

KOSOVO COUNTRY REPORT: FINDINGS FROM THE SKILLS TOWARDS EMPLOYMENT AND PRODUCTIVITY SURVEY

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Overview

Skills matter for Kosovo

1. **Kosovo faces severe labor market challenges.** Less than one third of the adult population holds a job, almost nine out of ten women are not working, and over half of active youth are unemployed. Kosovo’s labor market is characterized by limited employment opportunities and low quality of existing jobs which increases the risk of poverty, reduces labor productivity, and fosters discontent, especially among the many youth who enter the labor market each year. Promoting job creation is therefore essential to increasing productive employment, improving well-being and reducing poverty in Kosovo.
2. **Skills are central to enhancing business climate, fostering job creation and increasing well-being.** Workers with more skills improve their own productivity as well as that of other workers, increase capital productivity, and facilitate innovation and the adoption of new technology. There is solid empirical evidence that higher levels of skills are associated with better labor market outcomes for individuals. Cognitive (analytical) skills matter, but socio-emotional skills – often called soft, or behavioral skills – also have strong and long-lasting effects on employment and earnings. Moreover, skills explain most of country variations in long-term growth rates, and even small improvements in skills could raise growth rates significantly. Increasing the level and relevance of skills of the workforce is consequently a central focus of the Employment and Social Welfare Strategy 2018-2022 of the Government of Kosovo.
3. **What are labor market relevant skills in Kosovo?** Labor market relevant skills represent the ability to do a job-related task well, in this context, the tasks necessary for firms to provide goods and services. Thus far, there has been no systematic attempt to measure skills directly in Kosovo and analysis has been limited to inexact approximations of skills such as education levels, years of schooling, or occupational categories. This report provides new empirical insights into skill levels in Kosovo, based on two recent surveys. The Skills Towards Employment and Productivity (STEP) initiative of the World Bank has developed household-level and firm-based surveys to provide policy-relevant information on skills from both the supply and demand side. Household-level surveys measure the supply and use of skills in the adult urban population in a comprehensive way, including cognitive and socio-emotional skills that affect work-place readiness and effectiveness. Firm-level (employer) surveys focus on identifying the cognitive and socio-emotional job-related skills that employers seek, skills that are difficult to find, and linkages between firms and education systems.

Key findings from the STEP Household and Employer Surveys

4. **Job-seekers lack the skills that firms need.** A majority of recruiting firms in Kosovo find hiring new workers challenging because applicants have neither the skills nor work experience they require. According to the Employer Survey, firms were more likely to recruit for higher skill occupations than medium to lower skill occupations. Three out of four firms that attempted to fill a higher skill position, and three out of five firms that sought to fill a medium to lower skill position, encountered problems because of applicants' lack of skills and/or experience. At the same time, the vast majority of firms report that their current employees are *not* lacking in important job-related skills. From the firm perspective, skill deficits appear to be related more to new labor market entrants and jobless youth, than to experienced workers. When recruiting, firms rely more on informal channels such as personal networks and recommendations and poaching (i.e., approaching workers in other firms). This, along with firms' relatively poor ratings of Kosovo's education and training system, suggest that they find it difficult to identify skill levels based on education and training achievements alone. The ensuing recruitment approach that emphasizes work experience penalizes new labor market entrants without access to social or professional networks.
5. **Conscientiousness, problem solving, and working well under pressure are skills that are most needed and valued by employers.** The Employer Survey shows that employers look for workers that are disciplined and can be trusted upon to complete tasks well without supervision (conscientious), that are able to solve non-routine problems as they occur in the work process, and that can work well under duress (emotionally stable). For medium-to-lower skill occupations, typically service, sales, and low skill technical/manual workers, it is also important to work well with others, be they co-workers, clients, or suppliers. Findings from the Household Survey indicate that a broad skill set is needed across occupations. Although higher skill occupations (managers, professionals, technicians) are more likely to require advanced cognitive skills, medium-to lower level skills occupations also require the ability to do non-routine tasks, solve problems and interact successfully with others in the work place context.
6. **Skill gaps have negative consequences for firm growth and job creation in Kosovo and impede productive employment in more dynamic firms.** Although skills are not the most pressing constraint that firms face, skill gaps limit their ability to hire and grow. This is especially true for more productive firms, such as large firms, foreign-owned firms, innovative firms, and firms investing in research and development (R&D). These firms are more likely to have actively recruited workers and have the potential to create more jobs and, importantly, more productive jobs than other firms. Yet, these dynamic firms are also more likely to identify skills as a major constraint on recruiting efforts: over eighty percent of large firms, foreign firms, and firms investing in R&D report skill gaps as a major challenge in the recruitment process.
7. **Skill gaps negatively affect labor market outcomes.** As in many other countries, higher skill levels are correlated with better labor market outcomes in Kosovo although other factors (gender, age, ethnicity, family background) also matter. Estimates from the Household Survey indicate that workers who are conscientious and work well under pressure are more likely to be employed. This is consistent with findings on the skills valued by employers in the Employer Survey. Thus, although earnings are primarily influenced by cognitive skills, not having the right mix of skills may represent a significant handicap.
8. **Skill gaps reinforce existing inequities and affect vulnerable groups.** Individuals with lower levels of education, from certain ethnic minorities (other than Serbian) and from a more vulnerable socio-economic background, consistently perform worse on literacy tests (even at basic levels), use fewer cognitive, information processing skills (reading, numeracy, computer use), and score lower on measures of socio-emotional skills that are important for labor market success. Hence, differences in skill levels leave disadvantaged groups even further behind. By contrast, gender gaps in job outcomes are not well explained by observed (as opposed to perceived) differences in skill levels. Social norms surrounding family obligations and limited options for family care are a more likely explanation for women's limited access to employment.
9. **Skill gaps are rooted in issues of quality and equity within the educational system.** Access to preschool is increasing but only one third of youth (15-24) attended early childhood education, and children from poorer families are much less likely to do so. Access to primary and secondary education is now near universal in Kosovo, but because of lower enrolment in the past, the proportion of adult workers with basic level of education (9 years) or less is high compared to the majority of European countries. Ethnic minorities other than Serbian also have significantly lower levels of education than other ethnic groups, reflecting limited access to education historically. Gender gaps persist and are larger than in other Western Balkan countries. A higher share of young women has completed tertiary education compared with young men, but the share of young women with basic levels of education or less is also twice as high as that for young men. Differences in access are compounded by the poor quality of the educational system. Between 70 and 80 percent of Kosovo students have not acquired basic proficiency in math, science and reading, leaving Kosovo far behind Western Balkan peers and European countries. These assessments are consistent with employers' low appraisal of education systems, especially the ability to deliver graduates with practical and up-to-date knowledge in their fields.
10. **Beyond school, training opportunities for job seekers in the context of active labor market programs are limited and the quality and cost effectiveness of programs remain unclear.** Vocational training is the most common intervention in active labor market programs in Kosovo, aimed at skilling or re-skilling job seekers who are out of school. However, these adult training programs are not based on surveys of labor demand, are disconnected from employers and social partners, and lack systematic quality assurance, including monitoring and evaluation.

11. **Firms are not active in skill development.** Few firms provide further training to upskill their employees, and work-based training for students through internships or apprenticeships is underdeveloped. Firm-provided training is largely a complement to and not a substitute for school-based training. Most firms, however, do not offer training to their staff, especially training that is external to the firm. Dynamic markets for products and services are also likely to change demand for skills among those currently employed. The limited opportunities for skill development, once employed, are hence likely to hold back both labor market flexibility and firm productivity and expansion.
12. **Kosovo firms are not well connected with education and training systems, especially not at a strategic level.** The involvement of firms is critical to support the development of labor market relevant skills, but there is little interaction between educational institutions and firms, especially at the level of design and evaluation of the content of training. Firms that do engage in regular contact with education systems (fewer than one in five) do so to provide internships or train their workers and not to address the larger issue of the relevance of skills development systems. Only a small minority of firms that interact with education systems provide feedback on curriculum or assist in the testing of students and few use educational institutions for recruitment. Instead, firms rely on informal networks, personal recommendations, and recruitment of workers from other firms to identify suitable workers.

Going forward: policy reforms to reduce skill gaps in Kosovo

13. **The broad set of cognitive and socio-emotional skills that are valued in labor markets must be nurtured from an early age and throughout schooling and beyond.** Labor market relevant skills include a set of transversal cognitive and socio-emotional skills that are necessary in modern, competitive firms: conscientiousness, independent and creative work, ability to work under rapidly changing or stressful conditions, and effective communication and collaboration with others, among others. These develop from birth and throughout the life course: from interventions in early childhood programs that lay the foundation for basic cognitive and socio-emotional skills, through school-based academic or vocational learning, and after formal schooling, through training and re-training programs for adults and ongoing skill development in the work place. Education and training systems cannot be expected to produce graduates fully prepared for the workforce but, instead, graduates with the capacity for further on-the-job training and adapting to new challenges as they arise. Hence, stepping up skill development in Kosovo will require effort and collaboration among all stakeholders: education systems, firms, students, and policy makers.

Addressing inequity and quality problems in skill development

14. **The early years are formative and have long-term effects on further skill acquisition and broader aspects of well-being.** Participation in preschool education has a positive impact on the development of foundational and advanced cognitive skills, but only a small number of children have access to early childhood education in Kosovo and the quality of preschool education is unknown. The immediate priority and challenge for the Government of Kosovo – as recognized in its sector strategy for education – is to expand access to preschool education, while ensuring the quality of services. In this context, priority should be given to including vulnerable groups that have traditionally had little access to such systems. Tapping into the private sector for expanding access should be explored along with developing and implementing quality and monitoring standards across providers. A significant upscaling of affordable preschool options, if matched with complementary activation policies, could have the additional and direct benefit of encouraging women's labor force participation.
15. **Education reform must focus on raising the quality of education and training, especially for vulnerable groups.** The low learning outcomes in Kosovo, even for foundational skills like literacy, point to serious weaknesses in educational systems that can compromise Kosovo's ability to become more integrated into international markets. The Kosovo education system needs to ensure that students develop a wide range of skills, including socio-emotional skills that have been shown to have lifelong impact on well-being. There is significant evidence that socio-emotional skills, such as discipline, long-term goal setting and decision-making ability, are in fact malleable over time and can be nurtured and developed with adequate pedagogical methods. Increasing the quality of education and improving learning will require increasing investment in education, focusing efforts on targeting disadvantaged groups and investing in quality enhancing measures such as teacher policies and training, curriculum reforms, and ongoing monitoring and evaluation. Education expenditure per pupil is low in Kosovo compared to peer countries and investing in education early and for all will be essential to the development of a more productive economy. Because access to education differs significantly among different groups, it will be important to evaluate potential demand side constraints to education as well. This includes norms around schooling and gaps in information on career paths and pay-offs to education for children, families, and communities.
16. **There is significant scope for improving vocational education and training,** which account for half of all students at the higher secondary level (grades 10-12). This will require aligning vocational education training with assessments of technical skills needed in the labor market, involving employers in the design of training curricula, fostering cooperation with businesses in the delivery of training, and strengthening quality assurance mechanisms.
17. **It will also be important to increase the relevance of vocational training provided by the Employment Agency.** In particular, there is a need to develop effective training programs based on accurate measures of demand for skills and labor, and on evidence of

what works. It will be necessary to collect information on skills in demand as evidenced through firm-level surveys and other relevant sources of labor market information. It will also be important to strengthen the monitoring and evaluation of existing initiatives and develop effective programs. Tracer surveys, employer interviews, internship reports, and other data collection tools, together with information on regional and international best practice, can help identify the strongest programs and how to continuously improve them.

Connecting supply and demand: firms, students, and training institutions

18. **The involvement of firms in multiple dimensions of skill development systems is of utmost importance.** Connecting employers, workers, education systems and students is essential to increase the relevance of school-based training. Collaboration can take different forms, ranging from public-private sector partnerships involving shared financing and management responsibilities, to providing technology and equipment, job skills needs assessments, mentoring and career advice, partnerships around curricula reform, and work-based learning.¹
19. **Work based-training, in the form of internships and apprenticeships², can increase the relevance of skills and provide youth with both experience and references.** Internship and apprenticeship systems are under developed in Kosovo. Well organized, these arrangements have several advantages: (i) they provide trainees with an opportunity to participate in actual work place situations and solve concrete work-related problems; (ii) they contribute to building job specific skills as well as transversal labor market relevant skills that are highly valued by employers; (iii) they bring together firms, students and education systems and facilitate collaboration between stakeholders to improve education systems; (iv) they provide trainees with references from the private sector that can signal capabilities, which may be especially important given employers' emphasis on work experience; and (v) they provide an entry into a professional network for students. In the EU, an estimated 60-70 percent of apprentices find employment immediately after graduation. To work well however, these arrangements need strong institutions and governance systems, including three party collaboration (e.g., firm-student-school, or firm-student-employment agency), formal learning arrangements or learning plans, monitoring and evaluation, and quality assurance systems.³ Recently, cooperation agree-

1 Dunbar, M. (2013). Engaging the private sector in skills development. Health & Education Advice and Resource Team, <https://www.educationinnovations.org/>

2 In the EU, apprenticeships and internships are part of formal TVET in many countries. Apprenticeships lead to formal (VET) qualifications. Internships do not necessarily lead to formal TVET qualifications but can be an integral and formal part of a broader TVET program. See Broek, S., T. Hogarth, L. Baltina, and A. Lombardi (2017), Skills Development and Employment: Apprenticeships, Internships and Volunteering, IP/A/EMPL/2016-04, Report prepared for European Parliament's Committee on Employment and Social Affairs.

3 Ibid.

ments have been signed with companies for internships in Kosovo, but monitoring and evaluation of these initiatives are weak.⁴

20. **To fulfil its core function to match jobseekers with employers, the Employment Agency needs timely information on the number of available vacancies.** According to the STEP Employer Survey, there remains significant potential to increase this matching because only a minority of employers recruit through the Agency. To this end, strengthening outreach to employers may be needed, as well as providing high quality services to them (e.g., through effective preselection of candidates, and fast response times). In preparation, the Employment Agency can also provide job seekers with critical information on workplace skills that matter. Socio-emotional skills like discipline and perseverance are developed over many years. However, the Employment Agency can emphasize the importance of various workplace-related competencies, including timeliness, independent work, and team work in order to influence priorities and incentives.
21. **Capacity building would help firms, especially smaller ones, to identify and evaluate skill and training needs.** Smaller firms often lack the in-house capacity to identify and develop the skills of their staff. They are also less likely to use sophisticated tools like personality tests or other forms of assessments in the hiring process (hence the reliance on informal channels). Industry associations can play an important role as partners in both identifying skill development needs and in representing firms in interactions with education systems and government. Capacity building at the industry or firm level is also useful to enhance the identification of skill needs as well as the use of additional and more sophisticated techniques to evaluate skills among applicants. In this context, there is a need to reinforce the message that skill levels are not different for women and men, once education differences and participation in labor markets are accounted for. Advocacy to firms of all sizes may also be needed to reinforce the importance of proactive engagement by the private sector – through approaching other stakeholders, providing work-based training for students, and reducing prejudice to promote the employment of youth, women, and other disadvantaged groups.

4 Kosovo Education and Employment Network (2017). Evaluation Report on Implementation of Kosovo Education Strategic Plan in 2017. http://www.keen-ks.net/site/assets/files/1345/raporti_i_vleresimit_pesak_eng-1.pdf.

Reducing information gaps

22. **Assisting parents, children and youth in making informed choices on schooling, training, and jobs can have significant benefits for education and employment outcomes.**

The private sector must be involved in collaborative efforts to strengthen the availability of labor market information. Students and jobseekers need adequate and timely information on current opportunities, wages of different sectors and occupations, and qualifications needed for various careers, as well as forecasts on future skill needs. Research indicates that in both developing and developed countries, students and their families significantly misjudge returns to different levels and forms of education, and that providing relevant information can change incentives and career paths.⁵ The STEP surveys focus on understanding the demand and supply of basic and higher-order transversal skills. This type of analysis must be complemented with a better understanding of the technical vocations in demand. Strengthening Kosovo's Labor Market Information System will require (i) establishing a systematic collection of information on growth sectors with high employment potential, as well as wages across sectors and occupations, (ii) integrating labor market information from key stakeholders (employers, the Ministry of Education, Ministry of Labor and Social Welfare, the Employment Agency, the Statistical office); and (iii) making labor market information accessible through relevant channels such as the Employment Agency website, Busulla⁶, and others. Career guidance systems in school (both general and vocational) can also assist students and their parents in choosing vocations that match labor market demand, their own aptitudes, and interests, and in making the most appropriate educational choices to pursue a chosen career.

5 Guallar Artal, Silvia, S. Johansson De Silva, V. Levin, A. Safir, and A-M Munoz Boudet (2016). From aspirations to occupations: the role of information in educational and labor market decisions in Moldova (English). Washington, D.C.: World Bank Group.

6 Busulla.com is an online platform developed by Ministry of Education for the purpose of helping students in career planning.

1. Skills matter for Kosovo

23. **Kosovo is a young country whose working population is expected to grow over the foreseeable future.** Unlike in most European countries, Kosovo will experience a “demographic bump” that could contribute to increases in long-term economic growth rates, to the extent that the working age population can secure productive employment.

24. **Job opportunities are currently scarce in Kosovo, however.** Inactivity and unemployment rates are high and less than one third of the working-age population (those between 15 and 64 years of age) is employed.⁷ Women and youth are most at risk for labor market exclusion; Kosovo has one of the largest gender gaps in the world in labor outcomes. Low access to employment is compounded by a lack of productive job opportunities reflected in the high informality of existing jobs.⁸ Poor labor market outcomes are at the center of poverty and exclusion, high emigration rates, and disenchantment in Kosovo.⁹

25. **Those from poor and socially excluded groups, face a lack of employment opportunities and low earnings.** In 2015, some 11 percent of employed adults were poor, compared to 23 percent of the unemployed and 17 percent of the inactive. Poverty is also linked to quality of work. Households whose primary source of income was occasional work were more likely to be poor than those depending on household enterprises or steady waged work. Those in the poorest 40 percent of the population (the two poorest quintiles) were significantly less likely to work in professional occupations than the top 60 percent.¹⁰

26. **Lack of jobs is cited as the most urgent problem facing the nation by Kosovars.** In a recent survey of major issues affecting social well-being, respondents cited unemployment more than twice as frequently as corruption, and four times as often as poverty.¹¹ The poor economic prospects and ensuing disenchantment fuel social unrest and emigration of high skilled workers to European countries.

7 Unless otherwise specified, data on labor market outcomes refer to 2016 and are from the SEE Jobs Gateway database, available at: <https://www.seejobsgateway.net>.

8 2012 data, reported in Cojocar, A. (2017). Kosovo Jobs Diagnostic, the World Bank, Washington, DC.

9 Ibid.

10 Based on a measure of absolute poverty – a basic needs poverty line of €1.82 per adult equivalent per day. See Kosovo Agency of Statistics and the World Bank, 2017, Consumption Poverty in the Republic of Kosovo, 2012-2015, the World Bank, Washington, DC.

11 UNDP Kosovo, 2017, Public Pulse XIII, October 2017.

27. **Fostering job creation and productivity growth, the basis for access to high quality jobs, should be a top priority for policy makers in Kosovo.** As emphasized in the recent Jobs Diagnostics for Kosovo, this involves improving the conditions for business, including removing infrastructure bottlenecks, strengthening business and regulatory frameworks and developing the skills necessary for new job opportunities.¹² Little is known, however, about the skill levels of the working age population, the skills that matter in labor markets, and how skill gaps affect hiring and productivity, which is a major constraint on policy formulation. This report fills an important knowledge gap by presenting new evidence on the demand and supply of skills in Kosovo based on the World Bank Skills Towards Employment and Productivity (STEP) surveys.

1.1 Employment challenges in Kosovo

What types of jobs are available?¹³

28. **Kosovo's formal sector firms are small, even by regional comparison, and geographically concentrated in the capital.** Productive job opportunities in the formal sector stem from a dynamic and job creating private sector. Kosovo's formal sector is dominated by micro-firms, which account for 91 percent of firms and 36 percent of formal jobs. The share of large firms in formal employment is low by international comparison. Formal employment is concentrated in the commerce and services sectors. There is a significant geographical concentration of firms and productive job opportunities in Pristina, where over half of all jobs in formal firms are based.
29. **Firms in Kosovo are not well integrated into the global economy, which is a constraint on job creation.** Only four percent of firms are exporters and less than one percent have any foreign direct investment. Given the small size of Kosovo's economy, the lack of access to international markets means that few firms are able to significantly expand production and workforce. Exporters are also more likely to survive long-term, generate jobs, and pay higher wages than non-exporters.
30. **In Kosovo, larger, foreign-owned and exporting firms contribute to productivity and job creation.** Firms that are more productive should, inter alia, provide better jobs (i.e., pay higher wages). In Kosovo, larger, foreign-owned and exporting firms are most productive. Across sectors, relative to manufacturing, productivity is lower in the service sector but higher in commerce, construction, and agriculture. Exporting and more productive firms are also more likely to create jobs in Kosovo.
31. **Net job creation in the formal sector declined significantly between 2005 and 2014, from 7,000 to just over 1,600 per year, and the formal sector remains static.** Industry (mining,

¹² Cojocar (2017), op. cit.

¹³ The section draws on analysis presented in the Kosovo Jobs Diagnostic (Cojocar, 2017, op. cit.).

manufacturing, utilities) saw the most job losses whereas job opportunities increased in commerce (in particular) and services. Although start-ups account for most of net job creation, the formal firm sector is relatively static by international comparison, with low entry of new firms, and low exit of incumbents. As a result, a much-needed shift of jobs from less productive to more productive firms has not occurred.

32. **The informal sector is sizeable in Kosovo.**¹⁴ About fifteen percent of wage workers do not have written contracts and as such can be considered informally employed. However, if the definition of informality is broadened to include unpaid workers, employees in micro-firms, and those self-employed in non-professional occupations, more than two out of five workers are informal. Informality is highest in agriculture and construction, reflecting low skill requirements, casual labor, and unpaid family work. Informality is also higher in the tradable than the non-tradable sector, where informal jobs serve as entry to paid employment for low educated youth.

What kind of workers?

33. **Kosovo's population - and working age population - is young by European standards.**¹⁵ In 2011 (the most recent population census), children under age 14 and elderly above age 65 made up 28 and 7 percent of the population in Kosovo, compared to 16 and 19 percent in the EU28. The working age population in Kosovo is also relatively young, with youth between the ages of 15 and 24 making up 30 percent of the working age population in Kosovo versus 18 percent in EU28.
34. **The working age population has moderate levels of education:** Twelve percent of the population aged 15-64 has tertiary education, but 50 percent has no more than upper secondary education, and 38 percent has no more than lower secondary education or less (Figure 1). Women have significantly lower levels of education than men. Education levels have been increasing, however, and the share of tertiary educated is twice as high (24 percent) among the 25 to 29-year-old cohort as among the 30-64 cohort. Education gaps between women and men have also shifted; young women have surpassed men in terms of tertiary education, but the share of females with less than upper secondary education is more than twice as high as that for men.

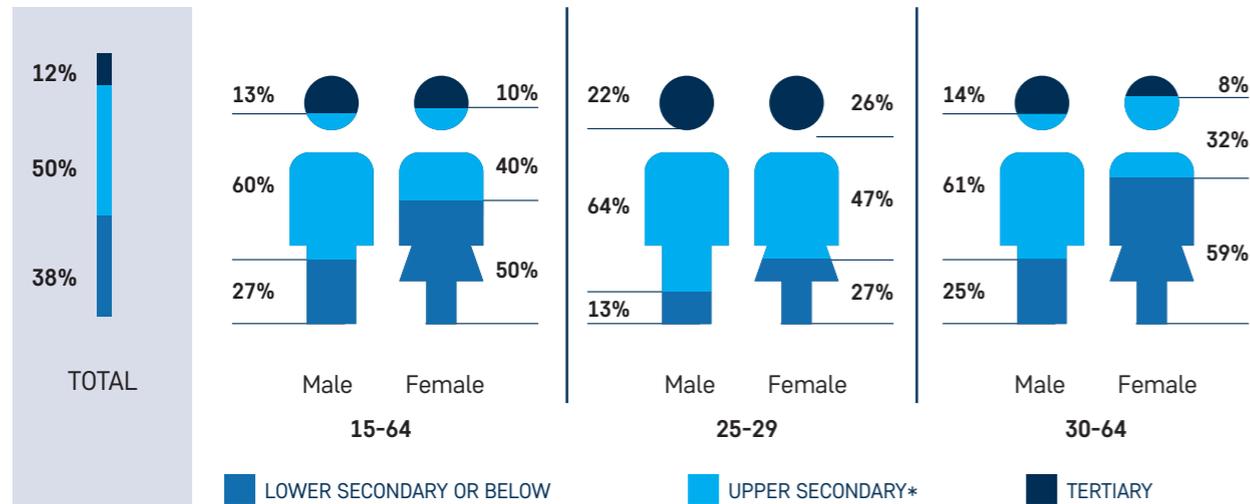
¹⁴ Ajwad, M. I., E. Vasquez, and H. Winkler (2016). European Informality: A study of Kosovo's shadow economy, Background paper for the Kosovo Jobs Diagnostic (mimeo). Washington, DC: The World Bank.

¹⁵ Estimates for Kosovo are based on data from the Population, Households and Housing Census 2011, available at <http://askdata.rks-gov.net>; for the EU, data are from Eurostat (2017 data).

FIGURE 1:

The Kosovo population has moderate levels of education with significant gender differences, 2016

Working age population: distribution by level of education, age group and gender



35. **Access to employment is low in Kosovo.** In 2017, 57 percent adults (aged 15-64) were inactive and the level of inactivity was more than twice as high among women as among men (80 vs. 35 percent). Low participation rate is compounded by high unemployment rates in the active population, at 30 percent on average and reaching 53 percent for youth (aged 15-24). Just 13 percent of women and 47 percent of men hold a job in Kosovo – among the lowest employment-to-population ratios in the world. Unemployment is structural rather than transitional. Once unemployed, the chances of transitioning into employment are low, and nearly three quarters of the unemployed had been without a job for more than 12 months.

36. **Women with more education are more likely to work.** Education is a strong correlate of access to employment, especially for women, and especially for young people. More than half of employed women aged between 25 and 29 have completed tertiary levels of education, compared to 20 percent of males (Figure 2). Differences in the share of tertiary educated between the employed and jobless are smaller but still substantial for older workers (aged 30-64).

37. **Employment is concentrated in non-tradeable sectors.** Public administration and social services, trade and construction employ 50 percent of the work force. Gender profiles vary significantly, with 42 percent of women working in the public sector, compared to 14 percent of men. These substantial differences likely reflect working women’s higher levels of education compared to men, women’s preferences for working conditions in

SOURCE: SEE Jobs Gateway database. *Includes post-secondary non-tertiary education.

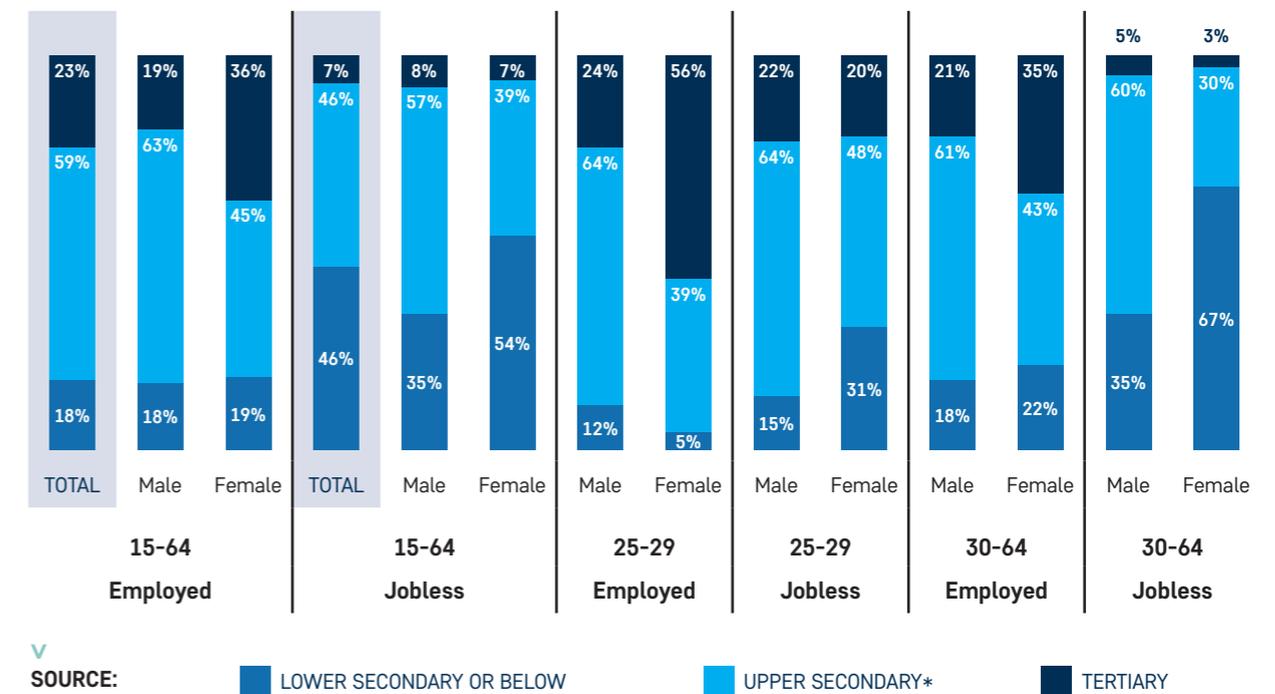
the public sector and, possibly, social norms that prevent them from accessing private sector jobs.¹⁶

38. **Kosovo has a sizable diaspora working abroad,** primarily in Germany, Switzerland and Austria. Remittances, together with foreign aid, are key drivers of economic growth in recent years. The large stock of migrant workers and the remittances they send home also influence consumption and investment patterns in Kosovo as well as incentives to work. Individuals in Kosovo who live in households that receive remittances have slightly higher reservation wages than others and are less likely to be registered with employment offices, although the differences are small.¹⁷

FIGURE 2:

Access to employment and access to education are linked, especially for women.

Employed vs. jobless: distribution by level of education, age group and gender



SOURCE: SEE Jobs Gateway database. *Includes post-secondary nontertiary education

■ LOWER SECONDARY OR BELOW ■ UPPER SECONDARY* ■ TERTIARY

16 Cocjocar (2017), op. cit.

17 Rudi, J. "Remittances and Labor Supply: The Case of Kosovo", unpublished mimeo, September 2014. Available at: <http://paa2015.princeton.edu/papers/150522>.

A strategy to improve jobs

39. **Kosovo needs more jobs, better jobs, and more inclusive jobs to foster growth, reduce poverty and social exclusion, and encourage qualified workers to remain in Kosovo.** The focus of such a three-pillar strategy revolves around key policies to (i) accelerate job creation in the formal sector, (ii) increase the quality of existing jobs by increasing productivity and earnings, extending social security, and improving working conditions, and (iii) help vulnerable groups, including women and first-time labor market entrants, connect to jobs. Possible priorities for a jobs strategy in Kosovo entail business environment reforms to stimulate private sector development, skill development strategies that increase the level of foundational skills as well as those relevant to current and future employer needs, and targeted activation policies focusing on the constraints faced by specific groups.
40. **Skills are only one aspect of any jobs strategy, but they are especially important as they cut across all three pillars.** Skills are critical to removing competence bottlenecks in the private sector for firms to grow, increase productivity in the production of goods and services, and increase access to jobs with higher wages and good working conditions.

