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RUSSIAN FEDERATION AGING PROJECT

STATE OF ADULT EDUCATION IN RUSSIA:

ENSURING THAT OLDER WORKERS CAN ACQUIRE SKILLS FOR THE FUTURE

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September 12, 2015

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† This paper was prepared as a background note for the World Bank report "Searching for a New Silver Age in Russia: The Drivers and Impacts of Population Aging" under the guidance of Victoria Levin. We thank Andrey Podolskiy, Kirill Vasiliev, Dmitry Chugunov, Emily Sinnott, and Johannes Koettl-Brodmann for their contributions to this note. The team greatly benefited from comments by Juan Manuel Moreno, Lars Sondergaard, and Birgit Hansl. The team also thanks Michal Rutkowski, Ana Revenga, Alberto Rodriguez, Roberta Gatti, and Omar Arias for their guidance in the preparation of this paper.

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EXECUTIVE SUMMARY

The aging of the Russian population and the rapid shrinking of its labor force in coming decades will make the human capital each worker contributes increasingly vital for sustaining economic output and growth. While improvements in general education are necessary to build the foundation for a productive future labor force, a broad-based and effective system of adult education can provide second-chance opportunities for current workers to enhance their productivity and lengthen their working lives and for low-skilled immigrants to be integrated into the workforce. How well the Russian Federation addresses these multiple needs at and beyond the workplace will depend on how effective its adult education system is. This study targeting policymakers outlines the problems of Russia's growing skills gap, especially the shortage of higher-order cognitive and socio-emotional skills, and examines the current state of adult education. The review raises two major questions: (1) Why do so few Russians participate in adult education activities? (2) What incentives and financing would raise the participation rate and heighten the relevance and quality of training and education courses?

INTRODUCTION AND OVERVIEW

This study focuses on the state of adult education in Russia today. The prospect of changing demographics, especially the aging and shrinking of the Russian labor force, suggests that adult education should have a more prominent role in sustaining economic output and growth and ensuring healthy, active, and prosperous lives. The study discusses the main issues and constraints for the expansion of adult education and offers policy options to help Russia attain a more productive workforce and thus deal with the challenge of changing demographics. As issues of workforce skills development and training for unemployed and marginal social groups have been covered at length in the recent World Bank Skills Report for Russia (World Bank 2013), this study will focus on the imperatives of adult education in the 21st century and the current state of adult education in Russia: its organization, the demand and supply of adult education services, achievements, and constraints. The study is *not* intended to be comprehensive, further study and analysis will be required to fully understand the underlying issues and trends, especially why so few Russians take advantage of adult education. Nor will there be detailed discussion of how the system is financed because there is a dearth of comparable data. This study simply offers an exploratory overview, based on which further studies or policy interventions can be identified as the government proceeds with formulating its national strategy for adult education.

Adult education is defined as learning by adults after they have completed initial education and training. While there is no single common interpretation of the term "adult education," this study adopts the definition of the Commission of the European Communities (2006), which states that adult education covers "all forms of learning undertaken by adults after having left initial education and training.". Such a broad definition encompasses the two main functions of adult education, professional and personal. The first function ensures an individual's socialization through acquisition of new professional roles, development of professional competences, and mobility. The second makes it possible to supplement and enrich the process of socialization by familiarizing the individual with universal human values, language, culture, thinking, feeling, activities, and communication.

Adult education is an important component of the education system because it can solve urgent tasks of socioeconomic and political development. The Final Declaration of the Sixth UNESCO International Conference (2009) stated that for every single year the average level of education of the adult population is raised, there is a corresponding increase of 3.7 percent in long-term economic growth and a 6 percent increase in per capita income. Along with structural

socioeconomic shifts and political changes, the knowledge economy is placing continuous new demands on people at and beyond the workplace. In the medium term, the rapid decline in the able-bodied population in Russia will escalate the urgency of the remaining workforce becoming more productive. While improvements in general education are necessary to lay the foundation for a productive labor force, a broad-based and effective system of adult education that emphasizes skills upgrading and retraining can provide second-chance opportunities for current workers to enhance their productivity and lengthen their working lives. At the same time, with the ranks of elderly Russians rising, continuous education provides one of the most effective means to mitigate an individual's entrance into the "third age," enabling healthier and more active aging.

The main challenge for Russia's education system today can be formulated as a crisis of competence: how to provide the types of skills a fast-changing labor market needs. Traditional formal basic education does not prepare students to respond effectively to continuous socioeconomic and technological changes; fundamentally, it cannot provide a person with sufficient knowledge, abilities, skills, and qualities to efficiently perform social roles throughout the lifecycle. Indeed, the skills obtained in school and university only partly meet the demands of the new economy and thus need upgrading and retooling throughout life. There is evidence of a growing skills gap in Russia's workforce, in particular a shortage of higher-order cognitive and socio-emotional skills, as demonstrated by the Russia Skills Report (World Bank 2013). Moreover, results from the Program for the International Assessment of Adult Competencies (PIAAC; OECD 2013a) suggest there are significant occupational inequalities in the basic cognitive skills of adults and relatively little on-the-job training for and use of information technology by older workers.

