

SKILLS MISMATCH MEASUREMENT IN GEORGIA

Report written by Irina Badurashvili for the European Training Foundation.

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CONTENTS

| | |
|---|----|
| ACKNOWLEDGEMENTS | 3 |
| INTRODUCTION | 5 |
| 1. CONTEXTUAL INFORMATION..... | 7 |
| 1.1 Country context and institutional background | 7 |
| 1.2 Demographic development | 8 |
| 1.3 Education system | 8 |
| 1.4 Labour market situation | 9 |
| 1.5 Labour legislation | 10 |
| 1.6 Labour market policy | 11 |
| 1.7 Developments in skills mismatch | 13 |
| 2. THE DATA..... | 17 |
| 2.1 Labour force survey | 18 |
| 2.2 Other regular data collection | 19 |
| 2.3 Administrative data | 20 |
| 2.4 Overall assessment of the data | 20 |
| 3. INTERPRETATION AND DISCUSSION OF SKILLS MISMATCH INDICATORS..... | 22 |
| 3.1 Unemployment rate and unemployment-to-employment ratios | 23 |
| 3.2 Employment-to-population ratio | 27 |
| 3.3 Young people not in employment, education or training | 29 |
| 3.4 Variance of relative unemployment rates (by education level) | 31 |
| 3.5 Coefficient of variation (CVAR) by skills | 32 |
| 3.6 Relative wages | 34 |
| 3.7 Occupational mismatch | 36 |
| 3.8 Over-education | 37 |
| CONCLUSIONS..... | 40 |
| LIST OF ACRONYMS..... | 42 |
| LITERATURE..... | 43 |

INTRODUCTION

In 2017, the European Training Foundation (ETF) initiated a mismatch measurement project with a twofold objective: identification of regular data sources and developing and testing a series of indicators fit to capture various angles and implications of skills mismatches. Four pilot countries were selected (Egypt, Georgia, Morocco and Serbia) in 2017. The work continued in 2018 with another three countries: North Macedonia, Montenegro and Moldova.

This report is the result of the ETF initiative on measuring skills mismatches. Through a combination of international and local expertise, and in close cooperation with national stakeholders, the work included the definition and testing of a set of indicators, using existing data from reliable sources. These indicators are based on international practice, and were chosen based on their feasibility in view of the countries' data availability. Country reports, for each of the involved countries, were drafted to present the results of the calculations but also to contextualise and interpret the results within each country's context.

Besides this report and those produced on the other countries, a cross-country report complements the country findings and further delves into methodological aspects and assesses the potential to replicate such initiatives in other ETF partner countries.

This analytical exercise may help institutions and partners in the countries to assess the effectiveness of their skills policies. A deeper knowledge of the nature and incidence of the skills mismatch, including a good contextualisation (e.g. socio-economic aspects, labour regulations, job-matching services), would in turn enable countries to better target their efforts to match supply to demand through education, training, employment and other policy interventions.

A skills mismatch is mostly measured by proxy in the current project. Education and occupation are proxies for the skills taught and the skills required in a job, respectively. The various ways in which the indicators are calculated allow us to identify problems or mismatches, while in itself they rarely enable us to pinpoint the exact nature or cause of the mismatch. Therefore, a skills mismatch in the current context entails a mismatch in the level of education or skills with those required in the occupation (job), the so-called vertical mismatch, but it also includes a horizontal mismatch in which the field of education does not match the occupational area even though the overall education level does match.

In terms of data sources for calculating mismatches, priority was given to reliable (and ideally regular) products, such as labour force surveys (LFS). Other sources were also consulted, namely administrative or survey data on vacancies and employers' needs, tracer studies, school-to-work transition studies, jobseeker databases and sector skills analyses, if available. The main indicator definitions that provide key information on skills mismatches are listed below.

- **Over-qualified** is the state of being skilled or educated beyond what is necessary for a job.
- **Under-qualified** is when an applicant/employee does not have the necessary level of education, abilities, qualities, attributes, etc. to perform a particular job or task.
- **Skill obsolescence** is the 'degree to which professionals lack the up-to-date knowledge or skills necessary to maintain effective performance in their current or future work roles' (Kaufman, 1974).

Using the data set available in Georgia and in line with the cross-country methodological approach to skills mismatches, eight indicators (or clusters of indicators) are calculated and discussed in this report, as follows:

- unemployment rates by various dimensions,
- proportions of unemployed people to employed,
- people not in employment, education or training,
- coefficient of variation for education,
- variance of relative unemployment rates,
- mismatch by occupation,
- over- and under-education,
- relative wages.

This report describes and interprets these indicators with the aim of clarifying the methodology used to measure and analyse skills mismatch based on existing data sources. It also aims to provide insights into the areas in which mismatches might occur in the country's labour market. Anyone who generates, interprets or uses labour market information, or is involved in education and/or labour market policy, might be interested in understanding the various ways in which the labour market and skills can be analysed. In addition, this report makes some proposals on how to develop further indicators, data infrastructure or labour market analysis for Georgia.

The first section of the report includes background information on Georgia's economy, labour market, social and demographic aspects, among others. Such background information is essential to contextualise the discussion on skills mismatch and avoid insufficient or biased interpretation of mismatch indicators. The data situation, sources and aspects of comparability are explored in the second section. Calculation of indicators is based on an excellent cooperation with the Georgian authorities in the field of employment, economy, education and statistics.

The third section discusses the relevance and results for each selected skill mismatch indicator (or cluster of indicators), while the fourth section summarises the key conclusions and hints at the main policy implications. As the main objective of this ETF initiative was to develop a feasible (and replicable to other ETF countries) approach to skills mismatch measurement and analysis, the proposed conclusions do not dig extensively into policy implications. To get a better insight on how to respond to skills mismatches would require a wider analysis of education, training and employment systems and the available resources and capacities. Nevertheless, the report's findings suggest most important avenues for further action.

We hope the results of skills mismatch measurement in Georgia by using data available on a regular basis would further inspire the continuous effort of Georgian policymakers and stakeholders to consolidate the research on skills needs' identification and anticipation, on the one hand, and enhance the skills matching policies and programmes, on the other hand.

1. CONTEXTUAL INFORMATION

1.1 Country context and institutional background

Georgia experienced turbulent times during the political transition from the Soviet Union to independent statehood, and the economic transition from a centrally planned economy to a market economy. Real gross domestic product (GDP) per capita declined by 79% from 1988 to 1994. The decline lasted for five years (the shortest observed among post-Soviet countries) but was the largest cumulative decline of them all (European Initiative – Liberal Academy Tbilisi, 2012). During its first five years of independence, Georgia experienced acute hyperinflation, which prevented economic development and exacerbated the country's social problems. After 1995, the inflation rate declined and the economy started to grow at an average of 6%: inflation averaged 7.5% from 1996 until 2017, with a record low of 3.3% in May of 2012¹.

Reforms carried out in the country, especially after the Rose Revolution of 2003, have accelerated growth. The government managed to improve the business climate substantially. The country moved up from 112th to 37th place in the Ease of Doing Business ranking in one year, from 2005 to 2006. In 2016, Georgia ranked 16th² – the same position as in 2008, when economic development was interrupted as a result of the conflict with Russia in August 2008 and the global financial crisis. GDP per capita (by purchasing power parity) averaged USD 5 248 in the period from 1990 until 2016, reaching an all-time high of USD 9 745 in 2017³.

In terms of the production structure during the period observed, Georgia has transformed from an agriculture-driven economy to a more diversified and services-driven one. While in 1996 more than a third of value added (34%) was in agriculture, in 2016 the sector's contribution had fallen to 9%, although it held its place among the three highest value-adding sectors. The other two are trade (15.3%) and manufacturing (10%), with relatively stable shares of GDP. The construction and transport sectors have traditionally played an important role in the development of the Georgian economy, contributing about 8% to national GDP. The fastest growing sector is finance, which accounted for only 1% of GDP in 1996, but reached 4% in 2016. Slightly smaller but still substantial advances were seen in the real estate sector, which went from 2% in 1996 to 7% in 2016 (Geostat data⁴).

However, the employment structure is still traditional, with agriculture accounting for 46% of total employment. The industrial sector is small, representing only 11% of total employment. The market service sector is relatively large (25% of employment), but is dominated by trade, which is largely a low value-added activity. The public services sector is also large, and activities such as education, healthcare and administration account for 17% of total employment. Modern business and financial services play a minor role, as their share in non-agricultural employment is less than 6%. The majority of jobs in the country are therefore in the traditional, low-productivity sectors, while only a minority of jobs are in modern, high-productivity sectors (World Bank, 2013, p. 16).

¹ For further details, please consult: <https://tradingeconomics.com/georgia/inflation-cpi>

² For further details, please consult: <https://tradingeconomics.com/georgia/ease-of-doing-business>

³ For further details, please consult: <https://tradingeconomics.com/georgia/gdp-per-capita-ppp>

⁴ Preliminary data for 2016 can be found here: http://geostat.ge/cms/site_images/files/georgian/nad/pres-relizi_2016_GEO.pdf

1.2 Demographic development

The last population census in 2014 showed a decrease in the national population from 4.1 million in 2002 to 3.7 million in 2014, and population growth has been negative since independence. Both low fertility rates and high levels of emigration have contributed to this. According to the United Nations Population Division (UN, 2017), net emigration rates from Georgia (including Abkhazia and South Ossetia) during the period from 1990 to 2015 were the highest among the countries of the world with more than 1 million inhabitants. There is some indication, though, that the fertility rate has improved in the country since 2008.

Out of the total Georgian population, 57% live in urban areas and almost 30% of the entire population live in the capital city, Tbilisi. In 2014, ethnic Georgians accounted for 87% of the country's population. Ethnic minorities include Azerbaijanis (6%) and Armenians (4.5%). The official language is Georgian and 87.5% of the population are native speakers. However, the low level of fluency in the official language among the main ethnic minorities is problematic: in 2014, only 19% of ethnic Azerbaijanis spoke Georgian fluently and the figure for ethnic Armenians was 35% (ibid.). Without a proper command of Georgian, ethnic minorities have little, if any, chance of getting a higher education in the country. Indeed, while 39% of the ethnic Georgians report having a higher than secondary education, the corresponding indicator for Armenians and Azerbaijanis stood at 9% and 6%, respectively (CRRG, 2015).

1.3 Education system

Since 2004, Georgia has introduced comprehensive reforms at all levels of education, with the aim of creating a credible education system that is compatible with internationally accepted standards and concepts. Significant international community's (donor) resources were devoted to ongoing educational reform in the country and it is central to the Socio-economic Development Strategy, known as 'Georgia 2020'. Public expenditure on education is still relatively low, accounting for about 3% of GDP during 2007–13. This is significantly lower than the 5% average for Commonwealth of Independent States countries and new EU Member States (IBRD/World Bank, 2014, p. 13).

Education is mandatory for all children aged 6–14 and illiteracy is minimal (0.4% in 2014⁵). The school system is divided into elementary (six years, age 6–12), basic (three years, age 12–15) and secondary (three years, age 15–18) or, alternatively, vocational education and training (VET, for two years). Only students with a secondary school diploma have access to higher education, and they have to pass standardised national examinations to enrol in a state-accredited higher education institution. The country has a high rate of enrolment in upper secondary education (92% in 2014) and a low rate of early school leavers (8% in 2014).

The educational attainment level of the labour force remains relatively high: in 2014, 62.1% of workers had a secondary education and 30.4% had a higher education. However, the quality of education remains an issue in Georgia's general education system. In the 2009 Programme for International Student Assessment (PISA) by the Organisation for Economic Cooperation and Development (OECD), Georgian students scored below the OECD average in all fields. Only 38% of students were proficient in reading literacy, 34% were proficient in science, and only 31% were proficient in mathematics at or above the functional level. Student participation in VET education, as well as its

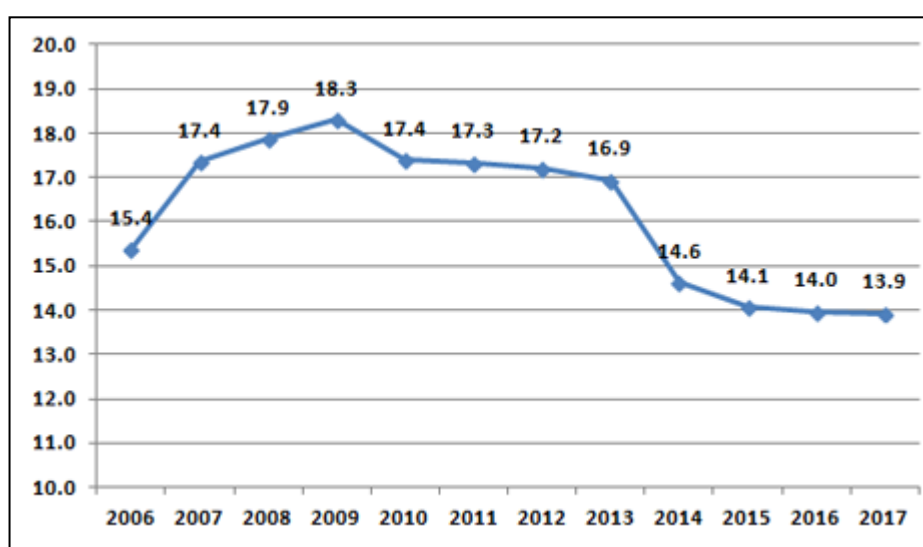
⁵ <http://census.ge/ge/results/census1/educationge>

relevance for the labour market's demands, are also important problems in Georgia (ETF, 2017a, p. 5; Unicef, 2014, pp. 13–19).

1.4 Labour market situation

The Georgian labour market has experienced major shifts over the last 25 years, with institutional and economic changes resulting in periods of growth and severe decline. Employment rates have been low, ranging from 51% to 57%, with the highest level of 57.4% reached in 2015 and some decline in 2016 and 2017 (Geostat, 2018). These employment rates are far below the 70% benchmark set for EU countries in 2010. Unemployment has been persistently high, reaching its peak of 18.3% in 2009 as a result of the August 2008 conflict and the global financial crisis. After that, the unemployment rate started to decline, reaching 13.9% in 2017 (see Figure 1.1)⁶.

FIGURE 1.1 UNEMPLOYMENT RATES (AGE 15+), 2006–17 (OFFICIAL STATISTICS)



Source: Employment and unemployment in Georgia (Geostat, 2018)

However, the official figures hide the extent of unemployment in the country⁷. Official statistics tend to overestimate national employment rates by including in the total number of employees those working in (subsistence) agriculture, including non-contributing family workers⁸. The true unemployment rate, especially in rural areas, is therefore probably higher than suggested by the official statistics. These provide unemployment figures for the rural population that are at least four times smaller than for the urban population: in 2017, the unemployment rate in rural areas was 5.1%, compared with 22.8% in urban areas⁹.

⁶ Note that unlike the indicators in the subsequent section, Geostat looks at the population of all people aged 15 and older: http://geostat.ge/index.php?action=page&p_id=146&lang=eng

⁷ According to a survey conducted by the National Democratic Institute in 2011, out of a total of 16 161 interviewees, 31% indicated that they were unemployed and looking for a job; 5% said they were not looking for work; and another 30% were in the inactive labour force, which includes students, retirees, etc. (Labadze and Tukhashvili, 2013, p. 20).

⁸ This category of unpaid employees in 2008, for example, represented 29.2% of the total number employed (USAID and IOM, 2010, p. 8). In addition, a rather broad definition of employment is used when registering the economically active population: it is enough even if a person worked just one hour on their own land in the week in question, or was fishing, hunting, sewing, picking berries or mushrooms, or preserving or canning food.

⁹ http://geostat.ge/index.php?action=page&p_id=146&lang=eng

The predominance of self-employed workers among the working population is a notable feature of the Georgian labour market. It has remained consistent over time and, at least in part, reflects the resilience of the informal economy and informal employment. The majority of the self-employed workforce in rural areas is employed in the low-productivity agricultural sector. That is why the share of income from self-employment in the average rural household does not exceed 7% of its total cash income (Geostat, 2016, p. 52). Self-employment does not include small businesses, which have a potential to generate income, reduce poverty levels and foster economic growth. Instead, it is mainly comprised of subsistence farming, informal trade or unpaid domestic work (Terterashvili, 2014, p. 5).