1.2 The role of skills

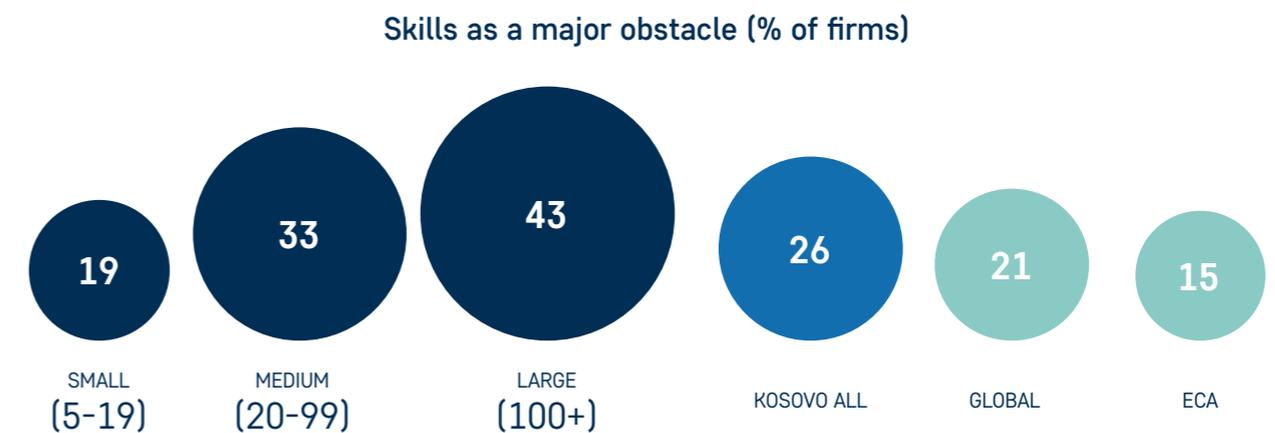
Skills influence growth, productivity and job creation

41. **Skills are defined as the ability to perform a task well, owing to a combination of knowledge, practice, and aptitude.** This includes technical skills as well as socio-emotional skills such as the ability to collaborate with others or communicate well. Skills are not the same as “years of schooling”. The latter has traditionally been used to measure human capital, but it does not capture a number of factors that affect learning and skill development, such as the quality of schooling, family background and location. Efforts have been now made to measure skills (both supply and demand) directly, through tests and surveys.
42. **Skills matter for nations’ long-term economic development.** Over time, the productivity and growth of a country are directly linked to the level of “economically relevant skills” in the population. There is logical evidence to support this link, but empirical research has only recently established a strong causal relationship, using new and direct measures of skills. An aggregate measure of cognitive (analytical) skills, developed using scores on international tests in mathematics and science, explains three quarters of cross-country variation in long-term growth rates, and even small differences in skills measures have strong impact on growth rate.¹⁸

18 Hanushek, E., 2017. “For long-term economic development, only skills matter”. *IZA World of Labor* 2017:343, March 2017.

43. **Skills matter for Kosovo’s private sector, especially for firms with higher potential for job creation and productivity growth.** The World Bank’s enterprise surveys indicate that whereas Kosovo firms consider high levels of informality, lack of finance and the impact of corruption as the most significant obstacles to business growth, a quarter of firms consider skills a major obstacle to their growth. The share in Kosovo exceeds that of Eastern Europe and Central Asia on average. Moreover, large firms – which contribute more to productivity and growth than smaller firms – are more likely to report that low levels of skills are a constraint on growth (Figure 3).

FIGURE 3: Low levels of skills are a constraint for firms in Kosovo



SOURCE:
Estimates based on World Bank Enterprise Surveys, 2013 survey for Kosovo.

44. **Skills matter for individual earnings.** Evidence from the Programme for the International Assessment of Adult Competencies (PIAAC) survey in OECD countries indicates that stronger analytical skills—measured by numeracy, literacy, and problem-solving—are significantly related to higher wages for individuals, more so than additional years of schooling.¹⁹ In other words, actual skills matter more than education, reflecting the importance of the quality of skills development system as a whole, and not only access to schooling. A recent study of skills in several middle-income countries (Armenia, Bolivia, Colombia, Georgia, Ghana, Kenya, Ukraine and Vietnam) also found that skills pay off significantly in terms of access to jobs and higher earnings, even when education is accounted for.²⁰

19 Hanushek, E; G. Schwerdt; S. Wiederhold; and L. Woessmann, 2015, “Returns to Skills Around the World: Evidence from PIAAC”, *European Economic Review*, Vol 73 (1), pp. 103-130.

20 Valerio, A., Sanchez Puerta, M-L, N. Tognatta and S. Monroy-Taborda, 2015, “Are There Skills Payoffs in Low and Middle Income Countries? Empirical Evidence Using STEP Data Policy Research Working Paper; No. 7879. World Bank, Washington, DC.

A broad and flexible skill set is important

45. **Globally, technological and organizational changes are transforming jobs and the corresponding skills in demand.** Significant structural change, in particular the rising role of information and communications technology in the production of goods and services, has led to a decline in the need for routine, manual skills and an increased demand for “new economy skills” that complement automated work.²¹ These shifts in skill demand have also been observed among developing countries that are more advanced on the reform agenda.²² In these economies, structured and repetitive tasks are giving way to tasks that require abstract thought, decision making, team work, and leadership. There is also an increase in manual tasks that require adapting and reacting to changing circumstances with tools and manual dexterity, as well as social interaction and collaboration. Thus, workers must accumulate a large tool box of skills that form the basis for acquiring job-specific skills and adapting to changes in tasks over time.
46. **Socio-emotional skills influence labor market outcomes.** Socio-emotional skills – such as discipline, perseverance and openness to experience and change – matter significantly for how individuals perform in school, in the labor market, and on other measures of success in life. As discussed, there is ample evidence to suggest that these skills are malleable and can be developed and honed during school. High quality early childhood and primary school programs have the potential to build and improve socio-emotional skills in the short and long run.²³ A recent study groups together skills that have been shown to be valued by employers into eight major categories, including the cognitive skill of problem solving, and several socio-emotional skills such as resilience, achievement and motivation, control, teamwork, initiative, confidence and ethics.²⁴
47. **Skill development involves a number of stakeholders:** (i) children/youth, their parents and communities, and adult workers that identify preferred educational and vocational paths (ii) education and training systems (including active labor market programs) that provide youth and job seekers with training and education (iii) firms that employ workers with different skill levels and provide them with experience and in some cases training (iv) policy makers. In a well functioning system that rewards skill development and where labor market information is available, youth choose educational paths suited to their interests, abilities, and labor market prospects; firms communicate and interact with education systems to improve relevance and provide further skill development to their workers; and education systems respond to labor market needs.

21 Autor, D., F. Levy and R.J. Murnane, 2003, “The Skill Content of Recent Technological Change: An Empirical Exploration,” *The Quarterly Journal of Economics*, vol. 118(4), pp 1279-1333.

22 Arias, O.; Sánchez-Páramo, C.; Dávalos, M; Santhos, I; Tiongson, E; Gruen, C; de Andrade Falcão, N., Saiovici, G., Cancho, C., 2014, *Back to Work: Growing with Jobs in Europe and Central Asia*, World Bank: Washington DC.

23 Heckman, J. and T. Kautz, 2012. “Hard evidence on soft skills,” *Labour Economics*, Elsevier, vol. 19(4), pp 451-464; and Heckman, J. and T. Kautz, 2014, “Fostering and Measuring Skills: Interventions that Improve Character and Cognition”, in Heckman, J. J.E. Humphries and T. Kautz (editors), *The Myth of Achievement Tests: The GED and the Role of Character in American Life*, Chicago, IL: University of Chicago Press. pp. 341-430.

24 Guerra, N.; K. Modecki; and W. Cunningham, 2014, Developing Social-Emotional Skills for the Labor Market. The PRACTICE Model. Policy Research Working Paper 7123. World Bank.

48. **Skills begin to form in early childhood and are honed throughout childhood, adolescence, and adulthood** (Table 1). Transforming the composition and level of skills takes time. Policy to promote and reinforce skill development must therefore span across the life course—from interventions in early childhood programs to university education as well as training and re-training programs for adults. New findings on school-based programs aimed at developing socio-emotional skills strongly emphasize the value of integrating such training into the core curriculum, and show that efforts are more successful when specifically targeted at young children (as well as vulnerable groups).²⁵ The time lag involved in building skills means that countries, even those less advanced on the reform agenda, must address skill gaps long before it becomes a major barrier to growth and labor market success. This involves collaboration among policymakers, workers, the jobless, students, schools, and firms. To inform stakeholders, more information is needed to identify the nature of the skill gap and where it occurs, as well as the children and adults most in need of skill development.

Table 1: Skills Towards Employment and Productivity: The five STEPs

STEPS	Preschool age	School age	Youth	Working age
5. Facilitating labor mobility and job matching			Apprenticeships, skills certification, counselling	Intermediation services, labor regulation, social security portability
4. Encouraging entrepreneurship and innovation		Fostering inquiry	Universities, innovation clusters, basic entrepreneurship training, risk management systems	
3. Building jobs-relevant skills		Basic vocational training, behavioral skills	Vocational training, higher education, apprenticeships, targeted programs	Firm-provided training, recertification, reskilling
2. Ensuring that all students learn		Cognitive skills, socialization, behavioral skills	Second chance education, behavioral skills	
1. Getting children off to the right start	Nutrition, psychological and cognitive stimulation, basic cognitive and social skills	School health and remedial education		

SOURCE: Banerji, A., W. Cunningham, A. Fiszbein, E. King, H. Patrinos, D. Robalino, and J-P Tan, 2010, *Stepping up skills for more jobs and higher productivity*, World Bank, Washington, DC.

25 Sánchez Puerta, M-L, A. Valerio, and M. Gutiérrez Bernal (2016). *Taking Stock of Programs to Develop Socio-emotional Skills: A Systematic Review of Program Evidence*. Directions in Development. Washington, DC: World Bank.

Measuring skills - the basics of the Kosovo STEP surveys

49. Our understanding of skills from the demand side (skills required by firms, presently and in the future) and the supply side (potential work force) has been held back by a lack of systematic information on the relevance and performance of education and training.²⁶

Educational attainment is an imperfect approximation of skills: skills developed in childhood and adolescence, through education and training systems, and on and off the job in adult life, are what matter. For these reasons, gaps between developing and more developed economies in actual skills are much larger than the (already significant) gaps in education levels would suggest.²⁷ Thus, measuring access to education in order to evaluate skill supply, or the effects of skills on labor market outcomes, is not sufficient.

50. The STEP Household and Employer Surveys is an important step toward filling knowledge gaps in the supply and demand for skills.

The STEP²⁸ Skills Measurement Program, launched in October 2010 by the World Bank, is a systematic attempt to fill knowledge gaps related to skills that enhance productivity and increase earnings in developing countries. The program is designed to provide policy relevant information on skills, beyond basic information on education levels and literacy, from both the supply and demand side. Household-level surveys focus on measuring skills and the use of skills in the population in a comprehensive way, including cognitive, or analytical skills, socio-emotional skills that affect workplace readiness and effectiveness, and job-specific technical skills. Firm level (employer) surveys focus on understanding the skills that employers need, skills that are difficult to find, and different means to address the skill gap. Annex 1 provides a table mapping different skills in the Employer Survey and Household Survey into a coherent framework and explaining how they are defined and measured.

51. The STEP Employer and Household Surveys focus on a broad set of skills:

- Cognitive skills are analytical skills. These include foundational skills such as literacy, numeracy and, in some settings, basic proficiency with computers (ITC literacy) – skills that are valued in their own right but also as preconditions for acquiring higher-order skills. Higher-order cognitive skills include logical, intuitive, and creative thinking and problem solving.
- Socio-emotional skills (in different contexts referred to as behavioral skills or characteristics, soft skills, life skills, workplace skills) include skills that are empirically linked to long-term labor market success, including perseverance/grit, conscientiousness, flexibility/openness, communication skills, interpersonal skills, independence, and emotional stability.

- Job-specific skills include some transferrable cognitive and socio-emotional skills (as described above) related to employment in general, such as making presentations (i.e., a communication skill) or working in teams (an interpersonal skill). They also include task-specific skills that are less transferrable across occupations such as the ability to use various methods, materials and tools to drive or operate a specific type of machinery.

52. **The Household Survey focuses on measuring skills in the urban population.** It provides information on self-reported cognitive skills used on the job and during spare time (reading, writing, numeracy, computer use), as well as (for those employed), on the job cognitive skills like problem solving and learning new things, socio-emotional skills such as interpersonal skills, supervising staff, or the ability to work independently, and technical job specific skills that can be described as job characteristics, such as operation of machinery, or driving vehicles. The Household Survey also provides an assessment of socio-emotional skills, based on the so called “Big Five” inventory of personal traits: extroversion, agreeableness, conscientiousness, emotional stability, openness – as well as grit, and approaches to decision making. The questions related to identifying these seven different traits are presented in Annex 2. Finally, the Household Survey also includes a literacy assessment which consists of two levels, a basic (“core”) and a more advanced reading test module. Respondents are first given the core literacy test consisting of eight rapid questions that helps to screen the least literate from those with higher-level skills. Passing the core literacy test (level 3 and above) is an indicator of basic literacy. Those that pass the test also undertake a more advanced (“full”) literacy test. The different levels (1-5) of literacy in the full test are explained in Annex 3.

53. **The STEP Employer Survey focuses on workplace-related skills.** The Employer Survey asks employers about a wide range of skills (primarily cognitive and socio-emotional skills), including how important they are to the job, and whether they are used by a typical worker. Skill gaps are addressed by asking employers about the nature and size of skill gaps among the current workforce, as well as how they affect business in general, and recruiting and hiring in particular. The Employer Survey also includes some specific questions aimed at understanding whether employers think that women experience larger skill gaps than men, or vice versa.

54. **The STEP Employer Surveys provide new and important information on skill gaps:** they (i) provide detailed information on skills as viewed from the demand side: skills that employers consider important, and skills that are lacking, for both high- and medium-skilled workers; (ii) focus on labor market-relevant skills, rather than on diplomas, certificates, or levels of education; and (iii) focus on generic cognitive, socioemotional, not just job-specific technical skills associated with a particular occupation.

55. **The STEP surveys focus on transversal skills.** The STEP surveys focus on generic skills that are important to varying degrees across a variety of occupations, and some very aggregate job specific technical skills (driving, interacting with people). Their lack of detail makes them unsuited for evaluating the supply and demand for specific job-technical skills related to different occupations (manpower planning). Understanding the technical skills in demand is

26 Sondergaard, L. and M. Murthi, 2012, *Skills, Not Just Diplomas: Managing Education for Results in Eastern Europe and Central Asia*, the World Bank, Washington, DC.

27 Hanushek, E., and L. Woessmann, 2012, “Do better schools lead to more growth? Cognitive skills, economic outcomes, and causation,” *Journal of Economic Growth*, vol. 17(4), pp 267-321.

28 Skills Towards Employment and Productivity.

central to improving the matching of job seekers to vacancies in Kosovo's labor markets but requires complementary survey instruments. Yet, there are strong grounds for focusing on a broad skill set as is done in the STEP approach. Basic cognitive and socio-emotional skills provide the foundation for further skill development, including technical skills. Additionally, demand for products and services is changing over time and with it demand for specific vocations. Transversal skills are needed to allow for flexibility and reskilling.

56. **Skill levels, skill needs, and skill gaps differ for different types of workers.** All STEP Employer Surveys separate workers into two categories, under the assumption that the demand for the skill sets and the systems addressing the skill gaps may differ for the two types. The nine different occupational categories (ISCO) are ordered into groups A and B. Type A includes managers, professionals, technicians and associate professionals. The "A" group corresponds to occupations with greater need for "new economy skills" (i.e., non-routine, non-manual skills). Type B includes the remaining occupations: clerical support, service and sales workers, skilled agriculture workers, construction, crafts and related trades workers, drivers, plant and machine operators and assemblers, and elementary occupations. The "B" occupations require more traditional skills, based on more routine tasks and – for some – more manual skills. For this group of workers, international evidence suggests that the non-routine components of tasks have also increased.²⁹ **In the following, these two groups of occupations are referred to as higher skill (Type A) and lower/medium skill (Type B) occupations.** On a few occasions the analysis also separates the lower/medium skill occupations into two groups: occupations in the service industry (clerks, sales and service workers), and physical/technical occupations (crafts/construction, plants/machine operators and drivers, and elementary occupations).
57. **For the Employer Survey, the analysis also highlights specific outcomes for more dynamic firms:** firms that could potentially contribute more to productive job creation in innovative, competitive sectors. This includes firms that are innovative (introduced new or significantly improved methods of manufacturing or producing goods or services in the past 3 years), are invested in research and development, or are large with more than 50 employees.
58. **The Kosovo STEP Employer Survey was rolled out in 2015 and the Household Survey in 2016-17.** Details around the two surveys are described in more detail in Annex 4 and Annex 5.

1.3 Organization of the report

59. To understand whether there are skill gaps in Kosovo, what they look like, and how they can be addressed, the report proceeds as follows.
60. **Section 2 investigates whether there are skill gaps in Kosovo's labor markets.** If firms cannot find the workers they need because applicants lack the requisite skills and experience, then skill gaps can hold back job creation. At the same time, if current employees lack the skills necessary to perform their jobs, then skill gaps can constrain productivity in the short run and growth and job creation in the long run.
61. **Section 3 focuses on the skills that matter in Kosovo.** For example, if a majority of the Kosovo population does not speak a foreign language other than English, but this is not required on the job, or not highly valued by firms in general (and not likely to become so in the future), then a lack of foreign language skills does not translate to skill gaps. The section explores aspects of the demand for skills, both those that are employed by workers and those that are valued by firms.
62. **Section 4 looks at the consequences of skill gaps on firms and individuals.** Although labor market outcomes are driven by multiple factors, and not just skills, the inequitable distribution of skills in the population suggests that some individuals lack opportunities in labor markets and that some of the work force lack the basic cognitive and socio-emotional skills to respond to rapid changes in labor demand.
63. **Section 5 discusses the potential driving factors behind existing skill gaps.** This includes issues related to education and training systems, and the extent to which the private sector helps develop relevant labor market skills and supports lifelong learning.
64. **Section 6 summarizes the primary findings and makes suggestions for moving forward.**

29 Autor and others (2013), op. cit.

2. Skill gaps from the firm perspective

Key messages:

- Skill gaps are a constraint on growth. Firms cite lack of skills and experience as a constraint on the growth of their business, albeit one of many obstacles.
- Skill gaps are a constraint on job creation. Recruiting firms find it difficult to hire because of problems in identifying sufficiently experienced and skilled workers.
- Skill gaps are holding back more dynamic firms and hence productive employment growth. Skill constraints appear to be especially detrimental to firms with the greatest potential for creating more, more sustainable, and better paying jobs.

2.1 Lack of skills are a constraint on growth but not the primary concern of firms

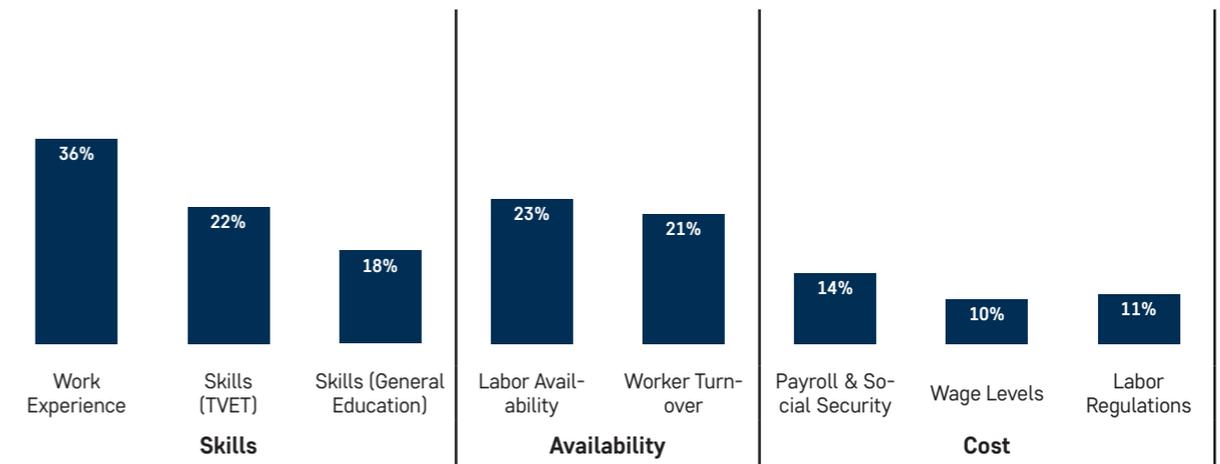
65. **Firms report that a lack of experienced workers is the biggest labor-related obstacle to operation and growth.** The quality of education and training systems, and relevant work experience are both related to labor market relevant skills. For Kosovo firms, the lack of workers with relevant experience is the primary labor-related concern, over and above the quality of formal education and training, and the availability and cost of workers (Figure 4, a). Yet, skill gaps must be evaluated in the context of other barriers to job creation and growth, as only 35 percent of firms report workers' lack of experience as a major or severe problem.

66. **Skills are but one of several constraints on business development in Kosovo.** According to the Employer Survey, difficulties related to weak governance – political and economic instability and uncertainty, corruption and crime, and a lack of rule of law – and infrastructure are more detrimental to business than labor-related problems, including skills

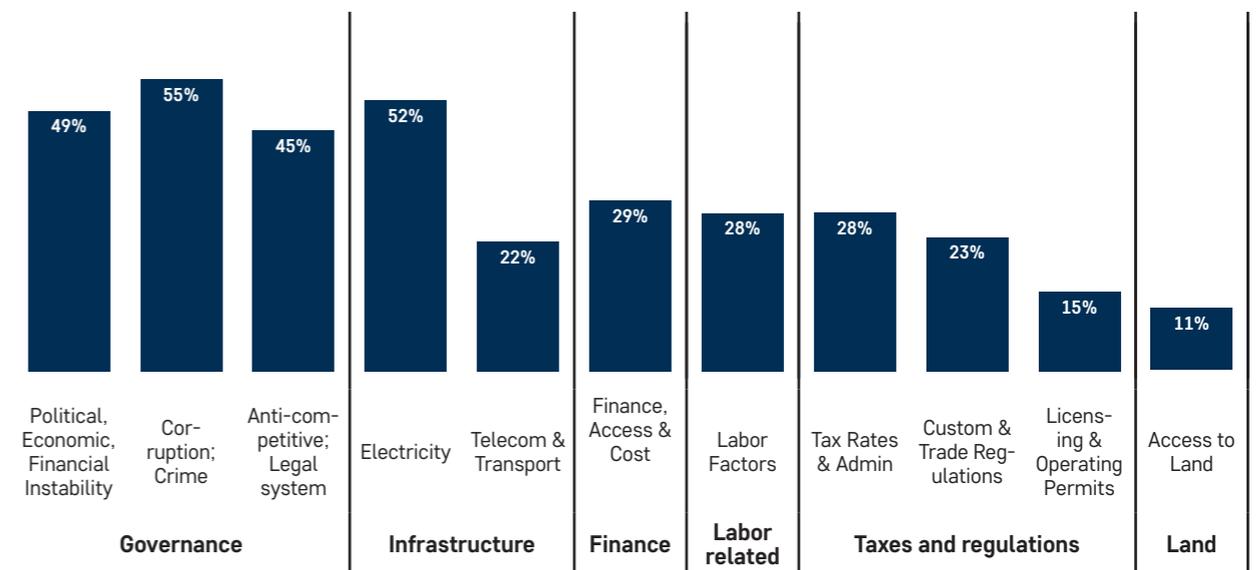
(Figure 4, b). Over half of firms find corruption and crime, as well as electricity, a major obstacle to business (55 and 52 percent respectively), whereas only 28 percent cite labor-related factors as a major problem. The Employer Survey presents a similar picture to that of the World Bank Enterprise Survey from 2013.³⁰

FIGURE 4: Obstacles to operation and growth

a. Labor-related obstacles



b. All obstacles



SOURCE: STEP Employer Survey

30 See: <http://www.enterprisesurveys.org/data/explore/economies/2013/kosovo>

2.2 Skill constraints are holding back job creation

67. **A limited share of firms has attempted to recruit workers.** In the last three years, for each occupational category, between 15 and 30 percent of all firms in the Employer Survey tried to hire at least one person (Figure 5, a). Demand was greater for higher skill occupations (managers, professionals, technicians) and medium skill service-related occupations (clerks, sales workers and services workers) than for low skill occupations (construction and crafts, elementary occupations, drivers and operators). These low skill occupations are also occupations where men traditionally have been overrepresented.³¹

68. **Efforts to recruit workers was more common among potentially dynamic firms.** Firms that introduced new or significantly improved methods for manufacturing or producing goods or services in the past 3 years were more likely to seek employees, especially for higher skill occupations (Figure 5, b and c). Larger firms also attempted to hire workers more often than small firms or micro-firms.³² These firms sought workers for higher skill occupations in particular, as well as for non-manual medium skill occupations. Further disaggregation (not shown here) indicates that foreign owned firms, and firms that invested in R&D were also more likely than other firms to have recruited workers for higher skills occupation. As seen, these findings on job creation are in line with the findings from the analysis of firm registry data in Kosovo, discussed in Chapter 1.³³

69. **Skills and experience were the primary constraints to recruitment, especially for occupations in demand by firms.** In fact, a majority of firms attempting to hire workers reported having difficulty identifying candidates with requisite skills or work experience. Employers' perception of applicants' lack of skills and work experience were more detrimental to hiring than the low number of applications or the number of applicants who would not accept the firms' working conditions or wages. In fact, 77 percent of firms that attempted to fill a higher skill position, and 59 percent that tried to fill a medium to lower skill position encountered problems because of either skill or experience. The significance of these skill gaps was consistent across all major occupational categories (Figure 6, a and b).³⁴ Among the medium to lower skills positions, fewer firms experienced difficulties recruiting for elementary occupations or jobs requiring driving or operating machinery (lower skill occupations), than for clerks, sales, services workers, or construction workers. In other words, skill constraints were more severe for occupations for which there was higher demand (more firms attempting to recruit).

31 Women were overrepresented among professional occupations (have a higher share of jobs in this sector than in all sectors taken together), and underrepresented among the construction and crafts, and well as plant and machine operators and assemblers.

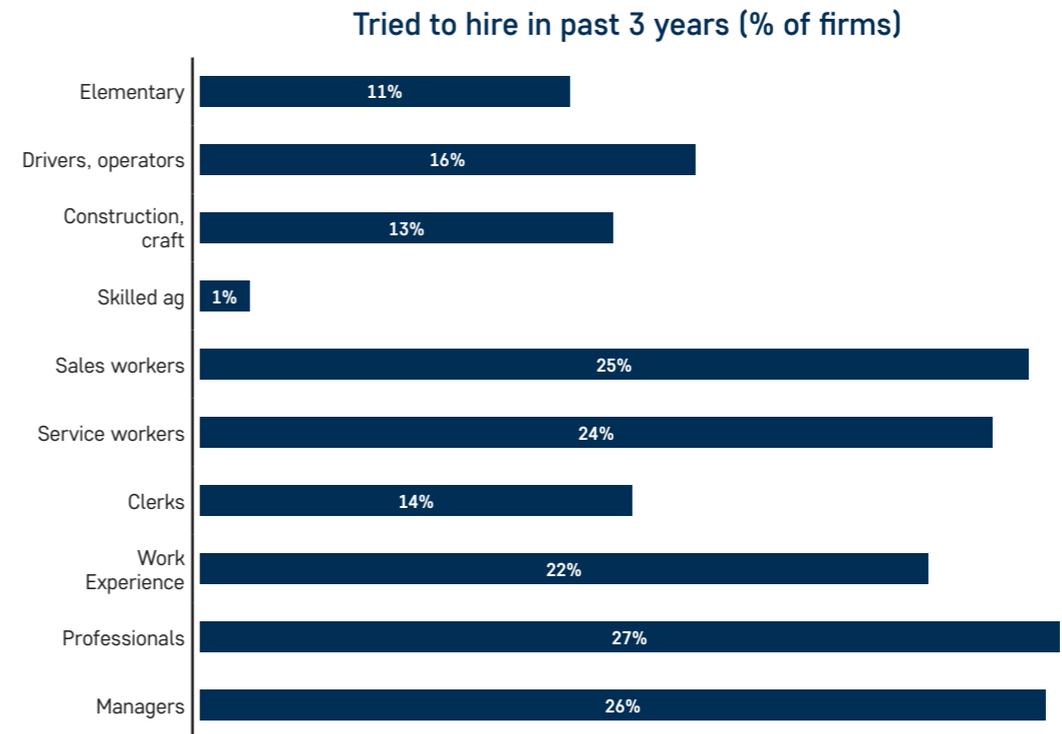
32 Because larger firms experience higher worker turnover in absolute terms, they are more likely to attempt recruitment than smaller firms. This does not necessarily imply, however, that larger firms create more jobs.

33 Cojocar. 2017, op. cit.

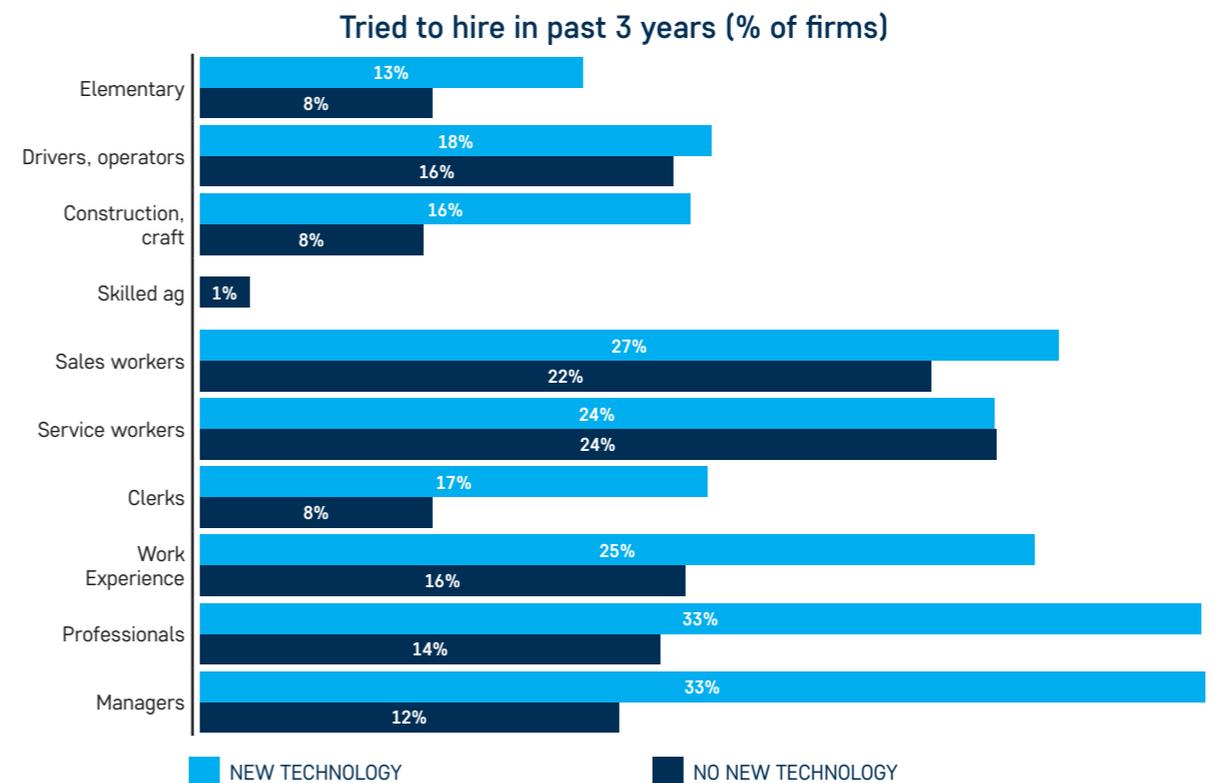
34 There is not an absolute difference between work experience and skill levels in this context as work experience should build the skills necessary for the job.

