 2004 and 2017, from 54 to 26 percent of the population, although most of these gains were made prior to the global financial crisis (GFC). Improvements were driven by labor-related factors, especially improvements in labor income per employed adults (“better jobs”) and, to a lesser extent, by more employment (“more jobs”) and remittances (“jobs abroad”). Jobs are the primary vehicle for transmitting economic growth, especially to poorer households that have few other assets than labor.

**The economic growth registered in the past two years, coupled with positive public perceptions about the new government after the Velvet Revolution, offer now the right momentum for reforms.** The Velvet Revolution in 2018 brought change and, most importantly, raised the perceptions about jobs prospects, especially among youth. The political change created new expectations on the future of Armenia and the right momentum for reform and more active inter-agency collaboration to promote productive employment. In this context, the objective of this report is to analyze the landscape of jobs in Armenia and the challenges that characterized jobs dynamics so far, and identify opportunities for reforms that support the ongoing political change and meet the growing demand for inclusive growth and shared prosperity.

## The macro context for job creation

**Following several years of high growth and poverty reduction, Armenia was hit hard by the global financial crisis in 2008, and progress on social and economic development slowed.** After the turn of the millennium, rapidly expanding copper exports, foreign direct investments and remittance inflows led to double-digit economic growth rates. Poverty fell dramatically. Between 2004 and 2008, the share of poor people (i.e. with incomes under the national upper poverty line) dropped to 27 percent from 54 percent of the population (Figure 1). However, the GFC and, subsequently, the Russian Federation crisis in 2014-15, dealt significant blows to the Armenian economy, as financial inflows dried up and exports receipts dwindled. The share of the population living in poverty increased again in 2009 and 2010, and overall, the effect of the 2008-09 crisis on the Armenian population was deeper than in other countries in Europe and Central Asia.<sup>4</sup>

**Growth remained subdued in the post-GFC period and poverty has only now recovered to pre-crisis levels.** Against a slow, downward trend since 2010, poverty fell more drastically in 2017, to 26 percent, driven by the improvement in economic growth in that year. Growth remained high in 2018, but it is too early to know whether the poverty-reducing effects are sustained. Armenia is still among the poorest countries in Europe and Central Asia. National averages also hide widening regional gaps. Inequality measures, including the Gini coefficient, have worsened in the post-crisis period.<sup>5</sup> Sub-national poverty levels range from 44 percent of the population in Shirak to 17 percent in Vavots Dzor.<sup>6</sup> Life satisfaction was among the lowest in the ECA region in 2016.<sup>7</sup>

**Industry has given way to services as the main source of value-added growth.** Growth in the pre-crisis period was mostly driven by rapid expansion of the construction sector, which came to a halt in 2007. In the post-crisis period, the services sector instead expanded while the overall contribution of agriculture to the economy shrank in both periods. In 2007, industry accounted for 44 percent of value added, with services and agriculture accounting for 36 and 20 percent respectively. By 2017, however, the structure of value added had shifted significantly, with services accounting for 60 percent of GDP compared to 25 percent by industry and 15 percent by agriculture.

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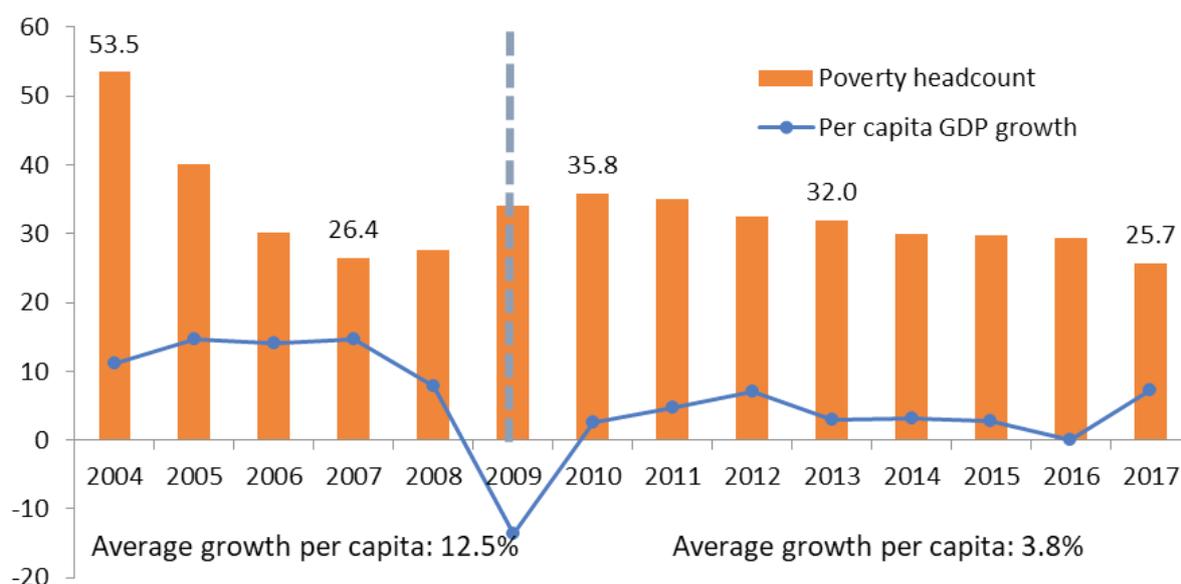
<sup>4</sup> For example, the difference in poverty rates between the less well-off and the more well-off regions rose from 25 to 38 percent between 2005 and 2014. See Bussolo et al. (2019) for further discussion.

<sup>5</sup> The Gini coefficient for consumption rose from 0.26 in 2010 to 0.29 in 2017 (Armstat 2018).

<sup>6</sup> Armstat (2018), Social Snapshot and Poverty in Armenia: Statistical and analytical report Based on the findings of the 2017 Integrated Living Conditions Survey.

<sup>7</sup> Life in Transition Survey III, <http://litsonline-ebd.com/countries/armenia/>

**Figure 1: Poverty reduction, interrupted by the global financial crisis, is only now recovering**



Source: World Bank (2019a).

Note: The figure refers to the national upper poverty line. For more details, see also “Social Snapshot and Poverty in Armenia” (National Statistical Service [Armstat] 2018).

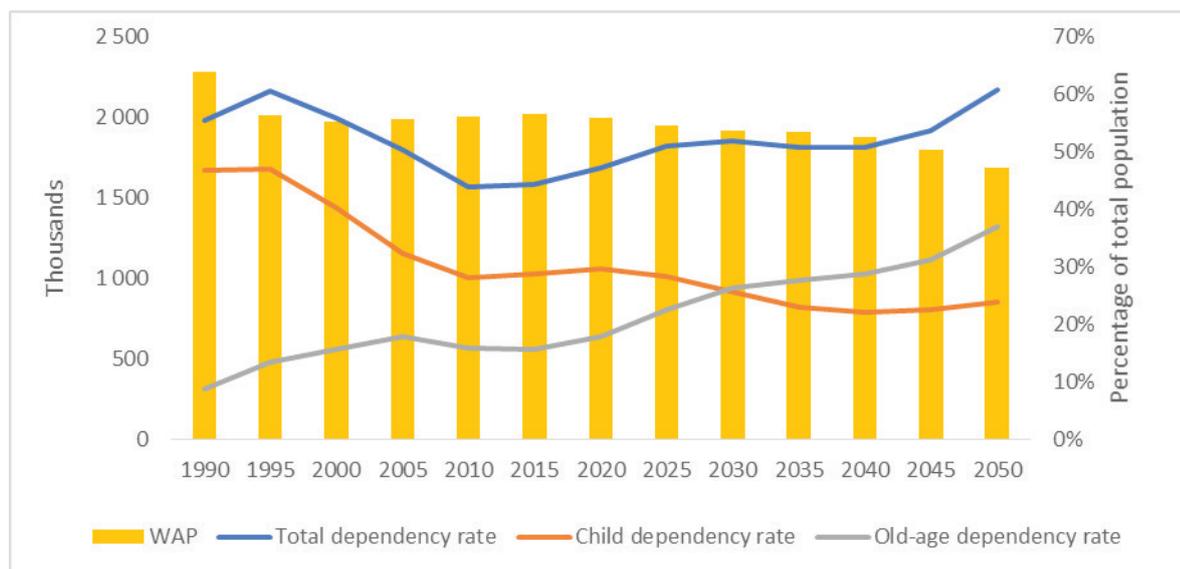
**An aging and stagnating population means that Armenia’s economy needs to offer more and higher-productivity jobs to maintain or increase the level of well-being of the population.** Demographic developments in the form of an aging and declining population raise the stakes of labor market challenges in Armenia. The overall population declined from 3.07 million in 2000 to 2.88 million in 2011, mainly due to outmigration, and increased slightly to about 2.93 million in 2017.<sup>8</sup> According to United Nations (UN) population forecasts, however, the population will decrease gradually to about 2.7 million in 2050. The population also is aging rapidly, with the number of elderly people (65+) increasing and the number of children falling, and the number of working-age adults will contract starting in 2020. The old-age dependency ratios—the ratio of the population ages 65+ to the working-age population (ages 15-64)—almost doubled, from 9 to 16 percent, between 1990 and 2017. Old-age dependency ratios are projected to nearly double again over the next three decades to reach 37 percent in 2050 (World Population Prospects database 2019). Hence, Armenia will need to prepare for the challenges posed by a stagnating and ultimately shrinking potential workforce and an increasingly elderly population, and which are exacerbated by high inactivity and outmigration. To counter these trends, labor force participation of the working-age population needs to increase, and the additional active people need to both find employment and in more productive jobs.

**Internal and external migration heavily influence Armenia’s demographic and labor market trends.** Following the independence, many Armenians left the country for good—for Russia and, later, for Europe and the United States. Migration has now shifted from permanent to temporary labor migration. Workers go abroad for short- to medium- term employment and return for some periods to Armenia. Workers from rural areas may make two to three migration trips each year, according to household surveys conducted by the Russian-Armenian University (2017).<sup>9</sup> At the same time, internal migration patterns give rise to differences in demographic trends at a regional level. Yerevan, for instance, is the receiver of significant internal migration while the population in all other areas is shrinking.

<sup>8</sup> Figures are based on World Development Indicators.

<sup>9</sup> Results are discussed in Yeganyan, 2017.

**Figure 2: Armenia’s demographic transition: population development including forecasts**



Source: World Population Prospects database (2019).

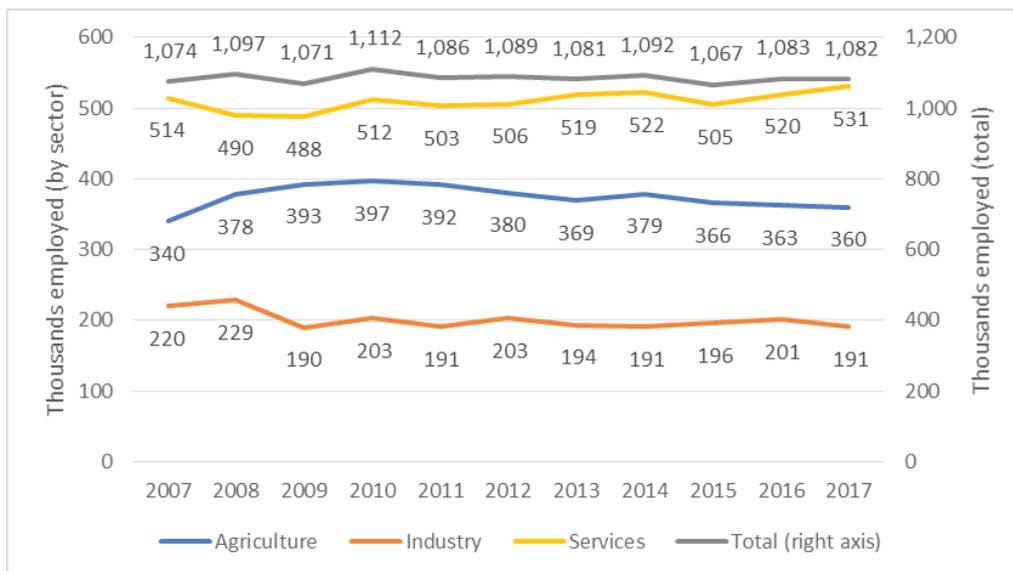
Note: WAP is working-age population.

**Employment levels have remained stable in the aftermath of the global financial crisis.** Unlike growth and poverty rates, employment levels have not fluctuated noticeably. Although per capita growth dipped below minus-10 percent in 2009, the employment to population ratio fell by only 2 percent in the same year and it more than recovered by 2010. Similarly, while jobs were lost in connection with the Russian crisis in 2014-15, they recovered by 2016. On a net basis, 38,000 jobs were created between 2007 and 2010, and 26,000 jobs were destroyed between 2010 and 2017. These numbers largely reflect the volatility during 2009 and 2010 and between 2011 and 2017; altogether, just over 5,000 jobs were lost during this time, representing a 0.5 percent decrease.<sup>10</sup> The apparently weak link between employment and poverty trends suggests that what matters is the quality of employment, especially in terms of earnings, rather than access to a job per se. Labor income, remittances, and social transfers (pensions and Family Benefit programs targeted to poor and socially vulnerable families) contributed to poverty reduction.

**The structure of employment has also remained relatively static.** Agricultural employment increased slightly in 2008-10, absorbing excess workers who lost jobs in the industry and services sectors in Armenia and abroad as a result of the crisis. The net increase in employment nationally between 2007 and 2010 is all due to agricultural jobs growth. However, agricultural employment receded again as the economy recovered after the crisis. Whereas value added increased significantly as a share of services, the structure of employment did not change in the post-crisis period. Jobs in services, measured at aggregate level, increased slightly after the GFC, as industry and agricultural jobs were lost. However, services accounted for about the same share of total employment in 2017 (49 percent) as they did in 2007 (48 percent).

<sup>10</sup> These are World Bank estimates based on ILCS data.

**Figure 3: The level and structure of employment have changed little over time, even during the crisis**

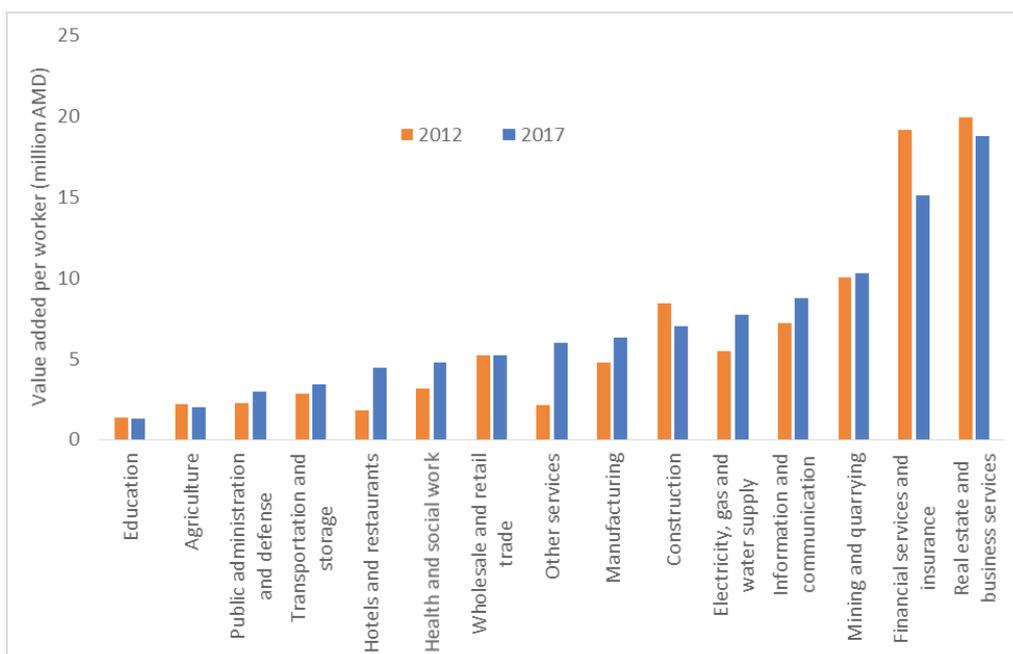


Source: World Bank staff estimates based on ILCS.

Note: The right axis shows total employment. The left axis shows employment by major sector.

**Labor productivity is highest in the services sector—but with significant variation—and lowest in agriculture.** The differences in the share of each economic sector in total employment versus total value added are reflected in differences in overall labor productivity (output per worker). Labor productivity levels in modern services sectors such as finance, insurance, real estate and business services are 8 to 10 times as high as labor productivity levels in agriculture. However, the services sector also encompasses low labor productivity (labor-intensive) sectors such as trade, transport and tourism. More surprisingly, public service sectors including public administration, education and health are also low productivity sectors.

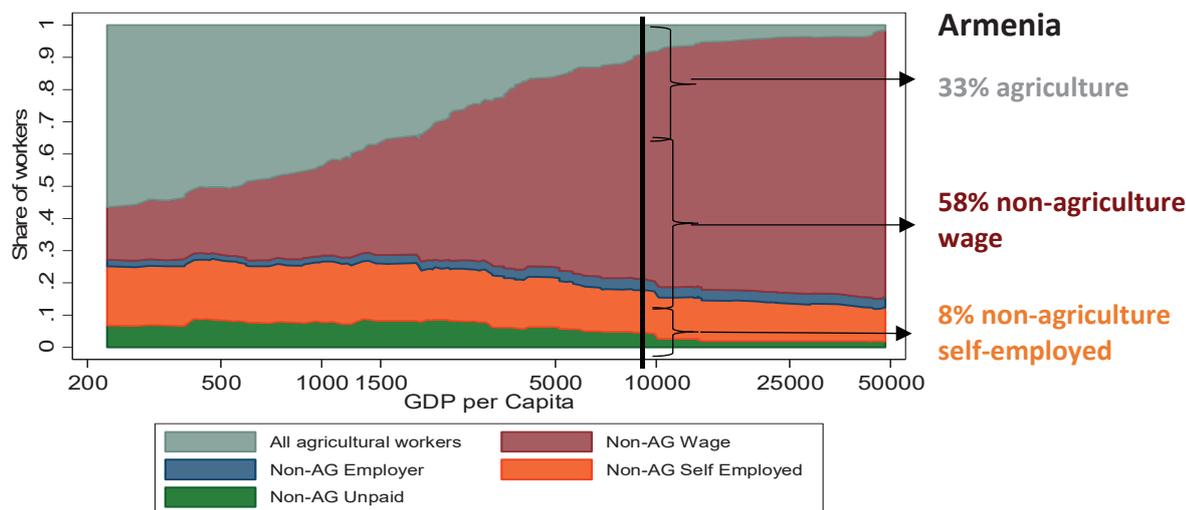
**Figure 4: Labor productivity is highest in modern services sector and lowest in agriculture and public sector services**



Source: World Bank staff estimates, based on value added from the Statistical Committee of the Republic of Armenia (Armstat; employment based on ILCS data).

**The structure of employment is transforming too slowly.** The share of employment in agriculture is high given Armenia’s status as an upper middle-income-country. At Armenia’s level of GDP per capita, countries typically only have about 10 to 15 percent of their workforce employed in agriculture, with the remainder employed as wage earners in the non-farm economy or as self-employed workers in the non-farm economy. In Armenia, 33 percent of all employed people are in agricultural employment, a level more typical of much poorer economies.

**Figure 5: Structural transformation and employment: share of workers by employment status and GDP per capita, 136 countries**



Sources: For shares of workers by employment status: World Bank I2D2 data; for share of workers in Armenia: ILCS 2017; for GDP per capita: World Development Indicators.

Note: The chart shows the relationship between GDP per capita and the distribution of employment by type of work (wage versus self-employment) and sector (agriculture versus non-agriculture) for 136 countries covering the years 1992-2012.

**Given the lack of significant changes in the employment structure, Armenia has not benefited from labor reallocation gains to support growth in value added and labor productivity.** As shown by a decomposition exercise of contributions to growth, labor productivity increases in mining, manufacturing, “other services” and public sector services drove the modest per capita growth after the GFC (2012-17).<sup>11</sup> Only a very small contribution to growth came from workers moving into more productive sectors, driven mostly by a net outflow of workers from low productivity agriculture and a net inflow of workers into modern higher-productivity services (finance and insurance, real estate, business services, and information and communication technology (ICT)). Armenia’s aging population is reflected in a small, negative impact of demographic changes while both employment and participation rates increased, contributing positively to overall growth.

<sup>11</sup> The “other services” sector includes arts, entertainment and recreation, other service activities, and activities of private households as employers.

**Table 1: Detailed Shapely decomposition of per capita value added growth 2012-17**

<b>Demographics, labor, employment</b>	<b>1.73</b>	<b>32%</b>
Change in employment rate	0.96	18%
Change in participation rate	1.33	25%
Change in share of WAP	-0.55	-10%
<b>Reallocation</b>	<b>0.51</b>	<b>9%</b>
Intersectoral reallocation	0.51	9%
<b>Within sector productivity</b>	<b>3.19</b>	<b>59%</b>
Agriculture	0.15	3%
Mining & quarrying + electricity, gas & water supply	0.51	9%
Manufacturing	0.67	12%
Construction	-0.34	-6%
Wholesale & retail + transportation & Storage	0.28	5%
Hotels & restaurants	0.23	4%
Financial & insurance + real estate & business services + information & communication	0.12	2%
Public administration + health + education	0.66	12%
Other services	0.90	17%
<b>Grand total (Per capita value added growth)</b>	<b>5.44</b>	<b>100%</b>

Source: Armstat data using the Shapely decomposition tool

## The environment for private sector development and job creation

**Armenia's economy is in the midst of a transition toward a market economy system.** Based on the 2014 European Bank for Reconstruction and Development (EBRD) Transition Index, Armenia is an intermediate reformer among transition countries, trailing behind most of the European Union (EU) member ECA countries, but ahead of most of the former Soviet Union states. A recent diagnostic undertaken by the World Bank shows that many of the socioeconomic challenges facing Armenia result from lagging private sector development, productivity and competitiveness (World Bank 2017).

**Armenia's investment climate needs to improve to foster sustainable labor demand from a more dynamic private sector.** Firm entry/start-up is not constrained, but firm survival, consolidation and growth are problematic. Entry rates (new firms as share of existing ones) are comparatively high in Armenia, at around 15 percent for 2014-17, suggesting that business start-up is not a significant problem per se. However, high exit rates in the same period (14 percent) suggest that new and smaller firms struggle to survive. Very few firms that start out small are able to grow into medium-size firms over time.

**Low international connectivity and weaknesses in the investment climate negatively impact the potential of private sector-led growth and job creation.** These weaknesses persist in critical areas such as corporate governance (World Bank 2017). Armenia is undertaking reforms to the business environment, but progress is slow in some critical areas. Armenia's potential to diversify and increase exports is held back by low physical connectivity, due to underdeveloped and poorly performing logistics systems. Access to finance is improving but the financial sector is still comparatively shallow and smaller firms tend to be excluded. Taxes rates and tax administration are cumbersome and rated by firms as the most severe obstacles. Resolving insolvency and getting construction permits are still difficult. Weak corporate governance frameworks, including the limitations in property rights and the lack of progress on competition policy, also render Armenia riskier and hence less attractive to foreign and domestic investors than many other ECA countries. Lack of competition in sectors that are essential to firms—transport infrastructure, utilities, Internet—also unduly increases costs to doing business.

**Skills gaps also hold back labor productivity and possibly job creation and growth** Results from the 2013 World Bank Skills Toward Employment and Productivity (STEP) employer survey indicated that many firms face constraints when attempting to hire employees for specific occupations (World Bank 2015). Skills gaps are widespread, in the sense that they apply across different occupations, whether manual or managerial, and across different educational paths, both technical and vocational education and training (TVET) and university education. These gaps are part of a wider story of low quality and inequity in education and training systems, as evidenced also in the low HCI index.

**Employment protection legislation, as established by the Armenian Labor Code and other legislative acts, is not overly strict by international standards, although some areas may need to be adjusted to encourage formal job creation.** A balanced labor market regulatory framework needs to protect workers' rights while also allowing for flexibility in the labor market in order to promote the creation of new businesses, the growth of established firms and job creation. ECA countries provide strong employment protection compared to other parts of the world (Bussolo et al. 2019), and overall, labor legislation in Armenia follows internationally accepted labor standards and norms governing the individual employment contract—notably International Labour Organization (ILO) conventions and recommendations—and are in line with those of other Commonwealth of Independent States (CIS) countries. Workers are protected by and large from employer abuse, regulations allow for some flexibility on the part of employers, and minimum wages are in line with international standards and hence not likely to limit job creation (for inexperienced youth or low skilled workers in particular). Labor regulation is not seen by employers as a constraint to doing business and firm growth (only 1.8 percent of firms report labor regulations as a major constraint to firm operation according to the World Bank-EBRD 2013).

**However, enforcement and compliance of labor regulations in Armenia are weak.** Rigid labor regulations matter only if they are enforced. However, Armenia does not have a functioning labor inspectorate. Consequently, it is not possible to effectively enforce core worker rights and minimum wages, supervise implementation of labor regulations, and provide technical assistance and advisory services to enterprises.

**Greater flexibility in the terms of contracts and working hours may foster more jobs.** Fixed-term contracts are prohibited for permanent and stable tasks. Allowing for such contracts, as is done in the majority of countries around the world, could contribute to job creation by allowing firms to cope with unexpected fluctuations of demand; replace permanent staff on holiday, maternity, or sick leave; hire workers with specialized skills to carry out specific, time-limited projects; and/or launch start-up ventures with risky and uncertain returns. Relaxing restrictions on the use of temporary or fixed-term contracts, especially for young or inexperienced workers, would improve incentives for firms to hire formal workers.

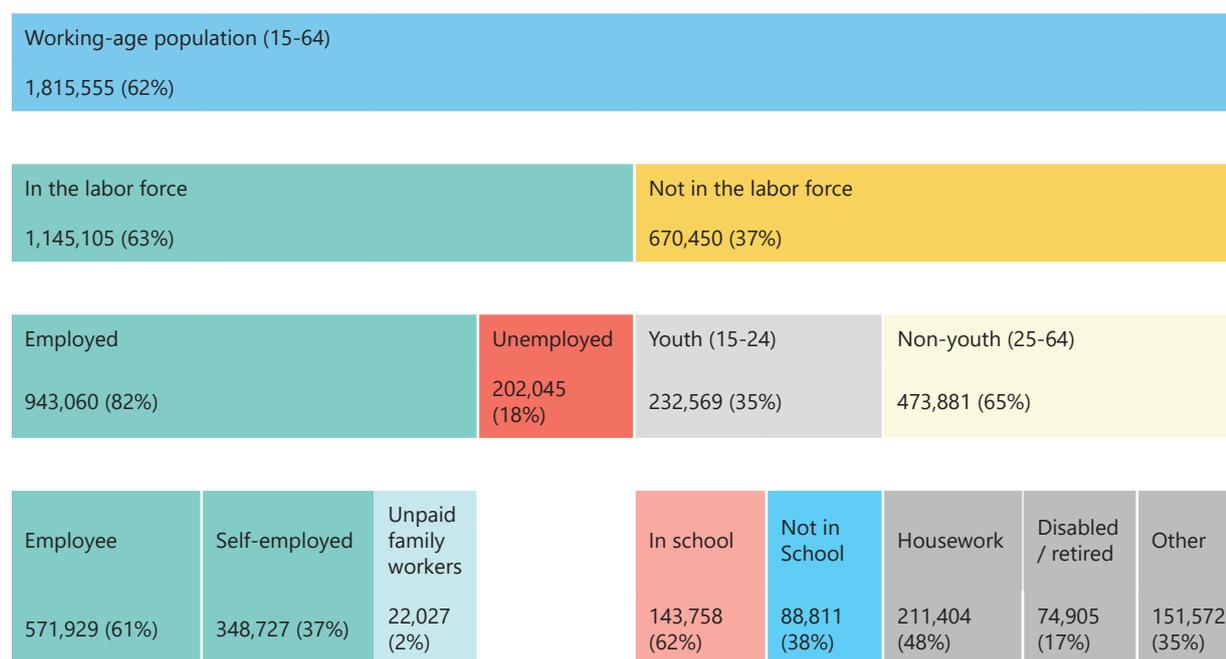
**Labor regulation lacks legal standards governing non-discrimination and equal pay.** In Armenia, women are entitled to the relatively long maternity leave of 140 days. While this is positive for the health of mothers and children, a long absence also can punish women in the labor market, especially in contexts where paternal leave is virtually unknown. Armenia, however, does not have legal provisions that stipulate equal remuneration for work of equal value irrespective of gender, nationality and other characteristics; nor is there explicit prohibition of gender discrimination in the labor law.

**Reforms are needed to shift the focus of the institutional framework from protecting jobs to protecting workers.** Armenia provides little unemployment protection to workers and offers a limited array of active labor market programs. Since there are no unemployment benefits, active labor market programs (ALMPs) remain the main instrument for protecting workers from long-term income losses. However, the supply of active labor market programs for job seekers and youth transitioning from school to work is limited.

## Main findings from the employment analysis

**Half of Armenian youth and adults lack a job.** Figure 6 provides a snapshot of the working-age population in Armenia in 2017.<sup>12</sup> Only 52 percent of the population ages 15-64 (or 82 percent of the labor force) had a job. With close to two out of five working-age individuals out of the labor force, activating people is clearly the greater challenge, although unemployment is also high, at 18 percent. The fact that young people do not work is not necessarily a problem if they are still studying and building up productive capacity for the future. However, two in five inactive youth (ages 15-24) are idle, meaning they are neither studying nor working. Inactive adults have largely opted out of the labor force because of household or family obligations, seasonal work, because they have given up hope of finding a job, or they are waiting for migration opportunities. Among those ages 15-64 who work, a majority are employees and receive a wage; two in five work for themselves or in a family-household enterprise.

**Figure 6: Profile of the working-age population, 2017**



Source: World Bank staff estimates based on ARM LFS 2017 data.

Note: Males ages 15-29 serving in the military are considered to be out of the labor force. "In school" refers to full-time education.

**Access to employment increased between 2007 and 2017 for both men and women.** Although the number of jobs remained quite stable, the share of employed people increased in the post-crisis period.<sup>13</sup> Data from the Integrated Living Conditions Survey (ILCS) show that between 2012 and 2017, the share of employed adults in the working-age population (the employed to population ratio) increased by 6 percentage points, as the working-age population had fallen faster than the number of jobs.<sup>14</sup> The share of women and men who held a job increased by 9 and 7 percentage points respectively. Spatially, employment creation was quite evenly distributed, with employment to population ratios increasing significantly in all Armenian regions except Gegharkunik.

<sup>12</sup> The detailed analysis is based on LFS data. However, these data are available only starting from 2014. To capture longer trends, data from the ILCS are used. Household surveys tend to capture more unpaid employment than do labor force surveys and, indeed, the total number of employed and the share of agriculture are higher in the ILCS than in the LFS for 2017.

<sup>13</sup> Because of the disruption to growth caused by the global financial crisis, the trend analysis focuses on the post-crisis recovery period.

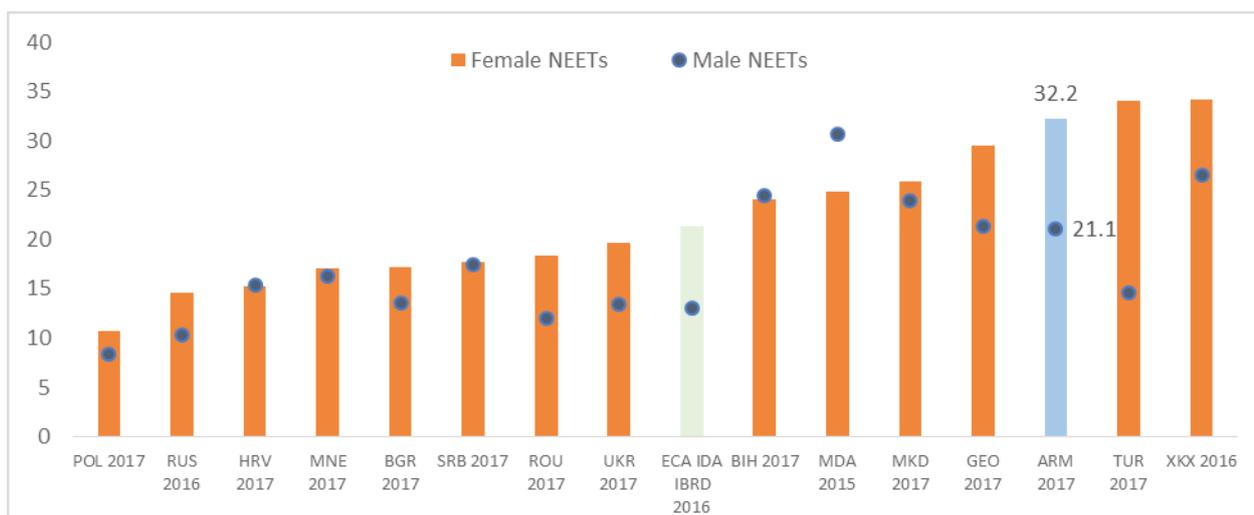
<sup>14</sup> UN population data and ILCS data are not consistent in terms of the peak in the working-age population (WAP); according to the ILCS, the WAP peaked in 2010.

**Women still lag behind men in labor markets, while gender and education levels are the characteristics most strongly linked to access to jobs in Armenia.** Multivariate analysis of access to employment taking into account gender, age, education and administrative division shows that individuals with tertiary education are most likely to be employed, especially in urban areas. Women in both urban and rural areas are approximately 16 percentage points less likely to be employed than men, even when education, age and location are taken into account.

**Too many youths fail to transition into work after finishing school.** The share of youth who are not in employment, education or training (NEET) is high in Armenia; more than one in four (27 percent) youth ages 15 to 24 were NEETs in 2017. In comparison, NEETs represent only one sixth of the youth population in the ECA region as a whole and even less in EU member countries of the region including Bulgaria, Poland and Romania.<sup>15</sup> If the age group is widened to ages 15-29, the share of NEETs increases to 33 percent, showing Armenia as even more of an outlier because its NEET rates exceed those of the Republic of North Macedonia, Serbia and Turkey.<sup>16</sup>

**The gender gap among NEETs is very high in Armenia and high compared to that of other countries.** About 32 percent of females ages 15-24 were jobless and not looking for work in 2017, compared to only 21 percent of males in the same age group—a gap of 11 percentage points. For the wider group of ages 15-29, the gap widens to 18 percentage points, with 42 percent of females jobless and not looking for work compared to 24 percent of males. For the former age group (15-24), the NEET gender gap in Armenia is the second-highest in the region, after Turkey (19 percentage points). Gender gaps in NEET rates in Armenia are especially high in rural areas and begin widening among young people at an early age.<sup>17</sup>

**Figure 7: NEET rates ages 15-24, Armenia and selected comparator countries**



Sources: World Development Indicators; for Armenia, World Bank staff estimates based on ARM LFS 2017 data.

Notes: Youth serving in the military are not considered NEET. According to World Development Indicators, “[y]outh are defined as persons ages 15 to 24 [...]. However, countries vary somewhat in their operational definitions. In particular, the lower age limit for young people is usually determined by the minimum age for leaving school, where this exists. When data are available for more than two age groups in a given year, one value for persons ages 15 to 29 is taken, considering that not all people complete their education by the age of 24.”

<sup>15</sup> The 15-24 age group is used here to refer to NEET youth because of greater comparability with data available for other countries. The figure for Armenia is based on LFS 2017 data; males who are serving in the military are not considered part of the working-age population for the purpose of this calculation. The source for ECA NEET percentages is World Development Indicators and includes only International Bank for Reconstruction and Development (IBRD) and International Development Association (IDA) countries for which 2016 data are available.

<sup>16</sup> These are based on Eurostat data. See the EU youth data database at <https://ec.europa.eu/eurostat/web/youth/data/database>.

<sup>17</sup> This represents the simple average for all comparator countries for which data are available.

**Family-household responsibilities largely fall on (married) women, keeping them out of the labor market.**

In the 15-29 age group, most female NEETs (54 percent) are homemakers or caregivers whereas most male NEETs (58 percent) are predominantly seeking work. Marriage and motherhood are associated with lower female labor force participation (World Bank (2017)). On the whole, men are much more likely to transition from school into work or active job search (unemployment), while women are more likely to drop out of labor markets altogether, especially in rural areas where family formation begins earlier. The share of inactive women peaks between the ages of 25 and 35, and exceeds 40 percent. Although the share of working women begins to rise after the age of 35, the gender employment gap remains significant. Even at the peak of female activity (ages 40-54), only 70 percent of women are active. By that time, women lack work experience compared to their male counterparts and are likely to have lost some of the human capital accumulated during their studies. For males, especially those ages 25-39, migration (going away, being away or having just returned) is a major reason for inactivity, whereas it is negligible for women. This means that the actual activity gap between men and women is even larger when migration is taken into account.

**Access to higher education is not sufficient to close the gender activity gap.** Individuals with tertiary education are much less likely to be inactive than those with secondary education only (22 versus 39 percent). The share of the Armenian population with tertiary education is higher for women than for men, and higher education significantly increases women's chances of being active, yet not enough to make the gender gap in activity or employment disappear.

**Youth unemployment is high.** Young people, presumably new labor market entrants who are lacking work experience, are much more likely to be unemployed than are older adults with the unemployment rate falling successively with age. One in three active youth (ages 15-24) is unemployed in Armenia, compared with about one in fourteen in Europe. On average, unemployment rates are similar for men and women and do not depend on education levels; however, young active women have higher unemployment rates than do men, whereas the reverse is true for older workers.

**The risk of remaining unemployed for a long time is high.** Unemployment in Armenia tends to be long lasting: a majority of the unemployed have been searching for a job for more than one year. Unemployment is a *structural* problem due to factors like skills mismatches, lack of labor demand and social norms that prevent especially women from taking up work. These long spells of unemployment may also explain the relatively high share of discouraged workers among the inactive—when finding a job takes too long, people become discouraged and given up looking for work.

**Limited work prospects at home in combination with established migration routes prompt more migration.**

More than one quarter of the population reports they are prepared to migrate to improve their job outcomes, and a majority of these would be prepared to move abroad. Unsurprisingly, those who are willing to migrate abroad are more likely to be unemployed, young, male and living in Yerevan; those who already hold a job are much less likely to want to move to a job in another location.

**Migration, especially temporary international migration for low-skill jobs in Russia, is a significant source of labor income in Armenia.** Estimates on migration differ. According to UN data, 32 percent of Armenians are living abroad. According to the 2017 Labor Force Survey, 12.3 percent of households had at least one working-age member who was absent from the household for three or more months and was living abroad because of his or her job. (i.e. a labor migrant). Temporary international migration is much more prevalent than internal migration. The importance of migration is illustrated by evidence that approximately 40 percent of inactive males were not looking for work because they had just come back from a migrant period abroad or will leave again shortly. Further, the typical international temporary labor migrant was male, had not yet turned 40, had only secondary levels of education and was working in Russia.

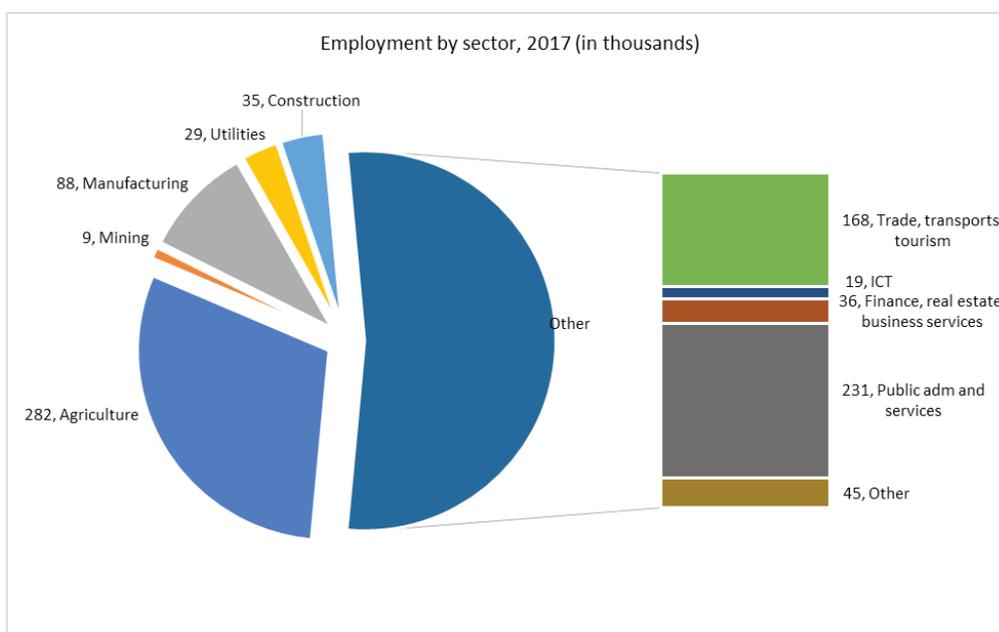
**Job creation is not enough; the quality of jobs also needs to improve.** Accessing employment may be a necessary condition to escape poverty in Armenia, but it is not a sufficient condition. Jobless individuals are at higher risk of poverty than those who are employed. Nevertheless, the differences are not as large as in more mature economies in Europe where the structure of employment has shifted more decidedly out of agriculture and small-scale and low productivity jobs and into jobs offering higher earnings and better working conditions in the modern private sector.

