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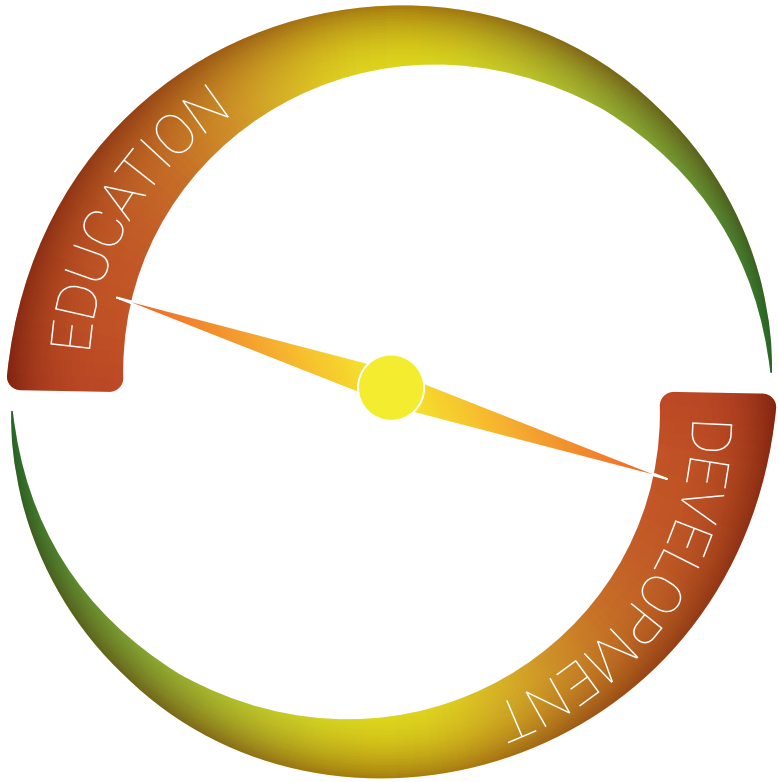

Kosovo Skills Barometer 1.0

Funded by the European Union

IMPLEMENTED BY
Austrian Development Agency

CO-FUNDED BY
Austrian Development Cooperation

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KOSOVO SKILLS BAROMETER 1.0

ALLED2 – "Aligning Education and Training with Labour Market Needs - Phase II" Project, funded by the European Union (EU) and the Austrian Development Cooperation (ADC), implemented by the Austrian Development Agency (ADA)

For ALLED2 developed by: Institute for Entrepreneurship and Small Business

Authors: Dr. Besnik Krasniqi, Dr. Iraj Hashi and Agon Dula

Reviewers:
ALLED2: Dr. Anton Gojani, Skender Boshtrakaj and Efka Heder.
Kosovo Chamber of Commerce: Dr. Besim Mustafa and Muela Ibrahimi

How should be cited: ALLED2 (2022), *Kosovo Skills Barometer 1.0.* Developed by: Institute for Entrepreneurship and Small Business. ISBN 978-9951-8990-7-9

Biblioteka Kombëtare e Kosovës "Pjetër Bogdani"
ISBN 978-9951-8990-7-9

This report was produced within the framework of the project "Aligning Education and Training with Labour Market Needs" ALLED Phase 2, with the financial support of the European Union (EU) and Austrian Development Cooperation (ADC), implemented by Austrian Development Agency (ADA). Its contents are the sole responsibility of the author and do not necessarily reflect the views of the European Union (EU) and of the Austrian Development Cooperation (ADC) / Austrian Development Agency (ADA).

February 2022
Prishtina

Abbreviations and Acronyms

ADA	Austrian Development Agency
ALLED	Aligning Education with Labour Market Needs
AVETAE	Agency for Vocational Education and Training and Adult Education -, Centre for Competencies)
CBK	Central Bank of Kosovo
CEDEFOP	European Centre for Development of Vocational Training
ETF	European Training Foundation
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
GoK	Government of Kosovo
HE	Higher Education
ICT	Information, Communications Technologies
ISCED	International Standard Classification of Education
ISCO	International standard classification of occupations
KAS	Kosovo Agency of Statistics
KCC	Kosovo Chamber of Commerce
KEA	Kosovo Employment Agency
KIESA	Kosovo Investment and Enterprise Support Agency
LFS	Labour Force Survey
MSMEs	Micro and Small and Medium Enterprises
NACE Rev. 2	Nomenclature statistique des activités économiques dans la Communauté européenne (NACE code is the common basis for statistical classifications of economic activities within the EU)
NDS	National Development Strategy
NEET	Not in Education, Employment, or Training
SMEs	Small and Medium Enterprises
UNDP	United Nations Development Programme
VET	Vocational Education and Training
VTCs	Vocational Training Centres
WB	Western Balkans

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The Kosovo Skill Barometer 1.0 (Edition 2021) investigates the extent of the current and future skills needs in Kosovo. It examines the causes and consequent impact it has on businesses across a range of industries, providing the basis for evidence-based policy-making in education and training and assisting young people and their parents in making informed career choices. The findings are also crucial for business owners/ managers in resolving the skill shortage in their business.

Introduction

Building a more competitive market economy, besides stable institutional settings and consistent reforms to ensure a more conducive institutional environment, depends on the extent to which the labour market provides the necessary range of skills and qualifications. The need for a skilled labour force has increasingly attracted the attention of policymakers and the private sector due to the impact they have on the national economy and the private sector in particular. These skills are essential for several reasons and stakeholders, as possessing these skills has a positive impact on employees, firms, and the economy, and these reflect positively on wages, productivity and innovation at the firm and economy levels. In the case of Kosovo, the challenge faced by the national economy is the skill mismatch or the shortage of a range of skills required by the private sector.

The government has proposed several strategies to address the skill gap in Kosovo[1], and several study reports have addressed this issue.[2] These strategies address the skill mismatch problems at the institutional level, recognising that the labour market is fragmented. These strategies highlight the importance of institutional reforms in education institutions and closer cooperation between institutions and the private sector. The study reports mentioned above relate the challenge of skill mismatch to the education system, where the demands of the market economy do not match the skill set of the current labour force. Consequently, private sector development and growth and the competitiveness of the economy are adversely affected.

The present study, the first Skills Barometer in Kosovo, has been produced by the Kosovo Chamber of Commerce (KCC) and experts from the Institute for Entrepreneurship and Small Business (IESB), with the support of ALLED2, shows Kosovo's skills and occupations landscape over five years. A Skills Barometer is a vital tool for policy making that will identify the skills needs, and occupations required by the private sector in Kosovo's market economy. In particular, the Skills Barometer involves forecasting the demand for and supply of different occupations in different sectors and economic activities in Kosovo.[3]

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[1] *Government of Kosovo: ECONOMIC REFORM PROGRAMME (ERP) 2019-2021.Available: https://ec.europa.eu/neighbourhood-enlargement/sites/near/files/kosovo_erp_2019-2021.pdf; Ministry of Culture, Youth and Sport, Strategy for Youth 2019-2023 (2019), Available at:* https://www.mkrs-ks.org/repository/docs/Strategy_for_Youth_2019-2023.pdf

[2] *Economic Reform Programme 2019-2021, (https://mf.rks-gov.net/desk/inc/media/4FC-9C8D0-8ADF-4DD1-97B8-BB2DD36150C3.pdf)*

[2] *World Bank. 2019. Kosovo Country Report: Findings from the Skills towards Employment and Productivity Survey. World Bank, Washington, DC.* http://documents.worldbank.org/curated/en/209751557432399449/Kosovo-Country-Report-Findings-from-the-Skills-towards-Employment-and-Productivity-Survey; *Instrument for Pre-Accession Assistance (IPA II)* https://ec.europa.eu/neighbourhood-enlargement/sites/near/files/20180817-revised-indicative-strategy-paper-2014-2020-for-kosovo.pdf; *OECD et al. (2019), SME Policy Index: Western Balkans and Turkey 2019: Assessing the Implementation of the Small Business Act for Europe, SME Policy Index, OECD Publishing, Paris, https://doi.org/10.1787/g2g9fa9a-en.*

[3] *In this particular study, the emphasis will be on the demand side of the occupational landscape as the information on the supply side (those leaving education and training institutions) is unavailable.*

To address this issue, the research strategy of this study report is based on both qualitative and quantitative methods, employing primary and secondary sources of information. The primary data consists of (i) an enterprise survey undertaken explicitly for this research and (ii) semi-structured interviews with various stakeholders. Secondary data is based on official statistics and various reports from governmental and non-governmental organisations.

The structure of this study report is as follows: the first section consists of a brief review of the skill barometer and the importance of skill mismatches. The second section focuses on skills, qualifications, and occupations. The third section explains the research strategy of this study. The fourth section contains findings of primary and secondary evidence sources, and the last section contains conclusions and recommendations.

1. What is Skills Barometer

A skills barometer is a tool or a device showing the skills and occupations landscape in a country over a five-to-ten-year period.[4] It is a system of identifying and forecasting the demand for and supply of different skills, occupations and subjects in different sectors of economic activity - and consequently any shortage and surplus. It highlights the sectors likely to grow faster or slower than average and the number of employees of different skills and qualifications needed in the growing sectors and not needed in the declining sectors. It should also provide information on the number of leavers from training and educational institutions at different levels and subjects. In short, and most importantly, the skills barometer contains a set of information of interest for a range of labour market stakeholders (policymakers, enterprises in different sectors of the economy, employment agencies, education and training establishments, students leaving education and training and their families) enabling them to develop appropriate policies and make informed decisions.

In any economy, especially in the short run, there are always some mismatches between the available skillset and the private and public sector demand. This is true for developing as well as highly developed economies.[5] The significance of skills needs analysis and skills barometer is essential, particularly for smart specialisation agenda in a knowledge-based economy. The main challenge is how quickly the education system can respond to the emergence of new skills and subjects by processing the information contained in the skills barometer and taking appropriate policy measures to reduce the gap.

Skills shortage and skills mismatch (the imbalance of demand and supply for specific skills) can have a severe effect on individuals and the economy. Workers in mismatched jobs (e.g., overqualified workers) earn less than they should and have lower job satisfaction; there may be wage inflation in jobs with skill shortages; unfulfilled vacancies increase the cost of hiring and lower firms' profits; firms cannot produce at their optimum output levels, their innovativeness, productivity and competitiveness will be adversely affected, and the economy and standards of living of citizens will be below their potential level. Therefore, skills shortages must be identified quickly, and appropriate measures are taken to encourage vocational and educational institutions to continuously upgrade their

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[4] *In case of Kosovo the Skills Barometer covers a period of 5 years, partly because the continually changing business environment and inability of businesses to forecast their needs for longer than five years, highlighted in interviews with businesses.*

[5] *See OECD/ILO (2018). Only a few months ago, a report analysing the skill gap in the UK showed that all industries in the country are impacted by skill shortages; some more seriously than others. The sector most affected is Engineering and Manufacturing who face 'the biggest skill shortage in 30 years. Another sector suffering seriously is financial services where 85% of the firms indicated that their workforce does not have the skills they need to do their jobs properly. (Search Recruitment Group, Mind the Gap, Search Consultancy Skills Shortage Report, February 2021)*

curricula to ensure that the recruits to the workforce have the appropriate skill set and that there are also opportunities for the existing workforce to improve their skill level.

Skill shortages and skills mismatch arise for various factors, almost as a natural consequence of economic and technological development. The most important factors are:

- **Technological transformation.** New technologies are generally associated with increased demand for new skills and qualifications. At the same time, technological change results in the replacement of labour by machines in certain activities (and skills) and the decline in demand for some skills. The recent rapid development of digital technology has speeded up this process in all countries. The current Covid-19 pandemic illustrates how economic activities have been impacted, particularly by an unexpected tragic event that can set in motion changes in work patterns and social behaviour and increase the demand for digital skills. The technological change enables some sectors of the economy to grow faster than others, leading to increased demand for specific skills and occupations.

- **Globalisation.** The rise in the volume and pattern of international trade and the demand for new products and services has resulted in the demand for new skills across the world, almost irrespective of countries' levels of economic development. Although the COVID-19 pandemic resulted in the disruption of global value chains and some 'on-shoring, the demand for new skills will not diminish.

- **Urbanisation.** The slow but permanent trend of moving from the countryside to urban areas (driven by the availability of more and better-quality goods, services, and opportunities) and 'smart cities' gradually change the demand for different skills.

- **The transition to the 'green economy'.** The increasing awareness and importance of the 'green economy and the developing international consensus on climate change and related policies have given rise to a host of new technologies specifically designed to reduce the harmful impact of human economic activities on the environment. These technologies require new skills and qualifications in new subject areas which must be provided demanded by education and training institution or met by net migration.

- **Demographic changes.** Changes in demographic structure in different countries (ageing in developed countries and increase in the share of young people in total population in many developing countries) affect the pattern of demand and thus skills and occupations. This also has strong implications for life lifelong learning which may involve reskilling or upskilling of workforce.

- **The inability of educational and training institutions to adjust their programmes quickly.** It is well known that in most countries, educational institutions cannot always produce graduates and school leavers with the education and skills needed by the labour market. The degree to which these institutions can reform and upgrade their curricula to match the changing market needs will influence the persistence of the skills mismatch. Indeed, educational and training institutions should adopt a new paradigm reflecting the rapidly changing environment, in particular the advent of the digital economy.

- **Migration.** Skill shortages in one economy can act as an influential 'pull factor' to attract skilled workers from other countries (migration for the receiving country and emigration for the sending country). At the same time, the movement of labour in or out of an economy will affect the skills shortage or surplus of both the country of origin and the country of destination of migrant workers.

The importance of identifying and forecasting the excess demand for different skills and occupations in different sectors of the economy has been recognised in most European countries, with a variety of approaches being adopted in different countries. In the United Kingdom, a Northern Ireland Skills Barometer (2018-2028) was produced in 2018 (and updated in 2019) to identify and estimate the shortages and surpluses of different skills, occupations and subject areas in different sectors in Northern Ireland (interestingly not for other parts of the UK) over ten years.[6] The NI Skills Barometer is based on surveys of employees, labour market surveys, the UK Higher Education Statistical Agency databases and information on the number of students on education and training in different subject areas and different levels and their estimated growth over the ten years.

