Labour Market Mapping in the Shirak, Lori, Tavush, and Gegharkunik Regions of Armenia

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Baseline Study

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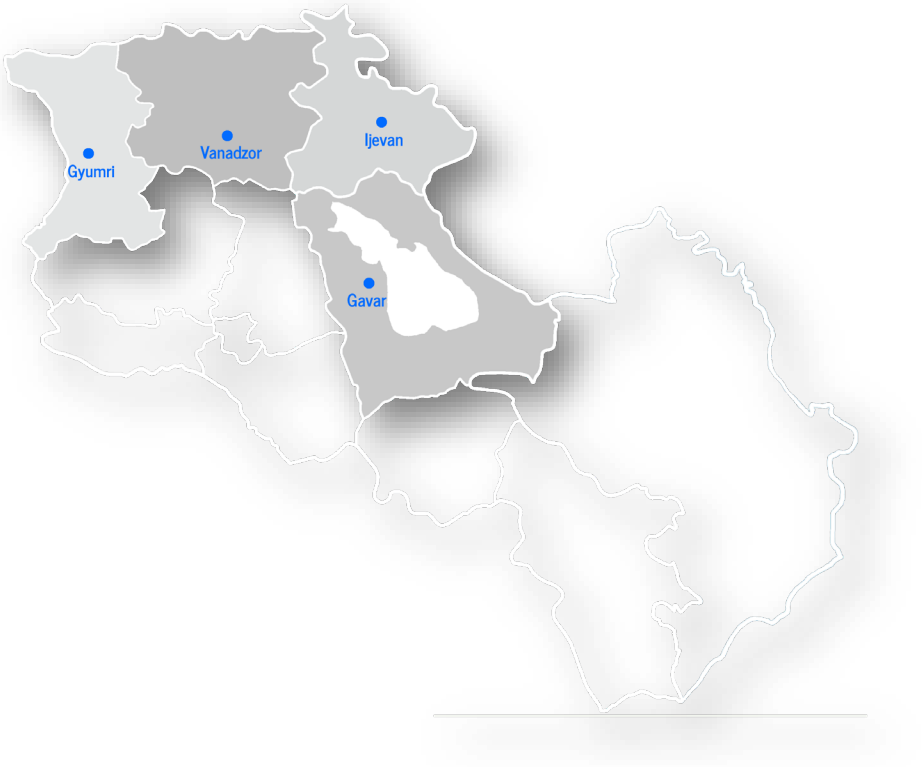
Supported by United Nations Development Programme



Yerevan, 2019

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Glossary

Economically active population (Labour force). Comprises the entire employed and unemployed population in the observed period that forms the labour force supply in the labour market for the production of goods and services.

Economically inactive population. Persons who were neither working nor seeking employment during the observed period, i.e. who were neither in employment nor unemployment.

Employed. A person aged 15-75 who has been either a wage-earner (employee) or a non-wage-earner within the reference week, regardless of whether the job was permanent, temporary, or seasonal, one-off or casual, even if that job lasted one hour in total. The person may have been temporarily absent from work for various reasons. The person may have been engaged in household or agricultural work, with production intended for full or partial sale or exclusively for own consumption provided that the production had a significant share in household consumption.

Employment rate. The share of the employed population within the entire economically active population.

Informal employment. Comprises the total number of informal jobs, whether carried out in formal sector enterprises, informal sector enterprises, or households within the reference period. Informal employment includes: (i) employees holding informal jobs (including paid domestic workers, e.g. gardeners, nursery workers, housemaids, watchmen, drivers, etc.); (ii) employers and own-account workers having informal sector enterprises; (iii) all contributing (unpaid) family members; (iv) members of informal production cooperatives; and (v) self-employed/own-account workers who produced goods or services (e.g. do-it-yourself construction of own dwellings) exclusively for own household use.

Labour resources. The total economically active (both employed and unemployed persons) and inactive populations (neither employed nor unemployed [without a job and not searching for a job]).

Market sector groups. The list of sub-sectors that are included in each market sector. The list (in Armenian) is available online at https://www.armstat.am/file/nace/Mas1.pdf.

Own-account workers. People who are working on their own account or with one or more partners, hold a job defined as self-employed, and have not hired any employees to work for them continually during the reference period.

Profession groups. The list of professions that are included in profession groups (in Armenian) is available online at https://www.armstat.am/file/doc/99479608.pdf.

Unemployed. A person aged 15-75 who met all of the following three conditions within the period of the last four weeks prior to the survey (including the reference week): (i) did not have a job or was not engaged in any income-generating activity; (ii) was actively looking for a job through any means (i.e. applied to a state and/or a private employment service and searched for a job through

acquaintances, relatives, announcements, or any other way); and (iii) was immediately available for work (i.e. within the next two weeks).

Unemployment rate. The share of the unemployed population within the total economically active population.*

Vulnerable employment. The total number of employment status groups of own-account workers and contributing working family members. They are less likely to have formal work arrangements and are therefore more likely to lack adequate work conditions.[1]

* The definitions apply only to the data of the National Statistical Service of Armenia, while State Employment Agency data only provide information about formal employment and unemployment.

[1] Definition provided by the United Nations.

Introduction

The labour market in Armenia has been largely characterized by low participation and a high unemployment rate, with *the unemployment rate at 17.6% for 2018* (National Statistical Service of Armenia, 2018). The data from the previous years (from 2014 to 2017) shows that the national unemployment rate remained steady at around 17-18%. Though the unemployment rate decreased to 15.7% in the second half of 2018—the post-revolution period (National Statistical Service of Armenia, 2018)—it is argued that the decrease is largely attributed to the shift of the employed from the informal to the formal sector rather than to new employment.

Considering the fact that one-third of the entire population of Armenia is based in the capital, Yerevan, *32% of the labour resources are also in Yerevan* leaving other regions of Armenia underdeveloped with lower employment rates and higher unemployment rates of up to *24.3% in the Shirak region* (National Statistical Service of Armenia, 2018).

Studies of the Armenian labour market conducted in recent years suggest that *unemployment among youth and women* continues to be a major issue given that the youth inactivity rate is high and that women are more likely to be inactive than men due to traditional family responsibilities (Media Model LLC, 2018; Serriere 2014). Also, there is a *gender gap in certain levels of occupation*. A World Bank study conducted in 2016 found that women, including those with higher education, are less likely to have managerial positions than men. Women also face a pay gap (World Bank, 2016). Another study conducted by the International Labour Office in 2014 posits that the *transition of most young people to the labour market takes longer and they would need additional training before finding a permanent job* (Serriere, 2014). Finally, research conducted by Media Model LLC in cooperation with Save the Children Armenia argues that *the existing gap between demand in the job market and available supply of educationally-qualified people is also conditioned by the lack of a facilitating body that could smooth the transition and identify the market mismatches to address* (Media Model LLC, 2018).

No previous research was found that investigated the regions of Armenia to reveal the respective labour market conditions and development trends in each region.

This research aims to examine the current state of the labour market in the Shirak, Lori, Tavush, and Gegharkunik regions of Armenia – more specifically, labour supply and demand, pay scale, rates of employment and unemployment, opportunities for volunteering, internship, and apprenticeship, and other demographics of the labour force.

The research was conducted under the UNDP terms of reference, and it serves as a baseline study for the implementation of the UNDP "Future Skills and Jobs for Armenia's Rural Youth" project.

Youth Unemployment in the World

Youth unemployment is regarded as one of the major global problems hindering the political, social, and economic development of countries and negatively impacting worldwide stability (Pieters, 2013). According to the International Labour Organization, youth unemployment in the world increased from 12% in 2008 to 13% in 2018. However, the increase is not equally distributed among the countries with the highest unemployment – 30% in Arab states, while East Asia at 10% has the lowest. The studies conducted by Freeman and Wise (1982), Blanchflower and Freeman (2000) and Bell and Blanchflower (2010), argue that youth unemployment is a critical problem for countries as long spells of unemployment have a permanent impact on the youth and on labour market outcomes. According to Clark and Summers (1982) as quoted in Kipesha and Msigwa (2013, p. 67), "Failure to find employment results in demoralization, depreciation in their human capital and deterioration in their employment prediction which leads to social barring."

Several empirical studies posit that prior unemployment affects the future earnings of the youth and their career path (Mroz and Savage, 2001). Furthermore, the youth is deprived of entry to the labour force during those years when their participation could yield the highest return (Ben-Porath, 1967; Blinder, et al. 1976). Long spells of unemployment make young people seek out more training, or they simply stay with the family, thereby increasing the adverse effects. The main shortcomings of youth unemployment identified by the research are the following: reduction of earnings, risk of a prolonged period of unemployment, likelihood of precarious employment in terms of short-term contracts, and even future adverse effects on health and well-being of the unemployed (Bell and Blanchflower, 2011; European Commission 2014; Kletzer and Fairlie 2003; Burgess et al., 2003). According to Card and Lemieux (2000), it is not the absence of jobs but weak labour market conditions and lower wages (vulnerable employment) that make the youth stay at home or prolong education (Card and Lemieux, 2000; Pieters, 2013).

As Breen (2005) argues, there is a strong variation of the causes of youth unemployment across countries based on institutional, economic, and cultural factors. While in the 1990s, the main reasons for youth unemployment were attributed to structural changes in industry and a mismatch of qualifications as a result of the change (Clark and Summers, 1982; Blanchflower and Freeman, 2000), beginning in the 2000s, the main argument was that youth unemployment is explained by business cycle conditions and institutional factors such as lack of experience, lack of qualified professionals, short-term employment, and difficulties in school-to-work transition (Blanchflower and Freeman, 2000; Jimeneo and Rodriguez-Palenzuela, 2002; OECD, 2006; Dietrich, 2003; Martin, 2009; Bell and Blanchflower, 2011).

Breen (2005) identifies two major institutional problems that affect unemployment rates: educational systems and labour market regulations. Maurice et al. (1986), Allmendinger (1989), Hannan et al. (1997), and Miller and Shavit (1998) argue that youth unemployment is conditioned by the quality of education in terms of providing specific skills and the cooperation between educational institutions and employers. It is observed that in most developing countries, local education does not guarantee the employability of the youth unless vocational education is

considered. Breen (2005) argues that vocational education has a big impact by equipping the youth and reducing the likelihood of unemployment. Pieters (2013) states that vocational education does not yield major results in developing countries because of weak links with the private sector and the lack of a monitoring system.

Bonanomi et al. (2019) found that youth unemployment in Italy is largely conditioned by their attachment to family and the support they get there. Gender, geographical location, educational system, lack of business skills, a non-attractive agricultural sector, and marital status are all significant factors that impact youth employment status in Tanzania (Mjema, 1997). In his study of Bulgaria, Dmitrov (2012) argues that the key determinants of youth unemployment are leaving school early, low quality of education and the business cycle, social status, and family background. Quintin and Martin (2014), by comparing developing countries with developed ones, argue that the youth in developing countries experience longer school-to-work transitions than youth in developed countries, and the youth leave education earlier and have higher inactivity rates.

It can be concluded from the literature reviewed that youth unemployment negatively affects the development of societies around the world and is conditioned by different socio-economic and demographic factors at the macro and micro levels. These factors are specific for each region and nation. The interventions designed to tackle unemployment should entail research and take into account all the factors specific for the target region.

Methodology

Based on the directions outlined in the UNDP Terms of Reference, this study uses a mixed methodology of desk study as well as quantitative and qualitative components.

The objective of the research is to conduct labour market mapping in the target areas to understand the current state of the market and identify existing trends and opportunities. More specifically, the research aims to do the following:

- Measure the employment/unemployment rates in the target regions and understand the distribution of the labour force across age, gender, and profession (including entrepreneurship and self-employment in agriculture);
- Explore the existing job opportunities and labour supply and identify gaps between demand and supply;
- Measure the level of earnings of the labour force in the target regions across demographic groups and identify existing trends;
- Explore instances of volunteering, internship, and apprenticeship in the target regions and identify other existing opportunities; and
- Combine the information obtained from the above-mentioned objectives thereby identifying the labour market trends, growth sectors, and potential opportunities.

Desk study

Information on the target areas of research was collected from various available sources (government offices, international organizations, NGOs, etc.). The available databases were used to conduct statistical analysis, including potential correlations among the variables considered.

In-depth interviews

In each region, face-to-face interviews were conducted with human resource managers of three to four companies that are active in the market sectors with potential for development. The sectors include manufacturing as well as tourism and service in all target regions and information technologies (IT) in Lori and Shirak. Interviews with the representatives of regional administrations were conducted to understand the development trends for each region. Interviews with local NGOs were conducted to reveal the current condition and development trends for volunteering.

Focus group discussions

One focus group discussion was conducted in each region with the unemployed[2] of different ages and professions. The professions were chosen based on the findings of the desk study research. People in professions for which there is high unemployment participated in focus groups. The number of participants per focus group ranged from six to ten.[3]

Labour Markets in Shirak, Lori, Tavush, and Gegharkunik Regions

The permanent populations in Shirak, Lori, and Gegharkunik are around 220,000 people and 120,000 in Tavush. In all the regions, there is almost equal gender distribution and the youth comprises 25-29% of the total population. There is an annual population decrease rate up to 2% in all the regions (National Statistical Service of Armenia, 2019). See table 1 below.

Table 1: Regions; Demographics in 2018

Regions	Population	Gender in %	Youth (18-34) in %	Decrease rate in %
Shirak	235,380	Men - 47% Women - 53%	27	1.6
Lori	217,363	Men - 46% Women - 54%	25	1.7
Tavush	123,493	Men - 48% Women - 52%	25	0.7
Gegharkunik	229,711	Men - 50% Women - 50%	29	0.4

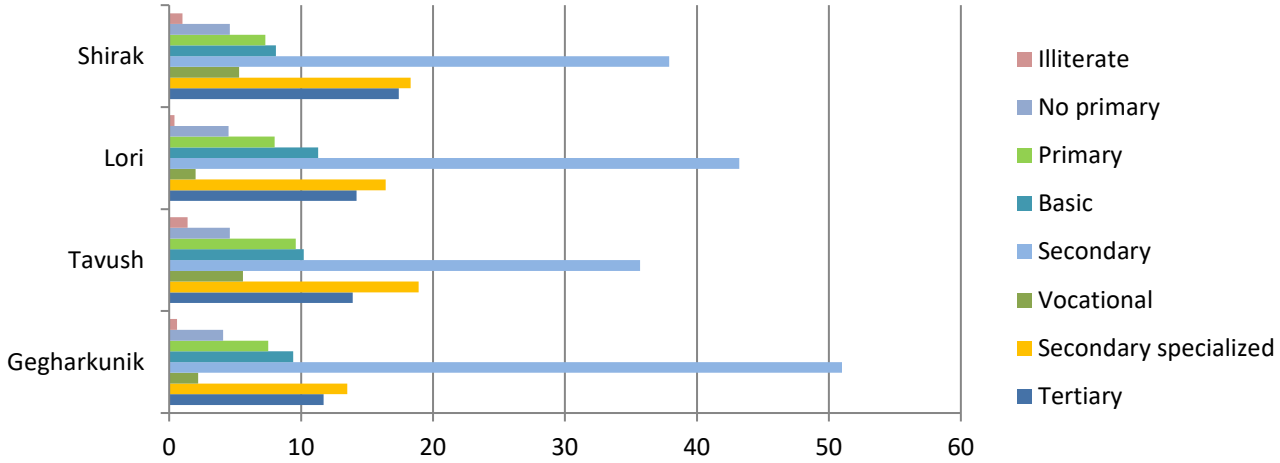
Source: National Statistical Service of Armenia, 2018

[2] The unemployed include both newly-graduated youth and professionals with work experience seeking employment.
[3] The sample of the focus groups is not representative; it gives an observation of the situation for each region.

Education

Most of population in all the regions has secondary education, followed by secondary specialized and tertiary education. A very limited number of people, mostly in Shirak and Tavush, have vocational education. There is almost no illiteracy in any of the regions (National Statistical Service of Armenia, Labour force database, 2017). See Figure 1 below.

Figure 1: Education Level in the Regions, 2017

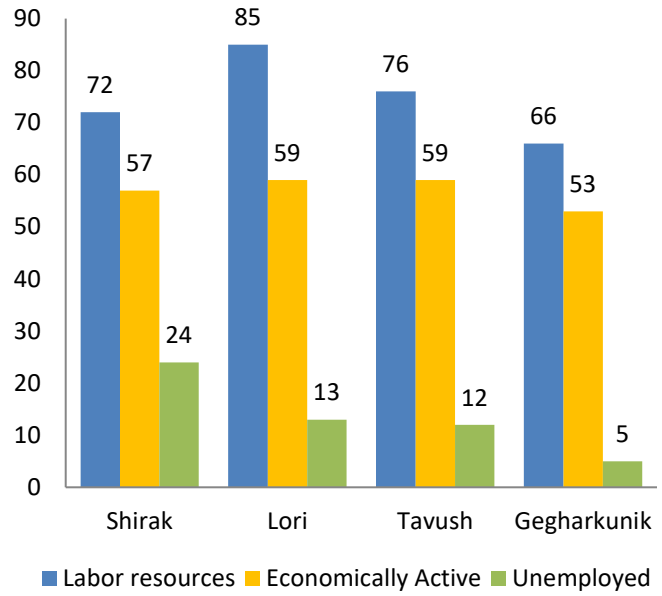


Source: National Statistical Service of Armenia labour force database, 2017

Labour Resources

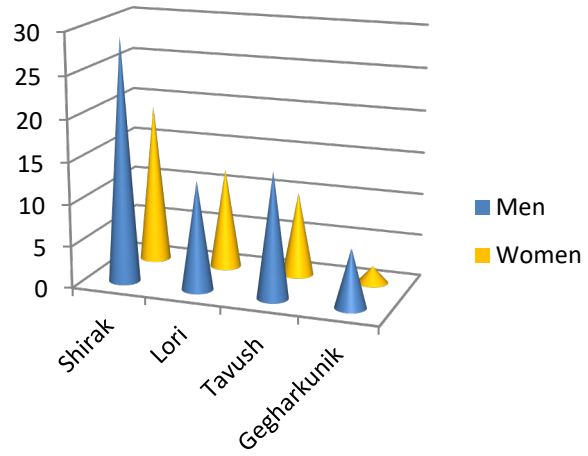
The labour resources in the regions comprise from 66% (in Gegharkunik) to 85% (in Lori) of the entire population of the region. The economically active population (labour force) makes up half of the labour resources. One-fourth or less of the labour resources is unemployed in all four regions – Shirak has the highest unemployment rate at 24% while Gegharkunik has the lowest at 5%. Male unemployment is higher than female unemployment in all four regions (National Statistical Service of Armenia, Labour market in RA, 2018). See Figures 2 and 3 below.