A “good” job is widely defined as one that offers sufficient, acceptable and secure earnings, decent working conditions and some protection against health and unemployment risks, and overall job satisfaction. Earnings are a key component of quality of work. Earnings can be too low because activities are poorly remunerated or because of underemployment, i.e. lack of sufficient hours of work in certain sectors and jobs. Earnings can also be too low relative to a worker’s investment in education. Other important aspects include job and income security, including a written contract stipulating job conditions and duration, as well as redundancy pay, health insurance, and acceptable working conditions in terms of hours and type of work. Although it is difficult to generalize, wage employment often offers more security than self-employment because wages, unlike self-employment earnings, are not directly related to profits over the short term.<sup>18</sup>

In Armenia, a *minority* of people work in the private, non-agricultural sector and very few people work in the modern services sector. Agriculture remains a significant employer in Armenia; only in Yerevan, Kotayk and Syunik regions does agriculture account for less than 40 percent of employment. As noted above, agriculture absorbs too many workers given Armenia’s income level. Although the agriculture share of employment has fallen over time, some 30 percent of the working population remain in the agricultural sector (Figure 8). In the services sector, most workers are in public sector-related employment such as public administration, education and health, which account for 29 percent of employment, or in trade, which accounts for 11 percent of employment. More modern services sectors such as ICT, finance, real estate, and professional and business services account for only 6 percent of total employment. Some 16 percent of the employed work in industry (8 percent in manufacturing and 5 percent in construction).

A *majority* work in sectors with lower labor productivity. Higher levels of labor productivity are important (although not sufficient) to ensure higher earnings. Agriculture, trade, transportation and tourism employ many people in Armenia but contribute comparatively less to its total value added, which translates into lower levels of value added per worker. Labor productivity in these sectors are only likely to increase if the workers leave them to take up work in higher productivity sectors such as manufacturing, ICT and modern business services.

**Figure 8: Distribution of employment by sector in Armenia, 2017**



Source: World Bank staff estimates based on ARM LFS 2017 data.

<sup>18</sup> Aspects of job quality include, among other things, pay, hours of work (as a match to workers’ need), future prospects both regarding promotion and job security, risk of physical and mental exhaustion or hazardous working conditions, job content (as a match with interests, perceived impact and so on), autonomy, and interpersonal relations at work. Most of these aspects are not measured in household-level surveys, however. For further detail, see Clark (2015), “What makes a good job? Job quality and job satisfaction.”

**Agriculture, the single largest sector of employment, provides the lowest earnings; modern business services, which employ very few people, provide the highest earnings.** Mirroring the pattern in labor productivity, most workers are employed in low earning sectors. Agricultural workers earn the least, by far, followed by market-based services sectors on the low-productivity end, i.e. trade, transports and tourism (Figure 9). Finance, ICT and mining provide the highest earnings.<sup>19</sup> The median earnings for a male working in the ICT sector are twice as high for a male working in the trade sector and five times the median earnings of a worker in agriculture. Public sector work also pays better than private sector work.

**Figure 9: Earnings in agriculture are significantly lower than in other sectors**



Source: World Bank staff estimates based on ARM LFS 2017 data.

Note: Figure shows monthly median earnings. Note that the gaps are likely larger than if only hourly wages are reported.

**Jobs that require intensive use of more advanced skills—typically those skills used in modern sectors—also pay better.** Jobs that require workers to spend time solving problems and learning new things pay more than jobs that consist of mostly routine tasks requiring very little adaption and flexibility.<sup>20</sup> Jobs that require contact with clients—presumably in the lower-paying services segment in trade and tourism, for example—pay lower wages, all else being equal.

**People with higher levels of skills and with higher levels of education earn more than low-skilled and less-educated people.** Investing in education at post-secondary levels pays off in Armenia. This relates in part to the large share of people with higher levels of education in the public sector, where, as noted above, wages also are relatively high. Median earnings for those with secondary levels of education amount to only 60 percent of the median earnings for people with higher-level education. People who work in jobs that require intense use of advanced analytical skills such as problem solving, creativity and learning, –and people who are disciplined and tenacious, are likely to earn more. Since both education and skills acquisition more broadly are related to family background, young people from poorer families have less chance to access better jobs.

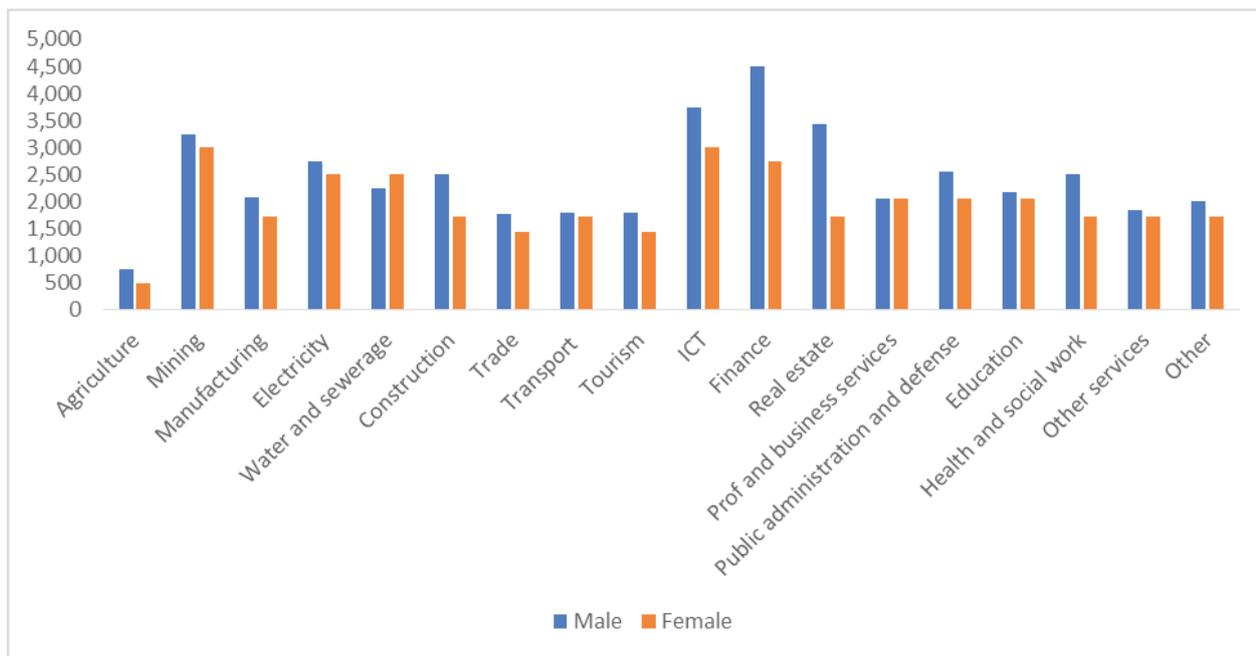
<sup>19</sup> Due to small sample size, the earnings levels for the real estate sector are highly unreliable, however.

<sup>20</sup> These findings are based on the 2013 World Bank STEP survey, in which cognitive, socioemotional and technical skills are measured directly in the Armenian (urban) population. See section on better jobs in Armenia for more details.

**Armenia’s gender wage gap is not only large, but also the result of different returns to education.** Not only do women have less access to employment and are more likely to work part time, they also are paid less when they do work. The World Bank’s Systematic Country Diagnostic noted that the gender wage gap in Armenia is among the largest of ECA countries and that the gap is due largely to *different returns* to education rather than *differences in characteristics*, including education.<sup>21</sup> Indeed, in all sectors and across education levels, women earn less than men. This is especially the case for higher-earning individuals. Differences in skills, directly measured, do not explain why women are less active than men in Armenia, however, as women do *not* differ significantly in skill levels compared with men.

**The gap in earnings between men and women is higher at the top, particularly in modern, private, market-based services and for workers with tertiary education.** It is noteworthy that income gaps between men and women are more significant in the higher-earning services sectors than elsewhere. In real estate, median female earnings are half those of men in ICT, women’s median earnings are 80 percent of those of men. A comparison of mean wages of men and women shows much more significant differences suggesting that male workers tend to account for the high-end (high-wage) outliers. The earnings gap between men and women with tertiary education is significantly higher than between men and women with secondary education (Figure 10). These factors may combine to reduce incentives for women to become active, even when they have higher levels of education.

**Figure 10: Significant gaps in wages by gender**



Source: World Bank staff estimates based on ARM LFS 2017 data.

Note: The chart shows median monthly wages in Armenian drams.

**Low earnings are also related to involuntary employment.** One in four workers overall (24 percent) work part time; the share of women working part time (33 percent) is double that of men (17 percent). When asked, 40 percent of part-time workers and even 12 percent of full-time workers respond that they would like to work more if given the opportunity.<sup>22</sup> A significant share of underemployment in Armenia, therefore, is involuntary and a consequence of high seasonality in jobs and/or lack of labor demand more generally.

<sup>21</sup> This is confirmed by Mincer regressions for the LFS 2017: Even when age, industry, gender and level of education are taken into account in multivariate analysis, the gender wage gap persists.

<sup>22</sup> World Bank staff estimates based on ARM LFS 2017 data.

**Although job security cannot be directly measured, the high share of self-employment suggests it is quite low.** Self-employment is high in Armenia, especially in rural areas. About three in five jobs (61 percent) are wage employment jobs. This is significantly lower than in ECA as a whole, where more than 80 percent of the employed are wage employed, and reflects the continued significance of agriculture for jobs. In rural areas, a majority of those working are working for themselves and the vast majority of these are working as farmers; only 4 percent of agricultural workers work for an employer other than themselves.<sup>23</sup> Self-employment is also fairly prominent as a share of total employment in construction (48 percent), trade (37 percent), transportation (30 percent) and other services (33 percent). In the remaining industry and services sectors, wage employment generally makes up 90 percent or more of total employment. Self-employment can be a very heterogeneous category, encompassing both high-growth entrepreneurs and subsistence work. The vast majority (over 90 percent) of self-employment in Armenia is own-account work, i.e. people are working for themselves and have no employees. This suggests this work is of a small-scale, subsistence nature, rather than truly entrepreneurial activities.

**The share of informal work is relatively low in Armenia, at least in non-agricultural wage employment.** About 13 percent of wage employees do not have a written contract and do not have access to any form of benefits relating to paid leave, redundancy, childcare or sick leave. If all the self-employed are considered to be working informally and the informality rate of the wage employed is taken into account, the total informality rate of work in Armenia is about 46 percent. Again, the high share of agriculture influences the picture. Since non-agricultural sectors have much higher shares of wage employment than does agriculture, the overall level of informality is limited in these sectors. The informally employed have lower levels of education than all workers, on average, but there are no significant differences in the proportion of men versus women in informal work.

**Raising productivity is necessary to improve jobs quality in Armenia, and this requires continuous human capital development and an appropriately skilled workforce.** Having post-secondary levels of education is clearly linked to accessing better jobs in Armenia, but skills are not necessarily the same as education. Skills—the ability to perform a task well—are built during early childhood and developed during school and extra-curricular activities and through work experience. Skills, in consequence, depend not only on an individual's innate ability, but also very much on the functioning of the overall skills development system. Education systems should help students develop broad skills sets, including both cognitive (analytical, problem solving) skills, socioemotional (soft) skills, and specific technical skills needed to perform job-related tasks such as driving a car, operating machinery, or performing eye surgery.

**There is evidence of skills gaps in Armenia that are likely slowing down job creation.** The skills development system suffers from quality problems in Armenia (World Bank 2015). A majority of employers report that education systems are not delivering the necessary skills, with modern and outward-oriented firms more critical than others of these gaps, and hiring firms report they cannot find workers with adequate skills (World Bank 2015). At the same time, one in five workers consider themselves over-educated, and thus mismatched, for available jobs. This indication of job dissatisfaction is highest in the low-productivity services sector; higher among youth than older workers; and much higher among workers who have either a vocational or professional education than among those with a more general tertiary education (World Bank 2015). Taken together, these findings further illustrate weaknesses in the quality and labor market relevance of the skills development system in Armenia. Other analysis suggests that a lack of information contributes to the problem, with another gap between the skills that youth perceive to be in demand and the actual skills needed in the labor market (Save the Children, 2018).

**Since skills pay off in terms of better jobs, it is important to increase access to quality education for all.** Individuals from families of higher socioeconomic status or whose parents have higher levels of education have, and have access to, jobs that are more skills-intensive, involving for example problem solving, learning skills, computer skills and reading. The skills gap, then, may in part relate to unequal access to quality schooling. Indeed, Bussolo et al. (2019) suggest that the learning gap in Armenia between rural and urban

<sup>23</sup> Self-employment encompasses employers, own-account workers and unpaid family workers. The vast majority (over 90 percent) of self-employment in Armenia is own-account work, i.e. a person working for himself or herself without employees.

areas is among the highest in ECA. Not only overall quality but also labor market relevance and practical orientation need strengthening. There is a persistent gap between what priority sectors such as information technology (IT) and tourism need and what training systems are producing.

**Continued learning and skills upgrading also require continuous training of workers.** In Armenia, modern firms are more likely than other firms to provide training to their workers. However, only a limited share of workers overall receive training. This reinforces the continued path dependence of skills development: those with skills get more skills. At the same time, workers place very limited value on training, which suggests that they, too, are unaware of the importance of continuously developing skills so as not to lose relevance in the labor markets.

## Four challenges and five solutions to productive job creation in Armenia

The jobs diagnostics make it possible to distill four key challenges for Armenia in terms of creating more jobs, more productive jobs and more inclusive jobs:

- 1. The economic growth model has not been creating enough jobs, or enough good jobs, for the labor force.** Job creation has overall been slow and even negative at times, and has not occurred in sectors that offer higher labor productivity or labor productivity growth. To sustain the welfare levels of the country's aging population and to avoid increasing unemployment, Armenia's economy will need to create about 8,000 new jobs per year between now and 2030 to absorb new labor market entrants and increase labor force participation to 75 percent. To achieve this, Armenia faces significant challenges in breaking away from the current trends of stagnation or even job destruction.
- 2. Armenia lacks a dynamic, modern private sector that could facilitate the transition of workers from lower- to higher-productivity jobs.** The structure of employment has not shifted from lower productivity to more productive sectors. The modern private sector is not big enough to create the labor demand needed to facilitate such a transition. Consequently, there are not enough so-called "good" jobs in Armenia that offer sufficient earnings, economic returns to education and worker protection. Too many people are still working in low-productivity sectors such as agriculture, trade and transports and in non-wage jobs. Limited innovation, international integration, economic diversification and competition hold back Armenia's dynamism.
- 3. Inactivity is high—higher than Armenia can afford, given its shrinking working-age population.** Women and youth are disproportionately affected by inactivity. The underlying reasons are complex and vary among different groups. Social norms assign to women the responsibility for childcare, elderly care and overall household duties. A sizeable earnings gap between men and women, especially among higher-educated workers and in higher earning sectors, also acts as a disincentive for even educated women to enter job markets. At the same time, high, and principally male, temporal outmigration may leave many women as de facto single mothers. For men, circular and/or seasonal migration is a major factor for inactivity spells. Young people end up slipping into inactivity after school because of lack of job prospects and lack of information and job search assistance. For young females, early family formation and the unequal division of household work also play an important role in raising inactivity rates.
- 4. Skills mismatches and skills gaps affect job creation and job satisfaction, especially among youth.** There is strong evidence of mismatches: one in five workers consider themselves over-educated relative to the requirements of their jobs, according to the STEP household survey, and other similar skill surveys further indicate that a much higher share of mismatches between workers' education and their jobs exist among youth. These mismatches point to human capital waste. Skills gaps also are evident, with firms in Armenia reporting that they find it difficult to hire workers because applicants lack skills, according to the STEP employer survey. Firms expressed particular skepticism about the skill levels of young university graduates and training capacity of education and TVET systems. More productive firms, firms with international linkages and firms that are innovative experienced more skill gaps – i.e. firms that are more likely to provide "better" jobs under improved business conditions – experienced more serious skill gaps when recruiting than others.

What can be done to meet these challenges? How can Armenia improve the quality and quantity of jobs as well as the ability of workers to access available jobs? Here are five solutions:

- 1. Increase labor demand by improving the enabling macro and business environments for firms to start up and to grow and create more jobs.** Armenia's growth model needs to shift from one that relies on domestic consumption to one that relies on productive investment and diversified exports. Stimulating foreign direct investment (FDI) and domestic capital investment in labor-intensive sectors with a potential for labor productivity growth and in higher productivity sectors with a potential for job creation, would help make growth less dependent on remittances and domestic consumption. One such example is the agribusiness sector which labor intensive and offers opportunities for diversification out of agriculture and links to global value chains. This will require concerted efforts to integrate Armenia in the international economy and help diversify its exports, in terms of products, services and trading partners. Further reforms are needed to make Armenia attractive to invest and work in, especially in terms of improving corporate governance, reforming tax policy, and improving the depth and inclusiveness of the financial sector. Carefully targeted reforms labor regulations could serve to stimulate job creation without unduly increasing workers' risk – in particular, allowing fixed-term contracts for permanent tasks, as most countries currently do. Finally, investment incentives as well as population welfare also depend on sustainable policies for public debt. Armenia's population is aging, adding burden on the pension system. The recent reform of the system needs to be accompanied by further development of capital markets and policies to expand coverage.
- 2. Promote job creation in more productive firms and raise productivity in low productivity sectors.** Policies need to address constraints across the spectrum of jobs, from encouraging job creation in high growth firms, to promoting productivity in agriculture at the other end. On the one hand, sectors with higher potential for creating high-skill jobs, in particular ICT, business services and industry, can be targeted with fiscal incentives for research and development, exports, training, financing, and so on. Sectors and firms with lower productivity levels, which typically include small firms, need access to innovations in technology and organization, higher connectivity to local and foreign value chains, and means of accessing skills upgrading and business development services. Different subsidies may be needed to transform self-employment from low productivity distress work to productive entrepreneurship, for example by providing flexible and targeted training to improve technical skills and business practices and increase access to business networks. Similarly, agricultural jobs, which likely will continue to absorb many workers for the foreseeable future, can become more productive if they are linked to commercialization and have upstream and downstream linkages to industry and services. For agriculture, as indeed for other sectors, better physical and communications infrastructure is necessary to increase competitiveness.
- 3. Encourage labor force participation, especially of women.** From a long-term perspective, Armenia already is trying to promote more births through monetary incentives ("birth grants") and community campaigns. Over the shorter term, institutionalizing quality childcare services would address several problems at once: the lack of early childhood education as an essential component of skills development, the cost of childbearing, and the burden on women to balance family responsibilities and work. Such initiatives may also give rise to a formal care industry that can both help reduce the demographic burden and provide employment opportunities for women in the lower skill segment, and at a decentralized level throughout Armenia. In addition, community campaigns to highlight the monetary benefits of women in work, provide role models of women in less traditional (and higher-paying jobs), and demonstrate involved and nontraditional fatherhood could help activate women to enter the labor market. Labor market regulations could also be strengthened to allow for the splitting of benefits between parents and to address discrimination in pay and working conditions that may affect women's incentives to participate. Low income groups also need specifically targeted activation policies. Recent reforms of the social assistance program has been undertaken to reduce work disincentives imposed by the program, but the beneficiaries need to be better targeted by activation or employment initiatives, e.g. through the State Employment Agency's (SEA) programs.

Finally, it is important to reduce the high number of NEETs, which represents wasted human capital. This means investing in quality education, increasing students' exposure to the world of work, and assisting with career guidance and job search. Doing so will also require building up a labor market information system that can help firms, students, schools and policy makers identify current and future job opportunities and challenges.

- 4. Facilitate worker mobility into better jobs (across sectors and geographical areas).** Investment is needed in job-matching policies, as information asymmetries prevent good matching in labor markets. At a systemic level, upgrading and expanding Armenia's labor market information system in line with industrialized economies would help support integration of employers, education institutions, public policy makers and labor market institutions, students, workers, and job seekers. Significant experience of building up such systems now exist, including in ECA countries, that Armenia could draw on. Specific suggestions include data on supply and demand for skills and occupations (student and firm surveys, graduate tracer studies), and a job portal linking job seekers to vacancy database. At the program level, the SEA needs capacitation and empowerment to provide efficient employment services in order to both increase job creation and make the process more inclusive. This includes more training and higher specialization of the SEA staff to provide counselling, profiling etc., and better coordination with potential employers in the private sector. Finally, rather than attempting to curb migration or focusing on encouraging (permanent) return migration, Armenia could maximize the benefits of circular migration by lowering costs and risks. This would involve facilitating access to information about jobs and skills in demand abroad, targeted training in relation to demand patterns, strengthening networks, developing transparent migration regulations, and ensuring transferable pension and other benefits where applicable. Armenia could also reach out to its sizeable diaspora and return migrants to investigate what determines successful establishment abroad as well as successful return to Armenia.
- 5. Invest more in skills development, skills upgrading and life-long learning to increase worker productivity, mobility, earnings and overall job satisfaction.** Investment in human capital affects workers' ability to move into better jobs. As emphasized throughout this overview, investments in human capital are overdue in Armenia and the quality and relevance of education and TVET systems, in terms of building a productive and competitive workforce, need immediate attention. This starts with high quality early childhood development interventions which can provide the basis for the development of foundational cognitive and socio-emotional skills needed throughout life. Educational institutions need an overhaul in terms of curricula, quality standards, teacher training, and collaboration with the private sector including sectors that have a potential to create more and better jobs (ICT, financial and business services). The concept of labor market relevance also goes beyond technical occupations. Occupational and sectoral forecasts are important to understand future demands for technical skills, but it bears remembering that disruptive technological shifts also are creating a high level of uncertainty. In this context, more efforts are needed to build transversal skills that help workers quickly learn and adapt to new tasks. These skills include the ability to retrain, learn, create ones' own solution to different problems, communicate complex findings and to speak different languages. Stronger linkages are needed between the private sector and education institutions through collaboration on curricula as well as workplace-based training. As the work force is aging, Armenia also needs to focus on learning opportunities throughout adult (working) life. Firms need to be informed (and possibly incentivized) to continuously provide training to staff to upgrade skills.

## Introduction

**Job creation, human capital investment and effective labor market inclusion are top priorities in the Program of the new government, adopted in February 2019.** This report provides an updated analysis of the enabling environment for job creation in Armenia, describes the key labor market challenges and identifies potential solutions, with the aim of informing and facilitating a productive policy dialogue with government counterparts on short-term and medium-term policies to improve jobs outcomes. The report also aims to inform the development of the new Labor Market Strategy 2019-24 and the recently-launched Work, Armenia! initiative to coordinate efforts to promote employment by different ministries, government agencies, educational institutions and employers.

**This report aims to tackle key questions.** Is the macro environment, the business climate and regulatory framework (including labor regulation) conducive to (formal) job creation? What constraints exist to the expansion of a productive, innovative and export-oriented private sector? How does the employment structure need to change to accommodate the demographic shifts and mitigate the risks of an aging society? How best can the human capital potential of the current high share of inactive people be exploited? Is the transition of workers from lower to higher productivity sectors happening and how can it be facilitated? To what extent are employment outcomes due to information asymmetries and skills mismatches between what firms demand and the skills produced by the formal education system, the technical and vocational education and training (TVET) system and adult professional training? Finally, what policy reforms can improve jobs outcomes?

**To respond to these questions, this report draws on the several data sources.** For the analysis of macro, aggregate labor productivity, demographic and poverty trends, the report draws on value added data from the Statistical Committee of the Republic of Armenia (Armstat). Population data come from the United Nations (UN) Population Division. GDP growth and poverty data are from the World Bank World Development Indicators (WDI) database. The analysis of labor supply draws on the latest (2017) Labor Force Survey (LFS) for the snapshot and on several rounds of the Integrated Living Conditions Survey (ILCS) for trends analysis.<sup>24</sup> The analysis of firm-level constraints to grow and create jobs is based on different data sources. These include the Enterprise Survey 2013, up-to-date Doing Business and European Bank for Reconstruction and Development (EBRD) indexes, the World Bank's Skills Toward Employment and Productivity (STEP) employer survey of 2013, and five rounds of firm-level data from the State Revenue Committee (SRC) for the years 2013-17. The firm-level data received by SRC refer to all registered firms between 2013-17. Information is available by sector, legal type, region, number of employees, salaries and revenues. However, these data have serious limitations and an outsized number of missing values for many key variables of interest for this report, including the number of employees and sales of firms. In 2017, only 31 percent of registered firms reported information on the number of employees and only 8 percent reported the volume of their sales. Consequently, neither a representative analysis of jobs flows (creation and destruction) nor firm productivity analysis could be done. The SRC firm-level data were used only to analyze the firm entry and exit rate.

**The report brings together previous analytical work and new analysis in a coherent framework to provide a comprehensive policy relevant analytical package for the Armenian Government and other stakeholders.** New analysis includes an updated analysis of labor supply and of labor productivity and the links with recent overall macro and global trends. The report also builds on a considerably body of work undertaken to inform the Armenia Systematic Country Diagnostic (World Bank, 2017), Drivers of Dynamism (Bartsch and De Rosa, 2015), and on previous analyses of the STEP household and employer surveys (World Bank, 2015; Valerio et al., 2015). Important knowledge gaps remain, especially for understanding the demand side of jobs. These include an analysis of jobs dynamics (job creation, destruction, reallocation effects) by firm characteristics to better identify the characteristics of job-creating firms, and an analysis of firm-level productivity to identify drivers of and constraints to firm growth. These analyses require access to either a nationally representative enterprise survey with accounting data and data on employees or to a comprehensive business registry with complete information on number of employees, sales, capital investment and input costs. The new Enterprise Survey data, planned to be fielded in the coming months, will contribute to filling the knowledge gaps.

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<sup>24</sup> Comparability issues and data caveats are signaled and described in respective sections of the report.

**The report begins with an overview, followed by this introduction and five sections.** The first section describes the context for job creation by presenting recent patterns of economic growth, drivers of growth, poverty reduction, demographics and migration trends, labor productivity, and employment growth over time and by economic sectors. The second section describes the business environment for firms to start up, grow and create jobs, and provides an overview of the labor regulations embedded in the main labor laws, benchmarking the main parameters and identifying the extent to which the employment protection legislation is conducive to a balanced job growth. The third section presents a profile of labor supply—specifically who is working and who is not working, over time and based on the latest available data with a focus on job inclusiveness. The fourth section discusses different aspects related to jobs quality (level of earnings; income security and the level of worker protection against health, unemployment and old age risks; and skills mismatches) and which skills matter to access good-quality jobs. The final section gives an overall brief summary of the analysis and a discussion of policy reforms that can improve jobs outcomes to further guide the development of a jobs action plan.

## Structural and macroeconomic context

### Key messages:

- *Armenia's post-independence growth streak was interrupted by the global financial crisis and remained sluggish until 2017. Poverty levels have largely followed growth trends.*
- *The structure of production (value added) underwent a transformation away from agriculture and to industry before the global financial crisis and to services after the crisis.*
- *Armenia faces a challenging demographic situation due to falling fertility rates, aging of the population and large outmigration, all of which put pressures on productive job creation.*
- *The structural transformation away from agriculture has not translated to higher net job creation or a transformation of the structure of jobs.*

### Introduction

**After some years of turmoil following independence in 1991, Armenia achieved solid economic growth that propelled it into a middle-income country.** The collapse of the Soviet Union and the centrally planned economy led to some initial contraction of GDP in the early 1990s. However, GDP per capita (measured in constant 2001 international dollars at purchasing power parity \$) increased more than fourfold, from \$2,000 in 1994 to \$8,800 in 2017. Most of this growth happened during the boom years in the early 2000s. After the global financial crisis (GFC), Armenia went through some years of stagnation, although growth picked up in 2017 and 2018.

**Over a longer timeline, Armenia has undergone a structural transformation process away from low productivity agriculture and toward an economy with a larger services sector.** Since the beginning of the 2000s, there has been a continuous shift away from employment in agriculture. Employment in industry, especially the construction sector, expanded during the boom years. However, following the GFC, employment in industry declined in favor of an increasing number of jobs in the services sector.

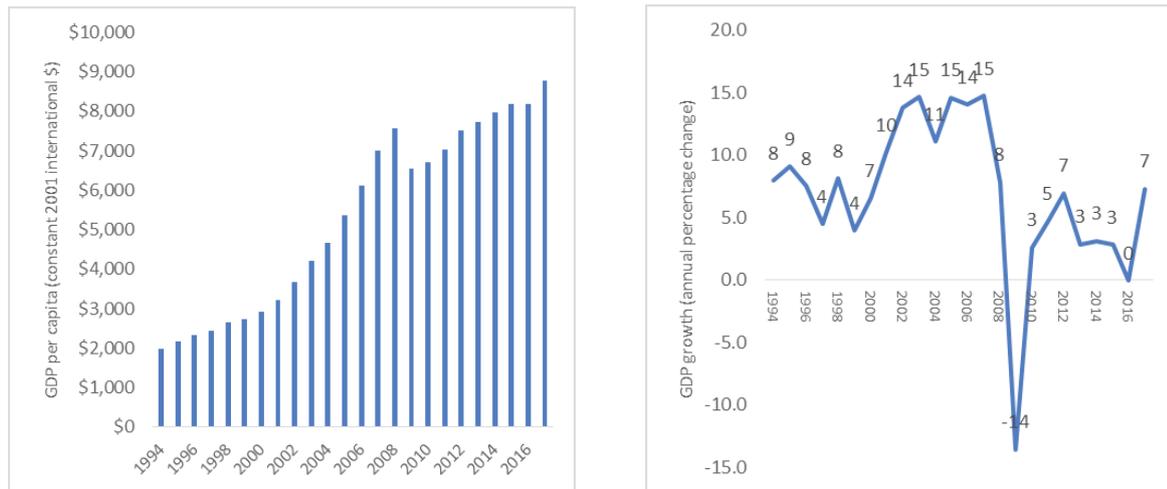
**Low fertility combined with high levels of outmigration are driving a rapid demographic transition in the country.** Fertility in Armenia is below the replacement level, leading to the aging of the population. High levels of outmigration are further reducing the size of the labor force. Although emigration has declined in recent years, it continues to affect the economy. The number of people of working-age is stagnant, and soon will decline, and the number of elderly dependents is increasing, creating significant pressures on the ability of Armenia's economy to sustain welfare.

### Economic growth and structure

**Armenia enjoyed a strong growth record between its independence in 1991 and the global financial crisis in 2008.** After some initial years of turmoil following independence in 1991, the country managed to restore macroeconomic stability, which led to the resurgence of economic growth from 1994 onward. Starting in 2001, the country's growth rate accelerated as a result of burgeoning copper exports and significant FDI inflows that fueled demand in the economy. Over the period of 2002 to 2008, the average growth rate in GDP per capita was an astonishing 12.3 percent (Figure 11).

**Armenia was hit hard by the global financial crisis in 2008 and the Russian crisis in 2014-15, which led to sharp reversals in growth.** As Figure 11 shows, the country experienced a major recession in 2008, with the economy shrinking by about 14 percent. This sharp downturn was driven by a slump in commodity prices that impacted the country's export base and a halt in financial inflows from FDI and remittances. Although growth subsequently picked up, it did not recover to pre-crisis levels, and Armenia was hit again in 2014 by the spillover effects of the economic crisis in Russia, Armenia's main trading partner. GDP growth picked up again in 2017, reaching 7.5 percent; it is estimated GDP remained high in 2018, at 5.3 percent. While on average, economic growth reached 4.2 percent between 2010-17, this is significantly lower than before the Russian economic crisis.

**Figure 11: Growth in Armenia**

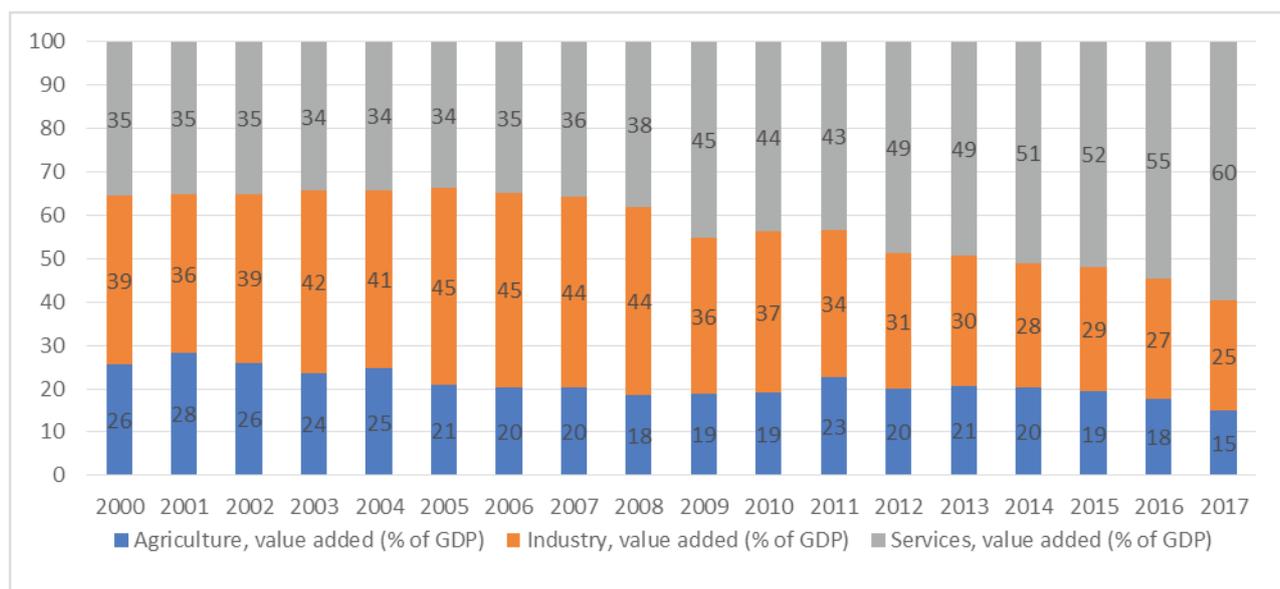


Source: World Development Indicators data.

During the boom years, the country’s sectoral composition of GDP shifted toward industry while services gained importance following the GFC. In 2001, 35 percent of Armenia’s GDP was attributable to services, 36 percent to industry and 28 percent to agriculture (Figure 12, panel a). At the height of the upsurge and just before the crisis, the share of industry in GDP had increased to 44 percent, mostly at the expense of agriculture. This reflected the impact of a construction boom on the economy and the accompanying stagnation in agricultural production. In the wake of the GFC, industry’s share of GDP plummeted from 44 percent in 2008 to 36 percent in 2009, as the construction sector collapsed. In the post-crisis era, industry continued to rapidly decline and reached 25 percent of GDP in 2017: a drop of 19 percentage points in less than a decade. At the same time, services expanded. In the post-crisis period, a more detailed level<sup>25</sup> analysis shows that per capita growth was driven largely by labor productivity increases in mining, manufacturing, other services (e.g. arts, entertainment and gambling), and public sector services.

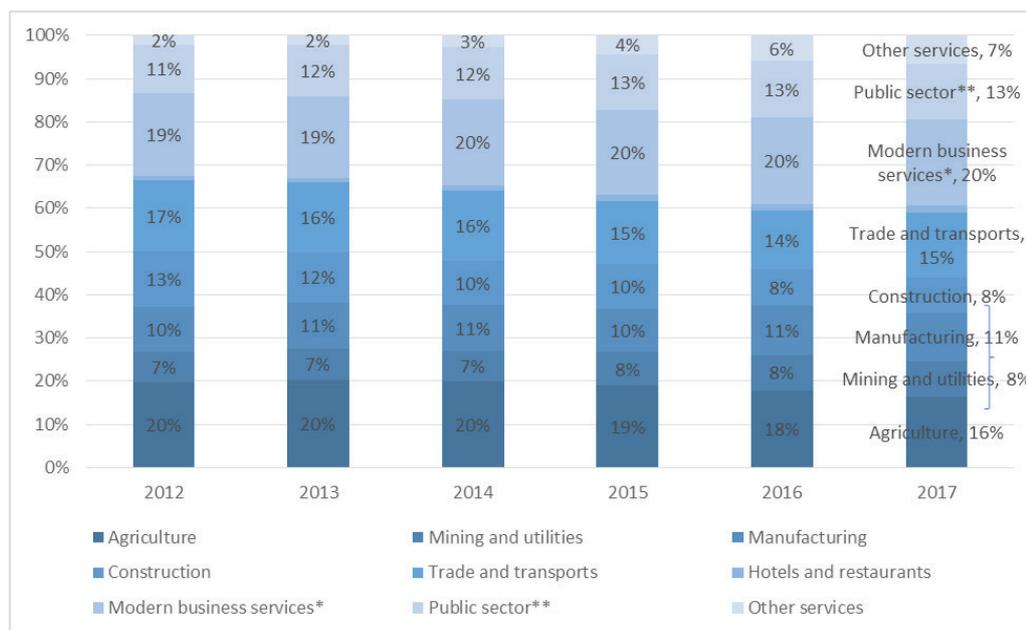
**Figure 12: The share of services in GDP has steadily expanded**

a. Primary sector decomposition



<sup>25</sup> Detailed and consistent data on value added are available only for the 2012-17 period from Armstat.

b. Detailed sector composition, 2012-17

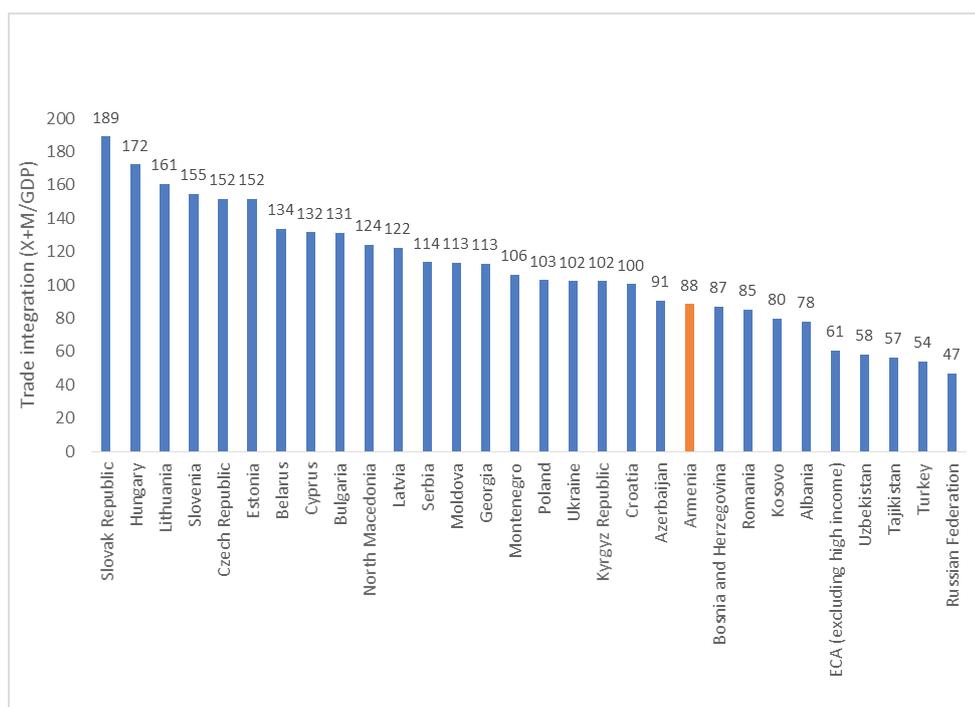


Source: For panel a: World Development Indicators; for panel b: Armstat.

Note: \*Financial and insurance + real estate and business services + information & communication; \*\*Public administration + health + education. Data inconsistencies are due to the different data sources used.

**For a small economy, Armenia is insufficiently integrated into global trade, in comparison both with its neighbors and with the regional average.** In 2016, Armenia’s trade integration (measured as exports plus imports over GDP) was 88 percent (Figure 13). While this figure indicates an open economy, Armenia still lags behind its neighbor Georgia, whose trade integration is 113 percent, and the region’s top-three performers, the Slovak Republic, Hungary and Lithuania.

**Figure 13: Armenia’s trade integration in comparative perspective, 2017**

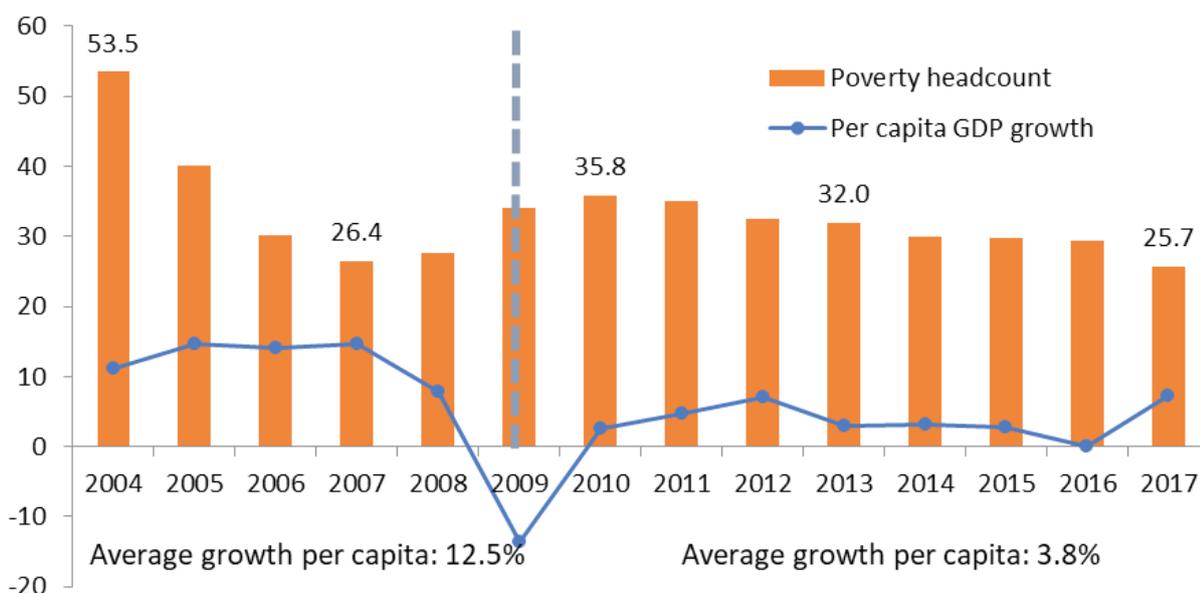


Source: World Development Indicators data.