In Austria, the Public Employment Agency has been publishing a semi-annual Barometer (AMS-Qualifications-Barometer) for many years now to identify the qualifications needs of the labour market.[7] This Skills Barometer is based on job advertisements, studies on demand for skills and other available studies.

However, the European Centre for Development of Vocational Training (CEDEFOP) in Skills Panorama has the most comprehensive assessment of skills needs in the EU and individual

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[6] *Ulster University Economic Policy Centre, (2019), Northern Ireland Skills Barometer, July. In 2021 an organisation called In-Comm Training Services launched the In-Comm Training Barometer for the West Midlands region of the United Kingdom to identify the effect of Brexit and Covid-19 on plans for investment in training of companies in the region. This 'Barometer' is not the same as Skills Barometer and has a very limited focus: investment in training. See In-Comm Training Services (2021), In-Comm Training Barometer 2021, available at:* https://in-comm.co.uk/wp-content/uploads/2021/02/e4154-in-comm-Barometerweb-1.pdf

[7] *The Austrian Barometer can be accessed on* http://3s.co.at/en/node/491

member states.[8] This skills panorama is an online platform providing detailed data, assessment and analysis on skills and occupations needs in different sectors of the economy of each member state. In turn, the skills and occupational needs information become the drivers for changes in the training and for educational institutions to align themselves to the needs of the labour market. CEDEFOP focuses on individual sectors of the economy and assesses its changing needs for different skills and occupations. As the joint OECD/ILO (2018) study points out, skills mismatch is prevalent in G20 countries, and any policy intervention aimed at reducing the skills mismatch requires a large amount of information on the details of the labour market needs and the skills and qualifications of new additions to the labour market.[9]

1.1. The importance of Skill Matches

Skill mismatch has attracted attention and has become a priority of policymakers around the world. Skill mismatch occurs when the employees are unable to adapt to firms' skill requirements. As a result, policymakers and social partners worldwide have become increasingly concerned about the match between employees' skills and employers' needs. In a continually changing global economy, possessing appropriate skills is crucial and considered an asset not only for employees but also for the firms. Possessing the right skills positively impacts employees, firms, and the economy through higher wages, higher productivity and innovation.[10]

The skill mismatch occurs when the demand for and supply of skills at a particular wage do not correspond.[11] Skill mismatch may take various forms: vertical and horizontal mismatch, skill gaps, skill shortages, and skill obsolescence.[12] There are different types of skill mismatch, particularly the imbalances of skill and qualifications required in the labour market in general and for jobs in particular. Skill mismatch is broad, includes different qualitative or quantitative imbalances, and addresses formal qualifications, including technical and soft skills.[13] The concept of skill mismatch can be used to describe a variety of situations such as i) vertical mismatch, which includes over education, under education, over and under skilling; ii) skill gaps and skill shortages, which occur when vacancies are unfilled or challenging to fill; iii) horizontal mismatch, which includes the field of study mismatch and skill obsolescence. These concepts

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[8] *Skills Panorama (CEDEFOP):* https://skillspanorama.cedefop.europa.eu/en

[9] *OECD/ILO (2018), Approaches to anticipating skills for the future of work: Report prepared by the ILO and OECD for the G20 Employment Working Group, Geneva.*

[10] *WEF. Matching Skills and Labour Market Needs Building Social Partnerships for Better Skills and Better Jobs. Global Agenda Council on Employment at the World Economic Forum (WEF), 2014*

[11] *International Labour Organization "Supplementary notes on skills mismatch" Link:* https://www.ilo.org/wcmsp5/groups/public/---ed_emp/---emp_ent/documents/genericdocument/wcms_735524.pdf

[12] *International Labour Organization "Supplementary notes on skills mismatch" Link:* https://www.ilo.org/wcmsp5/groups/public/---ed_emp/---emp_ent/documents/genericdocument/wcms_735524.pdf

[13] *International Labour Organization. "Skills and jobs mismatches in low- and middle-income countries," International Labour Office–Geneva:ILO,2019. Link:*https://www.ilo.org/wcmsp5/groups/public/---ed_emp/documents/publication/wcms_726816.pdf

refer to two aspects: the mismatch that influences workers in their attempt to find a job and firms that aim to employ or attempt to find skilled workers.[14]

The analysis of skill mismatch focuses on two levels: the individual and the firm levels. At the individual level, the skill gap highlights the degree to which individuals' skills, knowledge, and educational background are at the required level for the current jobs or to what extent these skills match the skills, knowledge and educational level of job vacancies. The skills gap is manifested at the firm level when the firm believes that the employees' skills and competencies are not at the expected level or are unrelated to their job. On the other hand, skill shortage highlights the situations where firms are unable to find the right candidates to recruit or do not find suitable employees to fill the vacant job.[15] The extent of the imbalance is now represented by a 'Mismatch Indicator' for skills, a combination of 5 sub-indices: Wage growth, Employment growth, Hours worked growth, Unemployment rate, Under-qualification growth, and prepared for EU and some other countries.[16]

It is acknowledged that skill mismatches are a crucial factor preventing the economy from reaching its potential. They are manifested in qualitative and quantitative labour shortages; they lead to an increase in recruitment cost[17] and training cost for employers; they harm wages and productivity[18], quality of jobs and employee job satisfaction; and they slow down companies' expansion plans. As a result, they require policy measures at both the EU and the national level to close the gap.[19] Addressing the mismatch can lead to a more competitive business environment, higher productivity, and better quality jobs and greater job satisfaction.[20]

New forms of skill mismatch have arisen during the financial crisis and in the fourth industrial revolution. The financial crisis led to job destruction, high unemployment and underemployment in many countries. Unemployed persons faced new job opportunities – part-

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[14] *McGuiness, S., K. Pouliakas and P. Redmond (2017), "How Useful is the Concept of Skills Mismatch?", International Labour Organization, Geneva.*

[15] *International Labour Organization "Supplementary notes on skills mismatch" Link:* https://www.ilo.org/wcmsp5/groups/public/---ed_emp/---emp_ent/documents/genericdocument/wcms_735524.pdf

[16] *OECD (2017), Getting Skills Right: Skills for Jobs Indicators, OECD Publishing, Paris.*

[17] *Recruitment cost increases as the skills and qualifications required for the job become more sophisticated. For example, the average recruitment time for professionals, technicians and associate professionals is 90 days while for elementary occupations (unskilled) is only 30 days. See Institute for Market Economics (2018). Skills Mismatches– An Impediment to the Competitiveness of EU Businesses. The European Economic and Social Committee (EESC). Available at:* https://www.eesc.europa.eu/en/our-work/publications-other-work/publications/skills-mismatches-impediment-competitiveness-eu-businesses#related-content

[18] *WEF. Matching Skills and Labour Market Needs Building Social Partnerships for Better Skills and Better Jobs. Global Agenda Council on Employment at the World Economic Forum (WEF), 2014*

[19] *Institute for Market Economics (2018). Skills Mismatches– An Impediment to the Competitiveness of EU Businesses. The European Economic and Social Committee (EESC). Available at:* https://www.eesc.europa.eu/en/our-work/publications-other-work/publications/skills-mismatches-impediment-competitiveness-eu-businesses#related-content

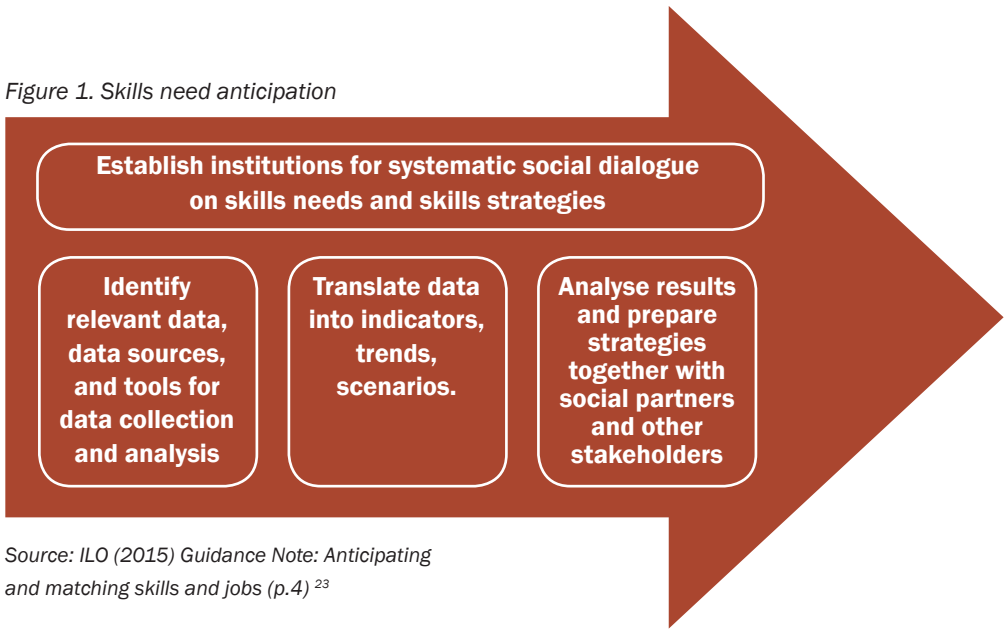
[20] *Martin, John P. (2018) : Skills for the 21st century: Findings and policy lessons from the OECD survey of adult skills, IZA Policy Paper, No. 138, Institute of Labor Economics (IZA), Bonn*

time and low skilled. As a result, new jobs provided fewer opportunities for employees to develop their skills and their careers.[21] The fourth industrial revolution, too, may result in large scale unemployment as the labour force lacks the skills needed to adopt technological changes driven by Big Data, Internet of Things and Artificial Intelligence.[22]

1.2. The skills needs anticipation approach

The most commonly used approach in skills needs anticipation studies is developed by ILO (see Figure 1). The approach promoted by the ILO identifies the relevant data and tools; translates data into indicators, trends and scenarios; analyses the data; and prepares strategies in direct interaction with key stakeholders by establishing necessary institutional arrangements conducive to matching demand for and supply of skills through systematic social dialogue. In the Kosovo context, the Kosovo Chamber of Commerce is a key player in this social dialogue that would precede the Skills Barometer's preparation.

Figure 1. Skills need anticipation



Source: ILO (2015) Guidance Note: Anticipating and matching skills and jobs (p.4) [23]

[21] *WEF. Matching Skills and Labour Market Needs Building Social Partnerships for Better Skills and Better Jobs. Global Agenda Council on Employment at the World Economic Forum (WEF), 2014*

[22] *Martin, John P. (2018): Skills for the 21st century: Findings and policy lessons from the OECD survey of adult skills, IZA Policy Paper, No. 138, Institute of Labor Economics (IZA), Bonn*

[23] *https://www.ilo.org/wcmsp5/groups/public/---ed_emp/---ifp_skills/documents/publication/wcms_534307.pdf*

2. Skills, Qualifications and Occupations

The concepts of skills, qualifications and occupations must be clearly defined at the outset to avoid confusion and misunderstanding. In this study, *skill* refers to a set of knowledge and competencies (cognitive and non-cognitive, generic or occupation/sector-specific, non-manual or manual, etc.) needed to carry out the tasks and duties of a given job. *On the other hand, Qualification* refers to a set of 'knowledge, skills and abilities needed for a given job and is associated with a degree of autonomy at each level (Humpl and Kargl, 2008). They are certified by a training or educational establishment. *Qualifications* also correspond to levels of education/training. *Qualifications* are now standardised across the European Union under the European Qualifications Framework, consisting of 8 levels, as shown in Table 1.

Table 1 Classification of Qualifications according to the Qualification Framework

Level 1	Elementary education
Level 2	Lower secondary education
Level 3	Gymnasium, Upper secondary education, Professional Certificate
Level 4	Foundation degree, Higher Schools; 1st-year University
Level 5	Post-secondary education; 2 years at tertiary level or Higher Schools
Level 6	Bachelor's degree or equivalent
Level 7	Master's degree or equivalent
Level 8	Doctoral degree or equivalent

Skills needs are reflected in shortages, or surplus, for specific qualifications or occupations. Thus, any skill needs assessment, such as the Skills Barometer, will inevitably be expressed in terms of excess demand or supply for occupations and jobs. A job is defined as "a set of tasks and duties performed or meant to be performed, by one person", while 'Occupation' is defined as a "set of jobs whose main tasks and duties are characterised by a high degree of similarity" (ILO, 2012, p.11). Occupations reflect varying levels of skills and are also associated with Qualification levels. ILO has standardised the range of available occupations into the International Standard Classification of Occupations (ISCO) (see Table 2).

Table 2 List of Occupational Group (1 digit)

Level	Description	Skills category
OC1	Legislators, Senior Officials and Managers	Higher skills (usually with at least some tertiary level education)
OC2	Professionals	
OC3	Technicians and associate professionals	
OC4	Clerical support workers	Intermediate skills (upper secondary and post secondary education)
OC5	Service and sales workers	
OC6	Skilled agricultural, forestry and fishery workers	
OC7	Craft and related trades workers	
OC8	Plant and machine operators and assemblers	
OC9	Elementary occupations	Low skills (Sub-secondary education)

Source: ILO (2012), p. 22.

Note: There is also the Occupational Group 0 to classify the Armed Forces, which is not relevant to the current discussion and has been removed from the table.

Each 1-digit group is divided into several 2-digit groups and each of those into further 3- and 4-digit groups, altogether consisting of some 436 different occupations.

2.1. Stakeholders of Skills Barometer

The Skills Barometer provides a range of stakeholders with information on the economy's needs for different occupations over a five to ten-year period to enable them to take appropriate action. The Skills Barometer has many stakeholders, including:

- **Governments.** The Skills Barometer is an essential tool of evidence-based policy-making at the disposal of government ministries. Ministries of Labour and Education would have a particular interest in the Skills Barometer as it would enable them to develop appropriate employment policies and education and training policies. Given that any shortfall in demand for various occupations can be met through migration, the Barometer will also help the government decide its migration policies.

- **Educational and training institutions.** These institutions may use the Barometer information to upgrade their programmes to respond more to the economy and employers' needs.

- **Employers.** It provides information about the supply and demand of the occupa-

tions across the economy and makes it easier for them to plan their skill needs corresponding to their growth strategies.