FIGURE 5: Share of firms that tried to hire in each occupation

a. All firms

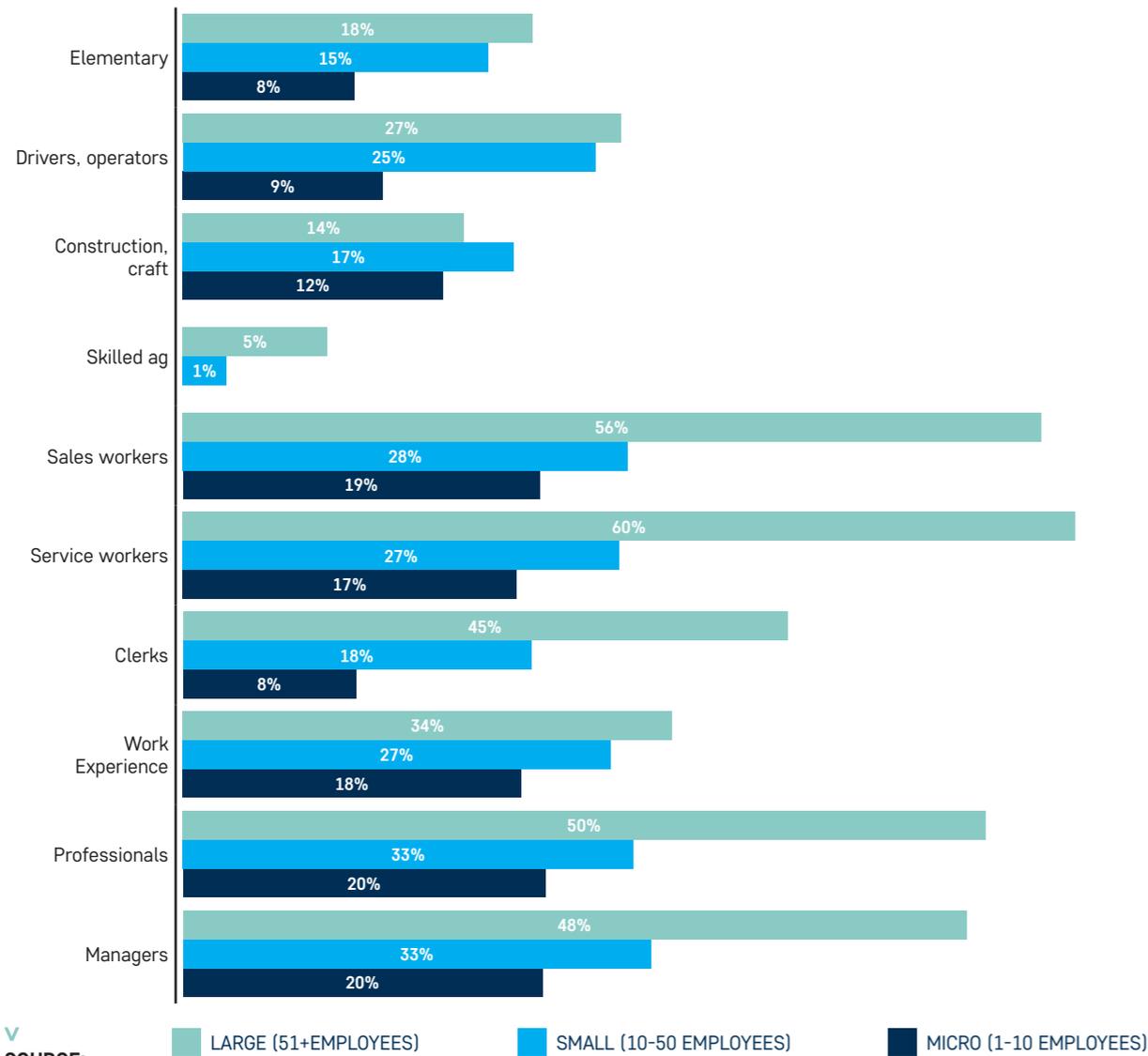


b. By innovation in new technology



c. By firm size

Tried to hire in past 3 years (% of firms)



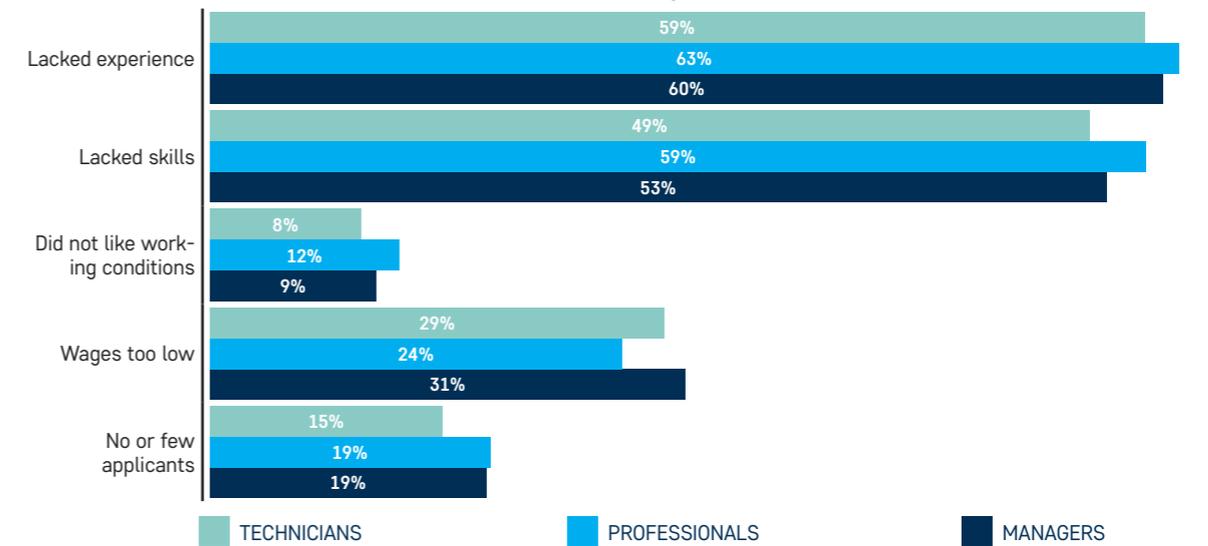
SOURCE: STEP Employer Survey

FIGURE 6:

Firms that tried to hire experienced difficulties for a variety of reasons

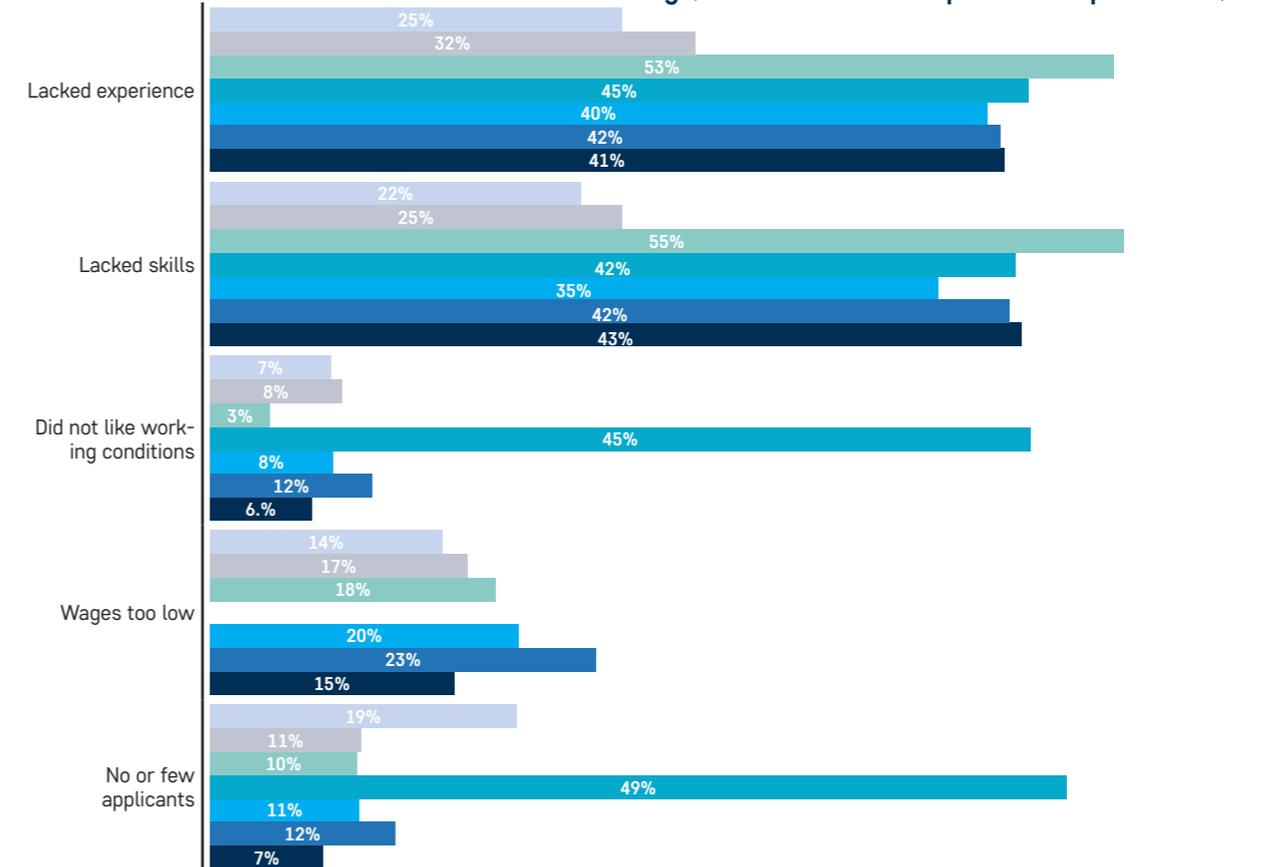
a. All firms

Reasons for difficulties in hiring (% of firms that experienced problems)



b. Medium-to lower skill occupations

Reasons for difficulties in hiring (% of firms that experienced problems)

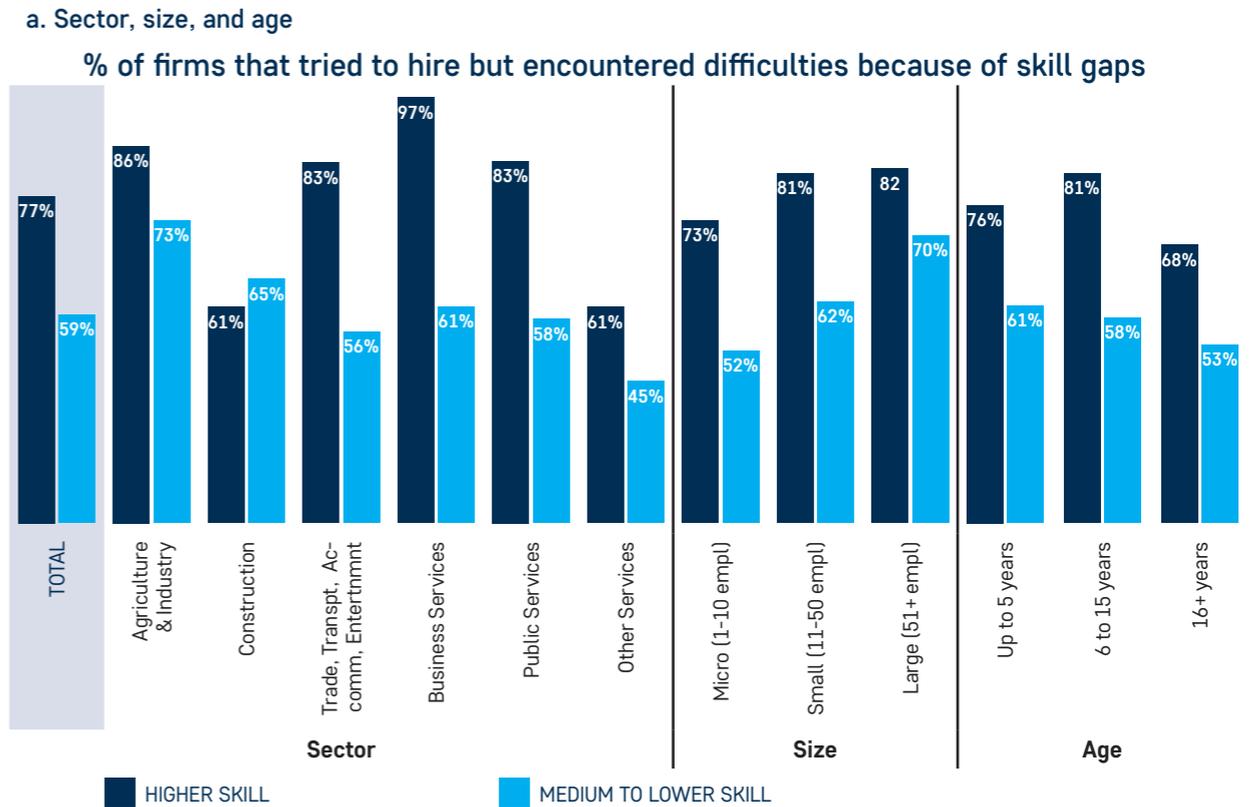


SOURCE: STEP Employer Survey

2.3 Skill gaps restrain more dynamic firms

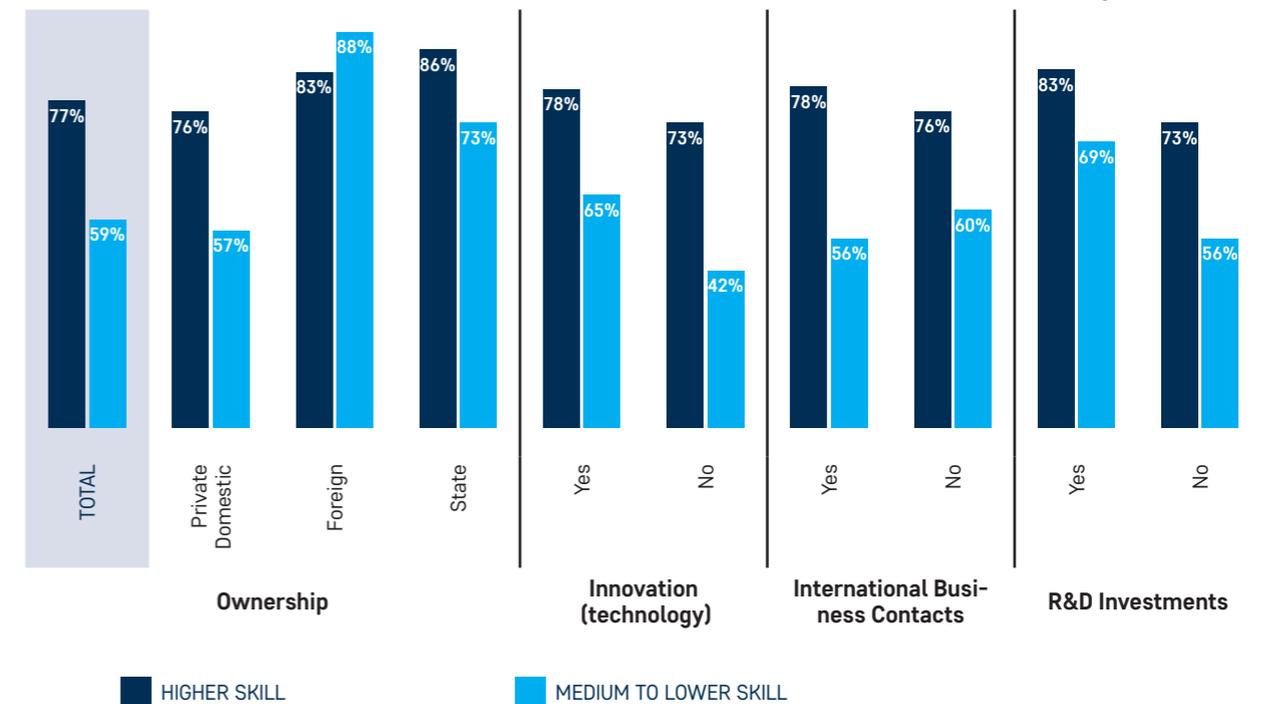
70. **Skill gaps are especially problematic for job creation and productivity if they affect the more dynamic firms in the economy.** Firms that are likely more competitive and productive should also be able to grow and provide more jobs and jobs of higher quality in terms of earnings and working conditions. As discussed above, particular firms (i.e., large firms, innovative firms, firms that invest in R&D) were more likely to have previously attempted to hire workers than other firms. These firms were also more likely to be productive and competitive, and thus more likely to provide both more jobs and jobs that are more sustainable and of better quality.
71. **Modern and potentially dynamic sectors were affected to a greater extent by skill gaps.** In all economic sectors, with the exception of construction and “other services” (including domestic household workers), a lack of applicant skills affected more than 80 percent of firms trying to recruit higher skill workers and more than 50 percent trying to hire medium to lower skill workers. Large firms were also more likely to have encountered skill constraints in hiring than smaller firms for lower-to-medium skills occupations (Figure 7, a).
72. **Innovative firms were also more likely to have experienced skill gaps when recruiting.** Firms that introduced new or significantly improved methods of manufacturing or producing goods or services in the past 3 years were more likely to be skill constrained, at least for medium-to-lower level skills (Figure 7, b). Firms that invested in R&D were also more likely to be skill constrained, but more so for higher level skills. These dynamic and technology-oriented firms were also more likely to consider lack of experienced workers and low levels of skills emanating from general and vocational education systems as major constraints to conducting business. Finally, foreign owned firms experienced high levels of skill deficiency for both higher and medium-to-lower skill occupations.
73. **In all, this suggests that skill constraints, especially for higher skill occupations, are holding back the creation of better jobs in Kosovo.** Whereas skill constraints affected all hiring firms, they had a stronger effect on those that attempted to hire in the past three years and on dynamic firms. Moreover, higher level skill constraints are large even in the Western Balkan context. A majority of firms in Albania and Serbia also experienced skill-related problems in recruiting workers for higher skill occupations but the share of firms affected in Kosovo was even higher (Figure 7, c).

FIGURE 7: Recruitment difficulties due to skills, by key characteristics



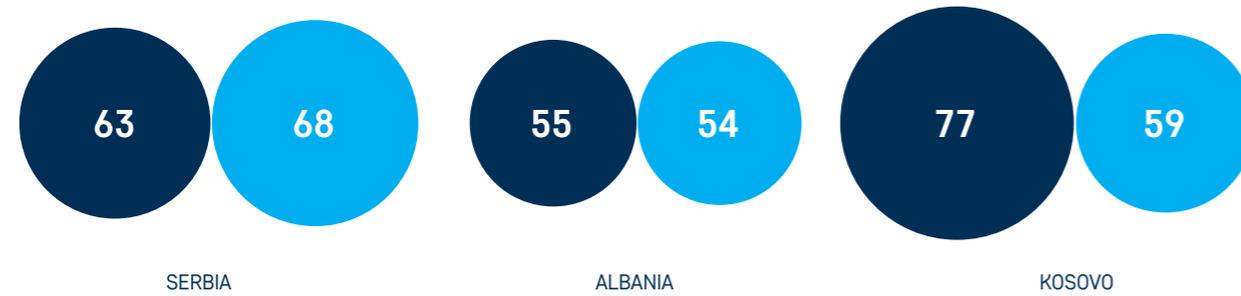
b. Additional characteristics

% of firms that tried to hire but encountered difficulties because of skill gaps



c. Skill constraints in Kosovo, Serbia and Albania

% of firms that tried to hire but encountered difficulties because of skill gaps



SOURCE: STEP Employer Surveys. The charts refer to the share of firms that tried to hire but encountered difficulties because of lack of skills or work experience.

 HIGHER SKILL

 MEDIUM TO LOWER SKILL

3. The skills that matter in Kosovo

Key messages:

- A range of cognitive and socio-emotional skills are needed for different types of jobs in Kosovo, emphasizing the importance of fostering broad and transversal skill sets.
- Skills most valued by employers include the abilities to work well with others (e.g., co-workers and clients), to accomplish tasks, either independently or in collaboration with colleagues, to handle stressful situations, and to solve non-routine problems.
- Skill gaps affect outsiders – job seekers – more than insiders – those with a job. Firms report that important skills are *not* lacking among the current employees, in sharp contrast to the difficulties related to recruitment. A majority of employed workers also consider their education level useful and well matched to the requirements of their job.

3.1 Skills needed on jobs

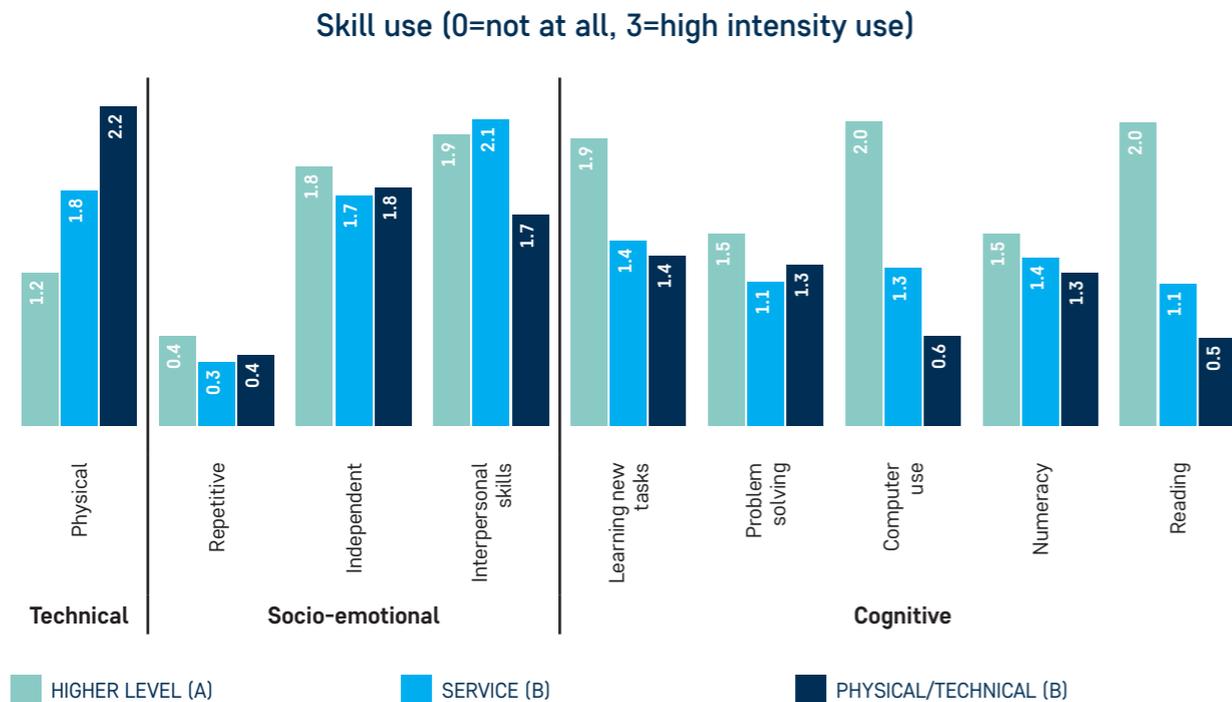
74. Skills are lacking among job seekers, according to employers. What are the skills valued by employers and how do they vary across different types of jobs?
75. **A broad set of skills, both cognitive and socio-emotional skills, is needed for jobs in Kosovo.** The Household Survey shows that workers report using a variety of skills on their jobs. Cognitive skills, both foundational (numeracy, literacy) and higher order skills (learning new tasks and problem solving), are used to a medium or high degree on the job by between 40 and 60 percent of the workers, depending on occupation. Among socio-emotional skills, interpersonal skills (when working with clients and team members) are an important part of the job for nearly 70 percent of workers.
76. **Higher skill occupations require greater use of foundational and higher order cognitive skills on the job.** Figure 8 presents averages for the degree to which different skills are used on the job as reported by workers. The figure categorizes occupations into three groups: higher-level skill professions (managerial, professional, technicians and associate

professionals), lower/medium skill occupations in the service industry (clerks, sales and service workers), and physical/technical professions requiring lower-medium skills (crafts/construction, plants/machine operators and drivers). Workers in higher-level skill occupations report using cognitive skills intensively, especially computer work and reading, but also problem solving and learning new tasks on a regular basis. They are also more likely to be supervising other workers. For these occupations, the mix of non-routine higher order skills – communication skills, team skills, management skills, creativity and adaptability to new tasks – likely matter for employers (Figure 8). Not surprisingly, workers in higher skill occupations are less likely to undertake physical tasks or operate machinery. Physical/technical occupations (lower-medium skills) are the least likely to use cognitive skills intensively on the job.

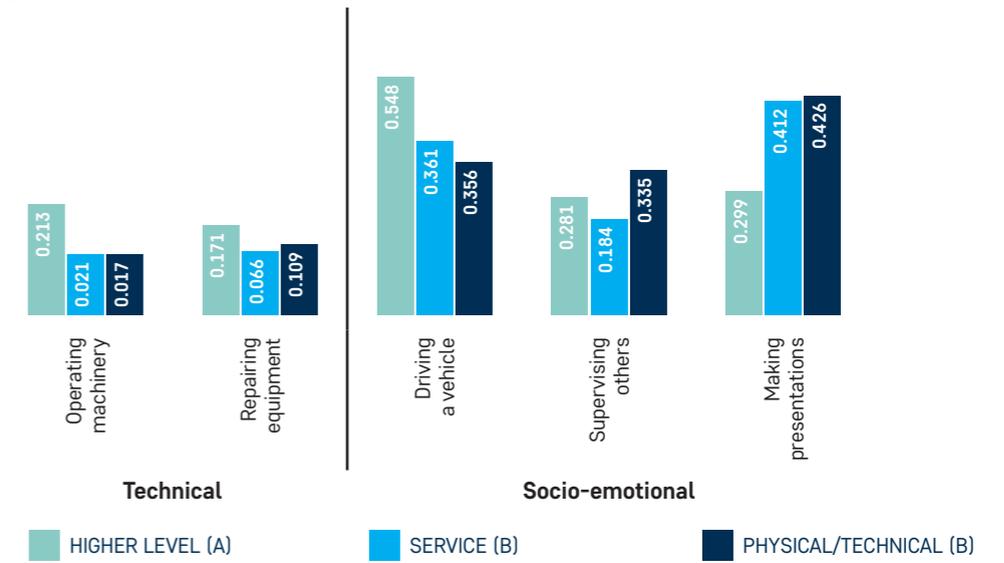
77. People skills and the ability to work independently is needed across occupations. The use of interpersonal skills and a relatively high degree of independent work characterize the three groups of occupations. Higher level communications skills (e.g., making formal presentations to share information or persuade clients or colleagues) are not frequently used, but they are equally important for higher skills and services skills occupations – reflecting the need to interact closely with clients in service and sales work.

78. Employers confirm that jobs overall are skill intensive, using a broad range of cognitive and socio-emotional skills. According to the Employer Survey, for all skills listed, at least 60 percent of firms report that the particular skill is used regularly by workers in

FIGURE 8: Skill use by occupational group (worker reported)



Job-specific technical and socio-emotional skills, (average, Yes=1, No=0)



SOURCE: STEP Household Survey. For the left chart, responses range from 0 (not used on the job) to 3 (high intensity of use). For the right chart, responses are binary (skill is used, or not).

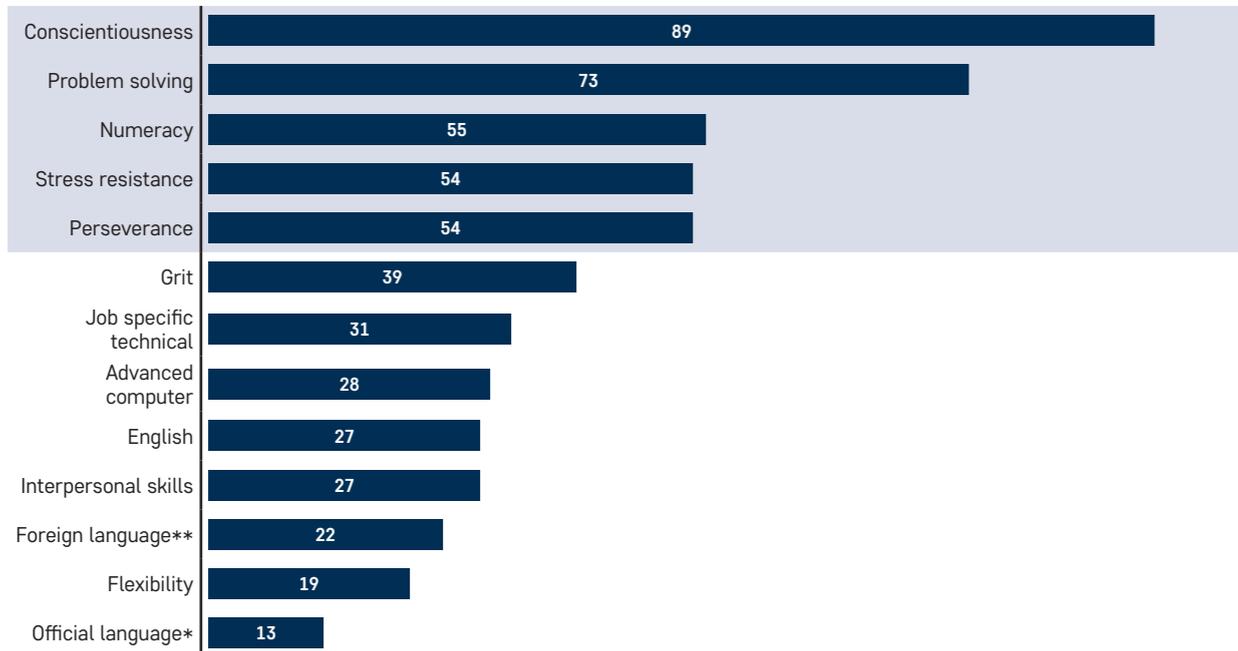
different occupations. Employers also confirm the importance of interpersonal skills and cognitive skills for both higher skill and medium/lower skill occupations.

3.2 Skills valued by employers

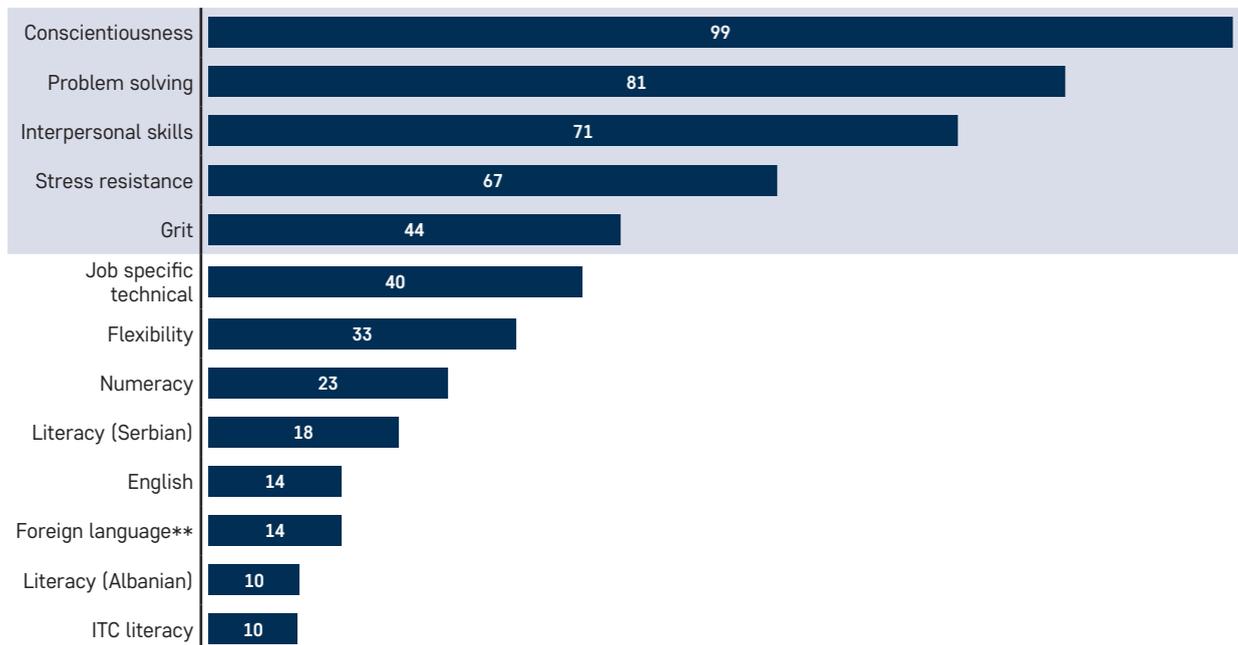
79. When recruiting, employers look for a broad set of skills across occupational categories. These findings are consistent with the picture emerging from the Household Survey. When employers in Kosovo are recruiting new workers for higher skill occupations, they place importance on cognitive and socio-emotional skills that affect productivity: conscientiousness, perseverance, problem solving, numeracy, and the ability to work under stress (i.e., stress resistance). Employers of medium and low skills occupations also value interpersonal skills, as well as reliability, problem solving skills, and stress resistance. These general skills are more important for hiring decisions than job-specific technical skills in Kosovo (Figure 9). The rankings are consistent across different categories of firms, such as those that faced hiring constraints because of skills compared with other firms, and hiring firms versus non-hiring firms (not shown here).

