Skills for a Modern Ukraine

Ximena Del Carpio, Olga Kupets, Noël Muller, and Anna Olefir

Overview
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Executive Summary

Ukraine's economic progress has been uneven since the start of the transition in 1991. Productivity is low partly because of the slow pace of market-oriented reforms and the misallocation of the labor force. Half of all workers work in low-productivity sectors, one worker out of five is informal, underemployment is widespread, and the rate of inactivity among older people is among the highest in Europe. Demographic factors—including low mobility, rapid aging, and the decline in the population—are also constraining growth. The recent conflict and economic downturn add urgency to the situation.

One of the key factors limiting productivity gains is the inadequacy of workforce skills, the focus of this report. The level of skills does not necessarily equate with educational attainment: A diploma does not guarantee that graduates perform well in the workplace. Looking directly at prospective employees' skills—formed in and out of school—provides a more accurate view of human capital than years of schooling.

Indeed, a large body of recent empirical work documents the importance of skills, rather than formal educational attainment, in fostering employment and raising productivity. Developing skills increases employability and enables workers to carry out their jobs more efficiently, use new technology, and innovate. Hiring people with better skills allows firms to move up the value chain.

This study aims to provide policy makers in Ukraine with new evidence to influence the design and implementation of public policies on postsecondary education, labor market information and intermediation, and labor policies. To do so, it investigates the nature of skills valued in Ukraine's labor market, identifies labor shortages, assesses constraints to firms' operations, discusses how institutions affect investment in skills, and suggests policy options. The report provides granular evidence from original data from household and firm skills surveys, a data set of online job vacancies, and an assessment of workforce development institutions.

The publication of this report has been made possible through a grant from the Jobs Umbrella Trust Fund, which is supported by the Department for International Development/UK AID, and the Governments of Norway, Germany, Austria, the Austrian Development Agency, and the Swedish International Development Cooperation Agency.

Five key messages emerge from the analysis:

1. Across occupations and sectors, workers need a mix of advanced cognitive, socioemotional, and technical skills to be successful in the labor market.
2. Postsecondary education and training lack relevance for today's labor market.
3. Institutional factors are hindering the efficient allocation of labor and skills development.
4. Gaps in skills are limiting productivity.
5. A range of policies could enhance the development and use of skills.

**message 1: Workers need a mix of skills**

Skills are the abilities to perform tasks and respond to situations. They include competencies, attitudes, beliefs, and behaviors that are modifiable across the life cycle and can be learned and improved through specific programs and policies.

Skills can be divided into three broad overlapping sets:

- **Cognitive skills** can be defined as intelligence or mental abilities. They include basic academic knowledge (such as literacy) and more complex thinking (such as critical thinking and problem-solving).
- **Socioemotional skills** are behaviors, attitudes, and personality traits (such as the ability to manage emotions, achieve goals, and work with others) that enable individuals to navigate personal and social situations effectively.
- **Technical skills** are the specific knowledge needed to perform a task as well as physical skills.

The analysis shows that workers need a mix of advanced cognitive, socioemotional, and technical skills to succeed in the labor market—a finding that is in line with evidence from around the world. A set of skills are highly valued across sectors and types of occupations (table ES.1).

**message 2: postsecondary education and training lack relevance for today’s labor market**

Ukrainians have high levels of basic cognitive skills, but the higher education and training system does not produce enough skills relevant for today’s labor market. Ukrainian firms in key sectors report that the lack of adequate skills is one of the

<table>
<thead>
<tr>
<th>Table ES.1 core cognitive, socioemotional, and technical skills identified as most valued in Ukraine</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type of skill</strong></td>
</tr>
<tr>
<td>Cognitive</td>
</tr>
<tr>
<td>Socioemotional</td>
</tr>
<tr>
<td>Technical</td>
</tr>
</tbody>
</table>

Sources: ULMS-STEP Household Survey 2012; Ukraine STEP Employer Surveys 2014; and job vacancies from HeadHunter online job portal 2015.
most important constraints to hiring. Most employers surveyed believe that the education system does not produce enough people with practical skills, the right kind or level of skills, or up-to-date knowledge.

message 3: institutional Factors Are Hindering the efficient Allocation of labor and skills Development

Five institutional factors are hindering skills development and the efficient allocation of labor:

1. The formal education and training system is not providing students with the skills employers need, and it suffers from weak governance and an inefficient funding system.
2. Skills training outside the formal education system has very low take-up rates. Partnerships between firms and education institutions are scarce, with only a fifth of firms in key sectors maintaining regular contacts with educational and training institutions.
3. Employers see payroll taxes and social security contributions as major constraints to their operation and growth. (Other major constraints include economic and financial uncertainty, political instability, corruption, and crime.)
4. Little reliable information is available on current and emerging skills demands that would allow students, educators, and training providers to make good decisions or make their program offerings relevant to labor market conditions.
5. Despite recent changes, the labor code and other labor market institutions do not facilitate an adaptable labor market or foster conditions that are conducive for the creation of more and better jobs.