Many workers in Georgia, either in urban or rural areas, are still employed in the informal sector, often as a last resort providing only subsistence income. Seasonal unemployment is also widespread in the country, meaning some people are fully employed only for a few months a year. This 'secondary' market forces most Georgians into jobs that require limited skills and offer no career growth opportunities, difficult working conditions and low remuneration, with minimal social protections and guarantees. The problem of the 'working poor' has been acute since the 1990s, trapping people in low-paying salaried work or low earnings for the self-employed.

For many Georgian families, emigration to work abroad enables the household to survive on remittances sent from other countries. Between 7% and 8% of the current Georgian population has experience of migration, meaning they have either emigrated or emigrated and returned (ETF and BCG, 2013, p. 9). According to the data from the Georgian Integrated Household Survey, approximately 7% of the population residing in the country receives remittances from abroad. This correlates with estimates that between 6% and 10% of households in Georgia have absent labour migrants abroad (ibid., p. 12). These remittances make up 5% of overall household income in the country, but for the households that receive them, they provide almost half of the household budget (Badurashvili and Nadareishvili, 2012, p. 15).

1.5 Labour legislation

The Constitution of Georgia, ratified international agreements, the Labour Code, the Law on Trade Unions, and other relevant legislative acts regulate the rights and obligations of employers and employees. The trade unions have more of a role in protecting employee rights, implementing state employment policy and creating dignified working conditions in collaboration with employers.

The Labour Code adopted in 2006 was considered to be among the most liberal in the world. It radically increased labour market flexibility and shifted the power in industrial relations towards employers. As a result, there was no institutional setting for social dialogue at national or company level. The new amendments to the Labour Code, adopted in 2013, brought it more in line with international standards, providing a more balanced approach to the regulation of employment relations. It included a limitation on fixed-term contracts, maternity and paid leave requirements, and better regulation to allow for collective bargaining and protection against anti-union activities and strikes.

Part-time and flexible working opportunities for women are still an issue, as they remain unregulated. An absence of alternative contractual forms in Georgian labour legislation makes it difficult for women to combine family responsibilities and their professional career. This is also reflected in the female labour force's participation rate, which is below the rate for men. The gap in this rate for men and women was 16.4 percentage points in 2017.

1.6 Labour market policy

Initially, the Georgian labour market was largely unregulated with a lack of proper public institutions, and this has been a significant obstacle for its effective management. However, since the 2000s, several programmes have been launched to reduce unemployment levels. Among these programmes were projects aimed at providing vocational training, retraining and internships, and generating employment through the development of small- and medium-sized businesses.

The scale of these programmes was limited and the outcomes in terms of actual employment were small. Programme participants were offered mainly cash benefits rather than enhancing their qualification levels, leading to a labour market policy that failed to tackle the core problem of job creation. These programmes were therefore not able to provide tangible results due to a lack of proper evaluation and control mechanisms, and a relatively small programme size (Ambroladze, 2012, p. 25).

The national agency responsible for managing the financing and implementation of employment policy is the Ministry of Internally Displaced Persons from the Occupied Territories, Labour, Health and Social Affairs, created in 1995 after the merger of three different ministries. However, the department implementing the employment policy there was abolished in 2005 and was only created again in 2013. The Labour and Employment Policy Department, created within the Ministry of Internally Displaced Persons in 2014, has a mandate to develop national employment and labour market policies. Youth has been one of the initial target groups for its policies. The department has been receiving EU-funded technical support to improve its policies over 2014–18. The department developed a one-stop-shop in the form of a public, integrated web portal – the Labour Market Information System (LMIS) – which provides updated information on labour market trends, career guidance and occupational profiles. In 2017, some functions, particularly related to the exchange and management of information about the labour market between different Georgian agencies, have been delegated from the Ministry of Internally Displaced Persons from the Occupied Territories, Labour, Health and Social Affairs to the Ministry of Economy and Sustainable Development, including the transfer of the unit dealing with the LMIS web portal from the Ministry of Internally Displaced Persons to the Ministry of Economy and Sustainable Development¹⁰.

Efforts to improve labour market management in Georgia are still in the very early stages. Endeavours over recent years have resulted in the development of several crucial policy documents, including: the State Strategy for the Formation of the Georgian Labour Market 2015–18 and its Action Plan; the State Strategy on Developing the LMIS 2015–18 and Action Plan; the Strategy for Developing Publicly Available Lifelong Vocational Counselling and Career Planning 2015–17 and Action Plan; the State Programme of Development of Employment Promotion Services 2015–18 and Action Plan; and the Active Labour Market Policy Strategy 2016–18 and Action Plan.

The State Employment Agency was created in 2006 but dissolved one year later. The Employment Support Services (ESS), created within the Social Services Agency in 2014, was intended to act as the country's public employment services. It was made responsible for registering jobseekers and vacancies, providing employment services, and implementing active labour market programmes (ALMPs). The main ALMPs introduced so far have been training and retraining programmes for the unemployed; employment support programmes for vulnerable and less competitive groups; internships at private companies for the unemployed; job subsidisation for vulnerable jobseekers; as well as job fairs in different regions, vocational counselling and career guidance.

¹⁰ See the LMIS web portal: www.lmis.gov.ge/Lmis/Lmis.Portal.Web/Default.aspx

The Programme for Employment Support Services Development and associated action plan for 2015–18¹¹ sets out the employment support services to be provided by the Social Services Agency, including job counselling and placement services, ALMPs and labour market intelligence. The agency has launched a job portal called Worknet (www.worknet.gov.ge), on which jobseekers, employers and vacancies are registered. It enables automatic matching of jobseekers and vacancies, and when there is a match between the vacancy, jobseeker profile and interest expressed by any of the parties, a text message is sent. In parallel, employment agency staff filter and classify users based on the terms of a vacancy and send text messages with relevant information about the chosen applicants to the employer.

There are some private employment agencies, which mainly deal with labour migration abroad. The Ministry of Internally Displaced Persons from the Occupied Territories, Labour, Health and Social Affairs is implementing a programme on supporting the reintegration of returning Georgian migrants¹², including retraining and funding their micro-business projects. Some international organisations also have similar programmes for specific groups of the population, such as internally displaced persons, female entrepreneurs and people with disabilities.

Some online job platforms have existed in Georgia for a long time now to help jobseekers to find employment (www.jobs.ge, www.hr.ge and www.hr.gov.ge). However, the range of vacancies available is limited and data shows that the majority of jobseekers in the country find a job through informal contacts.

According to the study undertaken by the Caucasus Research Resource Centres in 2013, useful connections and education are considered to be the two most important factors in getting a good job in a country where unemployment is high¹³. As a lot of Georgians tend to look for a job through informal channels, it is not surprising that job interviews are uncommon in the country. According to a study conducted in 2014 by the Tbilisi State University Centre for Social Sciences, 44% of Georgians use their family, friends and acquaintances to find a job and almost two thirds of those who rely on their social networks to find a job get employed. Only half of the 1 364 people who were formally or informally employed in various parts of the country had a job interview. However, if someone is to be interviewed for a job, it is highly possible that they will be asked personal questions not related to their career. Over 65% of all respondents (men and women) were asked about their marital status during an interview, and 40% of them were asked how many children they had. Such questions can lead to discriminatory treatment, because having a family can be seen as an advantage for a man and a disadvantage for a woman (Popovaite, 2015).

A representative survey of enterprises conducted by the Ministry of Economy and Sustainable Development also revealed that informal connections are an important source of staff for local employers: nearly half of enterprises (45%) hire new staff with the help of relatives, friends or acquaintances (MoESD, 2017a, p. 29). Employers also contribute to the issue of youth unemployment because, as a rule, they are seeking experienced employees, so recent graduates experience problems finding appropriate jobs.

The country's Socio-economic Development Strategy 'Georgia 2020', which sets out an overall policy framework for employment and the labour market, recognises the need to improve how the labour

¹¹ Ministerial Order, December 2014:

http://moh.gov.ge/uploads/files/oldMoh/01_GEO/Shroma/kanonmdebloba/1.pdf

¹² <http://mra.gov.ge/eng/static/8769>

¹³ <http://crrc-caucasus.blogspot.com/2015/06/connections-or-education-on-most.html>

market functions. It defines several activities to institutionalise labour market research; develop labour market intelligence; ensure effective communication between employers and jobseekers; develop public and private job mediation services; create a system for retraining unemployed individuals and jobseekers; and launch programmes to promote self-employment and entrepreneurial activities.

Moreover, the EU-Georgia Association Agreement including the Deep and Comprehensive Free Trade Area, signed in 2014, requires labour and employment legislation to be adapted to European standards. This includes, for example, legislation on decent work, employment policy, ALMPs, health and safety at work, social dialogue, social protection, social inclusion of people with disabilities and from minority groups, gender equality and antidiscrimination (ETF, 2017a, p. 8).

1.7 Developments in skills mismatch

A lack of proper public institutions has created significant obstacles for effective management of the Georgian labour market. Some functions have recently been delegated from the Ministry of Internally Displaced Persons from the Occupied Territories, Labour, Health and Social Affairs to the Ministry of Economy and Sustainable Development. In particular, these include functions related to the exchange and management of labour market information between different Georgian agencies.

In 2007, the International Organisation for Migration (IOM) began comprehensive research into labour market mismatch in Georgia. The latest survey, in 2010, demonstrated that even in conditions of mass unemployment, most employers in the country have difficulties recruiting staff with the required experience and qualifications: 34% of entrepreneurs encounter problems recruiting the staff they need; 54% of hard-to-recruit personnel are skilled workers, 31% are higher education specialists, and 2% are unskilled workers; and 13% of employers encounter difficulties recruiting staff and specialists with a higher education (USAID and IOM, 2010, p. 37).

The 2017 Business Demand for Skills in Georgia survey has revealed around 19 000 job vacancies in 5 651 reported organisations (MoESD, 2017a, p. 36). The main reason for the labour shortage in specific positions is the lack of skills and experience, a low number of applicants and low salaries. A wide range of problems have been observed in the process of filling 'white-collar' and 'blue-collar' job vacancies, specifically in fields such as science, manufacturing, services, trade, office work, art, entertainment and sports.

According to the survey, professional vacancies are particularly problematic to fill, as are those in food-processing and related trades, and those requiring stationary-plant and related operators. This is a direct reflection of the recruitment problems facing the manufacturing sector (ibid., p. 42). The low qualification level among jobseekers and employees makes it necessary to seek workers from abroad in many cases. According to adverts published in 2016 by private employment agency hr.ge (www.hr.ge), the majority of vacancies are positions such as: sales consultant manager or agent; credit manager; loan expert; cashier; distributor; waitress; cleaner; call centre operator; office manager; cook; accountant; advertising agent; nurse; security guard; courier; and IT specialist (MoESD, 2017b, p. 22).

Some experts suggest that imbalances between the supply and demand of the workforce in the Georgian labour market are caused by the structural unemployment that predominates in the country. However, there is also friction unemployment, which gradually transforms into structural unemployment (Paichadze et al., 2016, p. 100).

A skills mismatch occurs when the supply of skills does not match the demand for skills and, specifically, when the skills that workers have differ from those that employees need. There are

currently no direct measures of skill demand and supply in Georgia. Education and occupation are usually used as proxies for skills.

The World Bank conducted research on this, comparing the structure of jobs by education and occupation with that of the labour force. It found a discrepancy between the traditional employment structure in the country – indicative of a limited demand for highly skilled labour – and a large supply of workers with a tertiary education. However, the modern sector of the Georgian economy is too small to absorb all of those workers, and many highly educated workers are therefore unemployed or employed in low skilled jobs. At the same time, many workers with higher education diplomas seem to lack important employability skills. Despite high unemployment, employers often cannot find workers with the required skills. Over-education (also known as a ‘vertical mismatch’) seems to correspond with under-skilling, or a skills gap (World Bank, 2013, p. 15).

According to this survey, two thirds of Georgia’s urban workers seem to be well matched to their jobs. Given the high level of educational attainment in the country, it is not surprising that only 4% of all urban workers are under-educated for their current jobs. These results suggest that Georgia’s main problem seems to be the underutilisation of skills: too many urban workers underuse their skills in their current jobs, which might lead to occupational downgrading and worker dissatisfaction. This is the case for about 20% of urban workers who have completed tertiary education and work in jobs that only require secondary education. Women (with or without young children) and informal workers are more likely to be over-educated for their current jobs. Furthermore, having a tertiary education and the particular field of study are both factors that are closely linked to the likelihood of being over-educated in relation to the skills required for the job. In particular, urban workers with the lowest level of tertiary education, or less than 16 years of education, face greater risks of downward occupational mobility.

As far as the field of study is concerned, the rate of over-education is highest for business graduates. Graduates in science, technology, engineering and mathematics (STEM); information and communication technology (ICT); and architecture are also slightly more likely to underuse their skills in their current occupations. The percentage of over-educated workers is lowest for graduates in humanities and social sciences, education and social services, and law and health (World Bank, 2018, p. 128).

The traditional employment structure in Georgia limits the demand for highly educated workers, although the country has a large supply of them. At 31%, the percentage of workers with a tertiary education is high, not only for middle-income countries such as Georgia, but also for high-income European countries. Only 9% of workers have less than a secondary education. Highly educated workers are concentrated in urban areas, where every second worker has a higher education diploma. Even in rural areas, one in six workers has a tertiary education.

There is clearly a mismatch between the demand for highly educated workers and their supply. Given the country’s industrial structure, relatively few jobs require a higher education. The demand for college graduates in agriculture or trade – the two largest industries in Georgia – is also limited. At the same time, there are not enough workers with vocational training to fill the large proportion of jobs that require vocational skills. Workers with a tertiary education currently fill many of the jobs requiring vocational skills (World Bank, 2013, p. 19).

The abovementioned research also suggests that highly educated workers do not have the specific skills needed in the labour market. There is a large pool of jobless workers with a tertiary and secondary education, which could suggest that employers should not have problems finding workers with the necessary skills. However, many Georgian employers report that hiring workers with the necessary skills is difficult.

Over-qualification is common in Georgia. Several assessments have confirmed that there is a high degree of mismatch between qualifications and skills, with an excess supply of higher or over-qualification. This is also proven by the fact that the share of workers with a higher education in Georgia is higher than in many developed-economies and the OECD average. According to ETF calculations for 2015, 27.8% of Georgian young people (aged 15–24) are not in education, employment or training (NEET) (ETF, 2015). This figure is two or three times higher than in most EU countries, where the NEET share rarely exceeds 15%.

As a result, a large proportion of workers with a tertiary education take lower skilled jobs and work in occupations that do not require a tertiary degree. Over-qualification is a direct consequence of over-education. Highly educated workers are compelled to take lower skilled jobs because there are not enough jobs that require higher skills. Only one in two workers with a tertiary education works as a professional or manager; the rest work in occupations that do not require a university diploma. Many highly educated workers are employed in agriculture (14%), as manual workers (10%) and as salespeople (10%). Looking at over-qualification by type of employment, almost 30% of salespeople and 20% of unskilled workers have college or university diplomas (*ibid.*, p. 21). These figures indicate that over-qualification is a considerable problem in the country: a significant proportion of the workforce has invested in qualifications that are not needed, and that are higher than those required for the jobs that they do.

Some research suggests that only 60% of employed individuals who have an academic degree in Georgia are employed in their specialties. This rate is higher in the case of master's graduates (compared to bachelors), as a master's level qualification acts as an instrument of professional reorientation. The share of individuals employed within their profession, also varies significantly, and the lowest rate is in engineering (EPPM, 2013).

The Global Competitiveness Report (2018) places Georgia in the lower half of the countries' ranking in what regards the quality of vocational training, skillset of graduates and easiness to find skilled employees. This may suggest that the education system, in particular vocational education, is not fully effective at preparing professionals with the skills to meet current market needs.

In contrast to the general education system, the VET system should provide industry- and company-specific skills and knowledge. The VET system is extremely small. Out of 554 000 students in grades 1–12, 16 454 students were enrolled in VET programmes in 2016. This is just 3% of all general education students enrolled that year (grades 1–12). If applied only to the number of upper secondary students, however, the VET enrolment share reaches 10% (ETF, 2018).