Figure 2: Labour Resources in the Regions in 2017



Source; National Statistical Service of Armenia, Labour market in the RA, 2018

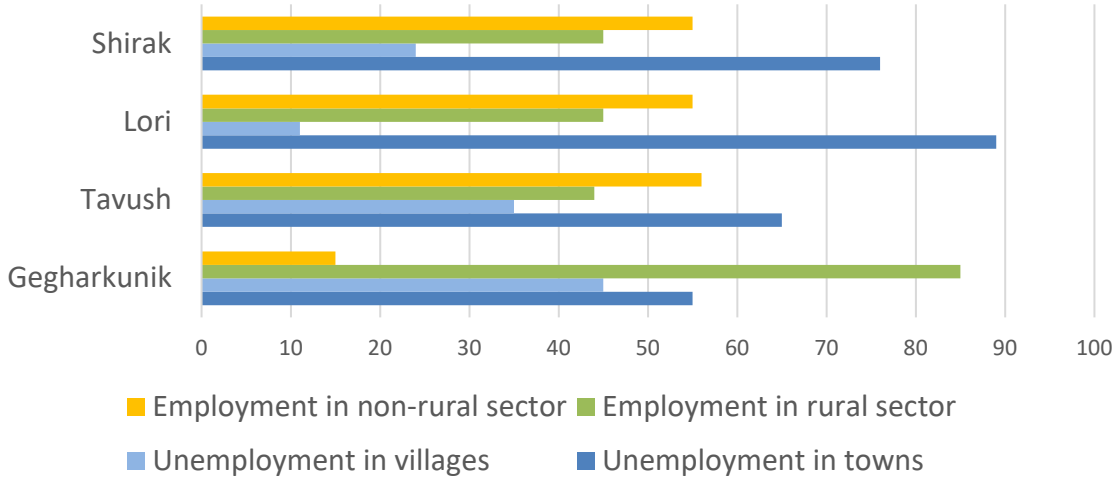
Figure 3: Unemployment by Gender in the Regions in 2017



Source; National Statistical Service of Armenia, Labour market in the RA, 2018

In all of the studied regions, unemployment is higher in towns than in villages, while employment is distributed almost equally across rural and non-rural sectors. The most urban unemployment was observed in Lori with 89% of the unemployed being from towns, followed by Shirak, Tavush, and Gegharkunik. In Gegharkunik, unemployment is distributed almost equally between urban and rural areas. See Figure 4 below.

Figure 4: Unemployment by Location and Sector in the Regions, 2017

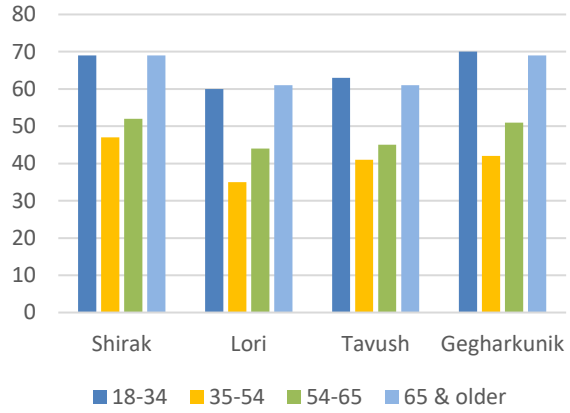


Source; National Statistical Service of Armenia, Labour market in RA, 2018

Unemployment By Age Group

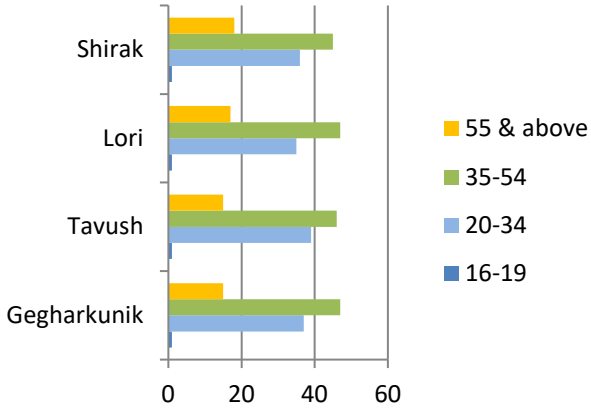
The highest unemployment is observed among the youth aged 18-34 in all the regions studied, according to the National Statistical Service of Armenia data analysis. The next age group most vulnerable to unemployment is comprised of people aged 65 and older. The most employment is observed among the middle-aged population (35-54) in all of the studied regions. Conversely, according to the data collected by the State Employment Agency,[4] most unemployed people in 2018 were in the 35-54 age group, followed by the 20-34 age group in all the target regions. See Figure 5 and 6 below.

Figure 5: No Gainful Activity by Age Group



Source: National Statistical Service of Armenia Labour force database, 2017

Figure 6: Unemployment by Age Group



Source: State Employment Agency of Armenia, 2018

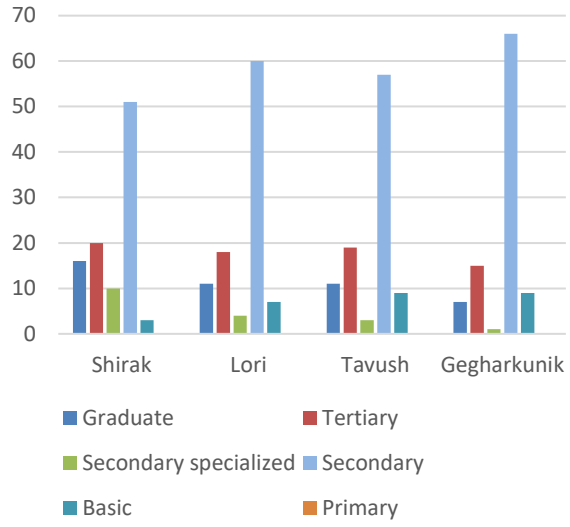
[4] The State Employment Agency is a state administration unit that cooperates with employers and helps the unemployed find jobs.

The inconsistency in the data may be due to several reasons, including (i) the fact that in the 18-34 age group there would be a large number of students who do not work in the initial years of their university studies; (ii) the fact that only some of the unemployed are registered with the State Employment Agency, which does not represent the entire population; and (iii) the National Statistical Service of Armenia data measure any gainful activity, while the State Employment Agency only provides formal unemployment data. Nevertheless, both sources show that youth unemployment is an issue in the regions and confirm the findings of the previous studies that transitioning from education to employment takes a long time and needs to be addressed.

Unemployment by Level of Education

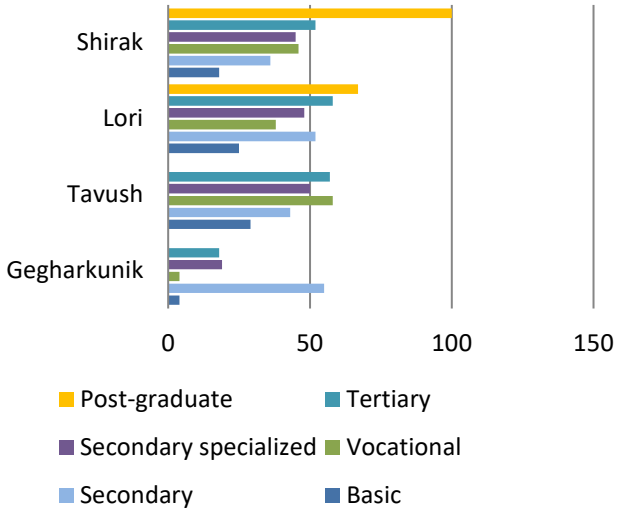
The analysis of the State Employment Agency data shows that half of the formally unemployed people in all the studied regions have a secondary education, while with increased education the number of unemployed people registered with the State Employment Agency lowers. The same situation is observed in the data of the National Statistical Service of Armenia for some regions; people with vocational, secondary specialized, tertiary, and post-graduate education experience less unemployment than people with secondary and lower education in Shirak and Tavush.[5] However, in Lori, people with secondary education are more engaged in employment than those with vocational or secondary specialized education. In Gegharkunik, people with secondary education have the highest employment levels, while very few people with higher education are employed in the region.[6] See Figures 7 and 8 below.

Figure 7: Unemployment by Level of Education



Source: State Employment Agency, 2018

Figure 8: Employment by Level of Education



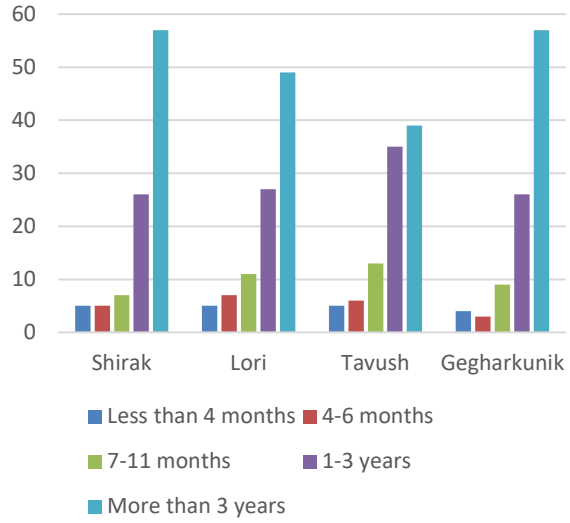
Source: National Statistical Service of Armenia Labour force survey database, 2017

[5] It was not possible to test the statistical significance of the findings because of the low number of cases in the data.
[6] The National Statistical Service of Armenia data measures the proportion of the employed in the same educational group.

Unemployment Period

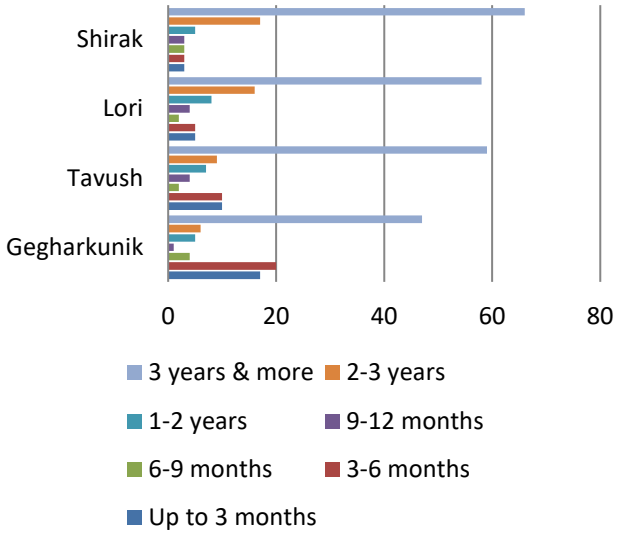
Long-term unemployment is prevalent in Shirak, Lori, Tavush, and Gegharkunik, as half of the unemployed have been out of work for more than three years, while very few reported to have been unemployed for less than a year. As argued in the literature reviewed, with long unemployment people become detached from the labour market and lose their skills, and return to work becomes more difficult. See Figures 9 and 10 below.

Figure 9: Unemployment Period



Source: State Employment Agency of Armenia, 2018

Figure 10: Unemployment Period

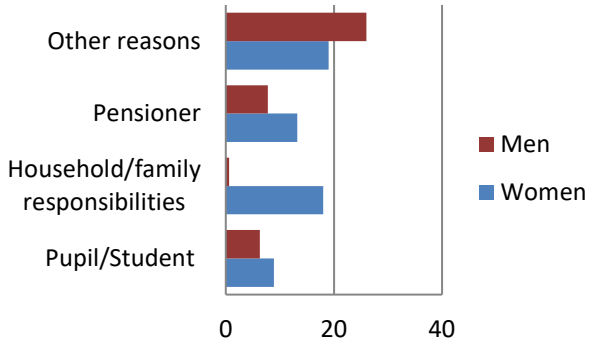


Source: National Statistical Service of Armenia Labour force survey database, 2017

Factors Defining Unemployment

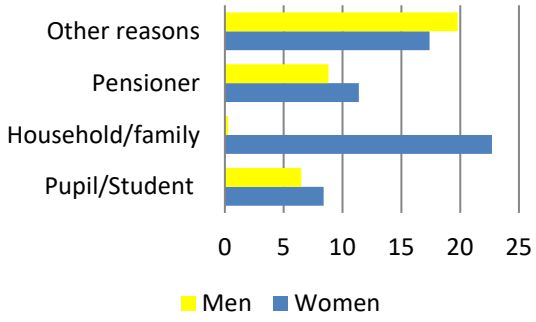
Analysis of the National Statistical Service of Armenia data reveals certain factors that have contributed to unemployment, what steps they pursue to find jobs, and the obstacles the unemployed face in their pursuit of work. Most of the unemployed in all the regions reported not having a job because of "other reasons" (not specified), followed by being on a pension, being engaged in the household, family responsibilities, and being pupils or students. Overall, no differences between unemployed men and women are observed for the three reasons identified. A significant difference exists between unemployed men and women when the cause is related to family responsibilities. The data confirms the findings from the previous studies conducted in Armenia that care for children and family is one of the reasons that women are unemployed. See Figures 11-14 below.

Figure 11: Reasons for No Job Activity in Shirak



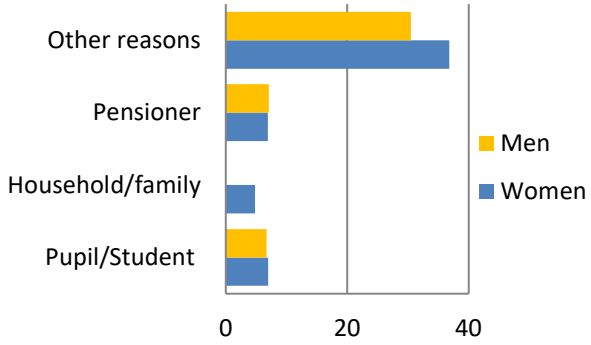
Source: National Statistical Service of Armenia Labour force database, 2017

Figure 12: Reasons for No Job Activity in Lori



Source: National Statistical Service of Armenia, Labour force database 2017

Figure 13: Reasons for No Job Activity in Tavush



Source: National Statistical Service of Armenia Labour force database, 2017

Figure 14: Reasons for No Job Activity in Gegharkunik

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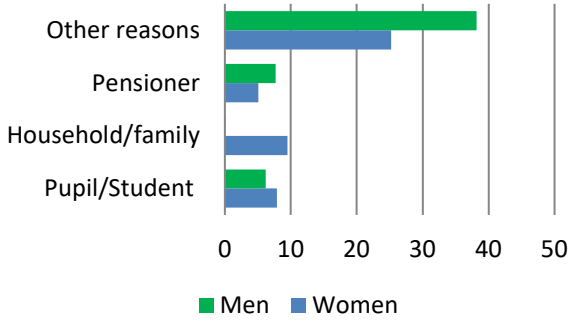
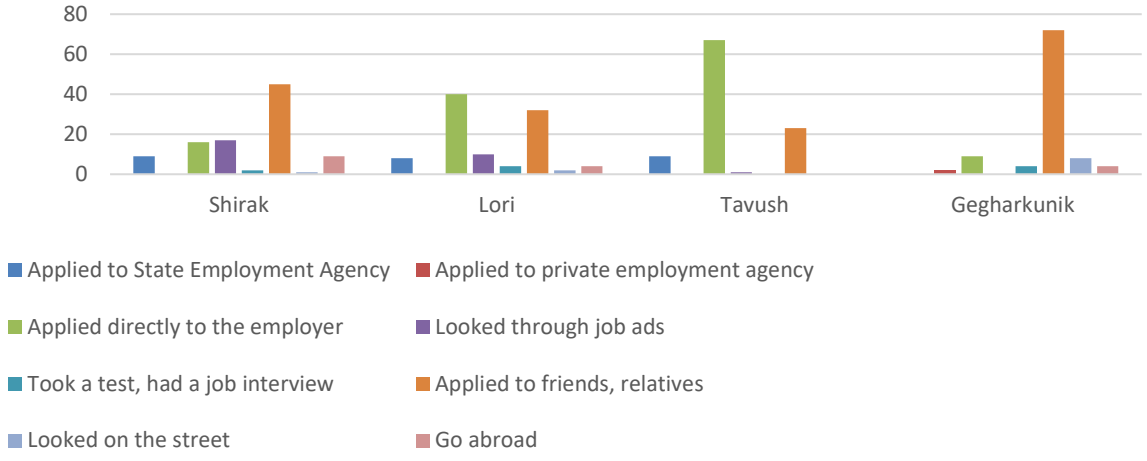


Source: National Statistical Service of Armenia, Labour force database 2017

Steps Taken to Find Jobs

In all of the studied regions, approaching friends, relatives, and acquaintances for work is widely practiced. The highest rate of this practice is in Gegharkunik, followed by Shirak. Although in Lori and Tavush the practice is still vital, it is relatively low. In the latter two regions, the main step taken in the pursuit of work is contacting the employer directly. In Shirak and Lori, people also look at job announcements. A small percentage of people in Shirak, Lori, and Gegharkunik look for work by going abroad. See Figure 15 below.

Figure 15: Steps Taken to Find Jobs in Each Studied Region



Source: State Employment Agency of Armenia, 2018

The findings from the focus groups shows that all the participants from the four target regions followed the usual, formal process of searching and applying for jobs, including searching for online announcements, sending CVs, and approaching employers. However, the findings show a lack of writing skills when it comes to CVs and motivation letters among some of the unemployed. The analysis confirms the statistical data showing that looking for a job through the help of relatives and friends is also a widespread practice in all four regions. The participants reported that nepotism is usually practiced in the hiring process, as most of them encountered it while looking for a job.

In Shirak, most of the participants were active jobs seekers, followed by Lori. In Tavush, the participants were seeking jobs but less actively than in Lori and Shirak. In Gegharkunik, most of the participants took just a few steps to find open vacancies and relied more on their relatives and friends.

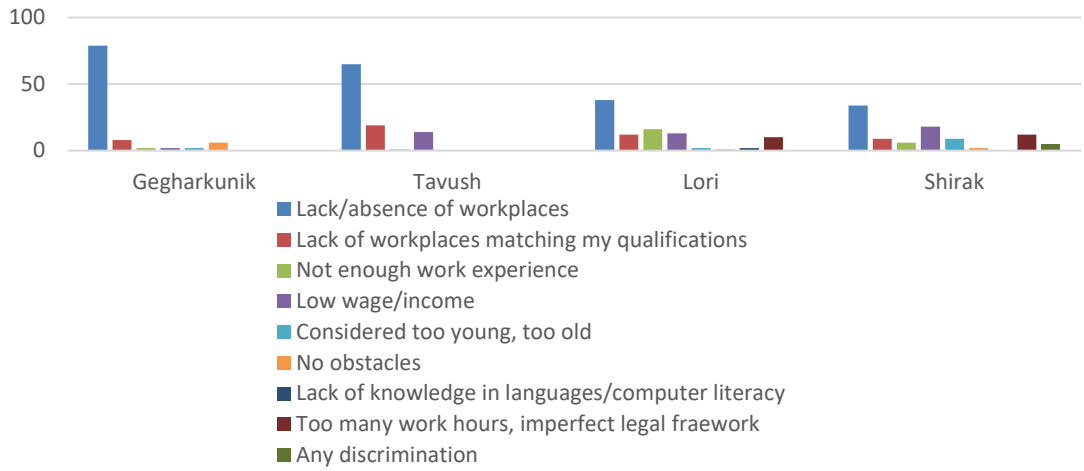
Very few youth search for jobs online, while several of them already have some experience working online.

The analysis gives us the following insights: in general, job seekers know and use the usual steps for finding jobs, however there is a lack of CV-writing skills. There is low trust in the hiring process, so they tend to go to their friends and acquaintances and there is widespread belief in the prevalence of nepotism and cronyism. The data also reveals that few people have trust in the state employment agency and that the youth have started to use the opportunities provided by IT technologies in their search for a job.

Obstacles to Finding Jobs

Most of the unemployed in all the studied regions identified the lack of jobs as the main obstacle for them to find work. Fewer people identified a lack of jobs matching qualifications as an obstacle in all the regions. Low wages/income was identified as an obstacle by up to 15% of the surveyed in all the regions except Gegharkunik. In Lori and Shirak, not enough work experience, the long hours the jobs require, and an imperfect legal system were among the obstacles identified. Very few people identified age or any other discrimination, or lack of knowledge in computer/language literacy as obstacles. Very few people reported no obstacles. See Figure 16 below.