message 4: skills Gaps Are limiting productivity

Skills gaps significantly constrain firms’ performance in Ukraine: 40 percent of firms in four key sectors (agriculture, food processing, information technology, and renewable energy) report a significant gap between the type of skills their employees have and those they need to achieve their business objectives. Although skills gaps are not the most pressing constraint firms face, they limit companies’ ability to hire, perform, and grow.

message 5: A range of policies could enhance the Development and Use of skills

Policy options can be organized into three pillars (table ES.2):

• Building foundational skills for new labor market entrants
• Enhancing the development of advanced skills for current and future workers
• Improving the institutional environment to facilitate the use of skills

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**Table ES.2 Overview of Policy Proposals for Improving Skills in Ukraine**

<table>
<thead>
<tr>
<th>Policy Pillar</th>
<th>Components</th>
</tr>
</thead>
<tbody>
<tr>
<td>Build Foundational Skills</td>
<td>Integrate socioemotional development into traditional learning</td>
</tr>
<tr>
<td></td>
<td>Develop a lifelong skills development strategy</td>
</tr>
<tr>
<td>Enhance the Development of Advanced Skills</td>
<td>Build and upgrade qualification and occupational standards</td>
</tr>
<tr>
<td></td>
<td>Introduce financial incentives for firms to promote training</td>
</tr>
<tr>
<td></td>
<td>Enhance the labor market information system</td>
</tr>
<tr>
<td></td>
<td>Build stronger tertiary education leadership structure</td>
</tr>
<tr>
<td></td>
<td>Introduce results-based funding of postsecondary education and training</td>
</tr>
<tr>
<td></td>
<td>institutions</td>
</tr>
<tr>
<td>Improve the Institutional Environment</td>
<td>Reform the labor code (labor costs, contracts, worker protection)</td>
</tr>
<tr>
<td></td>
<td>Build a statistical profiling tool for employment services</td>
</tr>
<tr>
<td></td>
<td>Remove barriers to internal migration</td>
</tr>
</tbody>
</table>

**Pillar 1: Building Foundational Skills for New Labor Market Entrants**

Skills formation is a cumulative process. Interventions have to be implemented as an integrated set across the life cycle, introduced when individuals are biologically and socially ready to acquire particular skills. The benefits of an investment depend on an individual’s existing level of skills.

The home learning environment plays an important role in shaping the formation of cognitive and socioemotional skills. Technical skills are developed after childhood, through informal learning, formal schooling, training, and on-the-job learning. Individuals need to acquire good foundational skills if they are to be able to learn, thrive at school and in the labor market, gain more advanced skills, and adapt to rapidly changing labor market needs.

A variety of interventions can foster socioemotional skills. Interventions are characterized by specific objectives, targeting age period—preschool, school age, youth, and adult age—and places of implementation such as school, work, or centers. Interventions for socioemotional learning must target optimal periods for the development of key skills.

**Pillar 2: Enhancing the Development of Advanced Skills for Current and Future Workers**

Building a strong postsecondary education leadership structure and adopting performance-based financing are promising ways to improve the relevance and quality of postsecondary education. Links between education institutions and private sector firms need to be created. The private sector needs to participate in setting up occupation standards and adapting curricula to the needs of the marketplace.

On-the-job training is an effective way for workers to build advanced skills. The government could provide financial incentives to firms to offer such training, linking them to performance criteria and fund-matching mechanisms to prevent abuse.
Pillar 3: Improving the institutional environment to facilitate the use of skills

Job creation can be encouraged through labor regulation reforms (while ensuring that workers benefit from sufficient social protection). Labor costs can be reduced and contractual diversity increased by shifting toward a flexicurity-like model (with income or activity support instead of rigid job protection). Job creation can also be spurred by encouraging entrepreneurship, through training, access to finance, and advisory services and networking.

A better information system on the labor market is essential to facilitate investments in skills formation and identify demand for skills. Students, their families, and job seekers should have access to reliable information on labor market prospects, job requirements, and wages across fields. The State Employment Service could collect and continuously update information on job vacancies and job requirements (using a methodology similar to the one used in this report).

Removing barriers to internal migration would make it easier for workers to find job opportunities and make full use of their skills. Internal migration could be facilitated by ensuring the portability of social benefits and removing administrative procedures that require people to be officially registered at their place of residence.
Overview

Providing workers with the skills they need to secure good jobs and perform them well is a critical policy challenge in Ukraine, where many employers decry skills deficits and mismatches. Drawing on several sources of original data, this report provides evidence on the importance of three types of skills (advanced cognitive, socioemotional, and technical skills); identifies the skills employers seek; and proposes ways in which policy makers can reform the country’s training institutions and labor laws to increase employment, raise productivity, and put Ukraine on a higher-growth pathway.

stagnation following independence

Under Soviet rule, Ukraine was home to abundant natural resources, a range of industries, and a workforce with high educational attainment. Independence seemed to promise broad-based prosperity. In the early 1990s, its per capita gross domestic product was similar to that of other middle-income countries (such as Brazil, Poland, and Turkey).