According to research by GTZ, the main shortcomings of the VET system in Georgia can be classified into two categories. First, occupations involving technical skills are not well covered by the VET system; and second, the existing VET programmes do not match the needs of the business sector, which does not engage in the system (GTZ, 2010). Labour market surveys by GTZ have found that several branches of the industries require skills that are not taught at Georgian VET centres.

Studies show that the attitudes that the population and stakeholders have towards vocational education are becoming more positive, although this is a slow process (UNDP, 2016). This trend is also reflected in the increased enrolment of young people in vocational schools. The main challenge is not a lack of positive attitudes towards VET, but the fact that VET is considered a second-rate alternative to higher or general education. Today, VET is still affected by the stigma and negative attitudes of Soviet times, perceived to only be qualifying students for low-status, manual and poorly paid jobs. In addition, students and stakeholders are hindered by 'dead-ends', which create barriers

for graduates wishing to progress to the upper levels of education. This issue has been addressed in the new VET law, but it has not yet been approved or come into force.

Despite implementing a number of measures to reduce the imbalance between supply and demand, the quality of VET still needs to be improved. Studies from 2015 (UNDP, 2016) once again reveal the need for graduates' skills to be developed further and for the quality of professional qualifications to be assured.

The data available for 2015 shows that VET graduates in Georgia performed slightly better in the labour market than university graduates. The unemployment rate for university graduates in 2015 was higher (14.4%) than for VET graduates (11%). Conversely, for young people (age 15–24), the highest unemployment rate is among VET graduates (36%) and secondary education graduates (33%), as opposed to university graduates (30.8%). Since 2016, however, the difference between VET and university graduates has disappeared (ETF, 2018).

The analysis shows that young people (especially girls) face obstacles while transitioning into the labour market. This includes lack of trust in vocational qualifications among employers; a preference for higher levels of educational attainment; requirements for work experience that few young people can meet; and a skills mismatch between supply and demand. Despite the high level of unemployment, employers find it difficult to find the staff they require (ETF, 2017b, p. 2).

In a 2015 tracer study done by the VET Department of the Ministry of Education, 57% of VET graduates said that their job did not correspond to their VET qualification, while 32.2% said it did, and 7% said it partially did.

2. THE DATA

Georgia features a good level of data availability. A review of the data enabling a skills mismatch analysis follows below.

There are two monitoring systems in Georgia:

1. the Education Management Information System (EMIS), provided by the Ministry of Education, Science, Culture and Sport;
2. the Labour Market Information System (LMIS) is a web portal launched in 2016 by the Ministry of Internally Displaced Persons from the Occupied Territories, Labour, Health and Social Affairs. It provides updated information on labour market and education issues in the country. In July 2017, the function of maintaining and updating the LMIS was transferred to the Ministry of Economy and Sustainable Development (ETF, 2018).

The Ministry of Education, Science, Culture and Sport has evolved comprehensive institutional arrangements for managing and delivering VET, and has significant experience in developing and monitoring VET policy. Within the ministry, the VET Department is responsible for defining, coordinating and managing VET policy. The department has three divisions (Policy, Monitoring and Social Partnership).

There are six agencies that are subordinate to the ministry – the National Centre for Educational Quality Enhancement; the National Teacher Professional Development Centre; the Educational and Scientific Infrastructure Development Agency; the Education Management Information System; the Office of Resource Officers in Educational Institutions; and the National Assessment and Evaluation Centre – which all contribute to the overall design, management and implementation of VET policy.

The LMIS IT system was envisaged as a one-stop-shop public web portal with up-to-date information about the labour market conditions in Georgia, occupational profiles and outlooks, and career guidance. The LMIS is a mechanism for collecting, processing, analysing and disseminating labour market information to jobseekers, students, employers, policymakers and other stakeholders. It has a databank of 78 variables across 6 categories, including education, labour and economy. It provides information on employability, trends in industrial sectors, career prospects, etc., improving the information flow and supporting policymakers in their analysis and decision-making processes. It will ultimately provide updated information on labour market trends, career guidance and occupational profiles¹⁴.

The skills mismatch indicators analysed in this report are based only on those data sources that were available and collected on a regular basis for use in labour market information systems. Another requirement was that the basic indicators should be calculated across different ETF partner countries. It therefore relies heavily on the LFS conducted and published by the National Statistics Office of Georgia (Geostat).

There are several data sources at national level that are relevant to a statistical analysis of education and labour market dynamics in the country. They all have their own limitations when it comes to

¹⁴ See: <http://labour.gov.ge/molhsa/lmis/lmis.portal.web/default.aspx>

measuring skills mismatch. The national LFS is found to be the most comprehensive data source for calculating skills mismatch indicators at national level.

2.1 Labour force survey

According to the methodology on skills mismatch measures provided by the ETF, the most comprehensive data source for calculating skills mismatch indicators is the national LFS. Until recently (2016), the LFS was a part of the Integrated Household Survey, which has been conducted by Geostat since the mid-1990s. This quarterly survey is nationally representative, and it comprises approximately 3 400 households from all over the country, except the territories not controlled by the Georgian government.

In 2010–11, as part of the Millennium Challenge Georgia Programme that supported Geostat to produce more comprehensive national statistics, the Integrated Household Survey used a larger sample size (about 6 000 households). However, the content of the labour force statistics in that time remained the same.

The LFS interviewed everyone aged 15 and above in a household, except those family members who, at the time of the interview:

1. had been living outside of the household for more than 12 months;
2. were living at a military base; or
3. were living in prisons, psychiatric clinics, retirement homes and other types of specialised institutions.

All datasets up to 2017 are available and accessible online on the Geostat website. Since 2017, a new and separate LFS was started in the country with a revised questionnaire and larger sample size. Geostat publishes quarterly data (except for 2017). The new LFS will ensure that the sample size and design is comprehensive enough to publish official statistics on employment by occupation and branch of activity (industries). Previously, Geostat only released statistics on the distribution of the Georgian population aged 15 and older by age group, administrative region and economic status, and on the distribution of employed people by institutional sector (public vs. private).

According to the country specifics and recommendations provided by the UN's International Labour Organisation (ILO), the upper age limit is not defined, as there is a high rate of economic activity among the section of the Georgian population that is of post-retirement age. The following criteria and explanations used by Geostat are based on the ILO methodology¹⁵:

- **Economically active:** a person aged 15 or above who works or offers their labour for the production of the services or products that fall within the definition of a domestic product, as determined in the United Nations national accounts system.
- **Employed (hired or self-employed):** a person aged 15 or above who worked seven days prior to the interview process (for at least one hour) to generate income (salary, profit or other compensation in kind), helped other household members for free, or was formally considered employed but for some reason did not attend work.
- **Unemployed:** a person aged 15 or above who was not employed (even for one hour) seven days prior to the interview process, had been looking for a job for the last four weeks, and was ready to start working within the next two weeks.

¹⁵ *Labour force statistics* (basic definitions): www.geostat.ge/index.php?action=page&p_id=143&lang=eng

- **Economically inactive:** a person aged 15 or above who was not employed (for at least one hour) seven days prior to the interview process and had not looked for a job within the past four weeks. Also, a person who had been looking for a job in the last four weeks but was not prepared to start work within the next two weeks.

As mentioned above, Geostat does not publish data on the distribution of employed people by educational level. The LFS microdata available on Geostat website does include an education variable, but only by aggregated ISCED educational levels. The national classification of occupations follows the International Standard Classification of Occupations (ISCO). Some of the LFS variables, such as employment duration or company size, are only available for salaried employment. The age variable is presented in a dataset by five-year age groups.

With regard to mismatch-related variables, the Georgian LFS does not include data on the underutilisation of qualifications and skill obsolescence.

2.2 Other regular data collection

The Georgian population census (in 2002 and 2014) collects data on the population's education level. It includes questions on the education of all household members, including the highest level of education completed (for each person age 10 or above). During the censuses, employment data is collected on everyone aged 15 and older, including: (1) status of economic activity (same definition as the LFS has applied since 2014: employment during the last week, seeking a job during the past four weeks, and readiness to start work within two weeks); (2) employment status (hired employee, self-employed, employer, etc.); and (3) details of labour activity: title of organisation/ enterprise, type of goods or services produced, and job position or short description of what they are doing at work. To analyse the population's specific labour activities, data might also be used on the main source of livelihood recorded for each household member aged 15 and above.

Other surveys

The first nationally representative survey on employer demands on the labour force was conducted by the Ministry of Labour, Health and Social Affairs in 2015. This survey looked at demand by occupation and expectations for the future, as well as some mismatch-related indicators. The most common problems that employers face is the lack of necessary skills, which is also the main explanatory factor in hiring foreign workers: four out of ten cases are related to the lack of necessary skills among the Georgian labour force (cf. MLHSA, 2015; Rutkowski, 2015). The national authorities continued to investigate companies' skills requirements, and in 2017 the Ministry of Economy and Sustainable Development conducted a nationwide Establishment Skills Survey with over 6 000 companies, covering all sectors¹⁶.

The transition from education to work has been explored too. The Georgian Centre of Population Research conducted a national survey of 2 000 young people (age 18–35) as part of the international project Opportunities and Barriers at the Transition from Education to Work: A Comparative Youth Study in Azerbaijan, Georgia and Tajikistan (TEW-CCA). It was financed by the Volkswagen Foundation, and the data might be used if the microdata¹⁷ is made available.

¹⁶ www.lmis.gov.ge/Lmis/Lmis.Portals/Web/Pages/User/Surveys.aspx?ID=7a09257c-ac3c-4860-a7b0-b8fb3922405f

¹⁷ Microdata is not yet accessible outside of the TEW-CCA project team.

No structural tracer studies are available in Georgia for higher education institution graduates. However, during the autumn of 2014, the VET Department of the Ministry of Education, Science, Culture and Sport launched a tracer study of the 2 881 graduates at public vocational schools in the 2012/13 academic year who were registered in the EMIS database. The 2016 tracer study interviewed 3 767 out of the 6 781 graduates from public VET institutions in 2015. The study was based on a structured, standardised questionnaire, which was uploaded to the website poll.vet.ge and completed during phone interviews. The core questions are split into nine modules dedicated to several groups of respondents, depending on their current status: (1) studying at a higher education institution; (2) studying at a VET institution; (3) working; (4) started own business; (5) involved in family business; (6) intern; (7) unemployed; (8) back to school; and (9) other.

The World Bank STEP survey (Rutkowski, 2013) with data for 2013 shows significant qualitative skill mismatches in many dimensions of the skill spectrum, including language, technical skills and leadership. However, this has so far been only a singular assessment of the situation.

All these assessments of the labour market, especially in the school-to-work transition, are important steps in identifying aspects of skills mismatch and the improvements necessary in the education system and labour market. However, they do not yet provide a repeated structural assessment of the situation that would accommodate specific mismatch indicators based on such a survey.

2.3 Administrative data

Administrative data on business exists and have been used to draw representative samples of the demand surveys by the ministries. This includes organisational information such as location, economic activity code, size and ownership.

Jobseekers must register on the national jobseekers register: the Worknet portal (www.worknet.gov.ge). Posted vacancies can be accessed online, but the data processed is not made available to the public. In 2016, the Social Services Agency registered 70 123 jobseekers and 3 980 job vacancies in the Worknet portal, and made 670 job placements in total (SSA, 2016).

2.4 Overall assessment of the data

Overall, the data available for Georgia can be considered good. The LFS seems fairly reliable and is able to provide the data necessary for key labour market statistics, as well as most of the basic skills mismatch indicators. It enables the indicators to be broken down into various groupings and dimensions.

A wealth of additional data is available. Most of the additional data is based on projects that have not yet led to the regular or structural collection of comparable data over time. However, there seem to be some developments towards providing some of the incidental data more regularly (tracer studies). This could be especially useful, as the indicators for the next part of this report point towards mismatches and problems in the school-to-work transition. These would best be analysed using specific data collections targeting this process and the underlying reasons.

There is some information on demand and vacancies based on surveys among employers. However, a more structural and comprehensive collection of vacancy data would help to bring together information on supply (based on existing data) and demand, as identified by vacancy surveys. Administrative data on vacancies might partly fill this gap, but the specific elements of demand in terms of skills required should also be collected for it to be fully useful. Additionally, great care should

be taken to clean the administrative registers of filled vacancies, to ensure that only vacancies that are still open are registered in the system.

The data used in this report is mainly based on the LFS. Additional data sources have been used to extend some of the analysis and to deepen, develop or confirm the insights taken from the indicators.

3. INTERPRETATION AND DISCUSSION OF SKILLS MISMATCH INDICATORS

While labour market imbalances generally relate to a difference between demand and supply, mismatch concentrates on certain aspects of those imbalances, specifically, a mismatch in skills or qualifications.

Skills mismatch can occur even when the total supply meets total demand in terms of numbers, but not in skills or qualifications. The dimension of skills mismatch at a micro-level is reflected as follows: skills are in the correct field for a specific task or occupation, but the level of skill is lower than usually required for the specific occupation or task. This is usually referred to as vertical mismatch, over- and under-education and/or over- and under-skilling. Horizontal mismatch occurs when the level of the qualification is sufficient, but the type or field of qualification does not adequately match. The more that detailed job requirements can be measured in terms of skills or qualifications, the more likely it is that there is some horizontal mismatch. The less detailed the data is, the less likely it is to identify horizontal mismatch, even where it exists.

The body of knowledge and recommendations summed up in the ETF methodological note (ETF, 2012), as well as other important studies carried out on skills mismatch by the Joint Research Centre (2014), Cedefop (2015), the European Commission (2015) and Eurostat (2016) represent the essential conceptual and methodological starting point for this country study.

The following pages discuss the skills mismatch indicators, using existing data and providing an interpretation in line with the country's context.

TABLE 3.1 OVERVIEW OF INDICATORS: DEFINITIONS AND INTERPRETATION

| Indicator | Definition | Purpose | Data source(s) | Interpretation |
|---|------------|--|----------------|---|
| Unemployment rate | $U/(E+U)$ | Official unemployment rate Often uses a strict definition of unemployed (searching for a job within the past four weeks) | LFS | Higher unemployment rates reveal a mismatch between demand and supply. |
| Unemployment-to-employment ratio | U/E | Like the unemployment rate but simpler to calculate Provides a direct interpretation of the proportions of employed and unemployed people | LFS | See above. Note also that the different groups might exhibit quite different ratios. Here, youth U/E shows problems in school-to-work transition; old age U/E shows a lack of relevant skills or institutional barriers to employment. |
| NEET (not in employment, education or training) | $IA+U/POP$ | Looks at unemployment among young people in the school-to-work transition | LFS | The number of young people that are neither working (after education) nor in education provides an insight into barriers to entering the labour market. Depending on age/education, this reveals a lack of acceptance of skills gained in the education system. |

| Indicator | Definition | Purpose | Data source(s) | Interpretation |
|--------------------------|---|---|--|--|
| Over-education | % with education level above required/identified level of education for occupation (group of occupations) | Degree of mismatch by qualification level | LFS and skills surveys | Higher percentages of over-education (or an increase) reflect higher mismatch. |
| Under-education | % with education level under required/identified level of education for occupation (group of occupations) | Degree of mismatch by qualification level | LFS and skills surveys | Higher percentages of under-education (or an increase) reflect higher mismatch. |
| Coefficient of variation | | Comparison on differences in education level among employed to unemployed | LFS | Higher levels indicate higher incidence of skills mismatch. |
| Wage rates (relative) | Various definitions Mostly index of wages relative to base year (and relative to specific base level) | Examines the overall level at a specific time, and development over time | LFS, wage surveys and administrative (tax or social security) data | Increasing (relative) wages usually indicate a higher (relative) demand for a specific group, i.e. an increase in the wages of higher educated workers compared to intermediate reflects a higher relative demand for higher educated workers. |

Notes: **U** – unemployed, **E** – employed, **IA** – inactive, **POP** – population. The population is, by definition, the sum of employed, unemployed and inactive people ($POP=U+E+IA$), while the labour force (LF) is defined as unemployed plus employed people ($LF=U+E$). The inactivity not related to school participation is taken into account for the calculation of NEETs indicator.

3.1 Unemployment rate and unemployment-to-employment ratios

The unemployment rate is the rate of unemployed people relative to the population that is active in the labour market (the sum of employed and unemployed). Higher rates show an increasing mismatch between supply and demand. Related to this are the unemployed-to-employed (U/E) ratios, which show the extent of unemployment. A ratio of 0.1 implies that for each unemployed person there are 10 employed, while 1 implies a one-to-one ratio.