**Although Armenia’s export base is more diversified than it was during the boom years, it remains centered on only a few product categories.** In 2016, Armenia’s main exports were commodities, with mineral products (36 percent), metals (12 percent) and precious metals (11 percent) making up more than half of all exports. Agricultural products made up a large proportion of exports, led by tobacco (10 percent), alcoholic beverages (10 percent), fruits and vegetables (3 percent), and animal products (3 percent). With the exception of textiles (6 percent) and machinery (2 percent), manufacturing exports made up only a small fraction of the total exports.

**Poverty in Armenia declined significantly over the last 15 years, although the GFC caused a temporary increase in poverty levels.** Between 2004 and 2017, poverty as measured by the national poverty rate declined from 53.5 to 25.7 percent of the population, showing a positive correlation with economic growth patterns (Figure 14). This decline in poverty occurred largely during the boom years before the GFC, when poverty was more than halved between 2004 and 2007. The 2008-09 crisis led to a temporary spike in poverty, which rose from 26.4 percent in 2007 to 35.8 percent in 2010. As of 2011, poverty began declining again, and in 2017 had fallen back to the pre-crisis level (26 percent) as economic growth rebounded. International poverty comparisons nevertheless show that Armenia remains among the poorest countries in the Europe and Central Asia (ECA) region.

**Figure 14: Poverty and growth in Armenia, 2004–17**



Source: World Bank (2019a).

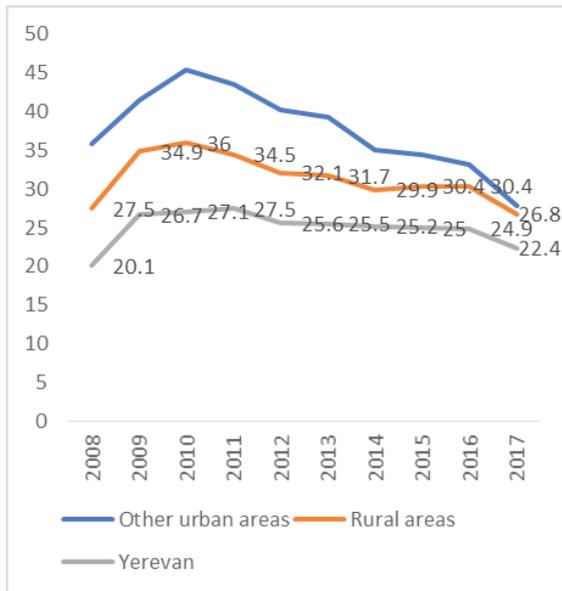
**Labor-related factors and public and private transfers drove the reduction in poverty in the post-crisis period.** Over the period 2010 to 2014, the largest contributors to poverty reduction were increases in labor income (-3.8 percent), the increase in employment rates (-3.3 percent), remittances (-2.6 percent) and pensions (-2.5 percent). However, an increase in the dependency rate and a decrease in private transfers resulting from the crisis-induced fiscal consolidation counteracted the positive impact of increased employment and income.

**Notwithstanding an overall decrease in poverty nationally, inequality has worsened and differences between regions persist.** Measures of inequality, including the GINI coefficient, have worsened in the post-crisis period, as evidenced by the increase in the GINI coefficient for consumption from 0.26 in 2010 to 0.29 in 2017 (Armstat 2018). Geographic disparities in poverty remain. In 2008, for instance, poverty in Yerevan (using the national poverty line) was about 15 percentage points lower than poverty in other regions. The gap narrowed to 5 percentage points in 2017 (Figure 15). Differences remain pronounced on the granular level: in 2017, poverty was highest in Shirak (44 percent) and lowest in Aragatsotn (17 percent).

**Figure 15: Regional poverty rates using the national poverty line**

a. Poverty rate by year and region, 2008-17

b. 2017 poverty rate by administrative division (marz)



Source: Armstat (2018).

## Demographics

**Armenia is experiencing the aging and gradual shrinking of its population.** The country’s fertility rate declined from about 2.6 children per women in 1985 to 1.6 children per woman in 2017, well below the replacement rate. Between 2000 and 2011, the population declined from 3.07 million to 2.88 million, mainly due to outmigration, before increasing slightly to about 2.93 million in 2017.<sup>26</sup> However, UN population forecasts predict the population will decrease beginning in 2020 and drop to about 2.7 million in 2050. The population pyramid depicted in Figure 16 (panel a) shows this projected demographic change whereby middle-aged adults make up the bulk of the population.

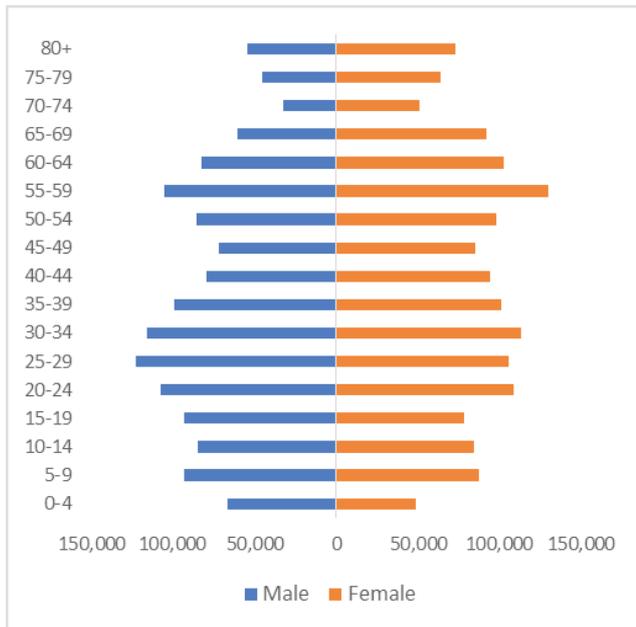
**The demographic transition is reflected in declining child dependency rates and increasing old age dependency rates.** As a result of this stark decline in fertility, the child dependency rate plummeted from almost 47 percent of the working age population in 1990 to 29 percent in 2017. The population is gradually aging: the old age dependency rate has increased from about 9 percent of the population in 1990 to 16 percent in 2017.<sup>27</sup> The old age dependency rate is forecast to increase further—and rapidly—in the future and to reach about 37 percent in 2050 (Figure 16, panel b). The increase in the ratio of elderly to the working-age population is the combined result of an increase in the number of elderly people and a decrease in the working-age population. The working-age population is projected to start declining now and fall from 2 million in 2020 to 1.68 million in 2050 (Figure 16, panel b).

<sup>26</sup> Data from World Development Indicators.

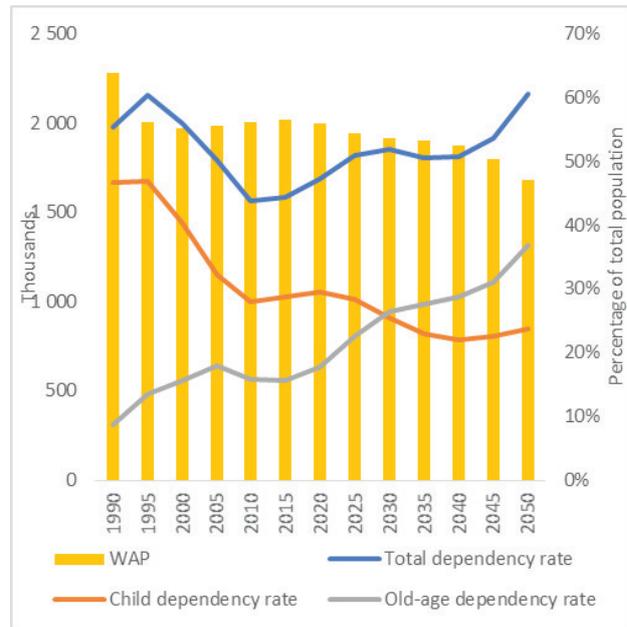
<sup>27</sup> Data from World Development Indicators.

**Figure 16: Armenia’s demographic transition**

a. Population pyramid



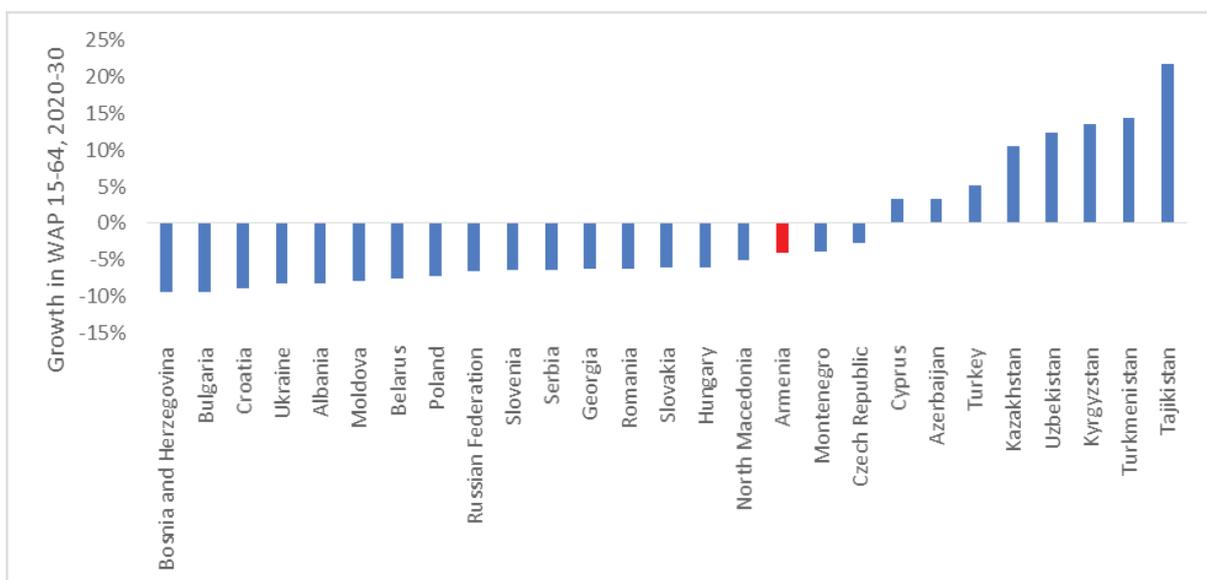
b. Population development including forecasts



Sources: For panel a: World Bank staff estimates based on ARM LFS 2017 data; for panel b: World Population Prospects database (2019).

**Compared with other countries in the region, Armenia is experiencing neither a demographic dividend nor rapid shrinking over the medium term.** Armenia’s fertility rate of 1.6 in 2017 is well below the ECA average, which according to World Development Indicators is only slightly less than two children per woman. Moreover, its working-age population is forecast to shrink between 2020 and 2050. Thus, Armenia is not likely to experience the demographic dividend that more youthful ECA countries such as Turkey and Tajikistan can anticipate. However, in the immediate future, Armenia will not experience quite the same dramatic reduction in its working-age population as will Ukraine, Belarus or Russia (Figure 17).

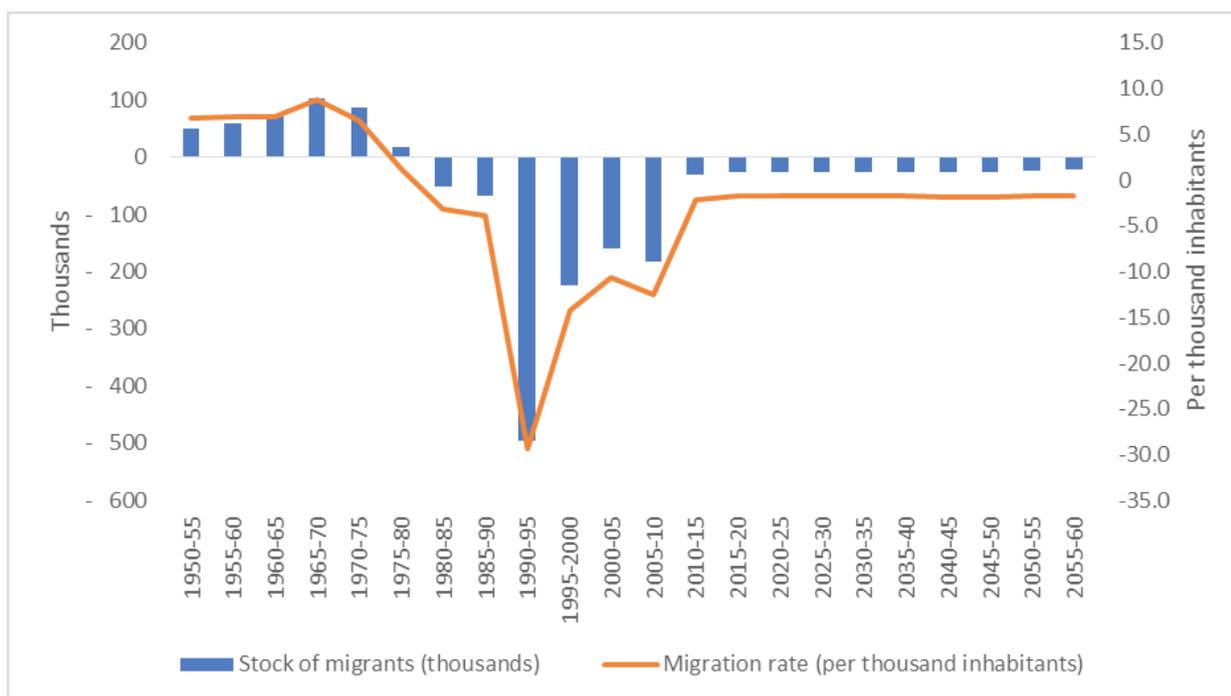
**Figure 17: Medium-term population prospects in ECA**



Source: World Population Prospects database (2019).

**The massive outmigration that Armenia experienced during the 1990s and 2000s has only stabilized recently.** Following independence, many Armenians left the country for good. In the 1990-95 period, the outmigration rate reached 30 per 1,000 inhabitants (Figure 18). In the 1990s, the stock of Armenian migrants living abroad rose to about 500,000 people. The destination for most migrants was Russia, followed by Europe and the United States. While the outmigration rate has since declined somewhat, it remained high until 2010. The rate has since dropped to about 2 per 1,000 inhabitants and is forecast to remain at this level in the coming decades. Nevertheless, Armenia has one of the biggest Diaspora communities living abroad.<sup>28</sup> Many of the recent migrants are temporary (and circular) migrants who primarily find low-skilled jobs in Russia. Research has found that push rather than pull factors most influence the decision to migrate (Bellak, Leibrecht and Liebensteiner 2014). A key driver of this migration appears to be a lack of employment opportunities.

**Figure 18: Migration dynamics in Armenia**

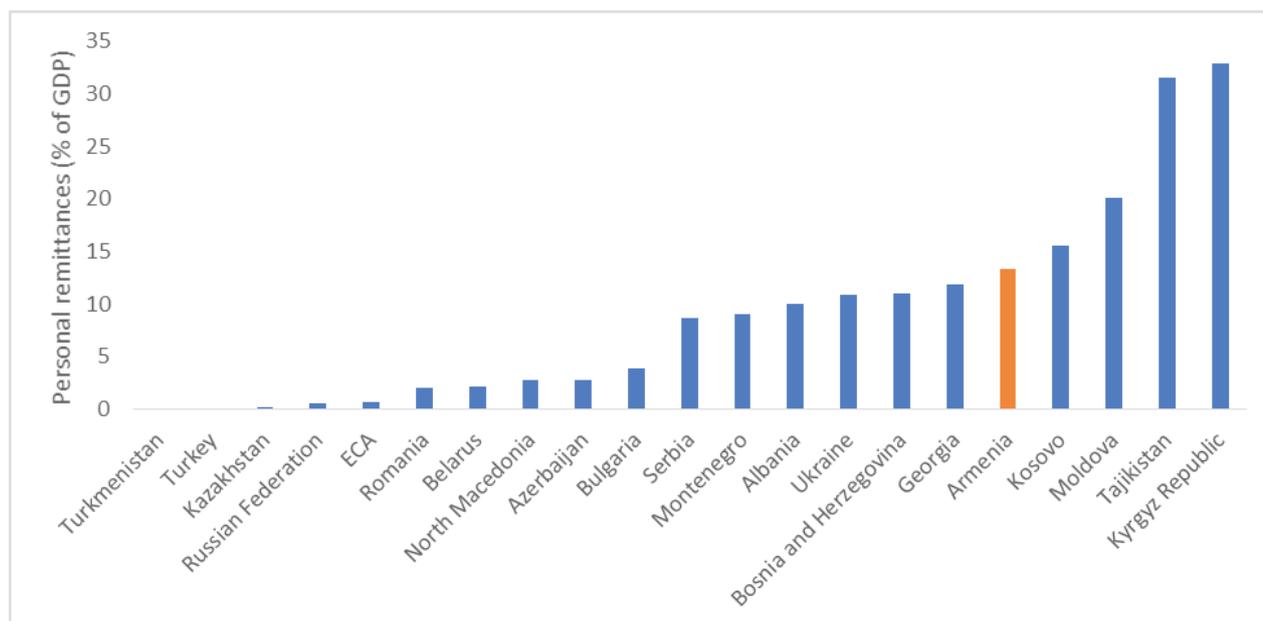


Source: UN Population Division data, <https://www.un.org/en/development/desa/population/migration/data/estimates2/estimates17.asp>

**While outmigration contributed to the shrinking of the country’s population, it also benefits Armenia through remittances and a potential “brain gain” from returning migrants.** Remittances sent by Armenia’s huge Diaspora are a significant part of overall output. In 2017, remittances amounted to 13 percent of GDP. Among ECA countries, only Kosovo, Moldova, Tajikistan and the Kyrgyz Republic (in ascending order) received remittances amounting to a greater percentage of their GDP ( Figure 19). There is extensive evidence that remittance flows not only have positive effects on household consumption, but also contribute to macroeconomic stabilization by counteracting economic volatility caused by instability in trade flows (price shocks) and/or climatic shocks (Le Goff 2010).

<sup>28</sup> The diaspora of Armenian heritage is estimated to total about 10 million people worldwide.

**Figure 19: Remittances as a share of GDP in ECA, 2017 data**



Source: World Development Indicators data.

## Employment and job creation

**Economic growth has not created jobs in Armenia.** Between 2007 and 2017, including during the GFC and the post-crisis period, the Armenian economy grew by an average of 2.3 percent per year. At the same time, net employment grew by only 0.07 percent, representing just over 7,000 jobs. Armenia has consequently faced a double challenge: low growth compounded by low capacity of growth to create jobs. The rate of employment creation for a given level of growth—the elasticity—was only 0.03, meaning that a one-percent increase in GDP was associated with only a 0.03 percent increase in jobs. In the post-crisis, period only (2010-17), average growth was higher, at 4.2 percent per year, but employment growth was actually negative. Upper-middle-income countries generally experienced a drastic drop in the positive association between employment and growth after the GFC, with an average elasticity of 0.18 in post-crisis years, compared to 0.56 before the crisis (Merotto, Weber and Aterido 2018). Even so, Armenia’s low and even negative employment elasticities stand out in comparison.

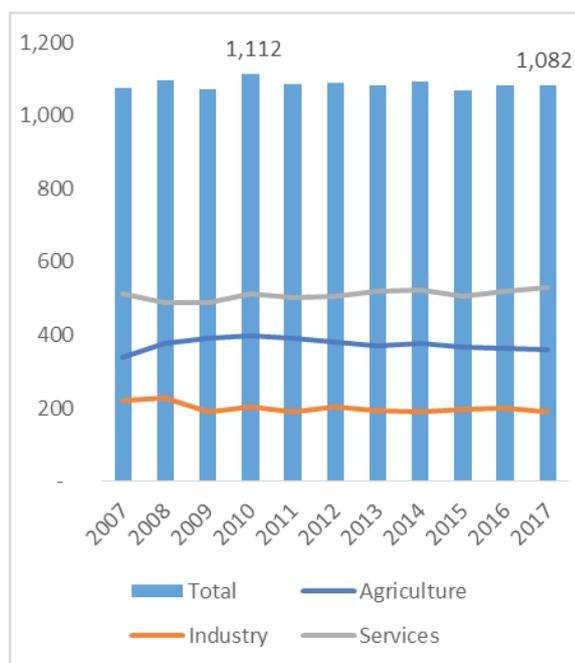
**Hence, the Armenian growth model has not delivered enough jobs for the labor force.** Unlike growth and poverty rates, employment levels have not fluctuated noticeably in the past decade. Whereas per capita growth dipped below minus 10 percent in 2009 and poverty shot up, overall employment fell by only 2 percent and more than recovered in 2010. Overall employment changed only marginally between 2007-17 (Figure 20, panel a). In 2007, there were 1.074 million people working in Armenia; in 2017, the figure increased to 1.082 million people. Net numbers hide significant volatility around the GFC, however. On a net basis, 38,000 jobs were actually created between 2007 and 2010, and then 26,000 jobs were destroyed between 2010 and 2017. These numbers in turn largely reflect the volatility around 2009 and 2010, as jobs dropped by 26,000 in 2009 and then increased by 41,000 in 2010. Between 2011 and 2017, only 4,000 jobs were lost, representing a 0.5 percent decrease.<sup>29</sup> The disconnect between output and employment in the years outside the GFC shows that the traditional drivers of growth in Armenia—mining, construction and the public sector—have not delivered enough jobs. As noted in this report, the lack of job creation has resulted in increasing unemployment. However, poverty has fallen in spite of negative job creation.

<sup>29</sup> World Bank staff estimates based on ILCS data.

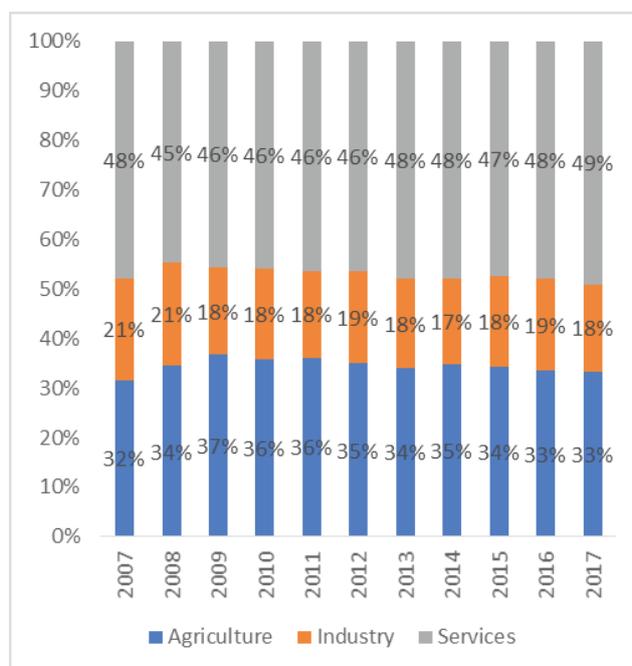
**The sectoral composition of employment has not changed significantly in the past decade.** Employment in industry has declined slightly, concurrent with a slight increase in employment in agriculture and services. Between 2007 and 2017, employment in agriculture increased from 340,000 to 360,000 (Figure 20, panel a). This expansion reflects an increase in agricultural jobs around the time of the GFC, as agriculture likely served as a safety net for excess workers who left collapsing industry jobs. Employment in industry declined from 220,000 in 2007 to 191,000 in 2017. Over the same period, employment in services increased from 514,000 to 531,000. Overall, however, the shares of aggregate sectors have changed only marginally. At a more detailed level, most job creation took place in manufacturing, mining, and in lower value-added sectors such as public administration and in “other services”. Most job destruction, meanwhile, occurred in agriculture, construction, and electricity, gas and water supply. Moreover, most of the new jobs were unpaid jobs, a category which increased its share from 5 to 11 percent of total employment between 2007 and 2017. More recently (between 2012 and 2017), modern business services and entertainment services have added 20,000 employees, yet together still account for only 11 percent of employment. An examination of the links between poverty and sector employment shows that poverty in Armenia is positively associated with employment growth in agriculture, but negatively associated with employment growth in services.

**Figure 20: Employment trends in Armenia (ages 15-64)**

a. Sectoral employment (thousands employed)



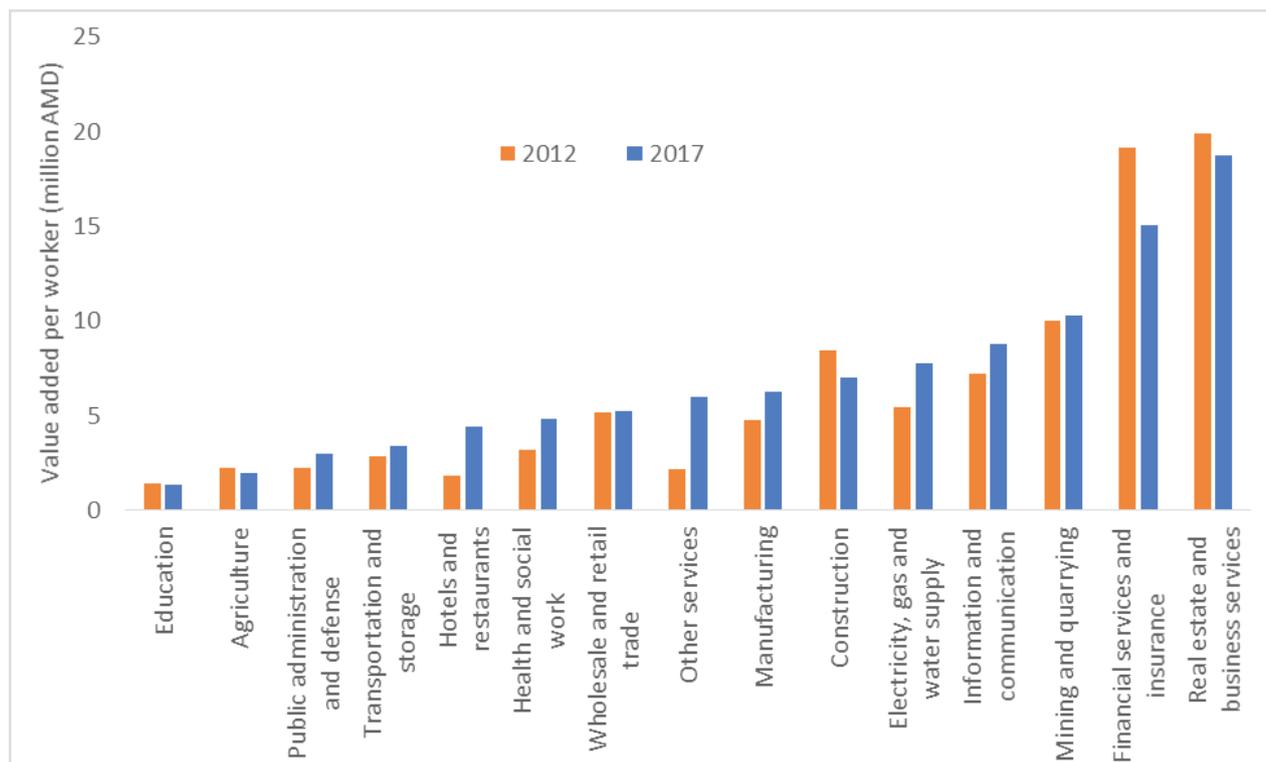
b. Sectoral employment change (percent)



Source: World Bank staff estimates based on ILCS survey data.

**Labor productivity is lowest in agriculture and highest in the services sector, but with great differences between specific services sectors.** The differences in the share of each economic sector in total employment versus total value added are reflected in differences in overall labor productivity (output per worker). Labor productivity levels in modern services sectors such as finance, insurance, real estate and business services, are 8 to 10 times higher than labor productivity levels in agriculture. The service sectors of trade, transports and tourism also are on the low end of labor productivity. Trade and tourism generally fall into the low productivity end of the spectrum, requiring comparatively low skills and limited investment. The low productivity of the transportation and storage sector is consistent with the general view that the transport sector needs modernizing and upgrading as it is currently an obstacle to regional and international integration. The low productivity of education and public administration are more surprising and an unusual observation. Without more details on value added it is not possible to disentangle these results, unfortunately.

Figure 21: Labor productivity is highest in modern services sector and lowest in agriculture and public sector services



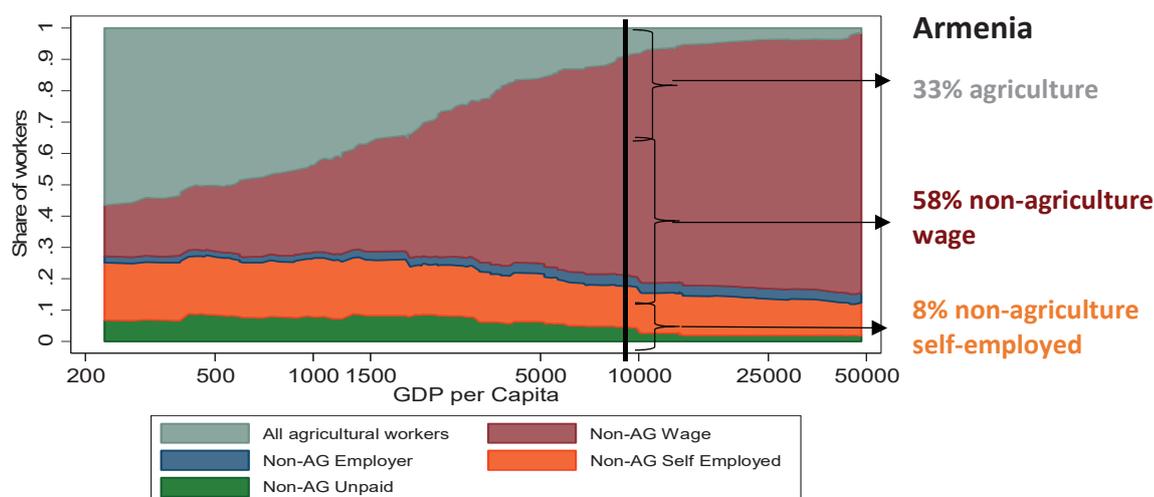
Source: World Bank staff estimates based on value added from Armstat ([http://armstatbank.am/pxweb/en/ArmStatBank/ArmStatBank\\_1%20Economy%20and%20finance\\_15%20National%20Accounts/EF-NA-12-2018.px/?rxid=602c2fcf-531f-4ed9-b9ad-42a1c546a1b6](http://armstatbank.am/pxweb/en/ArmStatBank/ArmStatBank_1%20Economy%20and%20finance_15%20National%20Accounts/EF-NA-12-2018.px/?rxid=602c2fcf-531f-4ed9-b9ad-42a1c546a1b6)) and aggregate employment data from the ILCs.

Note: Labor productivity is defined as output per worker. Modern services include finance, insurance, real estate, business services, information and communication.

## Structural transformation

**For its income level, Armenia has too many people working in agriculture, suggesting that structural transformation is moving too slowly.** As countries develop, the share of employment in agriculture tends to fall and the share of wage employment increases, and at Armenia’s level of GDP per capita, countries typically only have about 10 to 15 percent of their workforce employed in agriculture. However, taking into account its current level of development, Armenia lags behind in its structural transformation of jobs. In 2017, 33 percent of its workforce were employed in agriculture, 58 percent of workers were in non-agricultural wage employment and 8 percent were self-employed. Figure 22 shows the relationship between GDP per capita and the distribution of employment by type of work (wage versus self-employment) and sector (agriculture vs non-agriculture).

**Figure 22: Structural transformation and employment: share of workers by employment status and GDP per capita, 136 countries**



Sources: For shares of workers by employment status: World Bank I2D2 data; for share of workers in Armenia: ILCS 2017; for GDP per capita: World Development Indicators.

Note: The chart shows the relationship between GDP per capita and the distribution of employment by type of work (wage versus self-employment) and sector (agriculture versus non-agriculture) for 136 countries covering the years 1992-2012.

**Given the lack of significant changes in the employment structure, Armenia has not benefited from labor reallocation gains to support growth or labor productivity.** A decomposition exercise of contributions to growth (Box 1) shows labor productivity increases in mining, manufacturing, other services and public sector services largely drove the per capita value added growth that took place after the GFC (2012-17)<sup>30</sup> (Table 2). The sectors with the highest labor productivity levels (finance, real estate) did not see much larger increases in productivity; however, they did see higher levels of employment. Labor productivity growth in industry was connected to job destruction, as mining employment stagnated and manufacturing jobs fell. In the services sector, labor productivity growth was connected with job creation. Nonetheless, there was only a very small contribution to growth from workers moving into more productive sectors. This was driven mostly by a net outflow of workers from low productivity agriculture and a net inflow of workers into the modern, higher productivity services of finance and insurance, real estate, business services, and information and communication technology (ICT). Armenia’s aging population is reflected in a small negative impact of demographic changes, whereas both employment and participation rates increased and contributed positively to overall growth.

<sup>30</sup> The time period of the global financial crisis as used here depends on the availability of value added data disaggregated by economic sector (NACE 2 classification). Armstat is the data source ([http://armstatbank.am/pxweb/en/ArmStatBank/ArmStatBank\\_1%20Economy%20and%20finance\\_15%20National%20Accounts/EF-NA-12-2018.px/?rxid=602c2fcf-531f-4ed9-b9ad-42a1c546a1b6](http://armstatbank.am/pxweb/en/ArmStatBank/ArmStatBank_1%20Economy%20and%20finance_15%20National%20Accounts/EF-NA-12-2018.px/?rxid=602c2fcf-531f-4ed9-b9ad-42a1c546a1b6)).

### Box 1: Disentangling contributions to growth - the Shapely decomposition

Value added/capita – VA/POP, where VA is value added and POP is the total population - can increase due to several changes:

- A demographic effect: More people of working age relative to the population (WAP/POP, where WAP is the working-age population)
- A participation effect: More of the working-age population are actively participating in labor markets (LF/WAP, where LF is the labor force).
- An employment effect: More of those participating find a job (EMP/LF, where EMP is the number of people)
- A productivity effect: Value added per worker (labor productivity) increases because those working become better at producing more output (within sector productivity effect), or because more workers move into higher productivity sectors (reallocation effects) (VA/EMP)

These relationships can be summarized as:

$$\frac{VA}{POP} = \frac{WAP}{POP} \times \frac{LF}{WAP} \times \frac{EMP}{LF} \times \frac{VA}{EMP}$$

In 2017, using ILCS data, this means that:

$$\text{Value added per capita} = 4.24 = 0.61 \times 0.72 \times 0.85 \times 11.43$$

A Shapely decomposition can distinguish the contribution of changes in each of the factors on the right-hand side of the above equation to changes in value added per capita (the left-hand side).

The equation above illustrates that given the prospect of a negative demographic change (WAP/POP is falling), Armenia needs to increase the other factors to maintain or increase value added per capita. Labor force participation rates must increase, while the share of the labor force finding jobs should remain or increase (this will mean more jobs), and the labor productivity of the employed should increase (this will mean better jobs). Just activating workers, without the economy absorbing them in more productive employment, will not increase welfare.

**Table 2: Detailed Shapely decomposition of per capita value added growth, 2012-17**

<b>Demographics, labor, employment</b>	<b>1.73</b>	<b>32%</b>
Change in employment rate	0.96	18%
Change in participation rate	1.33	25%
Change in share of working-age population (WAP)	-0.55	-10%
<b>Reallocation</b>	<b>0.51</b>	<b>9%</b>
Intersectoral reallocation	0.51	9%
<b>Within-sector productivity</b>	<b>3.19</b>	<b>59%</b>
Agriculture	0.15	3%
Mining & quarrying + electricity, gas & water supply	0.51	9%
Manufacturing	0.67	12%
Construction	-0.34	-6%
Wholesale & retail + transportation & storage	0.28	5%
Hotels & restaurants	0.23	4%
Financial & insurance + real estate & business services + information & communication	0.12	2%
Public administration + health + education	0.66	12%
Other services	0.90	17%
<b>Grand total (per capita value added growth)</b>	<b>5.44</b>	<b>100%</b>

Source: Armstat data using the Shapely growth decomposition tool.

## Business environment and investment climate

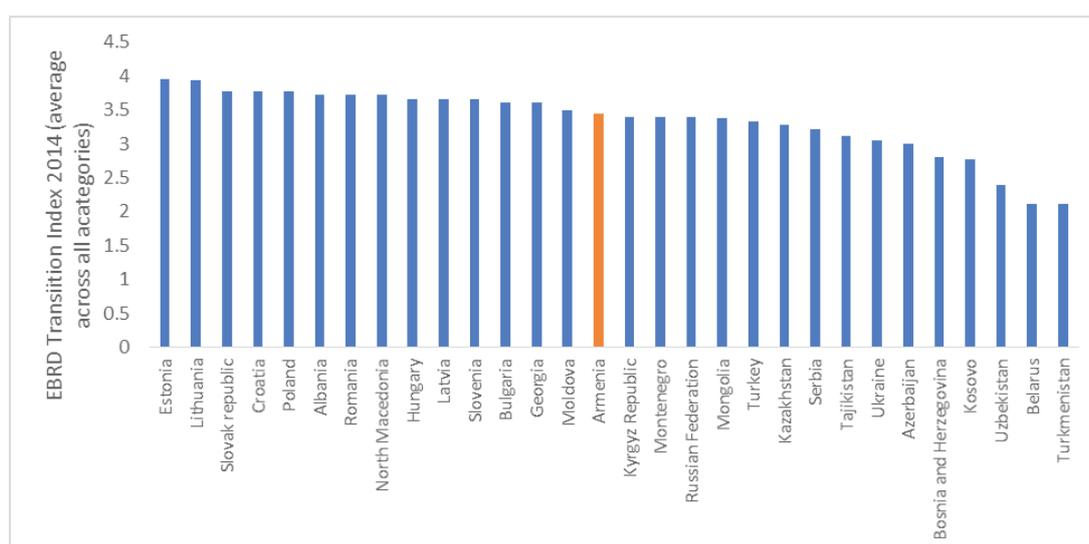
### Key messages:

- Armenia is in transition toward a market economy, but lags behind European Union member states.
- Armenian firms appear to be stunted—that is, start-up is easy, then firms struggle to survive and grow—which is holding back labor demand and job creation.
- Progress on key reform areas such as taxes, competition policy, corporate governance and access to finance is needed to improve the business environment and foster investment and business growth.
- The labor regulatory framework (i.e. minimum wages, employment protection) in Armenia is balanced overall. However, strengthening is needed in enforcement and compliance and worker’s protection outside of contracts.

### Progress on transition

**Armenia is in transition toward a market economy.** Armenia has made important progress on its transition from a centrally planned system toward a market economy system, although about half of ECA countries have moved faster away in their transitions. This is illustrated in Figure 23, which shows Armenia’s performance at about the average of ECA-region countries on the 2014 EBRD transition index. The index measures the transition from a planned economy towards a market economy, aggregating indicators of (i) large-scale privatization, (ii) small-scale privatization, (iii) governance and enterprise restructuring, (iv) price liberalization, and (v) liberalization of the trade and foreign exchange system. Armenia made relatively quick headway on price liberalization and large-scale privatization, but moved much slower on competition policy and governance and enterprise restructuring. Other former communist countries who have acceded to high-income status such as Poland and Slovenia score higher on the index.<sup>31</sup>

**Figure 23: EBRD Transition Index, 2014**

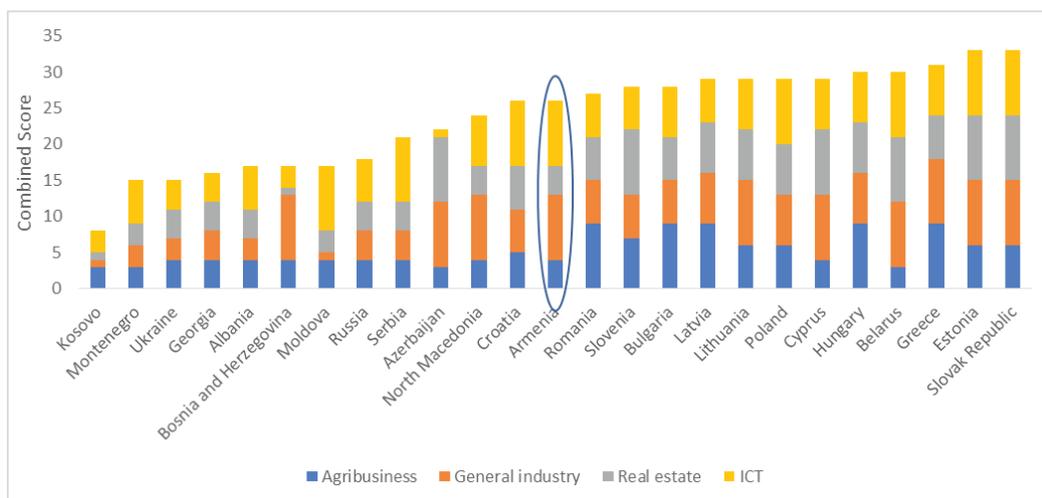


Source: European Bank for Reconstruction and Development, 2014.

<sup>31</sup> The EBRD Transition Index has been revised and broadened after 2014, to take account of the fact that a well-functioning market economy should not only be competitive but also inclusive, well-governed, environmentally friendly, resilient and integrated. On the new index, Armenia’s performance on the indicators also is about the average among ECA countries but is below high-income countries (including Estonia and Slovenia). The biggest gaps in Armenia’s performance compared to that of high performers are in competitiveness and the smallest gaps are in environmental sustainability.

**On a sectoral level of transition, Armenia lags behind in agribusiness and real estate.** Figure 24 shows the scores on the EBRD’s 2016 sectoral transition indicators. For each of the four sectors (agribusiness, general industry, real estate and ICT), the score reflects progress in the transition from a centrally planned economy and toward the standards of an industrialized, market economy, as well as measures of market structure (price liberalization, skills in the sector and infrastructure) and the quality of the legal framework supporting markets. Armenia performs well in ICT and general industry, indicating that these sectors have standards which are close to those in high-income countries. However, Armenia’s performance is lackluster in the agribusiness and real estate sectors. These sectors represent an important opportunity for further reforms, especially given the importance of increasing productivity of agriculture and the linkages into higher value-added activities.

**Figure 24: EBRD sectoral transition scores, 2016**



Source: EBRD.