Figure 16: Obstacles to Finding Jobs in Each Studied Region



Source: National Statistical Service of Armenia Labour force database, 2017

The unemployed interviewed in the regions also identified the above-reported causes as hindering factors for their job pursuits. They identified a lack of work experience among the factors and stated that the main reason the youth do not have work experience is the inefficiency of formal university apprenticeship programmes. The unemployed in all the regions, but mostly in Shirak and Gegharkunik, mentioned nepotism as a hindering factor as well as employer work abuse practices such as making employees work extra hours, paying less, and not following the labour code at all. Conversely, though the participants in Lori and Tavush claimed that there are no jobs available, some refused an administrative job because of overtime work requirements and a low salary or refused a job because it was not in their field of expertise. Some participants only wanted "office jobs" but did not have an understanding of what the position implies. The unemployed stated that the two other major reasons for unemployment are the absence of career consulting in schools, so the youth might chose a career path without any understanding of where it will lead, as well as an outdated university-level education system that does not equip them with the knowledge and skills that employers require.

The lack of public transportation was an issue brought by mostly teachers up in all of the surveyed regions. Due to a lack of public transportation, certain schools continue to have a shortage of teachers, while some teachers remain unemployed.

One survey participant, a teacher in Shirak, mentioned the following: "There is an open vacancy for a teacher in one of the villages around Ashotsk. I would love to go but transportation works irregularly and I cannot make it. In winter months, there is no transport from the village at all."

The employers interviewed in the regions, in addition to all the above-mentioned reasons for youth unemployment, identified the lack of soft skills and industry-specific knowledge among the youth. According to the employers, the main reason for that is the outdated education system of regional universities.

Table 2: Soft Skills and Knowledge the Youth Lacks in the Studied Regions, 2019

Communication skills
Decision-making skills
Leadership and conflict management skills
Management skills
Marketing skills
Entrepreneurial skills
Basic computer skills (Word, Excel, E-mail communication)
Basic skills for writing CVs and motivation letters
Software programs that the labour market demands (accounting programs, service programs, hotel management programs)
Knowledge of foreign languages
Tourism and service provision skills
Understanding the importance of continuous learning

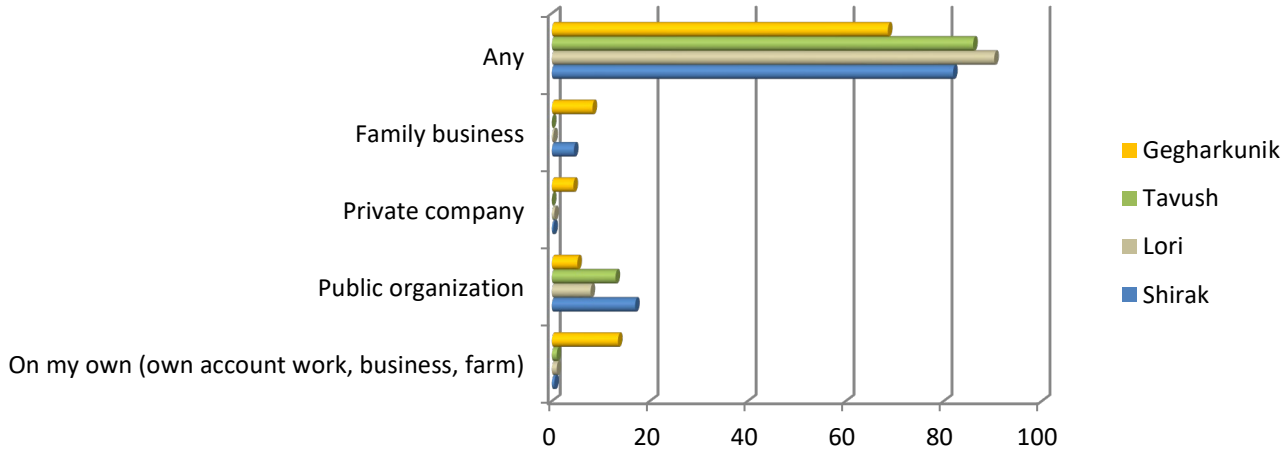
Source: Employers in the studied regions, 2019

Thus, the analysis provides the following observations: there is a lack of jobs in the regions, though the main problem is not the absence of employment but the absence of decent work desired by the youth in the regions. The main obstacles in finding jobs are low salaries, lack of work experience, lack of jobs matching qualifications, and lack of skills among the youth.

Preferred Occupation

The National Statistical Service of Armenia data analysis also reveals that most of the unemployed are eager to work irrespective of the place of employment. Most of the unemployed answered that they were ready to work in any field and for any organization. Some were interested in working in public organizations. Very few stated that they wanted to run a family business, and just a few stated that they wanted to start their own business. The inclination towards starting a business is substantially higher in Gegharkunik compared with the other three regions, where the number is close to zero. See Figure 17 below.

Figure 17: Where and For Whom Would You Like to Work?



Source: National Statistical Service of Armenia Labour force database, 2017

Almost all the focus group participants in Shirak, Lori, Tavush and Gegharkunik reported that they do not consider starting their own business because they do not know anything about it. They also identified the absence of funds as a reason for not starting a business.

In Shirak, one participant actively pursued a business idea on her own and another considered an idea but did not have enough skills to start. In Lori and Tavush, no one considered the option because of the reasons identified above. In Gegharkunik, only one participant had some plans but would pursue them after developing professionally.

One focus group participant, an accountant in Gegharkunik, stated the following: "I am thinking about starting a new business but that will not happen soon, as I don't know where to start. I don't have entrepreneurial skills, and I don't know anything about the business sector."

Both employers and the unemployed in the four regions identified the lack of any entrepreneurial and business knowledge and skills as the main difficulties for young people in

starting their own businesses. There are several programmes that support startups and short-term educational programmes, but they are not enough for the necessary systematic change and for motivating youth to start their own businesses and boost startup development in the regions.

In all the target regions, most of the participants who had families wanted to have jobs in the regions, in the central town of the region, or nearby villages. Single participants mainly preferred jobs in Yerevan because more opportunities are available there; however, rent for housing is a hindering factor for them. Most of the participants preferred to work in their field of expertise but did not refuse other job opportunities. The younger generation has higher requirements in terms of salary and work conditions, while older participants agree to any kind of job paying a minimal salary in their profession.

In Shirak, most of the respondents preferred to stay in the region. Those who reported that they were now searching for jobs only in Yerevan were disappointed by long-term unemployment and the nepotism they faced in the process of finding a job. Also, participants with narrow specializations stated that they would move to Yerevan if an opportunity arose. In Shirak, most of the participants agreed to work for a minimal salary, and only the few that knew about online platforms said that they could earn that same salary or higher by working online.

In Lori, married respondents preferred to stay and work in Vanadzor or nearby villages, while single youth stated that they would prefer working in Yerevan. Every participant in Lori would take a job paying a minimal salary.

In Tavush, most of the respondents preferred to have a job in Ijevan or adjacent communities due to family reasons and the rent they would have to pay if they moved to Yerevan. Young participants wanted jobs with good work conditions, relatively higher pay, and professional development opportunities at their work place. One of the participants preferred unemployment over employment because he was dissatisfied with the salary he received in his previous job, which was twice as high as the minimal salary. Overall, the requirements among the youth in Tavush were stricter than among the older generation, who just wanted to have a job. Most of the participants in Tavush regarded a normal salary to be twice the minimum wage.

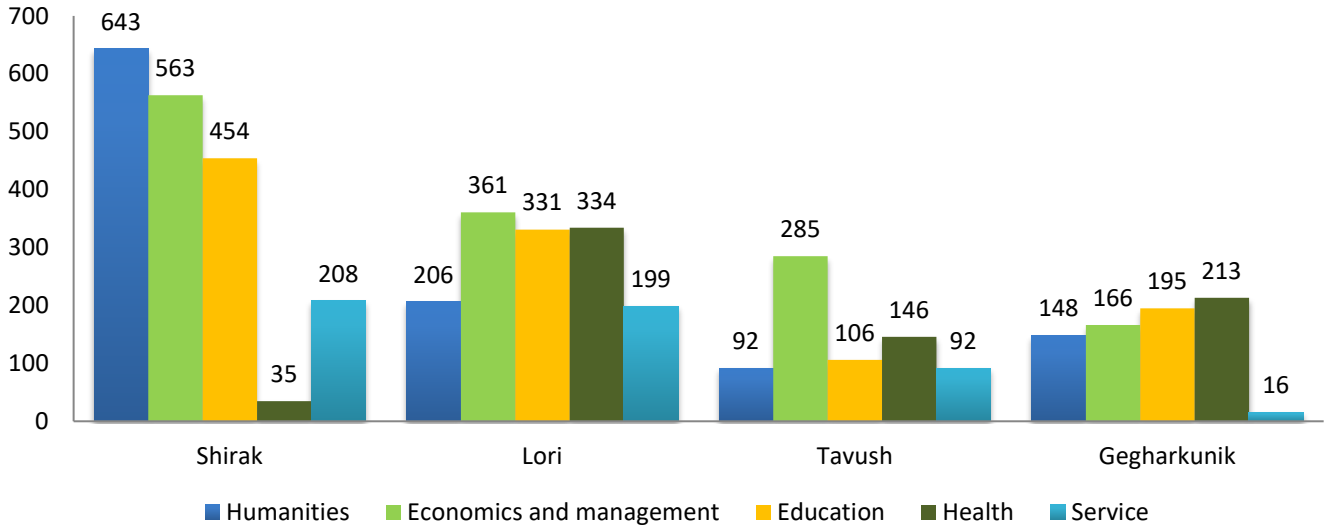
In Gegharkunik, all the respondents once again wanted jobs in their field of expertise. Female participants stated that the salary amount did not matter for them while men preferred salaries two to three times higher than the minimum. All the participants wanted to work in Gegharkunik because of the reasons cited above.

Labour Supply and Demand Gap Across Professions

Most of the unemployed in all the studied regions have professional backgrounds in the humanities, economics and management, education, or health (State Employment Agency, 2018). People who specialized in the humanities, economics and management, education, or health represent 13-16% of the total unemployed in the regions, which suggests that either there is no demand for these professions in the labour market or there is some mismatch in the qualifications they possess or the level of pay, or there are other reasons for unemployment. There is also a

substantial number of unemployed people who specialize in service. More than half of the unemployed registered with State Employment Agency in all the regions do not have a profession. Moreover, most of those mentioned above have either secondary (including specialized) or tertiary education. See Figure 18 below.

Figure 18: The Unemployed Across Professions in the Surveyed Regions, 2018



Source: State Employment Agency of Armenia, 2018

Shirak is the only region where the unemployment rate in the health sector is low, although respondents reported a lack of highly specialized doctors during the interviews. In Shirak, the number of unemployed people specializing in culture, art, design, light industry, transportation systems, metallurgy, and machine construction is relatively high. In Lori, the unemployment number is also high among people specializing in machine construction, manufacturing of materials, and metallurgy. In Tavush, people specializing in technological machinery and equipment transportation have higher unemployment rates. Finally, in Gegharkunik, high unemployment was not observed in professions other than the ones presented in Figure 18 above, except the service sector, which has high unemployment.[7]

Students Across Professions

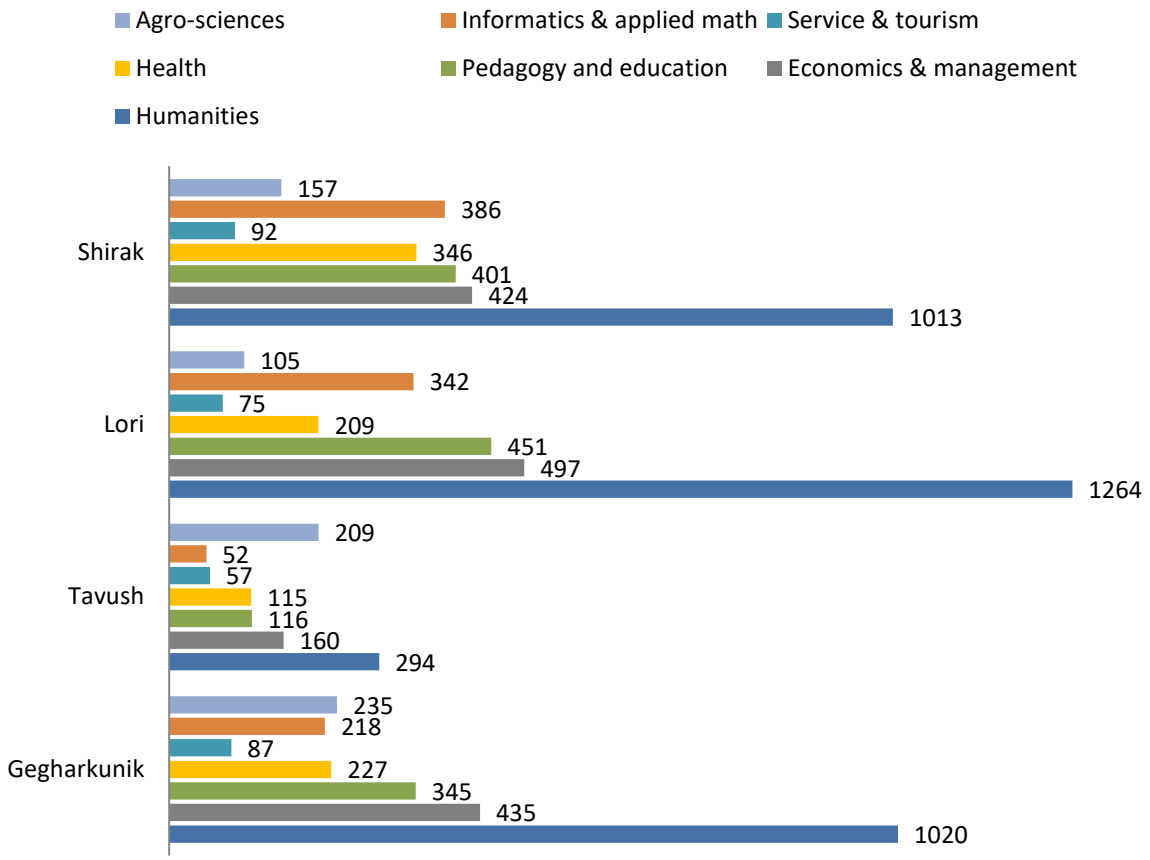
Data was collected from universities on the number of current students from Shirak, Lori, Tavush, and Gegharkunik studying in Armenia's largest universities to shed light on the anticipated labour supply (provided that those studying elsewhere in Armenia return to their home region) in the studied regions in the coming years.

The findings show that youth from the regions continue to choose predominantly academic disciplines in the humanities, education, economics and management, and health, for which large

[7] The figures for unemployment across occupations for each region are available in Appendix 1.

unemployment exists and there is almost no demand in the regional labour markets. Out of the total number of students in 12 universities,[8] including the largest university in the regions, the majority specialize in the humanities (languages, journalism, law, psychology, and international relations), economics and management, pedagogy and education, health and social work, and informatics and applied math in Shirak, Lori, and Gegharkunik. Though there is still a small demand in the labour market for some of these disciplines, the discrepancy between labour market supply and demand is likely to continue. It should be noted that most of the students studying education, humanities, and economics and management are from local universities. There is also a substantial number of students in each region specializing in services, tourism, and agro-sciences. See Figure 19 below.

Figure 19: Students Across Professions in 12 Universities of Armenia, 2019[9]



Source: The list of the universities is available in Appendix 5[10]

[8] The list of universities is provided in Appendix 5.
[9] Tables showing students studying across all the professions for each region are available in Appendix 2.
[10] Actual numbers of current students (BA and MA) from the target regions studying in the 12 HEIs of Armenia as of January 1, 2019 was collected in the course of the current research.

Choice of Profession

Focus group discussion results reveal the potential cause behind the profession preferences of the youth in the regions – why the unemployed chose the professions they have. Most of the participants in the target regions had difficulties choosing a career, and social norms and their respective families mainly influenced their choice. No one reported looking at market trends at the time of choosing their profession.

In Shirak, the participants acknowledged that the knowledge and skills that university provides are not enough, and self-learning is a must to land a job. One participant, an economist, reported her plans to change her profession – though she enjoys it, there is no market for it.

In Lori and Tavush, most of the participants stated that they chose their disciplines because they were interested in them, while some stated that they were pressured to do so by their families. Others chose their profession in order to have some kind of higher education.

In Gegharkunik, all the participants reported choosing their profession due to family wishes and appreciation for the discipline.

The analysis of the data revealed that most of the unemployed chose their profession either by chance or under the influence of their families or social norms. There is a practice of going to higher education institutions simply to have a better education. Conscious, well-weighted choices were not reported. Conclusively, the choices of the current students can be explained by the same reasons cited above – they just do not know the market, do not possess the skills to properly search, and just choose professions through inertia.

In all of the regions, professional development practices are rarely observed among the youth with higher education. Few participants in all the regions reported taking courses for professional development – most stated that they are engaged in self-learning. However, the impression was that most of the participants claimed to be involved in self-development activities so that they would not be different from the rest when, in fact, no professional development was pursed after graduation.

Most training activities were observed in Shirak and some in Lori. In Tavush, there was no expressed belief that professional development will lead to better jobs—only two participants out of ten reported to be engaged in professional development. The reason for not pursuing professional development was that the trainings do not give much. In Gegharkunik, only one out of the six participants reported to have taken courses for professional development.

Informal Employment

Shirak: 42,000 people, 42% of the labour force

Lori: 49,600 people, 45% of the labour force

Tavush: 33,400 people, 59% of the labour force

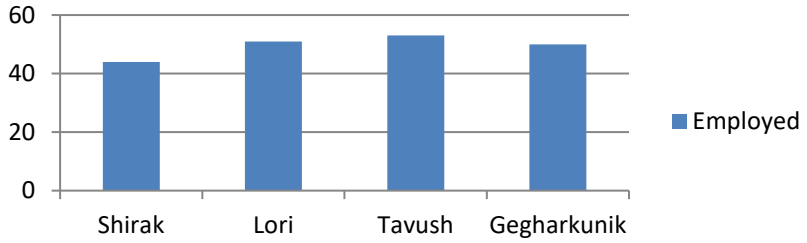
Gegharkunik: 55,400 people, 37% of the labour force

National Statistical Service of Armenia, Labour market in RA, 2018

Employment

In addition to the unemployment statistics and obstacles behind them, the research examined employment in the regions to understand the distribution of the labour force and measure work demand in the regions. The employed in all the studied regions form approximately 50% of the labour force. About 40% to 60% of the employed across the studied regions are engaged in informal employment. The highest number of informally employed people is observed in Tavush, while the lowest is in Gegharkunik. See Figure 20 below.