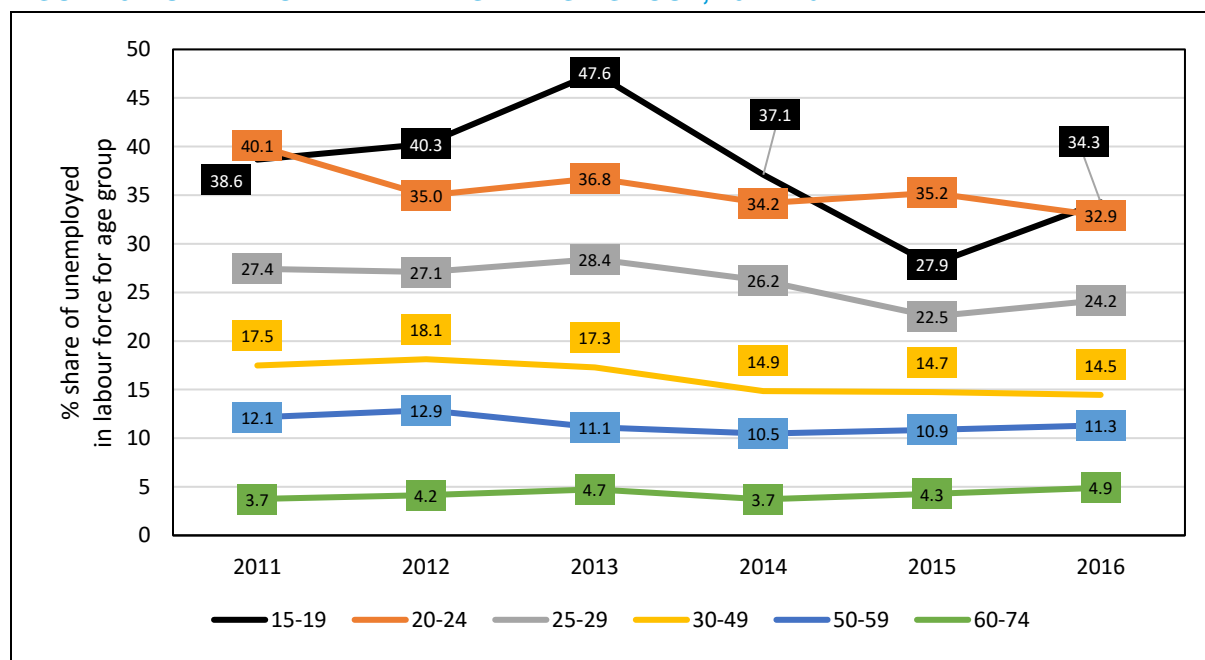
As mentioned in the previous sections, the general unemployment rates in Georgia have been decreasing since 2009. This corresponds to the overall picture presented in [Figure 3.1](#), in which unemployment rates are disaggregated by age group. Using additional dimensions such as age groups, education level or gender allows for a deeper understanding of the differential impact of unemployment across the various groups.

There are very high levels of unemployment in the younger age groups (age 15–29), which are in the seemingly difficult process of transitioning from education into the labour market. Only the population that is active in the labour market is taken into account to calculate unemployment. This has two implications for the younger age groups: on the one hand, there is a smaller active population as many are still in education and not in the labour market; and on the other hand, the transition from graduation to first employment can be difficult and lengthy and often it leads to inactivation. Therefore, the indicator of young people not in employment, education or training (NEETs) provides a fuller

picture of the joblessness among young people and precarious position on the labour market, particularly when transiting from school to work (the NEETs indicator is discussed later).

Unemployment rates decreased in all age groups in 2016, and most significantly (by more than 10 percentage points) in young people aged 25–29, compared to 2011. However, the particularly strong fluctuations in the younger age groups could be considered a statistical artefact caused by an insufficient number of respondents in the Georgian LFS. In general, labour force participation rates in the country are lower among young people compared to average national rates.

FIGURE 3.1 UNEMPLOYMENT RATES BY AGE GROUP, 2011–16



Source: Author's calculations using LFS 2011–16

Detailed indicators comprised of a combination of the employment variable with age and educational attainment of the respondents¹⁸ can sometimes give misleading results due to the small cell size of the combined variables¹⁹.

Figures 3.2–3.5 show the U/E ratios. They are calculated in a very similar way to the unemployment rate, differing only in denominator. Figures 3.2–3.4 show the breakdown of this indicator by education for the younger age groups (15–19, 20–24 and 25–29), while Figure 3.5 shows the same breakdown for the entire working-age population.

Taking Figure 3.2 as an example, we can see that the average U/E ratio in 2011 was 0.63, rising to a peak of 0.91 in 2013, before dropping to 0.52 in 2016. In the youngest age group, only the education levels ‘none’, ‘low’, and ‘intermediate’ are represented, as the highest level can only be achieved at a

¹⁸ The same considerations apply to further figures showing the ratios for different population sub-groups, such as inactivity to employment, or unemployment to employment. This is because indicators calculated for a category of population with no education are always very different from those for other educational levels.

¹⁹ For example, people with no education should usually be excluded from the calculation of these indicators, otherwise it can produce misleading results. As mentioned in previous sections, education in Georgia is mandatory for all children aged 6–14 and there is a high rate of enrolment in upper secondary education (92%). Only 0.4% of young people aged 15–19 do not have any formal education, and this figure remains similarly low for all Georgians up to age 60 (data from the last Georgian population census of 2014: <http://census.ge/en/results/census1/educationge>).

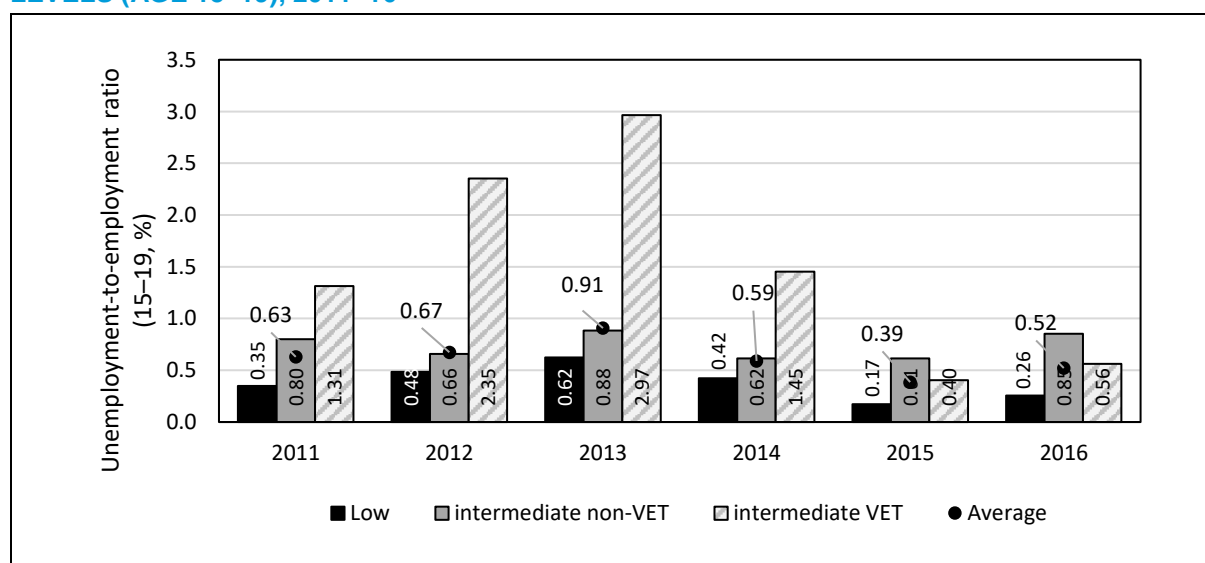
higher age. The main group pushing up the U/E ratio is those with an intermediate education. This can be explained by the fact that the majority of people in this age group are still in education and therefore not included in the statistic. They are only included in it when they are searching for jobs (unemployed) or working.

Figure 3.3 shows that the differences between education levels in the 20–24 age group are already diminishing, which is partly the result of a higher number of people with each of the education levels. Overall, the figure shows quite a stable U/E ratio over time, with the exception of the education level 'none'. The inclusion of uneducated people in the calculations might cause inconsistency in the time series over the relevant period as, for example, uneducated respondents are not included at all in the indicators for age 30–39. The same is true for the 50–64 age group (except in 2015). Therefore, the education level 'none' will usually be excluded in the calculation of further indicators.

Disregarding uneducated workers leads to the conclusion that the higher the educational level in Georgia, the higher the unemployment to employment indicator. This supports previous findings that low skilled workers now appear to be in higher demand in the labour market. However, there are some exceptions. For example, in the 20–24 and 25–29 age groups, this difference is not so obvious, and sometimes the ratio is in favour of workers with an intermediate education. This is in line with the findings discussed above: that VET graduates now perform slightly better in the labour market than university graduates. According to the ETF, the unemployment rate for university graduates was higher (14.4%) than for VET graduates, at 11% in 2015.

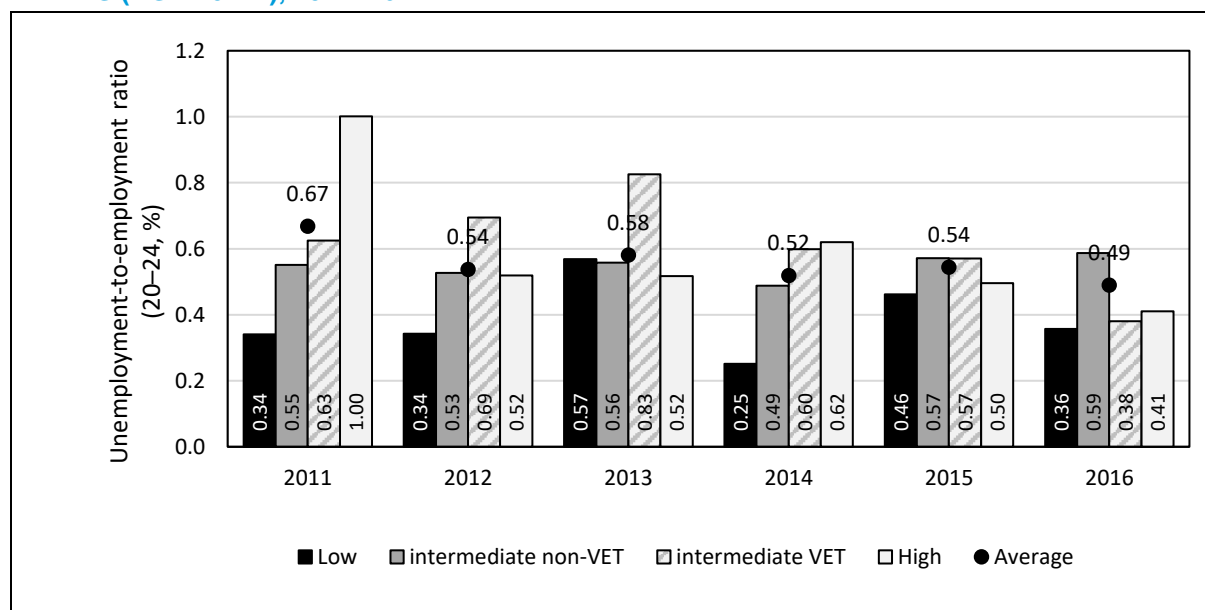
This varying level of integration into the labour market among people with different education levels diminishes as the age of respondents increases over the period observed. This is because of better employment outcomes for highly educated people. For the age group in which most employees are concentrated (30–49 years old), education plays a smaller role in employment opportunities. – unemployment to employment indicator during 2014–16) fluctuates only between 0.16 and 0.15 for respondents with each level of educational attainment.

FIGURE 3.2 UNEMPLOYMENT-TO-EMPLOYMENT RATIO BY EDUCATION ATTAINMENT LEVELS (AGE 15–19), 2011–16



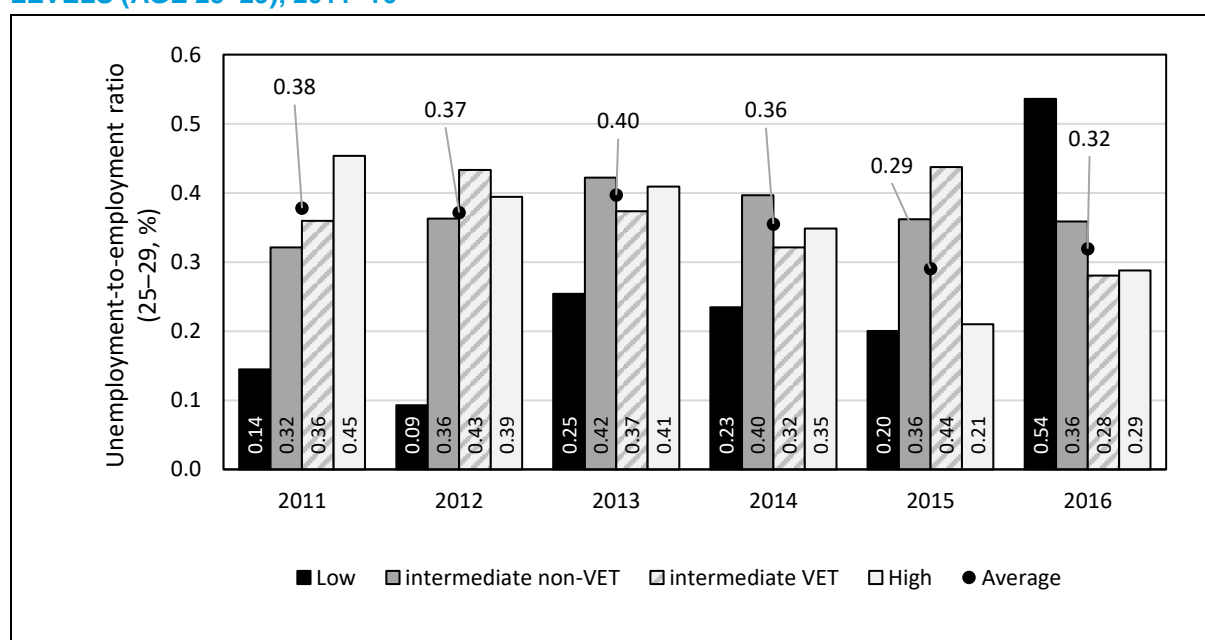
Source: Author's calculations using LFS 2011–16

FIGURE 3.3 UNEMPLOYMENT-TO-EMPLOYMENT RATIO BY EDUCATION ATTAINMENT LEVELS (AGE 20–24), 2011–16



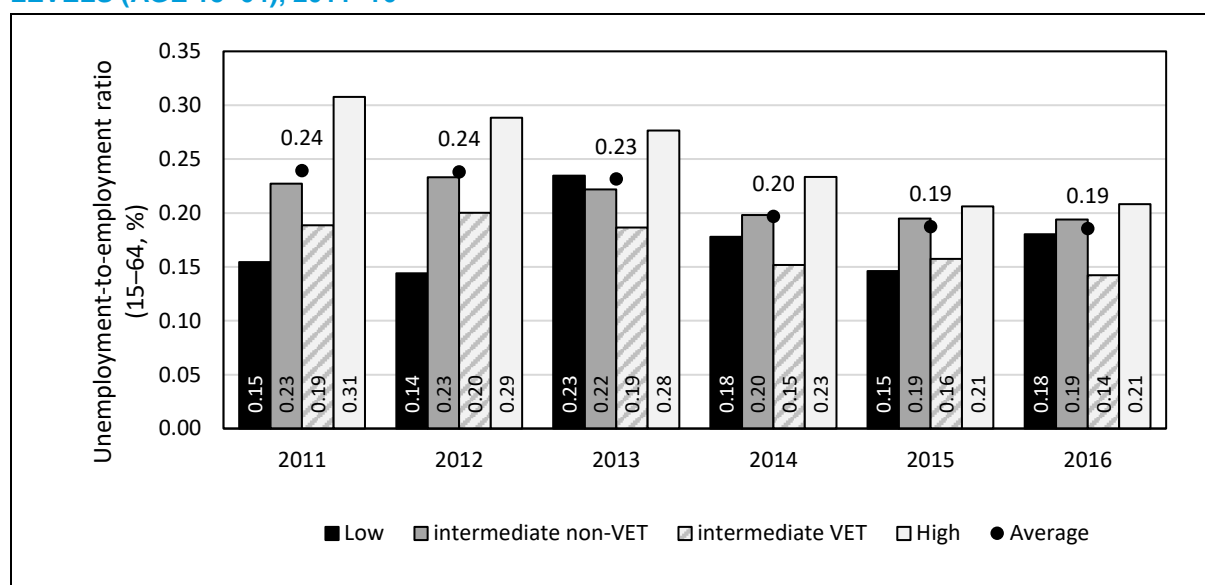
Source: Author's calculations using LFS 2011–16

FIGURE 3.4 UNEMPLOYMENT-TO-EMPLOYMENT RATIO BY EDUCATION ATTAINMENT LEVELS (AGE 25–29), 2011–16



Source: Author's calculations using LFS 2011–16

FIGURE 3.5 UNEMPLOYMENT-TO-EMPLOYMENT RATIO BY EDUCATION ATTAINMENT LEVELS (AGE 15–64), 2011–16



Source: Author's calculations using LFS 2011–16

When interpreting this indicator, it is important to understand the specific context in Georgia. The LFS defines an unemployed person as someone aged 15 or above who was not employed (even for one hour) seven days prior to the interview process, had been looking for a job for the last four weeks, and was ready to start working within the next two weeks²⁰. In the traditional structure of the Georgian economy, agriculture (mainly subsistence) accounts for 46% of the total. Rural households generally consist of several generations, and one person (the landowner) is counted as the employer, with other family members to help them. The chances of being identified as unemployed are therefore higher for younger household members, who are usually less likely to be engaged in agricultural work.