Today, Ukraine still has relatively high literacy rates, large numbers of university students, and significant numbers of graduates who contribute to industrial and scientific progress (World Bank 2011). But economic performance has been tenuous at best, productivity is lower than in comparable countries, and the standard of living for the average person was lower in 2015 than it was 25 years ago.

One of the main causes of this disappointing economic performance is the lack or slow pace of reform, especially of policies that regulate labor markets and education and training institutions. The labor code was drafted in 1971 and amended only marginally over the years; it therefore still includes many pretransition features. The antiquated code limits incentives for firms to hire and grow and leads to informal employment, underemployment, and wage arrears.
Stagnation in vocational and postsecondary instruction hinders the ability of training and education institutions to respond to the rapidly changing needs of the labor market. Underfinancing and limited technical capacity have constrained the implementation of reforms that have been approved—and the effectiveness of the reforms that have been implemented is unclear. Population decline and the low internal mobility of the labor force also hold back growth.

As a result of these factors, Ukraine ranks in the bottom tier of countries on indicators rating the ease of doing business. In 2014 it placed 96th out of 189 countries, below most other countries in Eastern Europe and Central Asia (World Bank 2014).

The conflict in eastern Ukraine and an economic downturn further weaken labor market prospects and economic performance more broadly. Since the beginning of the conflict in February 2014, employment has declined, as a result of the loss of job opportunities in Crimea and the near cessation of economic activities in the Donbas region, an important mining extraction and manufacturing area of the country. As of early 2015, 800,000 jobs had been lost in the Donbas region alone. In 2014–15 more than a million people migrated to another part of Ukraine or neighboring countries. Significant employment adjustment has also taken place through reduced hours, unpaid administrative leaves, and wage arrears, which more than tripled between 2014 and 2015, from Hrv 753 million to Hrv 2,437 million.

**The importance of skills in Boosting employment and productivity**

A large body of empirical work documents the importance of skills, rather than just formal educational achievement, in fostering employment and productivity (see reviews by Borghans and others 2008, Almlund and others 2011, Kautz and others 2014, and OECD 2015). Skills increase employability; enable workers to perform their jobs more efficiently, use new technology, and innovate; and allow firms to move up value chains (Banerji and others 2010; Arias and others 2014). A better skills development strategy has the potential to overcome structural challenges by improving firms’ performance and increasing the productivity of the Ukrainian economy.

The term *skills* refers to competencies, attitudes, beliefs, and behaviors that are malleable across an individual’s development and can be learned. Schools are a privileged place for teaching skills, but they are not the only venue where skills are formed. Family background, the living environment, extracurricular activities, and the workplace all affect skills development.

Skills are multidimensional and can be categorized into three broad overlapping sets (figure 0.1):

- **Cognitive skills** can be defined as intelligence or mental abilities. They include basic academic knowledge (such as literacy) and more complex thinking (such as critical thinking and problem-solving).
Figure 0.1 Framework for cognitive, socioemotional, and technical skills

- **Socioemotional skills** are behaviors, attitudes, and personality traits that enable individuals to navigate personal and social situations effectively (by managing emotions, achieving goals, and working well with others, for example).
- **Technical skills** can be defined as the specific knowledge needed to carry out one's job as well as physical dexterity.

**employer Demand for Advanced cognitive, socioemotional, and technical skills**

Skills gaps are significantly constraining firms’ performance in Ukraine. In a 2014 survey of four key sectors (agriculture, food processing, information technology [IT], and renewable energy), 40 percent of firms reported significant gaps between the skills their employees have and the skills they need to achieve the firm’s business objectives (figure 0.2). About half of all firms in food processing and IT (a sector in which most employees have postsecondary education levels) decry the lack of skills. The lack of skills is less salient in the agriculture and renewable energy sectors, but at least 20 percent of firms in both of those sectors report that skills are inadequate.

Skills gaps limit a company's efficiency, service quality, and ability to retain and grow its client base. They make it difficult for firms to hire the right people, especially in higher-skilled occupations and in occupational categories that require job-specific technical skills.

What are the skills that employers value and lament the lack of? The most highly demanded skills are a mix of advanced cognitive, socioemotional,
and technical skills. The results of the 2014 Ukraine STEP (Skills Toward Employment and Productivity) Employer Survey and a data set of 2015 job vacancies show that advanced cognitive skills that allow workers to analyze and solve problems, manage their time, gain new knowledge and learn new methods, and communicate effectively are highly demanded in Ukraine (table O.1). Employers look for workers who not only think well but who also possess socioemotional skills, including the ability to manage their emotions and behaviors (self-management, resilience, ethics); set goals and be willing to learn (achievement motivation); and work well with others (teamwork). A core set
of technical skills is harder to define, because they are often occupation- or job-specific, and the only source of detailed technical skills (the job vacancy data set created for this report) tends to target higher-skilled occupations. With this caveat in mind, a range of employers looks for sales skills, knowledge of markets and products, and computer skills.

The skills employers value most are consistent across sectors and occupations. Employers from the four key sectors surveyed ranked the top five (out of 14) skills virtually identically (table O.2):

1. job-specific technical skills (technical)
2. professional behavior (socioemotional)
3. problem solving (advanced cognitive)
4. ability to work independently (socioemotional)
5. teamwork (socioemotional)

These skills are equally important for high-skilled and low- and middle-skilled occupations. This uniformity is remarkable given the diversity of these sectors with regard to location, size, number of jobs, occupational structure, and extent of reported skills gaps.