Figure 20: Employment in the Regions, % of labour force, 2017



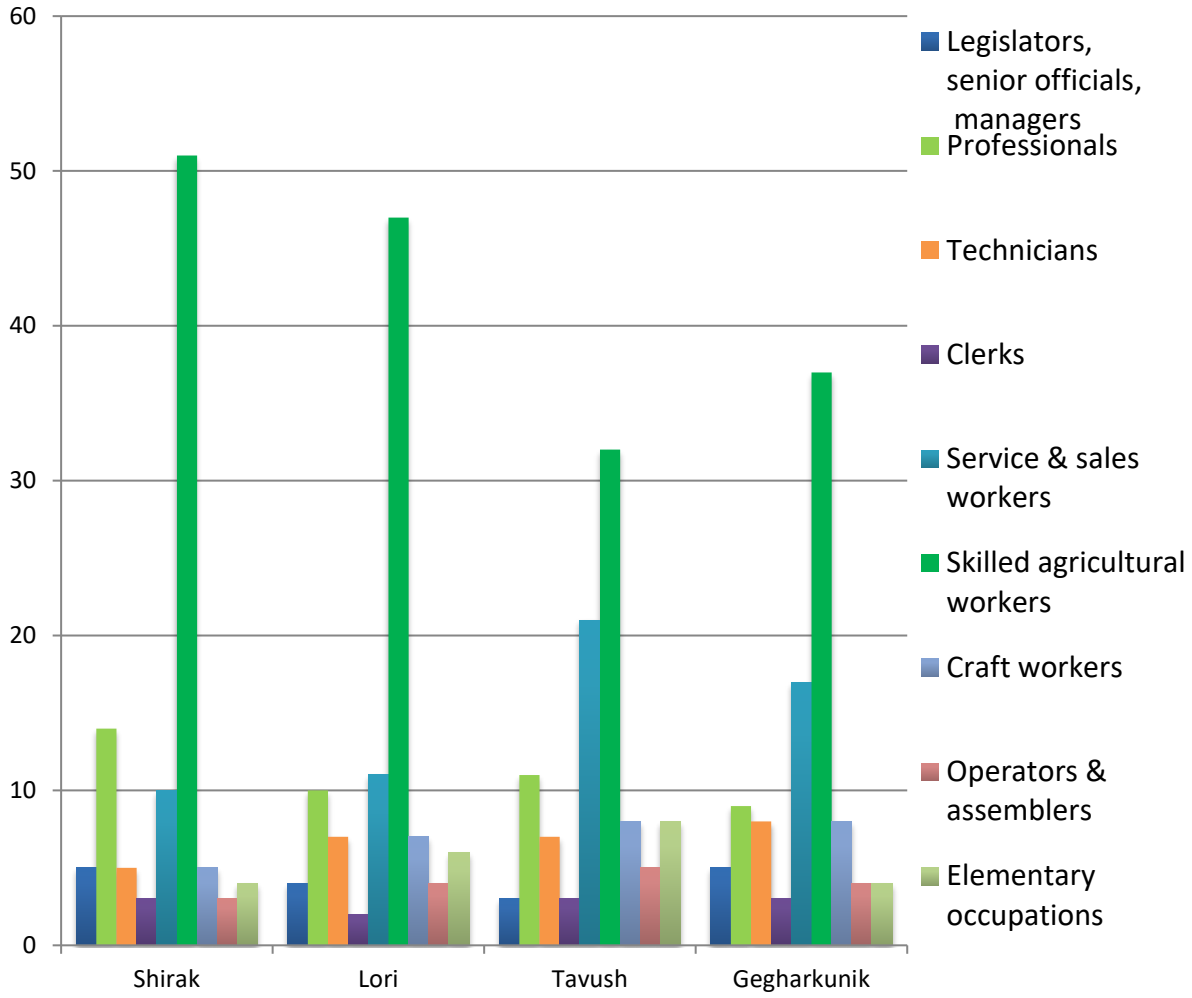
Source: National Statistical Service of Armenia Labour market in RA, 2018

Employment Across Professions

Most employed people in all of the studied regions are engaged in agriculture and regard themselves as skilled agricultural workers (mostly self-employed), followed by service and sales workers, and professionals (teachers) in relatively high numbers. Craft workers and technicians,

elementary occupations, operators and assemblers, clerks and legislators, managers, and senior officials are in lower numbers. There are slight differences across the regions: in Shirak and Lori, almost half of the employed work is in the agricultural sector, while in Tavush and Gegharkunik just one-third of the employed is engaged in agriculture, and the number of service and sales workers is also high. See Figure 21 below.

Figure 21: Employment Across Professions in the Studied Regions, 2017



Source: National Statistical Service of Armenia Labour force database, 2017

There are fewer young people than the middle-aged employed in almost all sectors. In terms of gender gaps, the findings of the previous studies arguing that there is a low number of women in management positions are confirmed; in all regions only one-third of the legislators, senior officials, and managers are women. All of the operators and assemblers are men. Most of the clerks, technicians, and professionals are women. In Lori and Tavush, in the rest of the professions, the distribution of men and women is almost equal. In Shirak and Gegharkunik, most craft, service, and sales workers are men.[11]

Share of the employed in agriculture, forestry and fishing in 2017

Shirak: 52%

Lori: 47%

Tavush: 33%

Gegharkunik: 38%

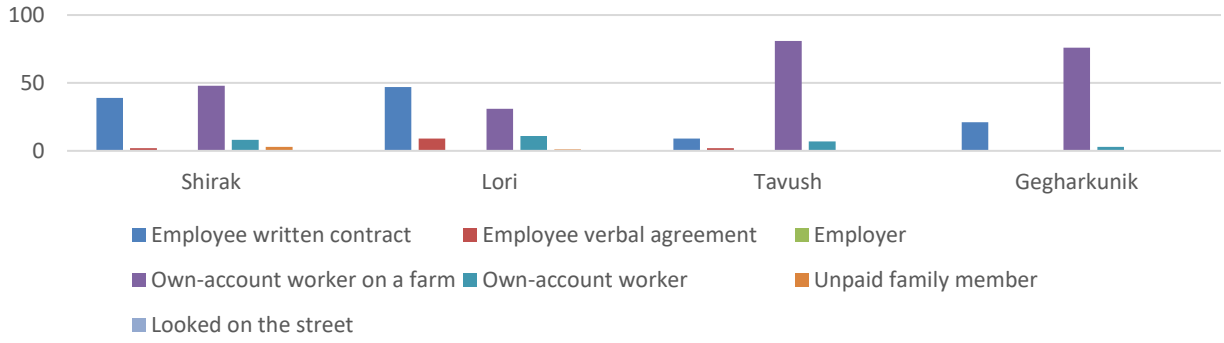
National Statistical Service of Armenia labour force database, 2017

The analysis also explains why unemployment is high in regional towns—in rural areas people are mainly engaged in agriculture and earn their living, while in towns unemployment prevails.

Employment Status

Half of the employed people in Lori have formal written contracts, followed by Shirak with 39%. In Tavush and Gegharkunik, the number of employees with contracts is below 30% of the total for the region. The situation can be explained by the fact that most of the surveyed in Tavush and Gegharkunik are own-account workers on farms, where employment is largely informal. Own-account workers in general comprise most of the employed surveyed in all the regions, except Lori where work without contracts is relatively higher when compared with the other regions. See Figure 22 below.

Figure 22: Employment Status in the Studied Regions, 2017



Source: National Statistical Service of Armenia Labour force database, 2017

[11] The figures across gender for each region are available in Appendix 3

Salary

Most of the employed in Shirak and Tavush answered that they would like to change their employment status, while most of the employed in Lori and Gegharkunik did not want to change their job status. In all the studied regions, the main reason identified by the employed who want to change their employment status was to have a higher income. Some people in Lori reported that they would love to change their jobs for professional development, while in Shirak, some were dissatisfied with their work conditions. Very few people identified other reasons, such as staff reduction or closure of a company, family circumstances, health problems, or temporariness of the job. So, earning a low salary is one of the main issues in the regions for both employed and unemployed people looking for a job. See Figures 23 and 24 below.

Average Monthly Salary (in AMD)

Shirak: 127,369 AMD

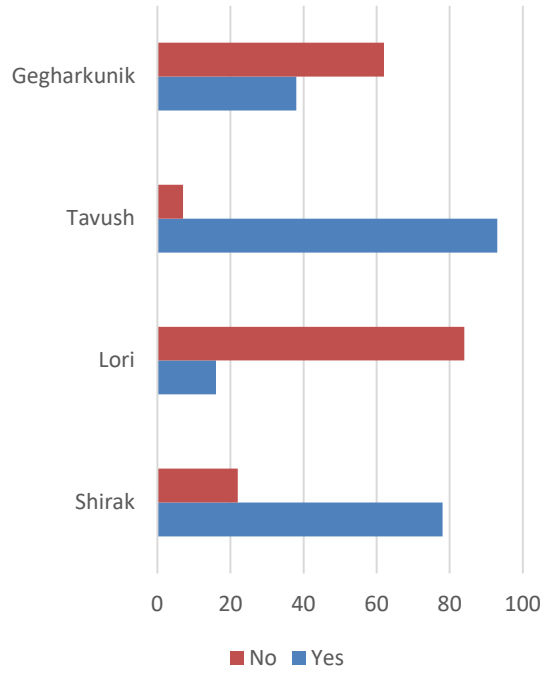
Lori: 148,896 AMD

Tavush: 143,080 AMD

Gegharkunik: 116,736 AMD

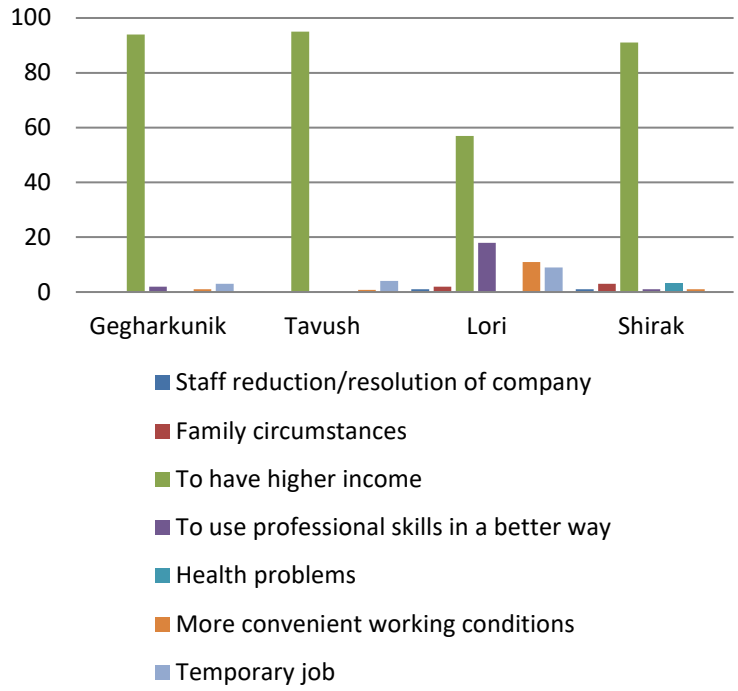
National Statistical Service of Armenia Labour market in RA, 2018

Figure 23: Change in Employment Status



Source: National Statistical Service of Armenia Labour force database, 2017

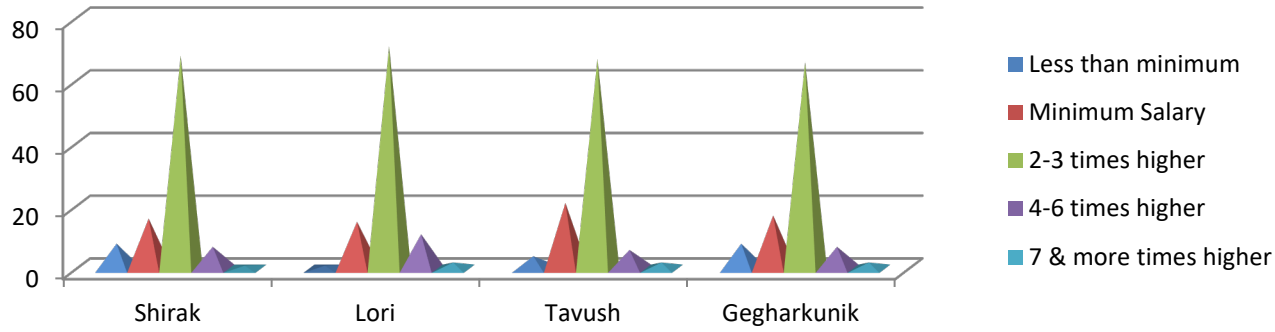
Figure 24: Reasons for Change in Employment



Source: National Statistical Service of Armenia Labour force database, 2017

The findings posit that, in all of the regions, most of the employed earn salaries that are two to three times higher than the minimum, which is lower than a monthly gross salary of 170,000 dram. One-fourth earns a minimum salary and very few earn four to six times higher than the minimum. Some people in all the regions earn less than the minimum salary, and the percentage of these people is higher in Shirak and Gegharkunik where nepotism and cronyism is more widespread. See Figure 25 below.

Figure 25: Monthly Gross Salary in the Studied Regions, 2017



Source: National Statistical Service of Armenia Labour market in RA, 2018

Labour Demand Across Market Sectors

The analysis of the data of open and filled vacancies in the regions at the beginning of 2018 provided by the State Employment Agency shows that labour demand is observed in manufacturing, wholesale and retail trade, motorcycle and motor vehicle repair, and services followed by education, health, public administration, and defence in all the studied regions. Very low demand is observed in the sectors of construction, transportation and storage, financial and insurance activities, arts, entertainment and recreation, agriculture, forestry and fishing, and information and communication. There is almost no demand for work in professional, scientific, and technical activities and administrative and support activities (State Employment Agency, 2018).[12]

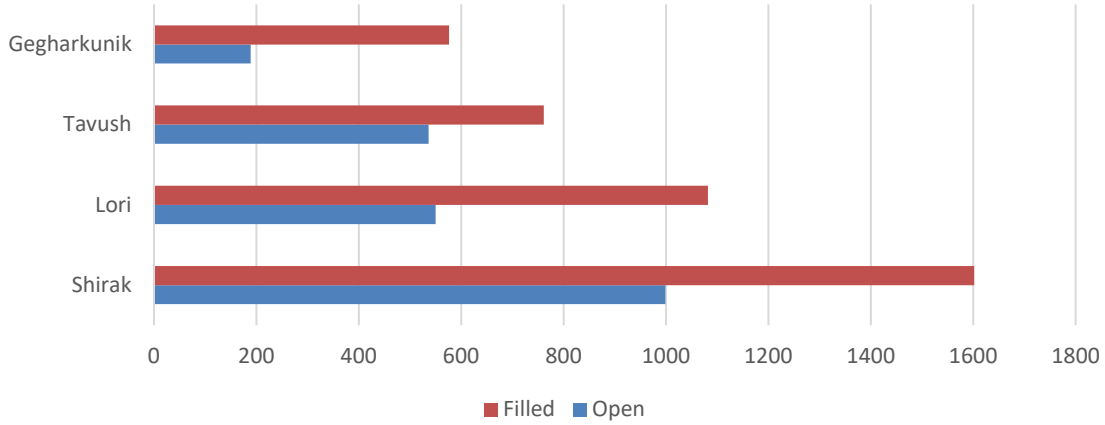
Figure 26: Open/filled vacancies in the regions, 2018[13]

[12] The State Employment Agency data presents findings for formal employment only.
[13] The figures of open/filled vacancies across market sectors for each region is available in Appendix 4.

% of total unemployed in the region

	Filled	Open
Shirak	4%	2%
Lori	8%	4%
Tavush	11%	8%
Gegharkunik	14%	5%

State Employment Agency, 2018



Source: State Employment Agency of Armenia, 2018

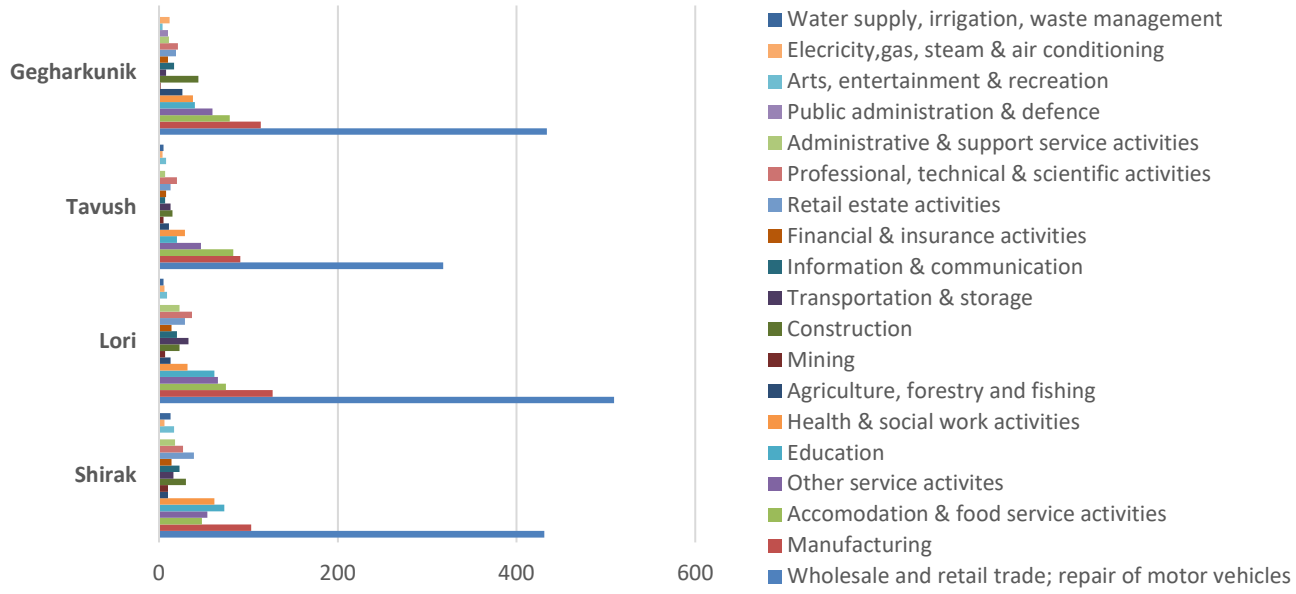
The highest demand for labour in Shirak is observed in the manufacturing sector, followed by services, including accommodation and food, wholesale and retail trade, motorcycle and motor vehicle repair, education, human health and social work activities, public administration, and defence. Development of the manufacturing, wholesale and retail trade, and services sectors is observed (State Employment Agency, 2018). In Lori, the highest demand for labour is observed in wholesale and retail trade, followed by motorcycle and motor vehicle repair, manufacturing, other services, education, accommodation and food services, health and social work activities, public administration, and defence. Development trends are observed in the accommodation and food service activities sector, among others (State Employment Agency, 2018). The highest demand for labour in Tavush is observed in wholesale and retail trade, followed by motorcycle and motor vehicle repair, manufacturing, other services, accommodation, food services, education, agriculture, forestry and fishing, human health and social work activities, and the rest. Considerable development is observed of accommodation and food service activities, other services activities, agriculture, forestry and fishing sectors among others, followed by some development trends

present in the wholesale and retail trade and manufacturing sectors (State Employment Agency, 2018). The highest labour demand in Gegharkunik is observed in wholesale and retail trade, followed by motorcycle and motor vehicle repair, other service activities, education, human health and social work, construction, and manufacturing. Development was observed in the labour market in wholesale and retail trade as well as motorcycle and motor vehicle repair from 2017 to 2018, and some slow-paced development is present in the sectors of health and education (State Employment Agency, 2018).[14]

As mentioned above, there is demand for labour in certain sectors of the market. However, the labour supply far exceeds the demand. The number of open vacancies in the sectors comprises only 2-5% of the total number of unemployed in all of the studied regions.

According to the data provided by the State Revenue Committee, the highest number of operational organizations in all the studied regions is in wholesale and retail trade: motorcycle and motor vehicle repair, followed by manufacturing, accommodation and food services, and other service sectors in Shirak, Lori, Tavush, and Gegharkunik. Other sectors show small numbers.[15] See Figure 27 below.