In urban areas, young proactive people are usually supported by their parents and can therefore be identified as unemployed, because they are searching for a good job. However, later on, when they are no longer supported by their parents, they must find employment and support their own families. They are therefore more likely to accept any job (often informal) and sometimes work that does not correspond to their education and skills. They are not considered to be unemployed in official statistics, and unemployment indicators are diminishing with the increasing age of the labour force.

3.2 Employment-to-population ratio

The employment-to-population ratio shown in Figure 3.6 indicates that there are significant age-related differences in labour market behaviour in Georgia. First of all, the data shows quite distinct behaviour for the neighbouring 20–24 and 25–29 age groups: while only four out of every ten people aged 20–24 are employed, almost six out of every ten people aged 25–29 are employed. This is due to enrolment in education, as can be seen from the very similar rates (shown in the next section) for people in these two age groups who are not in employment, education or training (NEET).

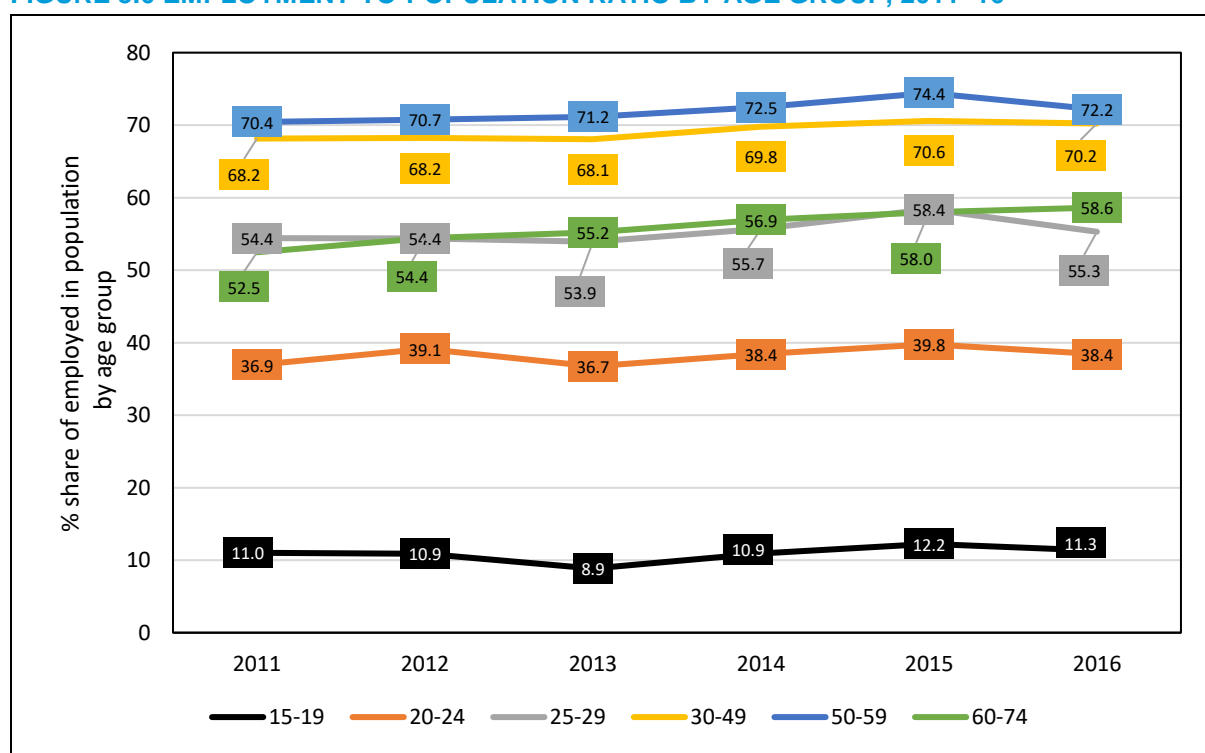
People aged 50–59 have the highest employment-to-population ratios and the proportion of employed people is quite high even among older people in the 60–74 age group. The reasons for this are to do with the specific nature of the Georgian labour market and the LFS methodology for defining

²⁰ http://geostat.ge/cms/site_images/files/english/methodology/labour%20force%20statistics%20Eng.pdf

employment status: half of them are self-employed, half of them are employed in agriculture, and there is a large number of non-contributing family members.

The national retirement system provides universal coverage for all elderly people and is quite comprehensive: all citizens, stateless people and foreign nationals residing in Georgia for the last 10 years who are over the retirement age (60 for women and 65 for men) are automatically entitled to old-age pensions without any contribution or means-testing requirements. All people of retirement age therefore receive a basic pension. The most important factor is that the status of ‘pensioner’ does not create any obstacles to employment opportunities for retirees, except in the public sector, which employs less than 15% of the total number of employees in the country²¹. As the basic pension in Georgia is so low, and is even below the official subsistence minimum, everyone who is able to, continues to work after retirement or becomes involved in a family business.

FIGURE 3.6 EMPLOYMENT-TO-POPULATION RATIO BY AGE GROUP, 2011–16

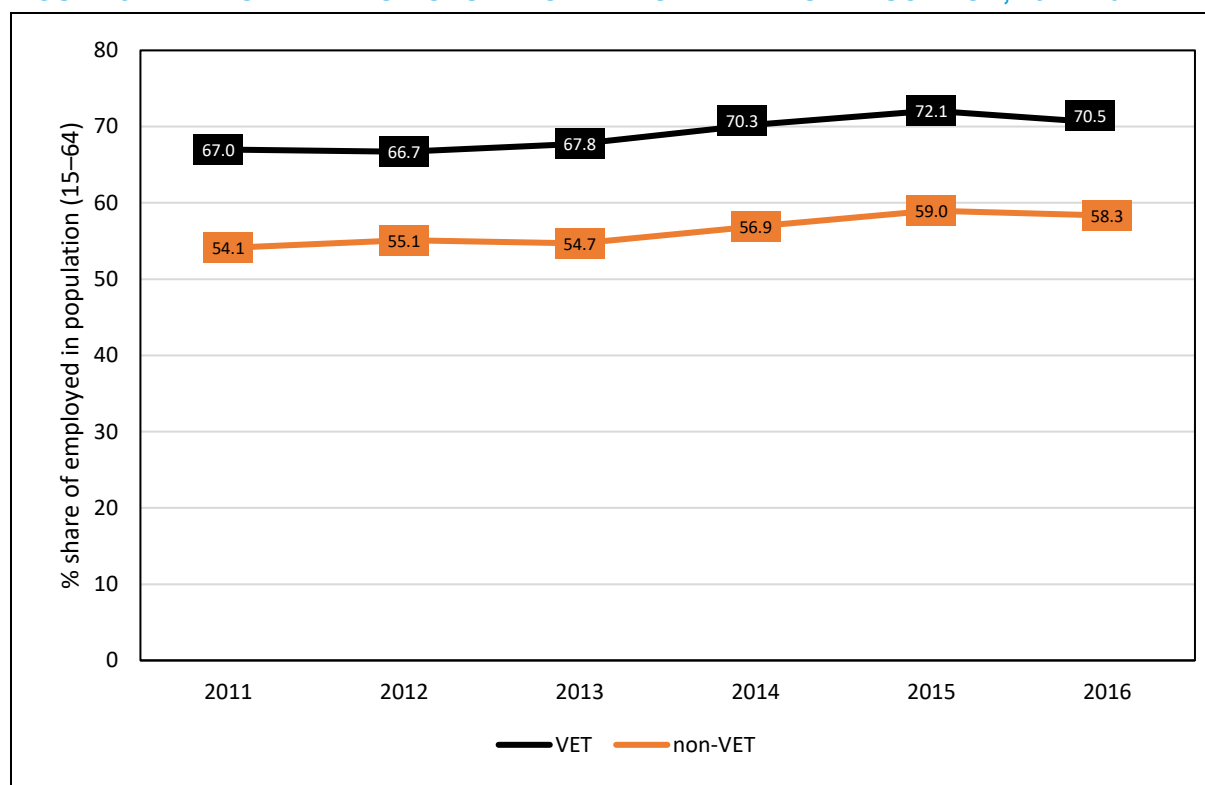


Source: Author's calculations using LFS 2011–16

Figure 3.7 shows the employment-to-population ratio for two population groups: those with VET training and those without, essentially showing the differences in successful labour market participation. Overall, the VET qualification provides a consistently better ratio, with higher employment rates for all years available. While the gap was 12.9 percentage points in 2011, this gap narrowed to 11.2 percentage points in 2016. Additional analysis including more detailed indicators would be needed to evaluate whether this dynamic suggests improving labour market conditions for the non-VET trained population.

²¹ http://geostat.ge/index.php?action=page&p_id=146&lang=eng

FIGURE 3.7 EMPLOYMENT-TO-POPULATION RATIO BY TYPE OF EDUCATION, 2011–16



Source: Author's calculations using LFS 2011–16

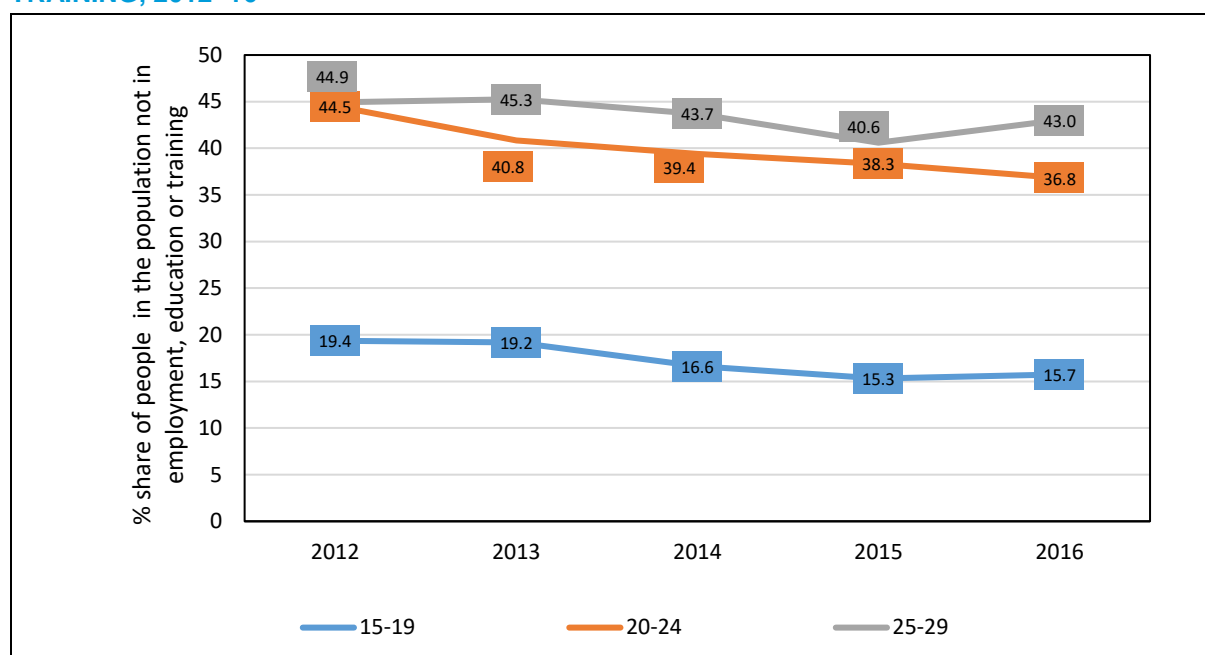
3.3 Young people not in employment, education or training

This methodology calculates the rate of young people that are not in employment, education or training. It therefore calculates the rate of young people who are not employed or engaged in education. The underlying reason is presumed to be some form of mismatch, as those who are not in education are generally presumed to have finished their education and should find some form of employment. It therefore combines inactivity (not related to school participation) and unemployment.

As is to be expected, the NEET rate among young people in Georgia is lowest among the youngest age group of 15–19. A low rate can generally be considered good, as the person is either in employment or preparing for it by being in education or training. People in the youngest group, 15–19, are likely not to have completed their education yet, so a large share of them are expected to be in education. Comparing this to the previous indicators on participation, unemployment, or the unemployment-to-employment ratio, shows that while the share of unemployed people appears to be high, it is a relatively small share of the overall group.

The same cannot be said for the 20–24 and 25–29 age groups, which have high rates fluctuating at around 40% for the period 2012–16. Figure 3.1 shows a high unemployment rate for the 20–24 age group, while the rate for the 25–29 age group was already significantly lower (by 10 percentage points). The high NEET rate shown in Figure 3.8 must therefore be the result of a withdrawal from the labour market (potentially only a temporary one).

FIGURE 3.8 YOUNG PEOPLE (15–19, 20–24, 25–29) NOT IN EMPLOYMENT, EDUCATION OR TRAINING, 2012–16



Source: Author's calculations using LFS 2012–16

Gender might be the explanation here: females in Georgia remain outside the labour market for longer as a result of family responsibilities and tend to have children around this age. Official statistics show a high gender gap in employment rates between men and women. Gender studies show that, given the high levels of gender inequality in family life in the country, there is an obvious inequality in employment opportunities for Georgian men and women.

This happens not only because women with children are not able to combine family responsibilities with a job, but also because married women in Georgia are not independent in making the decision about whether to work or stay at home. The *Generations and Gender Survey in Georgia* found that while Georgian men can unilaterally decide how much time they devote to a paid job, women more often take their partner's opinion into account (Badurashvili et al., 2010, p. 21).

Women therefore participate less than men in the labour market. In a comparison of men and women aged 15 and above, 78% of men are economically active compared with only 58% of women. The percentage of employed women is 53% of the total female population, while the respective figure for men is 67% (Geostat, 2017)²².

