

The World Bank

Demand for skills

Main results of the Azerbaijan STEP Employer Survey

Jan J. Rutkowski
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Azerbaijan

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This note summarizes the main findings of the STEP Employer Skills Survey carried out in Azerbaijan in 2013.¹ The note argues that there is a skills shortage in Azerbaijan. Azeri employers claim that it is difficult to find workers with required skills. The shortage is particularly pronounced in the case of modern, innovative firms, which tend to require more advanced skills. The education system does not meet the needs of the majority of employers. In particular, it does not equip young workers with the practical skills that are required in the workplace, and with knowledge that is up-to-date. The note finds that employers seek not only technical, job-specific skills but also cognitive skills (such as literacy, numeracy and problem solving) and adequate socio-behavioral skills (such as communication, teamwork, leadership and ability to work independently). Conscientiousness stands out as a personality trait that is critical for employability. Unfortunately, many young job applicants lack the skills demanded by employers. The key employability skills that young workers are most frequently lacking include job-specific technical skills, problem solving skills, communication, teamwork and leadership skills. Hence, the skills gap refers not only to technical skills but also to higher-order cognitive skills and socio-behavioral skills. By their nature, these results show subjective perceptions of employers. And these perceptions reflect not only the objective conditions, but also employers' expectations regarding worker skills that may be excessive. Nonetheless the results signal a skill problem in Azerbaijan, and employers' criticism of the quality and relevance of education should not be too easily disregarded. The survey's results strongly suggest that the quality of education needs to be improved, and the education system needs to be more responsive to labor market needs in order to support growth and modernization of the Azerbaijan's economy.

Box 1 summarizes the main results of the analysis. It shows the core employability skills that college and high school graduates lack most often. The development of these skills among students represents the main challenge for the education system in Azerbaijan and is critical for addressing the skills gap.

¹ The sample size was 316 firms. The sample was stratified by firm size and economic activity, with a booster sample of large firms. Most firms were from the trade sector (42%), manufacturing and ICT (16% each), and construction (9%). The results presented in this note are weighted so as to be representative of the Azerbaijani economy.

Box 1. Core employability skills that are most often missing among young Armenian workers

The table below shows the core employability skills that young workers lack most often. It lists the skills that are reported as frequently missing among young workers by at least 20 percent of firms. These are the skills that need to be developed among students in order to address the skills gap.

College graduates	High school graduates
Leadership	Teamwork
Openness to experience	
Problem solving	
Job-specific technical skills	

Source: World Bank Employer STEP survey, 2013; Bank staff analysis.

The rest of the note examines the skill problem in Azerbaijan in more detail and presents evidence of a skills gap.

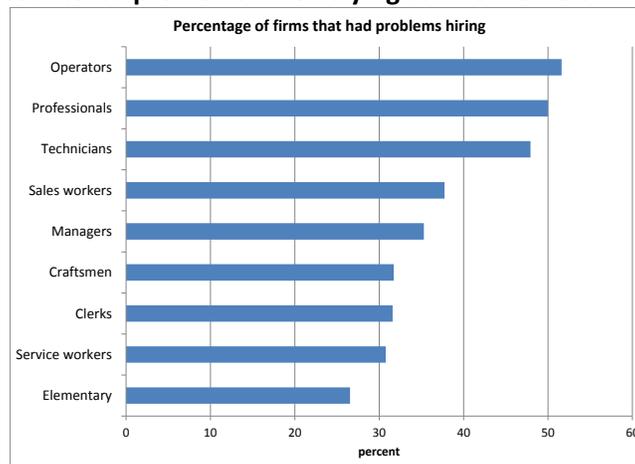
Survey results

This section attempts to answer four questions: (a) Is there a skill shortage in Azerbaijan?, (b) Does the education system respond to labor market demands?, (c) What are the core employability skills?, (d) What are the skills that young workers most often lack?, and (e) Do firms provide training to enhance skills of their workforce?

employers find it difficult to hire skilled workers

Many Azeri employers encounter problems when trying to hire new workers. The particularly refers to hiring skilled blue-collar workers, such as machine operators and assemblers, and highly skilled professional workers, including technicians (associate professionals). Hiring workers with these skills turned difficult for one firm in two (figure 1). This is a high proportion, pointing to a pervasive shortage of some specialized skills.