Skills and Labor Market Outcomes of Urban Ukrainians

Ukrainians in urban areas have good basic cognitive skills (the ability to evaluate and reflect from written text). These skills levels are roughly equivalent to levels in Organisation for Economic Co-operation and Development (OECD) countries; they are higher than in all middle-income countries for which comparable data are available.

Skills are relatively well distributed across demographic groups, but large gaps exist across generations. Adults educated during the transition years (people who were 34–45 in 2014) have significantly lower average levels of basic cognitive skills than their older or younger peers (figure O.3).

Differences in socioemotional skills across age, gender, or educational level are modest. These skills cannot be meaningfully compared across countries, because they tend to be driven by culture.

Ukrainian workers with strong skills—particularly strong socioemotional skills—have better labor market outcomes than people with weaker skills. People in Ukraine who are creative, proactive, perseverant, responsible, adaptable, and emotionally stable earn more, have higher occupational status, and are more likely to be active in the labor market. Basic cognitive skills do not appear to be significantly associated with these outcomes (possibly because employers simply assume that prospective workers have these skills).

The importance of cognitive and socioemotional skills, as well as other factors, varies across age groups and occupation type. Skills, especially socioemotional skills, explain more of the wage difference among youth (15–29) and older workers (45–64) than among middle-age workers (30–44) (figure O.4). Among older workers, socioemotional skills, in particular grit (perseverance) and openness to
### Table 0.2: Skills and Labor Needs of Ukrainian Firms and Skills Gaps in Key Sectors

<table>
<thead>
<tr>
<th>Sector</th>
<th>Main regions</th>
<th>Five most valued skills</th>
<th>Percent of firms reporting significant skills gap in their workforce</th>
<th>Percent of firms reporting significant skills gap in their workforce</th>
<th>Percent of firms reporting significant skills gap in their workforce</th>
<th>Percent of firms reporting significant skills gap in their workforce</th>
<th>Percent of firms reporting significant skills gap in their workforce</th>
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<td>4. Ability to work independently</td>
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<td></td>
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<td>5. Social work</td>
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<td></td>
<td></td>
<td>2. Professional behavior</td>
<td></td>
<td>2. Technician</td>
<td>2. Technician</td>
<td>2. Service and shop worker</td>
<td>3. Associate professional in food technology</td>
<td>3. Associate professional in food technology</td>
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<td></td>
<td></td>
<td>4. Teamwork</td>
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<tr>
<td></td>
<td></td>
<td>5. Ability to work independently</td>
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</tbody>
</table>

Note: The table provides an overview of the skills and labor needs of Ukrainian firms in key sectors, along with the percent of firms reporting significant skills gaps in their workforce, and the three most demanded occupational categories as well as the top five occupations with major skills gaps.
### Table 0.2 Skills and Labor Needs of Ukrainian Firms and Skills Gaps in Key Sectors (continued)

<table>
<thead>
<tr>
<th>Sector</th>
<th>Main regions</th>
<th>Five Most Valued Skills</th>
<th>Percent of Firms Reporting Significant Skills Gap in Their Workforce</th>
<th>Top Three Demanded Occupational Categories</th>
<th>Top Three Occupational Groups With Major Skills Gaps</th>
<th>Top Five Occupations With Major Skills Gaps</th>
</tr>
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<tbody>
<tr>
<td></td>
<td></td>
<td>4. Ability to work independently</td>
<td></td>
<td></td>
<td></td>
<td>4. Computer system designer and analyst</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5. Teamwork</td>
<td></td>
<td></td>
<td></td>
<td>5. Diverse types of clerks</td>
</tr>
</tbody>
</table>

Source: Ukraine STEP Employer Survey 2014.
Figure 0.3 Average Adult reading proficiency levels in selected countries, by Age cohort, 2012


Note: Data for Armenia, Georgia, and Ukraine are for urban areas only. Data for 23 OECD countries (OECD-23) are national. Reading proficiency scores range from 0 (lowest) to 500 (highest). For a description of reading scores, see table A.2 in appendix A.

experience (enjoyment of learning and being receptive to new ideas), are associated with the largest wage variation.

Observable factors other than skills—including demographics, job function, and location—explain a larger portion of wage variations. Potential work experience (the difference between the person’s age and the approximate age at the end of his or her studies) matters greatly for youth, and gender is important for middle-age adults, reflecting the disproportionate representation of women in low-paid sectors (education, health care, retail trade, individual services).

**Reforming Education and Training to Meet the Needs of the Workplace**

The workforce development system, including education and training institutions, needs to be reformed to respond to today’s labor market needs. This includes focusing on the development of skills that are in demand rather than achieving a given level of education (in particular at the postsecondary level), completing traditional cognitive and technical learning with socioemotional learning, and improving education and training institution governance.