Figure 27: Operational Organizations in the Studied Regions, 2019



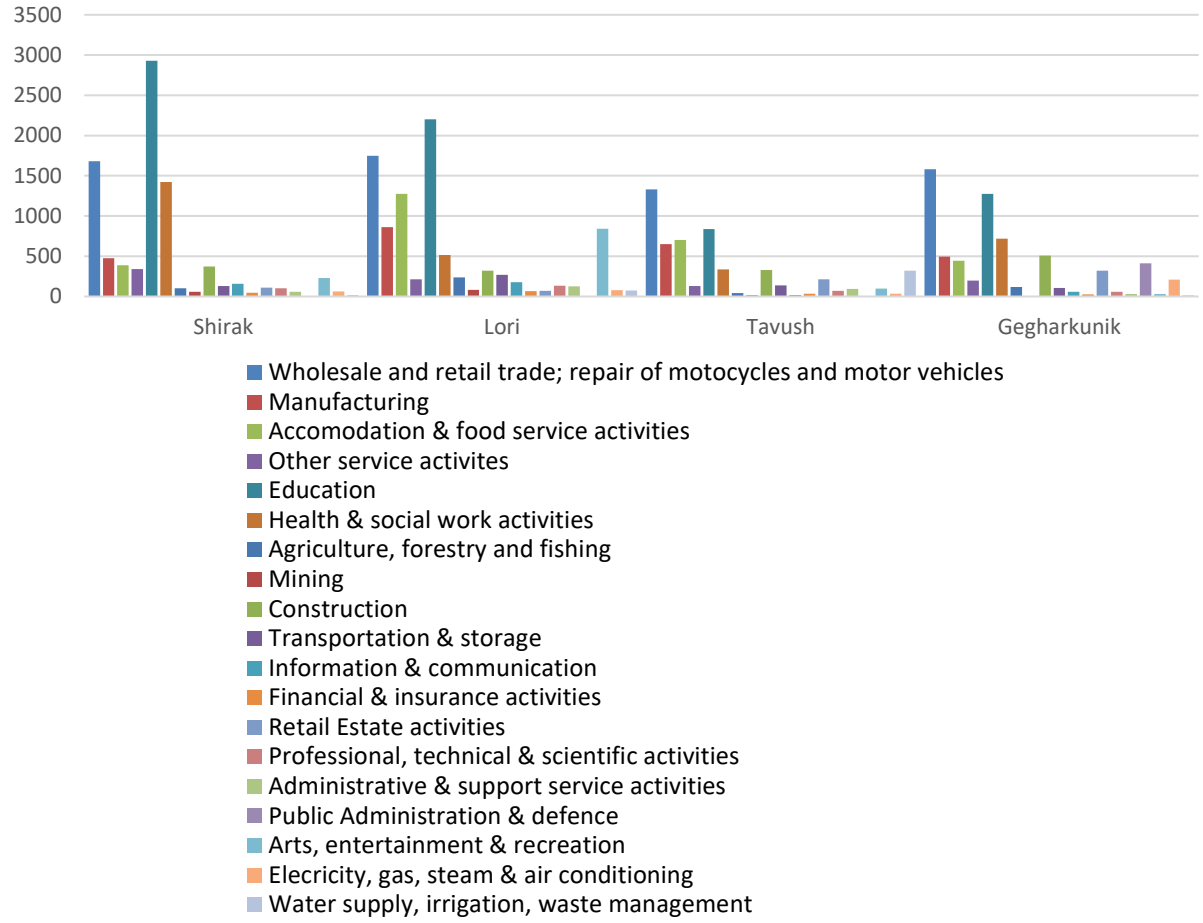
Source: State Revenue Committee of Armenia, 2019

According to data provided by the State Revenue Committee, the highest number of jobs in 2019 is observed in education in Shirak and Lori and wholesale and retail trade: motorcycle and motor vehicle repair in Tavush and Gegharkunik. Overall, a relatively high number of jobs is also observed in human health and social work activities, accommodation and food service, other service

[14] The figures for the open/filled vacancies for each region are available in Appendix 4.
[15] The data provided by the State Revenue Committee shows only formal employment.

sectors, and manufacturing in all the studied regions. Other sectors show small numbers.[16] See Figure 28 below.

Figure 28: Active Jobs in the Studied Regions, 2019



Source: State Revenue Committee of Armenia, 2019

The analysis across types of organizations reveals the following results: education, public administration, and health and social work activity organizations consist almost exclusively of state administration bodies, while most of the sole proprietors operating in the economy are in wholesale and retail trade: motorcycle and motor vehicle repair, followed by manufacturing, accommodation and food services, and other service activities (State Revenue Committee, 2019).

It can be concluded from the analysis that agriculture, wholesale and retail trade, motorcycle and motor vehicle repair, manufacturing, accommodation and food services, and other service activities are the developing markets in the regions where there is relatively higher labour force

[16] The data provided by the State Revenue Committee shows only formal employment.

demand. Labour in the agriculture sector is mostly informal and subject to vulnerable employment as most of the employed in the sector are reported to be own-account workers, which implies that the jobs are temporary and no social security measures are ensured. Formal employment is higher in the rest of the above-mentioned sectors.

Thus, analysis of the labour markets across the sectors was conducted by combining the analysis of data on labour demand from the State Employment Agency and State Revenue Committee and qualitative data collected in the course of the current research.

Developing Labour Markets and Existing Gaps

Manufacturing: The analysis shows that there is a relatively higher demand for labour in the manufacturing sector in all of the studied regions. The sector was developing from 2017 to 2018 with more people employed in that sector and more job vacancies opening in Shirak, Tavush, and Gegharkunik. No major development is observed in the sector in Lori (State Employment Agency, 2018). There are over 100 companies operating in the sector in all the regions. A total of 400-800 people are engaged in the sector in all the regions. There are investment projects awaiting implementation in the sector as of 2019. See Table 3 below.

Table 3: Expected Investment Projects in the Studied Regions, 2019

Region	Investment projects	Number of jobs to be created	Source of information
Shirak	Clothing production factory	14 workplaces	Ministry of Economy
	Glove production company	30 workplaces	Ministry of Economy
Lori	No available information about investments	-	Ministry of Economy
Tavush	Workers' glove production company	300 workplaces	Ministry of Economy
	Industrial filters and filter element production company	20 workplaces	Ministry of Economy
	Textile factory in border village	-	Regional Administration
Gegharkunik	No available information about investments	-	Ministry of Economy

However, despite the existing labour demand and supply in the manufacturing sector, no significant changes were observed in the unemployment registry at the State Employment Agency of people specialized in study areas relevant to manufacturing, including light industry, machines, equipment, transportation (including repair), management, and economics (State Employment Agency, 2018).

Although the manufacturing sector is developing in all the regions, certain challenges need to be overcome. Employers in all the studied regions reported problems related to recruiting staff, mainly due to the lack of motivation among the youth for working in manufacturing because of the laborious and low salary jobs being offered.

The manager of a textile company in Gyumri stated the following: "No one wants to enter the textile industry in Gyumri, as the work is hard and salaries are relatively low. The youth thinks it's better to stay unemployed, learn IT and earn more, or ask a relative from abroad to send money rather than work in a textile factory."

The absence of skills among the youth was reported across different specializations, including economics, accounting, management, agriculture, and cattle breeding. The manager of a cheese production company in Dilijan stated the following: "We were looking for a veterinarian, promising to pay for his five-year education if he agreed to work with us for five consecutive years. We found no one. The reason is that students currently studying at the Agrarian University did not choose their major; they were the ones who got left out from other universities. So, they don't want to work in their profession."

Shirak

Textile, food, beverage, furniture, leather production

Lori

Food, beverage, clothes, leather, machine construction

Tavush

Textile, concrete, cheese water, leather production

Gegharkunik

Beverage, clothes, pastry production

Wholesale and retail trade, motorcycle and motor vehicle repair: The analysis shows that there is a relatively higher demand for labour in this sector, which is developing with more people being employed and more job vacancies opening in Shirak, Tavush, and Gegharkunik. Again, no substantial development is observed in this sector in Lori (State Employment Agency, 2018). There are 300-500 companies operating in this sector in all of the regions. Entrepreneurship is developing in the sector, where two-thirds of the companies are sole proprietorships (State Revenue Committee, 2019). Most of the companies are retail stores, car wash, and car repair services (National Statistical Service of Armenia, 2017). The data also shows that most of the companies are probably small enterprises, each employing a few employees. Over 1300 people are employed in the sector in all the regions (State Revenue Committee, 2019). Nevertheless, despite the existing labour demand and supply in the sector, no significant changes were observed in the unemployment registry at the State Employment Agency of people specialized in transportation systems (including repair), machine construction, management, and economics (State Employment Agency, 2018).

Agriculture, forestry, and fishing: The development of the agriculture sector is declared as a strategic development goal in all the regions. Both land cultivation and cattle breeding are areas

that are somewhat developed and have more potential for development. Half of the employed in Shirak and Lori are engaged in the sector, mostly in informal employment. In Tavush and Gegharkunik, up to 40% of the labour is centralized in the sector. Most of the employed in the sector are engaged in own-account work on a farm. Thus, there is big labour demand in the sector, but since employment is vulnerable, much needs to be done to boost development of the sector.

Education: Education is the sector in which there is a high number of filled positions with few job openings in all the regions. The organizations active in education in Shirak (73%), Lori (97%), Tavush (85%), and Gegharkunik (72%) are mostly represented by state administrative units or public educational institutions that provide education to the local/regional population and are not directly affected by market changes (State Revenue Committee, 2019). This means that the high number of jobs in this sector is not expected to change unless there is an increase in the population served, which is unlikely based on the current trends, and these numbers do not reflect the existing market demand for education professionals. Although there is an oversupply of professionals in this sector, as the number of unemployed people shows, there is still a mismatch between supply and demand relative to qualifications, salary expectations, and other factors.

Among the identified hindering factors for unemployed teachers by the focus group participants were a lack of infrastructure and the absence or insufficient operation of transportation to the remote communities where there are open vacancies.

The other two factors identified by the youth are the relatively low salaries and nepotism present in the public sector of Armenia.

Accommodation and food service; other service activities: The data shows that the sector is continuing to develop with more open and filled vacancies in 2018, compared to 2017 in all the target regions (State Employment Agency, 2018). The highest rate of development of the sector is observed in Tavush, where in 2018 there were three times more open and filled vacancies than in 2017. The number of organizations in the sector is the third highest among all the sectors (85) with a high number of employed people (704) (State Employment Agency, 2018).[17] In Shirak, there are more than 100 organizations in the services sector. This is a sector where entrepreneurship is the third highest, after wholesale and retail trade and manufacturing (State Revenue Committee, 2019).[18] In Lori, there aren't many entities working in this sector, but most of them are businesses (75) that have a relatively higher number of established jobs (1274). The slowest development of the sector is observed in Gegharkunik, though the number of organizations in the sector is the third highest among all sectors in the region (State Revenue Committee, 2019). However, despite the existing labour demand and supply in the sector, no significant changes were observed in the unemployment registry at the State Employment Agency of people specialized in services (State Employment Agency, 2018).

[17] A new, major rest area is being constructed in the Hovk community of Tavush.

[18] Two new projects—a ski resort near Mount Aragats and a tour service to the ruins of Ani—are underway.

It was evident from the statistical and qualitative findings that the service sector has potential for development in all of the studied regions. However, the labour market of the sector, including tourism, faces supply and demand mismatches in qualifications of the professionals. All the interviewed employers of the sector identified the lack of local professionals as the main problem they are facing. In Shirak and Lori, employers reported that graduates in the sector do not learn the necessary skills and are underqualified. In Tavush, the employer stated that they are having difficulties in finding managers, administrators that know several languages, and a good accountant. They even had difficulties in attracting barmen and waiters, but a positive development is currently being observed. In Gegharkunik, the employer identified seasonality as the main hindering factor for finding and maintaining professionals. The employer had problems finding qualified human resources, marketing, and administration specialists.

According to the employers, the graduates of the tourism and service departments of local universities do not know anything about the sector. The manager of a leisure area in Sevan stated the following: "The quality of graduates is so low—not to mention their lack of knowledge of hotel management software."

The lack of certain skills and knowledge among the youth as a result of an outdated educational system were identified as the main reasons for unemployment in all four regions. All the service providers stated that the applicants lack communication skills and do not know how to behave and talk with customers**.** In Shirak, an employer identified conflict management as an important skill that employees of the service provision sector should have. Employers in Lori and Gegharkunik identified lack of basic computer skills and knowledge of languages as a big problem in applicants.

Information and Communication: The development of the information technologies (IT) sector has been declared as a strategic development goal in both Shirak and Lori. The sector is not developed in Tavush and Gegharkunik, where IT labour demand and supply markets are almost absent. In order to develop the sector, technology centres were opened both in Shirak and Lori (Gyumri Technology Center, Vanadzor Technology Center). Representatives from both technology centres and the regional administrations reported growth in the sector over the past few years and high potential for development in terms of human resources. They highlighted the important mediation role that the technology centres play. High interest among the pupils of Lori was reported as well. However, there are still a relatively small number of companies (23 in Shirak, 20 in Lori) operating in the sector in 2019 (State Revenue Committee, 2019). Nevertheless, all the parties agreed that there is continuing migration of IT professionals from the regions to Yerevan due to higher salaries and more job opportunities offered in Yerevan as well as a lack of entrepreneurial skills among the youth to start their own IT businesses locally. The manager of Gyumri Technology Center in Shirak reported difficulties related to attracting and keeping senior professionals at local companies. She stated the following: "The difficulty is not finding a professional, but finding a *good* professional."

The manager of Vanadzor Technology Center in Lori stated that there is migration of both junior and senior level professionals to Yerevan. As the number of IT companies both in Gyumri and Vanadzor is relatively small, most of the graduates of Gyumri Technology Center and Vanadzor Technology Center trainings leave for Yerevan. Both managers stated that the main difficulty for the development of the sector lies in finding or maintaining good professionals locally. IT startups have difficulty developing because the youth does not possess the necessary business skills and knowledge and they are not being taught basic entrepreneurial skills in universities.
However, there is high human potential both in Shirak and Lori, and if opportunities are created locally, the sector will continue developing.

Health care and social services: In almost all regions, the number of existing organizations in the health and social services market is not big, and half of the companies are state administration units—state supported hospitals and medical centres. In Shirak, the labour demand meets the supply in the sector, where there is a high number of jobs (1422) and a low number of unemployed (35) registered with the State Employment Agency. A slow pace of development of the sector is observed with more open and filled vacancies in 2018 compared with 2017 (State Employment Agency, 2018). However, it was reported that in the health sector there is demand for specialized doctors in Shirak that cannot be met. In Lori, Tavush, and Gegharkunik, employment is relatively high in the sector, while there were no developments from 2017 to 2018 in Lori and Tavush, and some slow pace development was seen in Gegharkunik (State Employment Agency, 2018). Most probably, most of the employed in the sector work in the state administration units. There is an oversupply of health professionals in Lori, Tavush, and Gegharkunik—the number of unemployed is so high in the three regions that the labour supply will continue exceeding the demand in the sector for the coming years. All of the unemployed health specialists are nurses and other middle-level professionals.

Arts, entertainment and recreation, financial and insurance services, real estate activities, transportation and storage: There are very few organizations in these sectors in all of the studied regions. Almost half of the organizations in arts, entertainment, and recreation and retail estate services are state administrative units, which suggests that change in these sectors is not conditioned by market trends. The number of open and filled vacancies in arts, entertainment, and recreation is small in Shirak, Tavush, and Gegharkunik. However, the sector has quite a high number of employed people (843) in Lori, and many are probably employed at the newly opened COAF SMART centre in the region. The sector has been slowly developing in Lori with more people employed and more job vacancies opening (State Employment Agency, 2018). In Gegharkunik, there is relatively high employment in the real estate sector, in the existing 21 major companies but development of the sector is not observed (State Employment Agency, 2018). Very few companies are registered in financial and insurance, transportation, and storage operations in all of the studied regions, and the little demand in the labour market in all these sectors explains the large number of the unemployed in the fields of culture, art and design, transportation systems, economics, and

management. Development of these sectors was not observed from 2017 to 2018 (State Employment Agency, 2018).

Construction: The labour market of this sector shows a growth tendency with more open and filled vacancies recorded in 2018 versus 2017 in Shirak and Gegharkunik (State Employment Agency, 2018). Though there are only 30 registered companies in the sector in Shirak, most of them are medium-sized with an average number of 12 employees in each. In Gegharkunik, 44 companies in the sector provide 508 jobs. There is relatively high employment in Tavush in the sector, but the sector does not show any development trends either in Tavush or Lori. In Lori, there are very few open and filled vacancies in the sector, which explains the large unemployment in the sectors of construction and design. However, in either of the regions, the number of unemployed specialized in construction or design with the State Employment Agency registry has not changed throughout the years (State Employment Agency, 2018).

Public Administration and Defence: All the vacancies in this sector are in state entities, mainly in defence. Labour demand in the sector is generally not conditioned by market trends in all of the studied regions.

Professional, scientific, and technical activities, administrative and support services, mining, electricity, water supply, and waste management. There is almost no demand for jobs in these sectors in all of the studied regions. However, in Gegharkunik, the electricity, gas, steam, and clean air supply sector shows signs of development with 12 active companies and 211 job opportunities in 2019 (State Revenue Committee, 2019). Supply of renewable energy is a new market sector in the region with potential for development. According to the regional administration of Gegharkunik, there are investment projects awaiting implementation that are scheduled to commence in two years. Solar energy stations are confirmed for construction in the Mets Masrik community and wind stations in the Sevan area.

The analysis show that in all of the above-mentioned sectors, in spite of the development, a decrease in the number of unemployed in these professions registered with the State Employment Agency was not observed, while up to an 8% decrease in the number of unemployed without professions was observed in 2018 versus 2017 (State Employment Agency, 2018). This suggests that the State Employment Agency probably succeeds only in facilitating employment in basic occupations and has difficulties in preparing the unemployed for higher positions.

As the data shows, the State Employment Agency does not enjoy wider popularity in some of the regions. In Shirak, only 31% of the unemployed are registered with the State Employment Agency. In Lori and Tavush, 64% and 66% of the unemployed, respectively, are registered with the agency. In Gegharkunik, the number of registered people exceeds the number of unemployed reported by the National Statistical Service of Armenia (State Employment Agency, 2017; National Statistical Service of Armenia 2018). This phenomenon can be explained by the following factors: (i) the State Employment Agency only takes into account formal employment, which means that a person can still be employed in own-account work and be registered with the agency, while the National Statistical Service of Armenia measures all kinds of employment; and (ii) as confirmed

by the employers in all regions, some people register with the State Employment Agency not because they are unemployed but because they want to keep their unemployed status to receive certain social security benefits.

Most of the unemployed registered with the State Employment Agency in all the regions are women. The main reasons for not being registered with the State Employment Agency identified by the participants were that the labour market is open and they can find jobs on their own, and that the agency's undertakings are ineffective.

Most of the employers in the regions reported about their prior or current cooperation with the State Employment Agency. Employers of the IT, tourism, and manufacturing sectors reported that the job applicants sent via the State Employment Agency were mostly underqualified, which is why some of them stopped cooperating. Employers in Shirak and Gegharkunik were satisfied overall with the cooperation and reported that they managed to hire workers for their factories with the help of the State Employment Agency. However, employers in Lori and Tavush reported that cooperation with the State Employment Agency is not effective. The managers of IT centres stated that they do not cooperate with the State Employment Agency as training centres since their trainings are costly, while the agency's financial and institutional capacities are limited.

Institutions Facilitating Employment

International experience shows, as was argued in the literature reviewed above, that unemployment in the world and specifically in developing countries is conditioned by institutional factors, such as school-to-work transition difficulties, education systems, and so on. As school-to-work transition has been identified as one of the major causes of unemployment in previous studies conducted in Armenia, the current research looks at the higher educational institutions in the regions and their activities, if any, directed at facilitating the process. Volunteering as a facilitator of the process is also explored.