## The enabling business environment for job creation<sup>32</sup>

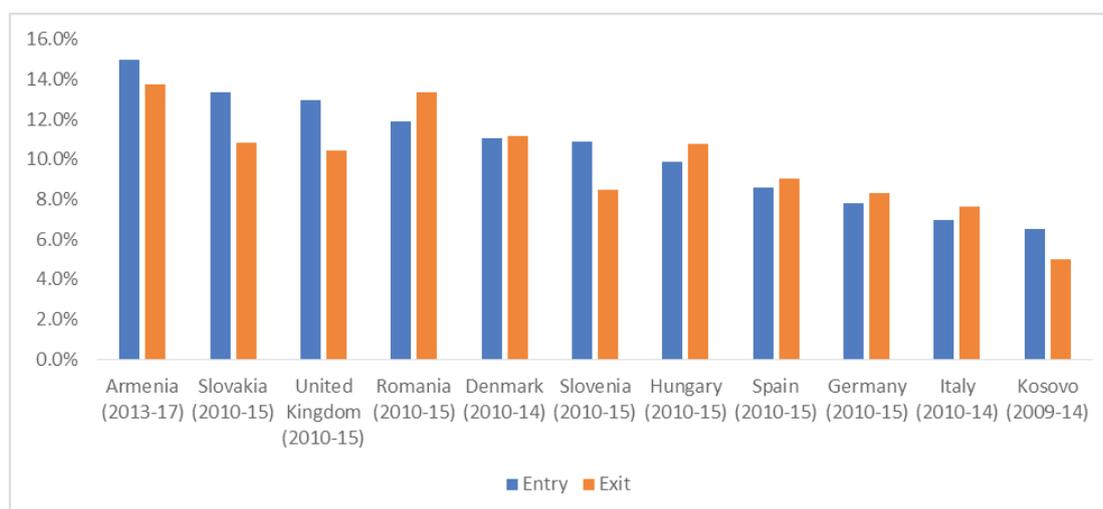
**Successful structural transformation requires a shift in jobs from firms in less productive sectors to firms in more productive sectors and, within sectors, the expansion of more productive firms and contraction of less productive firms within sectors.** The economic restructuring process generally starts with job destruction in sectors that were important prior to transition, and especially in heavy industry. Over time, new sectors appear and progress and thus job creation increases. Reallocation can take place through both firm entry and exit and through a simultaneous expansion and contraction of existing (and surviving) firms. In many ECA countries, high firm turnover contributed to productivity growth in early transition stages (Alam et al. 2008).

**Armenia’s investment climate needs to improve to foster sustainable labor demand from the private sector.** The World Bank’s Systemic Country Diagnostic (World Bank 2017) identified a number of challenges related to the business environment in Armenia, including weak exports performance and low participation in global value chains, limited labor productivity at firm level, and falling quality of human capital. These challenges are exacerbated by vulnerabilities to shocks imposed by high public debt levels, limited financial inclusion, weak pensions systems, and lack of attention to environmental sustainability.

<sup>32</sup> As noted in the introduction to this section, the analysis of constraints on firms to grow and create jobs is based on different data sources: the 2013 Enterprise Survey, Doing Business and EBRD indexes, the 2013 STEP employer survey, and 2013-17 firm level data from the SRC. The team is thankful for having received firm-level data from the State Revenue Commission. Data are for all registered firms—about 265,000 firms between 2013-17, with an average of 109,000 firms active per year. Information is available for sector, legal type, region, number of employees, salaries and revenues. However, these data have serious limitations and an outsized number of missing values for many variables of interest for this report including the number of employees and sales. In 2017, only 31 percent of registered firms reported information on the number of employees and 8 percent reported the volume of their sales. Consequently, a representative analysis of jobs flows (creation and destruction) and a firm productivity analysis could not be done. Only the SRC firm level data was used to analyze the firm entry and exit rate; for that analysis, firms of type “independent taxpayer” (about 10.5 percent of the total firms every year) were excluded.

**Firm entry/start-up is not constrained in Armenia; much more problematic, however, are firm survival and consolidation and employment growth.** As shown in Figure 25, the firm entry rate in Armenia was high relative to a number of transition and industrialized economies in the 2013-17 period, suggesting that business start-up is not a significant problem (for example, due to administrative burdens) per se. Newly entered firms in this period (where created) amounted to the equivalent to 15 percent of existing firms, which corresponds to creation of about 16,000 new firms every year on average.<sup>33</sup> Armenia also ranked among the top countries in terms of the share of the adult population that has tried to set up a business; between 2010 and 2016, the share rose by almost 7 percentage points.<sup>34</sup> Over the 2013-17 period, 14 percent of existing Armenian firms left the market, on average, which roughly corresponds to the exit of 14,600 firms every year.<sup>35</sup> Armenia's firm exit rate is consistently high in this period is consistently high across economic sectors, fluctuating between 10 and 20 percent. Moreover, the success rate among entrepreneurs is among the lowest in the ECA region, with almost 40 percent of start-ups failing to remain in operation.<sup>36</sup> The high exit rates for 2017 are somewhat of an anomaly, as Armenia was experiencing the aftermath of the economic shock caused by spillovers from the Russian crisis. However, data for other years suggest that Armenia has a consistently higher firm exit rate than do comparator countries. All in all, these findings may indicate that barriers to entry may not be especially high but that the probability of survival for micro firms is low, pointing to specific constraints on these smaller firms. Further analysis is required to determine whether exit rates are so high because of competitive pressures or because of a dysfunctional business climate.

**Figure 25: Firm entry and exit rates, compared across selected countries**



Source: For Armenia: SRC firm-level data for 2013-17; for other countries: OECD Business Demography Indicators.

Note: The entry (exit) rate is defined as the number of new (destroyed) firms during one year divided by the stock of firms that existed at the beginning of the year. The numbers in this figure are averages of annual entry and exit rates for each country during the time period indicated.

**The ICT, tourism and business services show signs of dynamism.** These demonstrate the highest firm entry rates, especially in hotels and restaurants and entertainment (including gambling and arts) in the tourism sector and financial services (Figure 26). Further, the tourism sector is showing a great deal of churning. Higher exit rates are observed in the low productivity sectors of (in the descending order) agriculture, transportation and storage service, hotels and restaurants, trade services, and construction. Analysis of the size of entering and exiting firms suggests that micro firms that newly enter the market have particularly pronounced exit rates.<sup>37</sup>

<sup>33</sup> The source is SRC data.

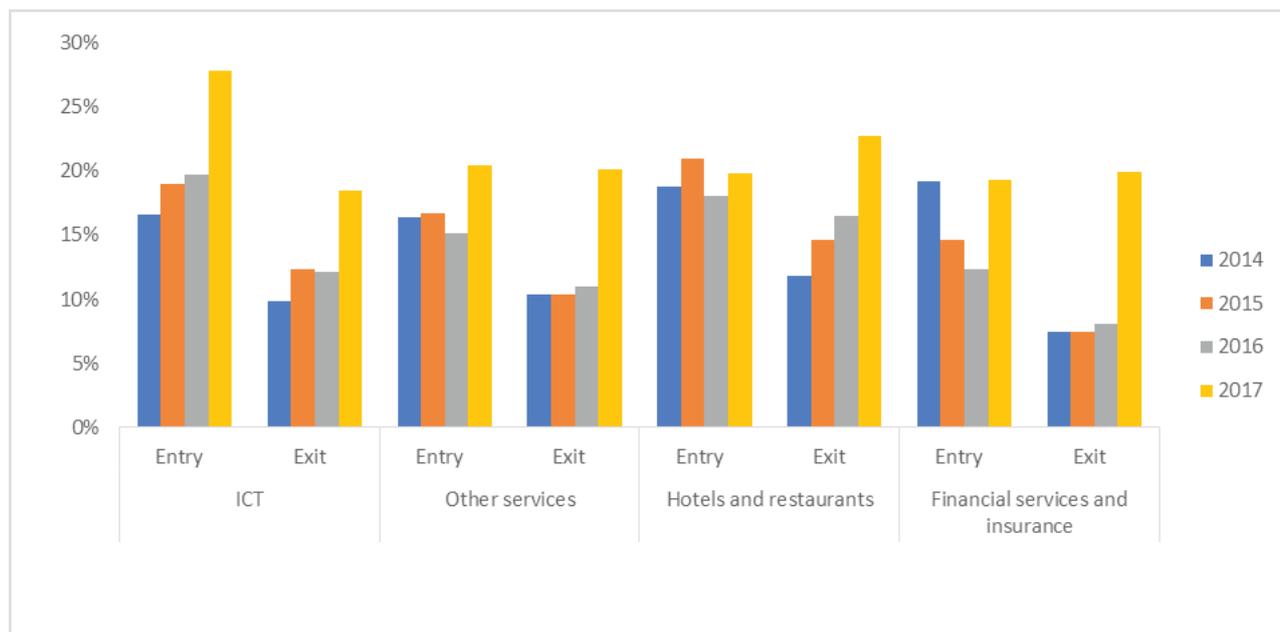
<sup>34</sup> 2016 Life in Transition Survey (EBRD).

<sup>35</sup> The source is SRC data.

<sup>36</sup> 2016 Life in Transition Survey (EBRD).

<sup>37</sup> The exit rate among own-account firms is 13 percent, as opposed to 7 percent among small (2-18 employees) firms, 2 percent among medium (19-98 employees) firms and 1 percent among large (more than 99 employees) firms. Very few firms grow beyond one employee. However, these numbers need to be interpreted with caution as they are not representative; only about 30 percent of firms in the registry reported employee information.

**Figure 26: Firm entry and exit rates in Armenia over time**



Source: SRC firm-level data for 2013-17

Note: The entry (exit) rate is defined as the number of new (destroyed) firms for one year divided by the stock of firms that existed at the beginning of the year.

**The cost of trading internationally is high because of low connectivity.** Export opportunities are held back in part because Armenia is a land-locked country. Land-based connectivity is especially weak due to lack of rail and ferry services, poor road networks, and an underperforming logistics sector. Armenia further performs worse than lower-middle-income countries and ECA countries on different aspects of logistics due to under-regulated road freight services and an overall transports sector in need of modernization. ICT connectivity is improving, especially in cities. However, broadband penetration is low in areas outside major cities and broadband speed is slower than that of comparator countries, partly because of Armenia’s landlocked nature (World Bank 2017).

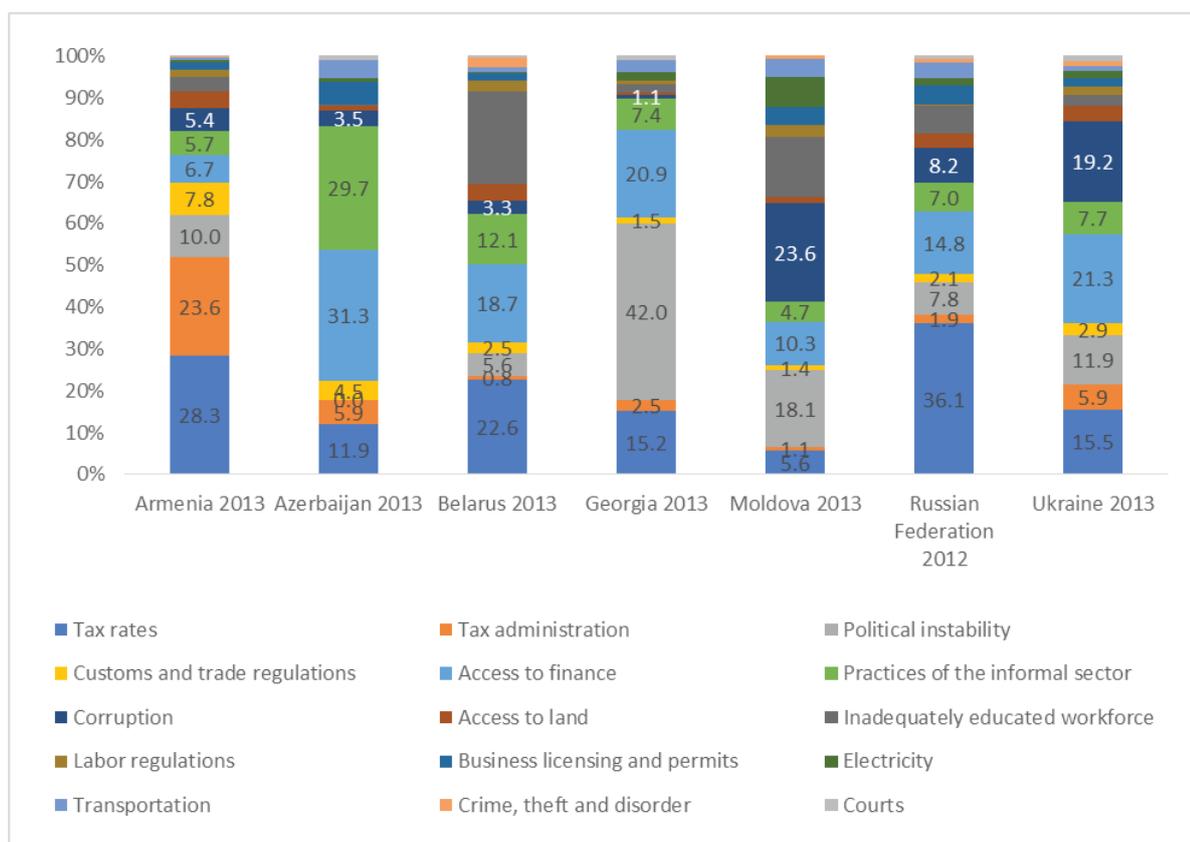
**The investment climate is improving, but several weak areas need to be addressed.** Armenia recently implemented important reforms concerning the business environment, notably in the areas of stronger contract enforcement and better protection of minority investors. Its ranking in the World Bank Doing Business indicators rose to number 41 in 2019 from 47 in 2018. However, a number of issues remain; resolving insolvency, paying taxes and dealing with construction permits in particular are problematic areas (Figure 28). Different areas of reform are strongly interlinked: for instance, it is easy to legally start a business but complicated to get a construction permit or access to electricity, which can be essential to begin actual business operations. More generally, some reforms that have been approved on paper have only slowly been implemented and/or enforced, including in areas of border management, property rights, tax administration and a competition framework.

**Employers ranked tax rates, tax administration and political instability as important firm-level constraints to doing business** in the 2013 Enterprise Survey. Specifically, 28 percent of employers reported tax rates, 24 percent reported tax administration and 10 percent named political instability as the biggest obstacles in doing business, followed by trade regulation and access to finance (Figure 27).<sup>38</sup> These clearly remain important obstacles in 2019, as do taxes (Figure 28).

<sup>38</sup> See the World Bank Group database at [enterprisesurveys.org](http://enterprisesurveys.org).

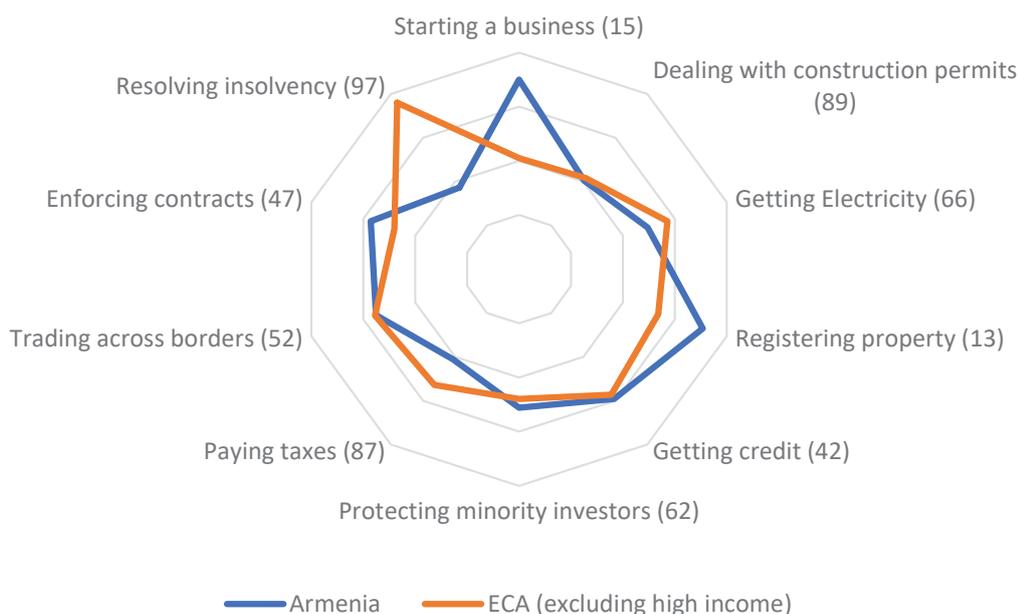
**Weak corporate governance frameworks, including the limitations on property rights and the lack of progress on competition policy, also render Armenia riskier and hence less attractive to foreign and domestic investors.** Investors in Armenia face high risks compared to those in other ECA countries that are related to perceived high levels of vested interests and cronyism and to unfair competitive practices (World Bank 2017). Armenia’s FDI inflows have been declining over the decade since the GFC, with investors highlighting significant risks related to the competition environment. Armenia FDI flows (as a share of GDP) are currently among the lowest of its comparator group. Lack of competition in sectors that are essential to firms—transport infrastructure, utilities, internet—unduly increases costs of doing business. Data from the 2013 Enterprise Survey indicate that some subsectors in manufacturing and services appear to have become increasingly concentrated over time, raising the risk of anti-competitive practices and price increases for both households and producers. More than one third of all manufacturing markets in Armenia are monopolies, duopolies or oligopolies—the highest share among peers in the ECA region.

**Figure 27: Biggest obstacle identified by firms in Armenia and comparator countries, non-agricultural, formal private sector (%)**



Source: World Bank staff estimates based on ES 2013.

**Figure 28: Armenia's ranking on *Doing Business 2019***



Source: World Bank *Doing Business 2019* database, downloaded from <http://www.doingbusiness.org/en/data>.  
 Note: Ranking is among 190 economies.

**Access to finance has improved in Armenia, but the financial sector is still shallow.** Getting credit is not a major constraint to doing business, reflecting progress on financial reform. However, banks dominate the financial sector, and smaller firms are much less likely than larger ones to have access to bank finance. Domestic savings in particular are low, reducing the resources available for investment.

**Armenia spends little on research and development and is less export-oriented than other countries.** Only 3.5 percent of Armenian firms spend on research and development (R&D), much lower than the average of 10 percent among ECA countries. Generally, the spending on R&D as a share of GDP in Armenia decreased from 2.5 percent in 1990 to a mere 0.25 percent in 2014.<sup>39</sup> Low spending in R&D limits innovation, product diversification and firm productivity improvements, and thus hampers the modernization of the private sector and good jobs creation. With exports representing about 37 percent of GDP in 2017, Armenia is less integrated with global markets than its comparators. Overall, only 9 percent of firms export either directly or indirectly. This is one of the lowest shares in the ECA region. The majority of exporting firms are large, with more than 100 employees. These exporting firms perform better, are more innovative, attract higher skilled workers and provide training to their workers (Bartsch and De Rosa 2015).

**While lack of skills in the workforce and among applicants is not cited as the most severe obstacle, it was reported as a constraint to firm growth.** Only 6 percent of firms reported an inadequately educated workforce to be a major constraint to business performance and growth, below the ECA regional average of 15 percent, and lack of skills was cited as the most severe obstacle by 3 percent of firms. Nonetheless, according to the 2013 STEP employer survey, 90 percent of firms that tried to hire but experienced difficulties reported that the main reason was lack of skills rather than lack of applicants, or disagreement on wage levels and working conditions. Firms more commonly face constraints when attempting to hire employees for specific occupations that require vocational training. Around 50 percent of firms in Armenia reported that it is hard to hire a craftsperson or a technician; 40 percent of firms find it difficult to hire a professional. By contrast, very few firms complained about labor regulation. Only 1.8 percent of employers in manufacturing saw labor regulations as a major constraint to firm operation. This indicator is below the regional ECA average (3.4 percent), indicating that labor regulations are not a major constraint in doing business in Armenia.

<sup>39</sup> Data drawn from World Development Indicators.

## Labor regulation

**Flexible labor legislation is essential for promoting the creation of new businesses and to the growth of established firms and job creation.** ECA countries provide more employment protection and higher job quality than countries in other parts of the world (Bussolo et al. 2019). Modern regulatory systems need to balance greater flexibility for firms to manage their human resources with greater protections for workers outside the work contract. Firms could be given more flexibility in managing their human resources so long as the law mandates proper notice, an adequate system of income protection is in place and efficient mechanisms exist to punish discrimination. However, more flexible dismissal procedures should be balanced with increased protections outside of the work contract and active reemployment support measures to protect people who lose their jobs. Otherwise, reducing restrictions on hiring and dismissal decisions would shift an unmanageable risk burden onto workers. A task of the labor law and other labor market institutions is to balance the need to protect workers' rights with the need to increase flexibility in the labor market and to establish a more conducive environment for the creation of productive employment opportunities and the enhancement of social dialogue.

**Overall, labor legislation in Armenia<sup>40</sup> follows internationally accepted labor standards and norms governing the individual employment contract, notably International Labour Organization (ILO) conventions and recommendations.** The Labor Code fully protects categories of vulnerable workers such as pregnant women, parents with small children and youth. Furthermore, the Armenian labor law sets minimum standards for employment contracts that can be exceeded in individual contracts but not undercut. Most regulations governing specific aspects of the employer-employee relationship are in line with ILO recommendations and similar to those of other Commonwealth of Independent States (CIS) countries. For most categories, Armenia is in line with regional standards. In particular, Armenia's regulations are comparable to those of other countries in the region in the areas of standard working hours (8 hours per day), limits on the probationary period for new workers (3 months), night work restrictions (from 10 PM to 6 AM), annual leave (20 days per year), and maternity leave provisions (a total of 140 days, 70 before the birth and 70 after the birth).

**Employment protection legislation, as established by the Armenian Labor Code and other legislative acts, is not overly strict by international standards, although adjustments in some areas could encourage formal job creation.** The Code nicely balances flexibility with security (worker protection). Consideration could be given to additional reforms in a few areas, such as allowing employers to use fixed terms contracts for permanent tasks, legalizing new forms of flexible contracts, extending the maximum number of overtime work hours, improving the unemployment protection system and supply of active labor market policies (ALMPs), and strengthening the enforcement and compliance of labor regulations.

**In Armenia, as in Russia and Kazakhstan, fixed-term contracts are prohibited for permanent and stable tasks.** Under the Labor Code, employment contracts, as a rule, shall be concluded for an indefinite period. It is prohibited to conclude an employment contract for a definite period, if the envisaged work is stable and permanent. In mid-2017, according to the Doing Business 2018 database, fixed-term contracts are prohibited for permanent tasks in 67 countries (35 percent out of 190 countries on the roster). In the remaining 123 countries (65 percent), such contracts are allowed for permanent tasks or this is not regulated in labor law. Flexible arrangements for fixed-term contracts have the potential to be abused. If such contracts are allowed for permanent tasks, they could contribute to job creation by enabling firms to cope with unexpected fluctuations of demand; replace permanent staff on holiday, maternity leave or sick leave; hire workers with specialized skills to carry out specific, time-limited projects; and/or launch start-up ventures with risky and uncertain returns.

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<sup>40</sup> Armenia's employment environment is predominantly shaped by the Labor Code of the Republic of Armenia (the Code), which was adopted on November 9, 2004. The Code entered into force on June 21, 2005, and has since been amended to some extent in line with development of social and economic relations. Armenia is a member of the International Labor Organization since 1992; it has ratified 29 ILO conventions, including all 8 fundamental conventions.

**As the labor market evolved, a wide variety of flexible employment contracts have developed.** Nonstandard employment, which includes temporary and part-time employment, has increased in the western part of Europe and Central Asia by almost 50 percent over the past two decades (Bussolo et al. 2019), although it still is not very common in Armenia. Apart from fixed-term and indefinite-term contracts, other types of employment contracts are allowed in Armenia. These include combined work, employment contracts with in-house workers, seasonal employment contracts, and temporary employment contracts. Temporary employment contracts and, increasingly, various forms of atypical contracting are emerging to facilitate the formalization of short-term and casual workers. Most of these atypical forms of contracting have the potential to contribute to labor market innovation and make such innovation more attractive to both employers and a wider range of potential workers. Flexible contract arrangements have the potential to be abused. However, under current circumstances, they could contribute to job creation because they allow firms to cope with unexpected fluctuations of demand; replace permanent staff on holiday, maternity leave or sick leave; hire workers with specialized skills to carry out specific, time-limited projects; and/or launch start-up ventures with risky and uncertain returns. Relaxing restrictions on the use of temporary or fixed-term contracts, especially for young or inexperienced workers, would improve incentives for firms to hire formal workers.

**Labor regulations in the region overall are similar, but Armenian labor regulation lags in terms of legal standards governing nondiscrimination and equal pay.** As shown in Table 3, Armenia's employment regulation diverges from regional standards in several areas. Armenia, for example, does not have legal provisions stipulating equal remuneration for work of equal value, and this could potentially contribute to employee pay discrimination based on gender or nationality. Nor does Armenia explicitly prohibit gender-based discrimination in the law, which could have important signaling effects. Armenian labor law also does not stipulate a minimum of five paid sick days a year for employees. Evidence suggests that not having access to paid sick leave increases worker turnover and may be detrimental to productivity (Goetzl et al. 2004, Hill 2013).

**Maternity leave in Armenia is above the minimum standards recommended by the ILO.** Maternity leave is an important public policy measure to protect the health of mothers and children during the final months of pregnancy and the first months after delivery. The longer the maternity leave that is allowed, the more positive the impact will be on the mother's health. However, long maternity leave can have an adverse effect on women's labor market participation by reducing women's attachment to the labor market, and it also can result in an actual or perceived erosion of women's skills and competitiveness. In Armenia, working women are entitled to maternity leave for a total period of 140 days of which 70 days can be taken before the birth and another 70 days after. In comparator countries, maternity leave varies from 112 days, in Turkey, to 183 days, in Georgia. Armenia introduced the universal Childbirth Benefit Program in 1990. In 2007, it introduced a childbirth one-off benefit for poor and socially vulnerable households participating in the Family Benefit Program. Recently, the birth grant benefit amounts have been increased and differentiated according to the order of birth.

**Armenia provides little unemployment protection to workers and offers a limited array of active labor market programs.** Unemployment protection differs among ECA countries. In Armenia and Kazakhstan, for instance, severance pay is one month's wage regardless of tenure, in line with comparators. In Azerbaijan, the benefit formula depends on the number of years of tenure and in Georgia, severance varies according to prior notice period. With the removal of unemployment benefits in 2015, ALMPs remain the main component of labor market policy. The scale and supply of active labor market programs for job seekers and youth transitioning from school to work are limited. However, these programs are not a major part of Armenia's social protection system. The budget for ALMPs has been declining since 2006, and many employment programs, including the small business grants to support entrepreneurship, were discontinued in 2017. The capacity of the State Employment Agency (SEA) is constrained in terms of both staffing and resources allocated for active labor market policies.

**Table 3: Indicators of employment regulations in selected countries, 2018**

	Armenia	Azerbaijan	Georgia	Kazakhstan	Russia	Turkey
Equal remuneration for work of equal value stipulated in law	No	No	No	No	No	Yes
Gender nondiscrimination in hiring stipulated in law	No	Yes	No	Yes	Yes	Yes
Minimum length of maternity leave (in calendar days; minimum number of days that the government, employer or both legally must pay)	140	126	183	126	140	112
Five fully paid days of sick leave a year	No	Yes	Yes	Yes	Yes	Yes
Unemployment protection after one year of employment	No	Yes	Yes	Yes	Yes	Yes

Sources: World Bank Doing Business 2019, <http://www.doingbusiness.org/en/data>; Doing Business 2018, downloaded from <http://www.doingbusiness.org/en/data>.

**Armenia's minimum wage is set at a level comparable to other countries.** Comparing minimum wage levels across countries poses measurement and comparability challenges. Table 4 shows minimum wage data for international comparisons by expressing minimum wage as a share of GNI per worker (a proxy for average earnings) for selected comparators.<sup>41</sup> Overall, based on data for 75 countries, the minimum wage level is most frequently set at about 40 percent of mean wages. Armenia's minimum wage is set at drams 55,000 per month, resulting in a modest ratio of minimum wage to GNI per worker of 0.23 in mid-2018. However, using 2017 Labor Force Survey data to estimate the wage for workers in the formal sector (drams 123,000 per month), Armenia's minimum wage is set at 44 percent of the average formal sector wage, which is in line with the cross-country average.

**Table 4: Minimum wage indicators in selected countries, 2018**

	Armenia	Azerbaijan	Georgia	Kazakhstan	Russia	Turkey
Minimum wage for a full-time worker (US\$/month)	111	78	16	87	283	585
Ratio of minimum wage to value added per worker	0.23	0.16	0.03	0.09	0.25	0.43

Source: World Bank Doing Business 2019; Doing Business 2018.

<sup>41</sup> Data are collected on the minimum wage applicable to a 19-year-old adult cashier in the food retail industry with one year of work experience.

**Armenia labor inspectorates have insufficient resources and are inadequately governed by legislation to monitor enforcement of labor laws and minimum wages.** In many countries, employment laws are often ineffective because of evasion, weak enforcement and failure to reach the informal sector. Even though labor legislation might be rigid de jure, de facto it is not enforced and widely evaded. Armenia does not have a functioning labor inspectorate<sup>42</sup> at the national level. In 2014, the government repealed Article 34 of the Labor Code, which had previously established the government's authority to conduct routine labor inspections. As part of a broader inspection reform agenda, responsibility for conducting labor inspections was transferred to the new State Health Inspectorate, created the same year. Beginning in 2015, subsequent changes to legislation regulating labor inspections left the State Health Inspectorate unable to conduct labor inspections. In 2017, continued inspection reform led to dissolution of the State Health Inspectorate and creation of the Health Inspection Body, which was tasked with monitoring occupational safety and health standards for employees and monitoring a variety of public health standards. However, the Health Inspection Body is unable to monitor or enforce labor laws in Armenia due to lack of adequate legislation.

**Thus, enforcement and compliance of labor regulations in Armenia are weak.** The country currently cannot effectively enforce core worker rights and minimum wages, supervise implementation of labor regulations, and provide technical assistance and advisory services to enterprises. ILO guidelines suggest that the number of labor inspectors in relation to workers should be about 1/20,000 for transition economies, indicating that Armenia would need around 60 labor inspectors.

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<sup>42</sup> Labor inspectorates are an important tool in monitoring compliance with labor standards. On one hand, labor inspectors enforce legal provisions dealing with labor regulations, occupational health and safety, social services, migrant workers, vocational training, social security, and other matters. On the other hand, modern labor inspections not only focus on pure law enforcement and penalties but also prioritize prevention, protection, and the improvement of working conditions and environments.

## Access to jobs in Armenia: Who works and who is jobless?

### Key messages

- *The aging of Armenia's population suggests that it must engage as many people of working age as possible in good-quality, productive jobs.*
- *The employment to population ratio has almost fully recovered since the 2008-09 global financial crisis. Nonetheless, in 2017, only about half of the working-age population were in employment. Youth, women, those with lower educational attainment and those living in urban areas are less likely to be employed.*
- *Labor force participation is low in Armenia, and low female activity rates are of special concern. Women, increasingly better-educated, represent an important, untapped potential force for economic growth. Social norms and care responsibilities are significant constraints that must be overcome to increase female labor force participation, especially of women of childbearing age.*
- *Armenia must focus on helping youth, and particularly young women, transition from school into work. Youth face challenges entering the labor market and the rates of youth not in employment, education or training (NEET), especially among young women in rural areas, are high.*
- *At 18 percent, Armenia's unemployment rate is particularly high. Even higher unemployment rates affect youth and people living in urban areas, including in Yerevan.*
- *Armenia is characterized by high levels of external migration, with a significant proportion of the working-age population temporarily abroad for economic reasons. Additionally, many Armenians in the country report being "ready" to go abroad to look for a job or a better job.*

### A snapshot of the Armenian working-age population

**Only about half of the working-age population in Armenia are in employment, and two out of five working-age individuals are inactive.** A snapshot of the 2017 working-age population (ages 15-64) shows that only 63 percent were in the labor force (either employed or unemployed), meaning that the remaining 37 percent—about two out of five individuals—were inactive (based on the Labor Force Survey 2017, see Box 2). Activating the working-age population is a significant challenge. Among the active population, a high proportion of people (18 percent) are out of a job. High unemployment and low activity rates resulted in only about half (52 percent) of the working-age population being employed in 2017. As such, Armenia lags behind comparator countries such as Azerbaijan, Belarus, Kazakhstan, and Russia, where the employment to population ratio nearly reaches or surpasses 60 percent.<sup>43</sup> Armenia also has one of the highest unemployment rates in the Europe and Central Asia (ECA) region. According to World Development Indicators (WDI) data, only Bosnia and Herzegovina and North Macedonia had higher unemployment rates in 2017; the ECA average, excluding high income countries, was only 9 percent.<sup>44</sup> Among those people who are employed, the majority (61 percent) work for a wage and two in five either work for themselves or for the family household enterprise (Figure 29).

**Idleness among youth, especially young women, is a significant concern.** Youth ages 15-24 made up 31 percent of the inactive working-age population in 2017, and fewer than two out of three in this population were enrolled in full-time education in 2017 (Figure 29). This means that a significant share, or 38 percent, of youth were in neither employment nor education.<sup>45</sup> Considering that many young males who are not in the labor force are serving in the military, the activation of young women emerges as an even higher priority. Young women who are not in employment or education tend to cite household work or family circumstances as the reason for their inactivity. Although this does not make them idle in the strict sense of the word, their devotion to care duties represents an inefficient allocation of resources. Many of these young women are highly educated, and the economy would be better served if they joined the labor force.

<sup>43</sup> The sources are WDI, modeled International Labour Organization (ILO) estimates, employment to population ratio, population ages 15+.

<sup>44</sup> This average is based on modeled ILO estimates, unemployment, percent of labor force.

<sup>45</sup> Not including males serving in the military, 26.8 percent of youth ages 15-24 were not in employment, education or training (full-time or part-time) in 2017.

**Family obligations are an important reason for inactivity.** Among the population ages 25-64, only about 17 percent reported being inactive due to retirement or disability; another 48 percent were inactive because of family obligations or housework, with the latter reason reported almost exclusively by women.<sup>46</sup> Another 35 percent were classified as “other inactive.” Among “other inactive” males, a significant share reported being inactive either because they were going abroad soon, they already were abroad (19 percent) or they had just returned from abroad (5 percent).

**Figure 29: Profile of the working-age population, 2017**

<b>Working-age population</b> 1,815,555 (62%)							
<b>In the labor force</b> 1,145,105 (63%)			<b>Not in the labor force</b> 670,450 (37%)				
<b>Employed</b> 943,060 (82%)		<b>Unemployed</b> 202,045 (18%)	<b>Youth (15-24)</b> 232,569 (35%)	<b>Non-youth (25-64)</b> 473,881 (65%)			
<b>Employee</b> 571,929 (61%)	<b>Self-employed</b> 348,727 (37%)	<b>Unpaid family workers</b> 22,027 (2%)	<b>In school</b> 143,758 (62%)	<b>Not in School</b> 88,811 (38%)	<b>Housework</b> 211,404 (48%)	<b>Disabled / retired</b> 74,905 (17%)	<b>Other</b> 151,572 (35%)

Source: World Bank staff estimates based on ARM LFS 2017 data.

Note: Males ages 15-29 serving in the military are considered to be not in the labor force. “In school” refers to full-time education.

**Box 2: Data sources**

**The data source for this section is the 2017 Labor Force Survey.** The Labor Force Survey (LFS) is a household survey administered by the Statistical Committee of the Republic of Armenia (Armstat) on an annual basis since 2014 to monitor trends in the Armenian labor force including employment, unemployment and labor force participation. The survey is representative of the Armenian population ages 15-75. Household members who have been absent for 3 or more months, unless absent due to military service, are not considered part of the population ages 15-75. This means that temporary migrants living abroad are not included in the sample.<sup>a</sup> The analysis in this report only considers the population ages 15-64 as of working age. In 2017, according to the LFS, 146,207 individuals ages 15-64 had been absent from their household for 3 more months, representing 7.4 percent of the 15-64 sample; among these, 91 percent, or about 132,753 individuals, were living abroad for work or for other reasons. The working-age population for which 2017 labor market information is available represents a total of 17,527 observations, or 1.8 million individuals.

Because the Labor Force Survey has only been administered since 2014, this report uses data from the Income and Living Conditions Survey (ILCS) in order to examine labor market trends between 2007 and 2017. These data are presented mainly to understand how Armenia’s labor market has fared since the onset of the 2008-09 global financial crisis and are not to be considered official labor market statistics.

<sup>46</sup> In 2017, 66 percent of the inactive population ages 25-64 was female.

One difference between the two surveys is that the ILCS, unlike the LFS, does not consider individuals absent from the household for three or more months due to military service to be part of the working-age population. Further, all individuals absent during the survey month for any number of days are also excluded. More importantly, there are significant discrepancies in employment, unemployment and activity figures between the two surveys.

Mainly, employment is higher when calculated based on the ILCS. In part, the ILCS captures a high number of unpaid family workers (about 110,000 in 2017, versus only 22,000 according to LFS).

One possible reason for such discrepancies, aside from the different populations considered, is that the questions used to identify employed individuals in the two surveys, although analogous, are not identical. Further, the two surveys serve different purposes, with the ILCS meant to capture a broad spectrum of living conditions. Seasonality does not appear to be an issue affecting differences in labor market figures, as both surveys are fielded throughout the entire calendar year, with approximately 1/12 of households interviewed each month.

a. Individuals absent from their households but living within Armenia could potentially be captured in the sample if they are surveyed in the place where they are living.

## Trends in labor force status among the working-age population

**The employment to population ratio declined following the global financial crisis, but recovered to was almost pre-crisis levels by 2017.** Prior to the 2008-09 crisis, this ratio<sup>47</sup> was 63 percent, according to ILCS data.<sup>48</sup> In 2010, the employment to population ratio fell to just 53 percent; it has since recovered but it is still somewhat short of the 2007 level (Figure 30). ILCS data further show that the total number of jobs only rose by 1 percent between 2007 and 2017. Labor force participation fell in the same period but now is almost back to pre-crisis levels.

**Unemployment has yet to revert to pre-crisis levels, suggesting that Armenia's high unemployment rate is structural.** Although the unemployment rate was considerably lower prior to the start of the global financial crisis in 2008, it was still high in absolute terms (about 13 percent, according to ILCS survey data). After peaking in 2010, unemployment has trended downward but has not returned to pre-crisis levels (Figure 30).

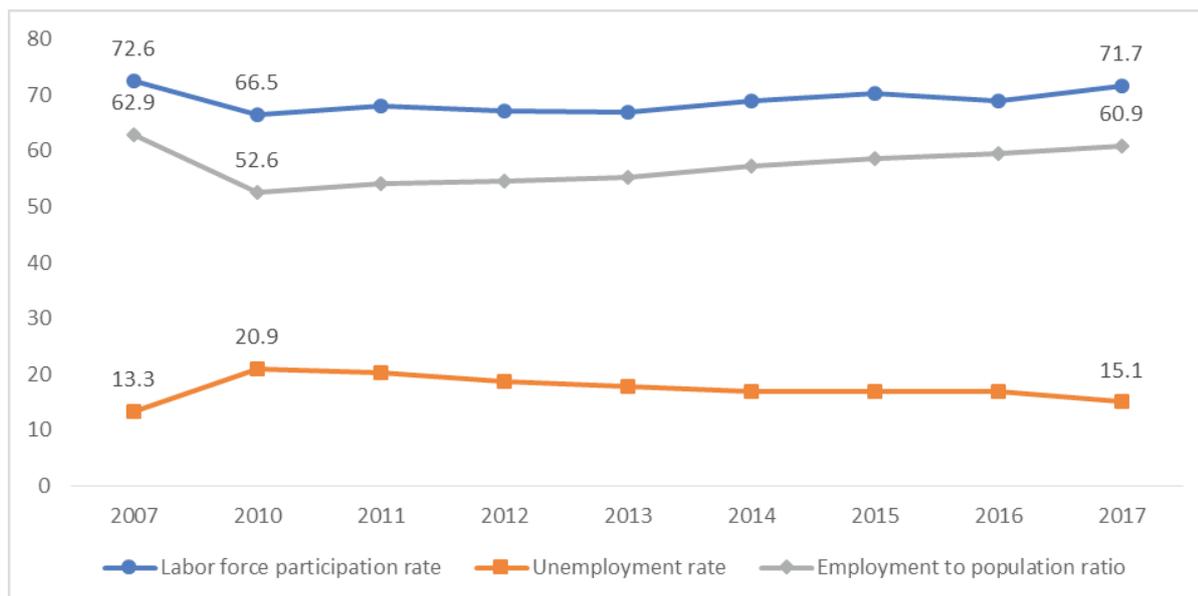
**Trends in employment during the last decade show differences by gender.** Employment rates for men have fully recovered since the 2008-09 crisis; in 2017, at 72 percent, the 72-percent employment to population ratio for men was higher than in 2007 (Figure 30). Women have not experienced a full recovery. The employment to population ratio for women declined sharply during the crisis. While it rose in subsequent years and reached 52 percent in 2017, it has yet to reach pre-crisis levels (56 percent), let alone levels observed among men. At the same time, the number of jobs held by men in Armenia fell by 4 percent during the 2000-17 period, whereas those held by women increased by 8 percent.<sup>49</sup>

<sup>47</sup> This ratio relates to the population ages 15-64.

<sup>48</sup> ILCS data are not strictly comparable with LFS data. Because LFS data are only available since 2014, ILCS data is used in this report in order to examine trends for a longer time series. Box 2 provides more details.

<sup>49</sup> A lower number of jobs held by men has still resulted in a slightly higher employment to population ratio because of lower estimates for the number of men ages 15-64 living in Armenia, according to ILCS data.