FIGURE 9: Ranking of skills by employers

Ranking of skills for higher skill occupations (index= 0-300)



Ranking of skills for lower and medium skill occupations (index= 0-300)



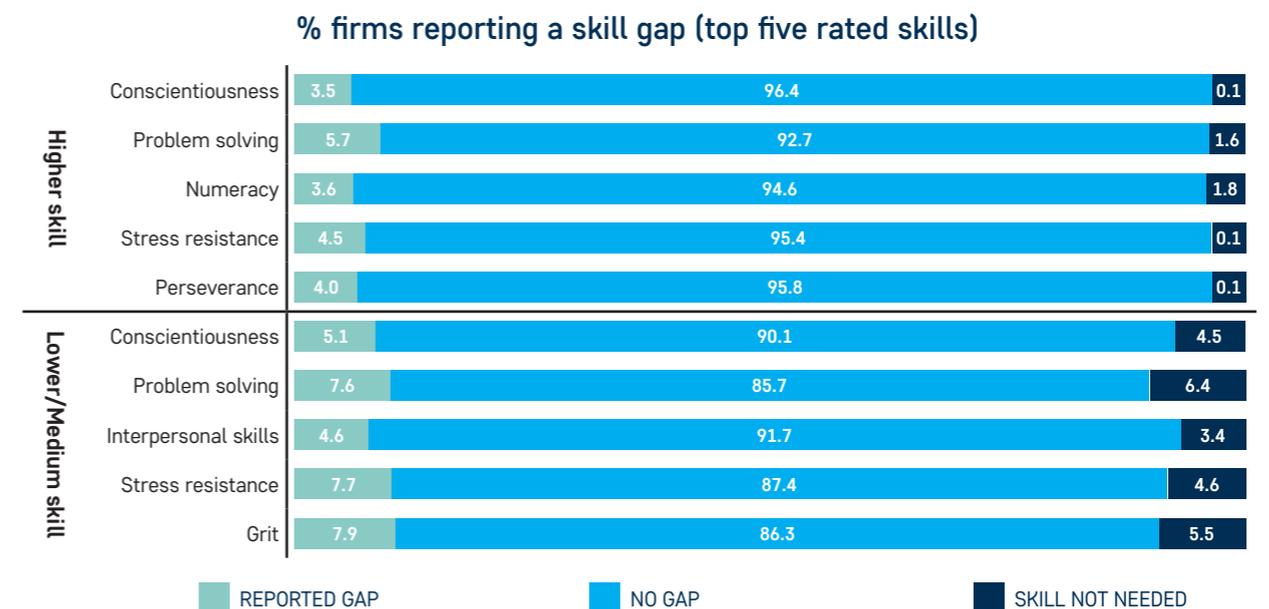
SOURCE: STEP Employer Survey. Firms are asked to identify the three skills that are first, second, and third most important when deciding to retain a job seeker who is on probation. The index is calculated as 3 x (% of firms listing it as most important) + 2 x (% of firms listing it second) + 1 x (% of firms listing it third). If all firms rated the same skill as the most important, its index value would be 300. For conscientiousness for higher skill occupations, the index value (89) is calculated as 3 x 15.9 + 2 x 14.8 + 1 x 11.7. *Official language that is not one's mother tongue. **Foreign language other than English.

3.3 There are no perceived skill gaps in the employed workforce

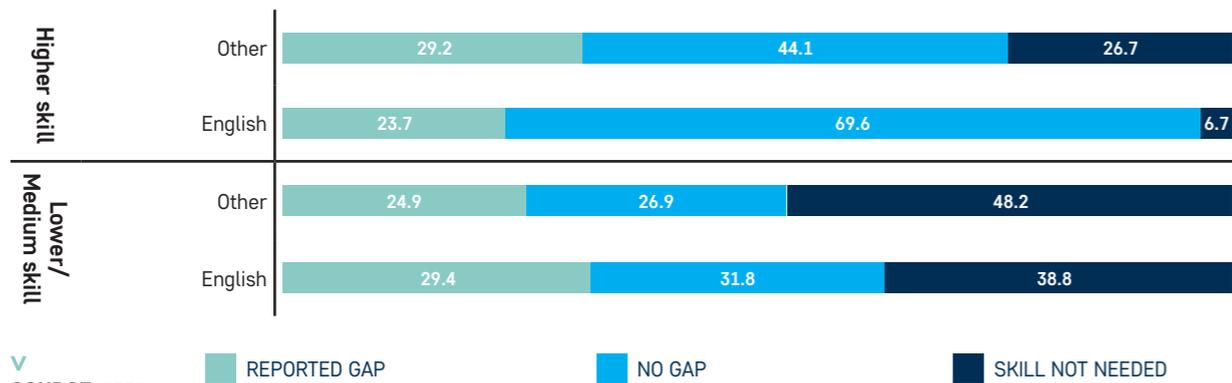
80. **A vast majority of Kosovo firms are satisfied with the skill levels of their workers.** This finding is in sharp contrast to the skill gaps hiring firms encounter among applicants. For the *five skills that are most highly rated* for either higher skill or medium to lower skill occupations (see above), fewer than ten percent of firms report a skill gap among their current workforce (Figure 10). The only skill for which more than 10 percent of firms reported skill gaps is fluency in foreign languages other than English.

81. **Even among skill constrained firms, and firms planning to hire, only a minority of firms report skills gaps among their employees.** Firms that experienced skill-related difficulties during recruitment (“skills constrained”), as well as firms planning to hire in the coming years, rank skills similarly to other firms. Even for these two categories, the share of firms reporting a skills gap among their employees is below ten percent for most skills evaluated, including those ranked most important. Only for language skills, between twenty and thirty percent of firms report that there is a gap. Among skill constrained firms, language skills are not considered very important, reflecting the low share of international integration and sophistication of Kosovo’s production of goods and services. Nevertheless, the lack of communication skills in foreign languages may become a constraint on the goal of increasing FDI and exports.

FIGURE 10: Firms reporting skill gaps.



% skill constrained firms reporting a skill gap (foreign languages)



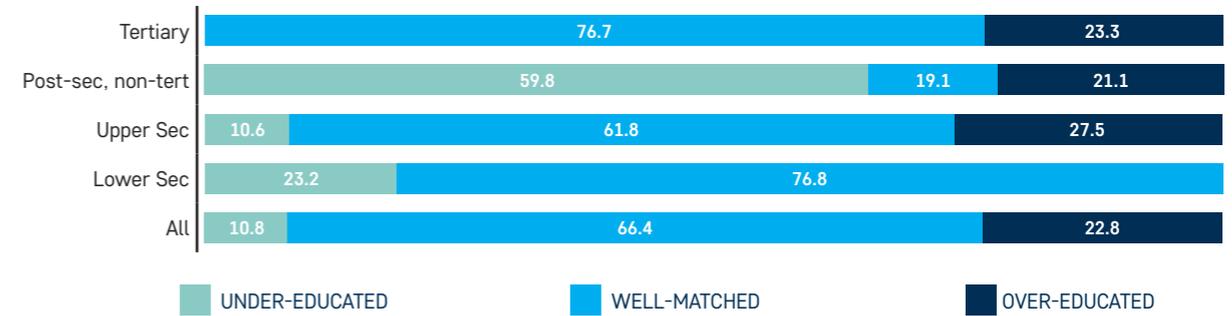
SOURCE: STEP Employer Survey. Skill constrained firms are those that reported difficulties in hiring due to lack of skills or work experience among applicants.

82. **A majority of workers report that their education level is matched with their jobs.** In Kosovo, two-thirds of workers report a good match between their level of education and job requirements, while 23 percent consider themselves overeducated, and 11 percent undereducated (Figure 11). This is broadly in line with the pattern observed in comparator countries such as Serbia or FYR Macedonia. Across all levels of education, most workers are well matched, with the exception of post-secondary, non-tertiary education, where a majority consider their level of education too low compared to what is required by the job.

83. **Taken together these findings suggest that skill gaps, or perceptions of skill gaps, mostly affect labor market outsiders – job seekers – in Kosovo.** This apparent dichotomy – firms finding difficulties with recruiting new workers because of skill gaps, but few firms reporting skill gaps among their employees – is not unique to Kosovo. Similar patterns occur in Serbia and Albania. Assuming that this to some extent concerns youth, the reason could be that education systems have deteriorated in quality, or that skills valued by employers are currently only developed on the job.

FIGURE 11: Skill gaps from the workers' perspectives

Education and jobs matching, Kosovo and comparators



Education and jobs matching, Kosovo and comparators



SOURCE: STEP Household Survey. Over/under education level is measured as the difference between the level of education that workers consider adequate for their job, and the worker's level of education.

4. What are the consequences of skill gaps for Kosovo's population?

Key messages:

- Skill gaps have economic and social consequences for individuals in Kosovo as having the right skills matter for access to jobs and higher earnings.
- Socio-emotional skills, especially higher degrees of conscientiousness and emotional stability, are systematically related to access to employment.
- Earnings are conditioned on access to good jobs (formal, higher paid occupations and sectors), jobs that require higher-level cognitive skills.
- Skill gaps reinforce social and economic exclusion as those with lower skills tend to belong to vulnerable groups, including those with lower levels of education, from ethnic minorities other than Serbian, and from less favorable socio-economic backgrounds.
- There are no significant measurable skill gaps between men and women that could explain worse labor market outcomes for women. Gender biased perceptions and norms surrounding family obligations are likely more important factors.

4.1 Skill gaps limit access to good jobs

84. Skill levels influence both employment and earnings in Kosovo, even after accounting for other important factors. Skills are expected to matter for labor market outcomes – how well an individual can do job-related tasks should be rewarded by greater access to higher paying jobs. In economies that are not productivity driven or economies that have information gaps, this may not be the case. Diplomas, personal networks and personal characteristics may instead serve as the most important decisive factors for accessing good jobs. Multivariate analyses of the Household Survey data suggest that skills do

play a role in labor markets in Kosovo, although the influence on access to employment is stronger than that of earnings. The results discussed below are presented in detail in Annex 6.

85. Socio-emotional skills and cognitive skills matter for access to employment in Kosovo (Annex 6, Annex Table 3). Scoring high on certain socio-emotional characteristics or skills is positively linked to the probability of being employed. Relative to the population at large, those that score higher on conscientiousness and emotional stability (i.e., those that can be relied on to complete a job, even under stressful and difficult circumstances) are more likely to be employed. High scores on agreeableness indicate kindness, sympathy, cooperation and consideration, whereas low scores point to ruthless, manipulative and highly competitive behavior. Somewhat surprisingly, individuals with higher scores on agreeableness have less access to employment. The use of cognitive skills outside of work (e.g., reading and computer work) are also related to job access.³⁵ Literacy test scores are not systematically related to employment. Because literacy is a foundational skill that underpins learning of other skills (e.g., computer use) and is essential for reading on and off the job, the independent effect of literacy may disappear when these other skills are accounted for. When focusing on the active population only, comparing unemployed with employed, the effect of conscientiousness on employment remains important. Those that score lower are more likely to be unemployed. Surprisingly, those that are more likely to ask for advice and think about the long-term consequences of their actions (i.e., score higher on the decision making measure), are more likely to be unemployed (Annex Table 4). It is possible that this reflects a more selective approach to employment, for example a preference for public sector work.

86. Women and youth are penalized in labor markets. Aside from skills, personal characteristics unrelated to skills also have a strong association with access to jobs. Age is positively correlated with employment and, as expected, the effect diminishes with age. This pattern holds whether the analysis is undertaken for the entire population or is limited to the active population. Given the low participation rates of women in Kosovo, it is not surprising that being female, and especially a married female, is negatively associated with job access, even after accounting for skills and education. Social norms assign family responsibilities to women in Kosovo. A combination of lack of affordable child and elderly care options, large family sizes, and disincentives such as extended maternity leave have several negative effects: (i) discourage women from participating in labor markets (ii) make it difficult for them to re-enter labor markets after extended absence (iii) reduce incentives for employers to hire women. Available institutional child care centers are either not affordable or not sufficiently flexible to accommodate full-time employment.³⁶ Family obligations are a factor behind female inactivity but not female unemployment as women are more likely to be unemployed than men, but whether they are married does not matter for unemployment. Other factors, perhaps perceptions about women's

³⁵ Note that because the analysis focuses on access to jobs, only skill use outside of jobs can be included in the estimates.

³⁶ Cojocar (2017), op. cit.

capacity or norms limiting what kind of jobs are available to women, may matter more once women do enter labor markets.

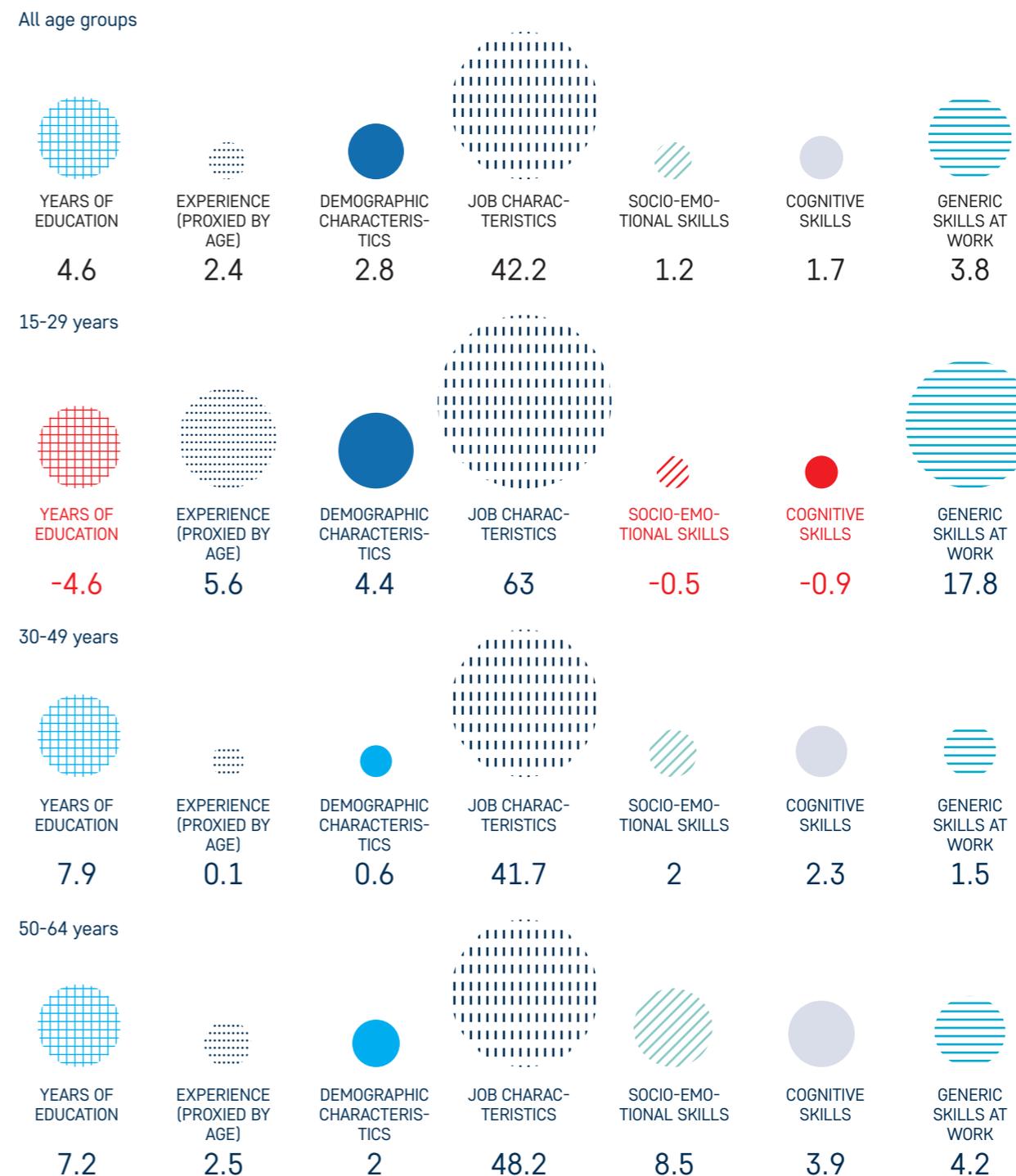
87. **Ethnicity and Family background matters.** Ethnicity is also a significant correlate of job access. Serbians have greater access to employment than Albanians or those of other ethnicities. Also, a favorable family background in terms of having grown up with a more educated mother is positively related to job access.³⁷

88. **Earnings are linked to cognitive skills but not socio-emotional skills** (Annex Table 5). The impact of different types of skills differs for access to jobs and for earnings. Cognitive skills like reading, problem-solving and autonomous work are correlated with the hourly earnings of wage workers. One explanation for this finding is that these particular cognitive skills, by design, overlap with job characteristics and may not fully capture an individual's innate cognitive ability. The skill variable is measured by the intensity in which particular skills are used on the job, such that jobs requiring more cognitive skill use are also jobs that offer higher earnings. Unlike in the case of access to employment, socio-emotional skills are not related to earnings, with the exception of agreeableness which has a negative effect.³⁸

89. **Job characteristics (sector, occupation, etc.) are by far the strongest correlates of earnings**, even when controlling for education and skills. This is particularly true for public sector work which pays off more than other sectors and jobs for people with similar qualifications and backgrounds. By contrast, personal characteristics, including gender, have no links with earnings. It appears that the biggest hurdles women face are participating in labor markets and finding employment in the first place, rather than discrimination in the work place once employed. It may also reflect the higher propensity for women to work in the relatively well-paid public sector.

90. A decomposition of the contribution to variation in hourly earnings of different characteristics for different age groups reinforce the message on the importance of job characteristics such as sector, occupation, formality, etc. (Figure 12). In fact, these characteristics are the main explanatory factor for earnings variability for every age group. For youth (15-29), generic work skills (e.g., interpersonal skills, problem solving, learning new tasks and autonomy, all of which are necessary for modern jobs) also influence earnings, but much less than jobs characteristics. Additionally, socio-emotional skills appear to have a stronger effect on earnings for the age group 50-64 than for younger workers.

FIGURE 12: Decomposition of the contribution to earnings by different characteristics.



SOURCE: Estimates based on STEP Household Survey. **NOTE:** Results obtained using regression-based decomposition according to the Field's approach (Fields, 2004) where the dependent variable is the log of hourly wages trimmed at the 5th and 95th centiles. The height of each bar represents the total R-squared for that regression. The sub-components of each bar show the contribution of each factor (or set of regressors) to the R-squared. Education=Years of education; Demographic Characteristics=Gender, Marital status, Ethnicity, Mother's education; Job characteristics=Sector, Occupation, Formality, Private/Public, Permanent/Temporary, Region; Socio-emotional skills=Big 5+Grit and Decision-making; Use of information-processing skills at work=Reading, Numeracy, Computer use; Generic skills at work=Interpersonal skills, Problem solving, Learning, Autonomous work.

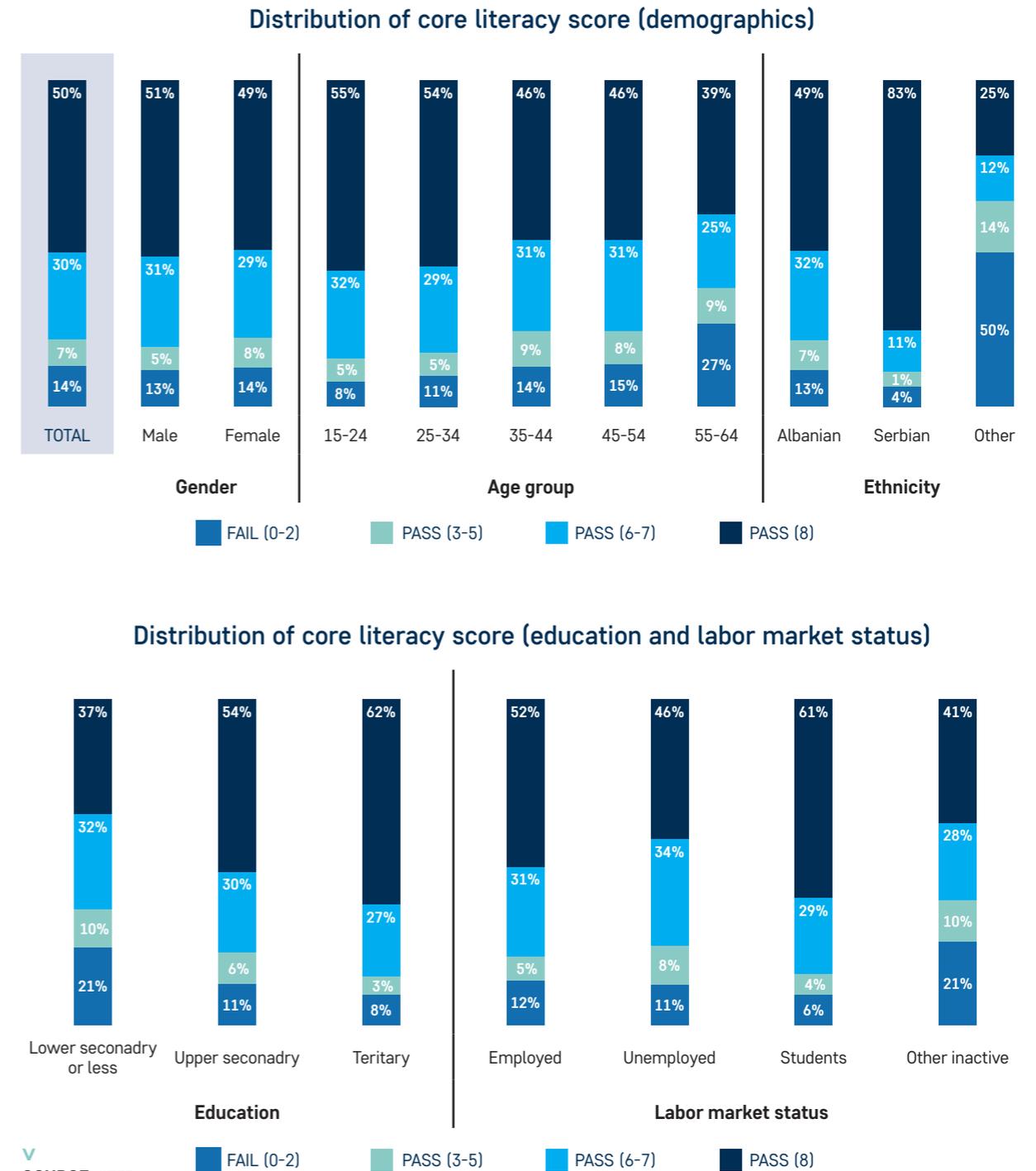
37 This finding may indicate that educated females make better educational choices for their children, but the variable could also be picking up higher socio-economic status which in turn may be a proxy for access to higher quality education, access to professional networks, or simply – in the case of female children – the impact of a role model in terms of career achievements.

38 Agreeableness has shown mixed results on earnings in other studies of low and middle-income countries using STEP data: there was a significant negative association in Armenia and Ukraine and a positive association in Colombia (Valerio and others, 2016, op. cit.). The explanation for a negative sign is that agreeableness could carry costs in terms of career advancement if individuals put others' needs in front of their own.

4.2 Skill gaps reinforce social and economic exclusion

91. **Skills are not the only determinant of labor market outcomes in Kosovo, but they matter.** Low literacy levels, lower use of cognitive skills, and lower levels of important socio-emotional skills among certain groups put them at significant disadvantage in the labor market which reinforces social and economic exclusion.
92. **Basic literacy is low in Kosovo overall.** Literacy is a critical foundational skill that serves as the basis for further skill acquisition. The *core literacy test* in the Household Survey provides an indication of basic literacy. In Kosovo, nearly one in seven respondents (14 percent) failed the core literacy test. For those that continued on to the *full literacy test*, the average score remained low, barely reaching level 2 of 5, indicating that they are capable of recognizing basic vocabulary, evaluating the meaning of sentences, and reading paragraph text. They are, however, not capable of understanding and evaluating dense and complicated texts that include relevant and irrelevant information or require background knowledge (see Annex 3 for more details).
93. **Low average literacy scores reflect significant differences in foundational skills across different groups.** Results from the core literacy test suggest that a few groups are significantly more handicapped than others, even in terms of basic literacy (Figure 13). The handicap is particularly strong for individuals belonging to an ethnicity other than Albanian or Serbian (Turks and Roma are the biggest minorities after Serbs), among whom more than half of the respondents failed the basic core literacy test and thus were never subjected to the full literacy test. Education also matters for basic literacy; twenty percent of those with less than upper secondary education failed the test compared to 8 percent of those with tertiary education. It is surprising, however, that only 60 percent of those with tertiary levels of education had a full score (8) on the core literacy test.

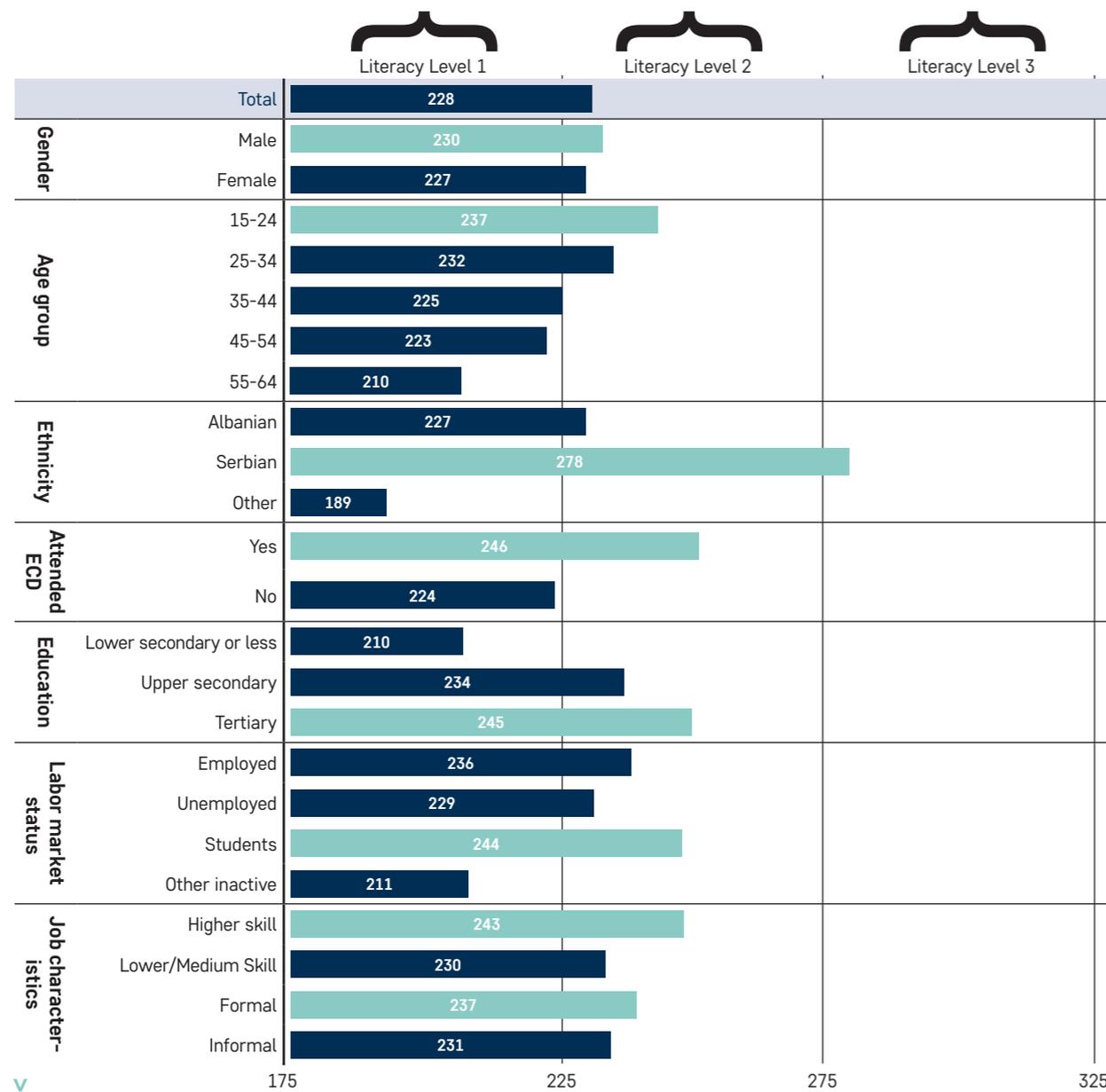
FIGURE 13: Core literacy score by different characteristics



SOURCE: STEP Household Survey, Core literacy assessment

94. **Age and ethnicity remain important for scoring higher on the full literacy test.** A similar picture emerges when looking at scores on the full literacy test (Figure 14). Literacy scores are higher for the younger generation, which is a sign that proficiency is improving. Not surprising, it is also higher for those with tertiary education, for formal sector workers and for workers in higher skills occupations (type A). Literacy rates are also significantly higher among those with Serbian ethnicity than among other ethnic groups. In fact, this is the only sub-group in Kosovo that is at par with average national levels in more developed European economies. Participation in early childhood development (ECD) programs is also associated with higher literacy rates. Further analysis shows that literacy is also associated with greater wealth, higher levels of education, as well as participation in ECD, although the marginal effect of ECD is smaller for higher levels of literacy.