Academia and Industry Cooperation

The existing cooperation between employers and local universities is not institutional and is centralized around student university apprenticeship programmes; students pass their apprenticeships in local companies. In the IT sector, there is an apprenticeship programme for equipping students with skills and preparing them for the labour market. However, there are certain difficulties, as the knowledge the students receive at universities is outdated and does not meet market requirements. Besides, the apprenticeship programme does not have an institutional monitoring system and students are not engaged in practical work.

In the tourism and service sector, employers interviewed in Shirak, Lori, and Tavush cooperate with local universities, and the students pass their university apprenticeships in their organizations. In Shirak and Tavush, the employers were satisfied with the process and reportedly

hired some of the students. In Lori, according to the employer, the students do not show any interest and the apprenticeship is like a formality. The employer in Gegharkunik does not cooperate with the local university.

In the manufacturing sector, all the employers cooperate with universities and students pass their university apprenticeships in their companies. The employer in Shirak stated that they cooperate with local universities and colleges, but most of the students do the apprenticeship as a formality; very few want to enter the sector. The same situation exists in Lori and Tavush; students come and learn, but very rarely want to stay and continue working in production. In Gegharkunik, one of the employers reported that the apprenticeship is successful as students learn a lot, including computer programs, while apprenticing in their factory, so their motivation rises.

According to the unemployed, the effectiveness and usefulness of the university apprenticeship is linked with the profession and the place where the participants apprentice. Participants who apprenticed in banks or other different financial institutions reported about the usefulness of the apprenticeship, stating that it helped them to grow and feel more confident in their search for a job. The participants who participated in administrative duties in schools or offices stated that they were not engaged in any profession-related activities.

In Shirak, almost all the participants had apprenticeship and internship experience and were satisfied overall with the quality. However, the participants complained that employers do not consider either apprenticeship or internship as work experience. In Lori, few participants were satisfied with their apprenticeships, while some reported that they did not learn anything. In Tavush, the participants overall were dissatisfied with the apprenticeships claiming that employers did not considered them as work experience. In Gegharkunik, most of the participants had apprenticeships in their colleges, which most probably were formal in nature.

Thus, it can be concluded that the existing cooperation between academia and industry is very weak as it only includes apprenticeship programmes, while employers are not engaged in any other activities that would influence the university system and have impact on the education of students. Although the apprenticeship programme gives benefits to students, reports about drawbacks in terms of lack of practical work, lack of motivation among the students, and the formal nature of the apprenticeships were voiced.

Volunteering Engagement

There is no law that defines volunteering and its regulations in Armenia. According to the programme of the government for 2017-2022, establishing a legal framework for volunteering was planned but the process stopped and no reports of its resumption are available. Internships and apprenticeships are regulated by the labour code of Armenia. The previous research studies posit that volunteering in Armenia is mostly perceived as a means for career development and it is mostly utilized in civil society structures (Paturyan 2016; Galstyan 2018). Not many young people are involved in volunteering. Research shows that volunteers are mostly engaged in administrative, organizational, and social undertakings. Those who volunteer do so for the following reasons: the desire to be employed or keep busy, to put their professional knowledge to use, to acquire new skills

and knowledge, to make new friends and meet possible employers (Paturyan 2016; Galstyan 2018). Some of the obstacles identified with volunteering in Armenia are that volunteering work does not count towards work experience, no mechanisms for reimbursements exist, and overall, no formal mechanisms for regulating different aspects of volunteerism exist (Galstyan 2018).

One major NGO that deals with volunteers and volunteering in each target region was identified and in-depth interviews with their representatives were conducted.[19]

Why should I volunteer? Is it naïve of me to work for free? (A widely spread perception about volunteering).

All the interviewed NGOs reported a misperception regarding volunteerism—volunteers are considered naïve for working for someone for free without getting anything in return. The locals do not comprehend the benefits and usefulness of volunteering. However, NGOs in Shirak, Tavush, and Gegharkunik reported a positive change in perception and an increase in the number of people who volunteer. However, the NGO in Lori reported no evident progress. All the NGOs highlighted the fact that the youth come to volunteer in their organizations to improve their professional skills, acquire necessary soft skills, and obtain work experience. In Shirak and Tavush, the presence of foreigners attracts volunteers as they see opportunities to improve their communication and language skills and expand their network. All the NGOs reported that volunteers are mainly engaged in organizational and administrative jobs, highlighting the fact that they are working toward broadening their potential. Volunteers were engaged in different activities like content writing, social media marketing, social work, and conducting trainings. All the organizations highlighted the fact that volunteering helps people find jobs, as volunteers learn necessary skills in job searching and enhance their soft skills.

Most of the volunteers are women aged 18-25 who come from central cities. In some rare cases, volunteers were from nearby villages. The main reason for this was the lack of reliable public transportation. Another reason identified was that in other communities the social conditions are worse than in central towns so the youth there seek paid employment. Men are less likely to volunteer as a result of stereotypes—they are afraid of being teased by their friends.

All the NGOs reported about their existing cooperation with the universities and of students engaged as volunteers in their organizations. In Shirak and Gegharkunik, students pass through an apprenticeship in the organizations and learn certain skills during the process that are not taught in the universities, such as leadership and conflict management skills, and also acquire practical work skills. In Lori and Tavush, NGOs do not have institutional cooperation with the universities. In Lori, NGOs engage local students if they apply, and in Tavush the NGO does not engage the local students because they are underqualified for the work to be performed.

Only one Shirak-based NGO reported close cooperation with the State Employment Agency. The organization is actively working with the State Employment Agency not only in Gyumri but also in Maralik, where it accepts volunteers sent via the agency. Also, they send their

[19] Gyumri Youth Initiative Centre in Shirak, NGO center in Lori, Youth Cooperation Center for Dilijan, Armenian Caritas in Gegharkunik

volunteers to the State Employment Agency when their skills match available work opportunities. The NGOs in Lori, Tavush, and Gegharkunik reported that they do not cooperate with the State Employment Agency.

All the NGO representatives agreed that in order to increase and promote volunteering the following should be implemented: (i) the law on volunteering should be passed; (ii) proper public relations should be conducted to encourage volunteering and explain the benefits and usefulness of volunteering through the combined efforts of the state, local government bodies, and private sector; and (iii) the problem of unreliable public transportation should be solved.

Reasons for Unemployment

During the face-to-face interviews both the employers and the unemployed were asked their opinions about the reasons for unemployment, in order to ascertain the local perspective and whether both sides would identify common problems.

Both employers and the unemployed in Shirak, Lori, Tavush, and Gegharkunik cited a long list of reasons that cause continuous unemployment in their regions. The main reasons named by almost all the employers and unemployed are the following; *labour supply in the regions exceeds demand, wrong career choice made by the youth due to the absence of career consulting bodies at schools, ineffective apprenticeship programmes in universities, lack of practical work experience among the youth, an outdated education system and materials that do not meet labour market needs, lack of necessary infrastructure (transportation), lack of motivation among the youth, hard work conditions and low salaries that most jobs offer, and violations of labour rights.*

The reasons for unemployment from the perspectives of employers and the unemployed are presented separately below.

Perspectives of Employers

In Shirak

- Bad choice of profession due to the lack of consulting bodies at schools
- Ineffective university apprenticeship programmes; lack of practical work experience during years of study
- Lack of student engagement into volunteering/internship
- Hard work conditions and low salaries
- Lack of entertainment activities in the region
- No cooperation between academia and industry

In Tavush

- Laziness
- Bad choice of profession due to the lack of consulting bodies at schools
- Underqualified graduates, lack of skills that the labour market demands
- The labour supply largely exceeds the demand
- No cooperation between academia and industry
- Demand of middle-level/technical specialists, especially in agriculture, and absence of supply

- Underqualified graduates, lack of skills that the labour market demands
- Lack of motivation among the youth for self-development

In Lori

- Lack of jobs
- The motivation of the youth; young people want easy work and higher pay
- The labour supply largely exceeds the demand
- Underqualified graduates, lack of skills that the labour market demands
- No cooperation between academia and industry
- Lack of entertainment activities in the region
- Lack of motivation in youth to work in agriculture and manufacturing
- Ineffective university apprenticeship programmes; lack of practical work experience during years of study
- Outdated education system and materials

In Gegharkunik

- Lack of jobs
- Underqualified graduates**,** lack of skills that the labour market demands
- Seasonality of the available jobs
- Lack of motivation among the youth to work
- Bad choice of profession due to the lack of consulting bodies at schools
- Outdated education system and materials

Perspectives of the Unemployed

- Ineffective university apprenticeship programmes; lack of practical work experience during years of study
- Hard work conditions and low pay
- Constant violations of the Armenian labour code (reports on the violation of the rights of pregnant women were reported in all regions – maternity leave is not provided and women are simply fired)
- Family, children
- Lack of infrastructure (there are reports of available vacancies in the villages and desire to work but the positions remain unfilled due to lack of transportation to some remote communities)
- Lack of career consulting at schools
- Outdated education system and materials
- Job supply exceeds the demand

Conclusions

The research findings provide insight into the current labour market conditions in Shirak, Lori, Tavush, and Gegharkunik in terms of unemployment and employment, and the gap that exists between labour demand and supply. The findings reveal the existing problems that both the

employers and the unemployed of the regions face as well as the developing trends of labour markets and potential opportunities.

The study revealed that there is high unemployment among the youth in all the regions studied that is higher in urban areas. Most of the unemployed had long spells of unemployment that made them more detached from the labour market. Male unemployment is slightly higher than female unemployment irrespective of the fact that a certain percentage of women are unemployed due to family responsibilities. Although unemployment is lower among people with higher education than those with secondary education, the findings are not statistically proven.

Employment in all of the studied regions is centralized in the sector of agriculture, followed by sales and service and manufacturing. High levels of employment are also observed in the sectors of education and health, but those employed people are mainly teachers in public schools and health practitioners in hospitals and medical centres that do not have a developing market. Half of the employed in the regions is engaged in agricultural practices, mostly in informal employment and own-account work on a farm. This means that most of the employed in the regions are subject to vulnerable employment.

Agriculture, manufacturing, wholesale and retail trade, motorcycle and motor vehicle repair, and accommodation/food and other service activities are the developing sectors of the regions where growing labour opportunities exist. There is very low or almost no demand for labour in other markets in the regions, except in Gegharkunik, where the production of renewable energy is a new innovative market that is developing.

Information technology (IT) is another sector that is developing in Shirak and Lori largely due to the existing Gyumri and Vanadzor Technology Centers. However, there is continuous migration from the regions to Yerevan because of the higher pay and opportunities that companies in Yerevan offer. A high number of students currently studies IT and if certain interventions are not made, the migration from the regions of the youth specialized in IT will continue with a renewed pace. There is evidence of youth in the IT sector working online with international clients from their towns.

The main problems both the employed and potential employees face is the big gap between labour demand and supply in the markets of all the studied regions in terms of discrepancies between supply and demand. There is an oversupply of certain professions (humanities, economics and management, education, health), the demand for which in the regions is low or non-existing—it is likely that this trend will continue in the coming five to six years as the youth continue pursuing higher education in the same professions for which there is no labour demand in the regions. Even with the existing oversupply and supply of professions in the markets where there is labour demand (service and manufacturing), employers are having difficulties recruiting locals because the local professionals and graduates from local universities are underqualified for the labour demand market. The education offered in local higher educational institutions does not equip the youth with the necessary knowledge and skills required in the labour market; meanwhile the motivation for self-development among the youth is very low. The reasons behind this situation are mainly attributed to the lack of career consulting bodies at schools that would help the youth choose

professions for which there is a labour market in the regions and would equip the youth with the necessary skills to identify their career paths. Furthermore, higher educational institutions do not take labour market demands into account while designing the education curricula for students. Finally, the youth lacks practical work experience upon graduation because of the drawbacks existing in the university apprenticeship programmes and the low number of students engaged in volunteering, which is largely attributed to the absence of institutional cooperation between industry and academia. The effectiveness of the State Employment Agency, the only employment facilitating body in the regions, is hampered by certain limitations. Thus, we are left with an underqualified youth that is unable to find jobs and employers who are unable to find employees.

Employers in the sectors of agriculture and manufacturing face more serious problems than having trouble finding qualified specialists. There is a lack of specialists as the youth is not motivated to work in manufacturing or agriculture, because the jobs in factories and fields are thought to be hard and pay low salaries. This notion poses quite a large risk for regional development, as agriculture is the sector in which half of the employed in the regions are working. With the generational change, the sector could face difficult problems that would affect the whole country at large.

The youth largely has higher salary requirements and demands for work conditions than the older generation. This issue can be explained by the fact that in Armenia, parents continue caring for their children even after they graduate from university, so there is no urgent need for the youth to find employment. Unemployed youth are not motivated to start their own businesses mainly because they lack entrepreneurial skills and knowledge of the business sector.

Finally, there are two other major issues that contribute to the demotivation of the youth and unemployment in the regions: (i) unreliable or unavailable public transportation between communities, which places limits on job opportunities for the unemployed and volunteering opportunities for the youth; and (ii) the constant violation of the labour rights of employees in the regions is widely accepted as a normal practice.

Conclusively, it can be argued that youth unemployment is a problem in Shirak, Lori, Tavush, and Gegharkunik that is hindering the socio-economic development of the regions. There are myriad economic, social, and cultural issues that need to be tackled with the combined efforts of public and private sectors through targeted short-term and long-term interventions to curtail unemployment and, thus, contribute to the future development of the regions.

Recommendations

The following recommendations are based on the data analysis of the research project. Short-term as well as long-term intervention recommendations are presented.

- Creating a platform for online jobs and conducting awareness-raising initiatives in the communities so that the youth will learn about the existing opportunities and will be able to work from their community.

- Conducting targeted skills and knowledge-building trainings (soft skills, technical knowledge, entrepreneurship) with practical components with graduate students from local universities to equip them with the skills required in the local labour market as well as with entrepreneurial skills to boost startup development.
- Changing established legal procedures of the State Employment Agency, making its undertakings more feasible and adaptable, thereby increasing the effectiveness of the agency.
- Conducting career consulting in schools: in the short-term, career consulting could be conducted by a single body going from school to school, whereas in the long-term career consulting bodies could be established in every school to help students find a suitable career path.
- Adding entrepreneurship education in schools and universities to motivate the youth regarding business development.
- Encouraging volunteering at all levels by first passing legislation and then creating incentives for companies to have institutionalized internship/volunteering programmes that would become the norm across the regions and increase opportunities for practical work among the youth.
- Creating incentives (tax waivers specific for regions) for IT companies as well as other startups to launch offices and branches in the regions with the stipulation that they set up long-term operations and hire some percentage of locals. These efforts would contribute to developing the local economy and employment in the regions.
- Working with employers, universities, and state administrative bodies to add dual apprenticeship programmes at local universities that would help the youth gain practical work experience.
- Redesigning the education system and educational materials through the combined efforts of the public and private sectors to shorten the gap between labour demand and supply in the regions.
- Improving the image of agricultural professions through educational and social media initiatives that communicate the benefits of the agriculture sector.
- Solving public transportation problems in the regions to facilitate youth mobility and increase work opportunities in all the communities.
- Organizing cultural events and fairs in the regions to help boost regional activity.
- Starting the process of governmental decentralization by moving some ministries to the regions to create employment opportunities and spur economic activities in the regions.

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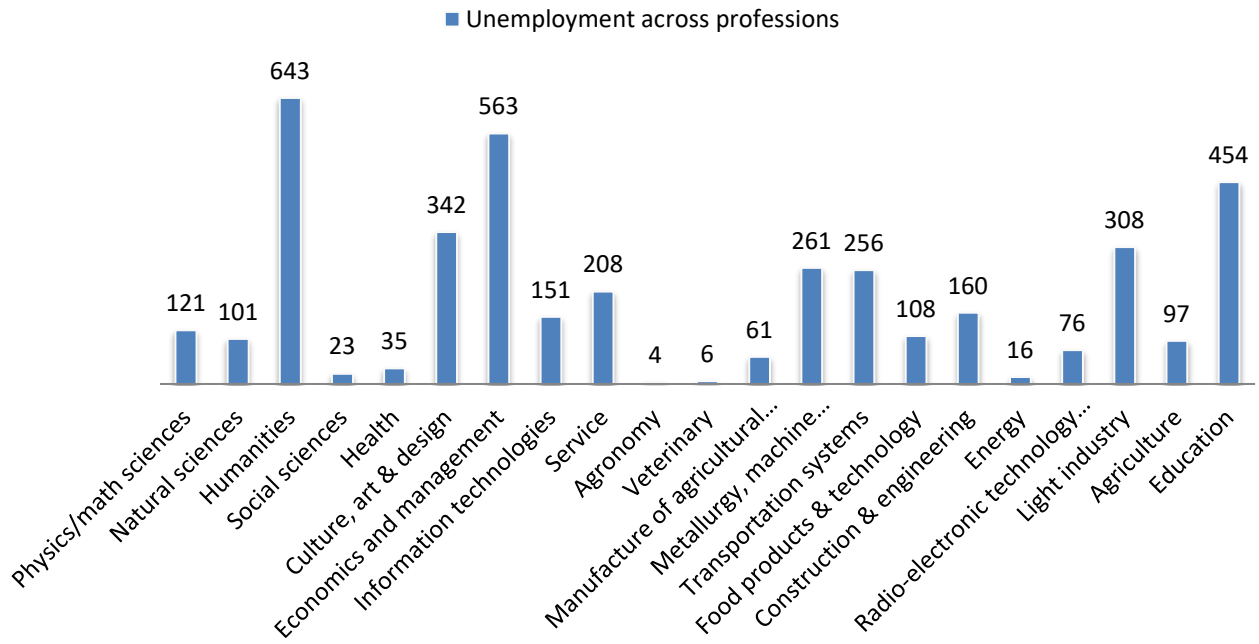
Appendices

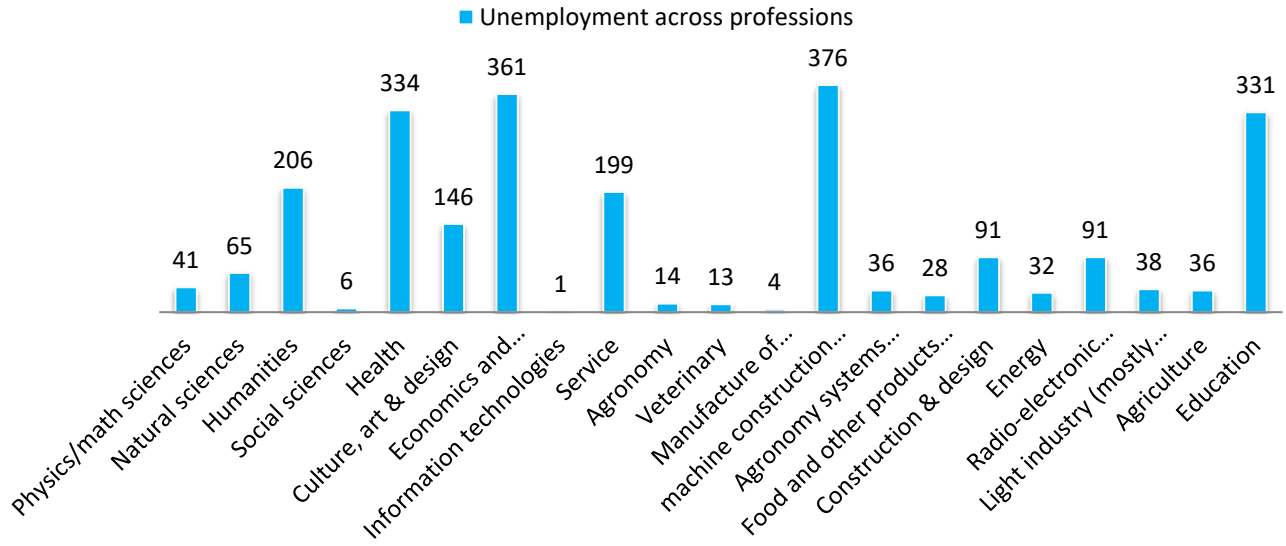
Appendix 1: Unemployment across professions