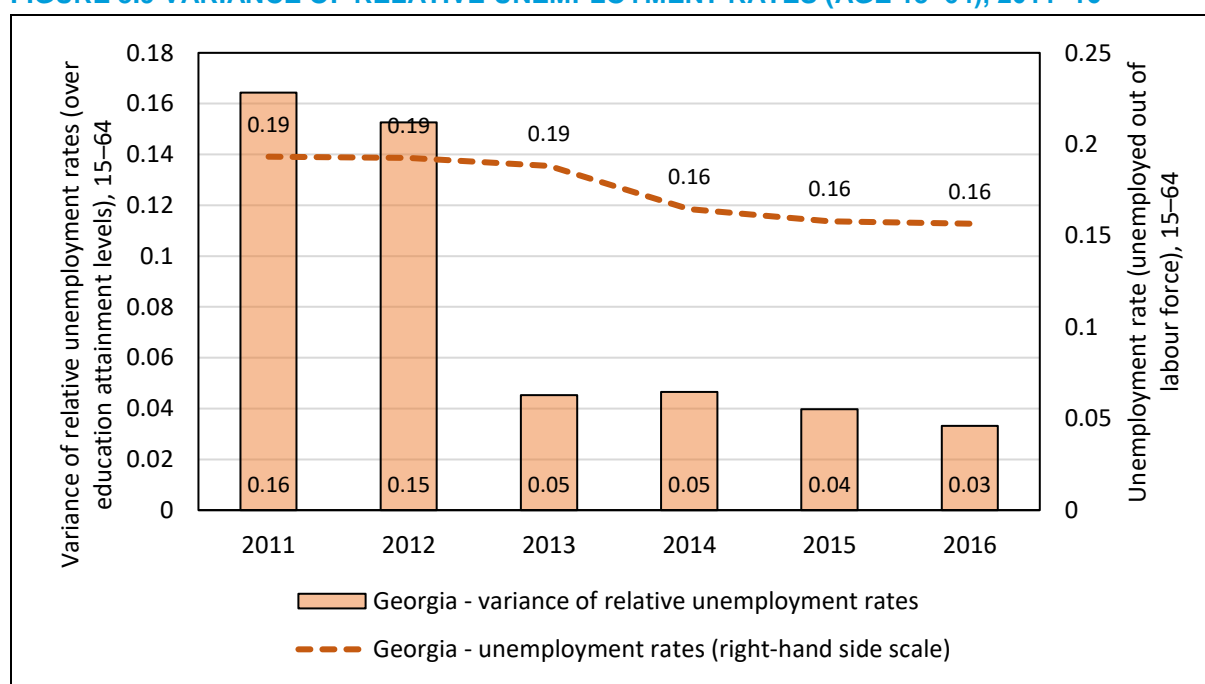
²² According to ETF estimates, 27.8% of Georgian young people (15–24) are not in education, employment or training (NEET). This figure is two or three times higher than in most EU countries, where the share of NEET rarely exceeds 15% (ETF, 2015). Figure 3.8 shows the NEET indicator for Georgia broken down into three age groups: 15–19, 20–24 and 25–29.

3.4 Variance of relative unemployment rates (by education level)

This indicator shows how unemployment deviates within education levels from the overall country average. The higher the variance, the higher the mismatch. The methodology would also be applicable to sub-groups such as age, gender and previous occupation.

The variance of relative unemployment rates shown in Figure 3.9 allows us to compare unemployment rates for specific education levels with the national average²³. A higher value indicates a lot of deviation in these education levels, meaning unemployment affects each level very differently. The indicator is high for 2011 and 2012, with values of 0.19, while it drops down to a much lower value of 0.16 from 2014 onwards. This indicates that, given the positive trend in unemployment levels smoothly declining from 2011 to 2016, the indicator on the variance of relative unemployment rates hides the specific problems experienced by the Georgian labour market during that period. Its consistency across education levels points to an over-education of employees. In general, the same positive pattern can be seen in the time series shown: according to the variance rates, there was a significant decrease in the level of skills mismatch in Georgia, particularly between 2011 and 2012²⁴.

FIGURE 3.9 VARIANCE OF RELATIVE UNEMPLOYMENT RATES (AGE 15–64), 2011–16



Source: Author's calculations using LFS 2011–16

The high variance of relative unemployment rates in 2011 and 2012 is due to comparatively flat unemployment rates for the lower education level (13.4% in 2011 and 12.6% in 2012) compared to the average. The variance of relative unemployment rates decreases in 2013, with the rate for the lower

²³ The unemployment rate shown in this figure is lower than the official Geostat unemployment rate (see Figure 1.1) as Geostat uses the 15+ age group instead of 15–64.

²⁴ However, including uneducated as a separate category would change this indicator. The uneducated dominate the variance, as the unemployment rate for that very small category fluctuates a lot over the years.

education level climbing to 19.0% and approaching the average unemployment rate of 18.8%. From 2014 to 2016, unemployment rates for lower education levels decrease to 15.3%. As the average unemployment rate decreases similarly during this period, the variance of relative employment rates stays at a low level.

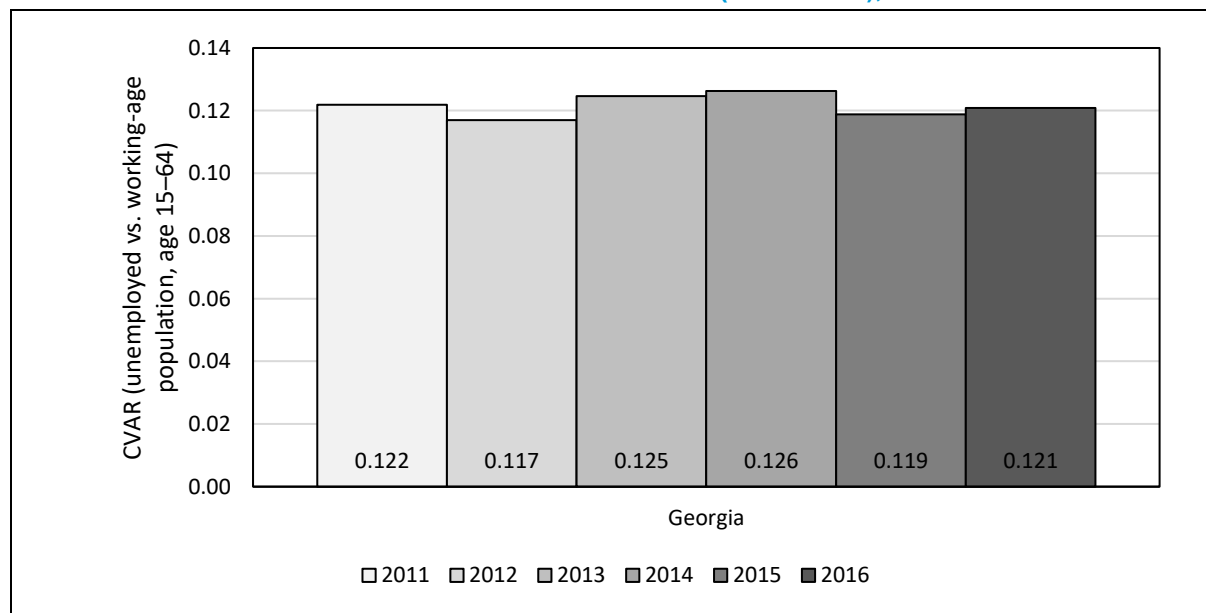
3.5 Coefficient of variation (CVAR) by skills

This indicator compares the distribution of skills within different groups while correcting for the overall size of the underlying statistic. The difference in skill composition/level between employed and unemployed people is expressed in just one number that measures the overall extent of mismatch. The higher the number, the greater the difference between the skills of people employed in the labour market and the skills of people wishing to enter it. The extent to which the distributions are different can therefore be interpreted as a measure of the ineffectiveness of the process of matching skill supply and demand in the labour market (ETF, 2012, p. 6).

A slightly different approach to investigating the differential effect of unemployment on the various qualification levels is the CVAR. Figures 3.10–3.12 show a CVAR that reflects the difference between the skills of unemployed people in Georgia and the skills of the general working-age population.

The CVAR seems relatively stable between 2011 and 2016. The 2014 data shows the highest rates and therefore the greatest difference in skills between the qualifications of the unemployed and the qualification mix of the population.

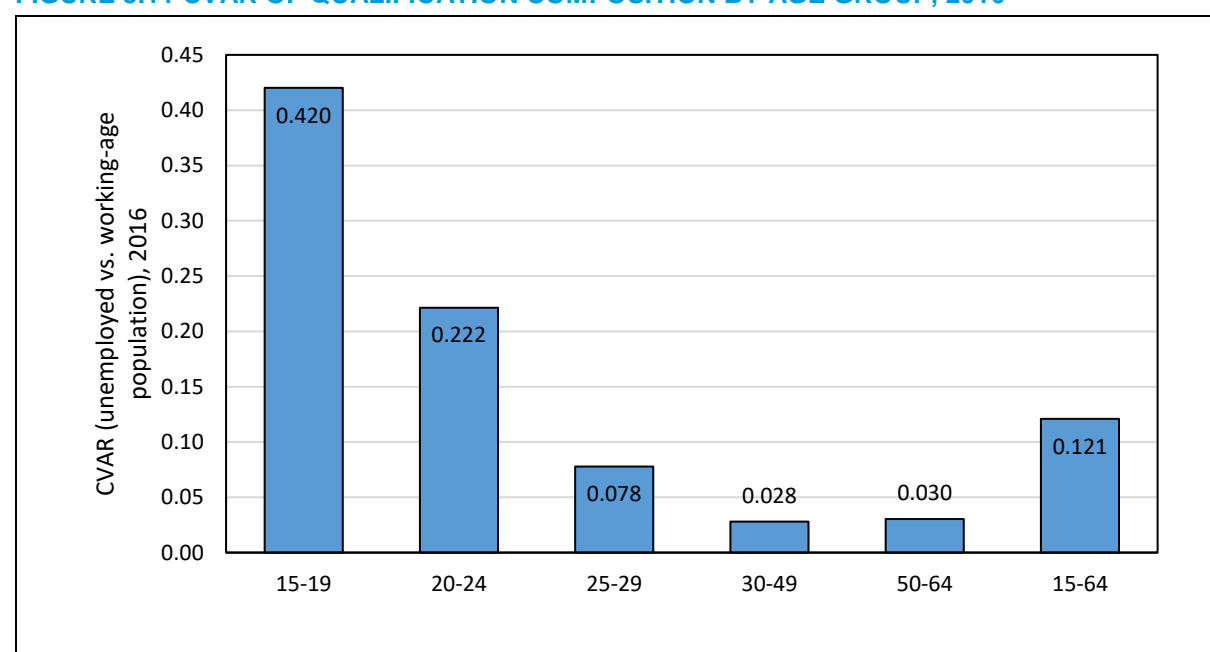
FIGURE 3.10 CVAR OF QUALIFICATION COMPOSITION (AGE 15–64), 2011–16



Source: Author's calculations using LFS 2011–16

Figure 3.11 allows analysis of the CVAR if the indicator is restricted to the specific age group, revealing whether the differences in the qualifications of unemployed people compared to the population is the same across all age groups. Clearly, this is not the case, as the younger age groups have a much higher indicator than the middle-aged population, and the indicator rises again towards the end of the chart. The low levels among middle-age people indicate that unemployed people at that age are very similar to those in the overall working-age population. At a younger age, there are stronger differences between the unemployed, indicating that unemployment is related to education level, especially in those age groups. This confirms the partial picture that the unemployment rates and the unemployment to employment indicator had given for these age groups.

FIGURE 3.11 CVAR OF QUALIFICATION COMPOSITION BY AGE GROUP, 2016



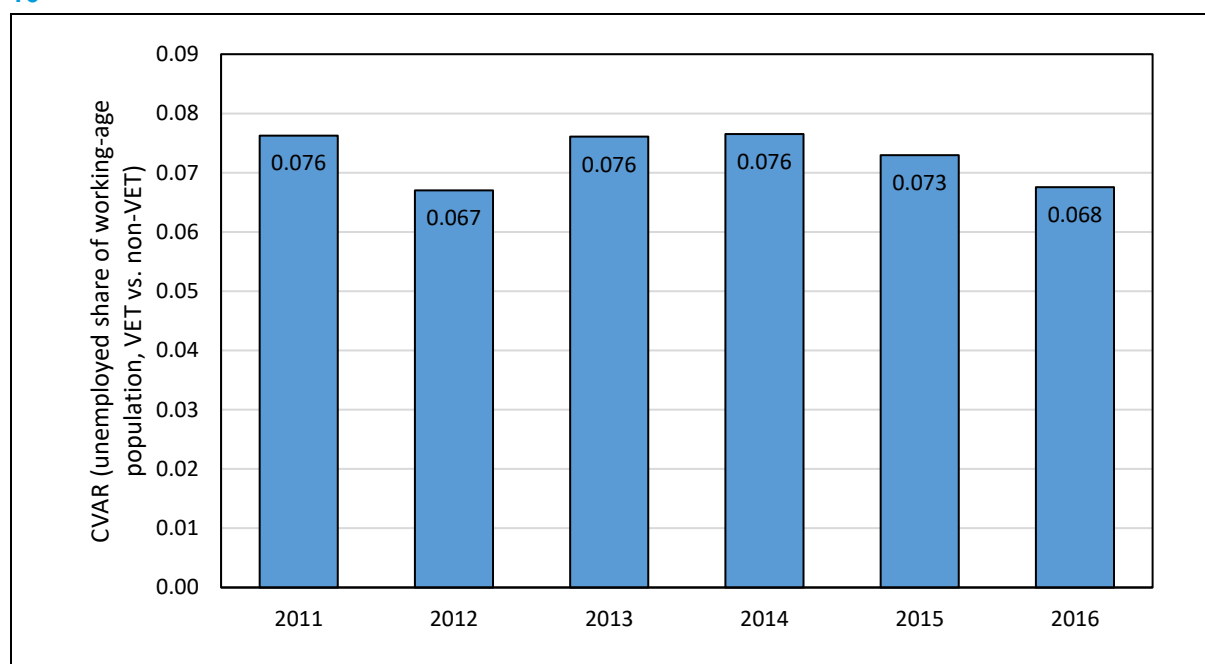
Source: Author's calculations using LFS 2016

Figure 3.12 is calculated slightly differently from the rest. It distinguishes qualification only in terms of VET and non-VET²⁵, rather than by level. The idea is to examine whether there are differences in the unemployment experience for people with VET compared with those that have other types of education.

The CVAR differentiating between the VET and non-VET population in Figure 3.12 shows variation slowly declining over time. This implies that the better employment rates among people with VET are slowly decreasing: the variation is going down, indicating that the two groups are becoming more equal in the degree to which they experience unemployment. This is mainly caused by lower unemployment levels among the non-VET population.

²⁵ The authors applied the following clustering for VET and non-VET categories: non-VET includes people who have graduated from upper secondary education (only people who do not give information on their specific profession) and a higher professional programme; and VET includes people who have completed upper secondary education (only people who provided information on their specific profession), a secondary professional programme and a vocational programme.

FIGURE 3.12 CVAR OF QUALIFICATION COMPOSITION (AGE 15–64), VET VS. NON-VET, 2011–16



Source: Author's calculations using LFS 2011–16

3.6 Relative wages

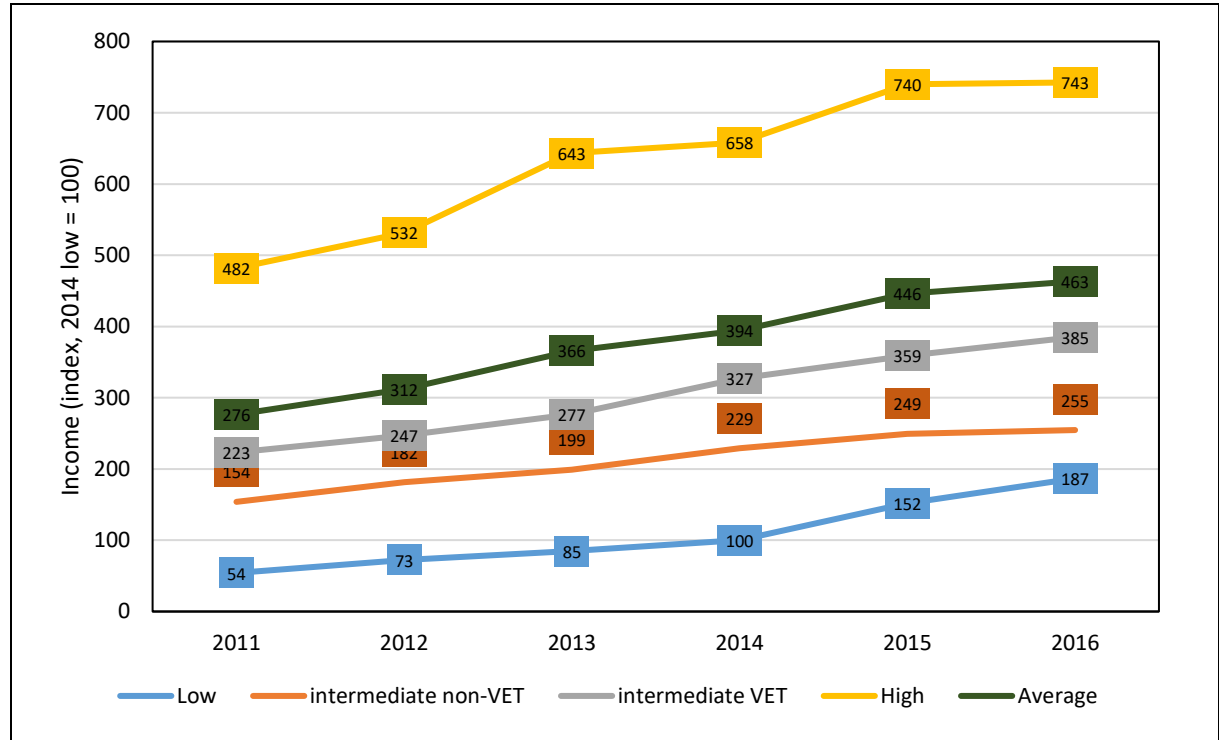
This methodology compares the wages across education levels over time, either relative to a benchmark wage or indexed vis-à-vis a base year. It can usefully be plotted in a diagram, as it is then very easy to see how certain education levels are more or less well remunerated than others over time. An education level that is seen to attract a higher income than that achieved by people with other levels of education can thus be a sign that this level of education is in higher demand on the labour market.