**Figure 30: Labor force status among the working-age population (15-64), according to ICLS data, 2007-17**



Source: World Bank staff estimates based on 2007-17 ICLS survey data.

Note: ICLS data are not strictly comparable with LFS data. Because LFS data are only available since 2014, ICLS data are used in this report in order to examine trends for a longer time series.

**Employment rates in the marz of Gegharkunik, Kotayk, and Shirak have not yet rebounded from the global financial crisis, while in most other marz they are close to full recovery.** Employment to population ratios decreased in all marz following the global financial crisis; in most marz, they have since returned to within 1 or 2 percentage points of pre-crisis levels. However, in Gegharkunik, Kotayk and Shirak, employment to population ratios were between 5 and 8 percentage points (and about 10 percent) lower than in 2007 (Table A.1 in Annex). In particular, Kotayk and Shirak have the lowest employment to population ratios among all marz, and have fallen further behind the national average. Following the crisis, the share of the working-age population that is unemployed also increased significantly in all marz and the share of this population that is inactive increased in almost all marz. As is the case for employment to population ratios and unemployment, activity rates have since recovered in almost all marz. Gegharkunik was an exception.

**The proportion of youth that is not in employment, education or training fell significantly between 2010 and 2017, with the greatest decline observed among females.** More than half of females and almost one-third of males ages 15-29 were not in employment, education or training (NEET) in 2010 (Table 5). By 2017, these proportions had fallen significantly, especially for females. The result is a fall in the total NEET rate for ages 15-29 from 41 percent in 2010 to 31 percent in 2017. The fall in NEET rates is even greater for the 15-24 age group, with females also leading the decline.<sup>50</sup> Despite these improvements, as discussed further elsewhere in this report, NEET rates in Armenia remain high by international standards.

<sup>50</sup> Male NEET rates do not differ significantly by age group.

**Table 5: NEET rates by sex, according to 2010, 2015 and 2017 ICLS data**

	Total	Male	Female
<b>Ages 15-24</b>			
2010	37.9	28.5	45.4
2015	29.8	23.1	35.3
2017	26.2	20.1	31.6
<b>Ages 15-29</b>			
2010	41.2	28.0	52.0
2015	34.0	22.7	43.3
2017	30.5	20.2	39.8

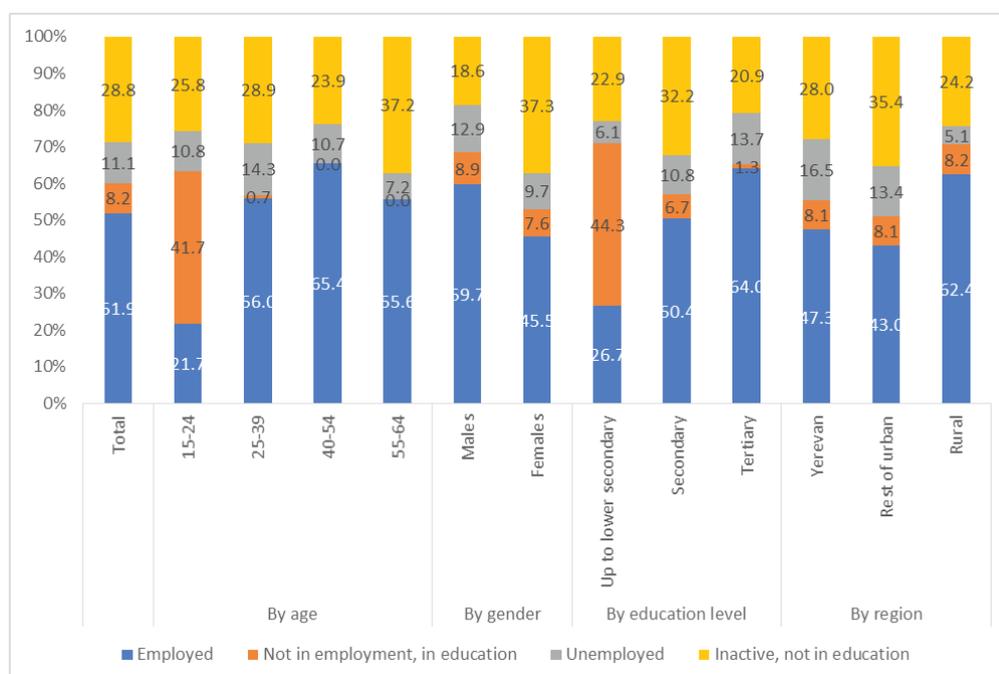
Source: World Bank staff estimates based on 2010, 2015 and 2017 ICLS data.

Note: ICLS data are not strictly comparable with LFS data. Because LFS data are only available since 2014, ICLS data are used in this report in order to examine trends for a longer time series.

## Access to employment

**Access to jobs is unequally distributed among the population and varies significantly by age, gender, educational attainment and region.** Women as well as individuals with lower educational attainment, those living in urban areas and especially youth (ages 15-24) are much less likely to be employed. Access to employment is especially low for youth and the low educated; only 22 percent of youth and 27 percent of individuals with lower secondary schooling or below were employed in 2017. In contrast, the employment to population ratio reaches at least 60 percent for men, individuals ages 40-54, those with tertiary education and those living in rural areas. (Figure 31).

**Figure 31: Labor force status among working-age population by age, gender, educational attainment and region, 2017**



Source: World Bank staff estimates based on ARM LFS 2017 data.

**Gender gaps in employment across the lifecycle are widest for people ages 25-39.** Employment to population ratios across the lifecycle for the working-age population follow an inverted U-shape for both men and

women. For men, however, employment reaches peak levels (above 70 percent) when they are between the ages of 25 and 39, and remains at this peak for the 40-54 age group. For women, employment rates do not reach peak levels until they have reached 40-54 years of age. The result is wide gender gaps in employment for the 25-39 age group (28 percentage points). This gender gap is only partially closed when women reach the ages of 40-54. Women have acquired less work experience than men when they reach this age group, which may partially explain why the gender gap fails to close; for many women, long spells of either inactivity or unemployment place them at a disadvantage when competing with men on the labor market. By the time women reach the 55-64 age group, gender gaps begin to widen again, although the gaps are not as wide as those observed for the 25-39 age group. Since unemployment rates are particularly low for the 55-64 age group, widening gender gaps at this age suggest that women leave the labor force at an earlier age than men.

**In terms of education level, gender gaps in employment to population ratios are widest among individuals whose highest educational attainment level is secondary schooling.** Gender gaps are at their narrowest for those with lower secondary and below (8 percentage points). However, this group also has the lowest employment rates for both men and women (30 and 22 percent respectively). The widest gender gaps are observed among those with secondary education (17 percentage points). But gaps also are substantial (14 percentage points) for those with tertiary education—reflecting that only 58 percent of women with a university degree are actually working, compared to 72 percent of men. Analysis by region shows the narrowest gender gaps in employment in rural areas. Employment rates are significantly higher for both men and women in rural areas, which also is where the narrowest gender gaps are observed.

**Multinomial analysis shows that education and gender are the greatest predictors of employment, with age and geographical location also significant factors.** A multinomial probit model controlling for gender, age, education and administrative division shows that in both rural and urban areas, individuals with tertiary education have the greatest marginal probability of being employed. This is especially the case in urban areas, where completing tertiary education leads to a 36-percentage point increase in the probability of employment compared to that of individuals who have completed only up to lower secondary education (the reference category). The model shows that women in both urban and rural areas are approximately 16 percentage points less likely to be employed than men and that each additional year of age leads to a 5-percentage point higher probability of being employed. There is also considerable variability according to administrative division, with those living in rural Kotayk and urban Shirak significantly less likely to be employed than those in rural Aragatsotn and Yerevan, respectively (the reference categories), and those living in urban Vayoc Dzro more likely to be employed than those in Yerevan. (Table A.1 in Annex).

## Who is out of work in Armenia?

Getting more people into employment is imperative for Armenia, especially considering its aging population. For this reason, it is important to examine who, among the working-age population, is out of work, i.e., inactive or unemployed. In particular, youth and women tend to be disproportionately affected by inactivity and unemployment. Geographical location and education also tend to influence the proportion of inactive or unemployed. Among youth, who are still in their human capital accumulation stage, the NEET rate, or the proportion who are not in employment, education or training, is also relevant; youth who spend long periods being NEET have low prospects of becoming employed later in life.

## Youth who are not in employment, education or training

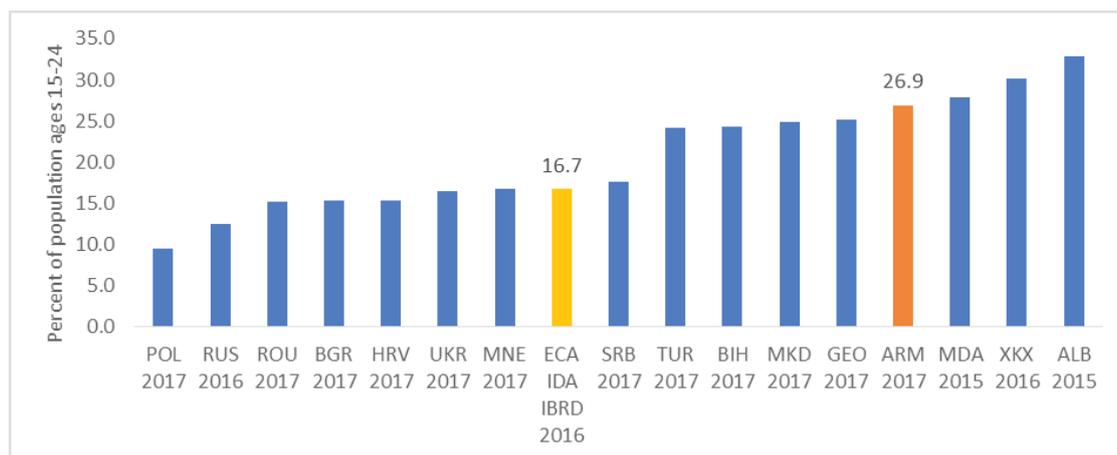
**The share of youth who are not in employment, education or training (NEET) is high in Armenia by international comparison.** Labor Force Survey data show that more than one fourth (26.9 percent) of youth ages 15 to 24 were NEET in 2017; regionally, only one sixth (16.7 percent) of ECA youth are NEET (Figure 32, panel a).<sup>51</sup> Armenia's NEET rate is similar to that of neighboring Georgia, but is more than double that of Poland (9.5 percent) and Russia (12.4 percent).

<sup>51</sup> The age group 15-24 is used to refer to NEET youth here because of greater comparability with data available for other countries. The figure for Albania is based on LFS 2017 data; males who are serving in the military are not considered part of the working-age population for the purpose of this calculation. The source for Europe and Central Asia is WDI and includes only IBRD and IDA countries for which 2016 data are available.

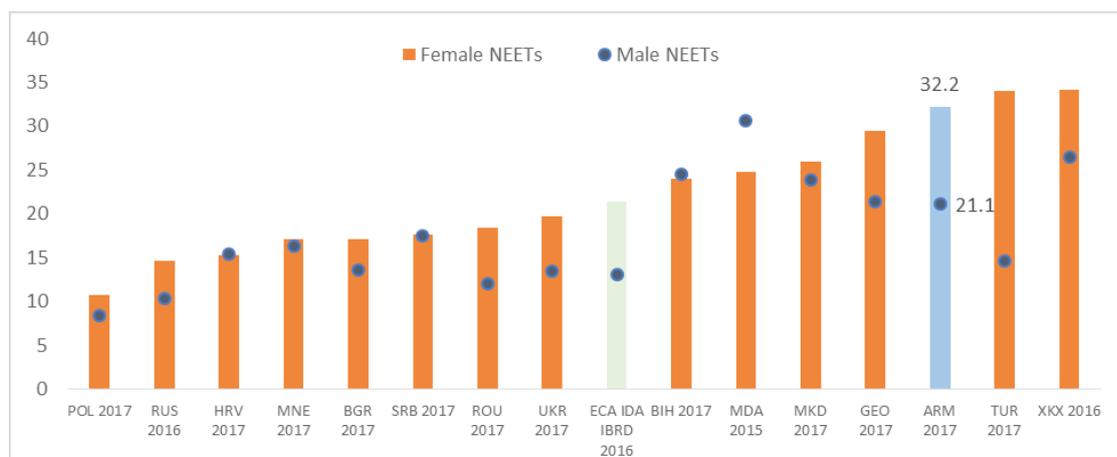
As is the case in most countries, Armenian females are more likely to be NEET than Armenian males, although the gender gap in Armenia is especially high. Almost one third of females ages 15-24 were NEET in 2017; in contrast, only 21 percent of males in the same age group were NEET—a gender gap of 11 percentage points. This is the second-highest gender gap in the region after Turkey (19 percentage points). The gender gap in Georgia is similar to Armenia’s (8 percentage points). Gender gaps for other countries in the region for which data are available are much smaller, with some countries having gender parity or lower NEET rates among females (Figure 32, panel b).<sup>52</sup>

**Figure 32: NEET rates ages 15-24, Armenia and selected comparator countries**

a. Total



b. By sex



Source: World Development Indicators; for Armenia, World Bank staff estimates based on ARM LFS 2017 data.

Notes: Youth in serving in the military are not considered NEET. According to World Development Indicators, [y]outh are defined as persons ages 15 to 24 [...]. However, countries vary somewhat in their operational definitions. In particular, the lower age limit for young people is usually determined by the minimum age for leaving school, where this exists. When data are available for more than two age groups in a given year, one value for persons ages 15 to 29 is taken, considering that not all people complete their education by the age of 24.” Figures may therefore not be strictly comparable across countries.

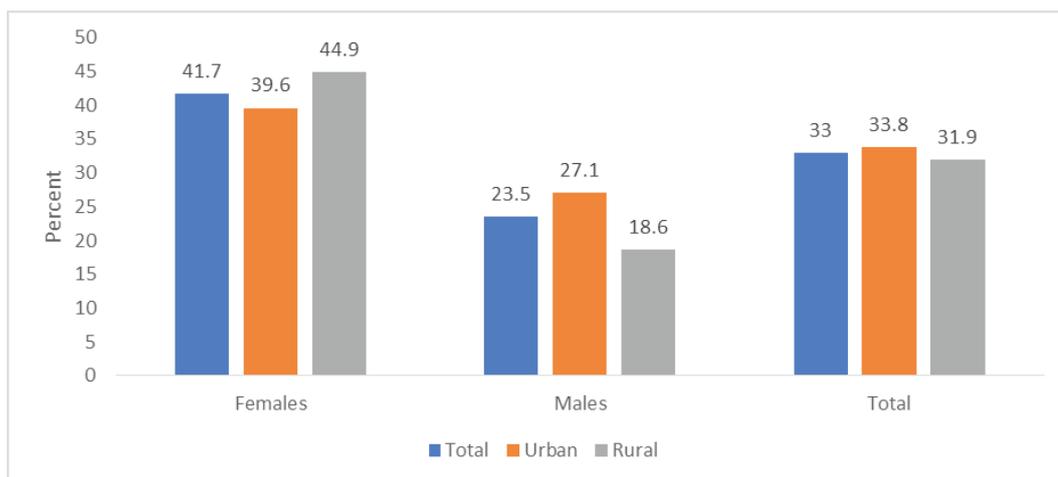
**An even wider gender gap is evident in NEET rates among the 15-29 age group in Armenia.** At 33 percent, the NEET rate for this age group is significantly higher than the rate (27 percent) for the 15-24 age group. The difference is mostly attributable to higher NEET rates among females: 42 percent of females ages 15-29 were NEET in 2017 versus just 24 percent of their male counterparts (Figure 33). The gender gap in NEET rates

<sup>52</sup> This represents the simple average for all countries comparator countries for which data are available.

begins to widen between the ages of 21 and 23 when most youth have already left school. Thereafter, the gender gap stabilizes and remains wide (Figure 34).

**Gender gaps in NEET rates are especially high in rural areas, where they also begin to widen at an earlier age.** In 2017, 45 percent of females in rural areas were NEET versus only 19 percent of rural males. By age 18, the rural gender gap begins to widen as NEET rates start to climb for women. In contrast, NEET rates remain relatively steady for males from the age of 18. Rural female NEET rates also are higher than those for urban females; in contrast, the share of NEET rural males is low relative to that of urban males. In urban areas, NEET rates for men peak at age 19, coinciding with the age when many men are in compulsory military service.

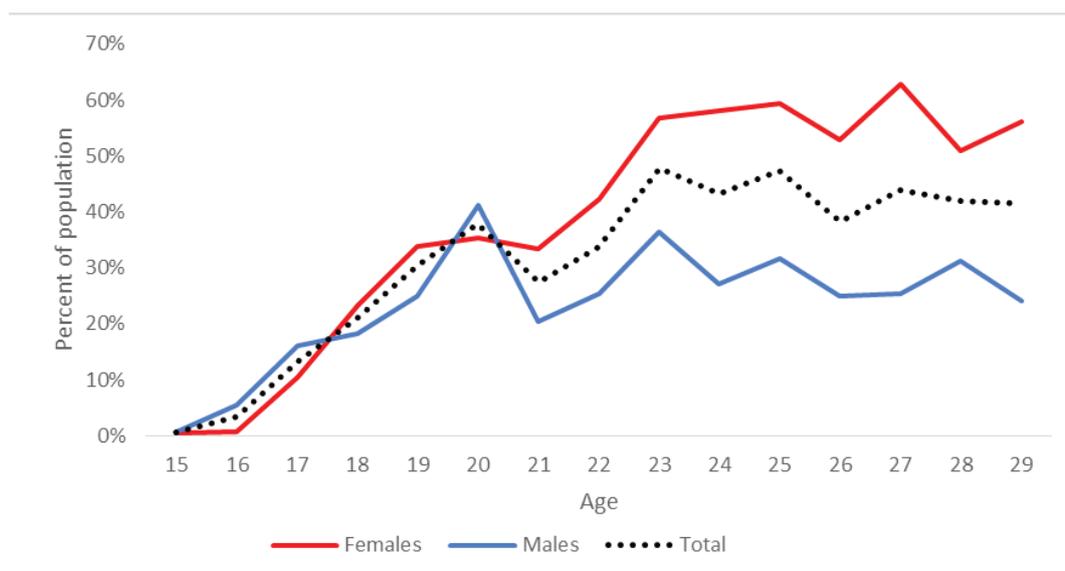
**Figure 33: NEET rates by sex, ages 15-29, 2017**



Source: World Bank staff estimates based on ARM LFS 2017 data.

Note: Males serving in the military are not included in the sample.

**Figure 34: NEET youth ages 15-29, by age, 2017**



Source: Buitrago et al. (2019).

Note: Males serving in the military are not included in the sample.

**In terms of their activity status, male and female NEETs differ significantly, with the women inactive and the men mostly unemployed.** Most female NEETs ages 15-29 (54 percent) were homemakers or caregivers and only 26 percent were seeking work. In contrast, most male NEETs in this age group were seeking work (58 percent). In rural areas, the proportion of female NEETs looking for a job was significantly lower, at just 14 percent. At the same time, rural male NEETs ages 15-29 were less likely to be searching for a job than their urban male counterparts. Discouraged workers were also more prevalent among NEETs living in rural areas than in urban areas, where jobs are more abundant. Among youth who are not NEET, the gender gap is driven by higher employment rates among males; in contrast, a similar proportion of young males and females (about 29 percent) are in education or training (Figure A.4 in Annex).

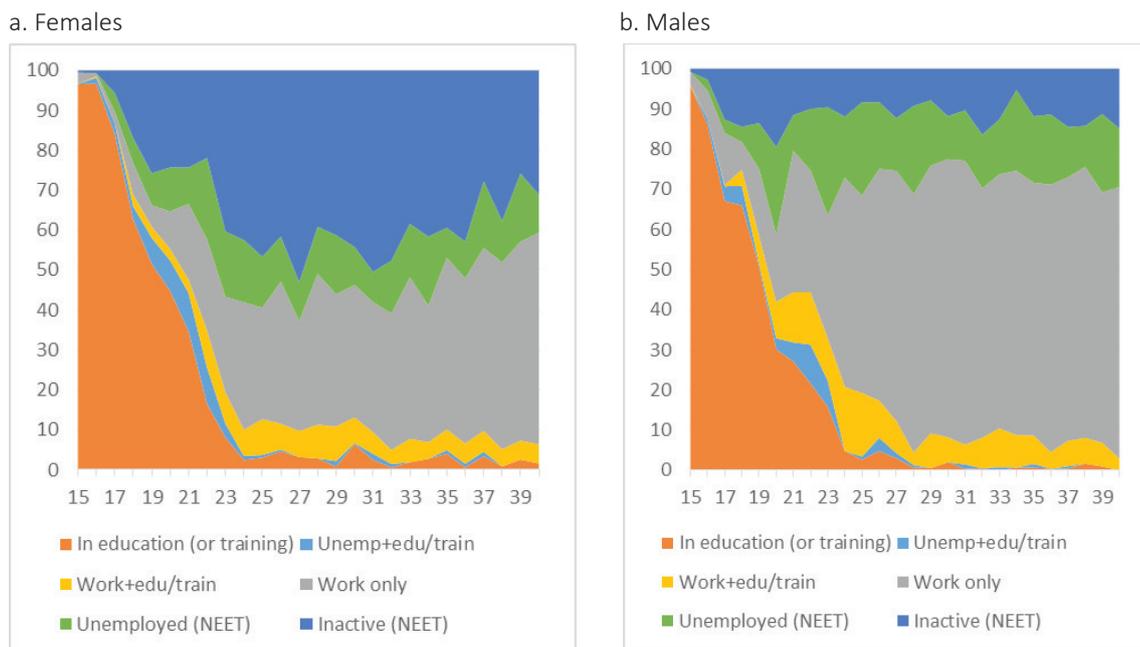
**In short, most males transition into work after school while most females transition into inactivity.** As females begin to leave school at about the ages of 18 to 24, a significant proportion of them enter inactivity. The share of inactive NEET females then peaks between the ages 25 to 35, hovering between 40 and 50 percent (Figure 35, panel a). After age 35, the share of working women begins to rise and inactivity begins to fall; however, female employment remains significantly lower than that of their male counterparts, and inactivity remains significantly higher. That women are more prone to enter inactivity after leaving school is a factor that likely limits their opportunities in the labor market later in life, as employers are often reluctant to hire individuals who have no work experience or have experienced prolonged periods without a job. While a greater share of men than women ages 25 to 40 are in unemployment, this largely reflects higher labor force participation among men.

**Men tend to leave education earlier than women, and compulsory military service may be an important explanatory factor.** Although the share of women in school begins to fall at about the age of 18, the share of men in education drops considerably more as many men start their two-year compulsory military service at this age.<sup>53</sup> The share of men serving in the military peaks at age 19, when 63 percent of men are serving and only 22 percent are in school or training (either full or part-time). In contrast, 60 percent of women are still in school at this age (Figure A.2 in Annex). In part, compulsory military service may explain why the share of women ages 25-29 who have completed tertiary education (41 percent) is higher than that of men who have completed tertiary education (36 percent) (Figure A.2 in Annex). It is possible that many men who enter military service at age 18 may intend to return to school after compulsory service, but join the workforce instead because of financial obligations. By age 22, the share of men in school rises again and is on par with that of women. However, many men who are in school at this age are either also searching for a job or combining work with studies; women, on the other hand, are less likely to combine school with work. In part, being able to participate in full-time education may explain women's higher educational attainment.

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<sup>53</sup> In Armenia, two-year military service is compulsory for men who have reached the age of 18. Until November 2017, men who entered higher education institutions after graduating from high school had the right to defer service, including until receiving a master's degree. Beginning in November 2017, only men who sign an agreement with the Ministry of Defence obliging them to serve in the army for three years after receiving a Bachelor's degree will be eligible for deferment.

**Figure 35: School to work transition, ages 15-40 by sex, urban and rural areas, 2017**



Source: Buitrago et al. (2019).

**School to work transition paths vary according to geographical location for both men and women.** Urban youth remain in school longer than their rural counterparts (Figure A.3 in Annex). By age 18, a significant share of rural females have already begun their transition from school into inactivity. The share of inactive, rural female NEETs peaks between the ages of 23 and 27, but their activity rates begin to climb at about age 28, reaching parity with urban rates. Rural women ages 28 to 40 are more likely to be in employment than their urban counterparts, suggesting that the transition from prolonged inactivity to work is easier in rural areas, perhaps because many individuals can engage in informal agricultural activities. In contrast, a larger share of urban women in this age group are in unemployment. Scarce employment opportunities in urban areas may be discouraging women from entering the labor force after a period of inactivity. Nonetheless, their lack of work experience at this age may also pose a significant entry barrier. School to work transition likewise differs for urban and rural males, with school attendance beginning to taper off at an earlier age among rural men. A higher share of rural men also are in employment, whereas a higher share of urban men are in unemployment.

### Who are the inactive?

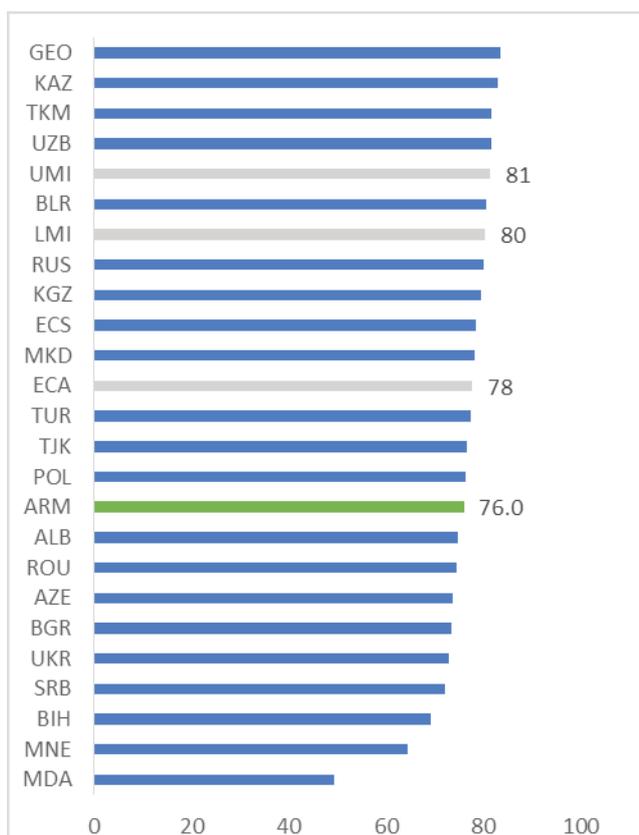
**While its male and female labor force participation rates are lower than the ECA average, Armenia should focus mainly on increasing women's participation to catch up with the best performers in the region.** According to World Development Indicators data, about 66 percent of the working-age population in Armenia (ages 15-64) participated in the labor market in 2018.<sup>54</sup> This share is lower than the average for the ECA region<sup>55</sup> (68 percent) and lower than the average for upper-middle-income countries (71 percent). When labor force participation (LFP) rates are disaggregated by sex, Armenia ranks on the lower end of the spectrum for male LFP compared to neighboring countries (Figure 36). While the female LFP rate in Armenia is significantly higher than those in low-performing countries such as Moldova and Tajikistan, it still is far below those of top performers such as Belarus, Kazakhstan and Russia. Female LFP in these top performing countries is close to or higher than 70 percent; Armenia's female LFP is 58.1 percent. If Armenia is to catch up with the best performers in terms of labor force participation, it should focus its efforts on increasing LFP rates among women.

<sup>54</sup> WDI data are based on ILO modeled estimates, allowing for international comparability.

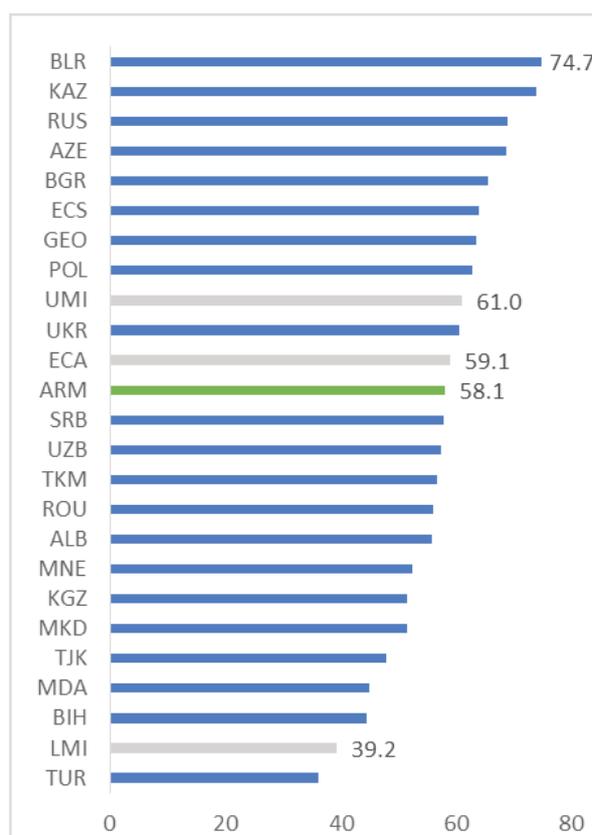
<sup>55</sup> The region referenced here includes only International Bank for Reconstruction and Development (IBRD) and International Development Association (IDA) countries.

**Figure 36: International comparison of labor force participation rates, 2018**

a. Males, ages 15-64



b. Females, ages 15-64



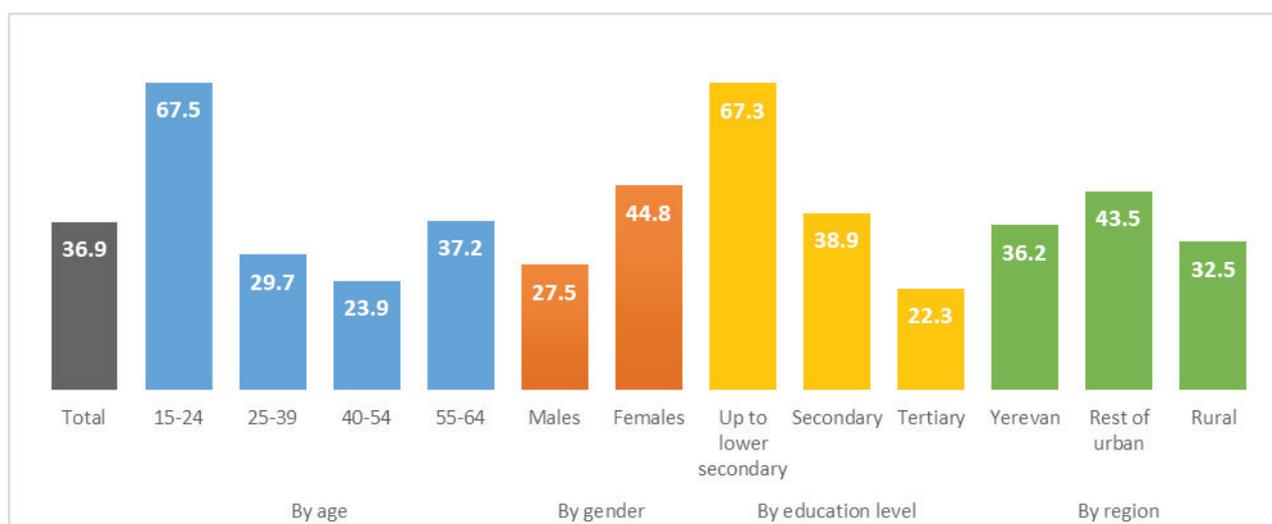
Source: World Development Indicators.

Note: The panels show ILO modeled estimate for international comparability. ECA = Europe and Central Asia IBRD and IDA countries; LMI = lower-middle income countries; and UMI = upper-middle-income countries.

**Labor force participation rates are low for youth and those with lower secondary education or below, with about two-thirds of individuals in each of these two groups inactive in 2017.** These two groups have low activity rates because most are still in school: 61 percent of inactive youth, versus 18 percent of the total working-age population, cited being in school as their reason for inactivity. Inactivity falls with educational attainment, with a particularly low LFP rate (22 percent) among those with tertiary education. While inactivity is high among individuals who have lower secondary education or below, 66 percent of these (66 cited being in school as the main reason for their inactivity). Among those with tertiary education, the most commonly cited reason for inactivity was household chores or family circumstances (24 percent). Analysis by age group shows a U-shape across the lifecycle, with inactivity hitting its lowest point between the ages of 40-54. Inactivity rates for the oldest age group (ages 55-64), while still high at 37 percent, are nevertheless low in comparison to the inactivity rate of youth (67 percent). Most individuals ages 25-39 who are inactive cited household chores/ family circumstances as the main reason. This is commonly cited as the main reason for inactivity by those in the 40-54 age group (although by fewer than one third of individuals), while illness or injury is the main reason cited by more than one fifth of those in this group. Illness or injury is an even more common reason for inactivity by individuals ages 55-64, cited by almost one third; 18 percent in this age group cited as the main reason for their inactivity that they are considered too old to find a job.

**Analysis by region shows that inactivity rates are lowest in rural areas and the highest rates in urban areas not including Yerevan.** Lower inactivity rates in rural areas may be attributable to greater participation in self-employment in agriculture and subsistence agriculture. That jobs are less available in urban areas other than Yerevan may also partly explain higher inactivity in these areas as unemployed individuals often become discouraged after a prolonged job search and drop out of the labor force. Indeed, in urban areas other than Yerevan, a sizeable portion of inactive individuals reported that the main reason they had not searched for a job or tried to launch a business during the previous month was “lack of jobs in the area” (10.4 percent) or “past failure to find a suitable job” (10.4 percent). In contrast, these reasons for inactivity are cited much less frequently by individuals in Yerevan (Table 6).

**Figure 37: Inactivity rates by region, age, gender and education, 2017**



Source: World Bank staff estimates based on ARM LFS 2017 data.

Note: The figure shows inactivity rates for the working-age population (ages 15-64). “Rest of urban” refers to urban areas except for Yerevan.

**Table 6: Main reason for inactivity, by region, share of ages 15-64 inactive**

	Yerevan	Rest of urban	Rural	Total
Student (studying) / going to continue education	19.8	18.6	25.9	21.5
Household chores / family circumstances	36.9	23.9	25.3	28.2
Illness / injury	14.4	14.7	9.9	13.0
Care of a family sick member	1.1	1.2	1.4	1.2
Waiting for the work / work season to resume	0.3	0.7	3.1	1.4
Considered too young / too old to find a job	8.9	3.9	2.1	4.7
Lack of jobs in the area	0.1	10.4	10.0	7.2
Past failure to find a suitable job	3.8	10.4	3.5	6.0
Do not know where and how to look for a job	0.7	0.7	1.0	0.8
Going abroad / is abroad	6.9	4.7	4.3	5.2
Have just returned from abroad	0.7	1.2	0.9	1.0
Others	4.5	8.5	11.9	8.5
Do not want to work	1.9	1.3	0.7	1.3

Source: World Bank staff estimates based on ARM LFS 2017 data.

Note: “Rest of urban” refers to urban areas except for Yerevan.

**Women’s high inactivity rates are primarily explained by family caregiving and domestic responsibilities.**

Gender gaps in inactivity rates are most salient among the 25-39 age group, coinciding with the ages when women are likely to have young children (Figure 38). The great majority of women in this age group (72 percent) cited household chores/family circumstances as their main reason for not looking for a job or trying to launch a business; this proportion drops to 43 percent for women ages 40-54, signaling that once children are older, household responsibilities become less of a binding constraint to labor force participation (Figure 39). Multivariate analysis conducted by the World Bank for Armenia also shows that marriage and motherhood are strongly associated with lower female labor force participation (World Bank, 2017). The same analysis found a negative correlation between the proportion of children ages 6-14 present in the household and the participation of women in the labor market. In contrast, these factors do not have an effect on men’s labor force participation. For men ages 25-39, the main reason for inactivity is going abroad or being abroad, which together represent almost one third of responses. Only 2 percent of women of the same age group cite one of these reasons. According to qualitative evidence<sup>56</sup> relating to low-income and vulnerable women, cultural norms play an important role in keeping women inactive.

**Social norms around gender tend to relegate women to caregiving and domestic activities rather than to work.** According to the 2011 World Values Survey for Armenia (Inglehart et al. 2014).<sup>57</sup> more than 85 percent of both men and women consider that work is very important in life. However, 65 percent of men and 48 percent of women believe that when jobs are scarce, men should have more right to jobs than women. Further, less than half of men (42 percent) and women (47 percent) consider that having a job is the best way for a woman to be an independent person. Therefore, increasing labor force participation by women would entail the provision of affordable childcare as well as a shift in gender norms so that women’s work outside the home is considered more acceptable and desirable and, by extension, men and women share domestic duties more equally.

**Having an absent partner due to temporary economic migration could also discourage some women with children from participating in the labor force.** Temporary economic migration is significant in Armenia, but it is largely male-dominated. Women who are left behind may be less prone to join the labor market: receiving remittances may increase women’s reservation wage while at the same time, not having a partner at home may increase their burden of care responsibilities. Nonetheless, 2017 LFS data do not show evidence of lower labor force participation rates by, mothers of children ages 12 and under and whose husbands have been absent for three or more months relative to LFP rates of, women whose husbands are present. Additional analysis by the World Bank based on 2015-17 Russian-Armenian University (RAU) household surveys shows that, after controlling for personal characteristics, individuals in households with migrants have a higher likelihood of participation in the labor market (Honorati, Yi and Kerschbaumer 2019).<sup>58</sup>

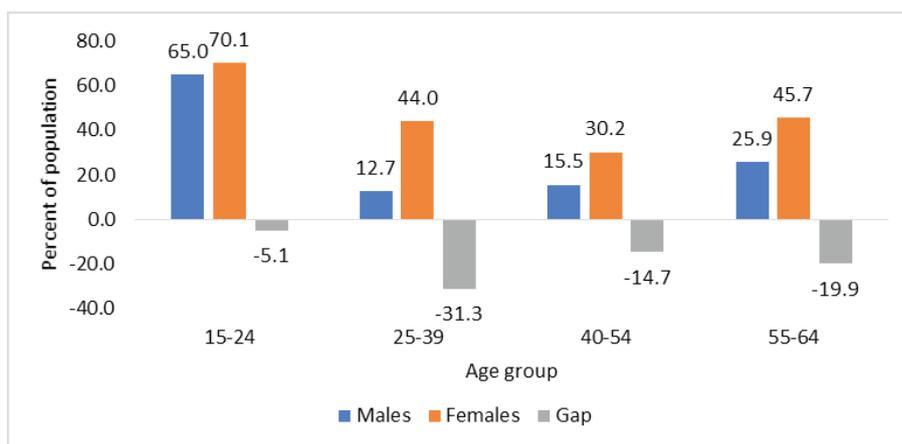
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<sup>56</sup> This evidence emerged from focus group discussions with social workers.

<sup>57</sup> The 2011 World Values Survey is the latest round available.

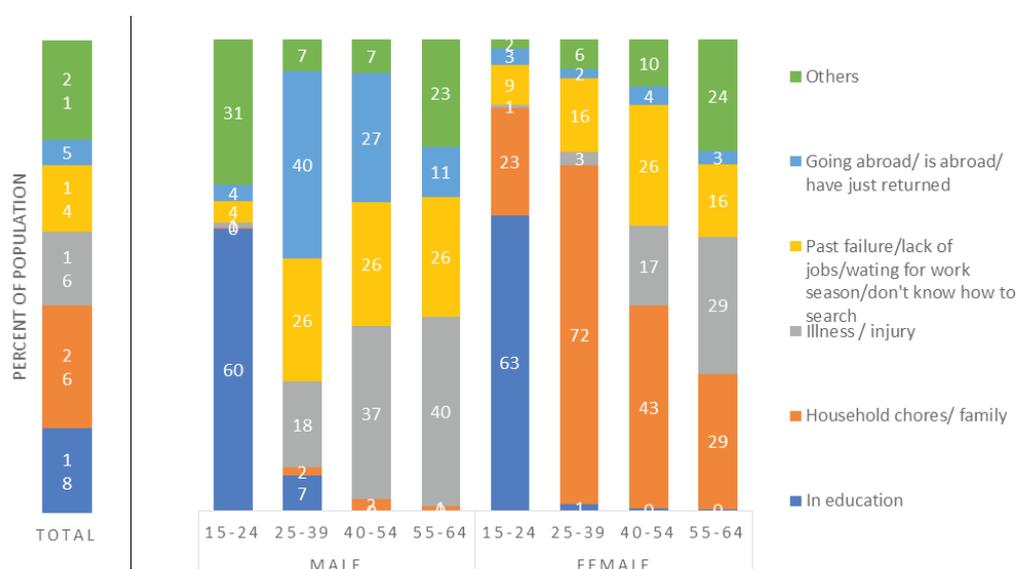
<sup>58</sup> A separate 2011 World Bank study found that work-able individuals in remittance-receiving households were less likely to participate in the labor market than non-recipient households. However, the study did not include individuals who also face care responsibilities, such as mothers of young children or women in households with disabled individuals. It is also worth noting that this 2011 study is based on 2009 ILCS survey data and therefore reflects the Armenian labor market at the time of the global financial crisis, when unemployment was at peak levels.

**Figure 38: Inactivity rate by sex and age, 2017**



Source: World Bank staff estimates based on ARM LFS 2017 data.

**Figure 39: Main reason for inactivity, by age and sex**

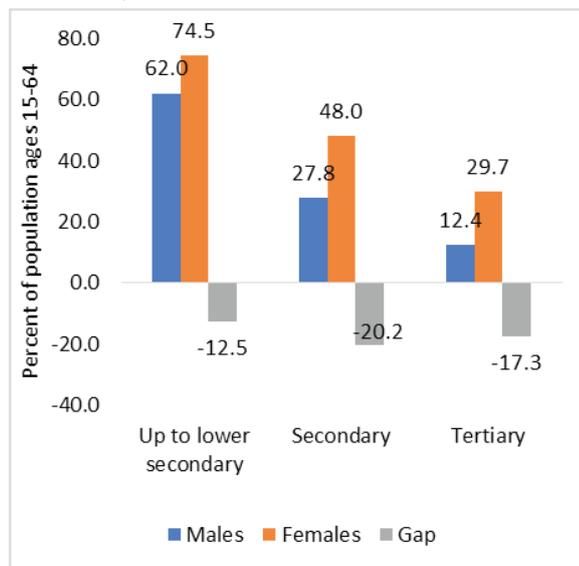


Source: World Bank staff estimates based on ARM LFS 2017 data.