Shirak: The unemployed across professions in 2018



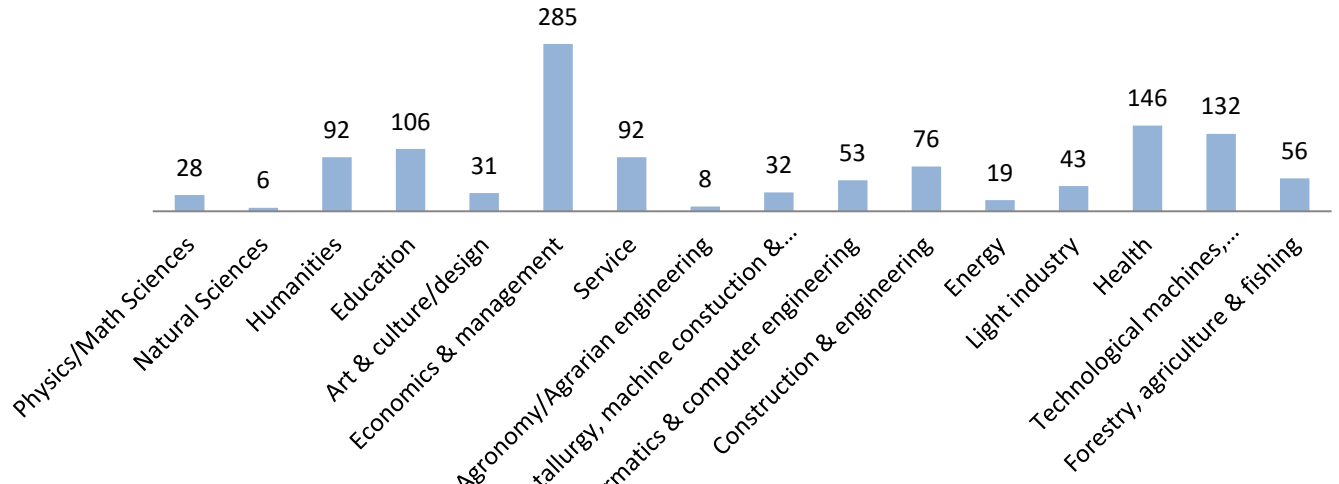
Source: State Employment Agency, Armenia, 2018

Lori: The unemployed across professions in 2018



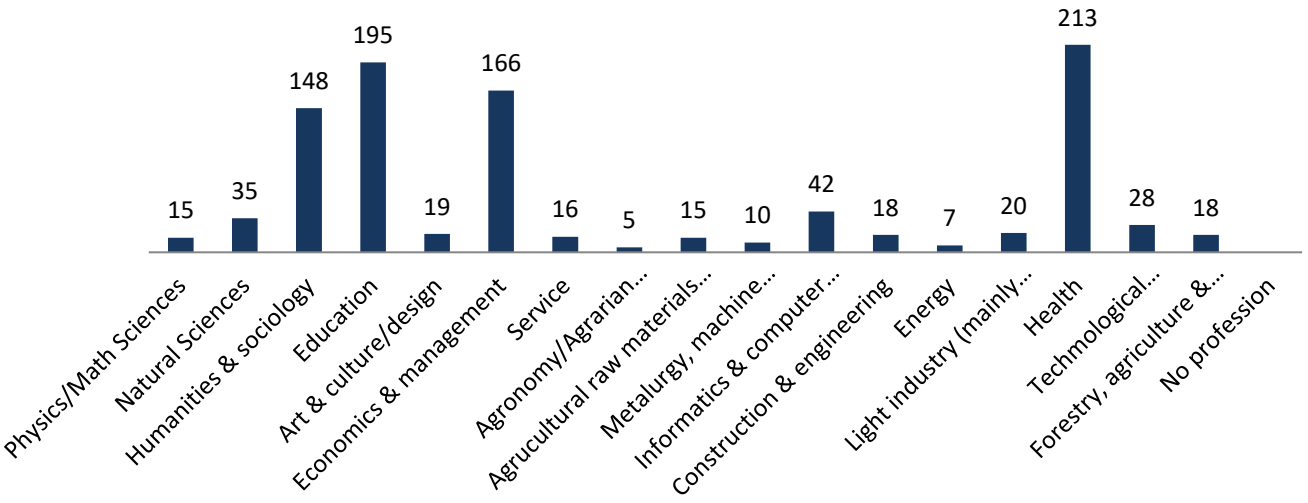
Source: State Employment Agency, Armenia, 2018

Tavush: The unemployed across professions in 2018



Source: State Employment Agency, Armenia, 2018

Gegharkunik: The unemployed across professions in 2018



Source: State Employment Agency, Armenia, 2018

Appendix 2: Students across professions

Shirak: Students across professions in 12 universities of Armenia, 2019,

Study Area	Faculty	Total	Male	Female
Services, including tourism	**Service & tourism**	**92**	15	77
Geology, Cartography & Cadastre Geography	**Geography & Geology**	**88**	58	30
Theology	**Theology**	**8**	2	6
Arabic studies, Iranian studies, Turkish Studies	**Oriental Studies**	**33**	10	23
Linguistics & Intercultural communication English, French, Spanish, German language & literature, Translation, European Studies	**European languages & communication**	**213**	6	207
Russian language & literature	**Russian language & literature**	**47**	3	44
Modern Armenian & translation Armenian language & literature, Genocide studies, World literature & theory	**Armenian Philology**	**105**	2	103
Sociology & social work	**Sociology**	**203**	24	179
Journalism, PR & Communication	**Journalism**	**30**	5	25
Law	**Law**	**158**	88	70
Philosophy & Psychology	**Philosophy & Psychology**	**169**	42	127
Pedagogy & education organization	**Pedagogy & education**	**401**	1	400
International relations, public administration, political science	**International relations & Public Administration**	**115**	50	65
History	**History**	**135**	42	93
Culture & art, design studies	**Culture & Art**	**133**	53	80
Informatics and applied math, Information security Math; computer sciences, Mechanical calculators'/systems, networks mathematical and programmed support	**Informatics and applied math**	**386**	268	118
Biology	**Biology**	**112**	15	97
Chemistry	**Chemistry**	**11**	-	11

Pharmaceutics	**Pharmaceutics**	**103**	20	83
Math & Mechanics	**Math & Mechanics**	**58**	19	39
Radio physics	**Radio physics**	**19**	17	2
Telecommunication		**13**	13	-
Energy and Electrotechnology	**Energy and Electrotechnology**	**50**	49	1
Mechanical machine construction, transport systems	**Mechanical machine construction, transport systems**	**65**	65	-
Physics	**Physics**	**23**	12	11
Economics, management, finances, business, trade accounting, banking, marketing	**Economics & management**	**424**	213	211
Construction	**Construction**	**43**	41	2
Acting/Performance	**Acting/Performance**	**104**	51	53
Physical education	**Physical education**	**158**	155	3
General medicine	**Health**	**346**	162	184
Stomatology	**Health**	**78**	34	44
Public health	**Health**	**2**	1	1
Agronomy	**Agronomy**	**17**	10	7
Food technology	**Agronomy**	**37**	28	9
Agrarian engineering	**Agronomy**	**24**	24	-
Veterinary	**Agronomy**	**26**	24	2
Agro business & economics	**Agronomy**	**53**	40	13

Source: The list of the universities is available in Appendix 5

Lori: Students across professions in 12 universities of Armenia, 2019

Study Area	Faculty	Total	Male	Female
Service, including tourism	**Service & tourism**	**75**	12	63
Geology, Cartography & Cadastre Geography	**Geography & Geology**	**53**	21	32
Theology	**Theology**	**8**	5	3
Arabic studies, Iranian studies, Turkish Studies	**Oriental Studies**	**21**	7	14
Linguistics & Intercultural communication English, French, Spanish, German language & literature, Translation, European Studies	**European languages & communication**	**341**	5	336
Russian language & literature	**Russian language & literature**	**100**	3	97

Modern Armenian & translation Armenian language & literature, Genocide studies, World literature & theory	**Armenian Philology**	**159**	1	110
Sociology & social work	**Sociology & social work**	**48**	7	41
Journalism, PR & Communication	**Journalism**	**32**	7	25
Law	**Law**	**150**	96	54
Philosophy & Psychology	**Philosophy & Psychology**	**181**	14	167
Pedagogy & education organization	**Pedagogy & education**	**451**	18	433
International relations, public administration, political science	**International relations & Public Administration**	**122**	45	77
History	**History**	**153**	69	84
Culture & art, design studies	**Culture & Art**	**62**	11	51
Informatics and applied math, Information security Math; computer sciences, Mechanical calculators'/systems, networks mathematical and programmed support	**Informatics and applied math**	**342**	197	145
Biology	**Biology**	**84**	14	80
Chemistry	**Chemistry**	**2**	1	1
Pharmaceutics	**Pharmaceutics**	**86**	10	76
Math & Mechanics	**Math & Mechanics**	**62**	18	44
Radio physics	**Radio physics**	**16**	13	3
Telecommunication		**9**	7	2
Energy and Electrotechnology		**11**	8	3
Mechanical machine construction, transport systems			100	10
Physics	**Physics**	**17**	7	10
Economics, management, finances, business, trade accounting, banking, marketing,	**Economics & management**	**497**	246	251
Construction		**77**	71	6
Acting/Performance	**Acting/Performance**	**57**	21	39
Physical education	**Physical education**	**155**	139	16
General medicine	**Health**	**209**	91	118
Stomatology	**Health**	**23**	10	13

Public health	**Health**		-	-
Agronomy	**Agronomy**	**11**	6	5
Food technology	**Agronomy**	**26**	11	15
Agrarian engineering	**Agronomy**	**13**	13	-
Veterinary	**Agronomy**	**10**	7	3
Agro business & economics	**Agronomy**	**45**	27	18

Source: The list of the universities is available in Appendix 5

Tavush: Students across professions in 12 universities of Armenia, 2019

Study Area	Faculty	Total	Male	Female
Service, including tourism	**Service & tourism**	**57**	14	43
Geology, Cartography & Cadastre Geography	**Geography & Geology**	**49**	15	34
Theology	**Theology**	**3**	2	1
Arabic studies, Iranian studies, Turkish Studies	**Oriental Studies**	**10**	6	4
Linguistics & Intercultural communication English, French, Spanish, German language & literature, Translation, European Studies	**European languages & communication**	**73**	3	70
Russian language & literature	**Russian language & literature**	**7**	-	7
Modern Armenian & translation Armenian language & literature, Genocide studies, World literature & theory	**Armenian Philology**	**40**	-	40
Sociology & social work	**Sociology**	**32**	4	28
Journalism, PR & Communication	**Journalism**	**9**	1	8
Law	**Law**	**25**	15	10
Philosophy & Psychology	**Philosophy & Psychology**	**35**	1	34
Pedagogy & education organization	**Pedagogy & education**	**116**	7	109
International relations, public administration, political science	**International relations & Public Administration**	**28**	10	18
History	**History**	**64**	41	23
Culture & art, design studies	**Culture & Art**	**50**	9	41
Informatics and applied math, Information security Math; computer sciences,	**Informatics and applied math**	**52**	30	22

Mechanical calculators'/systems, networks mathematical and programmed support				
Biology	**Biology**	**15**	2	13
Chemistry	**Chemistry**	**5**	1	4
Pharmaceutics	**Pharmaceutics**	**22**	5	17
Math & Mechanics	**Math & Mechanics**	**29**	3	26
Radio physics	**Radio physics**	**6**	4	2
Telecommunication		**3**	3	-
Energy and Electrotechnology	**Energy and Electrotechnology**	**7**	7	-
Mechanical machine construction, transport systems	**Mechanical machine construction, transport systems**	**50**	48	2
Physics	**Physics**	**7**	4	3
Economics, management, finances, business, trade accounting, banking, marketing,	**Economics & management**	**160**	78	82
Construction	**Construction**	**3**	2	1
Acting/Performance	**Acting/Performance**	**8**	2	6
Physical education	**Physical education**	**55**	53	2
General medicine	**Health**	**115**	32	83
Stomatology	**Health**	**33**	25	8
Public health	**Health**	**-**	-	-
Agronomy	**Agronomy**	**55**	48	7
Food technology	**Agronomy**	**42**	28	14
Agrarian engineering	**Agronomy**	**47**	46	1
Veterinary	**Agronomy**	**23**	15	8
Agro business & economics	**Agronomy**	**42**	27	15

Source: The list of the universities is available in Appendix 5

Gegharkunik: Students across professions in 12 universities of Armenia, 2019

Study Area	Faculty	Total	Male	Female
Service, including tourism	**Service & tourism**	**87**	31	56
Geology, Cartography & Cadastre Geography	**Geography & Geology**	**76**	39	37
Theology	**Theology**	**10**	5	5
Arabic studies, Iranian studies, Turkish Studies	**Oriental Studies**	**19**	9	10

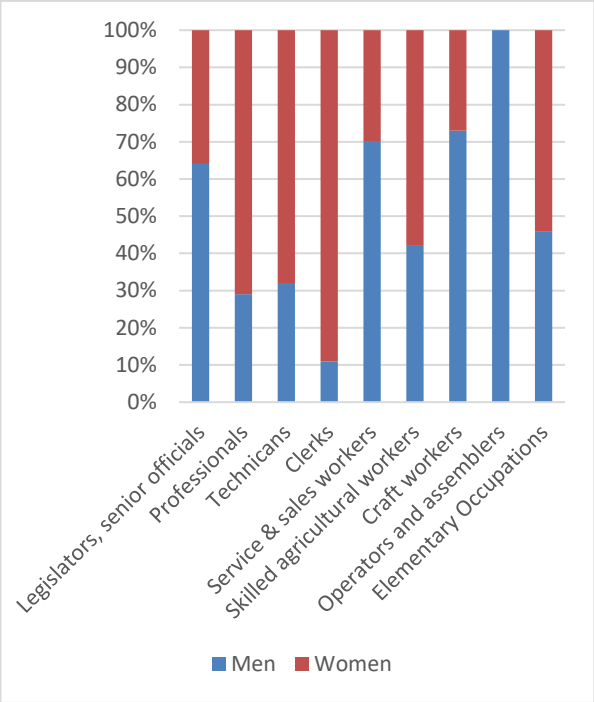
Linguistics & Intercultural communication English, French, Spanish, German language & literature, Translation, European Studies	**European languages & communication**	**159**	2	157
Russian language & literature	**Russian language & literature**	**34**	-	34
Modern Armenian & translation Armenian language & literature, Genocide studies, World literature & theory	**Armenian Philology**	**167**	1	165
Sociology & social work	**Sociology**	**76**	14	62
Journalism, PR & Communication	**Journalism**	**42**	6	36
Law	**Law**	**261**	202	59
Philosophy & Psychology	**Philosophy & Psychology**	**97**	12	85
Pedagogy & education organization	**Pedagogy & education**	**345**	6	339
International relations, public administration, political science	**International relations & Public Administration**	**108**	40	68
History	**History**	**123**	40	83
Culture & art, design studies	**Culture & Art**	**104**	25	79
Informatics and applied math, Information security Math; computer sciences, Mechanical calculators'/systems, networks mathematical and programmed support	**Informatics and applied math**	**218**	141	77
Biology	**Biology**	**96**	9	87
Chemistry	**Chemistry**	**13**	2	11
Pharmaceutics	**Pharmaceutics**	**83**	19	64
Math & Mechanics	**Math & Mechanics**	**46**	6	40
Radio physics	**Radio physics**	**11**	7	4
Telecommunication		**11**	14	-
Energy and Electrotechnology	**Energy and Electrotechnology**	**39**	35	4
Mechanical machine construction, transport systems	**Mechanical machine construction, transport systems**	**24**	21	3
Physics	**Physics**	**17**	6	11

Economics, management, finances, business, trade accounting, banking, marketing,	**Economics & management**	**435**	278	157
Construction		**2**	2	-
Acting/Performance	**Acting/Performance**	**10**	5	5
Physical education	**Physical education**	**168**	156	12
General medicine	**Health**	**227**	107	120
Stomatology	**Health**	**51**	26	25
Public health	**Health**	**-**	-	-
Agronomy	**Agronomy**	**33**	24	9
Food technology	**Agronomy**	**54**	36	18
Agrarian engineering	**Agronomy**	**54**	54	-
Veterinary	**Agronomy**	**26**	20	6
Agro business & economics	**Agronomy**	**68**	53	15

Source: The list of the universities is available in Appendix 5

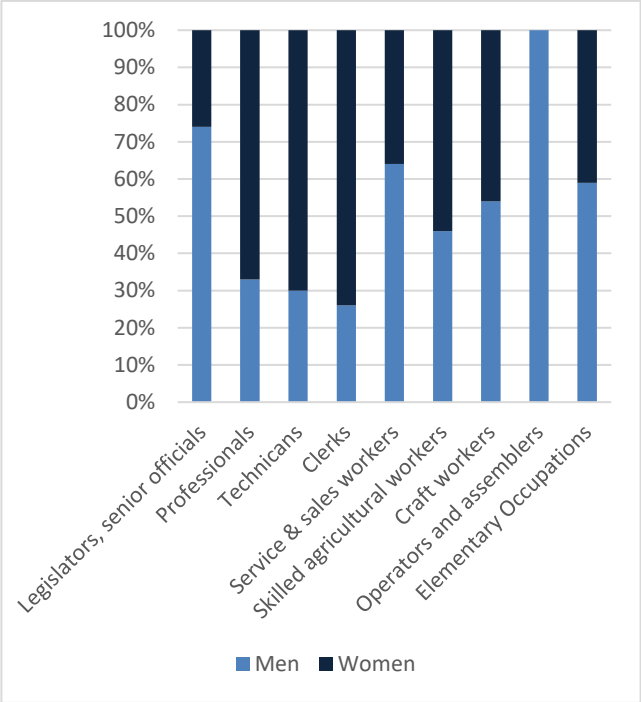
Appendix: 3 Employment across professions and gender

Shirak: Employment by profession and gender, 2017



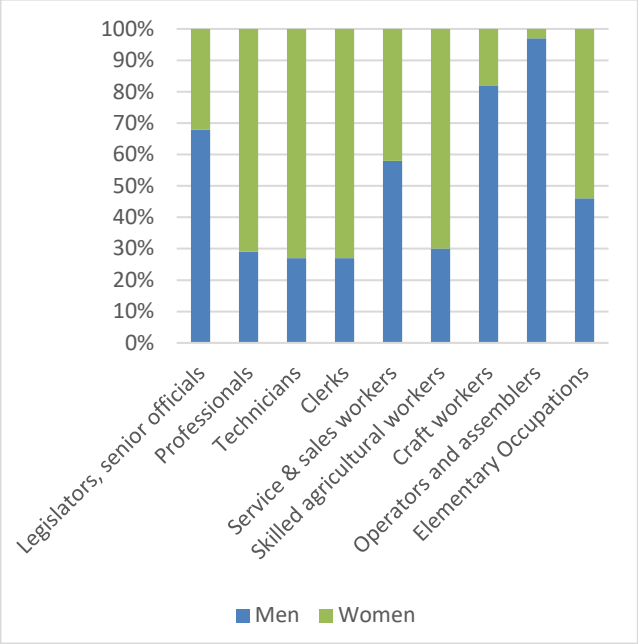
Source: NSSA Labour force database, 2017