Figure 3.13 presents data on the development of wages from 2011 to 2016, showing an overall increase in wages of 65%, with the more highly educated gaining 51%, intermediate 66% and lower educated 182% over that period. These data also show that the lower educated workers have increased their wages by more than the other categories. This is a sign that this particular level of education is in relatively higher demand in the Georgian labour market. However, taking 2014 as a base, we should note that the more highly educated have, on average, more than six times the income than those with a low level of education. People with an intermediate level still have, on average, an income that is 2.5 times that of lower educated, which highlights the overall demand for skills.

One interpretation of the gains made among the lower educated would be that their wages are affected by the economic situation much more than those with an intermediate and higher education, so they are gaining more in the current period of economic recovery. This might also be linked to the trends in the remuneration of workers engaged in different economic sectors. The official statistics on

the average monthly nominal earnings of employees in Georgia²⁶ show that the most significant increases in wages of employees from 2014 to 2016 were in construction, manufacturing and the hotel and restaurant industry – all sectors in which a lot of people with lower education levels work.

FIGURE 3.13 INCOME EVOLUTION BY LEVEL OF EDUCATION, 2011–16



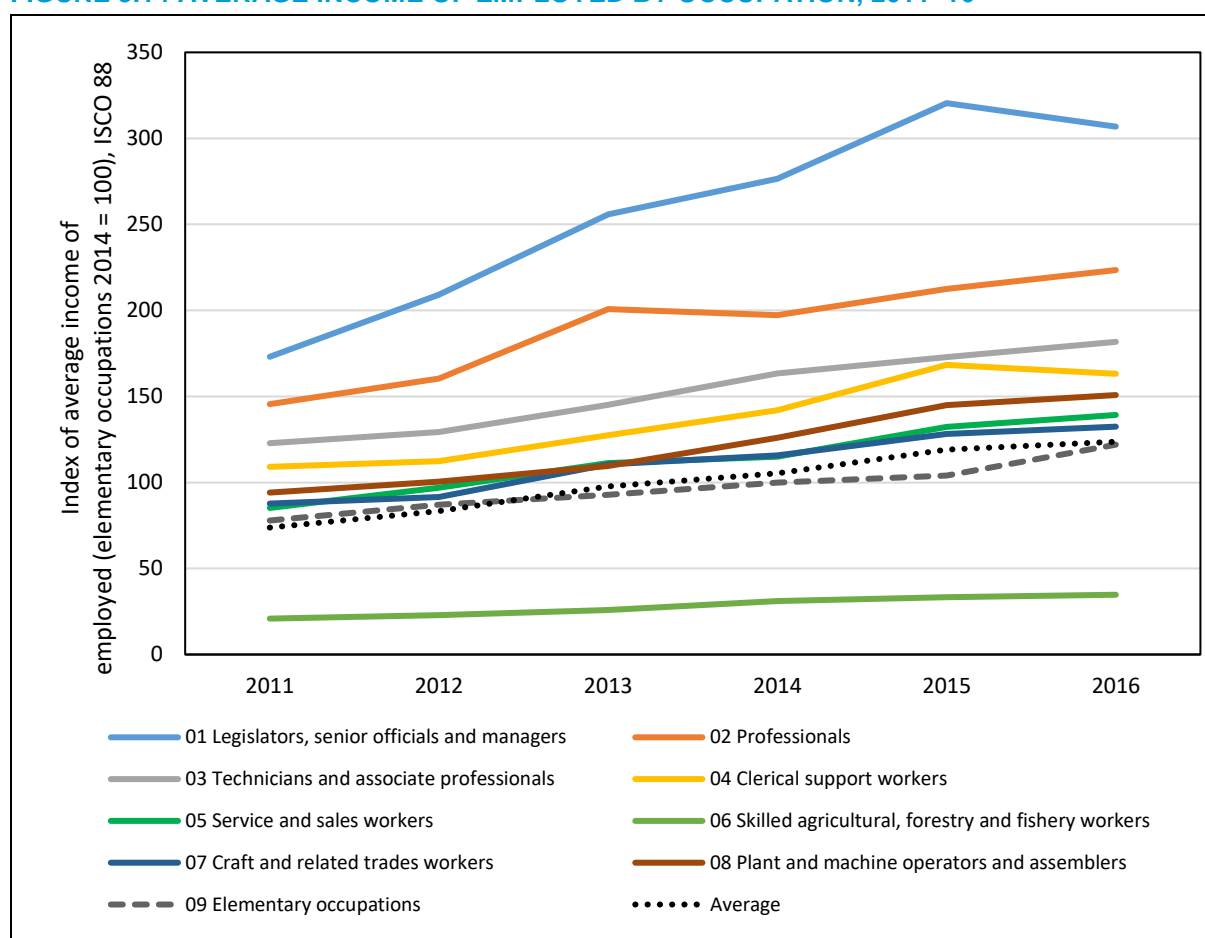
Note: Index set to low education in 2014 = 100

Source: Author's calculations using LFS 2011–16

Figure 3.14 shows the development and distribution of wages across the occupation groups, as identified by the first digit ISCO classification. The low levels of income among 'skilled agricultural, forestry and fishery workers' are also striking, and are likely to reflect the subsistence farming in the country. This group has less than half the income of elementary occupations. Taking the theoretical shortcut of equating income with productivity levels would imply that employment in agricultural occupations is a poor use of skills.

²⁶ http://geostat.ge/index.php?action=page&p_id=149&lang=eng

FIGURE 3.14 AVERAGE INCOME OF EMPLOYED BY OCCUPATION, 2011–16



Note: Index set at elementary occupations 2014 = 100

Source: Author's calculations using LFS 2011–16

3.7 Occupational mismatch

This method compares the ratio of people with a certain education level (International Standard Classification of Education or ISCED) who are working at an inappropriate skill level (based on the International Standard Classification of Occupations or ISCO) to all workers in that ISCED level.

Tables 3.2 and 3.3 present the indicators on occupational mismatch in Georgia for people in the 15–59 age group who are not in education. For those with an upper secondary education, a corresponding indicator measures the proportion that are employed in elementary occupations (manual skills level), and the proportion of those with a tertiary education that are employed in semi-skilled occupations. In both cases, this approach shows indications of skills mismatch.

The higher the education level of employees, the higher is the chance to work in a mismatched occupation. This is in line with findings of previous studies of Georgia, such as the STEP survey by the World Bank: while only 8.5% of lower educated people are engaged in elementary occupations, more than one third (38.2%) of employed people with a tertiary education work in semi-skilled jobs. Over-

qualification is more prevalent for males than for females, irrespective of their educational attainment. Moreover, the gender gap in this indicator is higher for people with a tertiary education people.

TABLE 3.2 OCCUPATIONAL MISMATCH IN GEORGIA: PEOPLE WITH UPPER SECONDARY EDUCATION WORKING IN ELEMENTARY OCCUPATIONS, 2012–16

| Gender | % of all people with upper secondary education working in elementary occupations (age 15–64) | | | | |
|--------|--|------|------|------|------|
| | 2012 | 2013 | 2014 | 2015 | 2016 |
| Total | 9.3 | 8.1 | 7.6 | 9.7 | 9.4 |
| Male | 11.7 | 9.8 | 8.4 | 10.8 | 10.4 |
| Female | 6.2 | 5.7 | 6.4 | 8.0 | 7.9 |

Note: Occupational classification: ISCO 88. Compare: www.oecd-ilibrary.org/education/education-at-a-glance-2010/education-and-occupational-mismatches-for-young-individuals-2003-2007_eag-2010-table175-en

Source: Author's calculations using LFS 2012–16

TABLE 3.3 OCCUPATIONAL MISMATCH IN GEORGIA: PEOPLE WITH TERTIARY EDUCATION WORKING IN SEMI-SKILLED OCCUPATIONS, 2012–16

| Gender | % of all people with a tertiary education working in semi-skilled occupations (age 15–64) | | | | |
|--------|---|------|------|------|------|
| | 2012 | 2013 | 2014 | 2015 | 2016 |
| Total | 35.7 | 35.3 | 34.1 | 35.2 | 36.1 |
| Male | 41.7 | 44.1 | 42.8 | 42.6 | 46.2 |
| Female | 29.4 | 26.5 | 25.2 | 27.6 | 26.6 |

Note: Occupational classification: ISCO 88. Compare: www.oecd-ilibrary.org/education/education-at-a-glance-2010/education-and-occupational-mismatches-for-young-individuals-2003-2007_eag-2010-table175-en

Source: Author's calculations using LFS 2012–16

3.8 Over-education

This method can be used in cases where datasets do not include specific questions on over-education or over-skilling. However, it is quite a simplistic measurement and must be interpreted as a proxy. The empirical method is a purely statistical measure in which the distribution of education is calculated for each occupation. Over-education is defined as existing when the level of education is more than one standard deviation above the mean (Bauer, 2002) or above the mode (Mendes de Oliveira et al., 2000) for the education level of a given occupation. The educational mean and/or mode for each occupation is therefore assumed to be a match for that occupation, but this may very well be a false assumption. In theory, everybody employed in a given occupation could be mismatched. (ETF, 2012).

Over-qualification in Georgia is a direct consequence of over-education. This follows on from data presented in Table 3.4, showing the proportion of employed people that are over-educated using the empirical method. The table shows that highest incidence of over-skilling in the country is among semi-skilled professions (clerks, service and sales workers, operators and technicians). This is because a large proportion of workers with a tertiary education work in occupations that do not require a tertiary degree and take less-skilled jobs. Highly educated workers are compelled to take lower skilled jobs as there are not enough jobs in the country that require high skills. Some studies show that

only one in two workers with a tertiary education works as a professional or a manager; the rest work in occupations that do not require a university diploma (ETF, 2015, p. 21).

At the same time, the degree of under-education in occupations, presented in Table 3.5 using the empirical method, shows that there is also under-education in the abovementioned occupations. Irrespective of the methodological difficulties in identifying over- and under-education precisely enough using the empirical method, there could also be a reasonable economic explanation for these findings. There is a lack of VET institutions providing comprehensive teaching curricula for technicians and associate professionals, especially in specific industries. As a result, there might be a degree of under-education for some semi-skilled jobs, including qualified clerks. The distinctive feature of the Georgian labour market is the shortage of workers with technical skills: labour market surveys conducted by GTZ have identified a number of industries demanding occupations that are not provided for by Georgian VET centres (see above).

TABLE 3.4 EMPIRICAL METHOD: OVER-EDUCATION BY OCCUPATION (AGE 15–64), 2011–16

| ISCO 88 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|------|------|------|------|------|------|
| 01 Legislators, senior officials and managers | 0.5 | 0.5 | 0.0 | 0.0 | 3.2 | 1.9 |
| 02 Professionals | 2.2 | 1.8 | 1.0 | 0.9 | 1.3 | 1.5 |
| 03 Technicians and associate professionals | 0.0 | 40.1 | 40.4 | 39.4 | 39.8 | 0.0 |
| 04 Clerks | 0.0 | 0.0 | 0.0 | 39.1 | 0.0 | 0.0 |
| 05 Service workers, and shop and market sales workers | 27.2 | 28.4 | 29.8 | 27.9 | 28.8 | 30.5 |
| 06 Skilled agricultural and fishery workers | 9.4 | 9.7 | 10.5 | 10.1 | 9.6 | 11.4 |
| 07 Craft and related trades workers | 18.9 | 18.6 | 15.9 | 15.5 | 16.6 | 16.1 |
| 08 Plant and machine operators and assemblers | 17.0 | 20.8 | 18.0 | 20.0 | 26.9 | 25.7 |
| 09 Elementary occupations | 19.5 | 21.0 | 19.4 | 19.7 | 16.4 | 19.1 |

Source: Author's calculations using LFS 2011–16

TABLE 3.5 EMPIRICAL METHOD: UNDER-EDUCATION BY OCCUPATION (AGE 15–64), 2011–16

| ISCO 88 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--|------|------|------|------|------|------|
| 01 Legislators, senior officials and managers | 16.6 | 17.0 | 15.2 | 15.2 | 10.7 | 8.9 |
| 02 Professionals | 3.8 | 13.9 | 12.0 | 4.0 | 2.8 | 2.8 |
| 03 Technicians and associate professionals | 9.4 | 12.6 | 14.6 | 16.3 | 14.6 | 13.1 |
| 04 Clerks | 15.8 | 18.4 | 13.9 | 23.2 | 20.6 | 23.7 |
| 05 Service workers and shop and market sales workers | 39.4 | 1.1 | 2.2 | 2.0 | 2.0 | 2.0 |
| 06 Skilled agricultural and fishery workers | 4.1 | 3.2 | 9.8 | 9.4 | 8.4 | 8.1 |
| 07 Craft and related trades workers | 3.2 | 2.8 | 2.3 | 3.3 | 2.3 | 3.6 |
| 08 Plant and machine operators and assemblers | 0.8 | 0.0 | 2.3 | 1.5 | 1.5 | 1.7 |
| 09 Elementary occupations | 5.4 | 7.7 | 6.7 | 7.0 | 7.7 | 6.7 |

Source: Author's calculations using LFS 2011–16

Skills mismatch is an important issue in the Georgian labour market, and several other studies support these findings. For example, the Georgian Labour Market Demand Survey commissioned by the Ministry of Labour, Health and Social Affairs in 2015 (MLHSA, 2015) asked companies to report difficulties in hiring of staff in order to evaluate the underlying reasons. A total of 72.5% of the companies mentioned that applicants lack the necessary skills; 42.9% of companies that employ foreigners gave a lack of domestic workers with the required skills as the reason (see [Table 3.6](#)).

Despite relatively high formal education levels, the personal performance and professional skills gap is quite a pronounced problem for the country. General education among workers is one of the main problems noted in the assessment of the Georgian labour market by the 2012 STEP survey. Finding workers with previous experience was identified as the most severe problem faced by 354 companies interviewed during this survey, and finding workers with technical and vocational training was ranked second.

TABLE 3.6 MISMATCH-RELATED INDICATORS FROM THE GEORGIAN LABOUR MARKET DEMAND SURVEY

| | | Share of companies (weighted) |
|--|--|-------------------------------|
| Companies employing foreign workers | | 1.6 |
| of these: | because there are no domestic workers with required skills | 42.9 |
| Companies reporting skill shortage | | 3.9 |
| Companies reporting difficulties in hiring | | 4.1 |
| of these: | few applicants | 14.1 |
| | applicants' lack of skills | 72.5 |
| | wage disagreements | 8.4 |
| | disagreements on working conditions | 3.4 |

Source: Georgian Labour Market Demand Survey (MLHSA, 2015)

CONCLUSIONS

Skills mismatch can be identified and analysed using the proposed mismatch indicators. The Georgian LFS allows a general calculation, broken down into several dimensions. The indicators also identify the particular characteristics of the labour market, specifically the large supply of more highly educated workers despite the structure of demand being less aligned to this type of supply.