Figure 1. Many firms encountered problems when trying to hire workers



Source: World Bank Azerbaijan Employer STEP Survey 2013; Bank staff calculations.

because job applicants often lack required skills

Hiring workers can be difficult for a variety of reasons. **However, it is the lack of required skills that is usually cited as the main reason.** In the case of professionals and technicians the lack of required skills was cited by 70-80 percent of firms, in the case of machine operators and assemblers, by over 60 percent. Other reasons, such as excessive wage expectations, unsatisfactory working conditions or lack of applicants, were reported much less frequently. This is a clear evidence of a skills shortage in Azerbaijan.

The skills shortage hits innovative firms more than traditional ones.² For example, nearly 60 percent of innovative firms encountered problems when trying to hire professional workers, compared with only 34 percent of traditional firms. Innovative firms also find it more difficult than traditional ones to hire skilled blue-collar workers, although in this case the difference is less pronounced although still significant (10 percentage points). The most likely reason why innovative firms are more disposed to experience skill shortages is that they require more advanced skills than traditional firms. The fact that innovative firms are particularly vulnerable to a shortage of skills implies that the supply of skills needs to be improved so as to match the demand in order not to impede the modernization and restructuring of the Azerbaijan's economy.

employers are dissatisfied with the quality of education

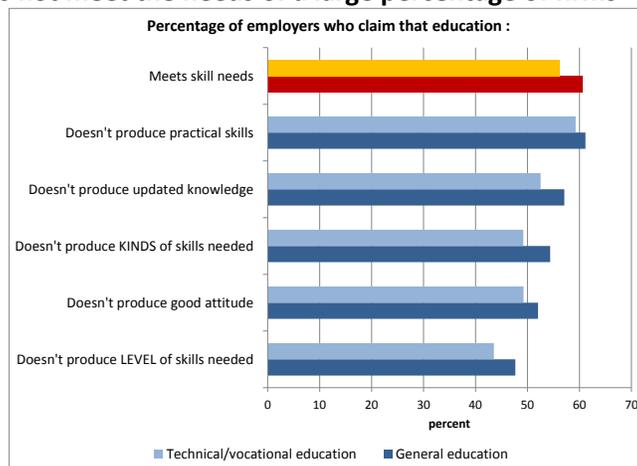
Many employers are critical of the quality of education in Azerbaijan. This does not come as a surprise given that that they find it difficult to recruit workers with the right skills. As many as 40 percent of employers claim that general education does not meet their skill needs, and the proportion is still higher in the case of vocational and technical education (figure 2). The main problem, from the employers' perspective, is that the education system (both general and technical/vocational) does not equip young workers with practical skills. This is a complaint voiced by 60 percent of Azeri employers (a related complaint is that the education system does not produce the *kinds* of skills needed).³ The second most frequently voiced concern is that the education system does not equip young workers with knowledge that is up-to-date. One employer in two considers knowledge produced by the education system as obsolete. It is noteworthy that employers are critical not only about "hard" but also "soft" skills: every second employer says that the education system does not produce good attitudes. This implies that in order to improve the quality of education in Azerbaijan and make it more relevant to labor market

² Firms are categorized as "innovative" if they introduced new technologies in the past three years; otherwise they are categorized as "traditional". Obviously, an introduction of new technologies is only a proxy for the firm's innovation status.

³ It should be noticed that this complaint is not specific to Azerbaijan; in most countries employers would like the education system to be more focused on the production of practical skills, as opposed to theoretical knowledge. The employers' view is partial, however, and as such needs to be treated with some caution. A high quality education system needs to balance different needs and considerations so as to equip students with broad and flexible skill that they will be able to apply at different jobs, not just one specific job. This is particularly important in a globalizing economy characterized by an incising job turnover, which implies that rather than being prepared for one life-time job students need to be prepared for taking different jobs during their work career.

demands investments needs to be made not only in cognitive and technical skills, but also in social and behavioral skills.

Figure 2. Education does not meet the needs of a large percentage of firms



Source: World Bank Azerbaijan Employer STEP Survey 2013; Bank staff calculations.