FIGURE 14: Score on full literacy test by different characteristics

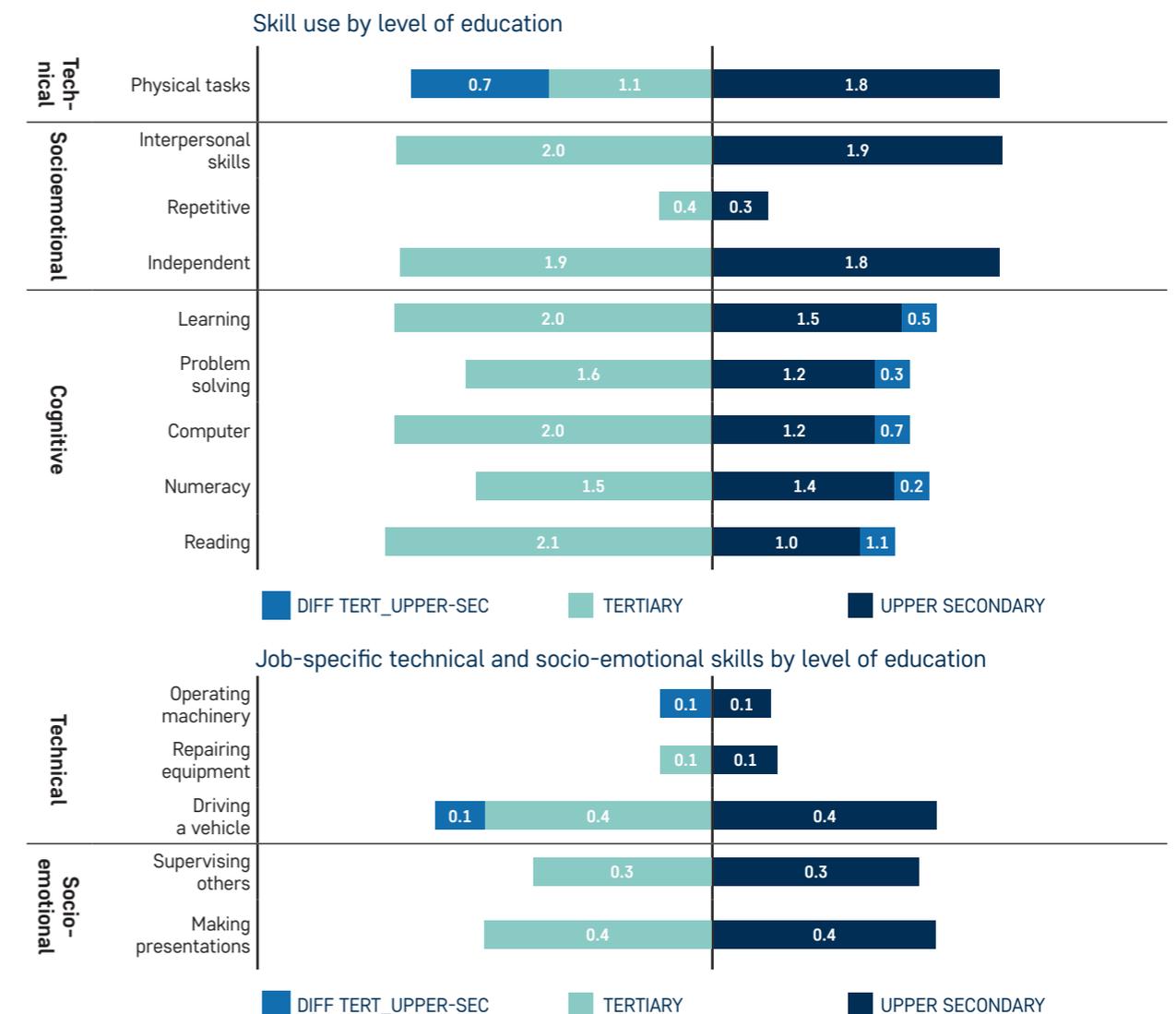


SOURCE: STEP Household Survey, full literacy assessment (Educational Testing Service, ETC). See Annex 3. Green bars denote "best performer" in the respective category. ECD: Early Childhood Development.

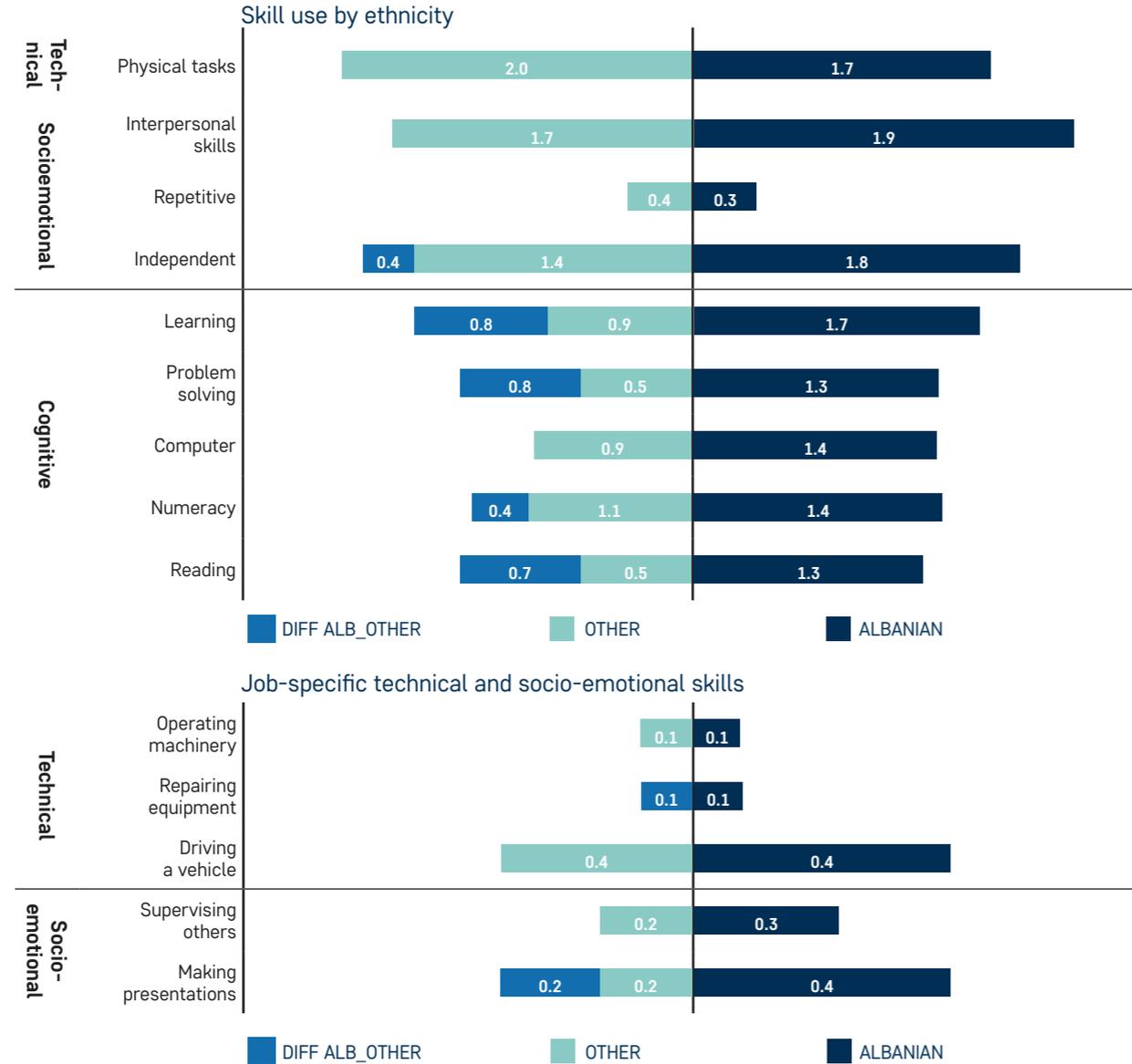
There are also significant differences in the use of advanced cognitive skills on the job by ethnicity and education levels. Lower educated workers and those of non-Albanian or non-Serbian ethnicities are much less likely to use higher order cognitive skills on the job than others. For education, the largest differences are between those that have tertiary education (about 17 percent of the total employed) and those with less education (Figure 15, a and b). The differences are largest in the use of cognitive skills and physical tasks (which are used more intensively by low educated workers). There are surprisingly small differences in socio-emotional skills needed for jobs held by workers with different levels of education, reflecting that interpersonal, communication, and supervision skills are needed in many different occupations. The significant differences in cognitive skills on the job can mean certain groups are excluded from jobs in which skills are used more intensively. These groups, therefore, are not developing important transversal skills necessary to acquire more productive jobs.

FIGURE 15: Ethnicity and education are correlated with intensity of skills use at work

a. By education (tertiary versus upper secondary)



b. By ethnicity (Albanian vs. non-Serbian, non-Albanian)



SOURCE: STEP Household Survey. For the top chart, responses range from 0 (not used on the job) to 3 (high intensity of use). For the bottom chart, responses are binary (skill is used, or not). The blue bar represents the gap – the difference in means between the two categories. Only statistically significant differences in means reported (5% level).

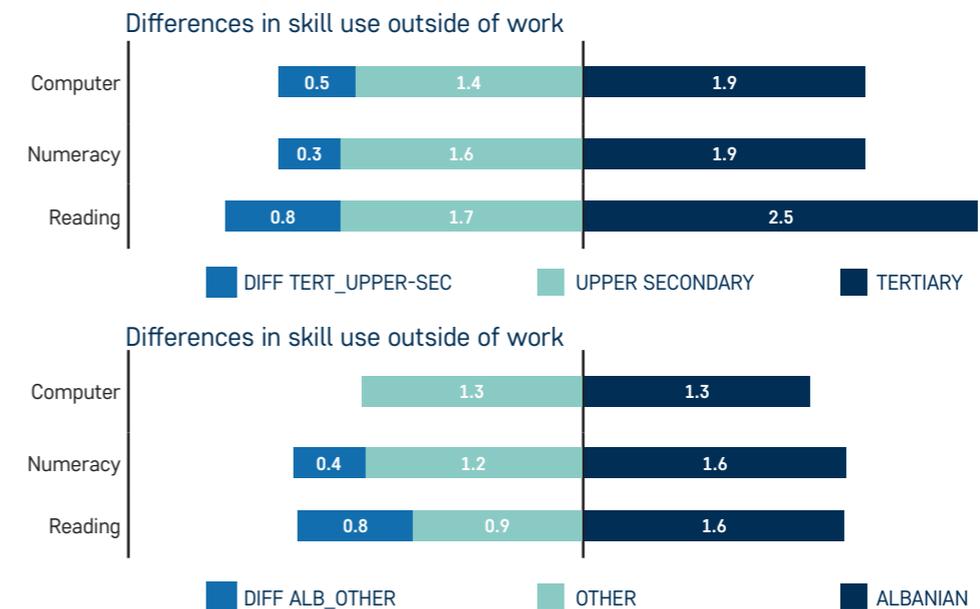
95. **Those with low levels of education, and of ethnicities other than Serbian and Albanian also use skills less outside of work.** One advantage of measuring cognitive skills use outside of job is that this measure includes the entire population, not only those employed. Including also the inactive and unemployed, those with tertiary education are significantly more likely to use computer skills, numeracy skills, or to read outside of work. Similar differences, albeit smaller, are also present for Albanian versus other (non-Serbian) ethnicities (Figure 16).³⁹

³⁹ Differences between Serbian and Albanian nationalities are not shown here. The Serbian ethnic group tends to display higher skill levels compared to Albanians.

96. **There are also marked differences in individual scores on socio-emotional characteristics for different education levels and different ethnicities.** Statistically significant differences in means for men versus women, education levels, and ethnic groups (pairwise) are presented in Figure 17. Those who stick to a task, ensure that it is well done, and can handle stressful situations are more likely to have higher education levels. However, the association is bi-directional because, as discussed in the introduction, these abilities are also developed during school. There are marked differences in some important socio-emotional skills between ethnic groups, especially for grit (the ability to pursue long term goals, even if they are difficult).

97. **Socio-economic background influences cognitive and socio-emotional skills outcomes independent of education and ethnicity.** In multivariate analysis of the determinants of skills (presented in Annex 7), more education remains linked to higher levels of cognitive, information processing skills such as reading, numeracy and computer use, even when other factors such as family background and gender are accounted for (Annex Table 6). Ethnicity and schooling are also positively associated with socio-emotional skills scores (Annex Table 7). However, personal characteristics like gender (women tend to score higher on several socio-emotional characteristics) and family background (level of education of one’s mother, household wealth, and ethnicity) matter more for cognitive skill levels and for most socio-emotional skills, than an additional year of schooling. There is no effect of ECD attendance on socio-emotional skills. As discussed below, it is possible that the unique influence of ethnicity and socio-economic background on socio-emotional skills reflects inequities in access to higher quality schools.

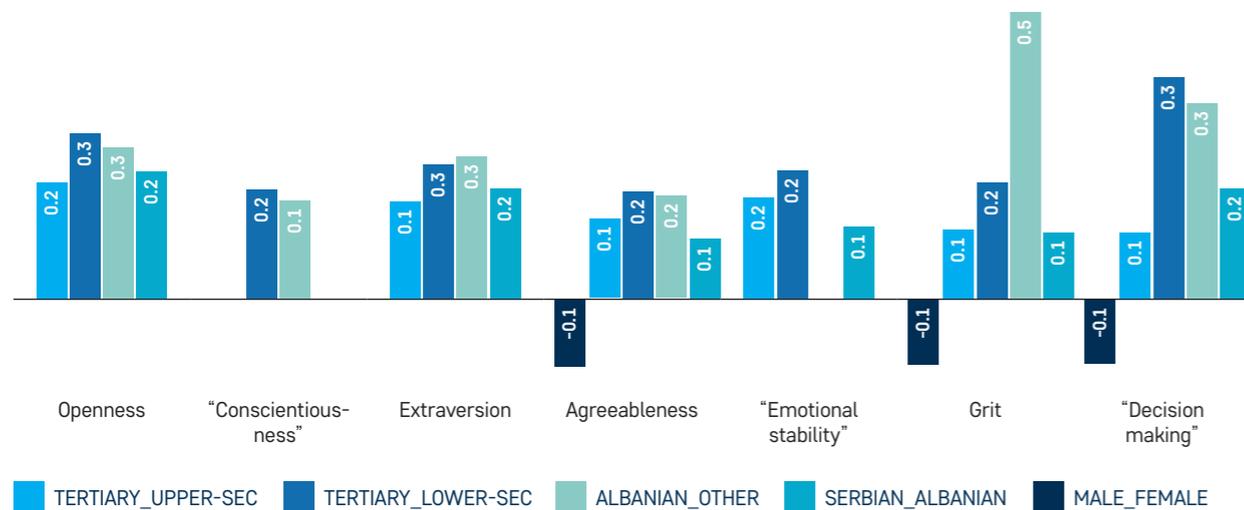
FIGURE 16: Education and ethnicity are correlated with intensity of skill use outside of work



SOURCE: STEP Household Survey. The blue bar represents the gap – the difference in means between the two categories. Responses range from 0 (not used on the job) to 3 (high intensity of use). Only statistically significant differences are reported (5% level).

FIGURE 17: Education and ethnicity are correlated with scores on socio-emotional skills and characteristics

Differences in socio-emotional skills (original scale 1-5)



SOURCE: STEP Household Survey. Each bar represents the difference in means between group x and group y (X_Y). Only statistically significant differences in means are presented (5% level).

98. **Participation in early childhood development programs is linked to the development of cognitive skills.** In multivariate analysis, ECD participation before age 7 had a positive, significant impact on cognitive skills used on the job, especially numeracy and the use of computers (Annex 7). ECD participation was more important for cognitive skills than another year of schooling, pointing to the importance of early education in getting children off to a good start. Cognitive skills were also higher for those with favorable family backgrounds (having grown up with an educated mother and in households with higher wealth levels). As noted, ECD participation does not influence the levels of socio-emotional skills, but education and family background are important for the development of both cognitive and socio-emotional skills. This is consistent with findings from the 2015 PISA survey in Kosovo in which those who had attended preschool performed significantly better than others in tests on reading, math and sciences.⁴⁰

99. In summary, education (including preschool attendance), ethnicity and socio-economic background influences the level of skills of individuals, whether measured directly (literacy and socio-emotional skills) or in terms of how much these skills are used at work. The disadvantaged groups are consequently penalized in labor market outcomes which, in turn, reinforces inequities in wellbeing.

40 Findings from “Kosovo, PISA 2015 Analysis Report (2017)”, prepared by the Kosovo Ministry of Education, Science and Technology under the Bank-financed Education System Improvement Project.

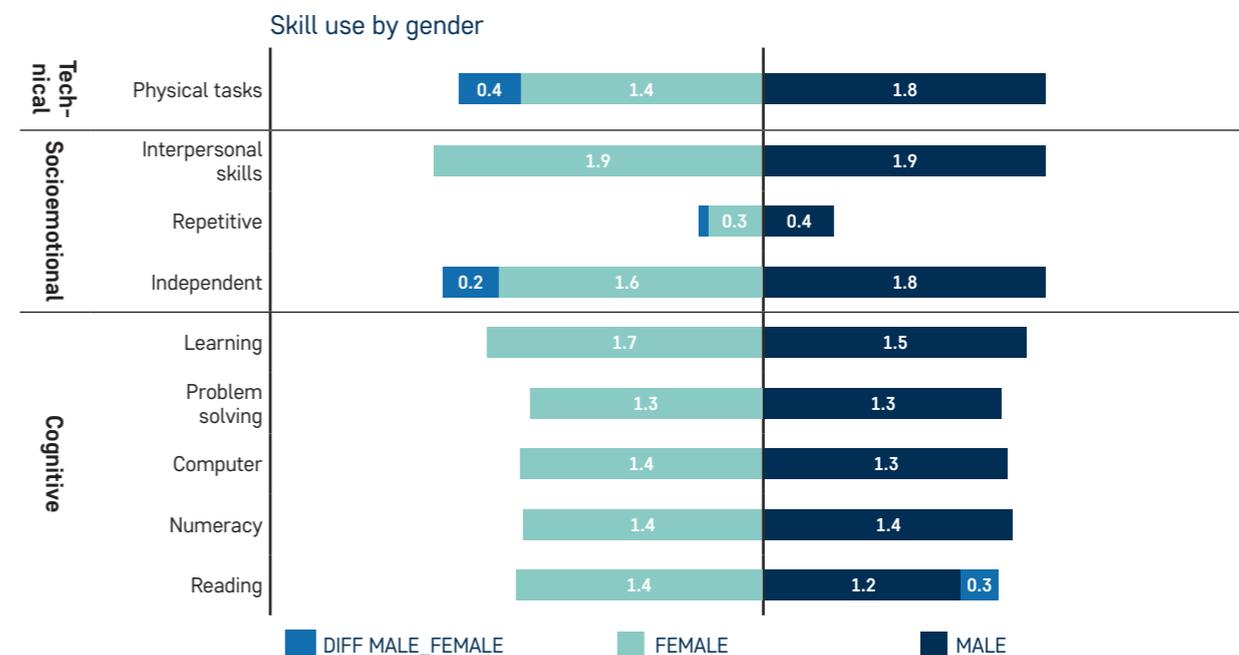
4.3 Skill and gender gaps

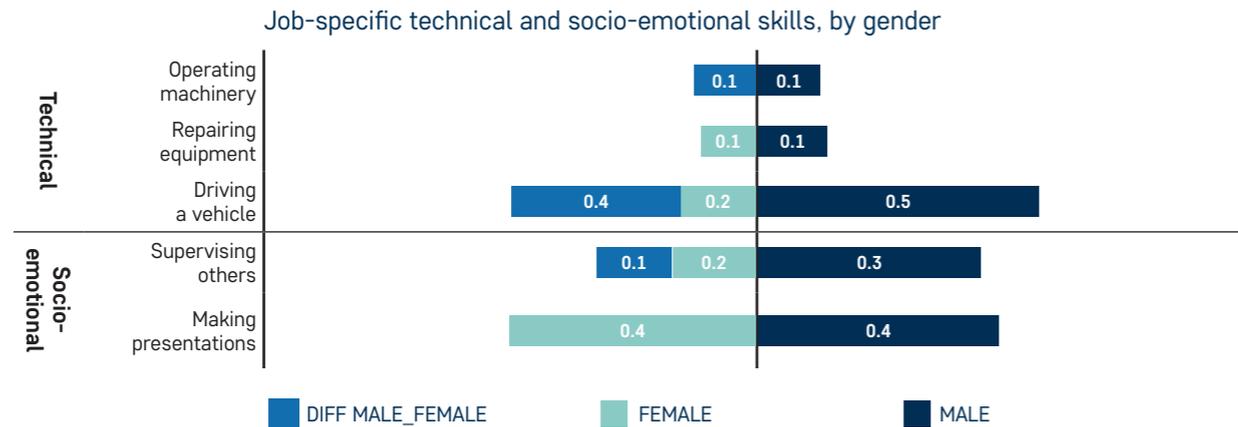
100. **There are no strong differences in skill levels between women and men with respect to literacy or the skills that characterize their jobs.** As shown above, the literacy test shows no differences between men and women in basic reading proficiency. Men use numeracy and computer skills at home more than women, but this isn’t true for use of these skills on the job. Overall, differences in skill use on the job between men and women are small, except on-the-job skills that reflect occupational segregation, such as driving, or doing physical tasks (Figure 18). Women are also less likely than men to work on independent tasks or to be in a supervisory position, although the differences, again, are small. Working women are, however, more likely to read on the job than working men.

101. **Women score slightly higher on socio-emotional skills such as agreeableness, decision-making, and grit.** There are some statistically significant gender differences in the socio-emotional skills measured in the STEP (agreeableness, decision-making, and grit) but these differences are small, especially when compared to difference across other, non-gender related characteristics, such as education or ethnicity (as seen in Figure 17 above). As seen above, decision making is positively correlated with access to employment, whereas agreeableness is negatively correlated. **In all, differences in skills do not appear to explain gender differences in employment and earnings outcomes.**

102. **Some employers nonetheless report that men’s skill levels are superior to those of women.** Perception of skill level is what matters for recruitment, but these may be

FIGURE 18: Gender differences in skills (on the job)





SOURCE: STEP Household Survey. The blue bar represents the difference in means between group x and group y (X_Y). For the top chart, responses range from 0 (not used on the job) to 3 (high intensity of use). For bottom chart, responses are binary (skill is used, or not). Only statistically significant differences in means are presented (5% level).

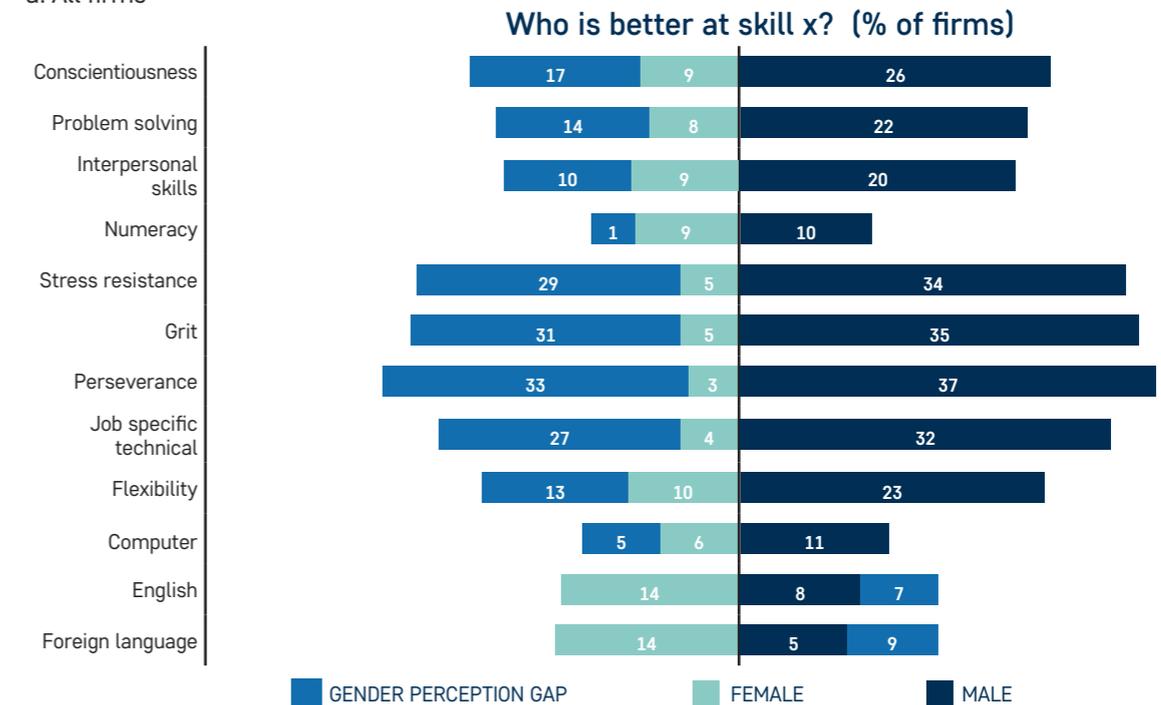
biased. A majority of employers do not think that skills differ between men and women. Those that do (between ten and forty percent of firms) favor men, however (Figure 19, a). Between 35 and 40 percent of employers think that men are better at working towards long-term goals (grit) and not giving up, even with complex and difficult tasks (perseverance) and in stressful situations (stress resistance). Only a few percentages of firms think women are better at these skills. Moreover, this is the case even for firms that hire predominantly women (Figure 19 b).⁴¹ The perception bias sets Kosovo apart from other countries in the Western Balkans. In Serbia and Bosnia-Herzegovina, for example, most firms report no gender difference in skills but, when they do, they tend to favor women. This said, in Kosovo, the biggest perceived gender differences in skills were not for the most highly valued skills like conscientiousness or problem solving.

⁴¹ Given the low employment levels of women in Kosovo, the average for total firms reflect largely male-dominated firms.

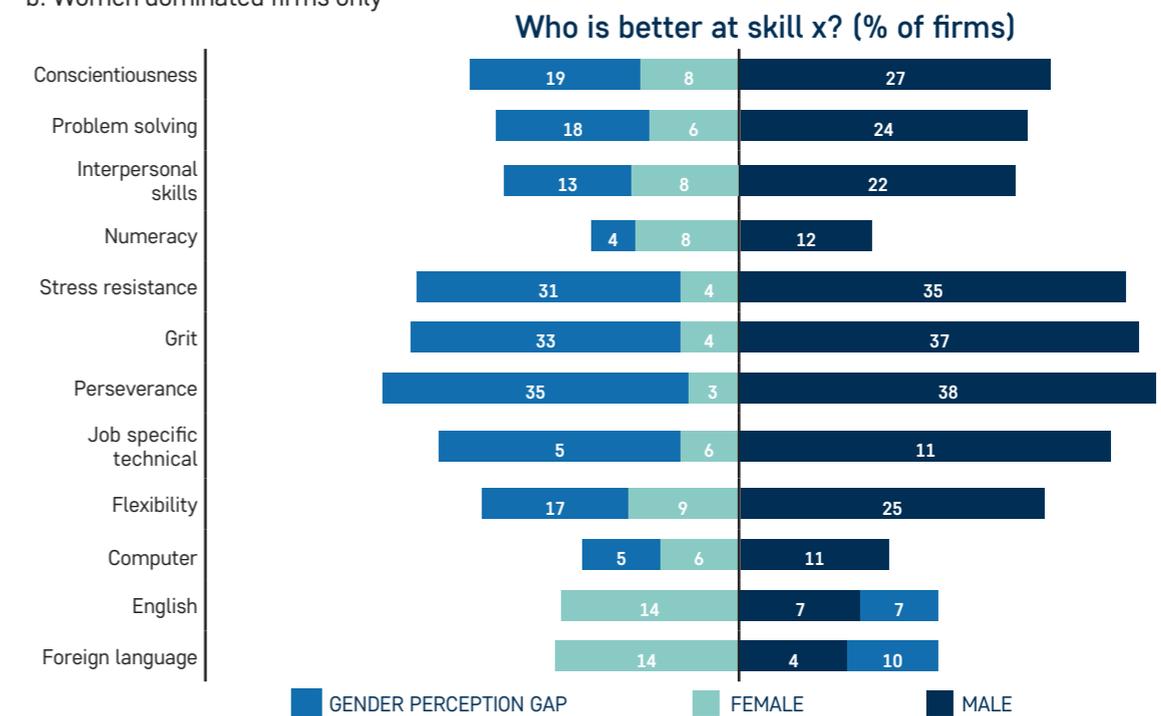
FIGURE 19:

Gender differences in cognitive, socio-emotional and technical skills, according to employers in Kosovo

a. All firms



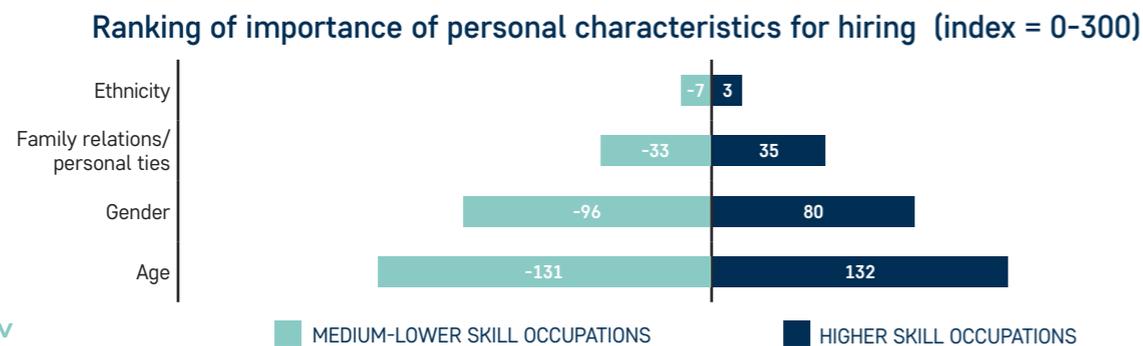
b. Women dominated firms only



SOURCE: STEP Employer Surveys, estimates from Davalos, M., S. Johansson de Silva, A-M Munoz Boudet, and A. Silva (2018), "Are Skills a Constraint to Women's Access to Jobs? Perspectives from the Western Balkans", mimeo, forthcoming. Ranking of skills from top to bottom by importance. The gender perception gap is the difference between the shares of employers who found men versus women better at the particular skill. Female-dominated firms are those that employ more than 50% women.

103. Some employers view male applicants more favorably. When asked to rank the importance of personal characteristics in the recruitment processes, 42 and 45 percent of employers (hiring for higher skill occupations) report that personal characteristics do not matter in the hiring decision (Figure 20). For medium to lower skill occupations, age and gender do weigh into hiring decisions. An applicant’s age is reported most important, followed by gender, and then personal connection to the applicant. Among employers who do value personal characteristics in hiring, they overwhelmingly state a preference for hiring males and applicants between the ages of 25 and 44.

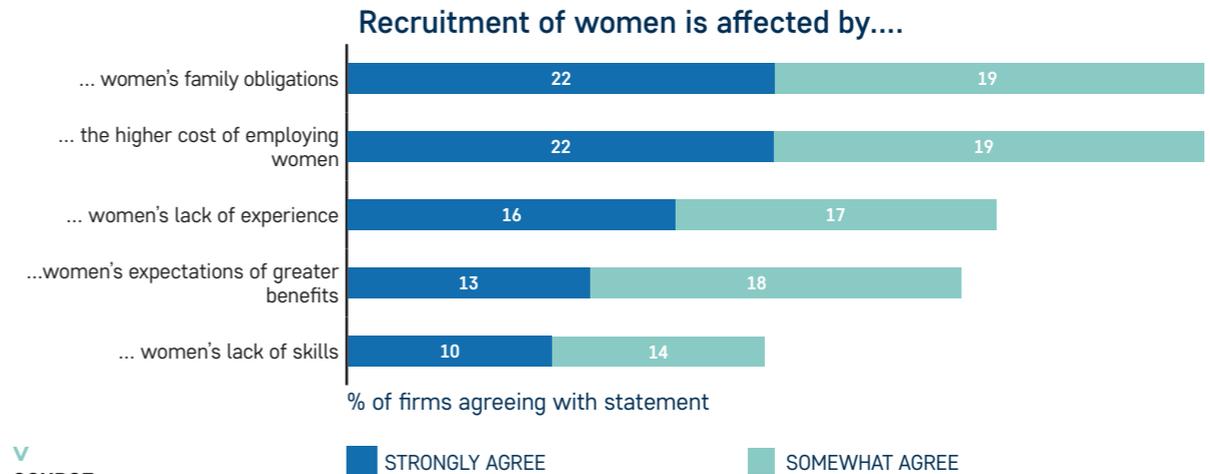
FIGURE 20: Role of personal characteristics in hiring



SOURCE: STEP Employer Survey. For an explanation on index calculation, see footnote to Figure 9

104. Firms associate recruitment of women with difficulties, but for reasons other than skills. A majority of firms do not find any specific gender issues with respect to hiring. However, over 40 percent of employers agree or strongly agree that the recruitment of women is affected by their competing demands due, in part, to prevailing norms that identify women as the primary care taker (Figure 21). Employers also report that women are costlier to hire because of labor regulations for maternity leave and similar provisions. These constraints could both affect women’s performance on the job, and discourage women from applying in the first place.