Unemployment has been persistently high and employment is dominated by agricultural employment (mainly substance farming), especially in rural areas. Modern business and financial services still play a minor role, with only a minority of jobs created in high-productivity sectors. The majority of jobs in the country are in the traditional, low-productivity sectors. The overall employment rate is low.

Good data is available (including at micro-level) for labour market analyses, particularly the LFS, which is regularly conducted by the National Statistics Office. Recent changes to the LFS (including a larger sample size, revised methodology and definitions) will ensure that it is internationally comparable and increase the relevance of results within the Georgian context. Other survey data (such as company surveys) and administrative data (such as education and labour market data) are also available for the country.

This report has explored the feasibility of calculating skills mismatch using data from existing reliable sources. This led to some clusters of indicators being identified that provide insights into key aspects of skills mismatch:

- unemployment rates and ratio between unemployed people and employed;
- extent of the youth unemployment phenomenon (including the young people not in employment, education or training);
- over-education and under-education, including particular groups affected;
- coefficient of variation from various angles (labour market status, age, differences in education level among employed and unemployed, etc.);
- wage factors in measuring mismatches.

The mismatch indicators suggest a problem with the school-to-work transition in the Georgian labour market, which is confirmed by qualitative evidence as well as other studies that use alternative data sources. Vocational education seems to provide an equal if not better chance of a good match as university education does, particularly compared to the performance of general secondary education graduates. Additional studies are required to inform policies aimed at improving the transition process. The education attainment level of the labour force remains relatively high, but the quality of education remains an issue. The participation of students in VET education, as well as its relevance for labour market demands, are also important challenges in Georgia.

Relative wages show that there is a strong disparity in pay between education levels. This is likely linked to some of the better-paid occupations associated with specific qualifications. On the other hand, qualifications that lead into agricultural and elementary occupations could be analysed in terms of the relevance of those skills for the labour market.

The dynamics of the skills mismatch seem to suggest that it is decreasing. However, it is not clear whether this is the result of higher mismatch being measured in the years following the global economic crisis, or whether it suggests a structural improvement in matching in the labour market.

A wealth of additional data is also available. However, as this data is not collected regularly, the data in this project was mainly used to confirm and reflect on the results from the LFS-based indicators. Given how problematic the school-to-work transition seems to be, the tracer studies pilot initiatives already developed should evolve towards a structural practice done on a regular basis.

Other analyses of the constraints on labour demand would also be helpful, as there seems to be a structural lack of demand that needs to be overcome to provide adequate employment. Further analyses and discussions on tackling skills mismatches should factor in, for example, the high proportions of people employed in the agriculture sector (most often subsistence activities) and in the informal (non-agriculture) sector.

Overall, the LFS provided detailed and sufficient data for calculating most of the skills mismatch indicators. This is positive, as the LFS is the most regular data collection process in the country and provides a good basis for comparability over time. More non-LFS based data would have been useful in assessing more specialised measures of skills mismatch. The school-to-work transition seems to be especially challenging in the country. A more structural and regular practice of investigating the process (transition surveys, tracer studies, etc.) would therefore provide more detailed insights into the shortcomings of the education process in providing adequate and practical skills, or an adequate number of graduates in each field.

A discussion of skills mismatch in Georgia should definitely look into the gender dimension and territorial aspects (urban vs. rural). Out-migration may also distort the picture. It is therefore advisable to expand on the dimensions and impacts of skills mismatch and analyse them regularly. The wealth of information and data currently available could be complemented by additional evidence-collection practices, such as tracer studies, to capture a fuller overview of skills mismatch in the country. This, in turn, would help tailor policy responses to proactively tackle mismatch in skills supply and demand.

LIST OF ACRONYMS

| | |
|----------------|---|
| ALMPs | active labour market programmes |
| CVAR | coefficient of variation |
| EMIS | Education Management Information System |
| ETF | European Training Foundation |
| EU | European Union |
| GDP | Gross Domestic Product |
| Geostat | National Office of Statistics of Georgia |
| ILO | International Labour Organisation |
| ISCED | International Standard Classification of Education |
| ISCO | International Standard Classification of Occupations |
| LFS | labour force survey |
| LMIS | Labour Market Information System |
| NEET | (Young people) Not in education, employment or training |
| OECD | Organisation for Economic Cooperation and Development |
| UN | United Nations |
| VET | vocational education and training |

LITERATURE

Ambroladze, T., *Georgia: updating and improving the social protection index*, ADB technical assistance consultant's report, Asian Development Bank, 2012. Last accessed July 2019 at: www.adb.org/sites/default/files/project-document/76055/44152-012-reg-tacr-06.pdf

Badurashvili, I. and Nadareishvili, M., *Social impact of emigration and rural-urban migration in Central and Eastern Europe. Final country report: Georgia*, European Commission and GVG, 2012. Last accessed July 2019 at: <https://ec.europa.eu/social/keyDocuments.jsp?pager.offset=0&langId=fr&mode=advancedSubmit&policyArea=0&subCategory=0&year=0&country=0&type=0&advSearchKey=EmigrationMigrationCentralEasternEurope&orderBy=docOrder>

Badurashvili, I., Kapanadze, E. and Tsiklauri, Sh., *Generations and gender survey in Georgia. II wave report*. Georgian Centre of Population Research/United Nations Population Fund (UNFPA), Tbilisi, 2010.

Bagnardi, F, 'The changing pattern of social dialogue in Europe and the influence of ILO and EU in Georgian tripartism', *Caucasus Social Science Review*, 2(1), 2015.

Bauer, T.K., Educational mismatch and wages: a panel analysis, *Economics of Education Review*, 21(3), 2002, pp. 221–229.

Cedefop (European Centre for the Development of Vocational Training), *Skills, qualifications and jobs in the EU: the making of a perfect match?*, 2015. Last accessed July 2019 at: www.cedefop.europa.eu/en/publications-and-resources/publications/3072

CRRC (Caucasus Research Resource Centres)/ISET (International School of Economics at Tbilisi State University), *Development on the move: measuring and optimising migration's economic and social impacts in Georgia*, 2010.

CRRC (Caucasus Research Resource Centres), *Caucasus barometer*, Georgia dataset, 2015. Last accessed July 2019 at: <http://caucasusbarometer.org>

CRRC (Caucasus Research Resource Centres), *2014 general population census*, 2015. Last accessed July 2019 at: <http://census.ge/ge/results/census1/demo>

Economic Policy Research Centre, *Employment and unemployment trends in Georgia*, Tbilisi, 2011. Last accessed July 2019 at: www.osgf.ge/files/publications/2011/EPRC_Georgian_Economic_Outlook_II_Nov_2011_ENG.pdf

European Commission, *Social protection and social inclusion in Georgia*, 2011. Last accessed July 2019 at: <http://ec.europa.eu/social/main.jsp?catId=89&langId=en&newsId=1045&moreDocuments=yes&tableName=news>

European Commission, *Analytical web note 07/2015: Measuring skills mismatch*, 2015. Last accessed July 2019 at: <http://ec.europa.eu/social/main.jsp?catId=738&langId=en&pubId=7860>

EPPM (International Institute for Education, Planning, Policy and Management), *Strategic development of higher education and science in Georgia policy analysis of higher education according to five strategic directions. V – Higher education and employment*, Tbilisi, 2013.

ETF (European Training Foundation), *Measuring mismatch in ETF partner countries: a methodological note*, ETF, Turin, 2012.

ETF (European Training Foundation), *Young people not in employment, education or training (NEET): An overview in ETF partner countries*, ETF, Turin, 2015. Last accessed July 2019 at: www.etf.europa.eu/web.nsf/pages/NEET ETF partner countries

ETF (European Training Foundation), *Georgia – Education, training and employment developments 2016*, ETF, Turin, 2017a. Last accessed July 2019 at: [www.etf.europa.eu/webatt.nsf/0/233AD94A2CEBED50C12580E60051DF39/\\$file/Georgia%202016.pdf](http://www.etf.europa.eu/webatt.nsf/0/233AD94A2CEBED50C12580E60051DF39/$file/Georgia%202016.pdf)

ETF (European Training Foundation), *Torino Process 2016–17: Georgia*, Executive summary, Turin, 2017b.

ETF (European Training Foundation), *Youth transition to work in Georgia*, ETF, Turin, 2018.

ETF and BCG (European Training Foundation and Business Consulting Group Research), *Migration and skills in Georgia: results of the 2011/12 migration survey on the relationship between skills, migration and development*, ETF, Turin, 2013. Last accessed July 2019 at: www.etf.europa.eu/sites/default/files/m/226927FBAE4DA4E2C1257B4D0043A93E_Migration&skills_Georgia.pdf

European Initiative – Liberal Academy Tbilisi, *Saqartvelos ekonomikuri transformacia: damoukideblobis 20 tseli* [Economic transformation of Georgia: 20 years of independence], USAID-Georgia and East-West Management Institute, Tbilisi, 2012 (in Georgian). Last accessed July 2019 at: www.ei-lat.ge/images/stories/The_Economic_Transformation_of_Georgia_-_20_Years_of_Independence_Interim_Report_geo.pdf

Eurostat, *Statistical approaches to the measurement of skills*, Publications Office of the European Union, Luxembourg, 2016. Last accessed July 2019 at: <http://ec.europa.eu/eurostat/documents/3888793/7753369/KS-TC-16-023-EN-N.pdf/438b69b5-2fcb-4923-b9e2-fa7b59906438>

Friedrich Ebert Foundation, *Generation in transition: youth study 2016 – Georgia*, Tbilisi, 2017. Last accessed July 2019 at: www.fes-caucasus.org/news-list/e/generation-in-transition-youth-study-2016-georgia/

Geostat (National Statistics Office of Georgia), *Statistical yearbook of Georgia 2016*, Tbilisi, 2016. Last accessed July 2019 at: www.geostat.ge/en/single-archive/3095#

Geostat (National Statistics Office of Georgia), *Employment and unemployment in Georgia*, 2017. Last accessed July 2019 at: www.geostat.ge/en/modules/categories/37/employment-and-wages

Geostat (National Statistics Office of Georgia), *Employment and unemployment in Georgia*, 2018. Last accessed July 2019 at: www.geostat.ge/en/modules/categories/37/employment-and-wages

Government of Georgia, *Social-economic Development Strategy of Georgia: ‘Georgia 2020’*. Last accessed July 2019 at: www.mrdi.gov.ge/sites/default/files/social-economic_development_strategy_of_georgia_georgia_2020.pdf

GTZ (Deutsche Gesellschaft für Technische Zusammenarbeit GmbH), *Matching vocational education in Georgia with labour market needs*, 2010.

IBRD (International Bank for Reconstruction and Development)/World Bank, *Georgia public expenditure review*, World Bank, Washington, DC, 2014. Last accessed July 2019 at: <http://documents.worldbank.org/curated/en/779561468275119198/pdf/781430GE0v10RE0Box0385291B00PUBLIC0.pdf>

Joint Research Centre/European Commission, *Occupational mismatch in Europe: understanding overeducation and overskilling for policy making*, Publications Office of the European Union, Luxembourg, 2014. Last accessed July 2019 at: <http://publications.jrc.ec.europa.eu/repository/bitstream/JRC89712/occupational%20mismatch%20in%20europe.pdf>

Kaufman, H.G., *Obsolescence and professional career development*, Amacom, New York, 1974.

Labadze, L. and Tukhashvili, M., 'Costs and benefits of labour mobility between the EU and the Eastern Partnership partner countries. Country report: Georgia', *CASE Network Studies & Analyses*, No 463, Centre for Social and Economic Research, Warsaw, 2013. Last accessed July 2019 at: https://case-research.eu/sites/default/files/publications/CNSA_2013_463.pdf

Mendes de Oliveira, M., Santos, M.C. and Kiker, B.F., 'The role of human capital and technological change in overeducation', *Economics of Education Review*, 19, 2000, pp. 199–206.

Ministry of Education and Science/VET Department, 'Labour market status of VET graduates in Georgia: analysis of tracer studies', *Labour Market Studies Series*, No 2, Ministry of Education and Science, Tbilisi (no date). Last accessed July 2019 at: http://mes.gov.ge/uploads/tracer%20study_report%20eng.pdf

MLHSA (Ministry of Labour, Health and Social Affairs), *The survey report of labour market demand component*, 2015.

MoESD (Ministry of Economy and Sustainable Development), *Survey of business demand on skills 2017: report*, 2017a. Last accessed July 2019 at: www.lmis.gov.ge/Lmis/Lmis.Portal.Web/Handlers/GetFile.ashx?Type=Content&ID=d2c29a21-366d-40ae-9556-4594bdbfddb

MoESD (Ministry of Economy and Sustainable Development) *Labour market analysis of Georgia 2017*, 2017b. Last accessed July 2019 at: www.lmis.gov.ge/Lmis/Lmis.Portal.Web/Handlers/GetFile.ashx?Type=Content&ID=b0c44289-6d97-44a7-b59a-336ca9b885c7

Paichadze, N., Chokheli, E., Keshelashvili, G., Kharkheli, M., Tielidze, Sh. and Tchuradze, G., 'Employment challenges in Georgia (an analysis of public and private sector)', *International Journal of Management and Applied Science*, 2(10), 2016. Last accessed July 2019 at: www.ijm.in/journal/journal_file/journal_pdf/14-308-148007423199-101.pdf

Popovaite, I., 'Traditional gender roles cause inequality in labour market', *Democracy & Freedom Watch*, 16 March 2015. Last accessed July 2019 at: <http://dfwatch.net/traditional-gender-roles-cause-inequality-in-labor-market-34336>

Posadas, J., Makovec, M., Jaef, R.F., Gruen, C. and Ajwad, M.I., *Georgia at work: assessing the jobs landscape*, World Bank, Washington, DC, 2018. Last accessed July 2019 at:

<http://documents.worldbank.org/curated/en/995521527068940160/pdf/126461-WP-P165644-PUBLIC-GeorgiaJDPrinting.pdf>

Rutkowski, J., *Workforce skills in the eyes of the employers: results of the Georgia STEP employer skills survey*, World Bank, Washington, D.C., 2013. Last accessed July 2019 at:

<http://documents.worldbank.org/curated/en/191321468178757151/Workforce-skills-in-the-eyes-of-the-employers-results-of-the-Georgia-STEP-employer-skills-survey>

Rutkowski, J., *Demand for skills in Georgia*, World Bank, Jobs Forum, Tbilisi, 30 October 2015.

Shvelidze, Z., 'Transition from Soviet to liberal labour law: labour standards in Georgia', *E-Journal of International and Comparative Labour Studies*, Vol. 1, No 1–2 March–June 2012, Adapt University Press, 2012, pp. 213–235.

SSA (Social Services Agency), *2016 annual report*, 2016.

Terterashvili, M., *The socio-economic dimensions of gender inequalities in rural areas of Georgia*, Tbilisi, 2014.

UN (United Nations), *World population prospects: the 2017 revision*, United Nations Population Division, UNDESA, New York, 2017. Last accessed July 2019 at:

<https://esa.un.org/unpd/wpp/Download/Standard/Migration/>

UNDP (United Nations Development Programme), *Briefing note for countries on the 2016 human development report: Georgia*, 2016.

Unicef, *Student performance in Georgia according to the Programme for International Student Assessment*, 2014. Last accessed July 2019 at: www.unicef.org/georgia/media/1946/file

USAID and IOM (US Agency for International Development and International Organisation for Migration), *Labour market in Georgia: report on June–July 2010 survey*, Tbilisi, 2010. Last accessed July 2019 at: <http://iom.ge/1/sites/default/files/pdf/Labour%20Market%20in%20Georgia.pdf>

USAID and IOM (US Agency for International Development and International Organisation for Migration), *Supplying workforce to the Georgian labour market: report for research implemented in February*, Tbilisi, June 2011.

World Bank, *Georgia – Skills mismatch unemployment labour market challenges*, World Bank, Washington, DC, 2013. Last accessed July 2019 at:

<http://documents.worldbank.org/curated/en/999371468242985088/Georgia-Skills-mismatch-unemployment-labor-market-challenges>

World Economic Forum, *The global competitiveness report 2018*, WEF, Geneva, 2018. Last accessed July 2019 at:

www3.weforum.org/docs/GCR2018/05FullReport/TheGlobalCompetitivenessReport2018.pdf

www.etf.europa.eu