- **Career guidance organisations.** The Barometer provides essential information for career guidance councillors to advise young people about alternative education and training opportunities.

- **Young people and their parents.** Young people's career choices are closely bound to occupations in demand in the future when they join the labour market. The Skills Barometer will help them in deciding on their future careers.

- **Donor organisations.** In countries like Kosovo, where many international donors are engaged in the labour market, education and training support programmes, the Skills Barometer will help them focus their attention on areas of real shortage and policies to alleviate these shortages.

2.2. Methods of anticipating future skill needs or skill mismatches

There are many methods of identifying and forecasting skills mismatch or skills needs of a country in the medium and long run. Each method requires its specific data and technical expertise, and, therefore, the choice of a method is closely linked to the availability of data and expertise suitable for that method. Here we briefly discuss some of these methods.[24]

- *Focus or Expert Group*. The skill needs assessment is conducted by interviewing either a focus group or a group of labour market experts. Often the panel of experts are interviewed twice or more (Delphi methodology) to gain a broad picture of skills/occupation shortages. This method does not require any large-scale dataset, but it requires expertise in analysing qualitative data and applying Delphi methodology. This method has several limitations and may not be generalisable.

- *Enterprise Surveys*. This method is one of the most commonly used methods of finding companies' future skills/occupational needs (or sectors) through its managers' eyes. It requires a register of companies and a reasonably sized representative sample. The choice of a sample will be influenced by the economy's structure and

[24] *For a detailed discussion of methods of skills need assessment and forecasting, see ILO/CEDEFOP/ETF/OECD (2017), Skill needs anticipation: Systems and approaches. Analysis of stakeholder survey on skill needs assessment and anticipation, ILO, Geneva; available at* https://edmsp1.ilo.org/KSP/en/Details/?dn=EDMSP1_208019

the size distribution of firms. Usually, stratified random sampling is used to ensure that all sectors of the economy and all size groups are represented. The sample may be weighted in favour of large firms (as in some economies, like Kosovo, there are not many large firms in existence) as these firms usually operate with more advanced technology and employ a range of skills at different occupational levels – and therefore have a better idea of how their skill needs will evolve. Smaller firms are usually less diversified in terms of skills, and employees are less specialised, each of them performing a range of jobs with different skill sets.

- *Quantitative Forecasting*. This method employs a multi-sectoral macroeconomic model and requires a large amount of consistent time series data on labour market conditions, occupations, qualifications, students in vocational training and educational institutions, and detailed population characteristics. The macroeconomic model needs to have been in existence for several years to ensure it is fine-tuned to produce reasonably accurate forecasts. This method requires knowledge and expertise in modelling, statistical and econometric methods and programming. This method is used only in advanced economies where both the data and the expertise are available. It produces measurable forecasts, but it is also costly.[25]

- *Graduate Surveys*. This method, sometimes referred to as 'Tracer Studies', focuses on the labour market experiences of a cohort of graduates (of varying disciplines and qualifications). It may be centralised at the national level (conducted by a Ministry or a public Agency) or decentralised at the institutional level (conducted by universities and, more recently, training organisations). It highlights the relevance of the skills and knowledge gained at the training or educational institutions to the employer's needs and thus the skills mismatch. The data is usually collected soon (six months to three years) after the students or trainees complete their course of study. The results are mainly used to improve the quality of education or training and bring it closer to the needs of the labour market and employers. It is relatively low cost and easy to administer though establishing contacts with the graduates, and thus forming a representative sample, may be difficult. Also, the result is only relevant for the early stage of graduates' labour market experience.[26]

- *Vacancy Surveys*. This method, which has recently become popular thanks to the progress in artificial intelligence and big data, analyses the vacancies in different sectors of the economy and for different occupations and builds a picture of skills/occupations in short supply. It now searches public announcements of vacancies

[25] *For a detailed analysis of the quantitative forecasting method, see CEDEFOP (2010)*
[26] *For details, see ETF/CEDEFOP/ILO (2016)*

on the web (instead of searching in newspapers and professional publications) and can quickly go beyond the borders of individual countries. Recently, CEDEFOP has completed and launched the Skills Online Vacancy Analysis Tool for Europe (Skills-OVATE), providing a detailed vacancy profile (according to occupations, skills and regions), in real-time (data on the last available four quarters, updated four times per year) for all EU member states.[27]

The Enterprise Survey method is the most common method used in G20 countries, often combined with another method (ILO/OECD, 2018, p.8). Following these countries' practices, the present study also uses the Enterprise Survey method as its primary tool and combines it with elements of the first method, interviews with experts and stakeholders. This is discussed in more detail later.

[27] *http://www.cedefop.europa.eu/en/events-and-projects/projects/big-data-analysis-online-vacancies*

3. Methodology of Kosovo Skills Barometer

The research strategy employed in this project is a combination of qualitative and quantitative methods. **The qualitative aspect** consists of desk research and semi-structured interviews with various stakeholders and experts. **Desk research** involved a literature review, the review of secondary data including project documents, assessments, evaluations and previous labour market surveys and situational analyses based on quantitative information. We carried out a literature review on the labour market trends and skills mismatch. The review of national strategic documents provided an overview of the labour market trends. The research team expanded the scope of analysis with other studies and surveys conducted by various institutions or organisations in labour market skills assessment. These critical studies were carefully reviewed to inform the present study's analytical and methodological approach and ensure that the most relevant methodology is used to investigate Kosovo's labour market and skills needs.

To provide a comprehensive analysis of different elements of the Kosovo Skills Barometer, we first reviewed various national strategic documents such as National Development Strategy, Economic Reform Agenda, competitiveness and sectoral strategy documents (ICT and Wood Processing sector, for example), Innovation and Entrepreneurship Strategy of Kosovo, Smart Specialization Framework, EU Progress Report and other labour market studies in order to provide an overview of the context in which the skills barometer is to be developed for Kosovo. The review highlighted the challenges facing Kosovo in building a more competitive labour force able to respond to the changing needs of its emerging market economy.

Data analysis for **semi-structured** interviews was carried out in several steps. The first step was to collect all reports regarding the labour market and skill gap in Kosovo. Then, we conducted and analysed semi-structured interviews with stakeholders and, within this phase, compared and contrasted findings of the literature. Finally, the new topics emerged in terms of skills gap and skills forecast.

The quantitative aspect involves an enterprise survey using an extensive questionnaire on the needs for some sixty occupations in different sectors of Kosovo's economy, with a specific focus on identified in ALLED2. The following section shows the methodology and reports findings from Skills Barometer based on employers' survey data.

3.1. Enterprise Survey and Selection of Sample

3.1.1. The sample

The Enterprise Survey was carried out in more than 400 companies with more than five employees in economic sectors (excluding public sector companies and public services). However, the number of companies that returned complete and useable questionnaires was 318es. The sample was selected randomly from the Database of Active Taxpayers provided by Kosovo's Tax Administration and supplemented with the KCC list of companies, using the NACE Rev. 2 sub-sectors with the specific target of the priority sectors selected by ALLED2. KCC has offices in all regions of Kosovo and has an excellent representation of businesses, especially those with higher growth and employment potential.

The survey had to be conducted through the online method and face-to-face interviews. A number of companies were visited in person when the restrictions on social interactions were eased, and the interviewers completed the online questionnaires. For implementing the online survey, the Qualtrics software platform was used. Qualtrics was also used when the team used face-to-face interviews. The software allows for data management and data export to other software programmes such as Excel or SPSS, which was used for data analysis.

The owners/managers of the companies in the sample were sent an email by KCC or phoned, and requested to follow a link to the questionnaire. Sometimes, at the company's request, the questionnaire was emailed as an attachment to be completed by them and returned to the research team. The team of IESB experts contacted 500 companies directly or via phone to complete the questionnaire. In some cases, after taking appropriate safety measures, they visited the company to complete the questionnaire. In total, 422 companies completed the questionnaires (response rate of 84.4 per cent). Given that some companies had not replied to some of the essential questions, the number of usable questionnaires was reduced to 318. The companies were from all sectors of the economy, with a specific focus on food processing, agriculture, industry and cross-sectoral skills such as ICT.

To establish a sound tracking system of companies and their labour market and skills needs. This will enable better analysis of the dynamic aspects of the skills needs of the private sector. KCC is strategically positioned to conduct future surveys because it is the umbrella organisation with a large membership of key businesses in all sectors. The IESB team of experts will take charge of methodology with a hands-on approach to building the capacity of KCC staff to ensure that they can conduct this type of survey on their own. Table 3 shows the breakdown of the sample by sector and employment structure.

Table 3. Sample characteristics, by sector

Sector	No. of firms	No of Employees 2020	Share of total 2020 (%)
Agriculture	38	530	7.6%
Food processing and beverages	24	966	13.8%
Textile, leather and footwear	2	22	0.3%
Wood processing	10	142	2.0%
Production of construction material	22	1296	18.5%
Metal processing and electric machinery	12	318	4.5%
Production of Machinery and Equipment	6	34	0.5%
Energy and electricity supply	26	686	9.8%
Construction	16	262	3.7%
Information technology	10	328	4.7%
Wholesale trade	22	270	3.8%
Retail trade	36	1154	16.4%
Hospitality and tourism	12	156	2.2%
Transport	2	8	0.1%
Finance and insurance	8	56	0.8%
Professional development and consulting services	14	222	3.2%
Other services	58	566	8.1%
Total	318	7016	100.0%

Source: Skills Barometer Survey 2021

The Skills Barometer contains the list of selected ISCO-08 occupational groups for each sector, enabling the IESB team and the KCC to analyse occupations in different sectors and identify current and future labour market trends.

Table 4 reports the size distribution of the sample. The sample used in this report favours larger firms because, as mentioned earlier, larger firms employ a wide range of occupations and are better informed about future trends. This is also reflected in the average size of the companies in the sample (22 employees), compared to the average size of employees in the population (6.3).

Table 4. Size distribution of the sample and population

Company size	Share in the sample	Share in the population
Micro (up to 9 employees)	16.9%	89.4%
Small (10 to 49 employees)	50.6%	8.9%
Medium (50-249 employees)	29.7%	1.4%
Large (more than 250 employees)	2.7%	0.2%

Source: Skills Barometer Survey 2021 and Tax Administration of Kosovo, 2019.

Table 5 shows the position of the respondents in their companies. It is important to note that more than half of respondents in the sample are owners or entrepreneurs, which adds to the accuracy of the data (58.5 per cent) as owners have more precise knowledge of their company and its future strategic direction, including its growth and employment. 25 per cent of respondents are female.

Table 5. Position of respondents in sample companies

Managerial position	% of respondents
Entrepreneur / owner	58.5
General Manager	19.5
Finance Manager	5.7
Production Manager	3.8
Human resources manager	4.4
Other	8.2
Total	100.0

Source: Skills Barometer Survey 2021

Table 6 shows the education level of the respondents. Interestingly, more than half of the respondents have university degrees (at Bachelors or higher levels).

Table 6. Highest education level of respondents *Source: Skills Barometer Survey 2021*

Educational level	Percentage
Elementary school	5.7
Below high school	17.6
High school – General sciences	12.6
Professional secondary school	9.4
University or postgraduate education	54.7
Total	100.0

3.1.2. Questionnaire design

The questionnaire consisted of several sections:

i. The characteristics of firms: size, age, gender of the owner/manager, economic activity, sales, education of owner/manager.

ii. Information related to training and its funding.

iii. Information on the occupational structure of company's employees. We have selected some 60 occupations (2 or 3-digit ISCO groups) which are relevant in Kosovo. The list was discussed with a group of experts to ensure that occupations particularly relevant at this stage of economic development are explicitly included in the questionnaire.

iv. Future expansion plans of the business, and their expected demand for employees in different occupations in five years' time. This will produce the main component of the Skills Barometer, showing how many people are needed in each of the 60 occupations.

The data was analysed using SPSS software and STATA. Cross-tabulations of the data were created to identify bivariate relationships between various occupations and industry priority sectors.

4. Findings

This section shows findings of desk review and semi-structured interviews. The section consists of three parts: the first part shows the general overview of Kosovo's economy and a brief review of Kosovo's labour market; the second part shows the results of the semi-structured interviews, and the last part shows the findings of the enterprise survey.

4.1. Desk review and secondary data analysis

4.1.1. Economic and labour market indicators

Kosovo's per capita GDP is lower than all EU countries, at EUR 3,959 in nominal prices in 2019, or 26.5% of the EU average.[28] There was a slight decrease in GDP per capita in 2020 due to the COVID-19 pandemic (3,772 euros in 2020).[29] Economic activity experienced an unprecedented shock in 2020 due to the Covid-19 pandemic. The lockdown by the government to stop the spread of Covid-19 had a severe impact on economic activity.[30] Economic activity in Kosovo decreased by 1.3 per cent in the first quarter of 2020, by 9.3 per cent in the second and 7.3 per cent in the third. These estimates also suggest that during the fourth quarter, economic activity in Kosovo experienced an increase of 0.7 per cent. As a result, estimates suggest that nominal GDP in 2020 decreased by 4.0 per cent compared to 2019 (and 3.9 per cent in real terms). Economic activities that experienced significant declines during 2020 were the transport and storage sector (-25.5 per cent) followed by construction (-24.3 per cent) and hotels and restaurants (-21.8 per cent). Economic activities that experienced real growth were health and social work activities (16.9 per cent), food processing (11.7 per cent), information and communication (10.0 per cent), electricity and gas supply (9.4 per cent), and the extractive industry (4.6 per cent). In addition, the decline in economic activity during 2020 due to the pandemic was also reflected in the decline of exports and services[31], although there has been a strong recovery of exports in 2021.