FIGURE 21: Employer reported issues when recruiting women



SOURCE: STEP Employer Survey

105. Skills constraints do not differ significantly between firms that employ mostly women, or mostly men. These two groups of firms – defined as firms which employ a majority of women versus men – tend to value similar skills (e.g., interpersonal skills, conscientiousness and grit). There is no evidence that female dominated firms experience greater skill constraints when recruiting than male dominated firms do, except that female dominated firms are more likely to report that applicants for managerial jobs lack skills or experience.⁴²

106. In conclusion, lack of education and socio-cultural norms rather than skills emerge as the two most important obstacles to women’s successful integration into labor markets in Kosovo. Education is a stronger correlate of women’s access to employment than of men. Once on the job, there are no significant differences in skill level between men and women’s access to employment. A majority of firms report that women and men have similar skill levels and that gender does not weigh into hiring decisions (although when they do, men are favored). Social norms surrounding family obligations and labor regulations that increase the cost of hiring women matter more.

42 Davalos and others (2018), op. cit.

5. What causes skill gaps in Kosovo?

Key messages:

- Access to early childhood education is limited, especially for more vulnerable groups.
- Low quality of education is a problem: firms complain about the quality of education systems and Kosovo students perform poorly on cognitive skill tests compared to student from other countries.
- Inequities in terms of access to quality education persist, and children from disadvantaged socio-economic backgrounds do worse in school.
- Training delivered through active labor market programs are not closely connected with labor market demand and not well monitored or evaluated.
- Firms use predominantly informal channels and poaching to recruit workers, which penalizes new job seekers without references.
- Firms are not involved with education or training systems and do not provide opportunities to their staff for further skill development.

5.1 Potential causes behind skill gaps

107. The analysis above has shown that for potential employers and especially for more dynamic firms, lack of skills and relevant work experience are major constraints to hiring in Kosovo. By contrast, firms report that their current employees have the necessary skills. The analysis also indicates that different groups have different skill levels. Those lacking certain skills and characteristics are less likely to be securing or working in jobs with higher earnings.

108. What accounts for these skill gaps? Skills development depends on the information, resources and incentives available to the key stakeholders: children, youth and adult

workers seeking to develop certain skills, their parents and communities that influence their choices, education systems that promote these skills, firms that search for skills to provide goods and services, and policy makers. From this perspective, insufficient levels of labor market relevant skills in Kosovo are potentially caused by: (i) insufficient opportunities for skill formation in early childhood; (ii) low quality and relevance of school-based education and vocational training as well as training programs delivered through active labor market programs; (iii) low involvement of the private sector in education and training; and (iv) information gaps regarding skills and vocations that: limit the ability of parents to make informed decisions about children's schooling; limit the ability of youth to choose relevant vocations and develop necessary skills; impede education and training systems from providing relevant and high quality education; and limit firms' ability to evaluate job applicants based on education and training paths.

5.2 Access to quality education and training

Early skill formation

109. **Skills developed in early childhood (preschool aged children in this case) are instrumental in shaping future education and labor market outcomes.** Linguistic development, the ability to learn, cooperative behavior, are forming at this time, and failure to develop these critical skills can have long-term negative effects on education, health and earnings. The design and implementation of high quality early childhood interventions can have significant positive effects on overall well-being. Moreover, because these early years are formative, interventions during early childhood are more cost effective relative to those aimed at youth or adults.⁴³

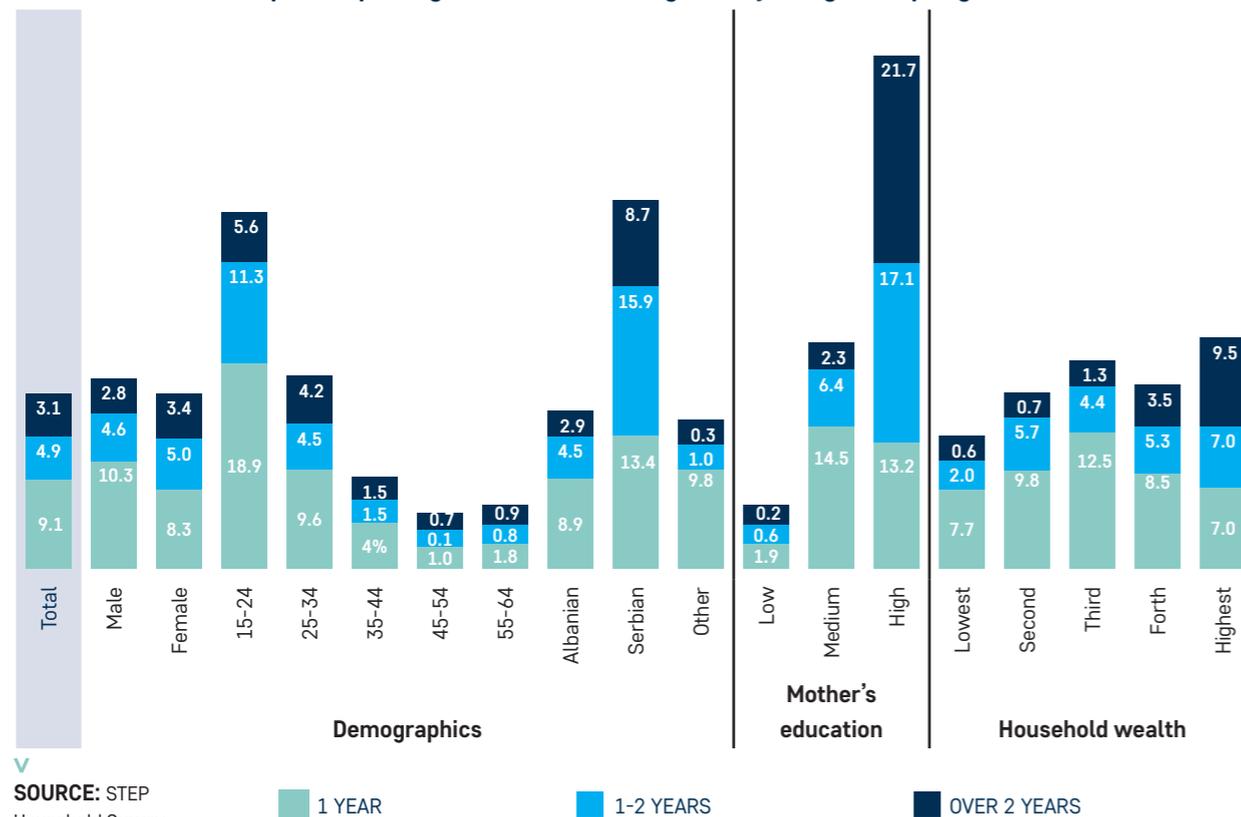
110. **Access to preschool is low but increasing.** Less than one out of five adults in Kosovo's urban population participated in any form of early childhood education, and only three percent of the population attended pre-school for two or more years. Encouragingly, participation is higher among the younger cohorts (15-24), but still only about a third of this age group attended preschool. Access to preschool is hampered by the limited number of programs, and an unequal distribution of facilities in urban areas. The incidence of children under six in some form of child care outside of the family is lower in Kosovo than would be expected given its GDP per capita.⁴⁴

43 Banerji et al., 2010, op. cit.

44 Cojocar, 2017, op. cit.

111. Socio-economic status is a large component of participation in ECD programs: those of Serbian nationality, those with highly educated mothers, and those from wealthy households are the only groups in which more than twenty percent have participated in ECD. Evidence from the PISA 2015 survey corroborate these findings: students of the bottom quintile of PISA scores in reading, mathematics and science, were nearly twice as likely as students of the top quintile of not having attended preschool education.⁴⁵

FIGURE 22: Participation in ECD, especially for longer durations, is low
 % participating in ECD before age 7, by length of program



SOURCE: STEP Household Survey

Formal education

112. Public expenditures on education have grown in recent years and are catching up with regional averages. Public spending on education grew steadily from 3.3 percent of GDP in 2007 to 4.3 percent in 2013. Yet, Kosovo still spends less than the average ECA country (4.6 percent) and short of the OECD recommendation of 5 percent. Moreover, owing partly to high enrollment and partly to a large youth population, Kosovo spends less per pupil than most comparator countries (and less than any other country in the

Western Balkans) on primary and secondary education, suggesting that expenditure on education may still be insufficient.

113. Access to quality education is a necessary condition for skills development: foundational skills like literacy and numeracy that should be developed during the first years of school are the basis for further skill development, and both higher order analytical skills and socio-emotional skills are expected to develop in school. The global evidence suggests that, overall, each additional year of schooling raises earnings by 8-10 percent. This correlation may occur for two reasons: first, school develops skills that are valued by labor markets; and second, education credentials can signal high levels of both cognitive and socio-emotional skills, or access to networks, both of which could result in higher earnings irrespective of schooling. However, analysis shows that the effect on earnings is largely driven by the skills acquired in school, as opposed to individual with higher levels of ability or stronger networks performing better in school.⁴⁶ Education, hence, matters for skills, and equitable access to quality education is a primary objective to counter socio-economic exclusion.

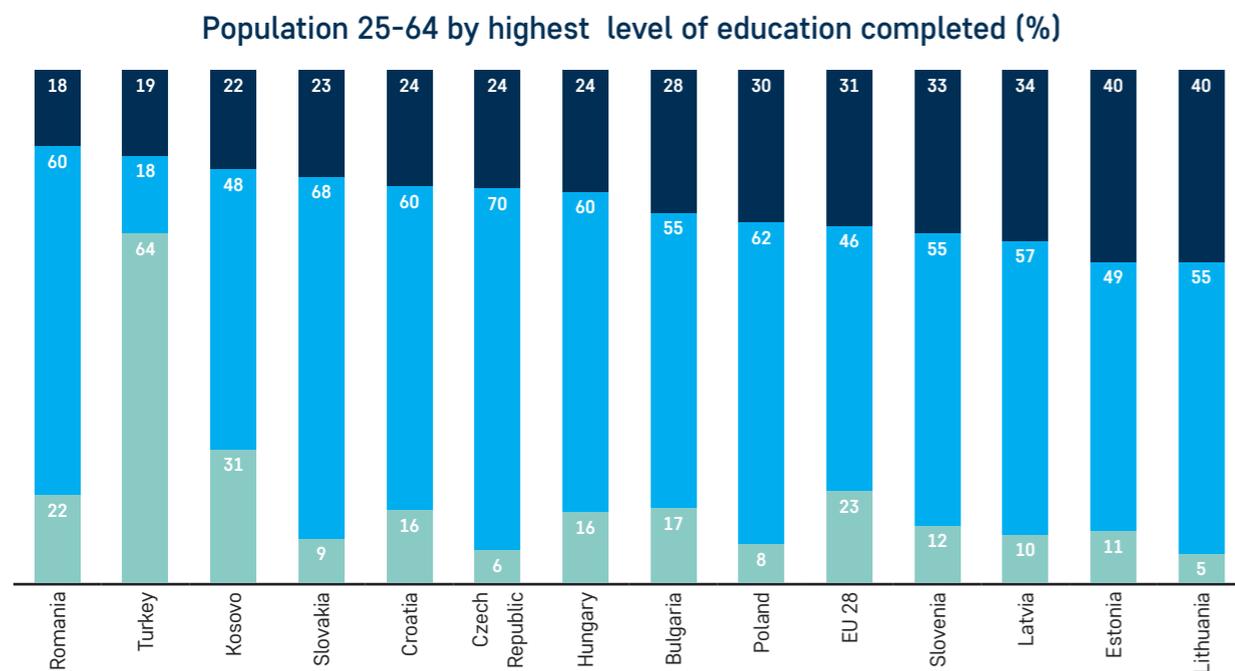
114. By European standards, Kosovo's population has low levels of education. Enrollment is now near universal in basic education (primary and lower secondary) and around 90 percent for upper secondary. The stock of workers changes slowly, however. According to workers evaluated in the STEP survey, however, just around 22 percent of the population between ages 25-64 have tertiary levels of education, and over 30 percent have not completed upper secondary school.⁴⁷ In comparison with countries in the European Union, that are also in Central and Eastern Europe, Kosovo has a lower share of tertiary educated, and a higher share of lower educated (Figure 23). Moreover, the estimates for education levels above upper secondary in Kosovo are likely inflated given that the STEP survey by design focuses on urban areas only where we expect education levels to be higher, whereas EU countries include both rural and urban areas.

45 Kosovo PISA 2015 Report, op.cit.

46 World Bank (2018). World Development Report 2018: Learning to Realize Education's Promise. Washington, DC: World Bank.

47 In the 1990s, the education system for the Albanian speaking population was largely informal and underground after the Serb-dominated government at that time took control of the formal system. Mass dismissals of ethnic Albanian teachers who refused to adhere to the central government curriculum and widespread boycotts of government schools by Albanian Kosovars led to the creation of informal Albanian-language schools. As a result, a large share of Kosovars currently in the 25-45 age-group have limited formal education.

FIGURE 23: Distribution of population by level of education in Kosovo, Turkey, and EU (selected)



SOURCE: STEP Household Survey (Western Balkans), Eurostat (EU)

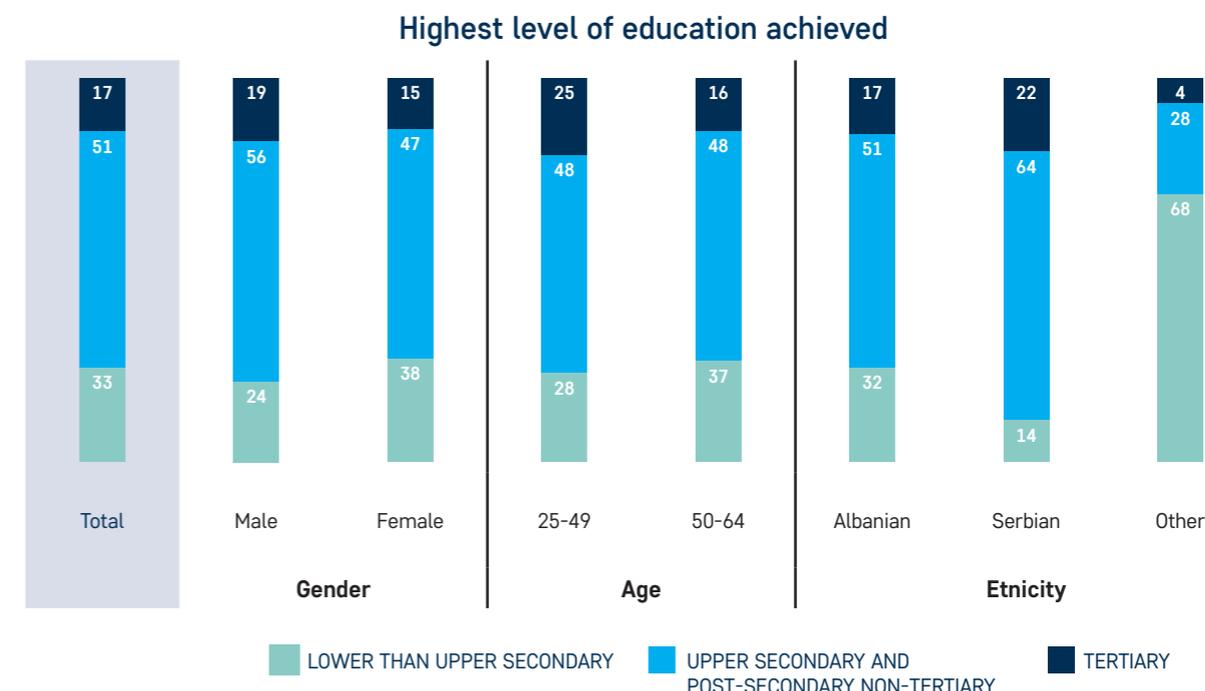
■ LOWER THAN UPPER SECONDARY
 ■ UPPER SECONDARY AND POST-SECONDARY NON-TERTIARY
 ■ TERTIARY

115. Inequities in the education system remain, especially concerning gender and ethnicity. On average, women have almost one year less of schooling than men. As shown above, a higher share of young women (ages 25-29) than young men have completed tertiary education. However, there are still fewer girls enrolled in upper secondary education and, even among youth, the share of women with basic education or less is much higher than for men. These gaps are likely to be even higher in rural areas. Within Kosovo, the Serbian and Albanian ethnic groups also have much higher levels of education than other ethnic groups (Figure 24 a).

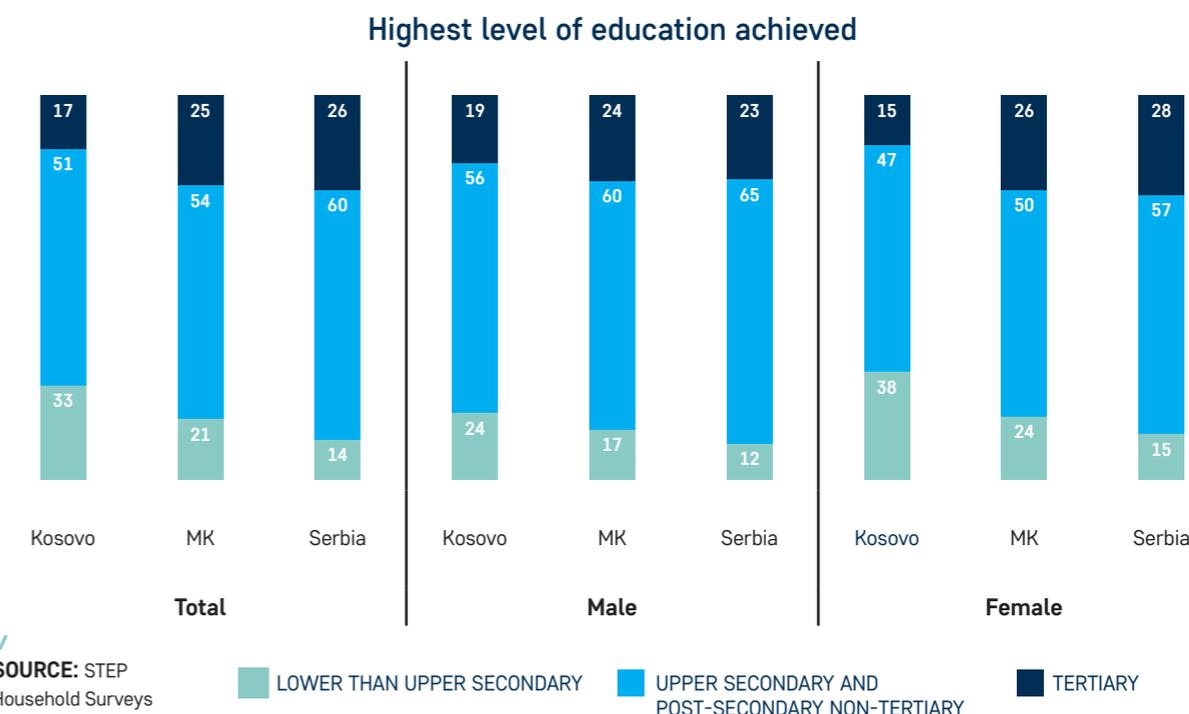
116. In Kosovo, levels of education are lower and gender gaps are larger than in Serbia and Macedonia. The low level of education of Kosovo women and the large gap between men and women place Kosovo apart from EU countries and its West Balkan neighbors (Figure 24 b). The share of the population with education levels below upper secondary is considerably higher (33 percent compared to 21 and 14 percent in FYR Macedonia and Serbia respectively). The gap between the share of women and men with education levels below upper secondary, at 14 percentage points, is also much wider than in Macedonia (7 percentage points) and Serbia (3 percentage points).

FIGURE 24: Access to higher levels of education is low, especially for certain groups

a. Kosovo – gender, age and ethnicity



b. Kosovo, Macedonia and Serbia, level of education, total and by gender

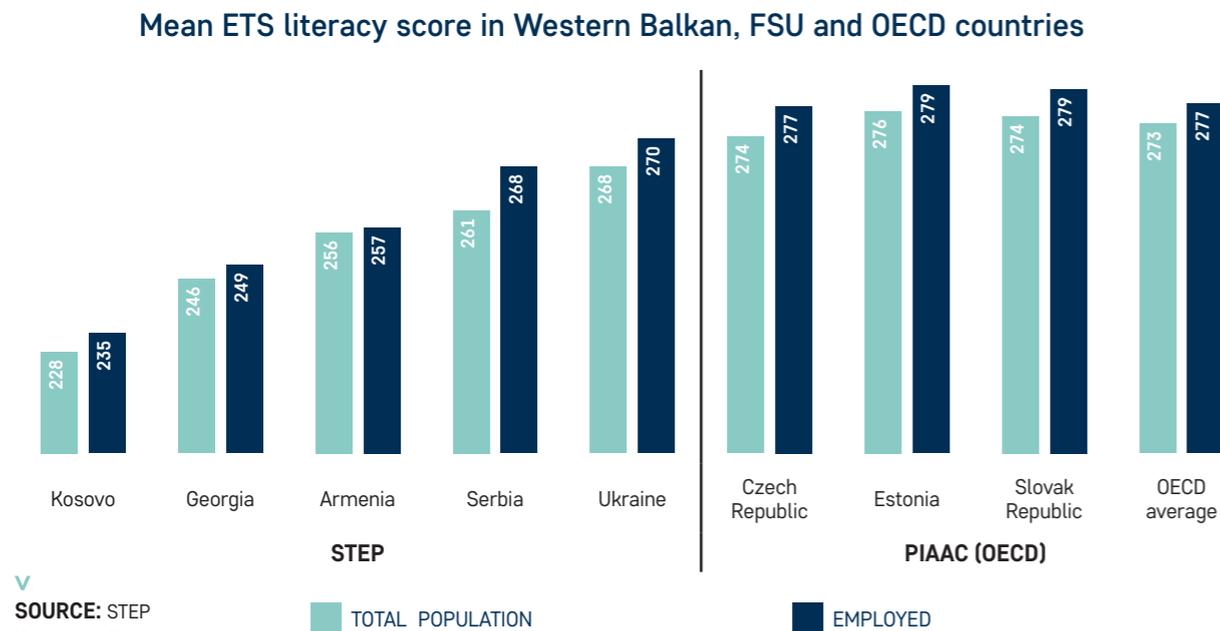


SOURCE: STEP Household Surveys

■ LOWER THAN UPPER SECONDARY
 ■ UPPER SECONDARY AND POST-SECONDARY NON-TERTIARY
 ■ TERTIARY

117. **Although access has increased, the quality of education remains a problem.** Literacy is a foundational skill that should begin to develop in the early years of schooling. As discussed in section 4.2, average literacy scores reach just above basic levels, prompting concerns that schools are not, in fact, successfully imparting those skills. Compared to OECD countries, but also other Western Balkan countries (Serbia) and countries in the former Soviet Union, Kosovo’s population scores poorly on the full literacy assessment. With an average score of 235, on a scale of 0-500 Kosovo is at the bottom of the distribution for employed individuals, significantly below Serbia, where average scores are similar to those of Central and Western Europe, and far below the OECD average (Figure 25). This is a significant skill gap since reading literacy is key to the development of a large range of skills – and the flexibility to adapt those skills – in a changing labor market.⁴⁸

FIGURE 25: Mean ETS Literacy Scores, total working age population and employed (15-64)



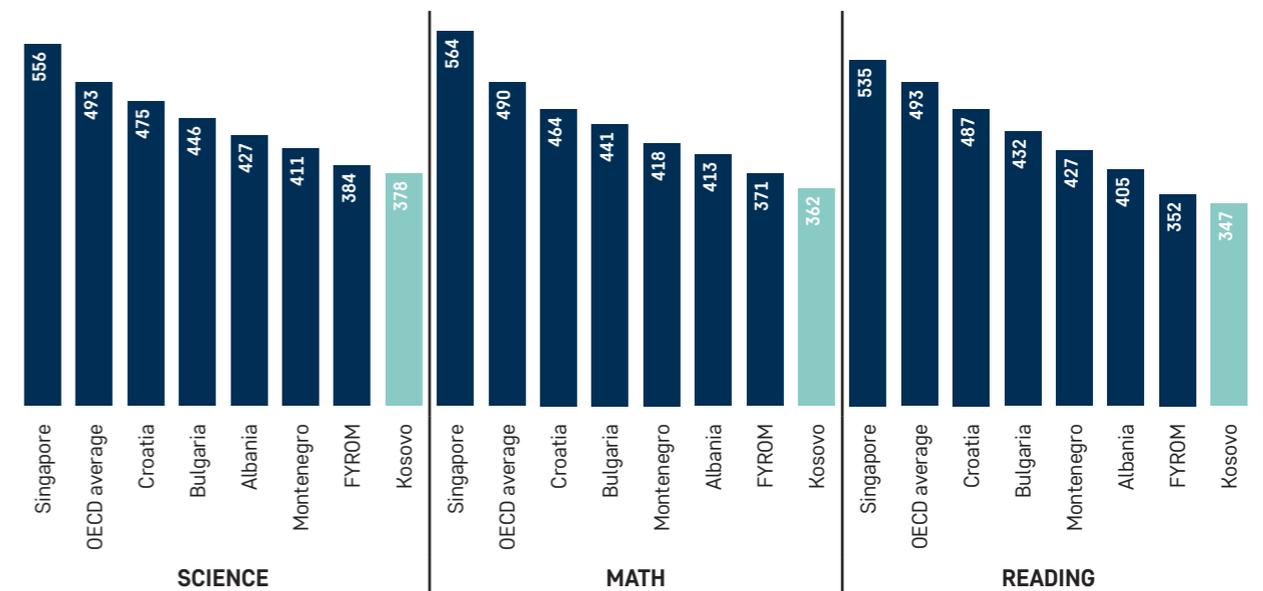
SOURCE: STEP Household Surveys (Kosovo, Serbia, Armenia, Georgia, Ukraine), PIAAC (Others)

118. **Young students’ overall performance in science, math, and reading significantly lags behind those of comparator economies** (Figure 26). In the 2015 PISA study, a large majority of Kosovar students do not reach basic levels of proficiency. Some 68 percent of students are below the level required for basic proficiency in science, 77 percent are

below basic proficiency in reading, and 78 percent are below basic proficiency in mathematics Kosovo’s PISA results are low even in relation to its average level of income.⁴⁹

119. **These low achievement levels reveal a wide performance gap between Kosovar students and their peers in the region.** Kosovo’s outcomes in science places its students, on average, 4.5 years of schooling behind OECD and EU averages, and 2.5 years of schooling behind ECA country averages. Reading and math outcomes are equally poor. Kosovar students’ scores are equivalent to 5 years of schooling behind the OECD average in reading, and a little over 4 years behind in math.

FIGURE 26: PISA performance, Kosovo and comparator economies.



SOURCE: Kosovo PISA 2015 Report, Ministry of Education, Science and Technology

120. **PISA results confirm inequities inherent in the Kosovo education system.** In science, students from rural areas are about 1 year of schooling behind their urban peers, and students from low-income households (bottom quintile) are about 1.5 years of schooling behind those from high income households (top quintile). While this is the smallest gap in ECA – where the average between top and bottom income groups is almost 3 years of schooling – it is indicative of education systems that reinforce rather than eradicate social inequities. Moreover, given the overall low level of performance by Kosovo youth, the lagging groups are far behind the OECD population on average.

48 Pierre G., M.L. Sanchez Puerta, A. Valerio, and T. Rajadel (2014). STEP Skills Measurement Surveys. Innovative Tools for Assessing Skills, Washington D.C.: World Bank; STEP Skills Measurement Snapshot 2014, Washington D.C.: World Bank.

49 Kosovo PISA 2015 Report, op.cit.

121. **Vocational training is prominent in Kosovo, but not in technical fields.** About half of all students in secondary education are enrolled in a vocational program and almost half of these are in turn enrolled in business and law, or health programs. These areas have offered few employment opportunities in recent years.⁵⁰

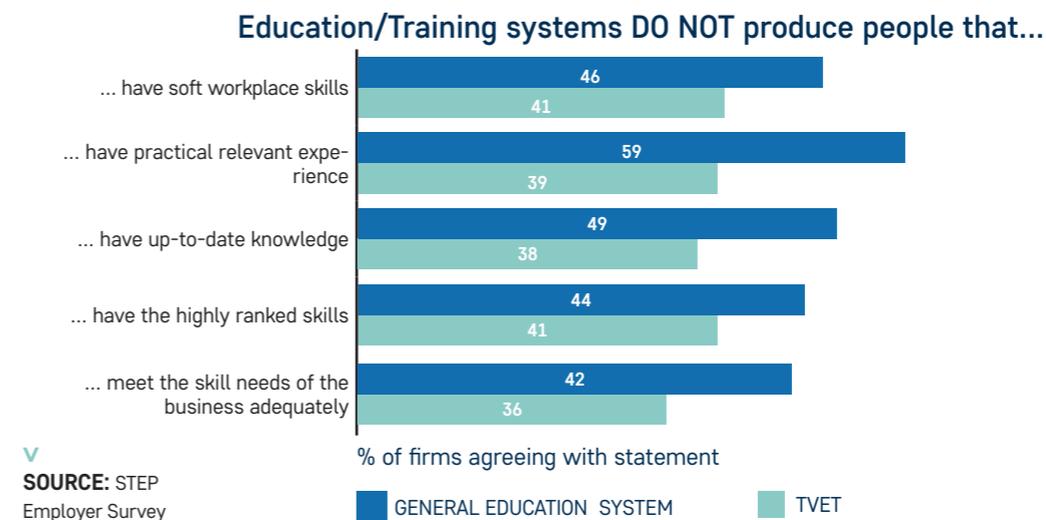
122. **Students enrolled in vocational training perform worse than those in general education, and the gap is significantly larger in Kosovo than in OECD countries.** For the PISA tests, students enrolled in academic programs outperformed students in vocational schools by 55, 51 and 64 points in science, math and reading respectively. These differences are much larger than the OECD average. Even after accounting for the socio-economic profile of students and schools, students in general/academic and modular programs score 22 points higher in science than students in vocational schools.⁵¹

123. **Employers' views reaffirm the presence of quality problems in Kosovo's education system.** A vast majority of firms are satisfied with the level of education of a typical higher skill or medium to lower skill worker in their firm (92 and 89 percent respectively are satisfied with the level of education). However, when asked about the *quality and specific outputs* of the education system, a significant share of firms identify problem areas. Nearly 60 percent of employers report that the general education system does not produce students that have practical relevant experience, and nearly 50 percent report a lack of up-to-date knowledge, or socio-emotional skills like discipline, timeliness, or interpersonal skills. Although they are somewhat more satisfied with the experience and skills from the TVET System, between 35 and 42 percent of firms find that the training systems do not graduate people with necessary skills. This is worrisome, given that the objective of TVET is to provide students with direct work relevant skills in a profession or vocation.

50 Kosovo Education and Employment Network (2017), Op. cit.

51 Ibid.

FIGURE 27: Firms' views on education and training systems are not positive.