Innovative firms are more critical about the quality of education than traditional firms. This is consistent with the earlier results whereby innovative firms more often suffer from a skill shortage. The explanation is the same: innovative firms tend to use more advanced technologies and therefore demand higher skills. This reinforces the point that the improvement in the quality of education is critical for the modernization of the Azeri economy.

job-specific technical skills are critical for employability but cognitive and socio-behavioral skills matter, too

What are the most important skills that Azeri employers seek? Occupation-specific technical skills are critical for both highly skilled professionals and middle-skilled white-and blue-collar workers (Figure 3). But there are some differences in skills sought from Type A and Type B workers (see box 2 for the definition of both groups). In addition to technical skills, employers require Type A workers to have adequate numeracy and literacy as well as problem solving skills. As to Type B workers, employers expect them to be able to work independently, and to have communication and teamwork skills.

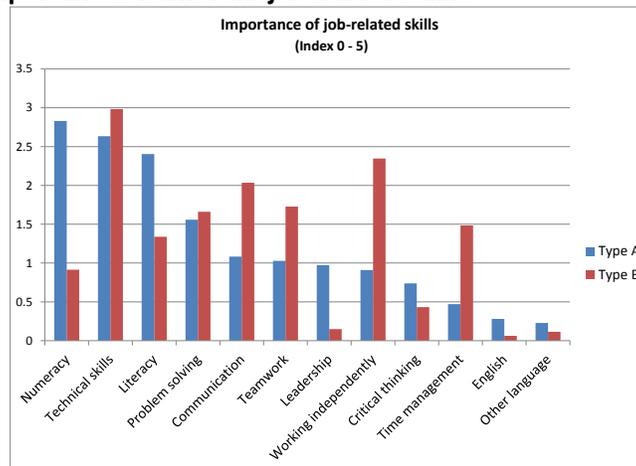
Box 2. Type A and Type B workers

The STEP employer survey distinguished between two types of workers: Type A and Type B.

Type A workers are highly skilled white collar workers, usually with tertiary education. The group comprises three occupational categories: managers, professionals and technicians (lower grade professionals).

Type B workers are middle- and low skilled workers, both blue and white collar, usually with secondary education, or less. The group comprises the following occupational categories: clerks, service and sales workers, craftsmen, machine operators and assemblers, and elementary occupations.

Figure 3. The relative importance of different job-related skills



Type A workers = Managers, professional and technicians (associate professionals)

Type B workers = clerks, sales and service workers, craft workers, machine operators and assemblers.

Source: World Bank Azerbaijan Employer STEP Survey 2013; Bank staff calculations.

Employers also attach a high value to some personality traits. Among them conscientiousness is by far the most important (for both Type A and Type B workers). This means that employers expect workers to work hard, do a thorough job, and be efficient. Other desirable personality traits include emotional stability, openness to new experience (among Type A workers) and agreeableness (among Type B workers).

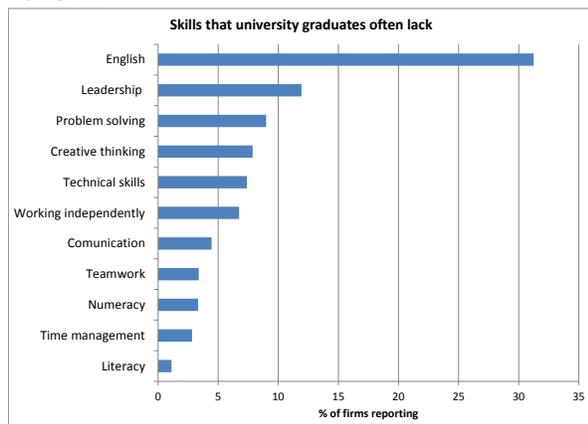
young workers often lack some important skills, not only technical but also socio-behavioral and cognitive

Many young job applicants lack the skills demanded by employers. English, leadership, and critical and creative thinking are the skills that are the most often lacking among university graduates, as claimed by 30 to 40 percent of Azerbaijani firms (figure 40, panel A). The list of skills that are frequently lacking among secondary school graduates is longer. At least 30 percent of firms say that they often lack teamwork skills, problem solving, creative thinking, technical and time-management skills (figure 4, panel B).