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[28] *EU (2019) 'Commission Staff Working Document Kosovo* 2019 Report.' Brussels: European Commission. Available at:* https://ec.europa.eu/neighbourhood-enlargement/sites/default/files/kosovo_report_2020.pdf

[29] *Kosovo Agency of Statistics (2021) Gross Domestic Product (GDP) by economic activities and expenditure approach 2008 – 2020 (*https://ask.rks-gov.net/media/6312/gdp-2008-2020.pdf*)*

[30] *CENTRAL BANK OF THE REPUBLIC OF KOSOVO (2020). Annual Report. Available at:* https://bqk-kos.org/wp-content/uploads/2021/07/CBK_AR_2020.pdf

[31] *CENTRAL BANK OF THE REPUBLIC OF KOSOVO (2020). Annual Report. Available at:* https://bqk-kos.org/wp-content/uploads/2021/07/CBK_AR_2020.pdf

4.1.2. Labour market

Kosovo's labour market indicators demonstrate that Kosovo is noticeably behind the Western Balkan countries and the EU. This is due to many new entrants to the labour market, high inactivity and high unemployment rate, especially amongst women and youth.[32] Table 6 shows that the participation rate in Kosovo in 2020 was 38.3 per cent which, compared to 2019, shows a decrease of 2.2 percentage points. The inactivity rate indicator shows a slight increase during 2020, from 59.5 per cent to 61.7 per cent. The unemployment rate has been the primary concern of governments and policymakers over the years. Table 7 also reports the data on unemployment, showing a slight increase from 25.7 in 2019 to 25.9 in 2020. In terms of gender, although the unemployment rate was higher among women than men (32.3 per cent compared to 23.5 per cent), men suffered the brunt of slower economic activity (unemployment increased amongst men but decreased amongst women).

Furthermore, divided by age, youth unemployment (15 to 24), though very high, reduced marginally during 2020 (49.1 compared to 49.4 per cent). Besides the high youth unemployment rate, Kosovo's challenge is the high share of NEET among the youth (15-24 years). Table 7 shows that during 2020 there was an increase of NEET's share, from 32.7 per cent in 2019 to 33.6 per cent in 2020.

[32] *ETF-European Training Foundation Policies for Human Capital Development in Kosovo; An ETF Torino Process assessment, 2020. Available at:* https://www.etf.europa.eu/en/publications-and-resources/publications/trp-assessment-reports/kosovo-2020?page=3&pid=845afbd0-c4c4-44ca-b2f9-dde3aae73c6d *(Accessed May 2021)*

Table 7. Labour market Indicators, by age and gender

Indicators	2018			2019			2020		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Labour force participation rate	63.3	18.4	40.9	59.7	21.1	40.5	56.0	20.8	38.3
Inactivity rate	36.7	81.6	59.1	40.3	78.9	59.5	44.0	79.2	61.7
Employment-to-population ratio (employment rate)	45.3	12.3	28.8	46.2	13.9	30.1	42.8	14.1	28.4
Unemployment rate	28.5	33.4	29.6	22.6	34.4	25.7	23.5	32.3	25.9
Youth unemployment rate (15-24 years)	51.5	64.7	55.4	44.1	60.3	49.4	45.2	57.2	49.1
NEET share of youth population (15-24 years)	30.2	30.0	30.1	31.4	34.2	32.7	34.0	33.2	33.6
Share of vulnerable in total employment	20.3	17.1	19.6	20.3	13.9	18.8	19.0	11.0	17.0

Source: Kosovo Agency of Statistics (KAS)

In addition, the unemployment rate is much higher among the non-majority communities. According to estimates, the unemployment rate was 90% among the Roma and Ashkali communities. Members of these communities are low skilled and in insecure low-status jobs, usually in the informal sector. They are also not registered in employment agencies as unemployed.[33]

As in other WB economies, Kosovo has also experienced structural changes in recent years, with employment in different sectors changing slowly. Table 8 shows the percentage share of employment in different sectors of the economy between 2016 and 2019 (we use 2019 for comparison as this year was not affected by the Covid-19 pandemic). Table 7 shows that the service sector accounts for the largest share of employment in the economy – even though its share has slightly reduced, from 51.5 per cent in 2016 to 50.1 per cent in 2019. This is followed by the share of employment in production and trade sectors, their relative importance of which has changed in the 2016-2019 period. The share of

[33] *Kosovo Progress Report 2020; Available at:* https://ec.europa.eu/neighbourhood-enlargement/sites/near/files/kosovo_report_2020.pdf *(Accessed June 2021)*

employment in production decreased from 17.9 per cent in 2016 to 15.0 per cent in 2019, while the share of the trade sector increased from 14.8 per cent to 17.0 per cent. The next largest sector was construction, where the employment share increased from 11.5 to 12.6 per cent. The sector with the lowest employment share is Agriculture, forestry and fishing, which accounted for 4.2 per cent in 2016 and 5.2 per cent in 2019.

Table 8. Share of employment in different sectors of the economy, 2016-2019 (%)

Sector	2016	2019
Agriculture, forestry and fishing	4.2	5.2
Production	17.9	15
Construction	11.5	12.6
Trade	14.8	17
Services	51.5	50.1
Of which: Public Administration	7.4	6.6
Education	10.6	10.0
Health Social Care	5.6	5.3
Information & Communication	2.2	3.8
Total	100	100

Source: Kosovo Agency of Statistics (KAS)

The change in the relative importance of the different sectors is a feature of all economies developing in a dynamic and changing environment. However, in Kosovo, the trend has been slightly different to other countries: the importance of services has declined slightly while the importance of the primary sector (agriculture) has marginally increased. Within the service sector, the share of public sector employment (Health and Social Care and Education) has decreased while the share of Information and Communication activities has increased.

There has also been a change in the relative importance of different occupations in total employment as in other countries. Table 9 shows the percentage share of employment in different occupations over the 2016-2019 period.

Table 9. Share of employment in different occupations %

Occupation (ISCO 08 Groups 1-9)	2016	2019
1 Legislators, senior officials and managers	7.6	8.8
2 Professionals	13.8	15.9
3 Technicians and associate professionals*	7.4	6.0
4 Clerical support workers	5.5	5.8
5 Service workers and shop and market sales workers	18.1	23.3
6 Skilled agricultural and fishery workers	2.2	2.8
7 Craft and related trade workers**	16.4	10.6
8 Plant and machine operators and assemblers	6.9	5.7
9 Elementary occupations	22.0	21.1
Total	100.0	100

** Includes science & engineering technicians, ICT technicians, business and management associate professionals; ** Skilled workers including metal and machinery operating workers, electrical and electronic trade workers, food processing and garment and related workers.*

Source: Kosovo Agency of Statistics (KAS)

Over this period, the demand for high skill occupations (occupational groups 1-3) has marginally increased while the demand for intermediate skill occupations (groups 4-8) and low skill occupations (group 9) have reduced. Although the demand for some occupations within each group has changed in the opposite direction, the general trend is quite clear. In the low skill category, Elementary occupations have the highest, though declining, and share of employment (22.0 per cent in 2016 and 21.1 per cent in 2019). In the intermediate skill group, the share of the top three groups (the more skilled section) has increased while the share of the last two groups has declined sharply, reducing the share of the whole group. The share of Service workers and shop and market sales workers had increased from 18.1 per cent in 2016 to 23.3 per cent in 2019; Clerical support workers from 5.5 to 5.8 per cent and Skilled agricultural workers from 2.2 to 2.8 per cent over the same period. On the other hand, the share of occupational group Craft and related trade workers was reduced from 16.4 to 10.6 per cent, and that of Plant and machine operators and assemblers decreased from 6.9 to 5.7 per cent.

In the highest skill groups, the share of Professionals increased from 13.8 to 15.9 per cent and the share of Legislators, senior officials and managers from 7.6 to 8.8 per cent, while the share of Technicians and associate professionals decreased from 7.4 to 6.0 per cent. The reduction in the share of two occupational groups (Technicians and associate professionals and Plant and machine operators and assemblers) is a matter of concern as these are groups on which the rapid growth of manufacturing and services depend. This is linked to the decline in the share of employment in the production sector. In most countries, certainly the countries in the region, the demand for these two occupational groups has increased while the demand

for the least qualified group (the elementary occupations) has decreased. This is an issue of particular importance to policy makers and vocational and educational institutions in Kosovo.

4.2. Findings from qualitative interviews

After reviewing the documents and reports that identify the study's parameters in terms of government objectives and policies, we conducted semi-structured interviews with various stakeholders from formal institutions to those directly or indirectly involved in the labour market and firms from the private sector. Our experts prepared the questionnaire for the semi-structured interviews and conducted the interviews with key stakeholders and experts. The experts arranged separate meetings if necessary to make the best use of the limited time. Some of the key stakeholders included: Government agencies (Ministries, Employment Agency of Kosovo, Agency for Vocational Education and Training and Adult Education (AVATE), Centre for Competencies); Private-sector employers; Business Associations - Kosovo Chamber of Commerce Vocational Training Centres (VTCs); and Higher educations (HE) providers.

Table 10 presents the summary of findings from the semi-structured interviews. They are divided into two main headings: the causal factors or the source of problems and recommendation.

Table 10. Causal factors and problems related to skills mismatch based on a sample of selected employers, business associations and school representatives

Factors	Problem	Recommendations
Causal Factor #1	• It takes too long for a graduate from vocational and professional schools to become productive employees	• Promote the principles of the dual education system (more practice-based teaching) in VET so that graduates can be equipped with practical skills • Invest more in physical infrastructure and laboratories, especially in professional schools or specific programmes at universities • Provide an additional training programme for youth in secondary schools
Causal Factor #2	• The education system and curricula need to be aligned with labour market needs • In certain occupations, the curricula are lacking, especially in VETs and professional technical schools	• Private companies and employers' associations need to strengthen cooperation with education/VET providers further • The private sector should be more committed to supporting MESTI in designing curricula
Causal Factor #3	• There is no matching of skills of youth with labour market needs • Skill gaps among youth are mainly in industry-related professions • Youth also needs more training on socio-emotional and cognitive skills and work ethics	• Improve skills and match the skills of youth and industry needs • developing training programmes that address skill gaps, in particular developing socio-emotional and cognitive skills among the youth • Municipality employment offices and career advisors in schools should play a mediating role between youth and private sector
Causal Factor #4	• Youth are not informed about labour market demand for specific occupations • There is a lack of information about attractive occupations	• Future Skills barometer should be tailor-made for the needs of youth entering the labour market, as well as disseminated to schools • Providing career guidance for youth • Provide information through career guidance officers regarding attractive occupations (e.g., engineering professions, technicians and professionals and digital technologies)

Causal Factor #5	• In specific sectors such as industry and export-oriented companies (in metal processing, wood processing, energy sector construction services that require certification, etc.), the limited stock of skilled labour inhibits the growth	• Companies and schools need to do more training for graduates working in specific areas and design future formal and non-formal training programmes to serve the needs of sectors with higher potential for growth • The growth potential is noticed in priority sectors identified by ALLED2
Causal Factor #6	• The unwillingness of youth to embark on internships and apprenticeships in companies. Three interviewees in the industry sector stated that despite the opportunities to offer paid practical work, the interest had been disappointing • School directors also confirm the low motivation of the youth for practical work	• Promote the role of internships and apprenticeships for future career development (e.g., job fairs, open days, company visits, soft skills training)
Causal Factor #7	• Creativity and innovation in the workplace are becoming problematic • Employees lack self-initiative • the growing demand for employees with high technological literacy is changing, especially after COVID-19	• Schools and educational institutions should include creativity and entrepreneurship courses as well as soft skills and job-relevant skills in their curricular and extracurricular activities
Causal Factor #8	• The internationally recognised certification of specific occupations (welders, CNC machinery operators, quality controllers) is necessary for companies to export their products	• More structured cooperation between the private sector and educational institutions to work with accreditation bodies to provide certification
Causal Factor #9	• Migration of skilled workers and specialists. Representatives of Business Associations claim that future migration of skilled workforce poses a challenge for private sector	• Design incentive schemes for the labour force to slow down the emigration of young people from Kosovo

Source: Field interviews, Authors 2021

The findings from semi-structured interviews with the employers show that the poor quality of formal education has led to a considerable gap between the youth skills and labour market needs. The competition for skilled labour has increased considerably in Kosovo, and firms require more skilled workers, particularly youth with high technological literacy. The Skills Barometer survey also confirms the increased needs for professional, associate professionals and vocational occupations, which correspond to the ISCED 5-8 or higher skills (tertiary education) or ISCED 3-4 Intermediate skills (upper secondary and post-sec-

ondary education). In particular, the demand for employees with high technical literacy is increasing rapidly. This may be linked to the macro context where Kosovo has lagged the WB countries in structural reforms. However, firms involved in exporting and those under competitive pressure have increased their demand for skilled youth. In areas where certification of professions are crucial, relevant stakeholders should pay special attention to reducing the future skills mismatch. However, the availability of international certification of skills increases the likelihood of skilled workers migration.