Training opportunities for job seekers

124. **Beyond school-based education, training provided through active labor market programs can facilitate the transition to employment and increase earning potential.** Typically, such training programs are short-duration interventions (less than 6 months) that focus on improving skills and sometimes offer practical work experience to job seekers. Globally, there is mixed evidence on the effectiveness of training programs for employment and earnings. That being said, well designed and comprehensive skill development interventions could have positive effects on employment outcomes in the long run.⁵²

125. **In Kosovo, the coverage of active labor market measures in terms of beneficiaries is limited.** Public funds for ALMPs, which include skill training programs, have been limited to around 2 million Euros per year, or 0.03% of GDP, which is very low compared to an OECD average of 0.42%. The total number of beneficiaries still only represents about one tenth of all registered jobseekers in the country. The limited funding also affects the overall functioning of basic employment services as reflected in the low counselor to jobseeker ratio (about 1:1000).⁵³

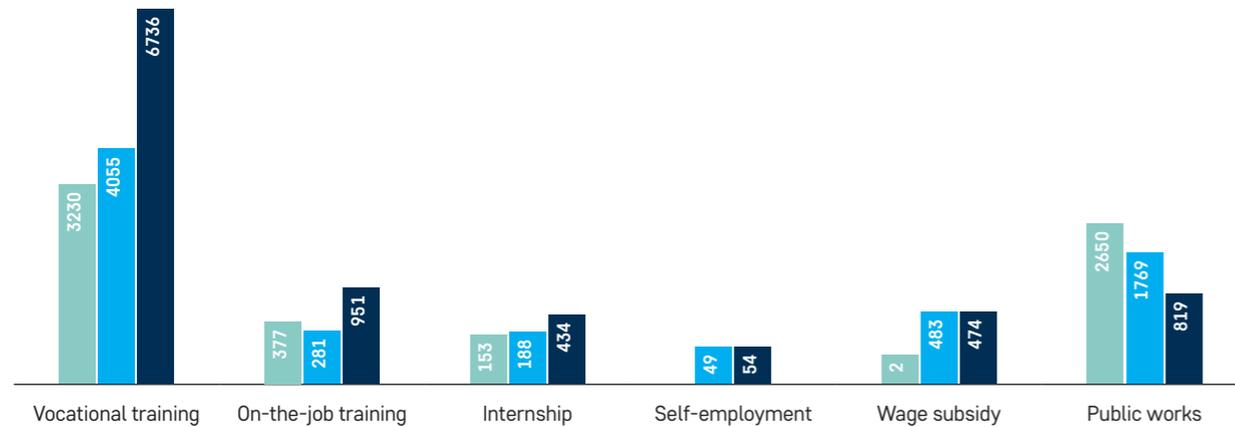
126. **Vocational training is the largest category of ALMPs.** The Employment Agency manages 8 Vocational Training Centers (VTCs) and 5 mobile Centers, offering vocational training and retraining through modular short-term training. These centers account for 71 percent of all beneficiaries. Given significant budget constraints, all measures other than vocational training, including those seeking to provide work experience such as on-the-job training and internships, have limited coverage.

52 Kluve, J., S. Puerto, D. Robalino, J.M. Romero, F. Rother, J. Stöterau, F. Weidenkaff, and M. Witte (2016). Do Youth Employment Programs Improve Labor Market Outcomes? A Systematic Review. IZA Discussion Paper No. 10263, Card, D., J. Kluve and A. Webber (2015). What Works? A Meta Analysis of Recent Active Labor Market Program Evaluations. IZA Discussion Paper No. 9236.

53 Republic of Kosovo (2018). Ministry of Labour and Social Welfare: Sector Strategy 2018-2022.

FIGURE 28: Beneficiaries in active labor market measures are mostly in training

Number of beneficiaries



SOURCE: Republic of Kosovo (2018). Ministry of Labour and Social Welfare: Sectoral Strategy 2018-2022

127. **The vocational training provided through ALMPs is often of low quality and lacking in relevance.** The main challenges affecting the relevance and effectiveness of skill training include: (i) lack of regular assessment of labor market demand; (ii) insufficient involvement of the private sector and social partners in the design of training curricula to ensure their relevance; (iii) lack of cooperation with businesses in the delivery of training (in 2016 for example, less than 100 trainees conducted part of their vocational training in companies); (iv) lack of quality assurance mechanisms; and (v) lack of monitoring and evaluation (e.g., absence of systematic tracer studies).⁵⁴

5.3 Firms involvement in education and training

128. **Firms are important stakeholders in demand-led, labor market relevant skill development systems.** They embody the essential knowledge of skill requirement and pick up rapidly changing skill needs driven by global changes in demand and supply of goods and services. The private sector can also be a source of further skill development by providing training for their workers or internships for students. Their involvement in the

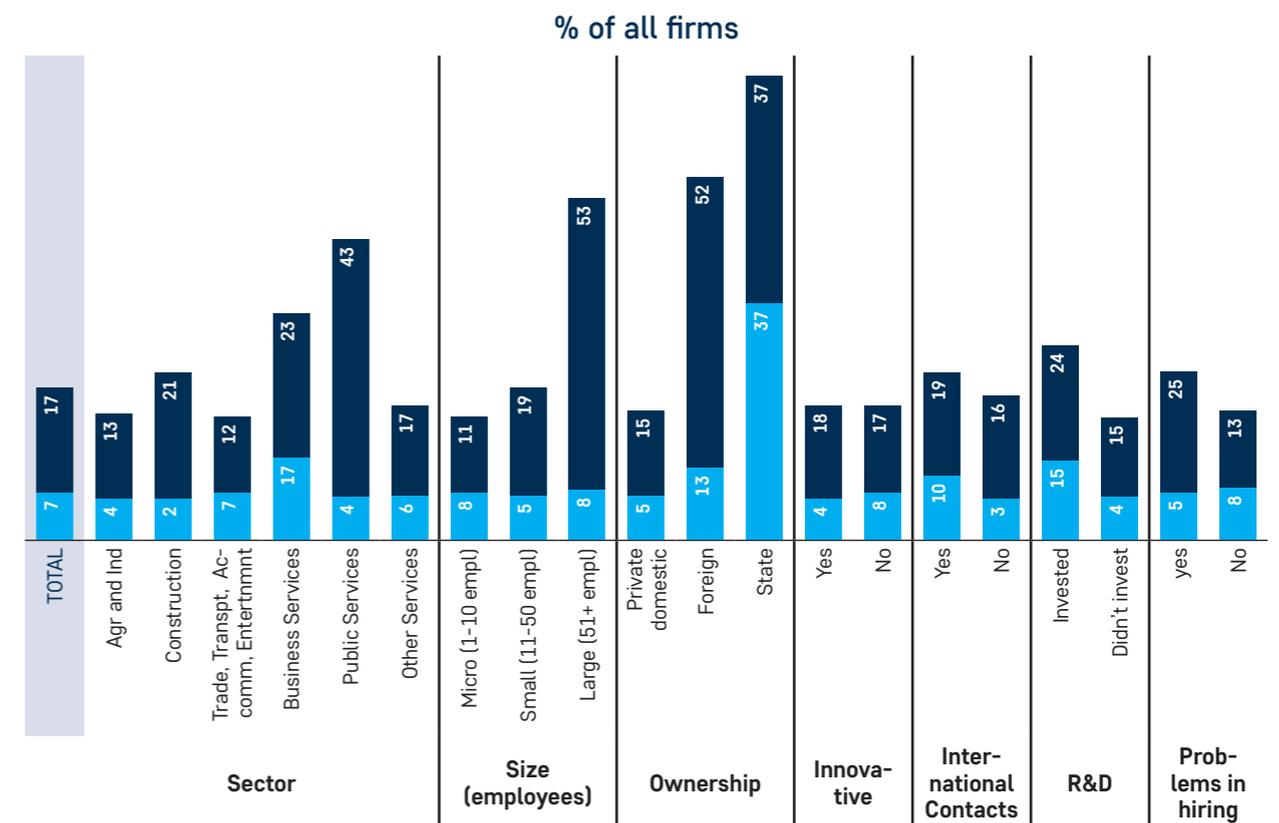
development of curricula, provision of work place experience, and testing of students is important for increasing the relevance of education and training.

129. **Kosovo firms are generally not well connected with education systems, especially not for medium to lower skill occupations.** In Kosovo, as in other countries in the Western Balkans, firms and education systems do not interact with one another (Figure 29, a). On average, fewer than one in five firms is in regular contact with education systems. Some firms – notably those with a potential for hiring – are more likely to engage with education systems, at least with respect to higher skill occupations: large firms, state firms, public services and business services, those that invested in R&D, and those that experienced problems in hiring.

130. **Firms are not interacting with education systems on a strategic level.** Firms that do engage in regular contact with education systems largely do so to provide internships or train their workers and not at a strategic level. The share of these firms that provide feedback on curricula or help in the testing of students is low (Figure 29, b).

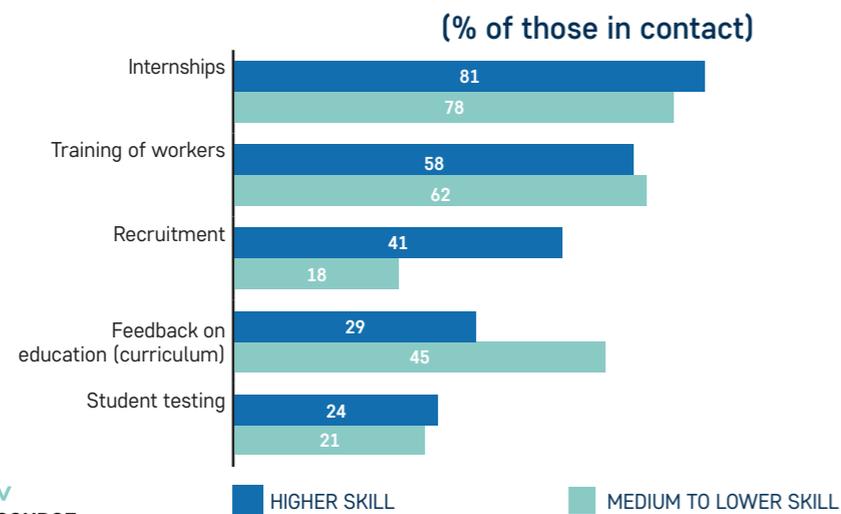
FIGURE 29: Less than one out of five firms engage with education systems; when they do, it is not at a systemic level

a. Firms in contact with the education system



54 World Bank (2018). Kosovo Social Protection and Health Expenditure Note.

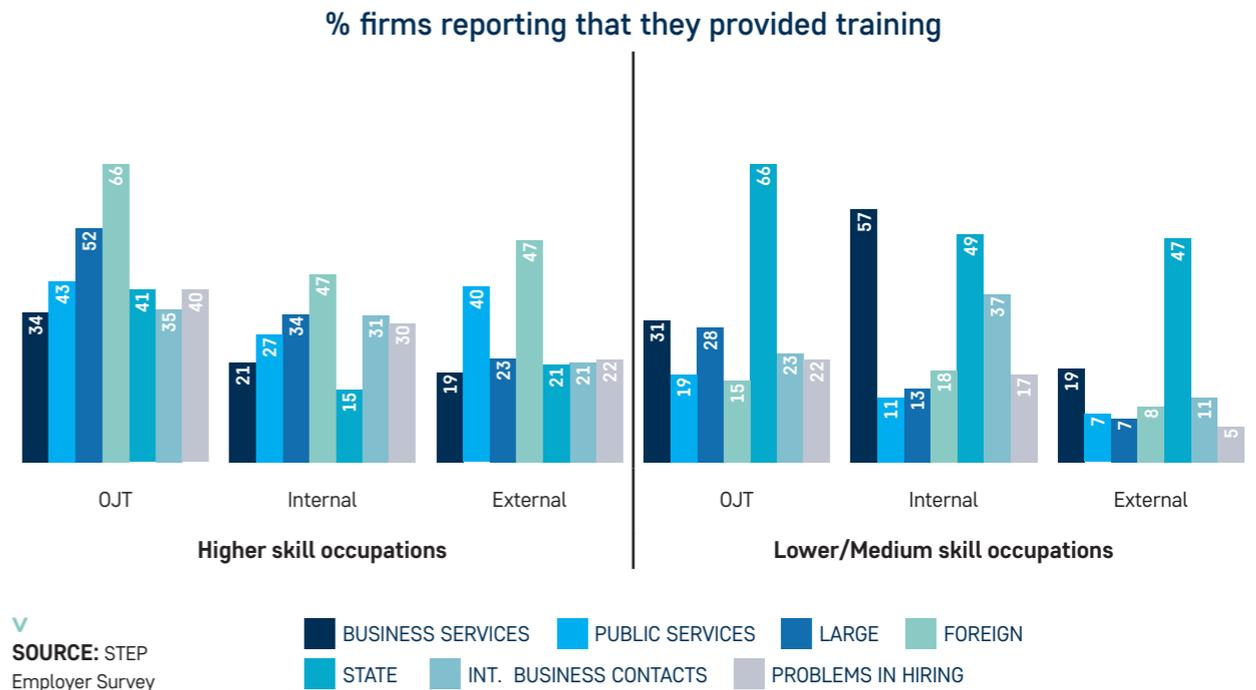
b. Firms in touch with education systems, by purpose of contact



SOURCE: STEP Employer Survey

131. The incidence of workplace-based training is low. To remain competitive, firms need to upgrade the skills of the work force as well as identify those new skills among job seekers. A majority of Kosovo firms do not provide training to their staff, not even in the form of on-the-job training (Figure 30). The incidence of training is higher among firms that are more likely to be in contact with education systems: public services, large firms, foreign-owned firms, firms that experienced skill problems in hiring (for higher skill occupations), and state-owned firms (for medium to lower skill occupations). Although firms are more likely to find women than men lacking in skills, men are more likely to receive training (in 60 percent of firms). This emphasizes that work place training is not likely to serve as a substitute for prior training, but more of a complement, to strengthen/impart firm specific skills, and that firms choose workers they identify as better able to acquire these new skills.

FIGURE 30: Incidence of on-the-job, internal, or external training among firms.



SOURCE: STEP Employer Survey

5.4 Information gaps

132. If education systems are plagued with quality problems, or grades and diplomas are influenced by other factors than skills (e.g., socio-economic background), employers may have little trust in education credentials. If so, young graduates entering the labor market are significantly handicapped because they lack the means to prove their ability. Individuals with limited social capital – likely the ones who already belong to vulnerable groups – will then be more constrained in their choices. There could be significant gains to providing information that would help workers identify jobs that are appropriate for their skill levels, maximizing their productivity potential given investments in education.⁵⁵

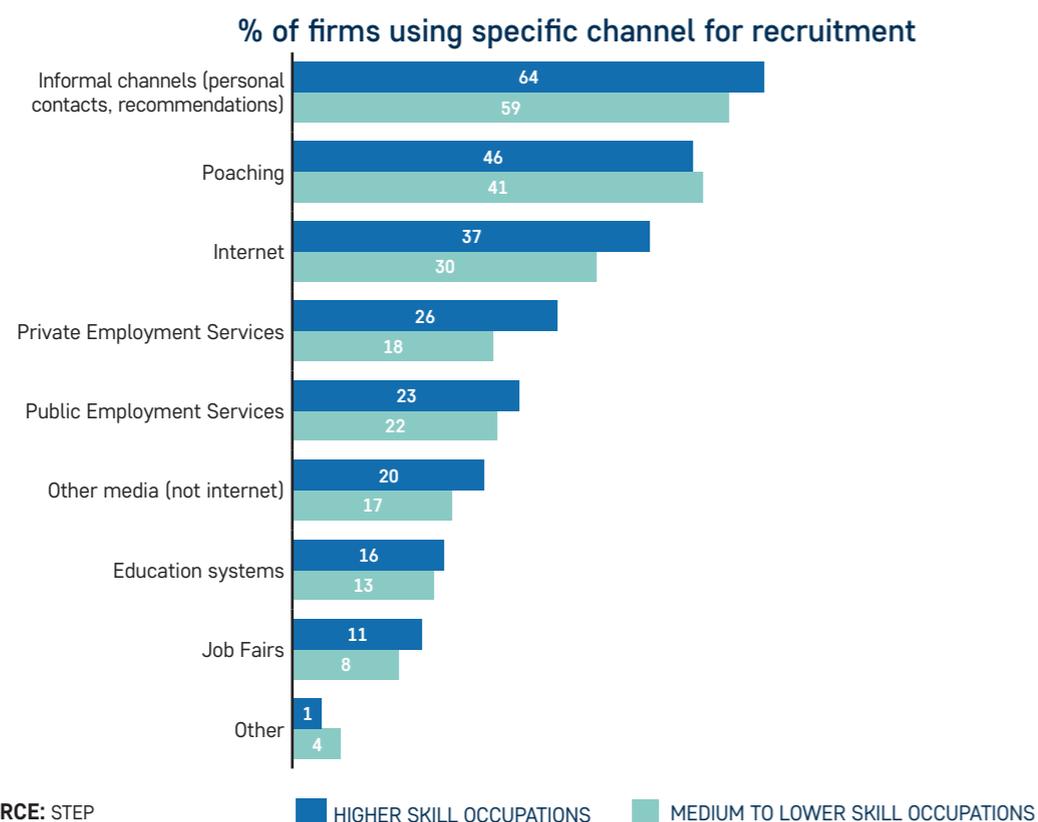
133. Firms in Kosovo overwhelmingly recruit through informal channels. Skills that are highly ranked by employers (conscientiousness, ability to work well under duress) are not necessarily easy to evaluate in face-to-face interviews. Lacking other means of evaluating skills, firms in Kosovo often resort to informal networks, personal contacts, recommendations from friends, as well as poaching (i.e., approaching workers who are employed in other firms). The emphasis on personal recommendations and poaching implicitly raises the value of prior work experience.

⁵⁵ Banerji and others, 2010, op. cit.

134. A small share of firms uses the public employment agency for identifying potential employees. Just over one fifth of firms connect with the public employment agency for recruitment, whether for higher or medium to lower skill occupations. Even fewer report connecting with education systems to identify potential job applicants.

135. The importance of contacts and networks for securing employment could also reduce incentives for students. New labor market entrants, especially those lacking access to professional networks through family and friends, are highly disadvantaged. Ethnic minorities, those from rural areas or poorer households, are at a higher risk of becoming marginalized. Excelling in school is not necessarily an optimal strategy if it is not likely to pay off without connections. In fact, two thirds of Kosovars believe that non-merit factors like family connections, bribes, and party alliances for example are most helpful for securing employment in the private sector (an even higher share, 79 percent, believe non-merit factors to be of highest value for the public sector). Thus, only 34 percent of respondents believe education, training and work experience matter.⁵⁶

FIGURE 31: Firms use informal channels to recruit workers



6. Going forward: policy reforms to reduce skill gaps in Kosovo

136. An in-depth analysis of the STEP Household and Employer Surveys shows significant scope for improving skill development in Kosovo for the benefit of firms, individuals, job creation and growth. To help foster more relevant skills in the work force, as set out in the Government's own strategy for employment and social welfare, it will be necessary to (i) improve the quality of education from early school years through tertiary education, and assist vulnerable groups in accessing quality education; (ii) connect labor demand – firms – with students and educational institutions in policy formulation and training delivery; and (iii) reduce information gaps relating to labor market developments more broadly and skill needs more particularly.

137. The broad set of cognitive and socio-emotional skills that are valued in labor markets must be nurtured from an early age and throughout education systems and beyond. Labor market relevant skills include a set of transversal cognitive and socio-emotional skills that are necessary for modern, competitive firms: conscientiousness, independent and creative work, ability to work under rapidly changing or stressful conditions, collaboration with others, and communication. These are developed from birth and throughout the life course: from interventions in early childhood programs that lay the foundation for basic cognitive and socio-emotional skills, through school based academic or vocational learning onto university and, after schooling, through training and retraining programs for adults, as well as further skill development in the work place. Education and training systems cannot be expected to provide workers fully prepared for employment. Their responsibility is to graduate students with the capacity for developing abilities through on-the-job training and adapting to new challenges as they arise. Hence, stepping up skill development in Kosovo will require effort and collaboration between all stakeholders: education systems, firms, students, and policy makers.

Addressing inequity and quality problems in skill development

138. The early years are formative and have long-term effects on further skill acquisition and broader aspects of well-being. Participation in preschool education has a positive impact on foundational and advanced cognitive skills, but only a small number of children have access to early childhood education in Kosovo and the quality of preschool education is unknown. The immediate priority and challenge for the Government of Kosovo – as recognized in its sector strategy for education – is to expand access to preschool education, while increasing the quality of services. In this context, priority should be given to including vulnerable groups that have traditionally had little access to such systems. Tapping into the private sector for expanding access should be explored along with designing and implementing quality and monitoring standards across providers. A significant upscaling of affordable preschool options, if matched with complementary activation policies, could have the additional and direct benefit of encouraging women's labor force participation.

139. Education reforms need to increase the quality of education and training, especially for vulnerable groups. The very low learning outcomes in Kosovo, even for foundational skills like literacy, point to serious weaknesses in educational systems that can compromise Kosovo's ability to become more integrated in international markets. The Kosovo education system needs to ensure that students develop a wide range of skills, including socio-emotional skills that have been shown to have lifelong impact on well-being. There is substantial evidence that socio-emotional skills are malleable over time and that personal characteristics like discipline, long-term goal setting and decision-making abilities can be nurtured and developed with adequate pedagogical methods. Increasing the quality of education and improving learning will require raising investment in education, focusing efforts on targeting disadvantaged groups and investing in quality enhancing measures such as teacher policies and training, curricula reform, and ongoing monitoring and evaluation. Education expenditure per pupil is low in Kosovo compared to similar countries and investing in education early, including for poorer families, will be essential to the development of a more productive economy. Because access to education differs significantly between groups, it will be important to evaluate possible demand side constraints to education as well. This includes norms around schooling and gaps in information around career paths and pay-offs to education for children, families, and communities.

140. There is significant scope for improving the performance of vocational education and training, which account for half of all students at the higher secondary level (grades 10-12). This will require aligning the supply of vocational education training with assessments of technical skill needs in the labor market, involving employers in the design of training curricula, fostering cooperation with businesses in the delivery of training, and strengthening quality assurance mechanisms.

141. It will also be important to increase the relevance of vocational training provided by the Employment Agency. In particular, there is a need to develop effective training

programs based on actual labor demand and on evidence of what works. Again, it will be necessary to both collect information on skills in demand through firm level surveys and other relevant sources of labor market information and strengthen monitoring and evaluation of existing initiatives and develop effective programs. Tracer surveys, employer interviews, internship reports, and other data collection tools, together with information on regional and international best practice, can help identify the strongest programs and how to continually improve upon them.

Connecting supply and demand: firms, students, and training institutions

142. The involvement of firms in multiple dimensions of skill development systems is of utmost importance. Connecting employers, workers, education systems and students is essential to increase the relevance of school-based training. Collaboration can take different forms, ranging from public-private sector partnerships involving shared financing and management responsibilities, to providing technology/equipment, jobs skill needs assessments, mentoring and career advice, partnerships around curricula reform, and work-based learning.⁵⁷

143. Work based-training, in the form of internships and apprenticeships⁵⁸, can increase the relevance of skills and provide youth with both experience and references. Internships and apprenticeships systems are under developed in Kosovo, as in other countries in Western Balkans. Well organized, these arrangements have several advantages: (i) they provide trainees with an opportunity to participate in real work place situations and solve concrete work-related problems; (ii) they contribute to building job specific skills as well as transversal labor market relevant skills that are highly ranked by employers; (iii) they bring together firms, students and education systems and facilitate collaboration between stakeholders to improve education systems; (iv) they provide trainees with references from the private sector that can signal capabilities, which may be especially important given employers' emphasis on work experience; and (v) they create an entry into a professional network for students. In the EU, an estimated 60-70 percent of apprentices find employment immediately after graduation. To work well however, these arrangements need strong institutions and governance systems, including three party collaboration (e.g., firm-student-school, or firm-student-employment agency), formal learning arrangements or learning plans, monitoring and evaluation, and quality assur-

⁵⁷ Dunbar, M. (2013). Engaging the private sector in skills development, Health & Education Advice and Resource Team, <https://www.educationinnovations.org/>

⁵⁸ In the EU, apprenticeships and internships are part of formal TVET in many countries. Apprenticeships lead to formal (VET) qualifications. Internships do not necessarily lead to formal TVET qualification but can be an integral and formal part of a broader TVET program. See Broek, S., T. Hogarth, L. Baltina, A. Lombardi (2017), Skills Development and Employment: Apprenticeships, Internships and Volunteering, IP/A/EMPL/2016-04, Report prepared for European Parliament's Committee on Employment and Social Affairs.

ance systems.⁵⁹ Recently, cooperation agreements have been signed with companies for internships in Kosovo, but monitoring and evaluation of these initiatives are weak.⁶⁰

144. To fulfil its core function to match jobseekers with employers, the Employment Agency needs access to a critical number of available vacancies. According to the STEP Employer Survey, there remains significant potential to increase this number because only a minority of employers recruit through the Agency. To this end, strengthening outreach to employers may be needed, as well as ensuring high quality of the services provided to them (e.g., through effective preselection of candidates, and fast response times). In preparation, the Employment Agency can also provide job seekers with critical information on work place skills that are important for finding and retaining a job. Socio-emotional skills like discipline and perseverance are developed over many years. However, the Employment Agency can inform job-seekers of the importance of different work place related competencies, including the importance of timeliness, independent work, and team work in order to influence, if not skills, at least priorities and incentives.

145. Capacity building would help firms, especially smaller ones, to identify and evaluate skill and training needs. Smaller firms are not likely to have the in-house capacity to know how to continuously develop the skills of their staff and are not likely to be using more sophisticated tools like personality tests or other forms of assessments when hiring, hence the reliance on informal channels. Industry associations can play an important role as partners in both identifying skill development needs and in representing firms in the interaction with education systems and government. Capacity building at the industry or firm level is also possible to enhance the identification of skill needs as well as the use of different techniques to evaluate skills among applicants. In this context, there is a need to reinforce the message that skill levels are not different for women and men, once education differences and participation in labor markets are accounted for. Advocacy to firms of all sizes may also be needed to reinforce the importance of proactive engagement by the private sector – through approaching other stakeholders, providing work based training for students, and opening up work places to youth, women, and other disadvantaged groups.

59 Ibid.

60 Kosovo Education and Employment Network (2017). Evaluation Report on Implementation of Kosovo Education Strategic Plan in 2017. http://www.keen-ks.net/site/assets/files/1345/raporti_i_vleresimit_psak_eng-1.pdf

Reducing information gaps

146. Assisting parents, children and youth in making informed choices on schooling, training, and jobs can have significant benefits for education and employment outcomes.

The private sector must be involved in collaborative efforts to strengthen the availability of labor market information. Students and jobseekers need adequate and timely information on current opportunities, wages of different sectors and occupations, and qualifications needed for various careers, as well as forecasts on future skill needs. Research indicates that in both developing and developed countries, students and their families significantly misjudge returns to different levels and forms of education, and that providing relevant information can change incentives and career paths.⁶¹ The STEP surveys focus on understanding the demand and supply of basic and higher-order transversal skills. This type of analysis must be complemented with a better understanding of the technical vocations in demand. Strengthening Kosovo's Labor Market Information System will require (i) establishing a systematic collection of information on growth sectors with high employment potential, as well as wages across sectors and occupations, (ii) integrating labor market information from key stakeholders (employers, the Ministry of Education, Ministry of Labor and Social Welfare, the Employment Agency, the Statistical office); and (iii) making labor market information accessible through relevant channels such as the Employment Agency website, Busulla⁶², and others. Career guidance systems in school (both general and vocational) can also assist students and their parents in choosing vocations that match labor market demand, their own aptitudes, and interests, and in making the most appropriate educational choices to pursue a chosen career.

61 Guallar Artal, Silvia, S. Johansson De Silva, V. Levin, A. Safir, and A-M Munoz Boudet (2016). From aspirations to occupations: the role of information in educational and labor market decisions in Moldova (English). Washington, D.C.: World Bank Group.

62 Busulla.com is an online platform developed by Ministry of Education for the purpose of helping students in career planning.

ANNEX 1:

Skills in STEP Household and Employer Survey

	STEP Household Survey		STEP Employer Survey (only job related)	
	Generic skills	Job-related skills (employed only)	Degree to which skill is important for job	Degree to which skill is used by typical worker
Cognitive skills (Foundational and advanced)	Self-reported skills used outside of job and on job <ul style="list-style-type: none"> • Reading • Numeracy • Writing • Computer 	Self reported skills used on the job: <ul style="list-style-type: none"> • Problem solving • Learning new things 	<ul style="list-style-type: none"> • Literacy (Read and write) • Numeracy • Problem solving* • ITC literacy* • Advanced computer use* • English • Foreign Language (not English) 	<ul style="list-style-type: none"> • Reading • Writing • Numeracy • Problem solving* • Use of computer • Foreign language
	Direct assessment <ul style="list-style-type: none"> • Literacy 			
Socio-emotional skills	Personality traits (Assessment): <ul style="list-style-type: none"> • Openness • Conscientiousness • Extraversion • Agreeableness • Emotional stability • Grit • Decision making 	Self reported skills used on the job: <ul style="list-style-type: none"> • Making presentations • Supervising others • Interpersonal skills • Independent work • Repetitive 	<ul style="list-style-type: none"> • Conscientiousness* • Grit* • Perseverance* • Stress resistance* • Flexibility* • Interpersonal skills* 	<ul style="list-style-type: none"> • Making presentations • Interacting with a team
Job-specific Technical skills		Self-reported characteristics of job: <ul style="list-style-type: none"> • Repair/maintenance of machinery • Operation of machinery • Driving vehicle • Physical 	<ul style="list-style-type: none"> • Technical skills 	

* see next page. Source: Compiled by authors.

Annex 1 cont.

Can be relied on to get things done	Conscientiousness
Can continue in the face of challenging situations at work	Grit
Can finish long and difficult tasks	Perseverance (Type A workers)
Can work well in very busy times or difficult situations	Stress resistance (Emotional Stability)
Can easily adapt to new tasks or changes in the workplace	Flexibility
Can find new and better ways to do things	Problem solving
Can read and write in a foreign language, not English	Foreign Language
Can read and write in English	English
Can read and write in mother tongue	Literacy
Can read and write in other official language (not mother tongue)	Official Language
Can use a computer for basic word processing tasks, email and internet searches	ITC literacy (Type B workers)
Can use a computer for making presentations and/or other advanced purposes like creating and managing databases or using specialized computer programs, etc.	Advanced computer use (Type A workers)
Can work well with others and listens to others' views	interpersonal skills

ANNEX 2:

Socio-emotional characteristics in the Household Survey

Socio-emotional skills	Items (Questions in the background questionnaire)
Openness	<p>Are you curious, interested in learning new things?</p> <p>Are you inventive, and discover new ways of doing things?</p> <p>Do you like to think a lot, and reflect about ideas?</p> <p>Do you come up with original or new ideas?</p> <p>Are you interested in nature, art or music?</p> <p>Do you prefer work that involves repetitive tasks and routines?*</p>
Conscientiousness	<p>Are you organized?</p> <p>Do you make plans and stick to them?</p> <p>Do you work hard to do things well and on time?</p> <p>Do you get to work and appointments on time?</p> <p>Do you put off your duties in order to relax?</p> <p>Do you get easily distracted?</p> <p>Do you complete your duties on time?</p>
Extraversion	<p>Do you enjoy being with people?</p> <p>Do you easily share your thoughts and feelings with other people?</p> <p>Are you enthusiastic and full of energy?</p> <p>In social gatherings, do you like to talk to many people?</p> <p>Are you talkative?</p> <p>Are you comfortable expressing your thoughts and opinions to others?</p>
Agreeableness	<p>Do you work well with other people?</p> <p>Do you try to understand how other people feel and think?</p> <p>Are you generally trusting of other people?</p> <p>Do you tolerate faults in other people?</p> <p>Are you helpful with others?</p> <p>Do you forgive other people easily?</p> <p>Do you tend to be rude to other people?*</p>

Emotional Stability (Neuroticism)	<p>Do you have sudden changes in your mood?*</p> <p>Do you feel sad, depressed?*</p> <p>Do you stay calm in tense or stressful situations?</p> <p>Do you manage stress well?</p> <p>Do you get nervous easily?*</p> <p>Do you get easily upset?*</p> <p>Do you worry a lot?*</p>
Grit	<p>Do you try very hard even after making mistakes?</p> <p>Do you stick to your goals despite obstacles and setbacks?</p> <p>Do you go after a goal, even if it takes a year or more to reach?</p> <p>Do you finish your tasks, even if they take a long time to complete?</p> <p>Do you keep working very hard even when you feel like quitting?</p> <p>Do you finish whatever you begin?</p>
Decision-making	<p>Do you ask for help when you do not understand something?</p> <p>Do you think carefully before you make an important decision?</p> <p>Do you think about how the things you do will affect others?</p> <p>Do you think about how the things you do will affect you in the future?</p>

NOTE: Response categories range from 1 "almost never" to 5 "almost always". The aggregation process was based on a simple average across items. Negatively scored items marked by "*" were recoded with a score of 5 assigned for "almost never" and so on prior to the aggregation.