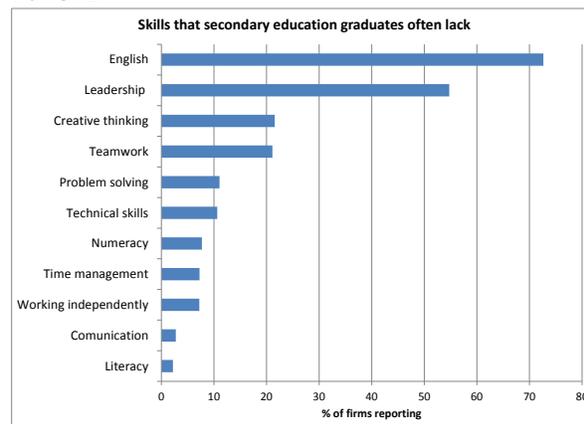
Openness to new experience is the personality trait that young workers lack most often. College graduates are not open to new experience according to 35 percent of firms, and high-school graduates according to as many as 45 percent of firms. These high proportions are worrisome, as it is young workers who are supposed to be most open to new experience and be a source of innovation and progress in the economy.

Figure 4. Young workers often lack some job-related skills

Panel A



Panel B



Source: World Bank Azerbaijan Employer STEP Survey 2013; Bank staff calculations.

occupation-specific technical skills, problem solving skills, leadership and teamwork skills are core competencies that young workers most often lack.

Some skills, although frequently lacking among young workers, are not critical for employability. English is an example. It is the skill that is most frequently missing among college graduates; however it is not particularly important for the bulk of Azerbaijani employers. What are then the critical skill gaps? What are the skills to which employers attach a high value and simultaneously often lacking among young workers? Occupation-specific technical skills and problem solving skills fall into this category for both Type A and Type B young workers. They are highly important but around 10 percent of firms claim that young workers often lack them. In addition, among key employability skills Type A workers often lack leadership skills, whereas Type B workers lack team working skills. The lack of teamworking skills is particularly worrisome since it is reported by 20 percent of firms, meaning that the concern is widespread. The lack of leadership skills among college graduates is reported by some 10 percent of firms. Finally, openness to experience is an important skill often missing among college graduates, as claimed by over one-third of firms.

One should not become complacent because of the sometimes small number of firms complaining about a skill gap. As shown earlier, firms that suffer from a skill gap tend to be the most dynamic and innovative. If the skill gap is an obstacle to the expansion of these firms, this has negative implications for the modernization and growth of the whole Azerbaijan's economy.

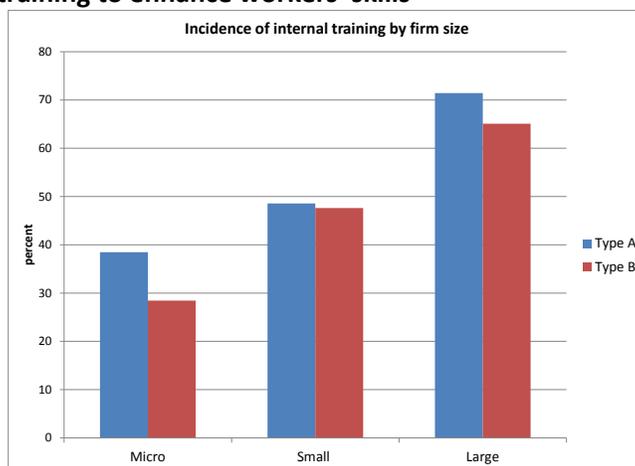
firms, especially large, respond to a skill gap by providing training

Roughly, every second Azerbaijani firm provides training to its workers to enhance their skills. Firms are somewhat more likely to provide training to highly skilled Type A workers (50 percent of firms) than to less skilled Type B workers (43 percent). As in other countries, the incidence of firm-provided training increases with firm size. Larger firms provide training more often than smaller ones (figure 5).

Training is largely internal and of short duration, provided either by the firm manager or co-workers. An average (median) workers receives around five days of training per year. Little is known about the content of the training. But given its short duration and the fact that it is delivered on the premises of the workplace, it is most likely orientation or on-the-job training meant to equip workers with some basic firm-specific skills. Given available data, it is impossible to assess the impact of the firm-provided training on worker productivity, and to ascertain to what extent it succeeds in addressing the skill gap.

Some firms provide external training, mainly to highly skilled Type A workers. About 20 percent of firms provide external training (delivered by specialized training institutions) to Type A workers, and only 8 percent to Type B workers. External training is also of short duration; both the median Type A and Type B workers received five days of external training per year. Again, little is known about the nature of training delivered by external institutions.