Lori: Employment by profession and gender, 2017



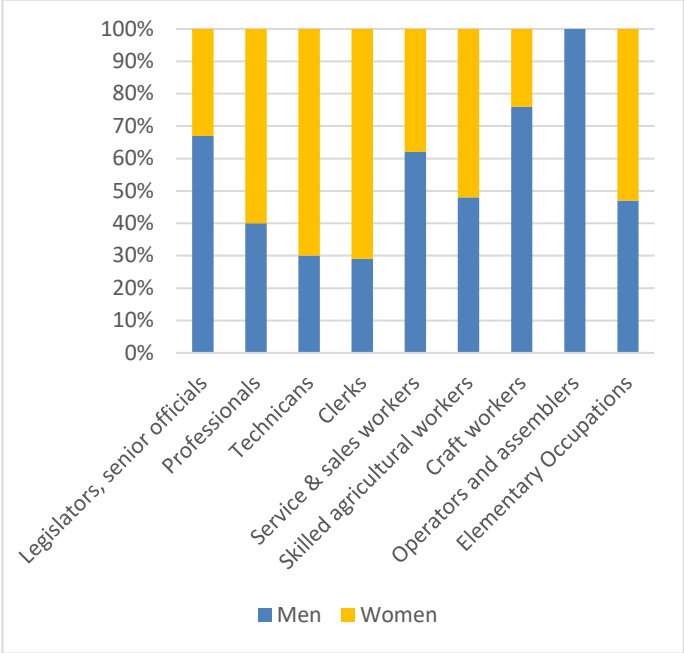
Source: NSSA Labour force database, 2017

Tavush: Employment by profession and gender, 2017



Source: NSSA Labour force survey database, 2017

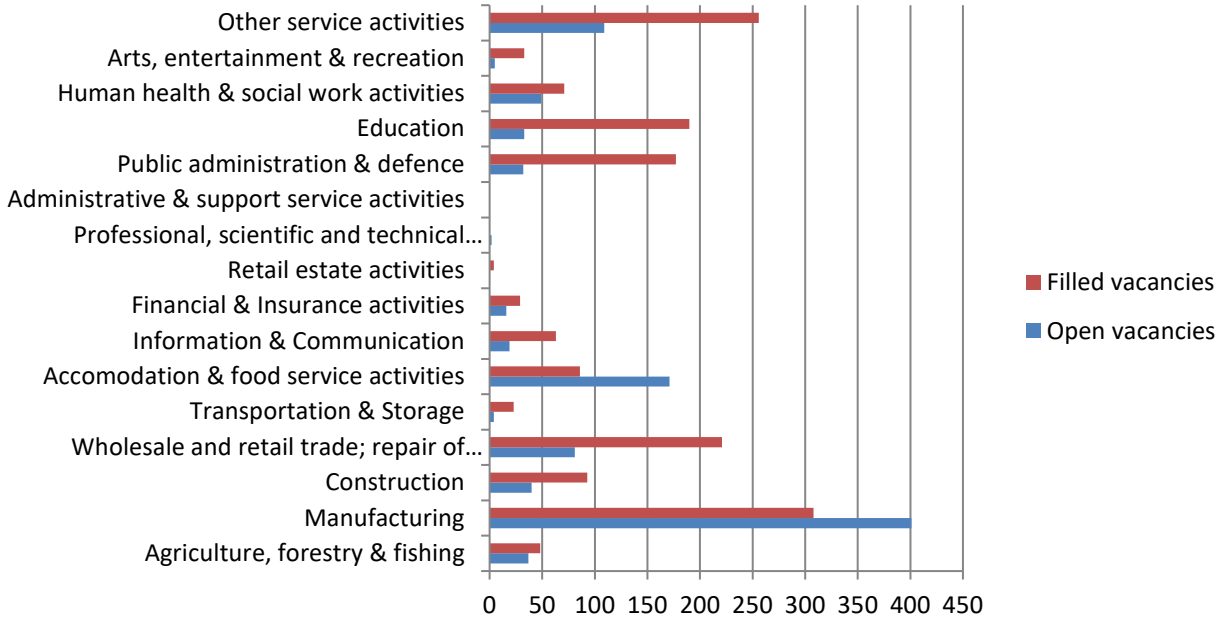
Gegharkunik: Employment by profession and gender, 2017



Source: NSSA Labour force database, 2017

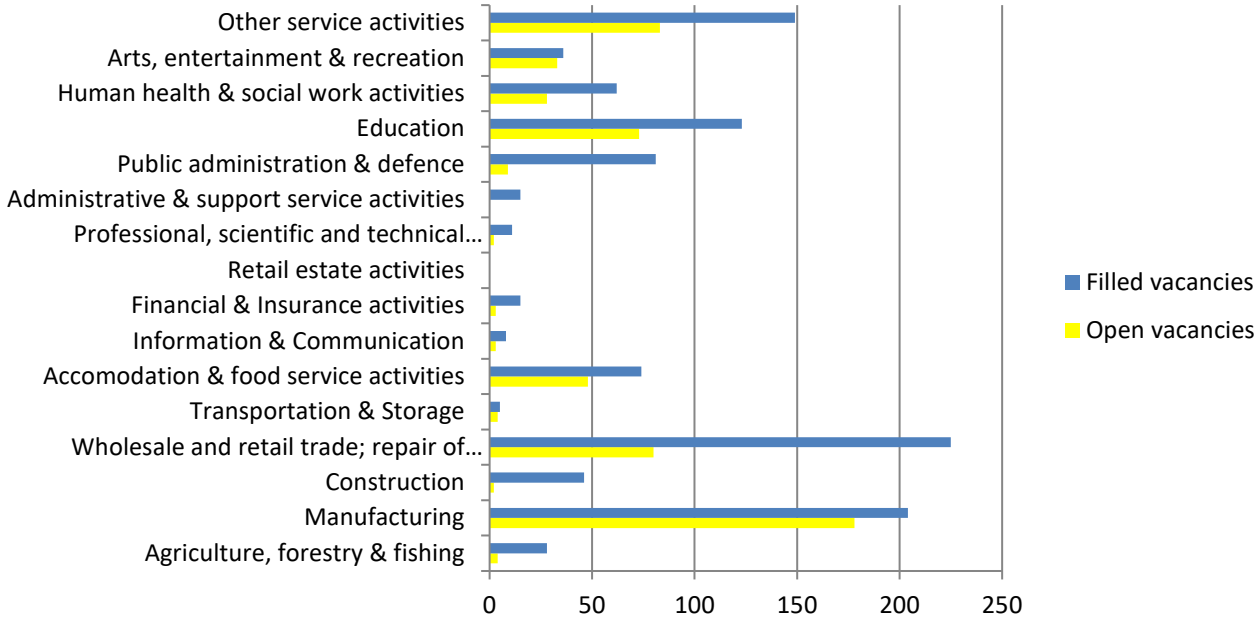
Appendix 4: Filled/open vacancies across market sectors

Shirak: Open and filled vacancies in 2018



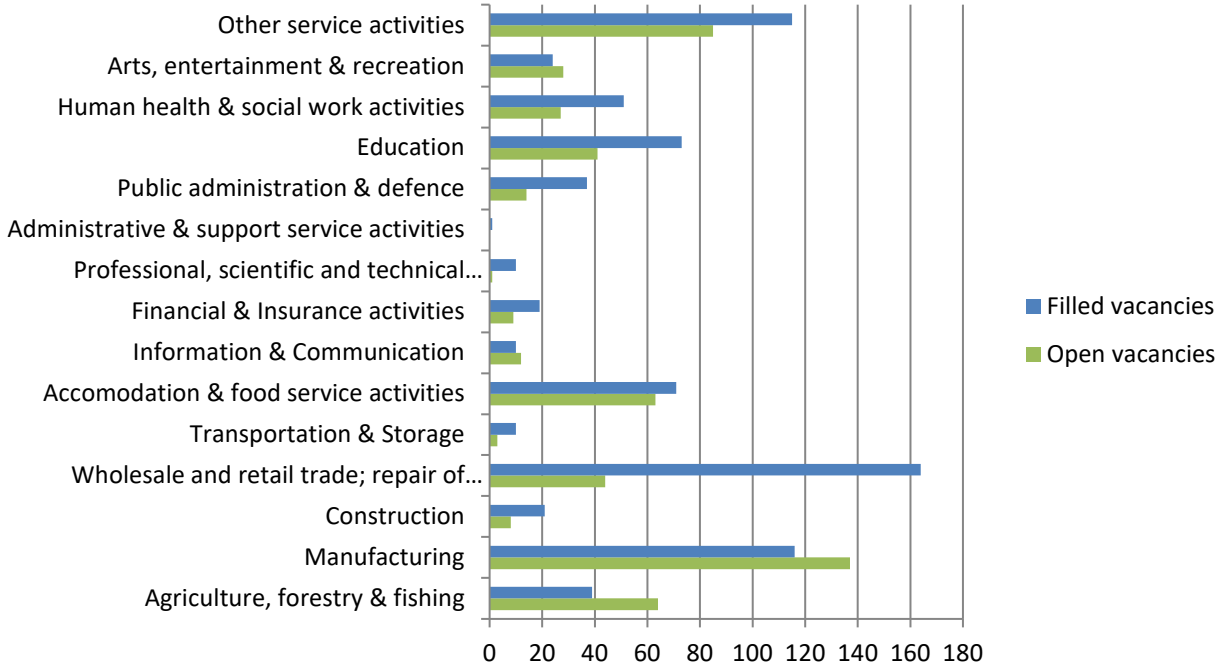
Source: State Employment Agency, Armenia, 2018

Lori: Open and filled vacancies in 2018



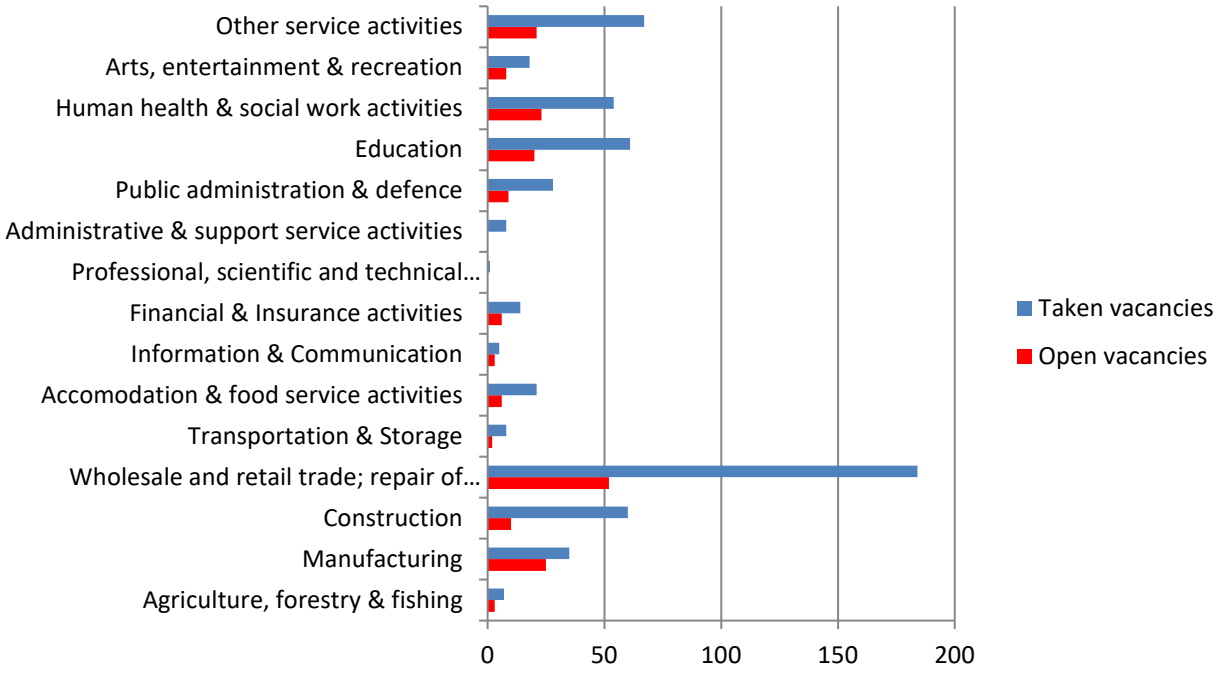
Source: State Employment Agency, Armenia, 2018

Tavush: Open and filled vacancies in 2018



Source: State Employment Agency, Armenia, 2018

Gegharkunik: Open and filled vacancies in 2018



Source: State Employment Agency, Armenia, 2018

Appendix 5: Higher educational institutions

1. Yerevan State University (YSU)
2. Armenian State University of Economics
3. Armenian National Agrarian University
4. Armenian State Pedagogical University
5. Yerevan State Medical University
6. Yerevan State Institute of Theatre and Cinematography
7. Yerevan Brusov State University of Languages and Social Sciences
8. Russian-Armenian University
9. Armenian State Institute of Physical Culture and Sport
10. Public Administration Academy of the RA
11. National Polytechnic University of Armenia

11. Gavar State University

12. Vanadzor State University

13. Shirak state University

14. YSU Ijevan branch

Appendix 6: Focus Group Discussions with the Unemployed: Focus Group Guide

Introduction: Good afternoon, my name is_____. Thank you for agreeing to participate in our focus group discussion. Today we will talk about unemployment and the obstacles you face while looking for a job. This discussion is a part of a larger baseline study conducted for United Nations Development Programme Armenia. The goal is to assess the overall situation in your region and track the reasons behind it. I can assure you that whatever you say here will remain strictly confidential. The discussion is being recorded to make sure that we don't miss something important, but no one except myself and my research colleagues will have access to this record. During the discussion, I would like us to follow a few simple rules. Let's make sure we all listen to each other, respect each other's opinion and talk one at a time.

1. Tell about yourself, specifically education, including vocational education (if any), work experience (if any) and how long you have been unemployed?
2. Why did you decide to choose exactly that profession?
3. Could you please identify the main reasons behind your unemployment?
4. Have you ever participated in a job interview? Why do you think you were not selected? Why didn't you accept the offer if selected?
5. What are the main reasons you are not able to find a job?
6. What are the main characteristics (location, salary, other) of the job you are looking for?
7. What are the steps you pursued for finding a job? Why exactly those steps?
8. Have you ever considered professional development?
9. Have you ever considered starting your own business? Why yes, why not?
10. What is your opinion about State Employment Agency's activities? Is it helpful in your pursuit of job?
11. What are the potential solutions to the problem of youth unemployment in your region?

Appendix 7: In-depth interview guides

Interview guide for the employers

Introduction: Good afternoon, my name is _____. Thank you for agreeing to talk to me about the labour demand and recruitment of human resources in your company. This interview is a part of a larger baseline study conducted for United Nations Development Programme Armenia. The goal is to assess overall situation of labour market in your region, identify the gaps and track the reasons behind. I can assure you that whatever you say here will remain strictly confidential. The discussion is being recorded to make sure that we don't miss something important, but no one except myself and my research colleagues will have access to this record.

1. What are the recruitment procedures in your organization? How do you attract applicants?
2. Where are most of your employees (region, town)? Why?
3. What is the age and gender of most of your employees? Please elaborate.
4. Do you have any difficulty in finding the desired professionals? Please elaborate.
5. Do you or have you ever cooperated with State Employment Agency? Please elaborate.
6. Do you have any volunteering/internship/apprenticeship programme at your organization? If yes, do you cooperate with local universities? If yes, please elaborate on the nature of cooperation.
7. Do you think paid internship/apprenticeship programme in cooperation with the universities will help your organization in having the employees you want? Please elaborate.
8. What professions are in most demand in the labour market?
9. What kind of skills, including soft skills should an applicant have to be able to work in your organization?
10. Why students are not able to find jobs after graduation? What are the main reasons behind this?
11. What are the main reasons for unemployment in the region?
12. What potential solutions to the problems identified you see?

Interview Guide for GTC and VTC managers

Introduction: Good afternoon, my name is _____. Thank you for agreeing to talk to me about the labour demand and supply of IT sector in the region and the existing drawbacks and available opportunities. This interview is a part of a larger baseline study conducted for United Nations Development Programme Armenia. The goal is to assess overall situation of labour market in your region, identify the gaps and track the reasons behind. I can assure you that whatever you say here will remain strictly confidential. The discussion is being recorded to make sure that we don't miss something important, but no one except myself and my research colleagues will have access to this record.

1. What are recruitment procedures in your organization? How do you attract applicants?
2. Where most of your employees are (region, town)? Why?

3. Do you have any difficulty in finding the desired professionals? Please elaborate.
4. Do you or have you ever cooperated with State Employment Agency? Please elaborate.
5. Do you have any volunteering/internship/apprenticeship programme? If yes, do you cooperate with local universities? If yes, please elaborate on the nature of cooperation.
6. Do you think paid internship/apprenticeship programme in cooperation with the universities will help IT companies in having the employees they want? Please elaborate.
7. What kind of skills, including soft skills should an applicant have to be able to work in IT sector?
8. What are the difficulties for the development of the sector?
9. What are the available opportunities for the development of the sector?
10. Is there any development of entrepreneurship in the sector? What are the difficulties for the youth to start a business in IT sector?
11. Why students are not able to find jobs after graduation? What are the main reasons behind?
12. What are the main reasons for unemployment in the region?
13. What potential solutions to the problems identified you see?

Interview guide for regional administration representatives

Introduction: Good afternoon, my name is _____. Thank you for agreeing to talk to me about the current situation of the regional economy, labour market and the issue of unemployment. This interview is a part of a larger baseline study conducted for United Nations Development Programme Armenia. The goal is to assess overall situation of labour market in your region, identify the gaps and track the reasons behind. I can assure you that whatever you say here will remain strictly confidential. The discussion is being recorded to make sure that we don't miss something important, but no one except myself and my research colleagues will have access to this record.

1. What are the main market sectors in the region that are developing and have potential for continuous growth? Please elaborate on each one.
2. Are there any sectors that have potential for growth but does not develop? If yes, why?
3. Are there any development programmes directed to the exact market sector? Please elaborate.
4. Are there any programmes for the solution of the unemployment? Please elaborate.
5. Are there any major investments expected? Please elaborate.
6. What are the main problems for the development of each market sector you mentioned?
7. What are the main reasons for youth unemployment in the region?
8. What are the main obstacles for starting a business in the region? Are there any difficulties for the youth?
9. How you see the solutions for the identified problems?

Interview guide for NGO representatives

Introduction: Good afternoon, my name is _____. Thank you for agreeing to talk to me about the situation of volunteering in the region and the existing drawbacks and potential opportunities for the development of the practice. This interview is a part of a larger baseline study conducted for United Nations Development Programme Armenia. The goal is to assess overall situation of labour market in your region, identify the gaps and track the reasons behind. I can assure you that whatever you say here will remain strictly confidential. The discussion is being recorded to make sure that we don't miss something important, but no one except myself and my research colleagues will have access to this record.

1. Please describe the volunteering/internship activities in the region? How would you rate the engagement of the youth into volunteering?
2. What are the demographics of the volunteers (location, gender, age)? Please identify the reasons behind.
3. What are the obstacles on the way of youth engagement into volunteering?
4. Do you cooperate with the universities for engaging the students into volunteering? Why yes, why not? Please elaborate.
5. Why do you think the youth wants to volunteer? What is the most attractive part in the process for the young people?
6. What are the main responsibilities of the volunteers? What kind of work they do?
7. Do you consider the profession of the volunteers while giving tasks?
8. What do you think the youth faces unemployment in the region?
9. Can volunteering, internship, apprenticeship help young people find their place in labour market? Please elaborate.
10. What is needed for the development of the practice in the region?