**Including Socioemotional Skills in Conventional Learning**

Formal education and training programs rarely teach socioemotional skills, even though people with higher levels of such skills are more successful.
**Figure o.4 Factors Associated with variation in Hourly Wages in Urban Ukraine, by Age Group and occupation, 2012**


Note: Results obtained using a Fields regression-based decomposition of the log of hourly wages (Fields 2003). The height of each bar represents the total variation in wages explained by the data used for that regression (coefficient of determination = $R^2$). The subcomponents of each bar show the contribution of each factor to total wage variation. Cognitive skills refer to reading proficiency. Socioemotional skills include openness to experience, conscientiousness, extroversion, agreeableness, emotional stability, grit, hostile attribution bias, and decision making. Potential work experience is the difference between the person's age and the approximate age at the end of his or her studies (it also includes a squared term). Family background refers to mother's education and main language spoken at home (Ukrainian, Russian, both, or neither).

in school and at work and have better health and other social outcomes (Heckman, Stixrud, and Urzúa 2006; Borghans and others 2008, Almlund and others 2011; Kautz and others 2014; and OECD 2015). Socioemotional skills are not a substitute for cognitive or technical skills but act as a pedestal to learn better, strive, and achieve labor market success. Socioemotional skills are by nature malleable and therefore can be fostered through interventions. These skills are highly demanded by employers and should be part of a comprehensive skills development strategy.

A core set of socioemotional skills emerges from the analysis of job vacancies and household and firm surveys conducted for this report (table O.3). It includes skills that help people manage their emotions and behaviors (control, resilience, ethics); set goals and be willing to learn (achievement motivation); and work with others (teamwork). These skills are best acquired and reinforced at particular points in the life cycle.

**Rethinking Postsecondary Education and Training Institutions**

Ukraine’s education system lacks flexibility, quality standards, and relevance for today’s labor market needs. Sixty percent of firms in the four key sectors
**table o.3 socioemotional skills Demanded by employers in Ukraine, according to various taxonomies**

<table>
<thead>
<tr>
<th>Skills demanded by Ukrainian firms</th>
<th>Equivalent in PRACTICE taxonomy of labor-market oriented skills</th>
<th>Associated Big Five personality traits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional behavior</td>
<td>Control and ethics</td>
<td>Conscientiousness</td>
</tr>
<tr>
<td>Self-management</td>
<td>Control</td>
<td>Conscientiousness</td>
</tr>
<tr>
<td>Stress resistance and perseverance</td>
<td>Resilience</td>
<td>Conscientiousness (grit), emotional stability</td>
</tr>
<tr>
<td>Goal orientation and motivation to learn</td>
<td>Achievement motivation</td>
<td>Conscientiousness (grit), openness to experience</td>
</tr>
<tr>
<td>Teamwork</td>
<td>Teamwork</td>
<td>Extroversion, agreeableness</td>
</tr>
<tr>
<td>Leadership</td>
<td>Initiative</td>
<td>Conscientiousness, openness to experience</td>
</tr>
</tbody>
</table>

Sources: Guerra, Modecki, and Cunningham 2014; Ukraine STEP Employer Survey 2014; HeadHunter job vacancy data set 2015.

Note: PRACTICE (an acronym for Problem Solving, Resilience, Achievement Motivation, Control, Teamwork, Initiative, Confidence, and Ethics) is a taxonomy of labor-market oriented skills elaborated by Guerra, Modecki, and Cunningham (2014).

report that formal education institutions do not provide students with the skills employers need (figure 0.5). They claim that the system produces too few people with practical skills, the right kind or level of skills, up-to-date knowledge, good attitude, and self-discipline.

Most adults in Ukraine complete at least upper-secondary school, and almost half have tertiary diplomas. Ukraine also performs well on international student assessments such as Trends in International Mathematics and Science Study (TIMSS), ranking in the same group as high-income countries like Italy, Norway, and Sweden. There are questions, however, about the relevance of education received before the transition (often vocational) and when students should be tracked into technical vocational education and training (TVET) schools. As a result, employers have difficulties to discern skill levels solely based on the education level of the person.

The government has crafted strategies to boost school quality and relevance, but the lack of financial resources and the ad hoc coordination of stakeholders has prevented it from implementing many of them. Funding for vocational training is not based on explicit criteria with performance indicators, and coordination between various government agencies and nongovernmental actors is weak.

Many formal postsecondary education and training institutions need to be reformed to improve their strategic framework, system oversight, and service delivery. Ukraine’s workforce development system is weak by international standards (figure 0.6). Education and training institutions lack clear direction for policy elaboration and implementation; the fragmentation of responsibilities makes it difficult to agree on a common vision, devise policy, and coordinate with employers. The funding system inefficiently allocates resources, adversely affecting the provision of textbooks and the ability to upgrade obsolete infrastructure and equipment of vocational schools.
Figure 0.5 Ukrainian Firms’ views of preparation of students for the Workplace in Four sectors

Source: Ukraine STEP Employer Survey 2014.
Note: Data are for firms in four sectors: agriculture, food processing, information technology, and renewable energy.