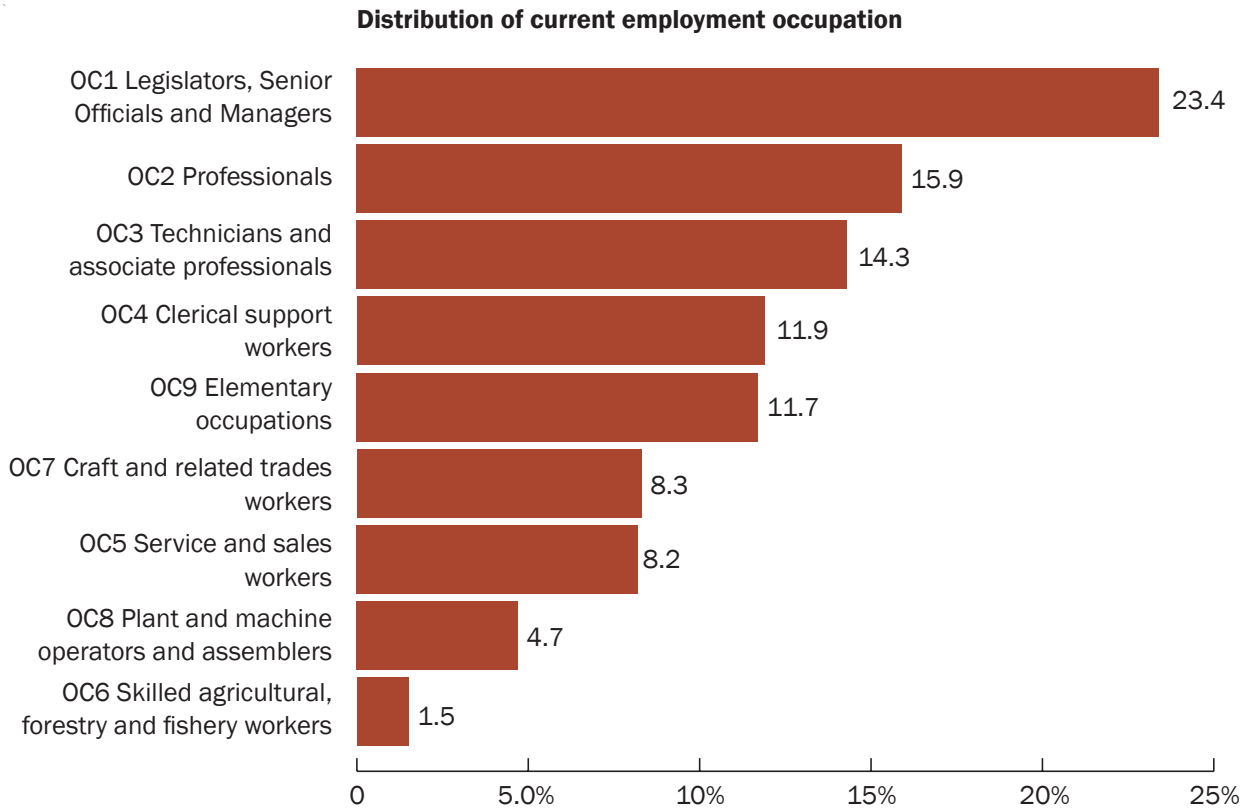
4.3. Findings from Enterprise Survey

4.3.1. Demand for occupations and future jobs

This section shows the findings of the skill barometer survey conducted amongst enterprises in Kosovo. Figure 2 shows the findings regarding the distribution of the current number of employees in the sample reported by surveyed companies according to ISCO-08 occupational grouping. Findings show that 23.4 per cent of employees are in the 'Managers' occupation[34], followed by 'Professionals' with 15.9 per cent, and 'Technicians and associate professionals' (14.3). At first glance, the large number of people in a managerial positions is somewhat surprising. Nevertheless, this can be partly explained by the fact that the sample is selected with a disproportionate number of larger firms (which have a wide range of managerial positions and personnel) and the particular situation in Kosovo where there is a real shortage of people with managerial capabilities. This is also reflected in the large average size of companies in the sample (larger than the average size of the population of firms in the country. Table 9 shows the occupational structure of the employees of sample firms, highlighting the relatively large managerial group.

[34] *Occupational group OC1 consists of 'Legislators, Senior Officials and Managers' but given that only private companies were surveyed, there are no Legislators or Senior Officials in the sample. We refer to this occupational group as 'Managers' only.*

Figure 2. Distribution of the current number of employees, by occupations (%)



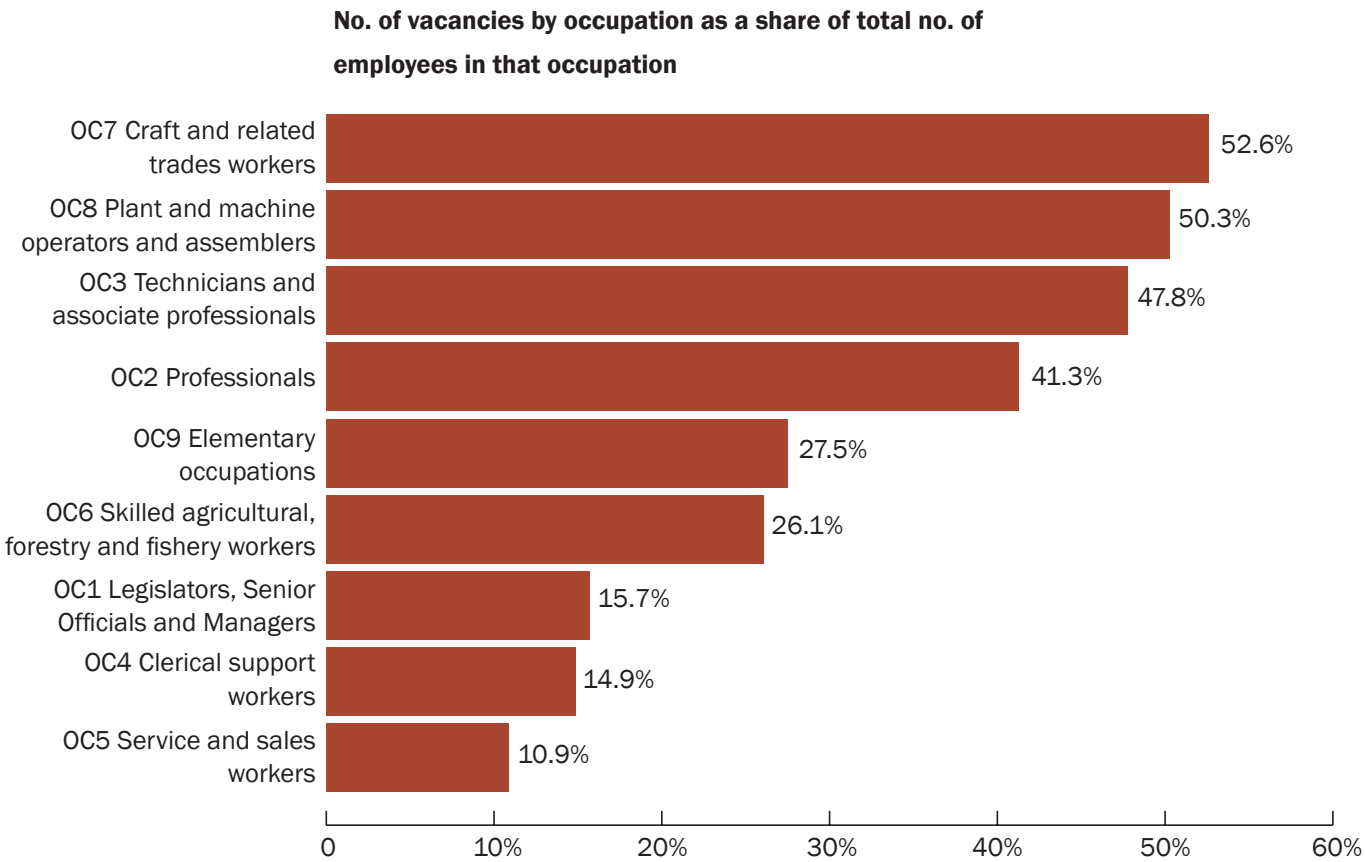
Source: Kosovo Skills Barometer Survey 2021.

The occupational groups 'Clerical support workers' and 'Elementary occupations' have similar percentage shares of 11.9 and 11.7 per cent, respectively. The last four groups are: 'Craft and related trades workers' and 'Service and sales workers', 'Plant and machine operators and assemblers, and finally 'Skilled agriculture forestry and fishery workers.

Figure 3 shows the number of job openings (vacancies) by Occupation as a percentage of the total number of employees in that occupation. Findings show that the number of vacancies as a share of the total number employed in the 'Craft and related trades workers' occupation group was nearly 53%, followed by 'Plant and machine operators and assemblers' occupation with 50 per cent, and 'Technicians and associate professionals'

and 'Professionals' with 48 and 41 per cent, respectively. In contrast, current vacancies with the lowest percentage are in 'Service and sales workers' occupation with nearly 11 per cent, followed by 'Clerical support workers' with 15 per cent and 'managers' with 16 per cent.

Figure 3. Current vacancies as a share of the total number of employees

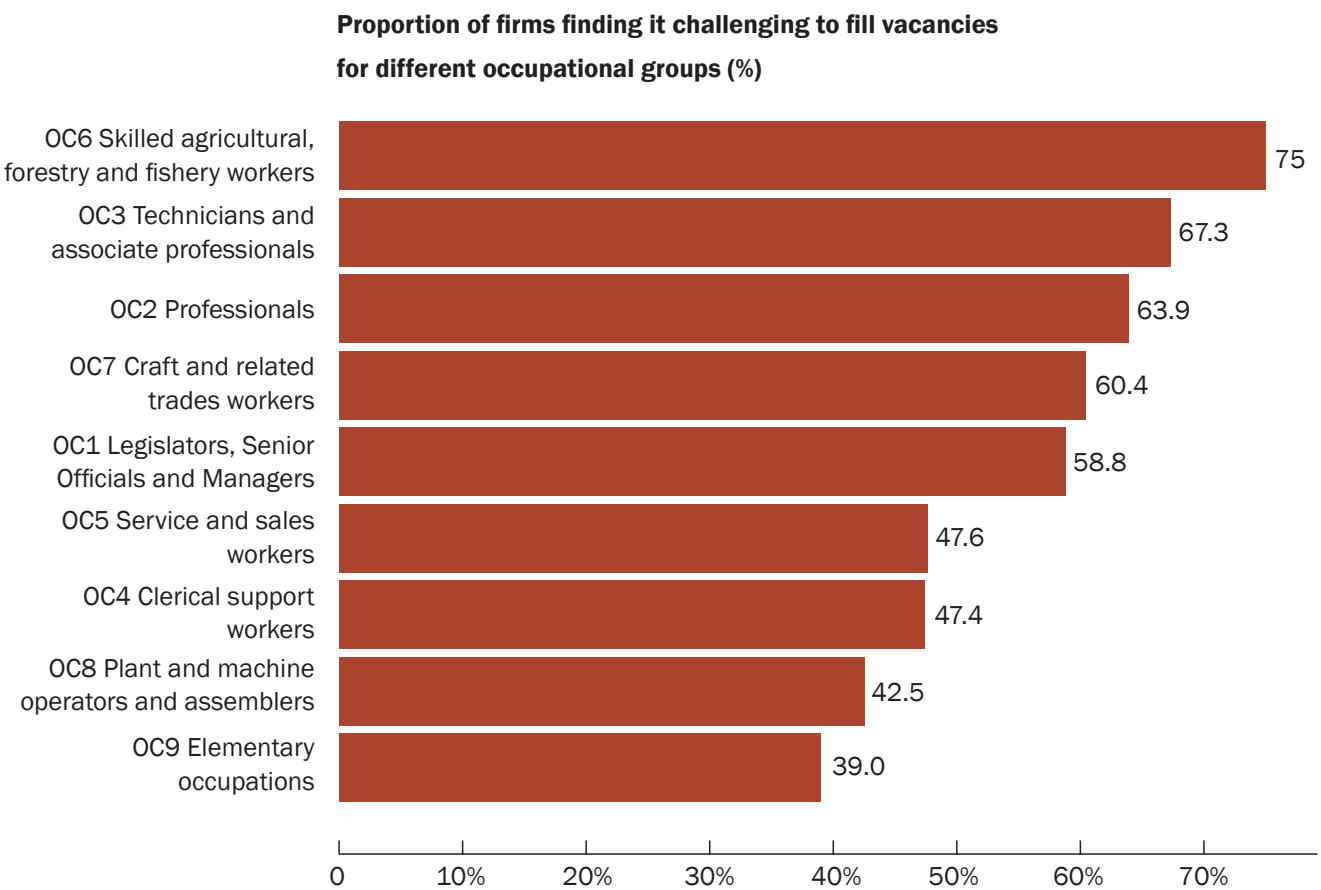


Source: Kosovo Skills Barometer Survey 2021.

Figure 4 shows the difficulty firms face in filling vacancies (finding qualified staff) for different Occupational groups. Interestingly more than 50% of firms find it challenging to fill vacancies in five of the nine occupational groups (Occupational Groups 6, 3, 2, 7 and 1,

in order). The graph shows that the sample firms find it very challenging to find staff in the Occupational Group 'Skilled agricultural workers' (75% of them declared that it is challenging to find staff in this Occupation). More than 60 per cent of firms find it challenging to fill vacancies in 'Technicians and associate professionals', 'Professionals' and 'Craft and related trades workers' occupations. More than 40% of firms find it challenging to recruit employees in the following three occupations: 'Managers', 'Service and sales workers', 'Clerical support workers' and 'Plant and machine operators and assemblers. The occupation with the smallest number of firms finding it difficult to recruit is the 'Elementary occupations', but almost 40% of firms report difficulties for this occupation.

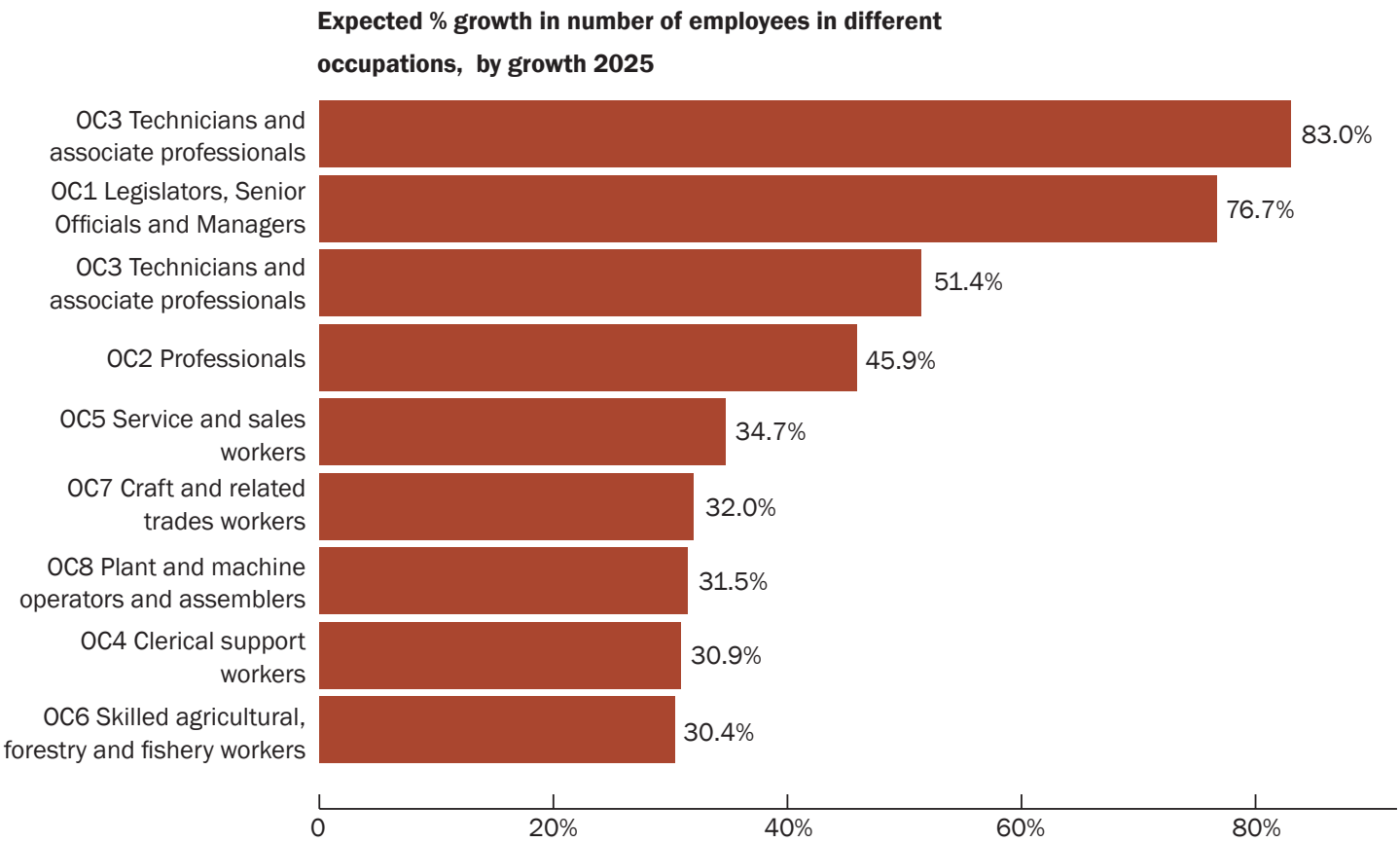
Figure 4. The difficulty of filling vacancies by occupation



Source: Kosovo Skills Barometer Survey 2021.