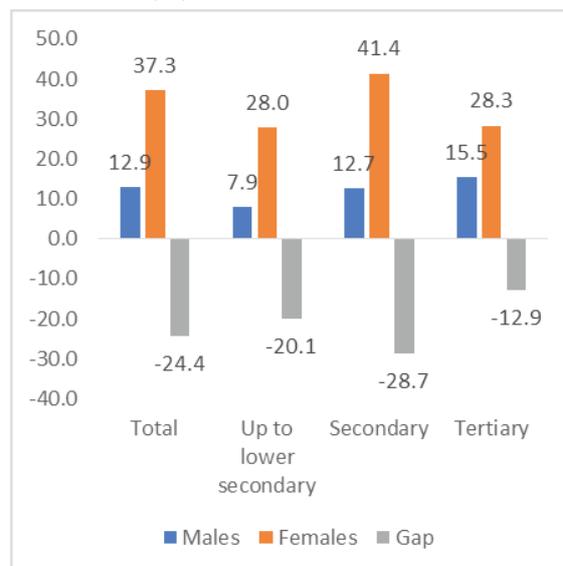
**As educational attainment levels rise, inactivity rates tend to fall, but gender gaps remain wide.** For both males and females, inactivity is strongly correlated with educational attainment (Figure 39, panel a). However, gender gaps do not close as educational attainment rises: indeed, the gender gap is narrowest among those with the lowest educational attainment, that is lower secondary and below). A close analysis of the data shows that a large share of individuals with lower secondary education or below (43 percent) are currently full-time students, and therefore are still in their human capital accumulation stage. The percentage of the working-age population that is inactive but not in education is plotted in panel b of Figure 40, which shows that for women, such inactivity peaks at the secondary level. Gender gaps are also widest for this level of education: 41 percent of women with secondary education are inactive and not in education, compared to only 13 percent of male counterparts. The gender gap is narrowest for those with tertiary education. Although women are increasingly becoming more educated and younger women now have greater educational attainment than men (Figure A.5 in Annex), they still are not joining the labor force at the same rate as men. Women, then, represent a significant untapped resource. If women with higher educational attainment were to join the labor force at the same rate as men, productivity would increase, and together with the rise in labor force participation, Armenian GDP could rise by about 4 to 6 percent, depending on the labor market capacity to absorb labor (International Monetary Fund 2019).

**Figure 40: Inactivity rate by gender and education, 2017**

a. Inactivity rate



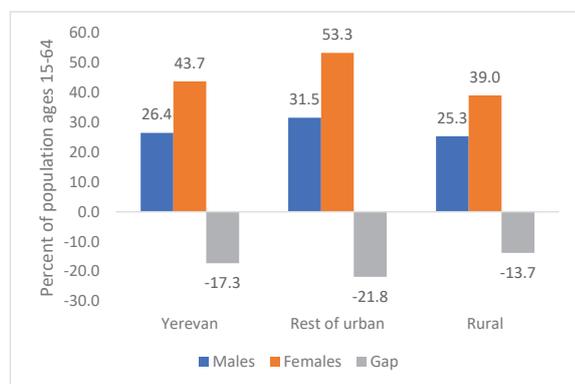
b. Percent of population that is inactive, not in education



Source: World Bank staff estimates based on ARM LFS 2017 data.

**Inactivity rates among women are highest in urban areas and especially in urban areas other than Yerevan.** High unemployment rates in urban areas may be an explanatory factor for relatively low female labor force participation in urban areas. The greater necessity for work due to lower household income, combined with the ability to take on an informal activity through work in subsistence agriculture as opposed to (unsuccessfully) searching for wage employment, may be a driving factor behind higher labor force participation for women in rural areas (Figure 41).

**Figure 41: Inactivity rate by gender and region, 2017**



Source: World Bank staff estimates based on ARM LFS 2017 data.

## Who is affected by unemployment?

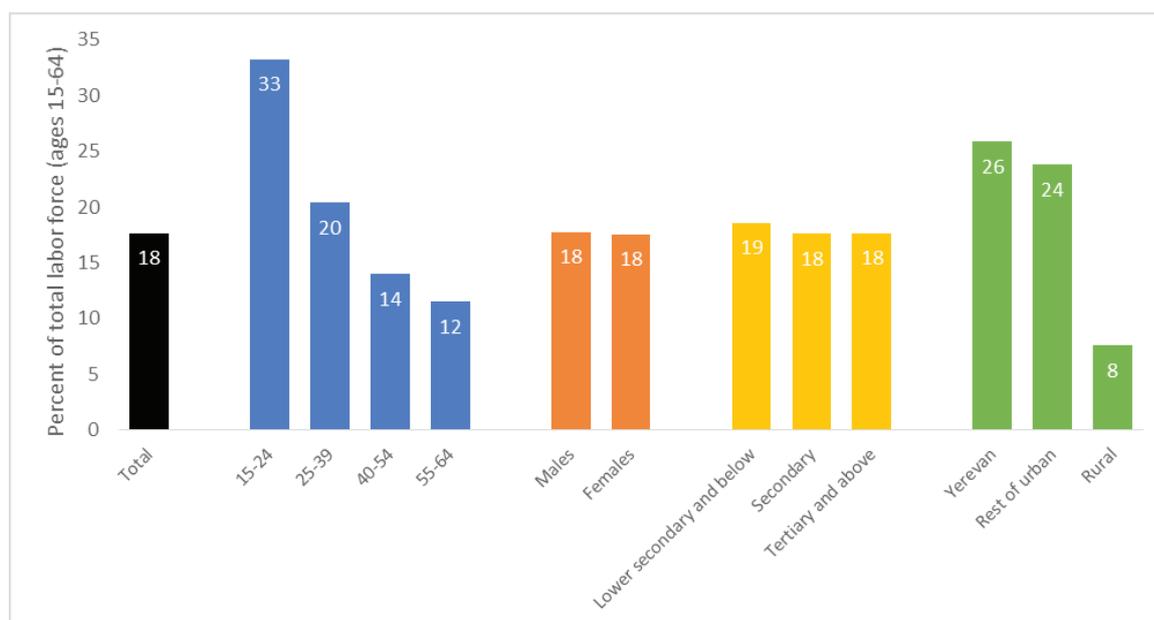
### Unemployment in Armenia is high, and more than half of the unemployed are long-term unemployed.

According to LFS data, 11 percent of the working-age population was unemployed in 2017.<sup>59</sup> The unemployment rate—that is, the percentage of the labor force that is without work but available for and seeking employment—is even higher (18 percent), and is one of the highest in the ECA region (World Bank 2017). Times series data show that Armenia’s unemployment is structural; although the unemployment rate was considerably at the start of the 2008-09 global financial crisis, it was still high in absolute terms, at about 13 percent in 2008, according to ILCS survey data.

**Most of the unemployed in Armenia are long-term unemployed.** The 2017 LFS data show that more than half of the unemployed (56 percent) are long-term unemployed—that is, they have been seeking employment for more than one year. Specifically, 20 percent of the unemployed have been looking for jobs for one-two years, another 20 percent for two-three years and the remaining 16 percent for more than three years.

**Unemployment rates, unlike employment rates, differ only by age and region, with youth being the most affected, not by gender.** Unemployment rates are similar to the national average of 18 percent for both men and women and in relation to educational attainment (Figure 42). However, rates vary significantly by age, with unemployment monotonically declining with age. The rate for youth ages 15-24 is particularly high, at 33 percent. Unemployment also differs by region, and it is relatively low in rural areas. The 8-percent unemployment rate in rural areas, while high in absolute terms, nevertheless pales in comparison to the unemployment rates of approximately 25 percent in urban areas.

**Figure 42: Unemployment rates by age, gender, educational attainment and region, 2017**



Source: World Bank estimates based on ARM LFS 2017 data.

**Females are also particularly affected by youth unemployment.** Gender gaps are particularly wide for youth ages 15-24 and favor males; for individuals above age 40, the gender gap favors females (Figure A.6, panel a, in Annex). Although activity rates are relatively low among youth—only around one third of those ages 15-24 participate in the labor market—experiencing difficulty finding a job at a young age can lead to scarring and discouragement, affecting future employment prospects. Males with lower educational levels (lower secondary and below) have higher unemployment rates than their female counterparts. However, there are no gender gaps for those with complete secondary or tertiary education (Figure A.6, panel b, in Annex). Nor is there evidence of a gender gap in unemployment rates by region (Figure A.6, panel c, in Annex).

<sup>59</sup> Individuals are considered to be unemployed if they are without work but available for and seeking employment.

**The main obstacle to finding a job cited by jobseekers is a lack of jobs.** Overall, more than half (55 percent) of individuals reported that the main obstacle to finding a job is a lack of jobs. This response was more prevalent among males (61 percent), those whose highest educational attainment is lower secondary or below (78 percent), and those living in rural areas or urban areas other than Yerevan (more than 60 percent). An additional 9 percent also reported that a lack of jobs corresponding to their profession or skills was the main obstacle; individuals with a tertiary education (20 percent) especially cited this as the chief obstacle to finding a job. It is also noteworthy that 10 percent of women cited lack of work experience as the main obstacle versus 6 percent of men; women's inactivity during peak childbearing years (ages 25-39) may explain this.

**Very few jobseekers look for jobs through the State Employment Agency.** Only 9 percent of jobseekers reported that they looked for a job by applying through the State Employment Agency. This proportion is even lower (4 percent in each case) among males and those living in rural areas. The most common job search methods were directly applying to prospective employers, looking through advertisements, or searching for a job through friends, acquaintances or relatives, each accounting for about 28 percent of jobseekers. Males are significantly more likely to seek jobs via friends or relatives, as are individuals with lower educational attainment and those living in rural areas. Individuals with tertiary education were more likely to look through advertisements, also the more commonly used job search tool in Yerevan.

## A profile of temporary migrants in Armenia and willingness to migrate

**A significant share of households in Armenia have at least one member who is abroad for economic reasons.**

The LFS, the main data source for this section, does not consider as part of the labor force household members who, at the time of the survey interview, have been abroad for three or more months (Box 3). In 2017, LFS data show, 12.4 percent of households had at least one working-age member absent from the household for three or more months and currently abroad because of his or her job.<sup>60</sup> These individuals, who can be considered temporary international economic migrants (Box 3), represented 6.3 percent of the working-age population in Armenia, or about 116,00 individuals. An additional 0.7 percent of households reported that at least one member had been absent for three or more months but living within Armenia, including in Nagorno-Karabakh (NKR), because of his or her job. Such migrants numbered about 5,500 individuals. Migrants who are abroad or in Armenia are not included in the summary statistics on the labor force presented in this section because they do not answer questions pertaining to their participation in the labor force or their work.<sup>61</sup>

**Temporary international economic migrants identified in the Labor Force Survey are predominantly male and have a secondary level education; in contrast, internal migrants are more evenly split by gender and most have a tertiary education.** Table A.2 in the Annex provides a profile of temporary international and internal economic migrants. Aside from differences in the number of individuals, significant differences are apparent in the profile of external and internal migration. International migrants are predominantly male (95 percent) and tend to have secondary schooling (80 percent). In comparison, almost 40 percent of internal economic migrants are female, and the majority (63 percent) have a tertiary education. International migrants also tend to be older, with only 10 percent being ages 15-24 versus 29 percent of internal migrants. Most migrants tend to be sons or daughters of the head of household. Older and more likely to be male than their internal migrant counterparts, international economic migrants are also more likely to be heads of households. Finally, international migrants are predominantly living in Russia (95 percent) and most (55 percent) migrated from rural households. Internal migrants are predominantly living in Yerevan (67 percent), and although most of these migrated from other urban areas, a significant share (46 percent) also migrated from rural areas. Migration from Yerevan tends to be exclusively international, with no households in Yerevan reporting a migrant household member living in Armenia.

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<sup>60</sup> This percentage is from World Bank staff estimates based on ARM LFS 2017 data. According to ILCS 2017 data, about 8.6 percent of households included a working age member who was absent from the household for three or more months because of his or her job. This includes both household members temporarily living abroad and within Armenia.

<sup>61</sup> An additional 24,000 individuals who were absent from the household for three or more months due to reasons other than their job are also not included. All individuals who are absent from the household for three or more months but not abroad at the time of the interview, except those living in NKR, could potentially be included in the survey sample if surveyed in their place of residence. All individuals absent for three or more months and serving in the military are considered part of the household for the purposes of the Labor Force Survey.

### **Box 3: Labor force mobility in Armenia**

This section characterizes temporary economic migrants based on available information and according to the 2017 Labor Force Survey. Temporary economic migrants are defined as working-age household members absent from the household for three or more months who were abroad because of their job. They amounted to approximately 116,000 individuals, or 6.4 percent of the total working-age population living in Armenia. According to data from the ILCS for 2017, the number of working-age individuals absent from their households for three or more months due to work (abroad or in Armenia) amounted to 4.6 percent of the working-age population in Armenia. These figures, however, do not necessarily represent the full picture of labor market mobility in Armenia.

Armenia is characterized by high levels of economic migration, mostly to neighboring Russia. According to migration data from the United Nations, emigrants' share of the Armenian population stood at about 32 percent in 2017, or approximately 951,000 individuals. Other estimates suggest that more than one third of families in Armenia have at least one household member who is either abroad or a returning migrant (Honorati, Kerschbaumer and Yi 2019). In recent years, temporary migration become more prevalent, with the most common reason for emigration being lack of work opportunities in Armenia (as cited by 48 percent of migrants, according to 2015-17 Russian-Armenian University household migration survey data). Indeed, migrants earn higher wages than their counterparts in Armenia. Economic migration is largely male-dominated, with males accounting for 81 percent of the current and returned migrant population (Honorati, Kerschbaumer and Yi 2019).

The economic impact of emigration is significant. The World Bank estimates that remittances amounted to \$1.87 billion in 2018 (Honorati, Kerschbaumer and Yi 2019), or 15.5 percent of Armenia's GDP. In theory, remittance-recipient households would be expected to have a lower incentive to participate in the labor market given their access to an additional source of non-labor income. Indeed, a 2011 World Bank study based on 2009 ILCS data found that remittance-recipient, work-able individuals without care responsibilities were less likely to participate in the labor market than similar individuals who did not receive remittances (Ersado and Levin 2011). However, more recent World Bank estimates show that, controlling for personal characteristics, having a migrant family member results in higher labor force participation (Honorati, Kerschbaumer and Yi 2019).

**More than one quarter of working-age individuals report they are ready to migrate to find a job or a better job.** When asked, 27 percent of these individuals said they are ready to migrate to find either a job or a better job and 9 percent said it is difficult to answer; and 64 percent responded that they are not ready to move, although this does not necessarily imply they are not willing to do so. Among those who reported being ready to move, most (53 percent) would move abroad. Another 39 percent are indifferent as to whether they move abroad or within Armenia, and only 8 percent reported they would only move within Armenia. The share of working-age individuals who reported not being ready to move varies according to labor force status. As could be expected, the unemployed show the most readiness to move, with only 46 percent saying that they are not ready. Of the inactive, 63 percent said they are not ready to move. Among those who are already employed, a slightly larger share said they are not ready to move to find a better job (68 percent). Individuals who are employed are also less likely to report being ready to move abroad, as opposed to internally or being indifferent between the two.

**Younger individuals, males and those with higher levels of education are more likely to report readiness to migrate to find a job or a better job.** However, there is no difference in readiness between youth ages 15-24 and individuals ages 25-39. Individuals ages 55-64 who are already employed or inactive are the least likely to report being ready to migrate; 82 percent of the former group and 74 percent of the latter group said they are not ready to do so. Females are more likely than males to report that they are not ready to migrate, regardless of activity status. The gender differences reflect social norms around gender, as women are less likely leave their families behind, even temporarily, and also less likely to move with their other household members solely because of their own employment prospects. As a substantial proportion of inactive women said they are not looking for work because of household and family responsibilities, this may explain why the inactive population overall shows the widest gender gaps in readiness to move. Although the majority of temporary economic migrants have only secondary education, individuals who completed tertiary education

were somewhat more likely to report being ready to move to find a job or a better job than those with secondary education. There was little to no difference in readiness to move between those who had only completed up to lower secondary and those who had completed secondary education.

**Individuals living in Yerevan are significantly more likely to report being ready to move and more likely than individuals in other locations to report they are ready to move abroad.** Among employed individuals, a larger share of those living in Yerevan said they are ready to move than of those living in other urban areas or in rural areas. The proportion of individuals reporting they are ready to move abroad to find a job or a better job was especially large—30 percent of those in Yerevan versus 5 percent of those living in urban areas other than Yerevan or rural areas. Similarly, about one third of the unemployed and one third of the inactive in Yerevan also reported being ready to move abroad; the proportion of those living in other areas said they are ready to move abroad amounted to approximately 10 percent. That a bigger share of individuals who live in Yerevan said they are ready to move abroad is consistent with findings that all temporary migrants from Yerevan are living abroad rather than elsewhere in Armenia. Although unemployment is lower in other urban areas and in rural areas, the quality of jobs available may not be sufficient to entice Yerevan residents to migrate to the rest of Armenia.

## Better jobs in Armenia

### Key messages

- *Too many Armenians are still locked in low-quality jobs with low earnings and low job security. Although jobs in higher productivity activities are increasing, their numbers are still small in absolute terms.*
- *Informality and insecurity of jobs are mostly related to importance of self-employment. Informality in wage employment is low, but the importance of self-employment means that almost half of the workforce lack income and job security.*
- *Low earnings are a concern because of low hourly pay, which reflects traditional and low technology activities, and because of significant involuntary underemployment.*
- *Women earn less than men irrespective of sector and education level, and the gender gaps increase in the top-paying sectors like modern business services.*
- *Skills gaps and skills mismatches in Armenia hold back job creation and labor productivity growth.*

### Focusing on the quality of jobs

**Job quality is discussed in this section along three key dimensions—earnings, worker protection and skills mismatches.** First, earnings are central to defining the quality of work. A low-pay job may mean that earnings per hour are low and that it is not possible to find enough working hours, which is understood as involuntary underemployment. Second, in relative terms, good-quality jobs are those that do not exploit workers' (higher) skills and productivity. Other important features include job and income security, including a written contract stipulating job conditions and duration; redundancy pay; health insurance; and acceptable working conditions in terms of hours and type of work; and safety conditions in the workplace.<sup>62</sup> Third, skills mismatches can be indicators of poor job quality; this section explores how and which skills matter to access good-quality jobs, drawing on both analysis of the LFS 2017 and the World Bank Skills Toward Employment and Productivity (STEP) employer and household surveys conducted in 2013.

**If Armenia is to transition into a modern market economy with higher welfare levels, the economy must create not only more jobs but better jobs.** More people need to find work. However, they must also move from low productivity work in subsistence agriculture to higher productivity jobs. Higher levels of labor productivity are important (although not sufficient) to ensure sustainable, higher earnings and better job conditions overall and to sustain long-term growth. Increasing the output per worker is even more vital in a context where growth of the working-age population will slow over time. Jobs-related transitions happen as workers become more productive by moving from (i) low productivity sectors, in particular subsistence agriculture, into higher productivity activities in industry and services; (ii) small-scale, own-account activities into wage employment (or, for a few, high-growth entrepreneurship); and (iii) less productive to more productive firms (Merotto, Weber and Aterido 2018). These transitions involve not only the creation of more jobs, but also considerable churning across and within sectors, with jobs simultaneously created and destroyed.

**To work is not a guarantee for escaping poverty in Armenia.** Poverty rates were higher for those not employed (34 percent) than for those who worked (24 percent) in 2015. However, the income gap between the working poor and non-poor is more significant than their gaps in employment rates; the poor who did work earned, on average, less than one third of the labor income of the non-poor.<sup>63</sup> Moreover, the poverty-employment link is not as significant as it is in more developed countries. Whereas one third of the jobless population in the 28 European Union (EU) countries are at risk of poverty, fewer than one in ten of the employed in these

<sup>62</sup> Aspects of job quality include, among other things, pay, hours of work (their match to workers' needs), future prospects regarding both promotion and job security, risk of physical and mental exhaustion or hazardous working conditions, job content (its match with workers' interests, perceived impact and so on), autonomy, and interpersonal relations at work. Most of these aspects are not measured in household-level surveys, however. See "What makes a good job? Job quality and job satisfaction" (Clark 2015). This section does not deal with safety aspects of job quality because the data sources analyzed do not cover these.

<sup>63</sup> These percentages are estimates based on the ILCS.

countries face that risk.<sup>64</sup> In EU countries, the structure of employment has undergone a more decisive shift toward what are termed “good” jobs, whereas Armenia is still undergoing this transition.

**What is a “good” job in Armenia?** This report defines a good job as one that provides the following: sufficient earnings for basic needs and beyond; earnings adequate relative to the worker’s productivity and skills; stable and secure income; and some protection against life risks, including health and unemployment risks, and against occupational health and safety conditions. Such jobs are more likely to be waged jobs in the formal sector, jobs in larger and more productive firms, or public sector jobs. At the same time, they are less likely to involve working for oneself or a family household enterprise (self-employment) and/or low productivity activities in microenterprises (Merotto, Weber and Aterido 2018).

**The structure of employment—that is, sector of work or wage as opposed to self-employment—is linked to earnings and working conditions.** Although it is difficult to generalize, wage employment often offers higher earnings and more security than self-employment, as wages, unlike self-employment earnings, are not directly related to profits volatility over the short term. The share of wage employment is considerably higher in high-income countries than in low- or middle-income countries.

## The structure of employment

**Too many Armenians are still working in low productivity sectors and activities.** Section 2 showed that labor productivity is highest in mining, construction and modern business services. Labor productivity is lowest in agriculture and in certain services such as trade, transports and storage and tourism (hotels and restaurants). Almost half of Armenia’s population (48 percent) is currently employed in these four lower productivity sectors. Labor productivity in these sectors can likely only increase with workers leaving them to take up work in higher productivity sectors, including manufacturing, information and communication technology (ICT), and modern business services.

**Agriculture remains a significant source of livelihoods in Armenia.** Agriculture, which has the lowest productivity of all sectors, absorbs too many workers given Armenia’s income level and given the sector’s limited contribution to value added. The share of agriculture in total employment has fallen over time, giving way to mostly services jobs. Nonetheless, some 30 percent of the employed population were still working in the agricultural sector in 2017 (Figure 43). Outside of Yerevan, the share increases to 42 percent, and only in Yerevan, Jotayk and Syunik marces does agriculture account for less than 40 percent of employment.

**Modern, high productivity private sector services jobs are scarce.** Low productivity services and public sector-related activities dominate jobs in the services sector. Some 18 percent of individuals are employed in the low productivity services sectors of trade (12 percent), transportation and storage (4 percent), and tourism (2 percent). As discussed, labor productivity is twice as high in these sectors as it is in agriculture, but lower than the economy-wide average. The remaining services sector jobs are overwhelmingly in public sector-related employment (public administration, education and health), and account for 24 percent of employment. More modern services sectors such as ICT, finance, real estate, and professional and business services account for only 6 percent of total employment. ICT, which has increased its share of value added between 2012-2017, employs 2 percent of the employed workforce.

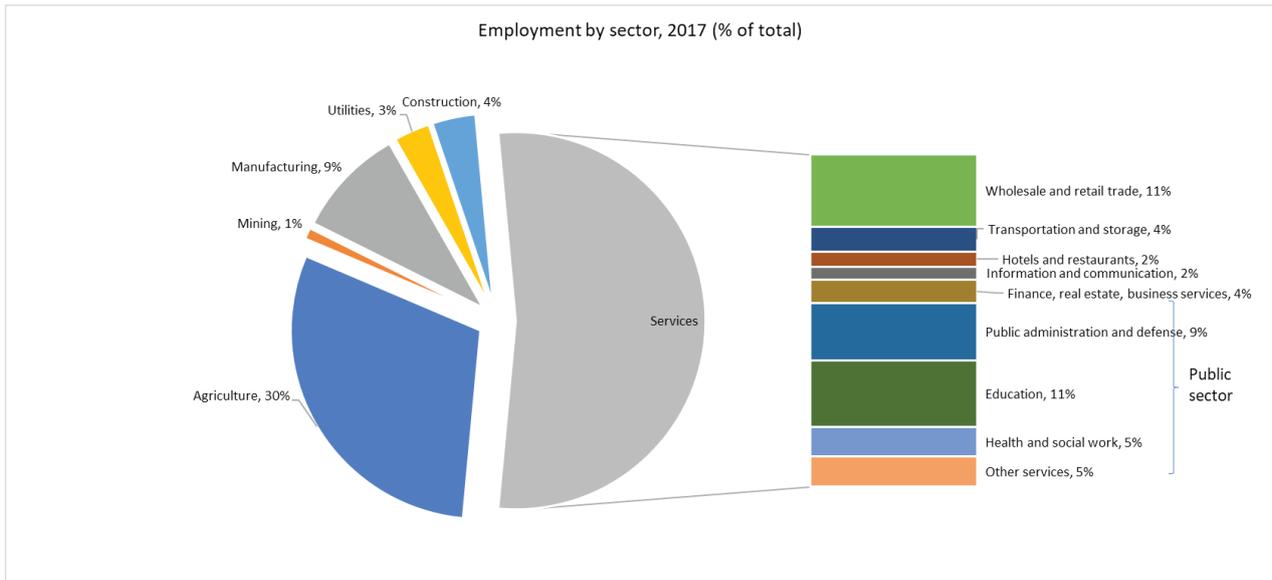
**The industry sector accounts for 17 percent of jobs.** Mining, which accounts for a high share of exports and is highly capital-intensive, employs only one percent of the workforce. Manufacturing and construction account for 9 percent and 4 percent each, and utilities, predominantly electricity, account for 3 percent.

**Women and youth are considerably less likely than men and older workers to be employed in industry.** By contrast, women account for a comparatively high share of agricultural sector employment and public sector employment in education and health. Similarly, women account for a high share of employment in the fast-growing modern services sectors (finance, real estate and business services). These sectors also have a very high share of workers with higher levels of education. Three in five workers overall with higher levels of education are working in the modern services sector or in the public sector (administration, education and health).

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<sup>64</sup> Eurostat calculates these figures based on the European Union Statistics on Income and Living Conditions (EU-SILC) survey. The data can be found at <https://ec.europa.eu/eurostat/web/income-and-living-conditions/data/main-tables>.

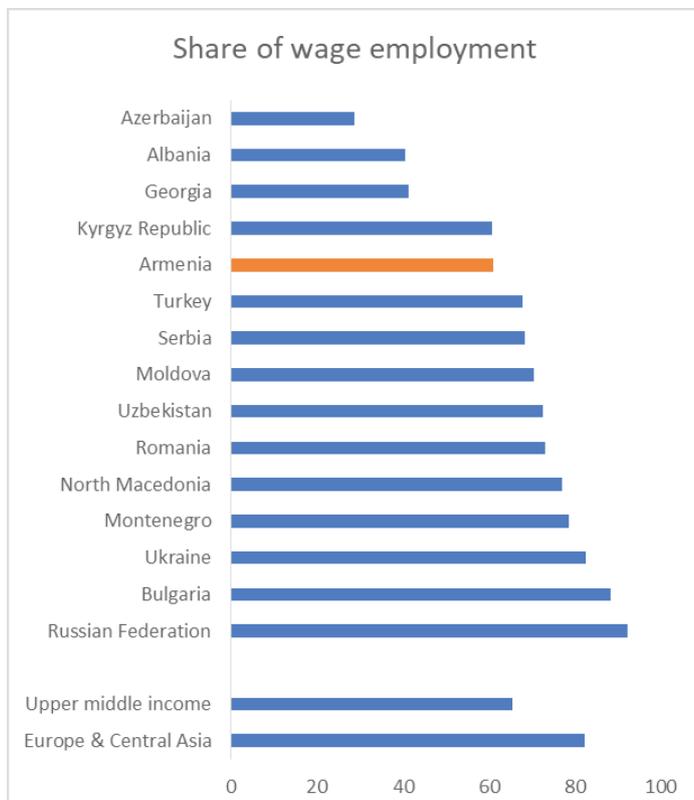
**Figure 43: Almost half of employment is in lower productivity sectors**



Source: World Bank staff estimates based on ARM LFS 2017 data.

**Three in five workers in Armenia have wage jobs.** The share of wage jobs in total employment, at 61 percent, is typical of upper-middle-income countries. This is evidence of an economy in transition. However, Moldova, Uzbekistan, Ukraine and several other FCUs as well as the new European Union (EU) member states of Bulgaria and Romania, have higher shares of wage employment (Figure 44).

**Figure 44: The share of wage employment is lower than in many European countries**

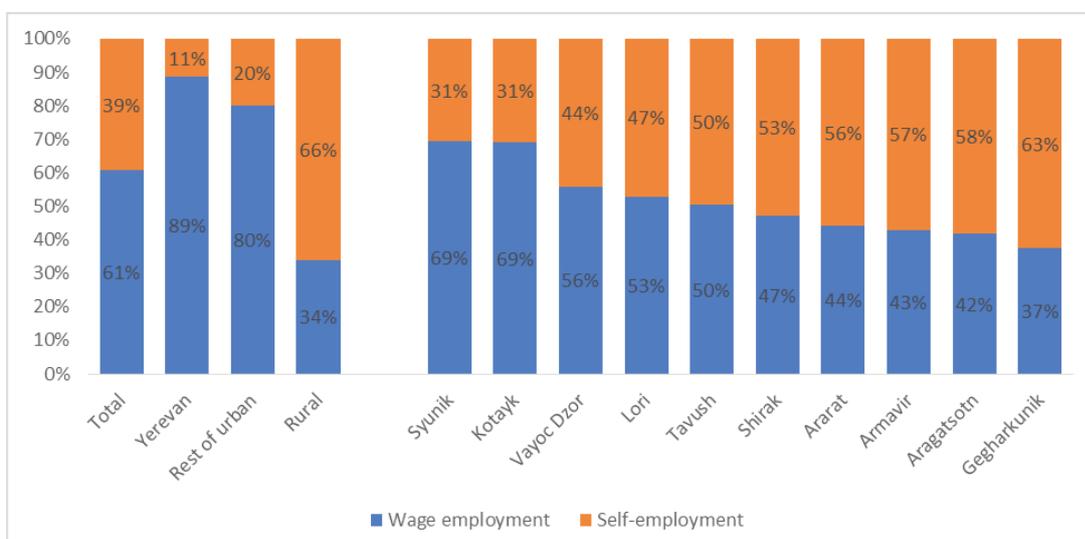


Source: For Armenia: World Bank staff estimates based on ARM LFS 2017 data; for other countries: World Development Indicators.

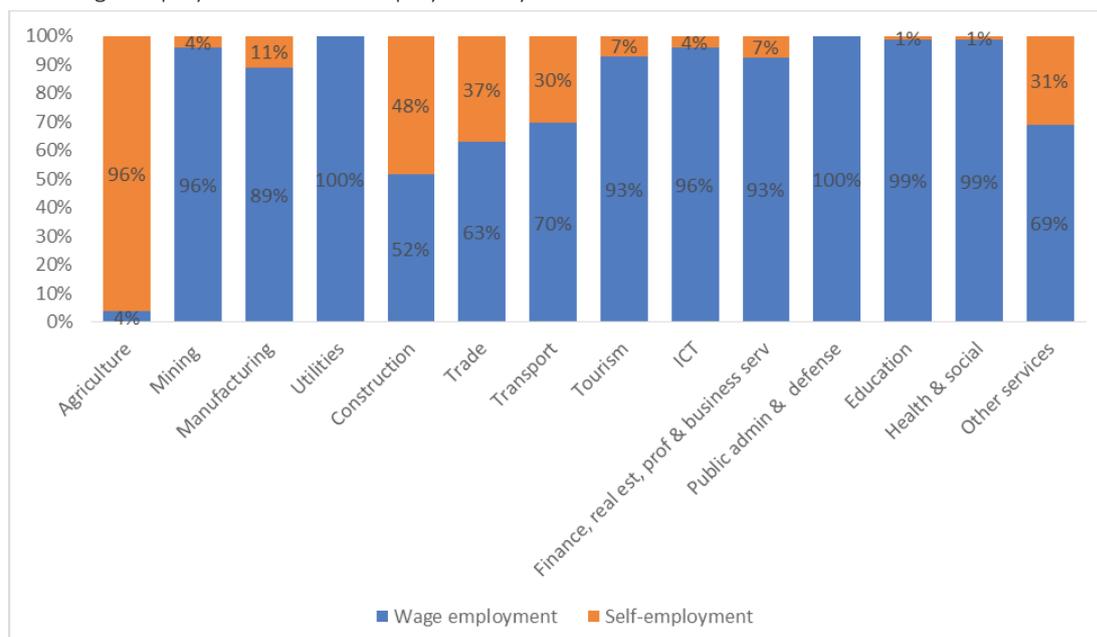
**Self-employment is dominated by agriculture and is high in rural areas.** Non-wage employment and self-employment encompass employers, own-account workers and unpaid family workers. The high share of non-wage employment in Armenia largely reflects the high share of subsistence agriculture in the country's economy. In rural areas, a majority of individuals who are working are actually working for themselves as farmers. In Yerevan (89 percent) and other urban areas (80 percent), most workers are in wage jobs. In rural areas, though, two-thirds of workers are self-employed; in five of Armenia's eleven administrative divisions (marz), moreover, a majority of workers are self-employed. Analysis of available data shows that farming drives the high shares of self-employment. Fewer than 30 percent of the self-employed work in off-farm activities. The share of self-employed in non-agricultural sectors is significant only in construction (48 percent), trade (37 percent), transportation and storage (30 percent), other services (31 percent), and manufacturing (11 percent). Two in five self-employed in the non-agricultural sector are working in the trade sector (Figure 45).

**Figure 45: While a majority of workers are wage employees, access to wage employment varies across marz and sectors**

a. Share of wage employment and self-employment by region and marz



b. Share of wage employment and self-employment by sector



Source: World Bank staff estimates based on ARM LFS 2017 data.

**More than 90 percent of self-employment in Armenia is own-account work, with individuals working for themselves and without employees.** While self-employment as a category can encompass a range of situations from high-growth entrepreneurs to subsistence work, the vast majority of self-employment in Armenia is own-account work. This points to the small-scale, subsistence nature of the work rather than to truly entrepreneurial activities. Employers and unpaid family workers make up only one and two percent, respectively, of total employment in Armenia, which amounts to less than 10 percent of all self-employment. Own-account work is at least partly a result of push factors and lack of access to better jobs. Almost half (46 percent) of own-account workers reported that they would like to change their current employment status, compared to 27 percent of wage workers. The vast majority of these own-account workers said they would like to change to improve their earnings.

**Not all self-employment is involuntary distress work.** Working for oneself can offer significant advantages, among them profits, if entrepreneurial activities go well, and freedom to organize one's activities. In Armenia, 3 percent of self-employed are employers and only 7 percent of these said they would like to change their employment status, a much smaller share than among wage employees.

**Women and men are equally likely to be self-employed, although youth are less likely to be self-employed than older workers.** The share of wage employment is very similar for men and women (59 and 62 percent, respectively). The share of wage employment is slightly higher (66 percent) for youth ages 15-24 than it is for workers in the 25-64 age group (60 percent). However, women are less likely to be self-employed in the non-agricultural sector than are men (5 versus 14 percent). Unsurprisingly, young people are somewhat more likely than older workers to be unpaid family workers (9 versus 2 percent), and none of them are employers.

**A majority of workers, whether wage workers or self-employed, are engaged in very small activities.** The average scale of activities where Armenians are working is very small, even when the wage employed are included. Two-thirds of the employed work in microenterprise activities with fewer than 10 people employed, and as many as 58 percent of these work in activities where five or fewer people are employed.

## Earnings

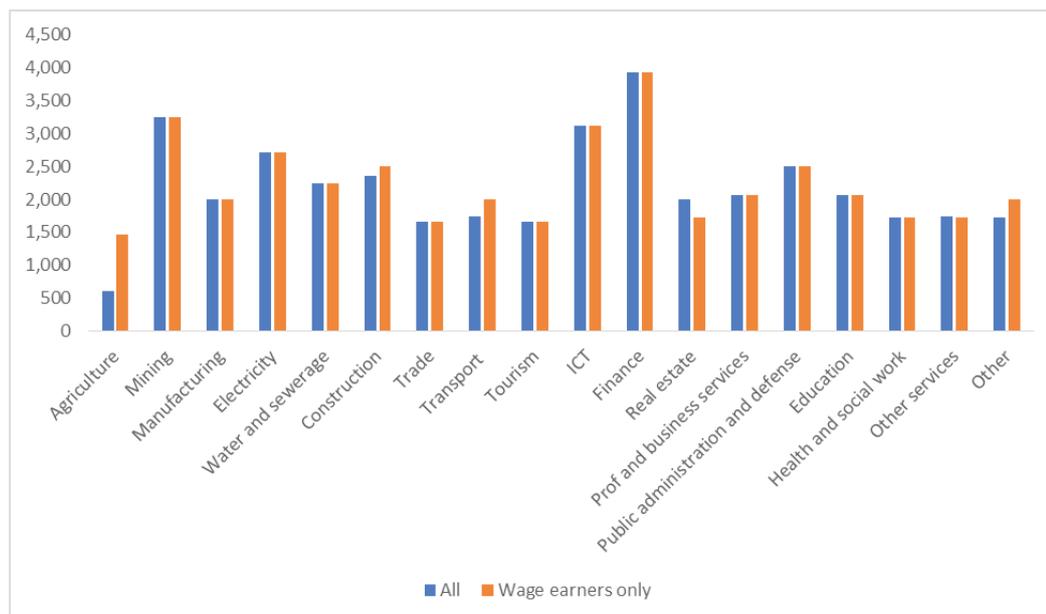
**Good jobs provide higher earnings.** This is a given, in part. A key reason that jobs in agriculture are seen as bad jobs in Armenia is that they currently pay poorly compared to other activities and the pay is not sufficient to help many farming households reach a decent standard of living. Low pay is related to the low technological sophistication of many of jobs in low skill and low productivity sectors such as agriculture and trade. Low pay for work is aggravated when earnings are variable and seasonal in nature, problems that are related to self-employment more generally and to farming in particular. Moreover, higher paying jobs are more likely to come with other benefits, including access to social protection, and therefore are more sustainable and have fewer downside risks to income and job security.

**Agriculture, the single largest sector of employment, provides workers the lowest earnings while modern business services the highest.** Earnings are related to labor productivity levels. Thus, agricultural workers earn the least in Armenia—by far—followed by workers in market-based services sectors on the low productivity end of the scale such as trade, transports and tourism (Figure 46). Average earnings in agriculture are only one third of earnings in the comparatively poor-paying sectors in services. Workers who move out of agriculture and into the low productivity services sectors, which are likely to be the easiest to access, would still stand to gain. The modern services sectors of finance and ICT provide the highest earnings in Armenia.<sup>65</sup> Median earnings of a worker in the ICT sector are double those of a worker in trade and five times the median earnings of a worker in agriculture. Median earnings for real estate are surprisingly low given the high productivity levels but are likely unreliable due to the small number of observations (few employees in the sector).

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<sup>65</sup> It should be noted, however, that because of the small sample size, the levels for the real estate sector are highly unreliable.

**Figure 46: Earnings in agriculture are significantly lower than in other sectors**



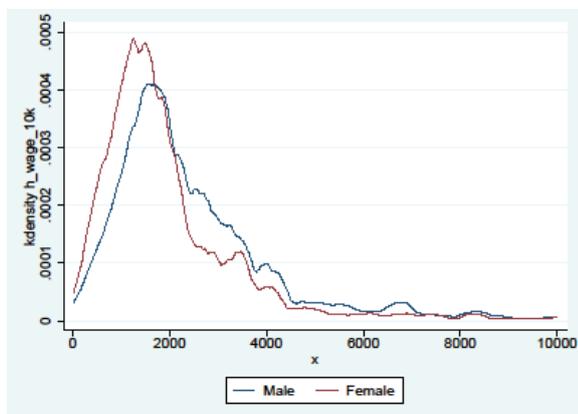
Source: World Bank staff estimates based on ARM LFS 2017 data.

Note: The chart shows median monthly earnings in Armenian drams for wage employees

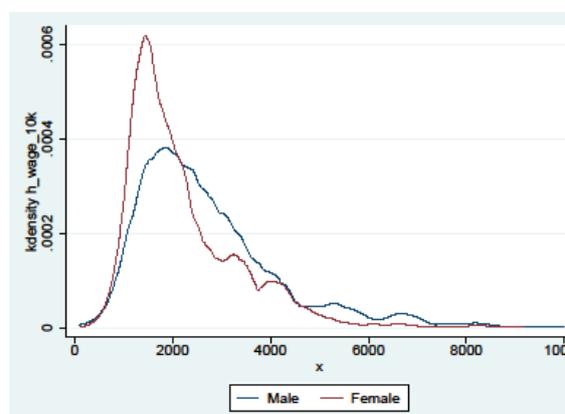
**Working in the public sector pays off more than private sector work, at least for men.** In Armenia as elsewhere, jobs in the public sector tend to be higher-paying than most jobs in the private sector. This can be seen in Figure 47, which shows that for men, the distribution of public hourly wages (panel b) is higher than that of the private hourly wages (panel a) for men. Female wages are more concentrated and generally lower than male wages. Moreover, public sector work provides no significant female payoff, in that there is not a smaller male wage premium in the public sector. This sets Armenia apart from other countries that have high shares of public sector employment and social norms prescribing the sectors where women should work. Although the higher wage levels in the public sector are consistent with other former socialist countries (and market economies), they are nonetheless surprising given the very low estimated levels of labor productivity in public administration, education and health services.