Figure 0.6 Assessment of Ukraine’s Workforce Development system

Note: The scores, ranging from 1 to 4, represent rating of the country’s system development in the considered dimensions: 1 stands for latent (absence of good practice), 2 stands for emerging (instances of good practices), 3 stands for established (systemic good practices), and 4 stands for advanced (attainment of highest global standards). Ratings across dimensions are assessed by World Bank experts.

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Ukraine scores relatively well with regard to service delivery, a result of the diversity of nonstate providers active in the training market. Performance of education institutions is weaker in other dimensions, such as providing reliable information on current and emerging skills demanded and monitoring and evaluation of service delivery.

Relaxing Stringent Labor Regulations
Employers see payroll taxes and social security contributions as major constraints to their operation and growth. In 2015 the overwhelming majority of firms in the four sectors surveyed faced problems related to hiring, employing, and firing workers (figure O.7). The biggest problems were high payroll taxes, social security contributions, and wages (high overall and minimum wage). An already large tax wedge on labor increased in 2014–15 as a result of two major changes: Additional taxes for military expenditures were temporarily imposed on personal income, and the tax rate for monthly salaries exceeding 10 minimum salaries (Hrv 12,180) was raised (from 17 percent to 20 percent). These changes increased tax wedges by at least 1 percentage point.

High labor taxation and burdensome labor regulation have prompted employers to evade strict labor regulations by hiring workers informally. Informality has risen steadily since the economic and financial crisis of 2008. Workers hired informally are less likely to be offered training or benefits that allow them to access training. Increased informality therefore undermines the government's goal of making the economy more productive and more competitive.

Figure O.7 Major or severe labor-related constraints cited by Ukrainian Firms in Four Key sectors

Source: Ukraine STEP Employer Survey 2014.

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Key amendments to the labor code made between 2010 and 2015 have made labor relations more restrictive. It discourages firms from increasing formal employment by failing to reduce relatively high labor costs or allowing contracting arrangements that help employers weather business cycles. Instead, it has added new fines, penalties, and restrictions, making it even less attractive for employers to hire.

The efficiency of labor regulations reform would depend greatly on constraining economic and political factors. Most employers report that economic and financial uncertainty, political instability, excessive taxes, corruption, and crime are more of a direct hindrance than labor-related limitations (figure 0.8). Employers also judge that capital constraints and competition from the informal sector make it very difficult for many Ukrainian firms to compete.

**Policy Agenda for the Modern Workplace**

An integrated skills development strategy for employment and productivity in Ukraine should consider three policy pillars:

1. **Build foundational skills for new labor market entrants.** Foundational skills—that is, a solid base in cognitive and socioemotional skills—are imparted largely in early childhood, primary, and lower-secondary education, and play a critical role in the eventual quality of the workforce. Future workers need to acquire good foundational skills to learn better, thrive at school and in the labor market, gain more advanced skills (including technical skills), and be adaptable to rapidly changing labor market needs.
2. **Enhancing the development of advanced skills for current and new workers.** This entails improving the relevance of higher education and training programs (like developing feedback mechanisms between the education-training institutions and firms), setting up incentives to extend the coverage of training programs, and improving the labor market information system for informed decision making.

3. **Improve the institutional environment to ease the use of current workforce’s skills.** There are critical institutional factors that facilitate or hinder employment and job creation. These include an institutional environment that enables more hiring, better job matching, and facilitating worker internal mobility. These pillars call for a set of policy priorities: reforming education and training institutions, reforming the institutional environment, create firm-level incentives to train, and provide assistance to individuals (table 0.4).

### Pillar 1: Building Foundational Skills for New Labor Market Entrants

The formation of cognitive and socioemotional skills is a multistage process affected by environment and investments. Skills formation is a cumulative process and interventions have to be implemented as an integrated set across one’s life. The familial environment (the household’s living standards, parents’

<table>
<thead>
<tr>
<th>Priority</th>
<th>Corresponding actions</th>
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<tbody>
<tr>
<td>Reform the institutional environment</td>
<td>• Institutionalize a system that allows providers of education, training, and lifelong learning to identify the skills employers demand and integrate them into sector program curricula.</td>
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<td>• Reform labor regulations to reduce labor costs, which disincentivize training and job creation.</td>
</tr>
<tr>
<td>Reform education and training institutions</td>
<td>• Validate and align education and training curricula with sector employment needs and required industry credentials.</td>
</tr>
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<td>• Improve the strategic orientation and oversight of the workforce development system.</td>
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<td>• Provide career awareness opportunities, starting in secondary school, in partnership with local industry.</td>
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<tr>
<td>Create firm-level incentives to train</td>
<td>• Create systemic partnerships between employers and education and (formal and informal) training institutions.</td>
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<td>• Offer incentives for on-the-job and off-the-job training and opportunities for apprenticeships, internships, and fellowships, to provide early sector workplace experiences and entrepreneurship.</td>
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<td>• Evaluate and enhance social security contribution tax rebates to promote job creation and investment in worker skills.</td>
</tr>
<tr>
<td>Provide assistance to individuals</td>
<td>• Improve the effectiveness of public employment and training services to facilitate access to jobs, lifelong learning, and skills upgrading opportunities for all workers and training for productive entrepreneurship.</td>
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<td></td>
<td>• Improve the functioning of employment and training assistance programs to help vulnerable populations (especially internally displaced people and the long-term unemployed) acquire skills relevant to the labor market and become economically active.</td>
</tr>
<tr>
<td></td>
<td>• Provide financial incentives for skills upgrading and continuous training.</td>
</tr>
<tr>
<td></td>
<td>• Ease constraints to accessing financing for productive entrepreneurship.</td>
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education, and relationships within the family) and home learning environment play a tremendous part in shaping the production of cognitive and socioemotional skills. Marketable skills are developed after childhood through informal learning, formal schooling, training, and on-the-job learning. National institutions such as the health care system and the school system are major components that can alter the cognitive and socioemotional development of an individual. The benefits of an investment depend on an individual’s prevailing level of skills.