Figure 5 shows the expected growth of employees in different occupations by 2025. The most critical finding of the survey is how the sample firms expect the demand for different occupations to grow in the next five years. It shows that, unlike many countries, the demand for all occupations is expected to grow. The two occupations with the expected growth of over 76 per cent are Technicians and associate professionals (83 per cent) and Managers (76.7 per cent). This is in line with the finding for European and many Western Balkan countries. Most interestingly, the demand for the lowest skill group, 'Elementary occupations' is also expected to grow by over fifty per cent.

Figure 5. Expected employment growth by occupations (2020-2025)

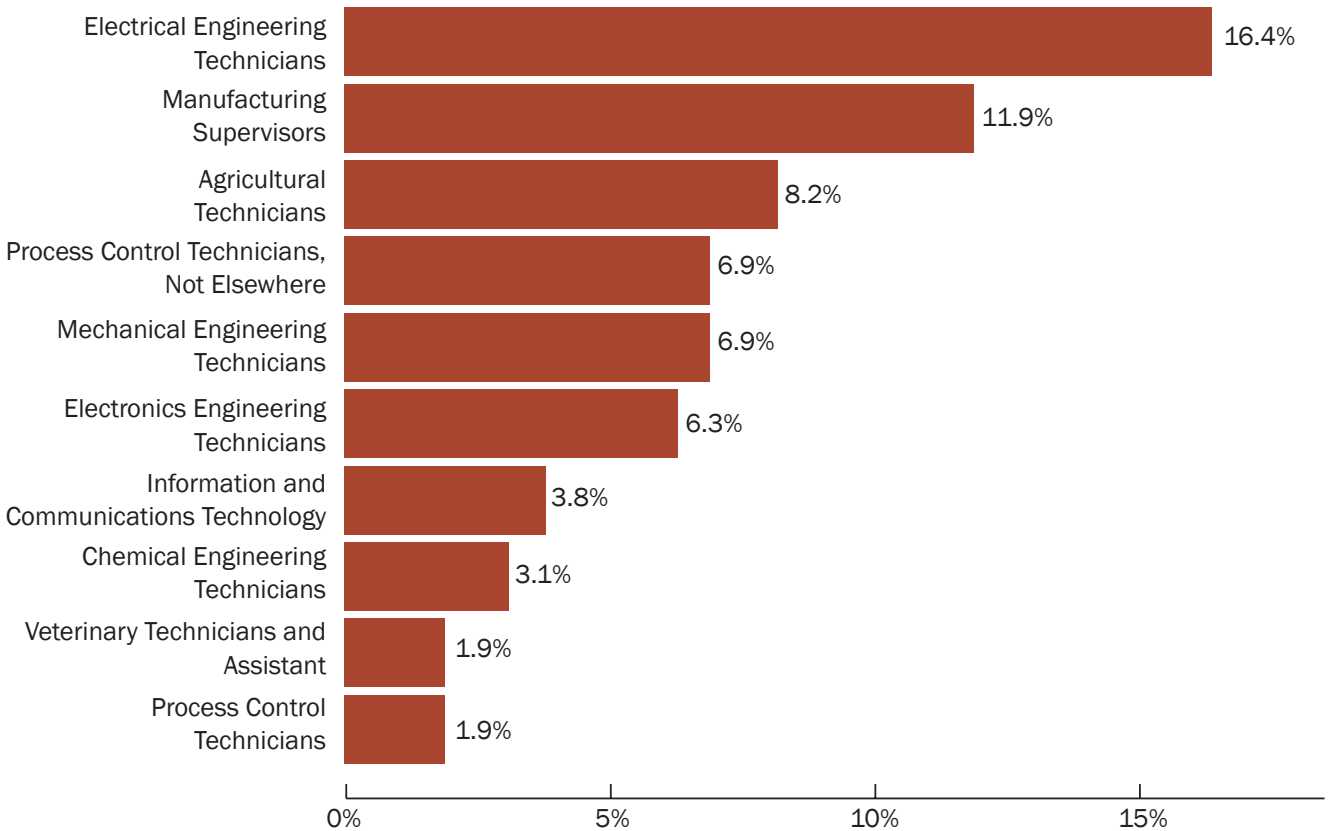


Source: Kosovo Skills Barometer Survey 2021.

In most EU countries, the demand for this occupational group has been falling and is expected to fall further in future (and this is a significant difference between Kosovo and many other countries). The demand for the occupations with the highest skill set (tertiary education and above), 'Managers' is expected to grow by just over 45 per cent. The demand for all other occupational groups (OC4-8) is expected to grow over 30 per cent.

Further analysis of the data for Occupational Group 2, disaggregated to a 2-digit level, shows that three occupational groups with the highest expected growth (above 50 per cent by 2025) are electronic engineering technicians, mechanical engineering technicians and agricultural engineering technicians (see Figure 6).

Figure 6. Growth of employment in sub-groups of the occupational group 3'Technicians and Associate Professionals', 2020-2025



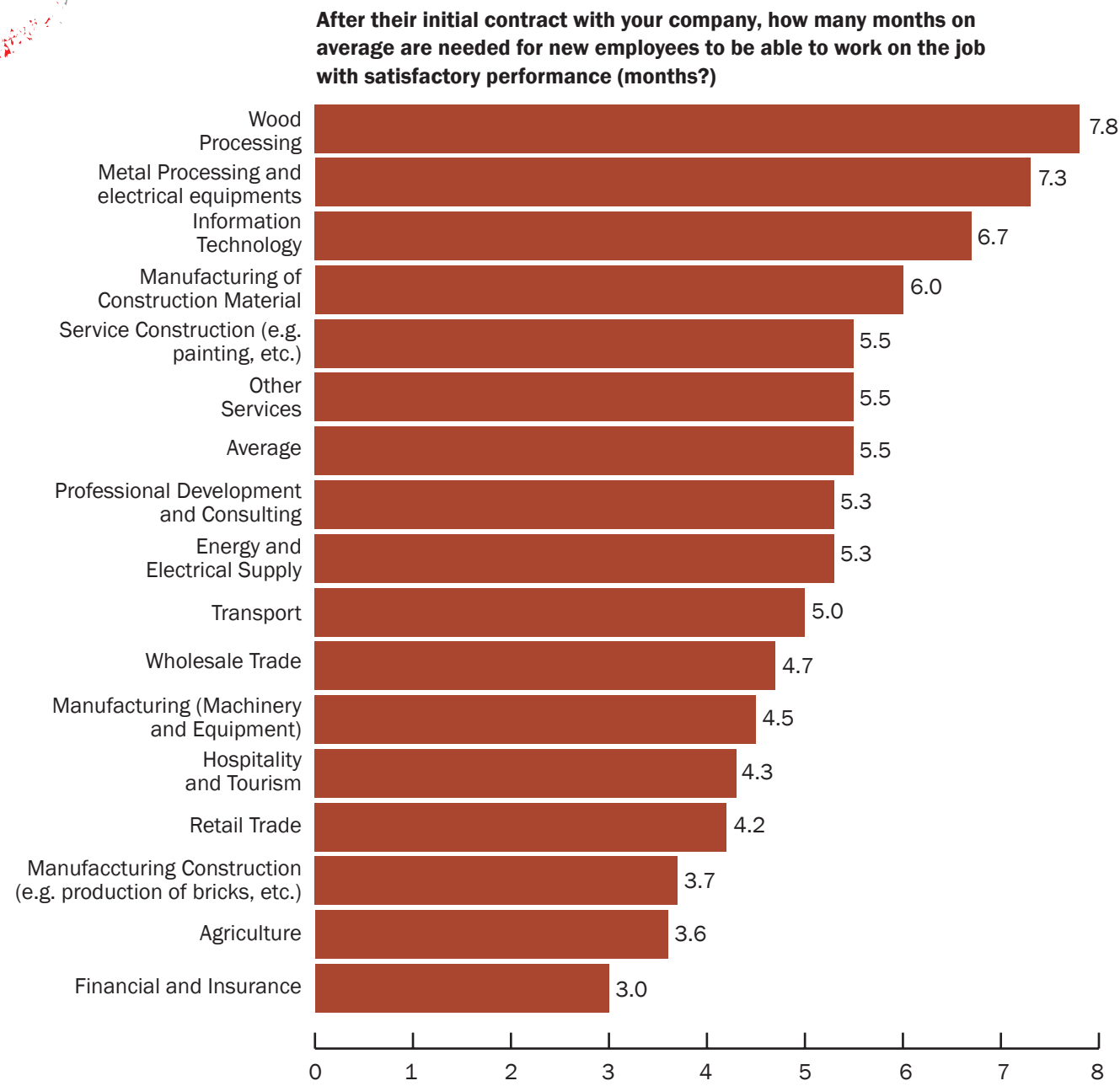
Source: Kosovo Skills Barometer Survey 2021.

Indeed, this finding is in line with the skills gap study conducted by Hapçiu (2017) for sector-specific skills in which manufacturing companies state that technical qualifications related to the industry and assembly line skills will continue to be vital to their operations ten years as well. Indeed, qualitative interviews with representatives of business associations confirmed the need for technical qualifications.[35] All three two-digit occupations fall into the qualification group Upper secondary education, Professional Certificate or Level 5 Post-secondary education pointing out the need for strengthening vocational and professional schools in those fields. These findings have significant implications for the ALLED2 project, confirming the need for interventions in the priority sectors.

Figure 7 shows the average number of months of learning on the job that employees need to adapt to the new working environment and reach the expected performance level required by employers in different sectors of the economy. Findings show that it takes more than six months for employees in Wood processing, metal processing and electrical equipment, Information technology and production of construction material sectors to adapt and reach satisfactory performance. The time is shorter for other sectors, reaching only three months for firms in finance and insurance.

[35] *Interview with Mr. Astrit Rexha, Executive Director at MIRECK - Metal Industry and Renewable Energy Cluster of Kosovo (interview conducted 24th of June 2021)*

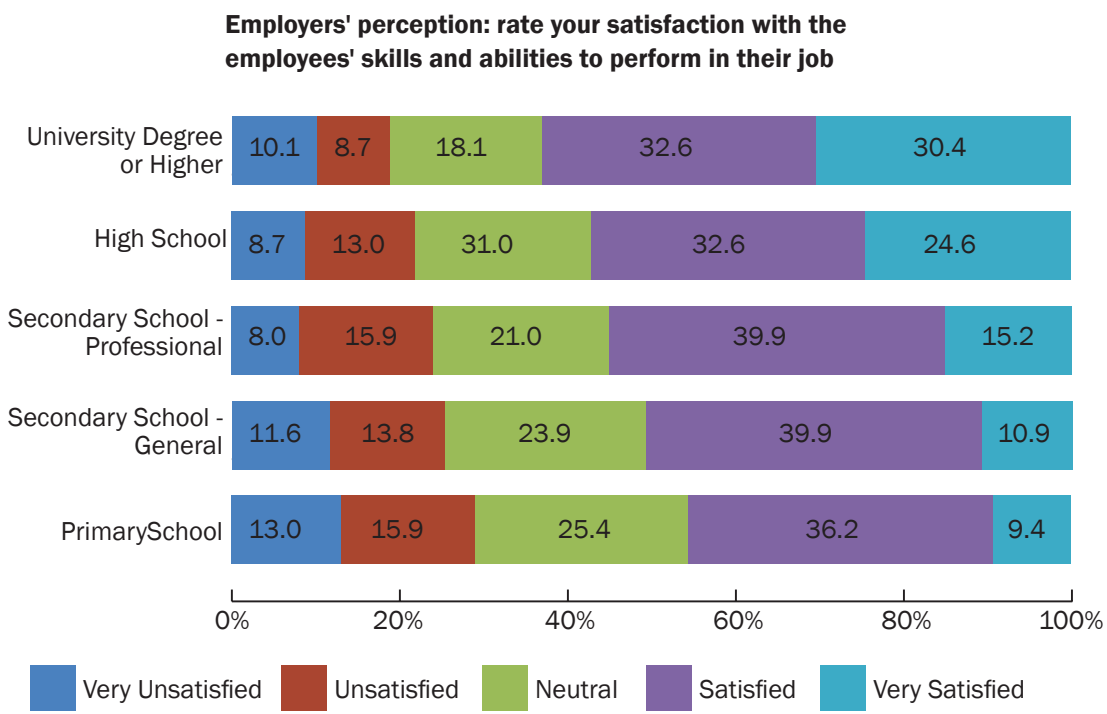
Figure 7. Average time from job entrance to satisfactory performance



Source: Kosovo Skills Barometer Survey 2021.