**Figure 47: Public sector jobs offer higher earnings than the private sector, and men always earn more than women**

a. Private sector



b. Public sector

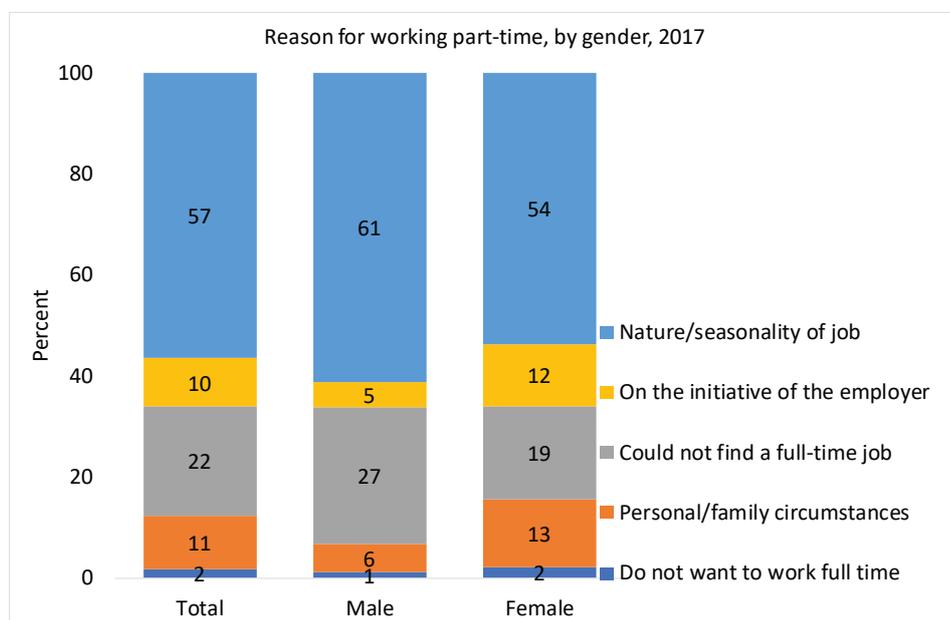


Source: World Bank staff estimates based on ARM LFS 2017.

Note: The panels show the distribution of hourly earnings.

**Involuntary underemployment is a problem.** On average, men work 43 and women work 36 hours per week. Secondary jobs are not common. Only 3 percent of workers have a secondary job; 76 percent of these workers live in rural areas, which suggests that they are trying to supplement meagre and/or seasonal agricultural incomes. Further, 24 percent of workers work part-time, and the share of women in part-time work (33 percent) is nearly double that of men (17 percent). When asked, 12 percent of full-time workers and 40 percent of part-time workers responded that they would like to work more if given the opportunity. Men were more likely than women to want to work more, likely because many women reported that they have family and/or homemaker responsibilities. Half of all men working part-time reported that they want to work more. Only 2 percent of those working less than full-time said they do so because they do not want to work full-time, and another 11 percent said they work part-time because of personal or family reasons (Figure 48). One third of part-time workers reported that they work less than full-time because they could not find a full-time job (22 percent) or because the employer requested that they do so (10 percent). Therefore, a significant share of underemployment is involuntary in Armenia and a consequence of high seasonality in jobs and/or lack of labor demand more generally.

**Figure 48: Underemployment is a problem in Armenia**



Source: World Bank staff estimates based on ARM LFS 2017 data.

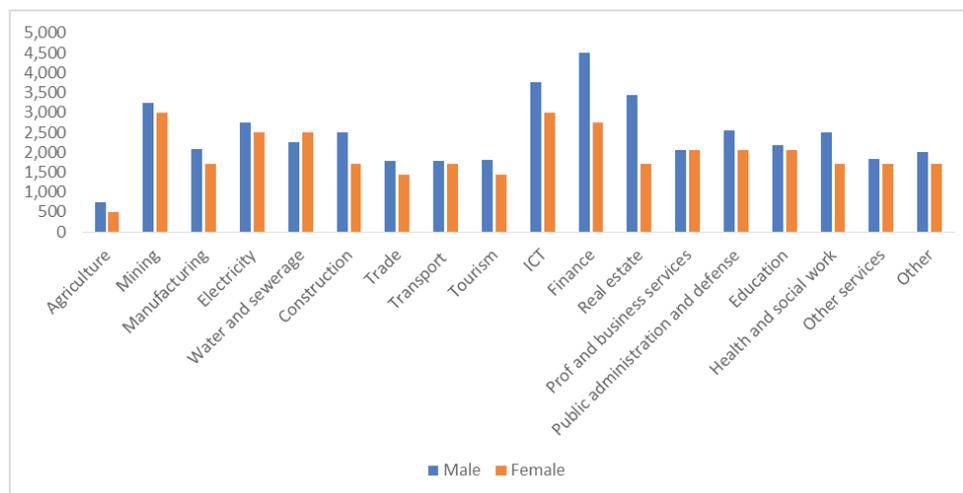
**Investing in education at post-secondary levels pays off in terms of earnings.** This is evident in the public sector, in which a substantial share of workers have higher levels of education attainment and which also pays relatively higher wages. Median earnings of those with secondary levels of education are just 60 percent of the median earnings of those with higher-level education. Additionally, both education and skills acquisition more broadly are related to family background, meaning that young people from poorer families stand a lower chance of accessing better jobs.

**Armenia's gender wage gap is not only large but also the result of different returns to education.** Not only do women have less access to employment than men and are more likely to work part-time, they are also paid less when they do work. The World Bank's Systematic Country Diagnostic noted that the gender wage gap (estimated at 33 percent in their analysis) was among the largest among countries in Europe and Central Asia, and that the difference was largely attributable to *different returns* to education rather than *differences in characteristics*, including education.<sup>66</sup> Indeed, in all sectors and across education levels, women earn less than men. This is especially the case for higher earning individuals.

<sup>66</sup> This is confirmed by Mincer regressions for the LFS 2017. Even when age, industry, gender and level of education are taken into account in multivariate analysis, the gender wage gap persists.

**The gap in earnings between men and women is higher at the top, that is for those working in modern, private, market-based services and for workers with tertiary education.** It is noteworthy that income gaps between men and women are more significant in the higher earning services sectors than elsewhere. In real estate, median female earnings are half, and in ICT, they are 80 percent, median male earnings. The differences are much more significant when mean wages are compared, which suggest that male workers tend to account for the high-end (high wage) outliers (Figure 49). The earnings gap between men and women with tertiary education is also significantly higher than that between men and women with secondary education. These factors may combine to reduce incentives for women to become active, even when they have higher levels of education.

**Figure 49: Significant gaps in wages, by industry and gender**



Source: World Bank staff estimates based on ARM LFS 2017 data.

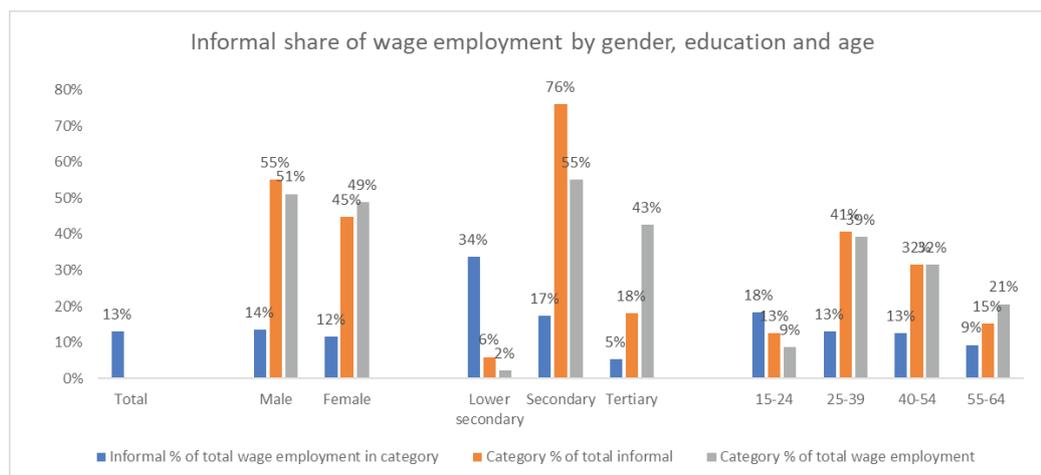
Note: The chart shows median monthly wages in Armenian drams for wage employees.

## Income security and worker protection

**The level of informal wage employment is relatively low in Armenia, at least in the non-agricultural sector.** Informal employment can be assessed through many different dimensions including work in informal enterprises, informal working conditions in the formal sector and so on. Armenian labor regulations cover some of these aspects, which also are discussed in section 3. In Armenia, about 13 percent of wage employees do not have access to any form of benefits relating to paid leave, redundancy, childcare or sick leave. Nor do these employees have written contracts stipulating the condition of their job situation. If all the self-employed are considered to be working informally, and the informality rate of wage employed is taken into account, the total informality rate of work in Armenia is 46 percent. This is close to the Armstat estimate of 45 percent (Box 4). Since non-agricultural sectors have much higher shares of wage employment than does agriculture, the overall level of informality is correspondingly lower in these sectors.

**Among the wage employed, informality is highest for youth and for those with lower than tertiary education, but there are no gender differences.** One-third of those with less than upper secondary education, and one-fifth of young wage workers, are informally employed (Figure 50). However, given that these two groups make up a very small share of total wage employment, most informal wage workers actually have upper secondary levels of education (76 percent) and are between 25 and 54 years of age (73 percent).

**Figure 50: Young workers and those with less than higher education and youth are more likely to be in informal jobs**



Source: World Bank staff estimates based on ARM LFS 2017 data.

Note: The figure refers to wage employees only.

#### Box 4: What is informal employment?

There is no single definition of informality. In some cases, formality of employment can be plotted across a spectrum ranging from fully formal to fully informal, with many variants in between.

The purpose of this analysis is to identify an employment status that render workers vulnerable to shocks—that is, income shocks due to poorer performance of the firm, poor health or incapacity to work for other reasons, or abusive behavior of an employer. Based on the first two shocks (income and health), self-employment may be considered fully informal, unless the self-employed have taken private insurance against unemployment risks (not likely to exist in Armenia) or health risks. For wage employees, the Labor Force Survey identifies several aspects of working conditions including access to a written contract, paid leave, paid sick leave, severance pay, redundancy pay, overtime pay, medical insurance by employer and parental leave. Access to these differ: 87 percent of wage employees have a written contract but only about 30 percent of wage employees have medical insurance that is paid by the employer. In this report, if none of these benefits are covered by a worker’s job situation, the worker is considered to be informally employed.

The Statistical Office of Armenia estimates informal employment largely based on whether individuals are working in the informal sector. The Office identifies them as follows: employees holding informal jobs (including paid domestic workers: e.g. gardener, nursery, housemaid, watchman, driver, and so on); employers and own-account workers having informal sector enterprises; all contributing (unpaid) family workers; members of informal producers’ cooperatives; self-employed and own-account workers who produced goods or services (such as do-it-yourself construction of their own dwellings) exclusively for own final use by their household if considered employed; and contributing (unpaid) family workers engaged in production of goods exclusively for their own final use by their household if their production represents a significant contribution to the total consumption of the household.

The share of informal employment is estimated on both main (primary) and additional (secondary) activities of the employed individuals. Using these definitions, the Statistical Office of Armenia determined that approximately 45 percent of the employed are informal workers, with very similar levels for men and women.

## Do skills matter for accessing better jobs?

**Having post-secondary levels of education is clearly linked to accessing better jobs in Armenia, but education is not necessarily the same as skills.** Skills—the ability to perform a task well—are built during early childhood and developed during school, extracurricular activities and work experience. Skills, therefore, depend on innate ability and also very much on the functioning of the overall skills development system. Education systems should help students develop broad skills sets, including both cognitive (analytical, problem-solving) skills, socioemotional (soft) skills, and specific technical skills needed to perform job-related tasks such as driving a car, operating machinery, performing eye surgery or scoring a goal. Actual skills should be rewarded in the labor market and not only with diplomas (Sondergardh and Murthi, 2012).

**Good matching between education, skills and labor market outcomes is an indicator of job quality.** Job satisfaction and job quality depend in part on whether workers feel sufficiently rewarded by their investments in skills and education, that is that they are working in jobs relevant to their education (both level and focus) and that these jobs provide acceptable earnings and working conditions.

**Given Armenia’s aging population and rapid changes in global skills, it is essential to continue skills development throughout workers’ working life so they can adapt to new challenges.** Rapid changes in technology are driving demand for continuous skills development. However, the skills profile of work has not evolved and developed in Armenia in the same direction as it has in the new EU member states in the ECA and in the Western Balkans (Bussolo et al. 2019). In other countries, and globally for industrialized countries, an increasing number of jobs involve intensive cognitive tasks that are not routine in nature, and hence require adaptation, problem solving and learning abilities. The growth of these jobs has come at the expense of routine tasks that are more easily replaced by technology solutions. Many middle-skill workers who do not have qualifications to take the non-routine, intensive jobs thus have found themselves in low-skill manual jobs, which are less difficult to replace. In Armenia, however, this is not the case. Between the early 2000s and the mid 2010s, jobs that are intensive in routine skills increased, while the shares of nonroutine cognitive and nonroutine manual jobs fell (Bussolo et al., 2019).

**The World Bank’s Skills Toward Employment and Productivity (STEP) survey approach, which was implemented in Armenia in 2013, attempts to identify and measure skill levels directly.** The Household Survey directly measures a range of analytical and soft skills, access to education, and a range of socioeconomic and other individual characteristics for the urban population. The STEP employer survey focuses on employers’ views on skills and skills gaps.<sup>67</sup> Table 7 defines and summarizes the skills assessed in the STEP household survey.

**Table 7: Definition of skills**

<b>Cognitive skills</b>	Direct measurement of reading literacy based on the Survey of Adult Skills instruments	Reading proficiency
	Indirect assessment (self-reported) on individuals’ use of foundational skills, at work or in daily life	Reading Writing Numeracy
<b>Socioemotional skills</b>	Personality traits	Openness Conscientiousness Extraversion Agreeableness Neuroticism Grit
	Behavior	Hostile attribution bias Decision making
	Risk and time preference	

<sup>67</sup> See analysis of the STEP survey findings for urban areas in Valerio et al. (2015). Results from the STEP employer survey are further reported in World Bank (2015), among other documents.

<b>Job-relevant skills</b>	Qualifications required for the job and job learning times	
	Indirect assessment of skills used at work	Computer use Contact with clients Solving and learning Autonomy and repetitiveness Physical tasks

Source: Valerio et al. (2015).

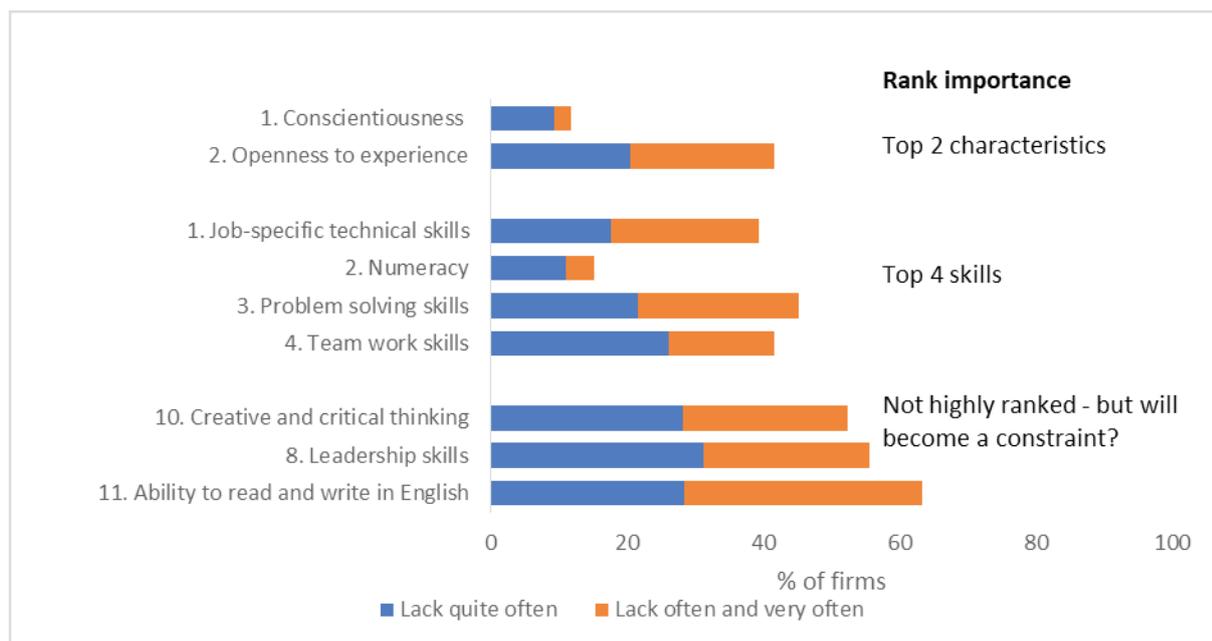
**Access to post-secondary levels of education has been increasing in Armenia, but there is still a lack of skills in the labor market.** The quality of education in Armenia is a problem. Indeed, a majority of employers find that education systems do not produce the technical or workplace skills workers need to function well on the job. Modern firms, those that are trading internationally and are technology-intensive, are more critical, suggesting that skills gaps are more severe for firms that could provide better jobs. The complaints apply to university graduates as well as those with only secondary levels of education and to vocational as well as general education systems. For 9 of 10 firms that tried to hire workers in Armenia for managerial and professional positions but found it difficult to do so, applicants' lack of skills was named as the major constraint; this was a bigger share than firms in Georgia (85 percent) and Ukraine (76 percent).

**Labor Force Survey results from that show about 18 percent of workers considered themselves over-educated for their jobs are further evidence of skills gaps and skills mismatches in Armenia.** The LFS 2017 found that fewer than 1 percent of workers considered themselves undereducated, while only 7 percent reported that their profession is not at all useful for their job. Unsurprisingly, a smaller share of workers in modern business sectors considered themselves overeducated (16 percent in ICT and 6 percent in real estate) while a bigger share of those in the low-productivity services sectors expressed this view (30 percent in trade and 26 percent in tourism). The same question was asked in the STEP household survey (urban population only) in 2013, and 29 percent of workers said they considered themselves -over-educated for their job. Another key finding was that the overall level of overeducation mismatch is more than twice as high for those with tertiary professional education than for those with general academic education (55 versus 25 percent). This suggests that the quality or labor market relevance of vocational training is a problem that jobs requiring higher technical skills are scarce or that there are problems matching workers to the right jobs. The level of over-education in Armenia is higher than in many Southern European countries but on a par with more developed countries including Estonia, Ireland, the Republic of Korea, and the United Kingdom. It is not clear what this overeducation reflects: mismatches, in that individuals do not educate themselves in the occupations, and for the skills, that are in demand; a simple lack of sufficient high-skills jobs in the economy; or that overall poor quality of education results in a low level of skills even at advanced levels of education and training.

**In terms of whether employed youth are mismatched with their jobs, the picture is more mixed.** Based on the LFS 2017, employed youth are slightly less likely to be overeducated for their job than older workers (15 percent versus 18 percent). Based on a smaller, nonrepresentative survey focusing specifically on skills mismatches, however, only half of employed youth (54 percent) are in occupations that match their level of education (Save the Children Armenia 2018). This survey suggested that there is a mismatch between individuals' perception and the reality of what jobs and skills in demand in the labor market. When asked to identify jobs and skills in high demand, labor market experts identified jobs requiring professional education as well as soft skills in managerial, marketing, tourism and engineering sectors. This perception was not shared by youth, who instead believed that jobs in sales or personal care services were easy to find (Save the Children Armenia 2018). Nonetheless, youth are leaving school for jobs they do not consider to be well-matched to their education level, and this suggests that human capital risks being wasted. As noted, the risk of over-education is especially high in low-productivity activities in the services sector, which is likely to absorb some of the unemployed youth.

**There is a lack of important transversal analytical and workplace skills as well as skills important to modern industry and services jobs.** Employers value workers who can be relied on to do their job (conscientiousness) and those who have an open and flexible personality. They value job-specific technical skills, but also transversal skills such as problem solving, strong numbers skills and teamwork skills. As seen in Figure 51, numeracy and conscientiousness are not considered by most employers in Armenia to be problem areas. However, 40 percent or more of employers reported that young university graduates aiming for managerial, professional or technical jobs lack other skills. Further, a majority of employers said English-language skills, creative and critical thinking, and leadership skills also are lacking. While these skills were not ranked as especially important, they nevertheless are typically important to modern and internationally competitive industries and services sectors, suggesting they may constitute a key gap in the future.

**Figure 51: Skills gaps in Armenia – Employer views**



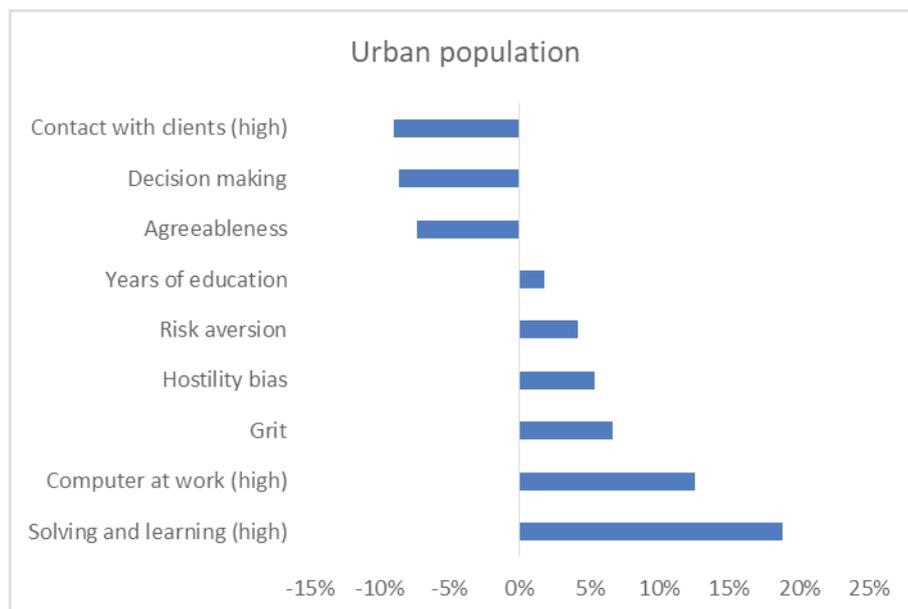
Source: World Bank staff estimates based on 2013 STEP employer survey.

Note: The chart shows the percent of firms considering skills to be lacking among university graduates.

**Skills matter—not only for education but for jobs outcomes.** Skills are positively associated with access to the labor market. In Armenia, the probability of participating in the labor force is substantially higher for an individual who is skilled along both analytical and soft dimensions, that is conscientious (reliable), hardworking and used to working with computers. This association holds true even when years of schooling are taken into account. Differences in skills do not explain why women are less active than men in Armenia, however, as women do not differ significantly in skill levels from men.

**Jobs which are intense in cognitive skills yield higher earnings.** Skills are also positively associated with quality of jobs, as is seen when measured by earnings in Figure 52. Jobs with low levels of routine work—that is, jobs that require workers to spend time solving problems, being creative and learning new things—pay higher wages. Jobs require contacts with clients, presumably in the lower paying services jobs sectors such as trade and tourism, pay lower wages, all else being equal. Individuals with higher levels of grit—perseverance, effort and ambition toward a long-term goal—are also likely to earn more. Workers in public sector jobs are also more likely to be using skills intensively than those in private sector jobs. This raises the question of whether there exists what some have called a public sector premium that leads the more skilled workers to seek public employment (which pays better) and which in turn worsens the skills gaps in the private sector.

**Figure 52: Returns to different skills (one-unit increase) on hourly earnings**



Source: Valerio et al. (2015).

Note: Chart shows percentage point return on hourly earnings.

**The importance of education and skills also changes over working life.** For example, using problem-solving and learning skills for at least 30 minutes is highly rewarded for the 25-34 age group. For the next-older group ages 35 to 44, autonomy on decision making is more rewarded. Skills requirements change as the complexity and responsibilities of a job change with work experience.

**Skills acquisition depends on socioeconomic factors and tends to reinforce inequities over time and across generations.** Individuals from families with higher socioeconomic status, or who have parents with higher levels of education, also hold jobs which are more skills intensive (problem solving, learning skills, computer skills, reading). This is the case even when years of education, gender and a set of household-related variables are included. At least some of these differences are likely to arise from unequal access to quality schooling. Children from poorer households tend to attend schools that provide less-effective learning than provided by schools attended by better off children. This is consistent with findings elsewhere which suggest that the learning gap in Armenia between rural and urban areas is among the highest in ECA.

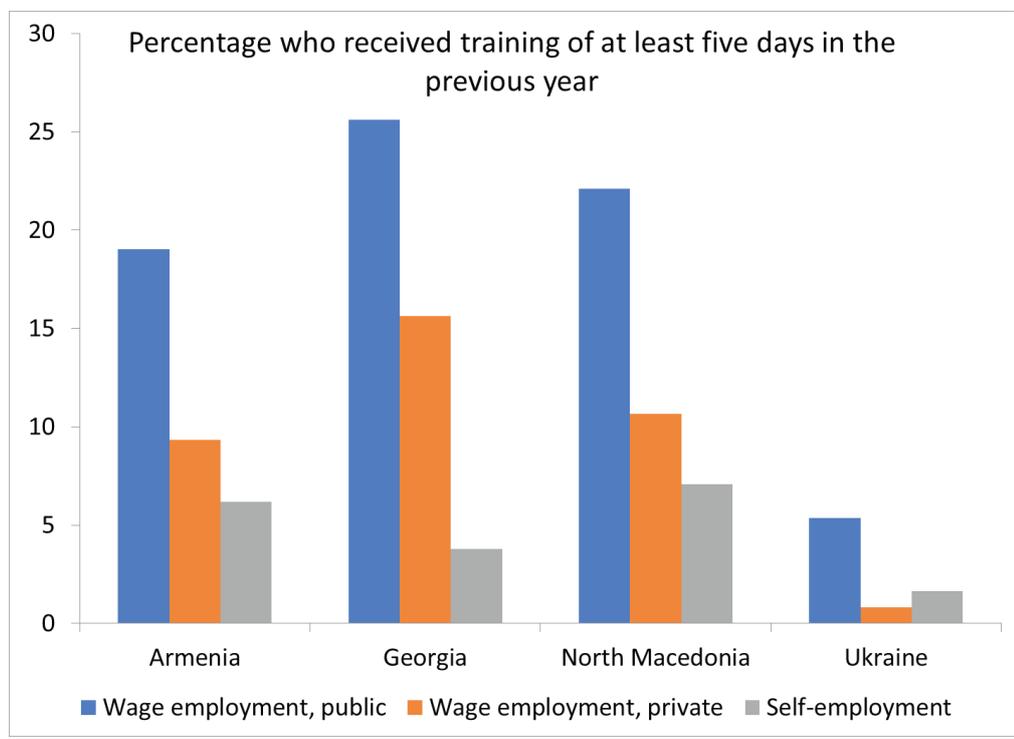
**Education and technical and vocational education and training (TVET) systems need strengthening to provide more relevant and higher-quality skills and to reduce skills mismatches.** A large share of firms reporting in the STEP employer survey said they do not consider the skills development system in Armenia (general education and TVET) to be delivering the skills necessary for the workplace. Similarly, majority of youth with TVET education who found a job also said they had received neither the theoretical nor the practical training needed for their job. Soft skills and job-searching skills were among the skills cited as largely not included in formal training. Information technology (IT) and tourism, two sectors seen as priority areas in Armenia, are not well served by current education and training systems. For example, IT employers are not interested in hiring TVET graduates for more skills-intensive positions, and overall, these firms rate the education and TVET systems very poorly in terms of the skills they produce (Save the Children Armenia 2018).

**Continued learning and skills upgrading require continuous training of workers.** Firm-based training cannot replace poorly-functioning education systems, but it can provide complementary, adapted and continued learning opportunities. According to the STEP employer survey, Armenian firms are more likely than firms in Ukraine or Georgia to train workers. Among the Armenian firms, 43 percent provided training to their workers in professional and managerial positions, versus 36 percent of firms in Ukraine and 22 percent firms in Georgia. Modern (innovative, internationally oriented) firms and large firms were more likely to provide

training than other firms. **However, the share of workers receiving training is quite small and depends on the work sector, demonstrating that access to further skills upgrading is not equitable.** Fewer firms provided training to workers in medium and lower skill occupations (27 percent, compared to 34 and 20 percent in Ukraine and Georgia). Moreover, access to training differs by sector of employment. Nearly 20 percent of public sector workers received training of at least five days during the previous year. The share of wage employed in the private sector and self-employed who receive or get training is less than half that. In the urban population as a whole, only 6 percent had received some on-the-job training and 10 percent had been in an apprenticeship (Figure 53).

**Firms and individuals may need guidance on identifying training needs.** The LFS asks whether workers received training in the past four weeks. The LFS 2017 found that only 7 percent of the employed had received some training in that time frame. At the same time, very few of the employed respondents (5 percent) said they needed additional training. Of the workers who considered that they needed more training, the largest share worked in the ICT sector, which indicates that workers in more modern sectors that are exposed to competition may also be more attuned than other workers to the need for training. Smaller firms, meanwhile, may not only find it difficult to finance training for workers, but also may lack the human resources functions that should help identify firms' internal skills needs.

**Figure 53: Access to training is not equitable**



Source: World Bank (2015).

## Conclusions and policy recommendations

**Jobs are a crucial mechanism for reducing poverty, generating strong economic growth, translating that growth into shared welfare gains across the population and thus reducing inequality.** Recent jobs diagnostics conducted at the World Bank (Merotto, Weber and Aterido 2018) suggest that countries face a set of common challenges. These include accelerating the rate of job creation in the formal sector of the economy; improving the quality of at least some of the many informal jobs that already exist and will continue to be created; and facilitating labor market transitions, particularly by vulnerable workers, from unemployment or inactivity into a job, from low-quality to higher-quality jobs, and from sectors more at risk of automation to sectors where job demand is expected to increase or at least remain constant. Addressing these challenges can enable structural transformations that are the center of economic growth and higher standards of living—with more people working and making each job in the economy more productive, and with workers prepared to move from low to higher productivity sectors and regions.

**Economic growth has been effective in reducing poverty.** The growth model up to now in Armenia contributed to reducing poverty, mostly through labor income, remittances and social transfers (pensions and the Family Benefit programs targeted to poor and socially vulnerable families). Armenia was a success story of rapid poverty reduction until 2008 when the global financial crisis hit; indeed, its poverty rate decreased from 54 percent in 2004 to 27 percent in 2008. Following the crisis, the slowdown in economic growth, which averaged about 3.2 percent between 2010 and 2016, coincided with lower rates of poverty reduction. Only recently has GDP expanded at a faster pace, growing at 7.5 percent in 2017 and 5.3 percent in 2018, driven mostly by tourism and domestic demand. Estimates from Integrated Living Conditions Survey (ILCS) data show that the growth spurt in 2017 is associated with a reduction in poverty, from 29 percent in 2016 to 26 percent in 2017, the latest year available.<sup>68</sup> Nonetheless, international comparison suggests that Armenia has one of the highest poverty rates in the Europe and Central Asia region.

**Slow economic growth until 2017 has translated into limited job creation.** Between 2007 and 2017, overall employment changed only slightly, growing on average only 0.12 percent per year.<sup>69</sup> The number of people employed in 2017 (1.09 million) was just marginally higher than in 2007 (1.07 million). Hence, only about 11,000 jobs were created between 2007 and 2017 in both the formal and informal sectors, or just over 1,000 net new jobs per year (according to ILCS). Following the global financial crisis, the employment to population ratio decreased and after 2010 reverted slightly to the pre-crisis level. While poverty to growth elasticity was relatively high over this period, employment to growth elasticity was low, at 0.03, below the average among middle-income countries. Economic growth thus made only a small contribution to overall employment. Moreover, economic growth and poverty reduction have been accompanied by growing inequalities in terms of income level and across regions. Income levels among non-poor households grew more than income among poor households and the Gini coefficient increased.

**Job creation has not been inclusive; youth, women, individuals with lower educational attainment and those in secondary cities continue to have fewer jobs opportunities.** Most job creation took place in manufacturing, mining, and in lower value-added sectors such as public administration and in other services.<sup>70</sup> Most jobs destruction, meanwhile, occurred in agriculture, construction, and electricity, gas and water supply. While the share of wage employment has not changed much over time, and accounts for 61 percent of total employment, most of the new jobs are unpaid jobs that accounted for 11 percent of employment in 2017, an increase over 5 percent in 2007.<sup>71</sup>

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<sup>68</sup> See Social Snapshot and Poverty in Armenia (Armstat 2018). The recent poverty gains were modest because the growth model has run its course. The poverty reduction in 2017 was possibly due to higher growth rather than higher poverty-growth elasticity.

<sup>69</sup> Figures for employment growth among the 15-64 age group are based on ILCS data. Looking only at the post-crisis period, the average annual employment growth rate is 0.19 percent since 2010. The impact of economic growth in 2018 on employment cannot be assessed because of a lack of employment data.

<sup>70</sup> The “other services” sector includes arts, entertainment and recreation, other service activities, and activities of private households as employers.

<sup>71</sup> Percentages are based on the ILCS. To the authors’ knowledge, no change has been made in the methodology to classify unpaid workers to the authors’ knowledge. Employment status is comparable over time.

**The projected rising dependency rates put pressures on job creation, labor productivity and labor force participation.** The total population has declined from around 3.5 million people in 1990 to 2.93 million in 2017; the decline is attributable almost entirely to outmigration and lower fertility rates<sup>72</sup> that contributed to a halving of the number of children ages 0-15 from about one million in 1990 to 500,000 in 2017. The working-age population (15-64) has remained almost the same—2.2 million in 1990 and 2.1 million in 2017.<sup>73</sup> However, according to United Nations (UN) projections, the population is expected to shrink beginning 2020 as a consequence of these declining fertility rates and migration outflows. The old age dependency rate has almost doubled, from about 9 percent of the population in 1990 to 16 percent in 2017. These demographic trends imply that higher labor force participation rates will be needed in coming years to sustain an aging population.

**The job creation challenge in Armenia pertains mostly to the lack of a vibrant private sector.** The private sector productivity challenges arise from the investment climate and governance gaps that persist despite recent reforms and some progress; poor competition; limited use of technology and innovation; limited integration with foreign markets; and the need for further financial deepening and access to finance (World Bank 2017). Armenia's foreign direct investment (FDI) inflows have been declining over the past decade, with investors highlighting significant risks related to the competition environment. Recent regulatory reforms and market conditions led to the registration of about 16,000 new firms every year on average between 2014 and 2017, but also to the exit of 14,600 firms every year on average during the same period,<sup>74</sup> mostly own-account micro-firms. Armenia's high entry and exit rates indicate that while there is sufficient dynamism in the economy, new firms struggle to survive. According to the European Bank for Reconstruction and Development (EBRD) Transition Index,<sup>75</sup> Armenia performs well in ICT and general industry, indicating that these sectors have standards which are close to those in high-income countries. However, Armenia's transition lags behind in the agribusiness and real estate sectors.

**Lack of good job opportunities at home has made emigration a common employment strategy option, but mostly for people without tertiary education and for men.** More than one third of families in Armenia have at least one household member who is either abroad or a returning migrant (Russian-Armenian University migration survey 2017<sup>76</sup> ). Armenia has experienced large net outflows of its workers; indeed, it is among the top exporters of human capital in the world. At an estimated 10 million people, the Armenia diaspora is more numerous than the population living in the country. In recent years, outmigration has predominantly been temporary (circular) migration rather than the large, permanent migration flows seen in the 1990s. The outflows of skilled workers may not necessarily mean a loss for Armenia, as these migrants facilitate FDI inflows, inward remittances, and skills and knowledge transfer to Armenia. The remittances sent by Armenia's huge diaspora are a significant part of overall output, accounting now for 35 percent of the recipients' household income and acting as one of the main drivers of poverty reduction (Honorati, Kerschbaumer and Yi 2019). Anecdotal evidence suggests that the recent economic development, coupled with positive public perceptions about the reforming government after the Velvet Revolution, are thought to have a positive effect on youth perceptions of the availability of jobs opportunities and may reverse previous outmigration trends. Still, the expectation of a wage differential between Armenia and destination countries continues to motivate youth to migrate, especially those in the capital, Yerevan. Nevertheless, consultations with academia and the State Employment Agency' migration services also point to the increasing trend of immigrants coming to Armenia from neighboring countries including the Syrian Arab Republic, owing to positive economic prospects in Armenia.

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<sup>72</sup> The total fertility rate decreased from 2.5 births per woman in 1990 to 1.7 births per woman in 2000 and to 1.6 births per woman 2017. This is well below the replacement rate.

<sup>73</sup> These numbers are based on World Development Indicators. Estimates of the working-age population from the ILCS and LFS indicate a similar trend, although different levels possibly may be due to how circular migrants are treated in the sampling design. ILCS puts the working-age population at 1,707,477 in 2007 and 1,781,870 in 2017.

<sup>74</sup> The source is State Revenue Committee data.

<sup>75</sup> The 2016 Index measures progress in the transition from a centrally planned economy toward the standards of an industrialized market economy.

<sup>76</sup> Estimates of migration differ and are likely underrepresented in the Labor Force Survey which accounts for migrants that have been abroad for more than three months.

**The transition to a modern, market-economy structure has been slow and as yet incomplete.** The structure of both value added and employment has changed slowly over time. Most of the labor market structural transformation started in 2010, after the global financial crisis, and is still incomplete. Agriculture accounted for 44 percent of employment in the early 2000s and up to 2008, then shrank to 33 percent in 2017. The employment share of services grew from 43 to 49 percent during the same time period, while the industry share remained nearly the same. These shifts reflect the net effects of the collapse of the construction sector (which shed many jobs for low skill workers) and the effects of job creation in the manufacturing sector. Armenia's score on the 2014 EBRD transition index is close to the average of ECA countries. If it is to become a high-income country, Armenia's structural transformation needs to advance through reforms that facilitate the cross-sectoral mobility of workers from less productive to more productive sectors and to enable more productive firms to grow.

## Labor market challenges

**The report identifies the following key challenges arising from lack of jobs, high inactivity rates, quality of existing jobs and skills mismatches.**

- 1. The economy growth model is not creating enough good jobs for Armenia's labor force.** The growth model so far relied on private consumption fueled by remittances and on mineral exports. This produced little job creation overall, especially in sectors with higher labor productivity or a potential for higher labor productivity growth. Hence, the pattern of growth and the pattern of employment creation were not strongly connected. The slow increase in the economically active population between 2007-17 has resulted in a rising number of unemployed rather than an increase in employment. Moreover, unemployment is mostly long-term (of more than one year), which reflects the low labor demand. Nor have employment levels noticeably increased over time, as growth has been unable to generate employment: over 2007-17, a one-percent increase in economic growth translated into only 0.03 percent increase in jobs. Lack of jobs is cited as the main reason for not finding a job or starting a new business by two out of three unemployed. The working-age population is projected to decline starting now and to fall from a projected 2 million in 2020 to 1.68 million in 2050; the elderly population (65+) will increase by almost as many, that is, by about 320,000 individuals. The dependency ratio is expected to increase from 16 percent in 2017 to 18 percent in 2020, and to 37 percent in 2050. To sustain Armenia's aging population and avoid increasing unemployment, the economy will need to create about 8,000 new jobs per year between now and 2030 to absorb the new labor market entrants and increase labor force participation to 75 percent. These may appear to be modest goals, but they would represent a significant change from the current pattern of (small) net job destruction.
- 2. A number of constraints stand in the way of developing a dynamic, export-oriented and modern private sector, one that offers a diversified range of products and markets and could facilitate the transition of workers from less productive sectors.** These constraints include limited innovation, export diversification, connectivity to foreign markets and limited competition, and have also translated into high death rates of microentrepreneurs. Only 9 percent of firms were exporting in 2013 (Enterprise Survey 2013). The recent per capita growth after the global financial crisis has been driven by productivity gains in mining, manufacturing (which shed workers), other services and public sector services and by only a very modest reallocation of workers from less productive to more productive sectors. Among higher value-added services, financial services saw significant inflows of workers. The size of the modern private sector is still too small to facilitate a more substantial transition of workers from less productive to more productive sectors. Hence, only a small share of private sector jobs are good quality in terms of earnings, returns to education and worker protection. Too many individuals in Armenia are still working in the low productivity sectors of agriculture and certain services such as trade, transports and storage, and tourism (hotels and restaurants). As such, too many workers are self-employed and work in low earning sectors (agriculture, trade, transports and tourism). Further, agriculture is the most climate-sensitive of all economic sectors and yet Armenian farmers are not well adapted to current climate-related challenges and need to undertake more adaption actions to prepare for the impact of climate change (World Bank 2017).