Interventions for socioemotional learning must target optimal periods for the development of key skills, namely when individuals are biologically and socially ready (Guerra, Modecki, and Cunningham 2014). Primary school-age childhood and adolescence are optimal (but not the only) periods—primary school because that is when children first need to interact with others on their own (parents largely do it when the kids are younger). In adolescence more complex social interactions emerge due to neurobiological changes, larger influence of peer acceptance, and social changes that provide opportunities to develop more complex patterns of social problem solving. The period between the ages of 6 and 11 is optimal for all dimensions of socioemotional skills but younger or older ages are also optimal across dimensions. For example, resilience is best developed from birth through age 11, while ethics is optimally developed between the ages of 6 and 18.

Socioemotional skills can be fostered by a variety of interventions, characterized by specific objectives, targeting age period—preschool, school age, youth, and adult age—and places of implementation such as school, work, or centers. Mentoring, parenting, and human interactions are the unifying themes of successful skills development strategies across the entire life cycle (see Heckman and Mosso 2014 and Kautz and others 2014 for reviews of interventions fostering skills over the life cycle). Early childhood interventions—like those promoting parent-child interactions—offer the largest returns and greatly influence long-term outcomes. For school-age children, a range of countries have implemented system-wide reforms to incorporate socioemotional skills in learning standards and curricula, training not only children but also teachers and school principals. Many early or middle childhood programs also aim to foster cognitive skills. For adolescents, most promising programs integrate aspects of work into traditional education and/or provide mentoring. Extracurricular and after-school programs using arts or sports to teach socioemotional skills are also valuable alternative approaches. Socioemotional skills can also be included in job training programs in additional to technical training, like in the youth training programs implemented in many Latin American countries. Many unknowns remain with regard to the right dose of training of these programs, the sequencing, the focus on single or multiple facets, their long-term impact, quality, design of mechanisms, and incentives. These considerations should be kept in mind to design interventions and integrate them into existing structures.

**Pillar 2: Enhancing the Development of Advanced Skills for Current and New Workers**

Building a strong leadership structure and adopting performance-based financing are promising ways to improve the quality of the post-secondary education.

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To align the Ukrainian system with well-managed workforce development systems around the world, it will be critical for the government to follow through in the following five areas:

- A high-level leadership committee to set the strategic plan and the vision of the workforce development system, to align its policies with the country's socioeconomic goals, and to ensure coordination among stakeholders
- A more effective institutional setup for implementation of the National Qualification Framework (NQF)
- Regular evaluation of the impact and enhancement of existing training programs for all modes of delivery with regard to graduates' labor market outcomes
- Funding linked to enrollments, performance, and effectiveness of training programs
- Fostering competition among vocational education and training (VET) institutions to enhance the provision of quality educational services

A major shift to improve the relevance of postsecondary education is to establish steady links between education institutions and enterprises by setting up standards and adapting curricula. To ensure to train workers with skills that are demanded by employers, postsecondary education institutions should systematize partnerships with organizations in industry to develop occupation standards and adequate curricula and regularly review them. Ideally, the identification and quality review of occupation and skills standards for the workplace would be coordinated by a special government body dedicated to this task. Financial support and technical assistance from local and international partners, donors, and the private sector should be sought to ensure proper implementation and integration of the new standards throughout the education and training system. Occupation standards would help the private sector to play a more active role in curriculum design. As an example, Chicago's college system was fully reformed to align its curricula and activities with the needs of employers. As one of the most important institutions beyond the formal education system that provide opportunities for lifelong learning, the State Employment Services of Ukraine could also tie training and retraining to local labor demands more closely.

Financial incentives for firms could be considered to promote on-the-job training, an effective way for workers and labor market newcomers to build advanced skills. On-the-job training can take various forms such as training for permanent employees or opportunities for apprenticeships, internships, and fellowships for new workers to provide early sector workplace experiences. An employer training investment program that assists interested businesses in training their employees could be targeted at companies looking to expand, hoping to relocate to favorable geographic areas, or in jeopardy of closing. Program participation should be made contingent on criteria that address productivity concerns (such as having clear job creation/retention goals) and have fund-matching mechanisms to prevent abuse. With respect to off-the-job training, short-term work schemes can retrain participants to be better qualified for occupations.
available in their local labor market. The State Employment Services of Ukraine could act as a bridge between firms or job seekers and training providers by coordinating the design of training, sharing equipment, and establishing teacher-practitioner arrangements, among others. Whatever the setting, the training programs should be carefully monitored and evaluated to ensure their quality.