Employers' satisfaction with the performance of their employees is an essential aspect of any skills needs analysis. Figure 8 shows a level of satisfaction of employers with the skills and abilities of their employees to perform their jobs according to their level of education. The Figure shows that, on average, more than half of employers are 'satisfied' or 'very satisfied with the skills and abilities of their employees with secondary school qualifications and higher. The proportion is highest (63 per cent) for employees with university or higher degrees. Only 45 per cent of employers are satisfied or very satisfied with the skills and abilities of the least educated group (those with only primary education). It has to be noted that employers who are very dissatisfied, dissatisfied or neither satisfied nor dissatisfied (in other words, all those who are not happy with the skills and abilities of their employees are pretty significant, around 37 per cent for university graduates, increasing to 54 per cent for primary school graduates. These figures must be taken seriously by the educational and training institutions, especially the primary schools.

Figure 8. Employers' satisfaction with skills and abilities of the employees, by educational level



Source: Kosovo Skills Barometer Survey 2021.

4.3.2. General skills

In addition to technical and occupation-specific skills, employees also need general or professional horizontal skills to perform their jobs satisfactorily. These confirm findings of desk review and semi-structured interviews, which suggest that firms in Kosovo have a variety of needs in terms of skilled workforce and heterogeneity of skills they need.[36] Horizontal skills listed below directly or indirectly influence a firms' competitiveness in domestic and international markets. The concerns of policymakers, the private sector and other sectors are the skill mismatch between employee skills and demands of the industry – not just for technical skills but also the horizontal and cross-sectoral skills.

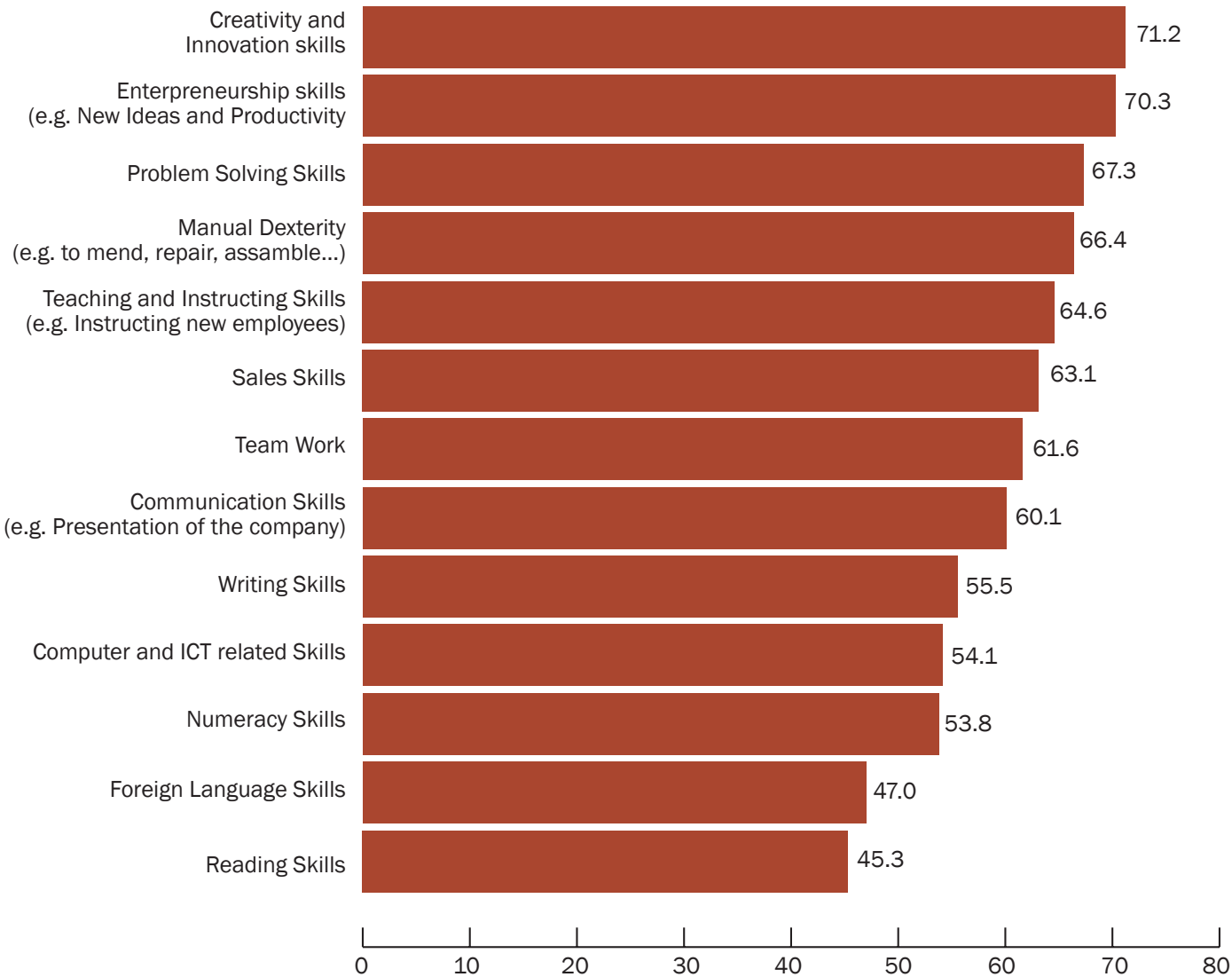
Figure 9 shows the challenges faced by employers in finding employees with appropriate skill sets to perform their jobs properly. The most desired skills (and consequently difficult to find) are creativity and innovation skills, with 71.2 per cent of firms finding it challenging, followed by entrepreneurship skills such as new ideas and productivity with 70.3 per cent of firms. Other skills that are difficult to find in employees are problem-solving skills, manual dexterity, teaching and instructing skills, sales skills, teamwork, and communication skills.

Skills that are less challenging to find, with only 40-50 per cent of firms finding it challenging, are foreign language skills and reading skills. Considering these findings, any curricula and training programme should ensure that graduates have the necessary creativity, teamwork, communication, writing, numeracy, and manual dexterity skills. The majority of firms surveyed consider the skills mentioned above to be increasingly more important for company performance.

[36] *Interviews with representative of the Elen Company and Monting Company.*

Figure 9. Difficulty in finding employees with professional (horizontal) skills

Proportion of firms that findding it challenging to find employees with horizontal skills (%)



Source: Kosovo Skills Barometer Survey 2021.

4.3.3. Top demanded occupations in 2025

One of the key findings of the Kosovo Skills Barometer survey is the projection for future occupations. Table 10 reports the top occupations with the highest expected growth in employment by 2025 and their corresponding educational level. Occupational groups OC3, OC1 and OC2 (Technicians, professionals and managers) exhibit the highest expected growth by 2025 as reported by employers. Thus, policy should focus on ISCED 5-8 and corresponding skills, mainly higher skills (tertiary education).

Table 11. Top Occupations in demand, projections for 2025

Rank	Top Occupations in demand, 2025	Correspondence to education levels	Correspondence to skills level
1	Electronics Engineering Technicians	ISCED 5	Higher skills (upper secondary and some tertiary education)
2	Mechanical Engineering Technicians	ISCED 5	Higher skills (upper secondary and some tertiary education)
3	Managers	ISCED 6-8	Higher skills (tertiary education)
4	Agricultural Technicians	ISCED 5	Higher skills (upper secondary and some tertiary education)
5	Information and Communications Technology Operations and User Support Technicians	ISCED 5	Higher skills (upper secondary and some tertiary education)
6	Labourers in Mining, Construction, Manufacturing and Transport	ISCED 1-2	Low skills (below upper secondary)
7	Agriculture, Farming, Forestry and Fisheries Advisers (professionals)	ISCED 6-8	Higher skills (tertiary education)
8	Electrical Engineering Technicians	ISCED 5	Higher skills (upper secondary and some tertiary education)
9	Electrical Engineers	ISCED 6-8	Higher skills (tertiary education)
10	Machinery Mechanics and Repairers	ISCED 3-4	Intermediate skills (upper secondary and post-secondary education)

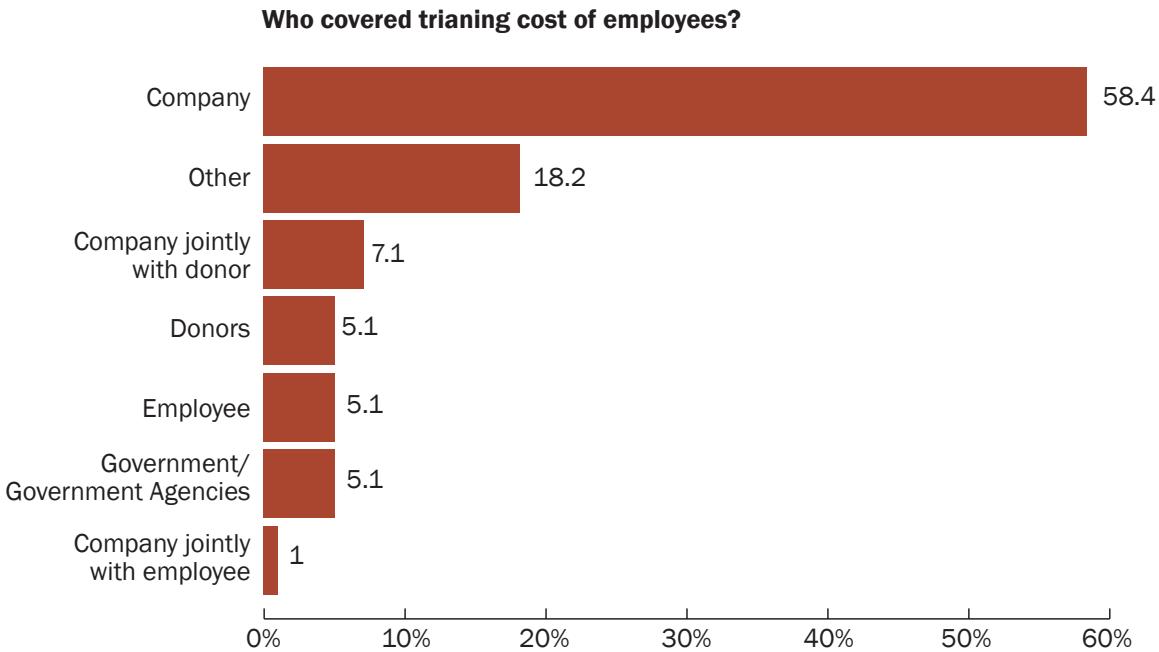
Source: Kosovo Skills Barometer Survey 2021.

4.3.4. Training

Continuous training is vital to support the growth of any company. The survey results show that a high proportion of respondents declared that they have a dedicated training budget for training employees (44 per cent). However, a considerably higher proportion of companies responded that their employees have gone through some form of training (52.6 per

cent). The manufacturing sector is reported to have the most training activities. In most cases, the cost of training was paid from companies' own resources (58.6 per cent). Other sources were companies jointly with donors, government or government agencies, donors and occasionally employees themselves (Figure 10).

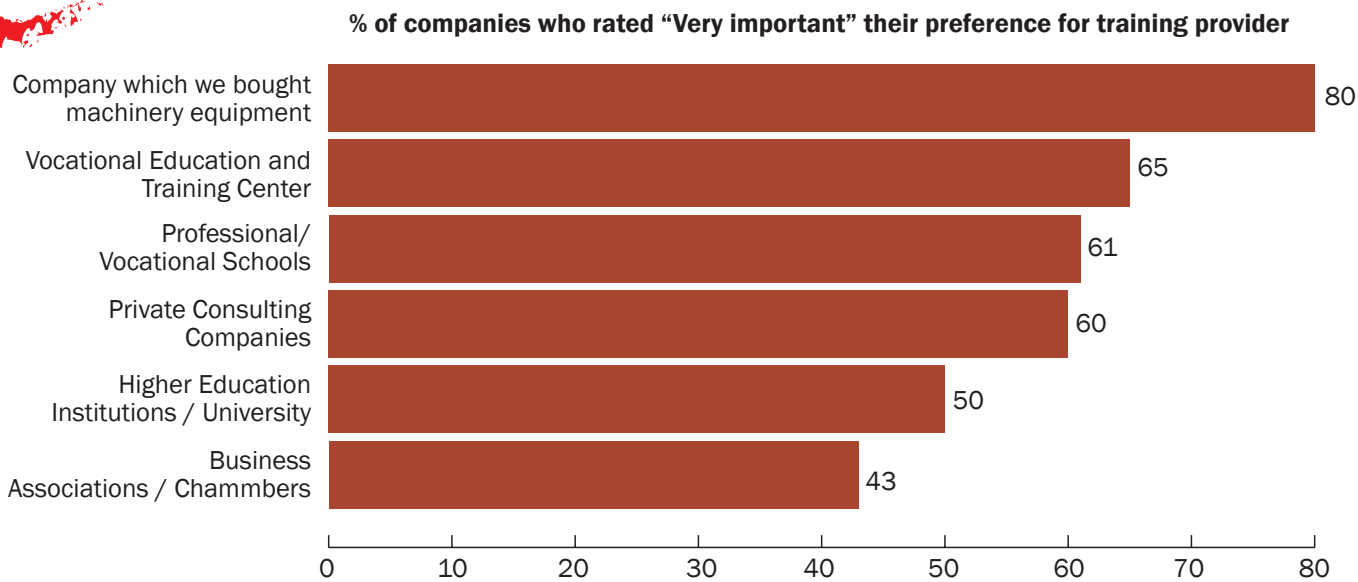
Figure 10: Funding the cost of training



Source: Kosovo Skills Barometer Survey 2021.

For companies that covered the training cost of their employees, 22.6 per cent declared that they have a contract to ensure employees receiving training will remain in the company for some specified time; otherwise, they have to pay back the training cost to the company. A range of companies and institutions provided training for companies in the sample. Companies were asked to rate the training providers in terms of efficiency and relevance for the company. Figure 11 shows the proportion of companies and their preferences for training provider. Companies from which the technology was bought are rated as most important provider for the training of employees. Private consulting companies, business associations and vocational training centres are also important.

Figure 11: Owners/mangers' views about the training providers



Source: Kosovo Skills Barometer Survey 2021.