- 3. The total inactivity rate is still too high and is especially high for youth and women.** The overall inactivity rate is 37 percent, but is even higher among youth (68 percent) and women (45 percent), as well as among residents of urban areas other than Yerevan and lower-educated people. The reasons behind such high inactivity rates vary. For women, family care responsibilities and social norms hold them back from participating in labor market activities. For men, circular and seasonal migration is the most commonly cited reason for inactivity; 29 percent of men ages 25-39 are not working in Armenia). For lower-educated people, seasonal migration and discouragement (past failure to find a job) are the more commonly reported reasons for inactivity. Youth who are not in school or training also report that is a main reason for being inactive along with lack of jobs, information and job search assistance. The rates of youth not in employment, education or training (NEET) in Armenia are among the highest in the region: the NEET rate is 27 percent among youth ages 15-24, more than twice the European Union (EU) 28 average of 11 percent, and 33 percent among youth ages 15-29. By comparison, the average NEET rate for youth was 13.4 percent in 2017 in the EU 28 countries and 30.6 percent in Georgia. NEET rates among women ages 15-29 are especially high (42 percent), as many young women enter into inactivity after leaving school. The gender gap is large, not just in terms of labor market outcomes (employment, unemployment and inactivity) but also in terms of earnings, occupation type, and employment status (given that women are more likely than men to engage in farming activities and unpaid work). Women have limited access to finance and significantly lower presence in top managerial positions. The average gender earnings gap is 33 percent (World Bank 2017), the largest among countries in Europe and Central Asia; the gender pay gap is higher among higher-educated workers and in the high productivity sectors of finance, real estate and ICT. Like childcare and elderly care responsibilities, the pay gap may explain why women participate at lower rates in the labor force despite having higher educational attainment than men. Due to specific constraints, including lower levels of education, lower mobility and others, low-income groups are particularly disadvantaged in terms of active participation in labor markets.
- 4. Skills mismatches and skills gaps affect job creation and job satisfaction, especially among youth.** First, one fifth of workers consider themselves over-educated for their jobs.<sup>77</sup> This finding points to human capital waste. This view is particularly prevalent among young people who leave school for a job that they do consider to be not well-matched to, or below, their level of education. The over-education perception also is higher among workers in low productivity services sectors (30 percent in trade and 26 percent in tourism) that require lower technical skills intensity (but not necessarily low intensity of other skills such as soft skills). One explanation may be that there are not enough jobs requiring higher technical skills to absorb all the qualified workers. Another may be that information asymmetries are preventing good matching of skills produced to skills demanded. Second, a bigger share of workers who said they need more training—while low on average—are in services sectors requiring higher technical skills, including ICT and financial and insurance markets.<sup>78</sup> This points to gaps in the general education and technical and vocational education and training (TVET) system. Responses in the STEP employer survey were consistent with the workers' perceptions. Employers reported that they have difficulty finding skilled workers in skills intensive services sectors. This view was especially prevalent among firms that are relatively more productive, trade internationally and are technology-intensive—that is, firms that could create better jobs. Nine of ten firms that tried to hire workers for managerial and professional positions but found it difficult, said lack of skills among applicants was the major constraint; by comparison, 85 percent of firms in Georgia and 76 percent of firms in Ukraine cited applicants' lack of needed skills (World Bank, 2015). Lack of skills can likely be traced to the general education and vocational training systems, which are not developing skills of sufficient quality and relevance for the labor market and to the lack of early quality education interventions. Evidence shows there are substantial disparities in access to early learning services and that the supply of ECD services is limited (Ayliffe, Honorati and Zumaeta, 2019; Save the Children Armenia 2017). The STEP employer survey also found that a relatively large share of firms in Armenia is providing training to their workers but that internal training is more prevalent among larger firms (35 percent) than among micro firms (18 percent). This suggests a lack of focus on life-long earnings among smaller firms.

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<sup>77</sup> Workers are generally satisfied with their technical skills. Only seven percent of workers reported that their skills are not useful in their job and only 5 percent of workers felt the need for additional technical training in their current job (LFS 2017).

## Potential solutions and priorities

The findings point to five sets of policy reforms to address these challenges: (i) policies enabling the macro and business environment for job creation; (ii) policies increasing the productivity of firms and boosting creation of high productivity jobs; (iii) policies encouraging labor force participation; (iv) policies facilitating job-matching and the transition of workers across sectors and geographical areas; and (v) policies increasing jobseekers' job-relevant skills and workers' productivity.

*Policies enabling the macro and business environment for firms to start up, grow and create more jobs*

**To sustain Armenia's aging population, the economy will need to create more jobs and achieve higher labor force participation, while avoiding higher unemployment.** To secure sustained growth, the Armenia growth model will need to shift from one relying on private consumption and mineral exports to one relying on productive investment and diversified exports. Even the recent growth rebound in 2018 has been demand-driven (by a strong increase in domestic demand following increases in disposable income and remittances) rather than productivity-driven, and thus is not necessarily sustainable even over the short term. A supply-driven growth model based on human capital accumulation and technological innovation is needed to generate better-quality and sustainable jobs in a sophisticated modern economy.

**Stimulating domestic capital investments and FDI in higher productivity and labor-intensive sectors would help make economic growth less dependent on domestic consumption.** Economic diversification achieved by redirecting resources from high-value-added sectors such as mining to high-value-added sectors with high potential for job creation could be considered a policy priority to promote more, better and inclusive jobs. The largest increase in the value added per worker occurred in services associated with tourism (including hotels, restaurants and entertainment) and in manufacturing, although manufacturing also experienced labor losses. Agribusiness is a labor-intensive sector with potential to provide means of diversification out of agriculture, growth and access to global value chains. Stimulating FDI and domestic capital investment in labor-intensive sectors with a potential for labor productivity growth and in higher productivity sectors with a potential for job creation, would help make the growth less dependent on remittances and domestic consumption.

**Further integration with foreign markets may stimulate foreign demand and diversify exports.** Armenia is a small country with a small domestic market, and exports could provide an important source of growth. However, this will require reforms to improve trade logistics and strengthen linkages with foreign markets beyond Russia. It will be important to diversify exports to reduce the dependency on minerals and metals for export and favor foreign demand for manufacturing products and business services. Improving their access to information and expanding their connectivity to local, regional and global value chains would help increase the competitiveness, product sophistication and exports of firms with high potential to export.

**Allowing fixed-term contracts for permanent tasks may make job creation more attractive for employers.** Armenia's Labor Code, overall, already offers a good balance between flexibility for employers and security for employees, but more flexibility may be achieved by allowing fixed-term contracts for permanent tasks. Armenia is among a minority of countries, including Turkey and Russia, that prohibit such contracts for permanent positions and tasks. While fixed-term contracts strengthen employers' bargaining power and can be abused, they can also encourage firms to create more jobs. Employers can more flexibly adjust their labor force to respond to demand fluctuations—simply by not renewing fixed-term contracts rather than terminating workers on open-ended contracts. This is particularly relevant for job creation in innovative and new business areas, where uncertainty about expected demand is high and flexibility of employment arrangements can be particularly valuable to employers.

**As public debt is projected to rise, comprehensive pension reforms need to ensure sustainability and protect the aging population.** This is a point worth noting, even though this report omits macro-level analysis. Sustainability of the pension system is receiving attention: beginning in 2010, the public pension system has undertaken major reforms and institutional rationalization to address the issue of funding. The new, mandatory defined contribution pension plans are expected to help increase the replacement rates of future retirees. The system has been in place for four years, has achieved reasonable rates of return, and

invested about 30 percent of assets abroad to achieve both regional and currency diversification. At the same, the safety of investments will remain a concern as long as capital markets are small and weak and the Armenian economy does not provide sufficient investable opportunities. More work needs to be done to develop capital markets and instruments in Armenia and to further improve the range of instruments available for investment in the mandatory defined contribution system. Furthermore, authorities will need to continue working on policies and mechanisms of coverage expansion.

#### *Policies increasing firm productivity and boosting creation of high productivity jobs*

**Design sector-specific policies that promote creation of high-skill jobs.** For sectors with higher potential for high-skill job creation—in particular, ICT, business services and manufacturing—fiscal incentives for research and development, training, and exports and better access to financing capital, can potentially ease existing productivity constraints and foster job creation in these sectors.

**Upgrade technology and improve financing policies for micro and small firms.** Micro and small firms generally face greater constraints to expansion and survival. Applying a more targeted approach to upgrading the existing technology of micro and small firms without also distorting competition, can improve competitiveness, innovation, and connectivity to local and foreign value chains. Nonetheless, local business conditions may differ greatly from the national average (including in practices of the informal sector, corruption and access to finance). Firms may also need direct advisory services and technological support, especially in areas outside the main commercial and financial centers in Yerevan.

**Foster productive self-employment and entrepreneurship.** The promotion of widespread entrepreneurship and small and medium enterprises is crucial to the transformation toward a market economy and the democratization of society in countries in transition. Nonwage workers (own-account, employers and unpaid workers) account for 39 percent of employment in 2017. Compared with larger firms, the self-employed have less access to information on training as well as on assessment of training needs; they also face significant opportunity costs in attending affordable training, because it takes them away from work. To address these issues and ultimately increase productivity growth among the self-employed, it is critical to upgrade their skills and business practices and broaden their access to markets and value chains. These can be achieved in a number of ways, including by providing government-sponsored business development services, subsidies access to credit and skills training tailored to potential entrepreneurs; establishing business incubators to promote networks; and creating incentives for registration and increasing awareness of the benefits of formalization.

**Improve the productivity of agriculture and its climate change resilience.** Agriculture accounts for one third of jobs, but agriculture has the lowest productivity of any sector. Making agriculture more productive will require commercialization, helping smallholder farmers to access value chains and facilitating agribusiness investments, as such investments are as well a source of wage jobs and potential positive spillover effects in the associated logistics services. The potential of agribusiness could be tapped by upgrading technology, including digital technology. Investments in technology should be complemented by strong investments in physical infrastructure (permitting the transfer of knowledge through the Internet and the physical distribution of produce, for example and in skills development (including basic education and training) that can help farmers understand and use technology appropriately

#### *Policies encouraging labor force participation*

**Policies to increase the size of Armenia's future workforce are critical to slow down the effects of an aging population on the country's growth.** Policies to encourage an increase in fertility rates back to replacement level could be considered to increase the working-age population in the long term. Reducing inactivity is an urgent priority given that the ratio of the working-age population to dependents will start to shrink. Armenia already has adopted birth grants, both universal and targeted to Family Benefit beneficiary households, and these should be maintained. According to quasi-experimental evidence, they have had a positive impact on the fertility of women who have already given birth twice, in that their probability of giving birth increased by

1.7 percent (Pinto, Posadas, and Shapira, forthcoming). Communication campaigns could be also considered to influence fertility rates and family planning decisions.

**The provision of childcare services, communication campaigns and more flexible labor regulation should be considered to reduce the gender gap in labor force participation and increase fertility rates.** As found in a recent diagnostic study in four marces, early childhood development (ECD) services are limited and where they are provided, the services are mainly offered only through kindergarten years. Expanding the supply of affordable ECD services would help women balance family responsibilities and work (Ayliffe, Honorati and Zumaeta, forthcoming). Another policy option would be investment in better staff qualification, training, and certification for both childcare and eldercare provision; these in turn could help develop a formal care industry that can contribute to the active aging objective by recruiting younger-old to care for older-old and increase female labor force participation, in particular by women with low skills and women in rural areas (Munoz-Boudet and Rodriguez-Chamussy 2017). According to qualitative evidence relating to low-income and vulnerable women, cultural norms play an important role in keeping women inactive.<sup>79</sup> Communication campaigns could be introduced to increase women's participation in the labor force. Other interventions could include making maternity benefits more flexible to allow women to split them with fathers so that mothers can go back to work earlier. Finally, additional policies to be considered include requiring employers to provide paid leave for workers to take care of sick relatives and making childcare payments tax deductible for both men and women. These have been introduced in high-income countries and the available evidence seems to show that they improve women's work-life balance (World Bank Group 2018).

**The transition of youth from school to work could be facilitated by expanding work-based experience arrangements and strengthening linkages between schools and employers.** A young person who does not find a job after school risks remaining without one. Increasing the role of the private sector through internship and apprenticeships is an important means to provide first-time, work-based experience that other employers value and thus can increase the employability of these youth. Introducing career guidance and orientation at an early stage in schools also would help the transition from school to work.

**Low-income groups, including social assistance beneficiaries, need targeted activation policies to facilitate their participation in the labor market and access to employment opportunities.** The government amendments to the scoring formula determining eligibility for the Family Benefit Program (FBP), Armenia's flagship cash transfer program targeted to the poor and socially vulnerable, reduced the work disincentives that were inherent in the previous coefficients. However, no programs exist that are specifically targeted to FBP work-able beneficiaries. Further, the participation rate of FBP work-able beneficiaries in active labor market programs (ALMPs) is very low, as is the number of suitable job offers for them. Improving coordination between the State Employment Agency (SEA), which manages employment offices, and the Social Security Services, which manages the FBP, is key to promoting activity rates among FBP beneficiaries based on targeted solutions.

#### *Policies facilitating job-matching and the transition of workers across sectors and geographical areas*

**The quality of labor market data should be improved to inform education, training and employment policies and to guide students' career choices.** Better-quality of labor market information is also necessary to reduce information asymmetries between employers and jobseekers, thus alleviating skills mismatches and improving job matching. The labor market information system should be upgraded and expanded to support coordination between employers, education institutions and the State Employment Agency. The benefits of being able to collect and analyze more detailed data related to supply and demand for different occupations and skills are extensive: such data would provide students with the information they need to choose a career, jobseekers with the information they need to find a job that best suits their skills and firms with the information they need to choose the workers who would best meet their needs. Policies should also foster more data collection in the form of occupational surveys and employer surveys and support the development of a skills assessment tool and medium-term forecast tools to further inform education and

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<sup>79</sup> This evidence emerged from focus group discussions with social workers.

labor market policies regarding skills needed. Information on occupational trends could be either quantitative (regular surveys) or qualitative (through focus groups with employers). Graduate tracer studies are common tools in European countries to collect information on career prospects associated with the choice of different types of schools and fields of study.

**The government plays a critical role, not only to generate data but also disseminate labor market data.**

An online job portal could be developed to make labor market data accessible and enable students and jobseekers to make informed career choices. The development of a jobs portal requires the upgrade of the vacancy database to private firms and the collection of data on graduate skills from education institution and TVET schools. Many countries have set up labor market observatories to improve the quality and scope of available labor market information and to analyze labor market developments.

**The capacity of the State Employment Agency should be strengthened for more efficient employment service delivery.**

SEA employment services are underutilized and jobseekers express little trust in the SEA's job placement capacity. Only 9 percent of unemployed individuals are registered with the SEA. To improve the quality of job intermediation services—job matching, job search assistance and referral to training and ALMPs—SEA employees should be trained to take on more specialized functions such as careful profiling of jobseekers and vacancies for better case management (assessment of job readiness). Outreach to employers needs to be intensified, as the SEA relies on very few employers, most of them public, for recruitment and activation programs.

**The benefits of circular migration could be further maximized and barriers to international labor mobility reduced.**

Temporary labor migration offers opportunities for Armenians, especially the unemployed in rural areas, to take advantage of wage differentials between Armenia and destination countries. The availability of information on overseas opportunities is limited, and generally shared among family members and relatives. Information asymmetry leads to skills mismatch in overseas jobs. Armenian labor migrants also tend not to have written labor contracts (Honorati, Kerschbaumer and Yi 2019), which increases their vulnerability in work situations, the costs of migration and constrain migrants' choice of destinations. The government can be more proactive in building partnerships with destination countries to (i) make job information, including specific information on qualifications, available and publicly accessible; (ii) cooperate in developing skills for specific occupations to minimize skills losses, for example by harmonizing and jointly developing curricula and collaborating in on-the-job training and dual training; and (iii) ensure equal treatment of Armenian workers and natives in destination countries in terms of wages and labor and social protection, including access to healthcare insurance and especially for the low-skilled who tend to face inequality in bargaining power.

**Effective policies to facilitate the return of overseas Armenians rest on better understanding of the diaspora population and determinants to return.**

Actions taken to encourage qualified people to return to Armenia and contribute to brain gain have yet to produce concrete results. Return decisions are complex and skills acquired abroad may not be fully transferable, resulting in a loss in human capital among returnees. To develop effective schemes for return, it is imperative that the government develop mechanisms to profile the diaspora population in order to better understand motivations and conditions for return and estimate the flow and stock of the return population. Analyses of such data would serve as the basis to formulate evidence-based policies. Other policy options are to allow transferable pensions through mutual agreements with destination countries and to ensure cooperation between state and local governments in implementing migration regulations in a transparent manner. Finally, for those emigrants who do return, Armenia can establish policies that better facilitate their reinsertion into the labor market through close coordination among relevant government agencies. The enrollment of higher education to meet productivity goals is underutilized. The combined enrollment in vocational and high school of children ages 16-18 has fallen in the past decade<sup>80</sup>. Fostering more job-relevant technical skills also calls for institutionalizing the links between the education and training systems, between students and firms (through, for example, apprenticeships and internships), and between firms and education institutions. One way to make post-secondary and professional skills provision more demand-responsive is to strengthen the role of employers through work-based experience for example in the form of internships and apprenticeships.

<sup>80</sup> The enrollment rate fell from 98.8 percent in 2009 to 85.6 percent in 2017 (World Bank, forthcoming).

**More attention should be paid to transversal skills that are adaptable to the changing nature of jobs and to non-technical skills.** Individuals need new skills, more opportunities to learn and higher levels of human capital to stay competitive. Evidence suggests that globally, the skills content of jobs is changing, with a decline in routine manual skills (which can be automated) and an increased use of skills that require problem solving, interaction, collaboration and creativity. As Armenia's economy develops and becomes more reliant on technology, innovation and services, the skills needs of the labor market will become more skewed toward these transversal skills that can adapt to fast-changing business and production processes. Transversal skills such as foreign languages, for example, will help Armenian firms integrate to foreign markets. The fast pace of technological change makes technical skills redundant more quickly than ever before, underscoring the importance of investing in foundational (cognitive and socioemotional) skills.

**The supply of professional training and re-training courses should be incentivized and upgraded to meet the needs.** Older workers are more exposed to the risk of having obsolete skills due to automation and technological change. The skills of the current workforce will need to be regularly upgraded to remain relevant and support firm innovation and increased productivity. Policies to enhance continuous and lifelong learning should be a priority so the workforce can be equipped with the adaptable skills employers look for. The current provision of class-based and employer-driven professional vocational training needs to be scaled up to meet the needs.

**Fostering job-relevant skills is a broad agenda that calls for developing foundational and socioemotional skills starting in early childhood.** Early childhood development interventions will be key to preparing Armenia for the future of work. In addition to providing childcare and giving women more opportunities to enter the labor market, Armenia should expand the provision and access to ECD services to very young children (ages 3 and below), children in poorer and disadvantaged households, children in rural areas, and children with special needs and from poor and vulnerable households.

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## Annex: Additional tables and figures

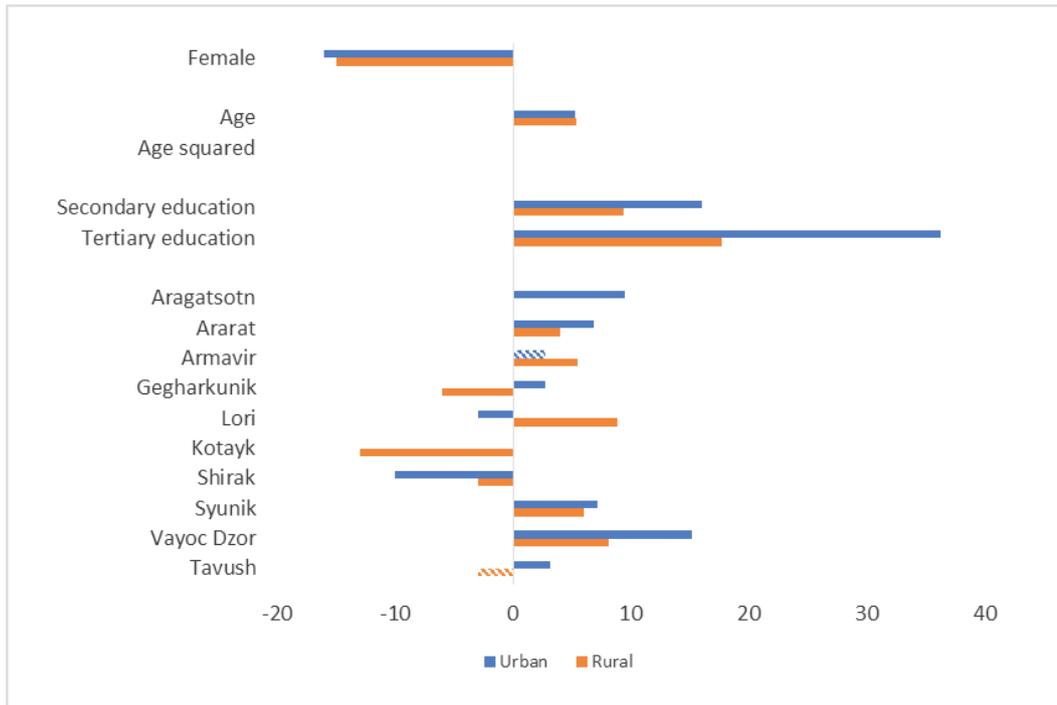
Table A.1. Labor force status by marz, based on 2007, 2010, 2015, and 2017 ICLS data

	Total	Yerevan	Aragatsotn	Ararat	Armavir	Gegharkunik	Lori	Kotayk	Shirak	Sjunik	Vayots Dzor	Tavush
<b>2007</b>												
Employed	62.9	55.8	79.9	75.6	70.2	71.8	58.7	56.1	55.8	73.0	69.0	75.1
Unemployed	9.7	13.7	2.7	5.0	6.1	6.6	10.5	10.4	10.2	5.2	9.6	5.0
Inactive	27.4	30.5	17.4	19.5	23.7	21.6	30.8	33.5	33.9	21.8	21.5	19.9
<b>2010</b>												
Employed	52.6	45.2	74.4	66.4	60.7	62.0	50.5	44.9	41.9	69.3	61.6	66.0
Unemployed	13.9	20.0	7.7	5.9	7.8	9.1	15.4	11.7	13.8	10.5	12.5	9.6
Inactive	33.5	34.8	18.0	27.7	31.5	28.9	34.1	43.5	44.2	20.2	25.9	24.5
<b>2015</b>												
Employed	58.6	51.5	80.7	67.4	68.1	69.7	56.5	50.0	45.9	65.8	71.9	69.0
Unemployed	11.8	16.9	3.4	8.0	3.6	0.9	12.5	14.5	19.8	11.1	9.0	4.9
Inactive	29.6	31.6	15.9	24.6	28.4	29.3	31.0	35.5	34.3	23.1	19.1	26.1
<b>2017</b>												
Employed	60.9	55.5	80.8	75.1	68.8	63.0	56.3	50.0	50.3	77.3	72.0	68.6
Unemployed	10.8	13.9	5.1	4.8	5.0	6.2	12.4	16.5	14.0	4.3	7.0	10.8
Inactive	28.3	30.5	14.1	20.1	26.2	30.8	31.2	33.5	35.7	18.4	20.9	20.6
<b>2007-17 percentage point change</b>												
Employed	-2.0	-0.3	0.9	-0.4	-1.4	-8.8	-2.4	-6.1	-5.5	4.3	3.1	-6.5
Unemployed	1.1	0.3	2.3	-0.2	-1.1	-0.4	1.9	6.1	3.7	-0.9	-2.5	5.8
Inactive	0.9	0.0	-3.2	0.6	2.5	9.1	0.4	0.0	1.8	-3.4	-0.6	0.7
<b>2007-17 percent change</b>												
Employed	-3%	0%	1%	-1%	-2%	-12%	-4%	-11%	-10%	6%	4%	-9%
Unemployed	11%	2%	86%	-4%	-17%	-6%	19%	59%	37%	-18%	-26%	118%
Inactive	3%	0%	-19%	3%	11%	42%	1%	0%	5%	-16%	-3%	4%

Source: World Bank staff estimates based on 2007, 2010, 2015 and 2017 ICLS data.

Note: ICLS data are not strictly comparable with LFS data. Because LFS data are only available since 2014, ICLS data are used in this report in order to examine trends for a longer time series.

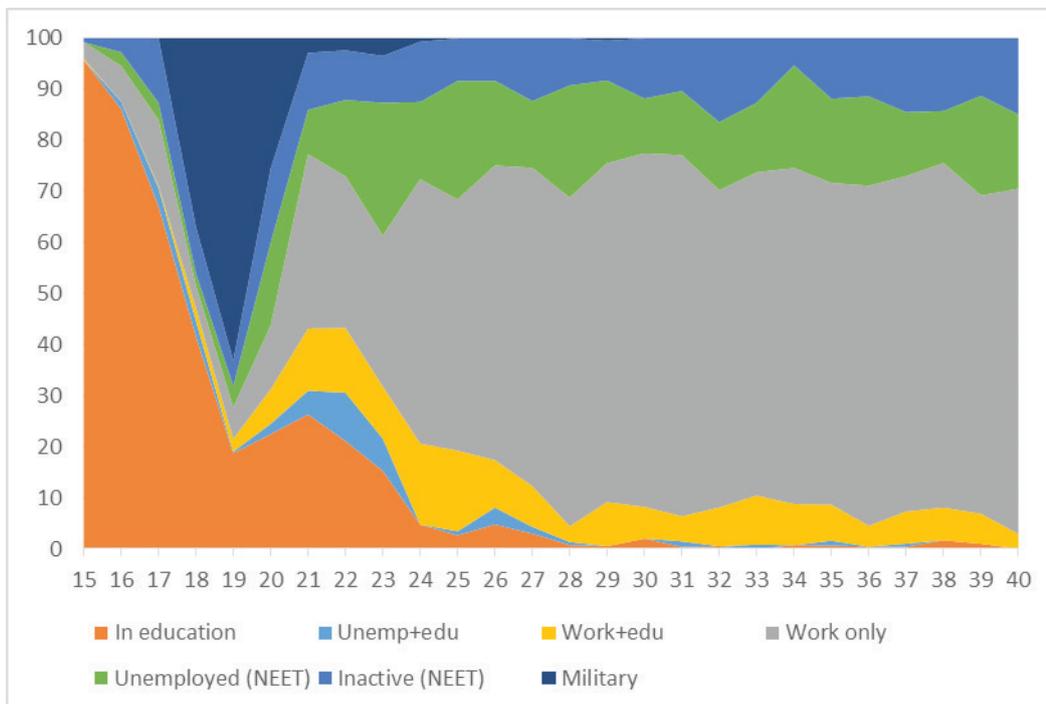
**Figure A.1. Marginal effects of probit model for employment, 2017**



Source: World Bank staff estimates based on ARM LFS 2017 data.

Note: Bars show marginal effect coefficients based on a multinomial probit model; bars in solid colors depict statistical significance at the 5 or 10-percent level; bars with diagonal stripes depict lack of significance at the 10-percent level. The reference category for education is complete local secondary and below. The reference categories for urban and rural provinces are Yerevan and Aragatsotn, respectively.

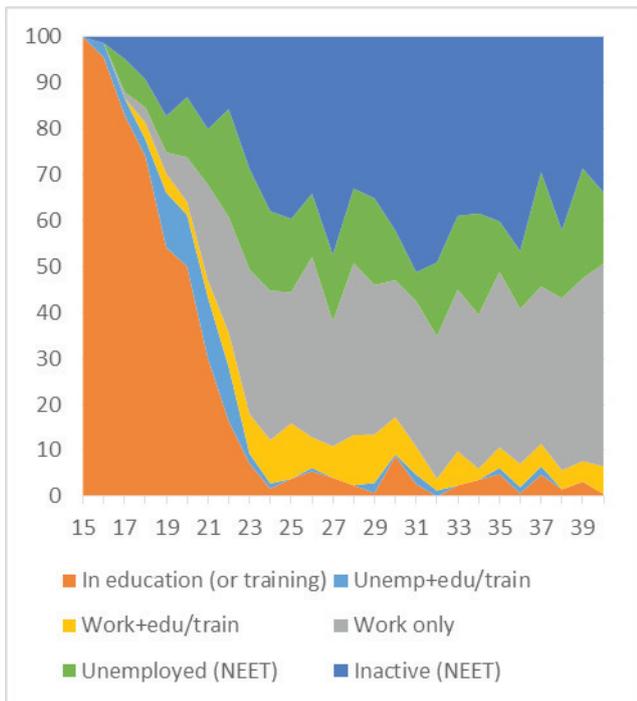
**Figure A.2. School to work transition for males ages 15-40, including military service**



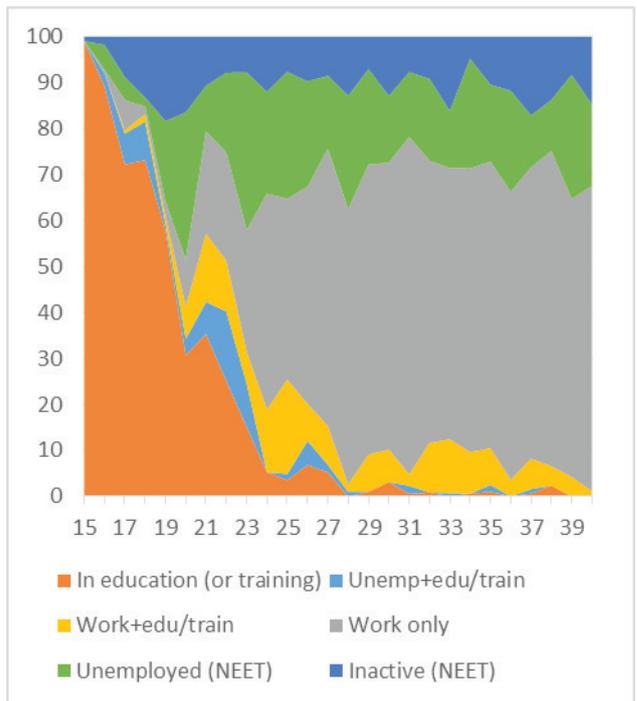
Source: Buitrago et al. (2019).

**Figure A.3. School to work transition ages 15-40 by sex, urban and rural areas, 2017**

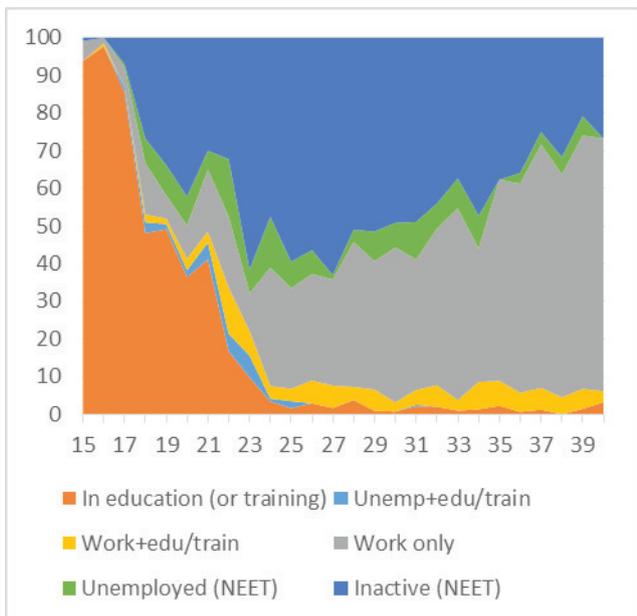
a. Females, urban areas



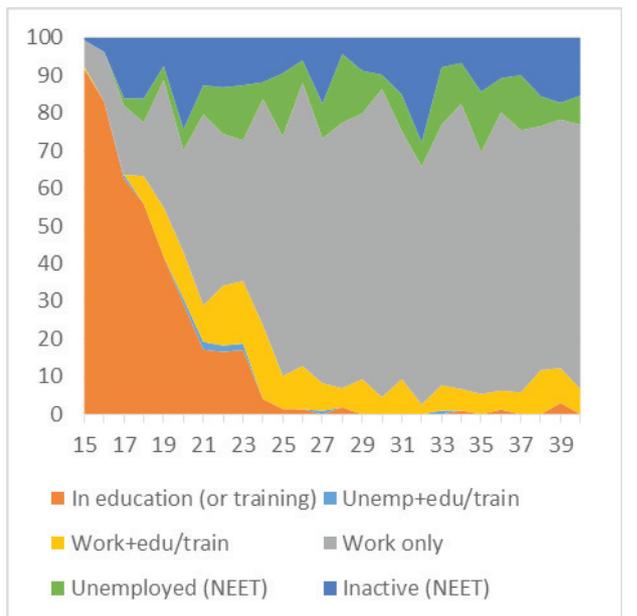
b. Males, urban areas



c. Females, rural areas



d. Males, rural areas



Source: Buitrago et al. (2019).

**Figure A.4. Activity status among youth ages 15-29, total and by sex, 2017**



Source: Buitrago et al. (2019).

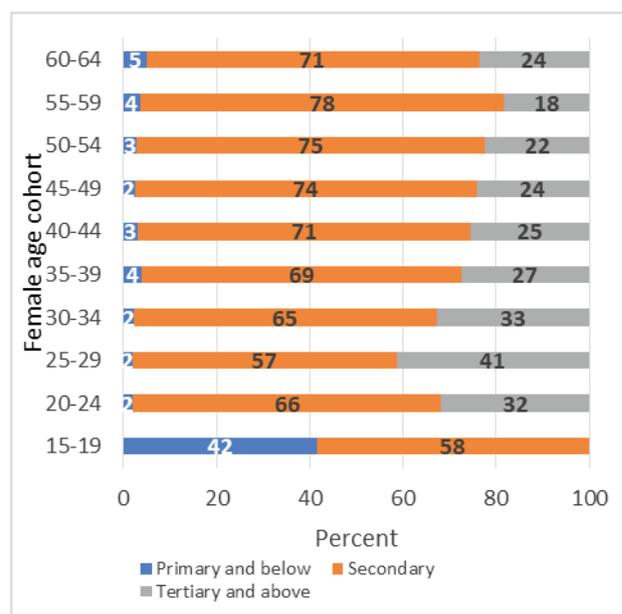
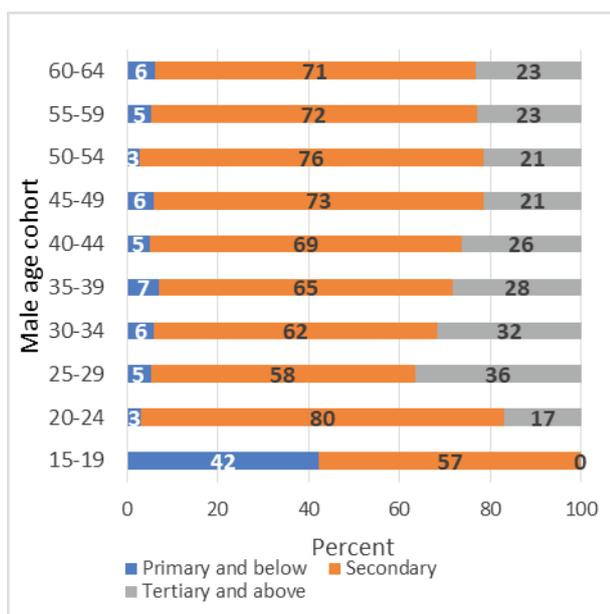
Note: NEET is defined as not in employment or in either formal or informal education/training, either full- or part-time; males serving in the military are excluded from the sample.

**Figure A.5. Youth, especially women, are more likely to have complete tertiary education**

Highest level of education achieved by age group and sex, 2017

a. Males

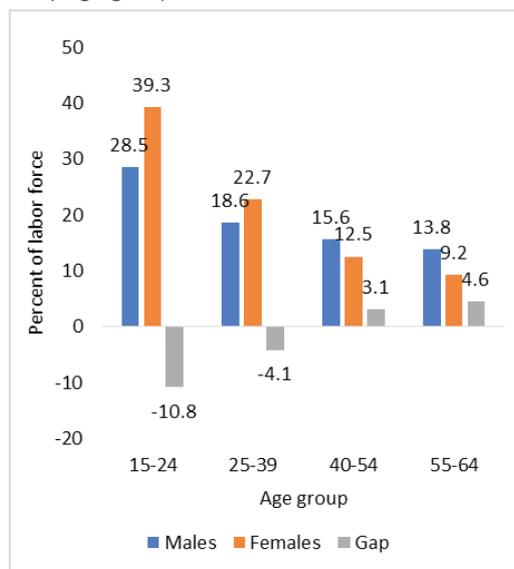
b. Females



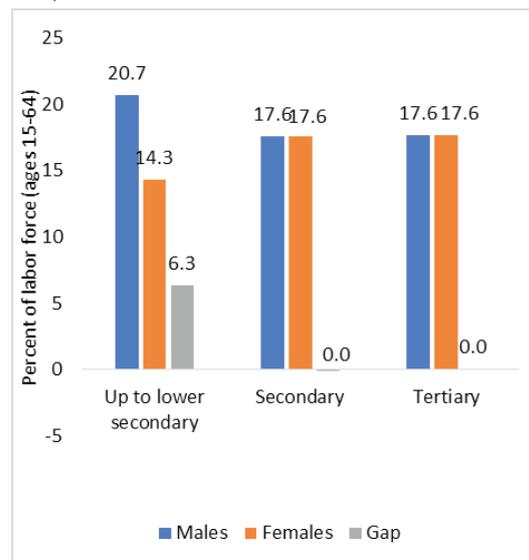
Source: World Bank staff estimates based on ARM LFS 2017 data.

**Figure A.6. Unemployment rate by gender, 2017**

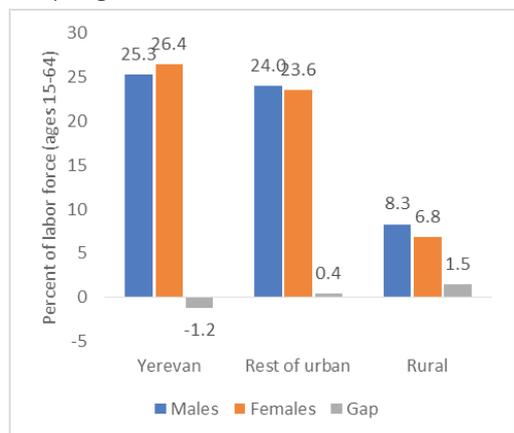
a. By age group



b. By educational attainment

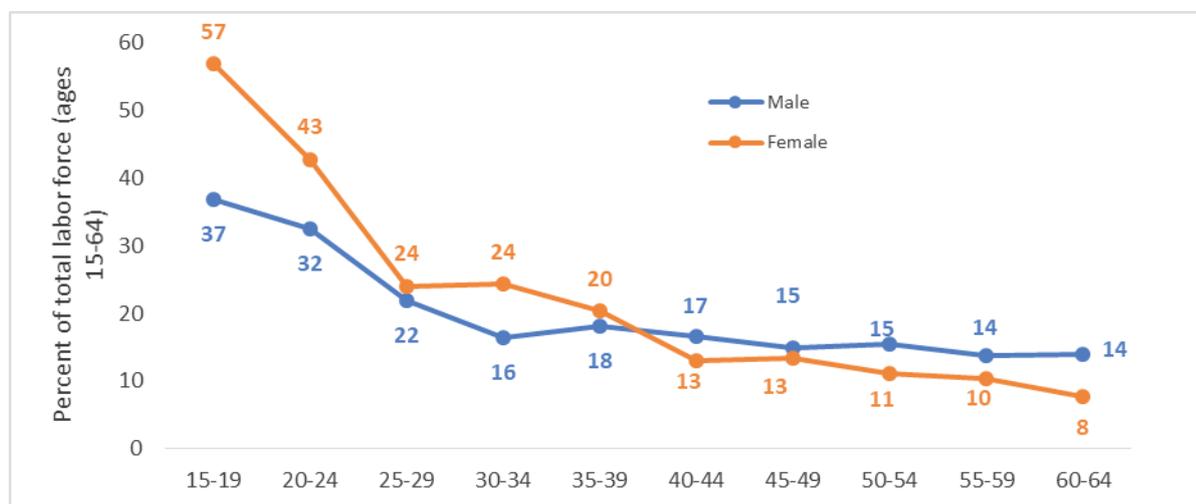


c. By region



Source: World Bank staff estimates based on ARM LFS 2017 data.

**Figure A.7. Unemployment rates by age and gender, 2017**



Source: World Bank staff estimates based on ARM LFS 2017 data.

**Table A.2. Profile of temporary international and internal economic migrants\***

	International	Internal
<b>Number of persons</b>	115,512	5,568
<b>As a percentage of total economic migrants</b>	95.4	4.6
<b>As a percentage of working-age population</b>	6.0	0.3
<b>Relationship to household head</b>		
Household head	31.5	13.2
Wife / Husband / Spouse	6.5	1.5
Daughter / Son	50.5	80.0
Mother / Father	0.8	0.0
Sister / Brother	1.1	0.0
Daughter- in-law / Son- in-law	4.0	1.9
Mother-in-law / Father-in-law	0.2	0.0
Grandchild	5.0	3.5
Other relative	0.2	0.0
Non-relative	0.2	0.0
<b>Gender</b>		
Male	92.8	60.8
Female	7.2	39.2
<b>Age group</b>		
15-24	10.1	28.7
25-39	43.5	55.6
40-54	31.1	11.8
55-64	15.3	3.9
<b>Educational attainment</b>		
Primary and below	4.9	6.1
Secondary	80.5	31.4
Tertiary	14.6	62.5
<b>Migrated to</b>		
Russia	95.2	NA
Other CIS country	1.7	NA
Europe	1.8	NA
USA and Canada	0.7	NA
Other	0.6	NA
Yerevan	NA	67.0
Aragatsotn	NA	0.0
Ararat	NA	0.4
Armavir	NA	2.0
Gegharkunik	NA	1.2
Lori	NA	5.5
Kotayk	NA	2.2
Shirak	NA	0.7
Syunik	NA	1.6
Vayots Dzor	NA	1.8
Tavush	NA	3.6
NKR	NA	14.2
<b>Migrated from (marz)</b>		
Yerevan	13.4	0.0
Aragatsotn	10.4	1.3
Ararat	10.8	6.4
Armavir	7.3	0.0
Gegharkunik	11.5	8.8
Lori	17.4	47.1
Kotayk	9.0	2.2
Shirak	14.8	2.8
Vayoc Dzor	1.8	10.4
Tavush	3.6	21.2
<b>Migrated from (region)</b>		
Yerevan	13.4	0.0
Rest of urban	31.0	53.7
Rural	55.6	46.3

Source: World Bank staff estimates based on ARM LFS 2017 data.

\* The term "economic migrants" refers to individuals who are absent from the household for three or more months and for whom "job" is the reported reason for their absence. Such migrants are assumed to be "temporary" given that, according to LFS survey data, they still belong to the household.