A better information system on the labor market is essential to facilitate fruitful investments in skills formation and identifying the demand for skills. Students, their families, and job seekers should have access to reliable information on labor market prospects across higher education fields and institutions and job requirements. Career and labor market information that help intervene early in the decision making can prevent misalignments later. Outreach efforts are critical and could include online introduction to education and training programs, classroom speakers, plant tours, and shadowing experiences while in school. A labor market information platform should also contain up-to-date information on skills and occupations in demand for workers and educators and training providers: on job vacancies, their requirements (for instance, with regard to experience, education, or skills), wage information in the sector and occupancy (by personal and geographic characteristics), among other relevant dimensions.

**Pillar 3: Improving the Institutional Environment to Ease the Use of Current Workforce’s Skills**

A strategy to increase the use of people’s skills is to encourage job creation through labor regulation reforms while ensuring workers benefit from sufficient social protection. In the Eastern Europe and Central Asia region, Ukraine has a high tax wedge—the difference between the total cost of labor for an employer and the take-home pay that the worker receives. The government of Ukraine should evaluate the effectiveness of social security contribution tax refunds currently in place (since 2013) and where labor costs can be further reduced, for longer-term measures (for a detailed review of policy options to reduce labor costs, see Kudo 2011). More contractual diversity would also be a lever for job creation by easing the recourse to temporary forms of employment, increasing the length and scope of term contracts, and allowing flexible working hours. However, contract diversity and reduced labor costs should not come at the expense of workers’ protection in case of job loss, meaning that the government should shift from the protection of jobs to protection of workers by providing support during periods of transition from one job to another (a model called “flexicurity”). Support can be provided either through income (unemployment insurance) or active labor market programs like retraining.

Promoting the best use of skills also requires efficient intermediation between job seekers and jobs. Efficient labor intermediation services rely on comprehensive information about labor demand, as emphasized in the agenda for pillar 2, but also require to address the full range of constraints faced by a heterogeneous vulnerable population in the labor market (for example, long-term unemployed, youth, informal workers). In this spirit, the State Employment Service could
improve its services in developing and using a statistical profiling tool, which can also be used to link individuals to short-term and long-term social assistance for those who are less able to work. Such a tool can help avoid duplication in the provision of services and, in the conflict context, can help in the integration of internally displaced people (IDP) by registering and providing them with labor and social services and also assistance with a focus on activation.

Removing the barriers to internal migration would allow workers to find more job opportunities and make full use of their skills. Ukraine’s low internal mobility per international standards is mainly due to the regulatory framework. Ensuring the portability of social benefits across region and removing administrative procedures that require people to be officially registered at their place of residence, although many people prefer not to register a new residence for various reasons, would support internal migration of workers.

notes

1. The assessment is based on the Systems Approach for Better Education Results (SABER), a World Bank tool that allows countries to document and assess their workforce development policies and institutions.

2. International experience from various countries that have undergone similar reforms or lead in this area (such as Australia, Ireland, the United Kingdom, the Republic of Korea, and Malaysia) should be assessed.

3. Short-term work schemes are not uncommon in Ukraine, but their take-up rate can be increased by not only tying the work activities suited to the education level of the participants (for example, less manual and more intellectual in nature) but also tying the program to occupational retraining which responds to the demands of the local labor market.

4. A methodology tested in this report provides an example of collection of job vacancies and identification of job requirements. This exercise could be pursued and continuously updated by the State Employment Service in partnerships with the local private sector.

references


Ukraine’s economic progress since its independence in the early 1990s has been uneven partly because of the slow pace of reforms, unfavorable demographic factors, and low productivity. One key factor that limits Ukraine’s success is that the skills of its workforce do not adequately meet the needs of a modern economy. Although the country has achieved high literacy levels and has provided a majority of graduates with solid basic knowledge, the postsecondary education and training system fails to equip workers with the right advanced skills for labor market success.

*Skills for a Modern Ukraine* provides new evidence on the nature of skills that are valued in the labor market and proposes a set of policy options to improve the formation and use of skills. Household and firm surveys and a data set of online job vacancies show that workers need a mix of advanced cognitive skills (such as problem solving and communication), socioemotional skills (such as self-management and teamwork), and technical skills (such as computer programming or sale skills) to be successful in the labor market and meet employers’ demand. Policy makers should establish steady links between educational institutions and enterprises (by establishing occupational standards and adapting curricula to firm demand) so that the goal is to learn and develop skills for the labor market, rather than only attendance or government planning. To identify continuously the demand for skills and facilitate fruitful investments in skills formation, a labor market information system is needed. Nonetheless, forming better skills would be beneficial only if the workforce can put these skills to use with more flexible labor regulations.

*Skills for a Modern Ukraine* will be of particular importance to policy makers, researchers, and others interested in human development and employment issues in Ukraine.