4.3.5. The impact of COVID-19 and changing demand for skills

The impact of COVID-19 on firms is evident all over the world. The pandemic has affected severely almost every sector of the economy. The world has witnessed an unprecedented decline in consumption, production and investment. The World Bank estimates a decline in global output of 8% in 2020.[37] The labour market has been affected in a similar way and is expected to experience similar trends. The ILO estimates around 195 million job losses (equivalent to around 7% of working time) due to the COVID-19 pandemics.[38] Similar shocks to the economy and employment have hit Kosovo, which was already struggling to accommodate a high number of unemployed, particularly among youth and women.[39] There are no precise estimates of

[37] *World Bank (2020). 'The Global Economic Outlook during the COVID-19 Pandemic: A Changed World'. The World Bank.*
[38] *ILO (2020). International Labour Organization, 'COVID-19 causes devastating losses in working hours and employment'.*
[39] *Krasniqi, B, Reçica, F, and Bajrami, F. (2020) COVID-19 Pandemic Impact on Employment in Kosovo* Research Report, Regional Cooperation Council, Sarajevo.*

the impact of the pandemic on Kosovo's economy, and preliminary studies suggest that the number of unemployed has increased dramatically during the second quarter of 2020. According to GAP, Kosovo Employment Agency has recorded around 33,000 additional job seekers.[40]

COVID-19 has also had a significant impact on the needs for different skills due to digitalisation and the change in the way business is conducted. This is confirmed by Kosovo Skills Barometer Survey 2021 which suggests that 57% of surveyed companies reported a decline in their sales. The evidence suggests the growing importance of professional or general horizontal skills (sometimes referred to, inaccurately, as 'soft' skills) due to COVID-19. A recent article from Forbes reports that skills such as self-motivation, resilience and emotional intelligence are crucial success factors in business in the pandemic period.[41]

The current and future performance of private companies is important as the sector is the basis of future job creation. Table 11 reports the data on companies' current and future sales performance and the views of owners/managers regarding future growth expectations of their company and the sector in which they operate.

Survey data shows that most firms have experienced a decrease in their sales during 2020 compared to 2019, reflecting the significant effect of COVID-19 on private sector growth (see Table 11). According to the survey findings, on average, the decrease was 32.8%. Only around 20 per cent of surveyed firms reported growth of sales by an average 42.7%, while for 24 per cent of firms, the sales remained unchanged. Compared to the pre-COVID-19 (normal situation before pandemic), more than two thirds of the companies reported a decrease in their sales and only 11 per cent reported sales growth.

Table 12. Sales growth in 2020 and expected sales growth in 2025 (% of companies)

Sales performance	Compared to 12 months ago, your company sales have?	Compared to the normal situation before the pandemic, your company sales have?	In the next 5 years, you expect your company sales to?
Decreased	56.4	67.4	4.4
Remained unchanged	24.0	21.5	6.9
Increased	19.6	11.1	88.7

Source: Kosovo Skills Barometer Survey 2021.

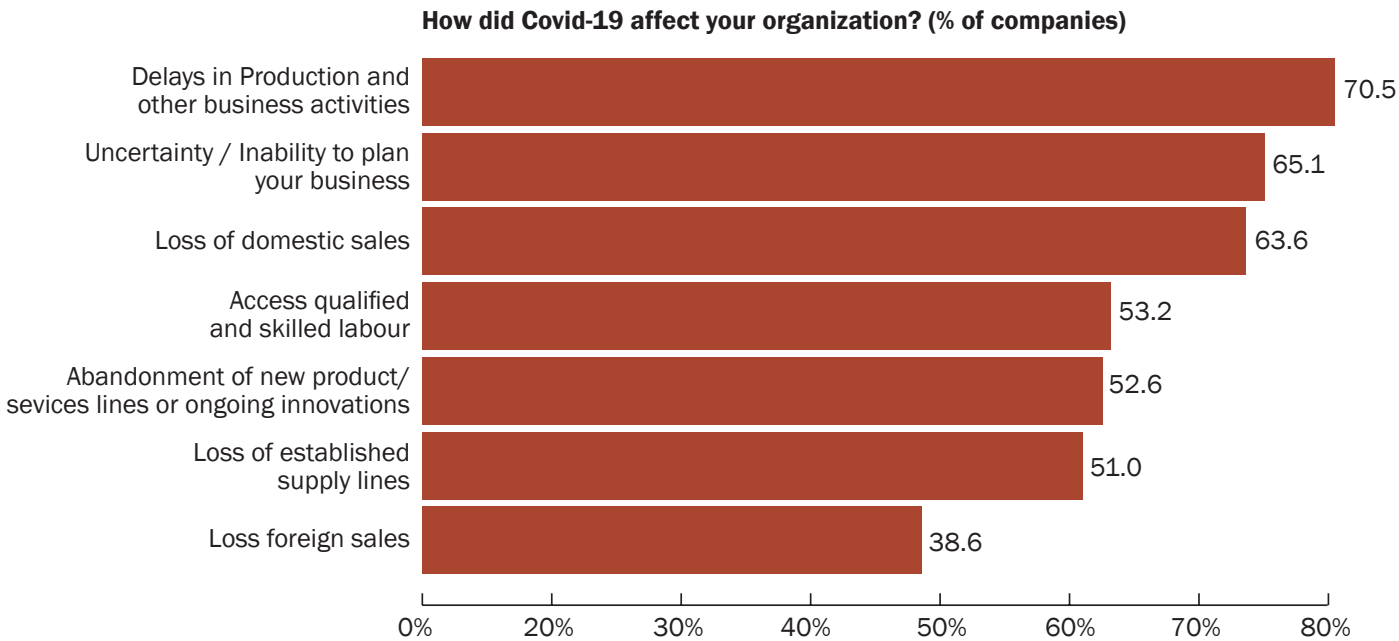
[40] *GAP, 2020 'Ndikimi i pandemisë COVID-19 në tregun e punës'.*

[41] *https://www.forbes.com/sites/forbeshumanresourcescouncil/2021/01/20/soft-skills-are-essential-to-the-future-of-work/?sh=41a141fe1341*

Covid-19 has also led to other negative consequences for business operations such as disruption of the supply chain, shortage of essential resources, price rises, in some extreme cases restriction imposed by government decisions to stop many industries and to redesign the work place, increased consumer pessimism, and the loss on global trade (Morgan et al., 2020; Krasniqi et al. 2021). Figure 12 shows the significant impacts of COVDI-19 in terms of delays in production and other business activities, loss of domestic and international sales, access to qualified labour, abandoning the production of new products and services and innovation activities, and loss of established supply lines. A majority of firms have suffered almost all of these effects.

COVDI-19 harmed the investment plans of entrepreneurs. In response to the question 'have you cancelled any planned investments in your company infrastructure and/or manufacturing due to the COVID-19", 68.7 per cent stated that they cancelled their initial investment plans. The major effects of reconsidering companies' investment plans may be reflected in the future demand for specific skills to navigate the COVID-19 and post-COVID-19 period. The lack of knowledge of customer and supplier relationships and the "lack of knowledge of alternative marketing strategies" are rated as obstacles during COVID-19 (see Table 13).

Figure 12. The impact of COVID-19 on firms in Kosovo



Source: Kosovo Skills Barometer Survey 2021.

Table 13. The impact of specific skills on business survival through COVID-19 (%)

What impact did the following skills have on your business survival during the Covid-19 pandemic?	Not at all	minor	Considerable
Lack of knowledge of digital communication	23.5	45.9	30.6
Lack of knowledge of virtual business teams	29.3	37.8	32.9
Lack of knowledge of alternative marketing strategies	25.6	36.6	37.8
Lack of knowledge of customer and supplier relationships	19.6	35.9	44.6

Source: Kosovo Skills Barometer Survey 2021.

On the other hand, skills and knowledge such as managing change and creativity, communication skills, and digital customer and supplier management would become essential in the post-Covid-19 period (all three, were considered essential by more than 70% of respondents; see Table 14). Some of these skills could be developed by more rapid interventions such as training and professional development workshops, which companies could organise, or by active labour market measures such as upskilling and retraining the employees to align them with the changing demand for new skills needed in the post-COVID-19 period.

Table 14. Skills and knowledge that would become essential in the post-Covid-19 period (% of companies)

How important will the following skills and knowledge become essential in the post Covid-19 period? -	Not at all	Slightly	Considerably
Digital business skills	8.2	22.4	69.4
Virtual skills of working in a virtual team	9.8	25.6	64.6
Communication skills	3.4	24.1	72.4
Managing change and creativity	3.5	16.3	80.2
Digital customer and supplier management	10.5	17.4	72.1

Source: Kosovo Skills Barometer Survey 2021.

5. Conclusion and Policy Recommendations

The findings of this study highlight the presence of excess demand (vacancies) for certain occupations now and in future. Findings suggest that occupations most in demand are managers, technicians and associate professionals, followed by crafts and related trades workers, and plant and machine operators and assemblers. The survey also shows that enterprises in Kosovo find it challenging to find staff in the following occupations: skilled agricultural, forestry and fishery workers, technicians and associate professionals, followed by professionals. With regards to the expected growth in the number of employees in different occupations by 2025, findings show that three main occupations with highest expected growth in the future are: technicians and associate professionals, senior officials and managers and, unexpectedly, elementary occupations.

Graduates entering the labour market need some time to achieve satisfactory performance and become productive employees. The average time required for new employees to reach satisfactory performance is 7.8 months in wood processing, 7.3 months in metal processing and electrical equipment, and 6.7 months in information technology. This period is shorter in other sectors such as manufacturing, construction, agriculture and finance and insurance.

In addition, enterprises also face challenges in finding employees with horizontal skills such as creativity, entrepreneurial skills and problem-solving skills.

Based on the findings above, the following recommendations are offered:

- The high unemployment and slow economic growth in Kosovo can be addressed by policy measures aimed at matching of the skills of the labour force with those demanded by the market economy. This would lead to more stable employment and increase the dynamism of the private sector and the national economy.

- Reducing the skill mismatch would require the collaboration of various stakeholders. Stakeholders responsible for designing policies need to cooperate more closely with the private sector and the education and training institutions in order to address skill mismatches. Such collaboration would make it possible to narrow the gap between the knowledge and skills generated through formal education and training and the skills required by the private sector.

- Policymakers need to address qualifications and skill mismatch particularly among the youth as well as women. The high percentage of NEET among the youth means that, , schools should be encouraging the youth to take up training in shortage occupations through VET institutions and gain skills that are in line with current and future private sector needs. Beyond the formal education offered by schools, training opportunities for should be provided for the youth and job seekers in order to reduce the skills gap in Kosovo. This would assist the youth in making faster and more cost-efficient transition to future labour market conditions. For example, shorter certified training programmes involving dual-mode systems can be offered as a component of active labour market policy measures.

- Developing close and more structured cooperation with the private sector and employees to address and promote the importance of lifelong learning and skill upgrading. There is an urgent need for connecting employers, workers, educational and training institutions and students to promote a dual system of school-based training and internships. Collaboration can take different forms, ranging from public-private partnerships involving shared financing and management responsibilities to providing technology and equipment, skill needs assessments, mentoring and career advice, partnerships around curricular reform, and work-based learning.[42] Indeed, the qualitative interviews with surveyed company managers show that some of these collaborative experiences already exist but more structured cooperation between these stakeholders are needed.

- Improving curricula at VET institutions and ensuring that all unemployed persons are included in some form of technical and vocational education. In particular the unemployed persons that are underqualified and work in low skill jobs (often from certain ethnic minorities) should be included.

- Concerning general horizontal skills, findings point out the importance of inclusion of these skills in any curricula and training programme, ensuring that graduates have the necessary creativity and entrepreneurial skills, teamwork skills, manual dexterity, problem-solving and other skills. The majority of firms surveyed consider the skills mentioned above to be increasingly more critical to their operation and growth. Qualitative interviews with employers also found that these skills are essential as they consume much of the managerial time to guide the employees and compensate for their low level of self-initiative and creativity.

[42] *These are similar to conclusions of Dunbar, M. (2013). Engaging the private sector in skills development, Health & Education Advice and Resource Team, https://www.educationinnovations.org/*

- COVID-19 has changed the demand for skills. It has created the need for digital skills and ICT and adapting to new working environment and business condition all over the world. The skills and knowledge that would become essential in the post-Covid-19 period are managing change and creativity, communication skills, and digital customer and supplier management. Some of these skills can be developed by more rapid interventions such as training and professional development workshops. Any active labour market policy measures designed to re-educate and re-train employees or the unemployed needs to align itself with the changing demand for skills due to COVID-19.

- Linking to the priority sectors identified by ALLED2, the research finds that most vacancies and jobs in demand are for mechanical and electrical engineering technicians within the technical post-secondary-level qualification category and machine operators and assemblers and agricultural and food processing technicians within the secondary and post-secondary level qualification category. These findings suggest that policy-making efforts should focus more on support for engineering and technical schools at secondary and tertiary levels. Helping these schools to align their study programmes, teaching methods, and infrastructure to the private sector's needs is critical for matching skills, job creation and private sector growth.

- The government need to provide financial and other incentives to encourage employers to train employees continually according to new market demands and, as a result, to ensure a more stable private sector. This is important considering the changes in the labour market after the COVID-19 pandemic when the market demand for skills changed significantly. Therefore, supporting employers to adopt more advanced types of training is of crucial importance.

- An important area of policy focus should be the reduction of the information gap concerning the labour market needs and future demands by employers. Often, career choice decisions are made ad hoc and without appropriate information. The information resulting from this Skills Barometer study should be made available to various stakeholders, in particular the young people, parents and careers guidance officers to enable them to make informed decisions about their future careers, which can significantly affect school leavers' employability. Thus, strengthening Kosovo's Integrated Labour Market Information System supported by the ALLED2 project can offer immense opportunities to provide timely and needed information for making informed choices for youth and policymakers. To this end, career centres in schools and municipalities can assist students in choosing occupation that meet the needs of the labour market.

The next edition of Skills Barometer should utilise a larger sample size (representing all sectors of the economy or any priority sector) and incorporate the supply side (tracer and graduate surveys, Kosovo Labour Market Barometer and possibly a survey of VET institutions). Future studies should make use of more advanced econometric models in order to improve forecasting about future employment growth by occupations. Finally, the next edition of Kosovo Skills Barometer should integrate into KCC VET digital platform to disseminate the findings to the wider to society.

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