Figure 5. Firms provide training to enhance workers' skills



Micro = 1 – 10 employees

Small = 11 – 50

Large = 51+

Source: World Bank Azerbaijan Employer STEP Survey 2013; Bank staff calculations.

Few Azerbaijani firms have regular contacts with training institutions. And it is predominantly large firms that have such contact. Only 7 percent of firms have contacts with institutions that train Type A workers, and the percentage of firms that have contacts with institutions that train Type B workers is still lower (4 percent). The absence of such contacts matters because research has shown that they can be instrumental in addressing a skills mismatch. Once training institutions know the skill demands of employers, they can respond by adjusting their training curricula so as to effectively respond to these demands. Consequently, firms get trained workers whose skills match the skill requirements of the jobs. There is room to reduce a skills mismatch in Azerbaijan by strengthening the systematic partnership between firms and training institutions. This entails a more active approach to workforce skill development on the part of employers.

addressing the skill gap: investing in the development of higher-order cognitive and socio-behavioral skills in addition to technical skills

According to employers, young workers in Azerbaijan often lack three groups of skills: adequate technical skills, higher-order cognitive skills (especially problem solving), and socio-behavioral skills (teamwork, leadership, openness to experience). The policy implications of these findings are straightforward. **In order to address the skill gap and to support the modernization and growth of the Azerbaijani economy the government needs to improve the quality of education and enhance its relevance to labor market needs.** Different parts of the education system are responsible for enhancing each group of skills. The development of socio-behavioral skills starts with early childhood education and continues through all education levels, but is most intensive at the early stages of education. The development of higher-order cognitive skills requires investments primarily in secondary education. The development of technical skills requires investments in technical/vocational education, and in tertiary education.

The above analysis is quite general and represents only a first step in the identification of a skill gap in Azerbaijan and its exact nature and sources. More thorough research is necessary to identify specific skills that are in short supply, and to determine the areas where reforms are needed in order to better respond to the needs of the labor market and bridge the skill gap.

Conclusions and policy implications

There is evidence of a skills shortage in Azerbaijan. It is often difficult for employers to hire workers with the right skills, including both highly skilled professionals and middle-skilled workers. This is largely due to inadequate education. The education system does not meet skill needs of many firms, especially innovative ones. According to Azeri employers, it does not produce necessary practical skills, it does not equip students with up-to-date knowledge, and it does not produce the kinds of skills needed. As a result, young workers often lack some key employability skills, including job-specific technical skills, higher order cognitive skills (problem solving), and socio-behavioral skills (leadership, communication, teamwork).

The consequences of the skill shortage can be severe. They potentially include a slower rate of economic growth and of the modernization of the economy. These are due to employers creating fewer jobs since they cannot find workers with the required skills, and due to smaller investment flows to skill intensive sectors (including FDI). They also include higher unemployment, as many workers are unemployed because they lack the skills demanded by the market, especially in the newly created and more skill intensive jobs. But as the above analysis indicates, some people are unemployed not necessarily because they lack the necessary technical skills, but because they lack adequate socio-behavioral or cognitive skills.

Some degree of a skills mismatch is inevitable and is present in every growing and restructuring economy. It reflects the process of creative destruction and the fact that the skill content of newly created jobs is different from that of jobs that are being destroyed. **The policy challenge is to minimize the extent of a skills mismatch so that it does not impede job creation and economic growth.** A two

pronged strategy is necessary to achieve this objective. First, Azerbaijan needs to improve the quality and labor market relevance of education. Second, it needs to develop a labor market information system to help labor market actors (education and training institutions, students, jobseekers, employers and public employment services) make informed choices.

Making the education system more responsive to labor market needs involves, among other things, strengthening systematic partnership between education institutions and employers so that they can influence curricula design. It also involves the development of professionally-oriented higher education in addition to the academic stream. This responds to the employers' demand for workers with better practical and job-specific technical skills.

The development of a labor market information system involves collecting, publishing and analyzing information on the supply of and demand for skills. Information on the demand for occupations and skills helps students and jobseekers to choose fields of study and invest in skills that will enhance their employment and wage prospects. Information on the supply of occupations and skills helps employers to decide where to invest and which jobs to create. As such, the labor market information system contributes to limiting the extent of a skills mismatch. Creating a *labor market observatory*, which core mandate is to collect and disseminate information on the supply for and the demand for skills, is one way to build a labor market information system in order to address a skills mismatch.