ANNEX 3:

Full literacy test: Reading Proficiency Levels

Literacy Level	Score
Below Level 1	0 to 175
The tasks at this level require the respondent to read brief texts on familiar topics to locate a single piece of specific information. There is seldom any competing information in the text and the requested information is identical in form to information in the question or directive. The respondent may be required to locate information in short continuous texts. However, in this case, the information can be located as if the text were non-continuous in format. Only basic vocabulary knowledge is required, and the reader is not required to understand the structure of sentences or paragraphs or make use of other text features. Tasks below Level 1 do not make use of any features specific to digital texts.	
Level 1	176-225
Most of the tasks at this level require the respondent to read relatively short digital or print continuous, non-continuous, or mixed texts to locate a single piece of information that is identical to or synonymous with the information given in the question or directive. Some tasks, such as those involving noncontinuous texts, may require the respondent to enter personal information onto a document. Little, if any, competing information is present. Some tasks may require simple cycling through more than one piece of information. Knowledge and skill in recognizing basic vocabulary, determining the meaning of sentences, and reading paragraphs of text is expected.	
Level 2	226-275
At this level the medium of texts may be digital or printed, and texts may comprise continuous, non-continuous, or mixed types. Tasks in this level require respondents to make matches between the text and information, and may require paraphrasing or low-level inferences. Some competing pieces of information may be present. Some tasks require the respondent to: • cycle through or integrate two or more pieces of information based on criteria • compare and contrast or reason about information requested in the question • navigate within digital texts to access and identify information from various parts of a document.	
Level 3	276-325
Texts at this level are often dense or lengthy, and include continuous, non-continuous, mixed, or multiple pages of text. Understanding text and rhetorical structures become more central to successfully completing tasks, especially navigating of complex digital texts. Tasks require the respondent to identify, interpret, or evaluate one or more pieces of information, and often require varying levels of inference. Many tasks require the respondent to construct meaning across larger chunks of text or perform multi-step operations in order to identify and formulate responses. Often tasks also demand that the respondent disregard irrelevant or inappropriate content to answer accurately. Competing information is often present, but it is not more prominent than the correct information.	
Level 4	326-375
Tasks at this level often require respondents to perform multiple-step operations to integrate, interpret, or synthesize information from complex or lengthy continuous, non-continuous, mixed, or multiple type texts. Complex inferences and application of background knowledge may be needed to perform successfully. Many tasks require identifying and understanding one or more specific, non-central ideas in the text in order to interpret or evaluate subtle evidence-claim or persuasive discourse relationships. Conditional information is frequently present in tasks at this level and must be taken into consideration by the respondent. Competing information is present and sometimes seemingly as prominent as correct information.	
Level 5	376-500
At this level, tasks may require the respondent to search for and integrate information across multiple, dense texts; construct syntheses of similar and contrasting ideas or points of view; or evaluate evidenced based arguments. Application and evaluation of logical and conceptual models of ideas may be required to accomplish tasks. Evaluating reliability of evidentiary sources and selecting key information is frequently a key requirement. Tasks often require respondents to be aware of subtle, rhetorical cues and to make high-level inferences or use specialized background knowledge.	

ANNEX 4:

STEP surveys in Kosovo: Background information

a. Kosovo STEP Household Survey

Target population: The target population for the Kosovo STEP survey comprises all non-institutionalized persons 15 to 64 years of age (inclusive) living in private dwellings in urban areas of the country at the time of data collection. This includes all residents except foreign diplomats and non-nationals working for international organizations.

Sample design: The sample frame of Primary Sample Units (PSUs) is based on a list of Census Enumeration Areas (CEAs) from the Kosovo Agency of Statistics CEA Frame for 2011. To facilitate the selection of separate Albanian and Serbian samples, the sample frame was partitioned into two separate sub-frames: one sample frame for Albanian-majority populated PSUs, and another sample frame for Serb-majority populated PSUs. The sample frame for the target population is a list of 1153 Albanian PSUs and 60 Serbian PSUs from the 2011 Census of Population.

The survey used a 3-stage stratified sample design. The sample was explicitly stratified by 2 ethnic groups, i.e., Albanian majority PSUs and Serbian majority PSUs, and by 36 municipality areas.

Random selection method was used at all stages of sample selection. At the first stage 215 Albanian PSUs and 37 Serbian PSUs were selected with probability proportional to size from 36 strata with PSUs. At the second stage 15 households were systematically selected as the target sample in each selected PSU; in addition, 15 households were systematically selected as the reserve sample in each selected PSU. At the third stage the main respondent was randomly selected in each visited household from among all household members aged 15 to 64 years; the substitution of the main respondent was not allowed.

Fieldwork: 9 Sep 2016 - 29 Mar 2017

Final sample: 3,511 individuals aged 15-64 years (inclusive) living in urban areas.

Weighting: The data weighting was undertaken at three main stages (PSU, household- and individual-levels) by the STEP survey methodologist to ensure consistency across sampling strategies. Based on the 3,511 participating selected persons, the sum of the final person weights is 511,999.

Languages: The literacy assessment was carried out in two languages, Albanian and Serbian.

b. Kosovo STEP Employer Survey

Target population: Establishments, or workplaces, defined as distinct physical locations at which employers undertake economic activity. These are not an office, department, building or assembly line within a larger, geographically contiguous ensemble.

Sampling design: The sampling frame is based on a database of firms compiled by the Kosovo Agency of Statistics (ASK), and a complementary frame of 39 Serb firms in Northern Kosovo that was obtained independently.

The sample was stratified by two geographic domains (Prishtina and remaining regions of Kosovo) and four size strata in terms of the number of employees: 5-9, 10-15, 16-50 and 51+ employees. The target sample size for the selection of firms by stratum is shown in Annex Table 1 below:

At the first stage, the ASK selected a larger sample of firms from their frame to select a reserve

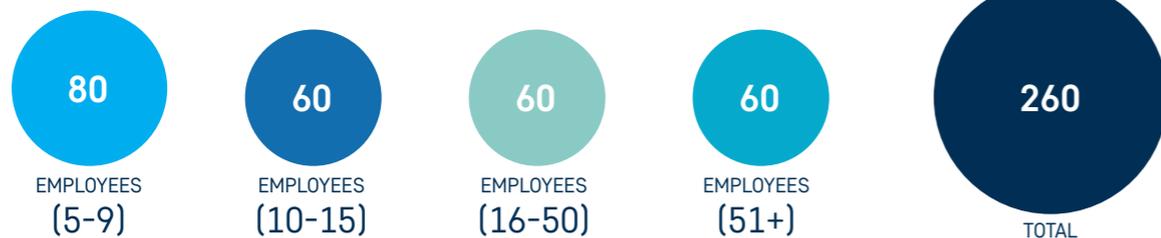
ANNEX TABLE 1: Target sample size

Geographic domain

Prishtina



Other



Total



of potential replacement firms. Given the smaller number of firms in the strata with 51+ employees, all firms were selected for this first sampling phase: 154 firms for Prishtina, and 165 firms for the Other geographic domain. A separate frame of 39 Serb firms in Northern Kosovo was combined with this large sample of firms for the first phase.

At the second stage the target number of firms/branches for each stratum under 51 employees was selected from the combined first phase frame using random systematic sampling with equal probabilities within the stratum. The firms in the frame for each stratum were sorted in the following order: municipality, Activity ID and number of employees. In the case of the stratum of 51+ employees in the Prishtina and Other geographic domains, the subsample of firms were selected systematically with probability proportional to size (PPS), where the measure of size was based on the number of employees. The largest firms were selected with a probability of 1 in the second stage, and some of the firms with more the 1600 employees were allocated 2 to 4 sample branches depending on their size.

Majority of smaller firms had only one workplace, so it was not necessary to select a branch. In the case of firms with more than one branch, a branch was selected randomly. There were only 6 self-representing firms with an allocation of 2 or more branches; one branch is selected in each of the remaining 484 sample firms.

Fieldwork: November-December 2015

Final sample: 500 workplaces (484 firms and 16 branches)

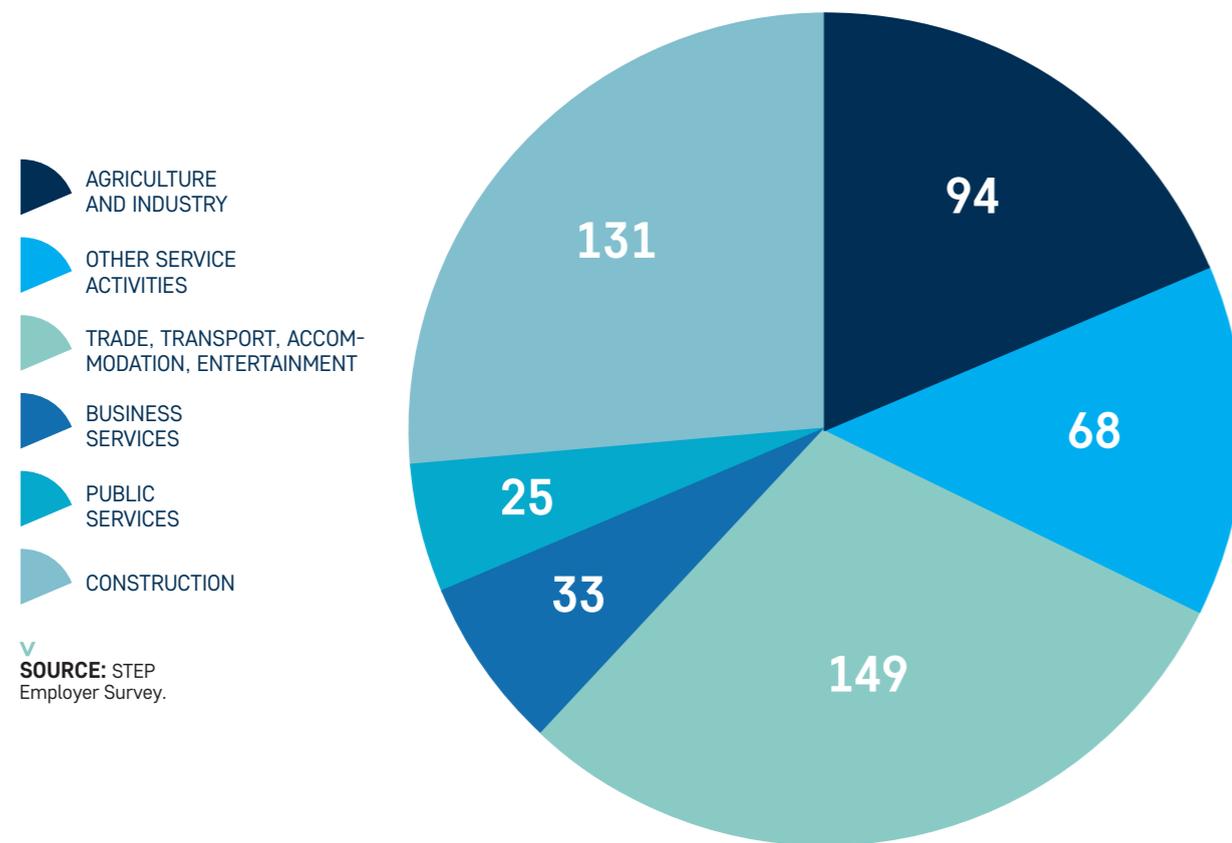
Weighting: The data weighting was undertaken by the STEP survey methodologist. Based on the 500 participating establishments, the sum of the final weights is 6,115.

Languages: The base questionnaire provided by the WB team was adapted according to circumstances in Kosovo and translated into Albanian and Serbian, while taking into account the linguistic peculiarities and mentality in the country.

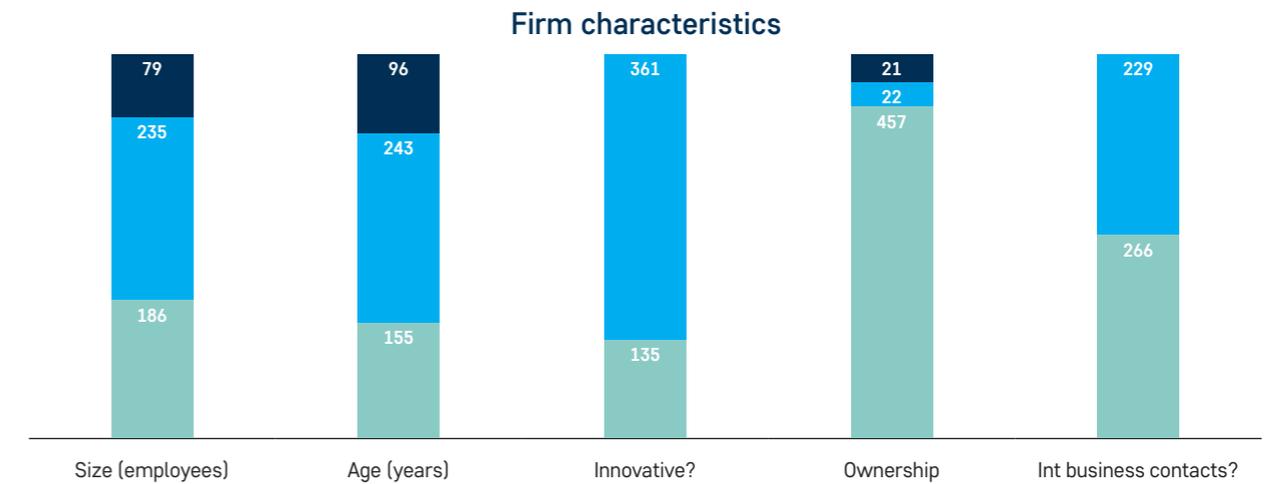
ANNEX 5:

Descriptive Statistics for STEP Employer and Household Surveys

ANNEX FIGURE 1: STEP Employer Survey: Distribution of firms by sector

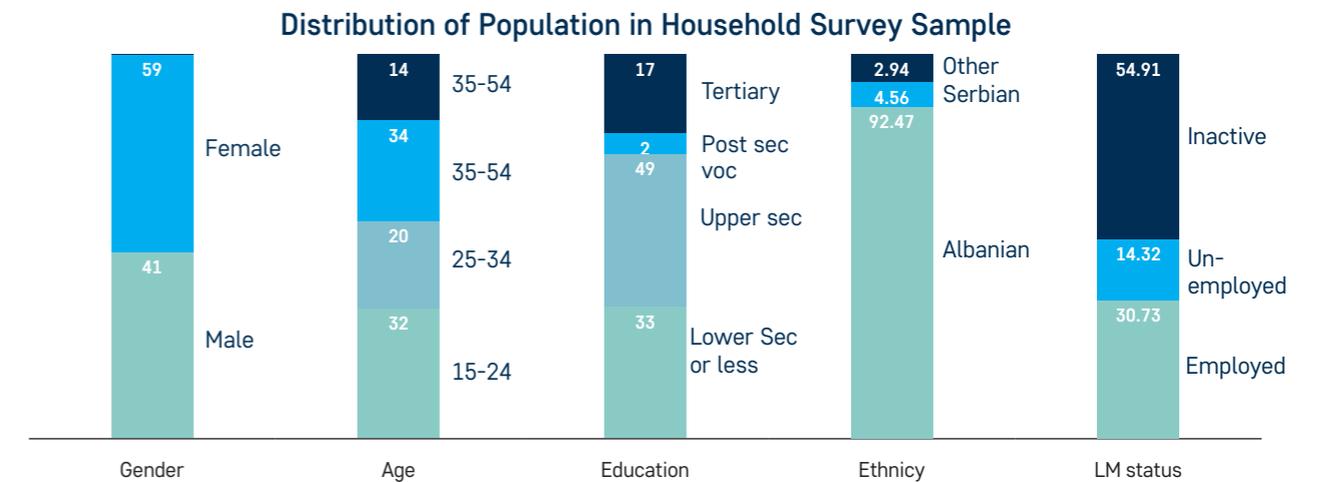


ANNEX FIGURE 2: STEP Employer Survey: Distribution of firms by key characteristics



SOURCE: STEP Employer Survey.

ANNEX FIGURE 3: STEP Household Survey: Distribution of population by key characteristics



SOURCE: STEP Household Survey.
 Note: Bias towards young, female, and unemployed compared to overall urban population.

Individual characteristics							
Age	0.153***	0.145***	0.149***	0.164***	0.154***	0.150***	0.151***
Age squared	-0.002***	-0.002***	-0.002***	-0.002***	-0.002***	-0.002***	-0.002***
Female	-0.459***	-0.490***	-0.523***	-0.354***	-0.525***	-0.488***	-0.487***
Married	0.200	0.233*	0.291**	0.286**	0.279**	0.233*	0.234*
Female*married	-0.442***	-0.427**	-0.420**	-0.469***	-0.418**	-0.421**	-0.422**
Serbian (ethnicity)	0.521***	0.502***	0.468***	0.438***	0.470***	0.474***	0.491***
Other (ethnicity)	0.034	0.132	0.168	-0.130	0.197	0.152	0.146
Mother's edu secondary	0.283***	0.268***	0.234***	0.193***	0.242***	0.266***	0.266***
Mother's edu higher	0.522***	0.524***	0.452**	0.353**	0.460***	0.502***	0.497***
Constant	-5.024***	-4.654***	-4.476***	-5.043***	-4.506***	-4.659***	-4.664***
Observations	2,599	2,588	2,520	2,299	2,416	2,482	2,482
F-test	42.35	27.36	23.34	21.44	23.68	23.76	
Prob > F	0	0	0	0	0	0	

v

SOURCE: Estimates based on STEP Household Survey. Notes: All models are estimated with the "svy" command. Z-scores relative to the total population mean are used for skills. Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1. Omitted categories: Albanian; Mother's education, primary and less (ISCED 0-1). Literacy 1: ETS literacy score (advanced); Literacy 2: ETS core pass dummy (i.e. levels 0-2 vs 3-8); Literacy 3: ETS core high dummy (i.e. level 8 vs other levels). Number of children, an interaction variable for married and children, as well as socio-economic status were included in regressions 3 and 4 but not significant.

ANNEX TABLE 4: Probability of unemployment (vs employment).

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Education and skills (z-scores relative to total population)							
Adj. years of edu	-0.104***	-0.083***	-0.078***	-0.089***	-0.075***	-0.077***	-0.075***
Socio-emotional skills							
Openness		-0.103	-0.108	-0.115	-0.124	-0.112	-0.107
Conscientiousness		-0.243***	-0.235***	-0.225***	-0.236***	-0.244***	-0.246***
Extraversion		-0.045	-0.037	0.110	-0.058	-0.056	-0.056
Agreeableness		0.050	0.046	0.004	0.056	0.044	0.039
Emotional Stability		-0.080	-0.076	-0.048	-0.072	-0.073	-0.070
Grit		-0.140	-0.130	-0.122	-0.125	-0.127	-0.125
Decision making		0.159*	0.156*	0.128*	0.177**	0.174**	0.172**

Cognitive skills							
Reading outside		-0.056	-0.017	-0.065			
Numeracy outside		0.100	0.062	0.097			
Computer outside		-0.064	-0.069	-0.065	-0.076	-0.075	
Literacy 1			0.014				
Literacy 2				0.167	0.150		
Literacy 3							0.020

Individual characteristics							
Age	-0.099***	-0.089***	-0.086***	-0.100***	-0.095***	-0.098***	-0.096***
Age squared	0.001**	0.001*	0.001*	0.001**	0.001**	0.001**	0.001**
Female	0.412**	0.472***	0.464**	0.203	0.449**	0.456**	0.453**
Married	0.000	-0.045	-0.110	-0.157	-0.094	-0.038	-0.043
Female*married	-0.185	-0.275	-0.268	-0.088	-0.238	-0.249	-0.244
Serbian (ethnicity)	-0.543***	-0.535***	-0.560***	-0.512***	-0.578***	-0.531***	-0.524***
Other (ethnicity)	0.016	-0.038	-0.053	0.460*	-0.120	-0.103	-0.140
Mother's edu secondary	-0.154	-0.102	-0.085	-0.130	-0.087	-0.095	-0.096
Mother's edu higher	-0.387*	-0.400*	-0.371*	-0.300	-0.371*	-0.380*	-0.386*
Constant	3.307***	2.848***	2.808***	3.348***	2.810***	2.824***	2.894***
Observations	1,372	1,368	1,303	1,209	1,278	1,341	1,341
F-test	12.86	8.573	7.493		7.119	7.924	7.777
Prob > F	0	0	0		0	0	0

v

SOURCE: Estimates based on STEP Household Survey. Notes: All models are estimated with the "svy" command. Z-scores relative to the total population mean are used for skills. Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1. Omitted categories: Albanian; Mother's education, primary and less (ISCED 0-1). Literacy 1: ETS literacy score (advanced); Literacy 2: ETS core pass dummy (i.e. levels 0-2 vs 3-8); Literacy 3: ETS core high dummy (i.e. level 8 vs other levels).

ANNEX TABLE 5: Determinants of Earnings (OLS)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Education and skills (z-scores relative to employed population)							
Adj. years of edu	0.061***	0.060***	0.031***	0.022*		0.021*	
Non-cognitive skills							
Openness	0.049	0.052		0.044	0.045	0.045	0.046
Conscientiousness	-0.013	-0.011		-0.017	-0.010	-0.017	-0.010
Extraversion	-0.000	-0.003		0.029	0.029	0.029	0.029
Agreeableness	-0.082**	-0.093**		-0.133***	-0.135***	-0.134***	-0.137***
Emotional Stability	0.028	0.025		0.019	0.016	0.018	0.015
Grit	0.023	0.032		0.046	0.046	0.046	0.046
Decision making	-0.051	-0.046		-0.021	-0.019	-0.022	-0.020
Use of information-processing skills at work							
Reading at work	0.124***	0.130***		0.014	0.011	0.014	0.011
Numeracy at work	0.003	0.006		0.049**	0.051**	0.048*	0.049**
Computer at work	-0.042	-0.043		0.015	0.020	0.014	0.020
Generic skills at work							
Interpersonal skills	-0.008	-0.009		0.003	0.005	0.001	0.004
Problem solving	0.078**	0.075**		0.040	0.042	0.040	0.042
Learning	0.024	0.028		0.003	0.011	0.004	0.012
Autonomy	0.110***	0.115***		0.070**	0.072**	0.067**	0.069**
ETS literacy score		0.004				0.021	0.024
Individual characteristics							
Age	0.019	0.017	0.009	0.006	0.006	0.006	0.005
Age squared	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	0.000
Female	0.173	0.179	0.047	0.081	0.065	0.085	0.070
Married	0.170	0.163	0.123	0.164*	0.163*	0.169*	0.168**

Female*married	-0.069	-0.086	-0.062	-0.099	-0.090	-0.105	-0.097
Serbian (ethnicity)	-0.025	-0.034	-0.124*	-0.120*	-0.095	-0.144*	-0.123
Other (ethnicity)	0.040	0.066	0.105	0.149	0.150	0.142	0.143
Mother's edu, secondary	-0.001	-0.016	0.046	0.030	0.033	0.033	0.036
Mother's edu, higher	0.016	-0.035	-0.035	-0.066	-0.071	-0.065	-0.069
Job characteristics							
Private formal			-0.252***	-0.250***	-0.255***	-0.251***	-0.256***
Private informal			-0.192**	-0.189*	-0.205**	-0.190*	-0.206**
Permanent job (dummy)			-0.028	-0.021	-0.021	-0.020	-0.020
Sector							
Construction			0.143	0.135	0.134	0.138	0.137
Trade, Accommod			-0.097	-0.106	-0.106	-0.105	-0.104
Transport & ICT			0.251**	0.238*	0.214*	0.244**	0.222*
Finance/Real estate			0.029	0.070	0.059	0.074	0.063
Public services			0.154*	0.143*	0.137*	0.144*	0.138*
Other services			0.121	0.121	0.105	0.126	0.111
Occupation							
Professionals			0.029	0.093	0.093	0.092	0.092
Techn & ass. prof			-0.320**	-0.229*	-0.207	-0.233*	-0.211
Clerical support			-0.169	-0.118	-0.101	-0.121	-0.105
Service and sales			-0.540***	-0.397***	-0.383***	-0.396***	-0.380***
Crafts			-0.366**	-0.312**	-0.317**	-0.307**	-0.312**
Operators			-0.210	-0.084	-0.068	-0.085	-0.068
Elementary			-0.517***	-0.357**	-0.356**	-0.358***	-0.357**

Annex Table 5 cont.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Region							
Gjakova			-0.187**	-0.244***	-0.257***	-0.256***	-0.269***
Gjilani			0.130	0.154	0.156	0.152	0.154
Mitrovica			-0.069	-0.057	-0.063	-0.055	-0.060
Prizren			0.063	0.072	0.068	0.077	0.075
Peja			-0.154**	-0.196***	-0.195***	-0.196***	-0.195***
Ferizaj			-0.101	-0.075	-0.077	-0.066	-0.065
Constant	-0.714**	-0.633*	0.454	0.516	0.808**	0.534	0.820**
Observations	577	543	564	542	542	542	542
R-squared	0.366	0.359	0.552	0.580	0.580	0.581	0.581

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SOURCE: Estimates based on STEP Household Survey. Notes: The dependent variable is the log of hourly wages (trimmed at 5th and 95th percentiles). All models are estimated with the "svy" command. Z-scores relative to the employed population mean are used for skills. Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1. Omitted categories: Lower secondary education or less; Mother's education, primary and less (ISCED 0-1); Albanians; Managers; Industry; Public (both formal and informal), Prishtina. Occupational groups "Armed forces" and "Skilled agricultural workers" (2 obs) are excluded. Agriculture, forestry and fishing (1 obs) is excluded.

ANNEX 7: Determinants of Skills

ANNEX TABLE 6: Cognitive skills used (reading, numeracy, computer use): ordered probit with svy

VARIABLES	Reading overall	Numeracy overall	Use of computer overall
Female	0.239***	-0.117**	-0.281***
Age	-0.108***	-0.090***	-0.022*
Age squared	0.001***	0.001***	0.000
Adjusted years of education	0.148***	0.077***	0.135***
ECD	0.146*	0.310***	0.318***
Mother's edu secondary	0.236***	0.094	0.091
Mother's edu higher	0.420***	0.221*	0.340**
Socio economic status at age 15			
Middle	0.125	0.057	-0.059
High	0.119	0.267***	0.052
Asset wealth index quintile			
second	0.014	0.037	0.432***
Third	0.135*	0.173**	0.436***
forth	0.022	0.139*	0.441***
highest	0.208**	0.256***	0.768***
Serbian	0.513***	-0.097	0.739***
Other ethnicity	-0.324*	-0.243	0.399**
Gjakova	0.652***	0.650***	1.195***
Gjilani	-0.204**	-0.180*	0.105
Mitrovica	0.343***	0.337***	-0.009
Prizren	-0.037	-0.153	0.845***
Peja	0.114	0.011	0.462***
Ferizaj	0.143	-0.260***	-0.112
Constant cut1	-0.489**	-1.868***	1.347***
Constant cut2	0.331	-0.944***	1.606***
Constant cut3	0.860***	0.883***	2.003***
Observations	3,019	3,018	3,019
Standard errors in parentheses			
*** p<0.01, ** p<0.05, * p<0.1			

ANNEX TABLE 7: Socio-emotional skills: OLS with svy

VARIABLES	Openness	Conscientiousness	Extraversion	Agreeableness	Emotional stability	Grit	Decision making
Female	0.030	0.048**	0.014	0.094***	-0.010	0.077***	0.105***
Age	-0.015***	-0.001	0.005	0.002	-0.006	-0.001	0.002
Age squared	0.000*	0.000	-0.000	0.000	0.000	0.000	-0.000
Adjusted years of education	0.036***	0.027***	0.026***	0.022***	0.029***	0.034***	0.028***
ECD	0.041	-0.003	-0.039	-0.011	0.048	0.022	0.046
Mothers education							
Secondary	0.084***	0.041	0.043	0.040	0.015	0.074**	0.076*
Higher	0.109**	0.015	0.002	0.069	0.099**	0.103*	0.154**
Socio economic status at age 15							
Middle	0.032	0.048*	-0.018	0.010	-0.022	-0.001	0.021
High	0.069*	0.059*	0.030	0.011	0.048	0.021	0.019
Asset wealth index quintile							
second	0.067*	0.005	-0.023	-0.006	0.066*	0.031	-0.020
third	0.071*	-0.014	0.003	-0.028	0.065*	0.020	0.010
forth	0.096**	0.015	0.046	-0.002	0.089**	0.070*	0.033
highest	0.153***	0.120***	0.211***	0.125***	0.073*	0.175***	0.157***
Serbian	0.167***	0.134***	0.152***	0.035	-0.015	0.142***	0.112**
Other ethnicity	-0.063	-0.094	-0.101	-0.026	-0.030	-0.264***	-0.139
Gjakova	0.056	0.000	-0.069	-0.256***	-0.005	0.174***	0.095*
Gjilani	0.083**	-0.139***	-0.037	-0.081*	-0.076*	0.213***	0.090*
Mitrovica	0.020	-0.199***	-0.047	-0.070**	0.085**	-0.100***	-0.007
Prizren	0.015	0.009	-0.136***	-0.174***	-0.013	0.048	-0.109**
Peja	0.104***	0.076**	0.061	0.013	-0.046	0.134***	0.019
Ferizaj	0.179***	0.160***	0.195***	0.154***	-0.112**	0.367***	0.318***
Constant	3.214***	3.301***	3.140***	3.312***	2.855***	3.344***	3.376***
Observations	3,011	3,011	3,011	3,011	3,011	3,009	3,007
R-squared	0.157	0.113	0.087	0.093	0.074	0.113	0.085
Standard errors in parentheses							
*** p<0.01, ** p<0.05, * p<0.1							

ANNEX TABLE 8: Literacy levels

VARIABLES	Coefficients (ordered probit)		Marginal effects (ordered probit)			Coefficients (OLS)
	Levels from 0/1 to 4/5	Levels 0/1	Level 2	Level 3	Level 4/5	Score
Female	-0.012	0.005	-0.003	-0.002	0.000	-1.680
Age	-0.031**	0.012**	-0.007**	-0.005**	0.000	-0.715
Age squared	0.000	0.000	0.000	0.000	0.000	0.004
Adjusted years of education	0.091***	-0.035**	0.021**	0.013**	0.000	4.060***
ECD	0.143	-0.054	0.033	0.021	0.000	3.842
Mothers education						
Secondary	0.045	-0.017	0.011	0.006	0.000	5.772*
Tertiary	-0.073	0.028	-0.018	-0.010	0.000	1.492
Socio-economic status at age 15						
Middle	0.032	-0.012	0.008	0.004	0.000	2.230
High	0.126	-0.048	0.029	0.019	0.000	5.166
Asset wealth index quintile						
second	0.183	-0.071	0.047	0.024	0.000	7.723**
third	0.172	-0.067	0.045	0.022	0.000	8.405**
forth	0.117	-0.046	0.031	0.014	0.000	6.375*
highest	0.421**	-0.157**	0.092**	0.065**	0.000	15.800***
Serbian	1.684***	-0.377**	-0.129**	0.479**	0.027	48.466***
Other ethnicity	0.009	-0.003	-0.001	0.003	0.000	-13.802
Gjakova	0.571***	-0.216**	0.132**	0.084**	0.001	21.726***
Gjilani	-0.261*	0.099	-0.060	-0.038	0.000	-1.353
Mitrovica	-0.277**	0.105**	-0.064**	-0.040**	0.000	-6.282*
Prizren	-0.259**	0.098**	-0.060**	-0.038**	0.000	-8.586**
Peja	-0.221**	0.083**	-0.051**	-0.032**	0.000	-5.161
Ferizaj	-0.534***	0.202**	-0.123**	-0.078**	0.000	-18.002***
Observations	3016	3016	3016	3016	3016	3019
Standard errors in parentheses						
*** p<0.01, ** p<0.05, * p<0.1						