Adult education in Russia also has an important social role in promoting inclusion of immigrant workers and vulnerable groups. While increasing immigration from other countries helps Russia address the aging challenge, effective adult education targeted to migrant workers can ensure their successful integration into the host country through familiarization with Russia's sociocultural environment and promotion of Russian language proficiency. Adult education can also play a more protective role of adults as rapid social and economic changes increase their sense of vulnerability, anxiety, and legal insecurity, as well as raising concerns about fairness and transparency.

While adult education coverage and resources in Russia have grown in recent years, and while several models of providing it have already emerged, to date there is no comprehensive policy in place. In recent decades, Russia has experienced a major shift in adult education primarily through

the development of training within corporations and other businesses. As the resource base for continued adult education has been expanding, the number of providers has steadily increased. Yet to date all that can be seen are a few models and a smattering of programs and regional initiatives that try to provide adult professional education. In most countries adult education consists of a plethora of models and providers with a comprehensive policy framework that ties it together. That type of framework has to be based on a system of occupational standards, certification, equivalence, and accreditation where viable financing and incentives are in place. That is what current adult education in Russia still lacks. Its coverage trails the Organization for Economic Co-operation and Development (OECD) countries. According to OECD (2011), on average 40 percent of adults take part in formal and informal education in its member countries and that goes up to 70–80 percent in the best-performing countries. In Russia, all forms of adult education cover about 30 percent of Russia's adult population (Agapova 2008). For adult education to become a defining social institution that can help Russia deal with its impending demographic challenge, policies are needed to establish a genuine system of adult education and significantly expand coverage.

I. Setting the Stage: Living Long and Prosperous Lives

By heightening the productivity of current workers and promoting the social inclusion of vulnerable groups, adult education can help Russia address the multiple problems posed by demographic forces and changes in the global economic structure. All countries today are facing stiff challenges with regard to sustaining economic growth and securing long and prosperous lives for their citizens. Education is one means to address these challenges. How to achieve this goal can be framed by analyzing how the adult education system can help Russia respond to the following three challenges:

1. Globalization, competition, changes in business organization and in demand for skills in the labor market, and implications for the renewal of skills;
2. Adjusting the composition of the labor force with more older workers and increasing replacement by low-skilled migrant workers; and
3. Securing healthy and prosperous aging, to both increase the quality of life and also reduce the costs of long-term care, publicly funded pensions, and health-related expenses.

EDUCATION AND SKILLS IN THE 21ST CENTURY FROM CRADLE TO GRAVE

In today's globalized economy, knowledge has become critical for sustaining competitiveness and economic growth. Whether framed as the cause of or the panacea for today's social, political, and economic ills, the phenomenon of globalization and global competition changes the fundamentals of any government socioeconomic strategy. The authorities may avoid the phenomenon or fully embrace it—and both have reasonable adherents—but they cannot ignore its impact on policymaking in every sector of the economy. One of the most important consequences of this trend is that application and continued renewal of knowledge (education, skills, information, and know-how) have become critical factors in sustaining competitiveness and economic growth. For many countries an abundant supply of low-wage, unskilled labor used to be a route to rapid growth and national prosperity. This is no longer the case. In today's world, which is characterized by intense global competition and rapid technological change, the key to prosperity is a well-educated, technically skilled workforce that can produce high-value-added, knowledge-intensive goods and services; in addition, workers must be employed in enterprises that have the managerial capacity to find, adapt, and adopt up-to-date technology and sell sophisticated goods and services in local and global markets.

For continued competitiveness, the education system must be capable of producing well-educated workers who can sharpen and revamp their skills throughout their working life. In particular, the education system must be able to produce the broadest possible base of human capital. If knowledge is increasingly recognized as central to competitiveness, it follows that the higher the share of people with a fundamental level of instruction, the better.[‡] The second imperative for the education system is to promote continuous expansion and updating of each individual's knowledge base. Levy and Murnane (2004) have identified a range of skill levels, each requiring more extensive use of cognitive skills and decision-making capacity, that are usually needed in any productive process.[§] According to Autor, Levy, and Murnane (2003), the need for "expert thinking" and "complex communication" has grown in recent decades while the need to conduct more routine tasks has declined in most OECD countries. Similar trends can already be observed in emerging European

[‡] The term "fundamental level" is used to refer to the minimum set of skills, competencies, and knowledge necessary to add value to economies. What constitutes this fundamental level is always open to discussion but at the very least it includes numeracy and literacy in a national language.

[§] (1) **Expert thinking**: solving problems for which there are no rule-based solutions, for example, diagnosing the illness of a patient; (2) **complex communication**: interacting with humans to acquire information, explain it, or persuade others of its implications for action; (3) **routine cognitive tasks**: mental tasks that are well described by logical rules, for example, maintaining expense reports; (4) **routine manual tasks**: physical tasks that can be described using rules, for example, counting and packaging pills; (5) **nonroutine manual tasks**: physical tasks that cannot be described as following a set of 'If-then-Do rules' but rather they require optical recognition and fine muscle control.

economies (Arias et al. 2014). The trend has several implications beyond the impact on the subjects taught and the pedagogical approach taken in schools. To emphasize the absorption of transversal skills, which are growing in importance in the knowledge-based economy, pedagogical reforms worldwide have emphasized two main ideas: (1) introduction of inquiry-based learning and (2) adaptation of teaching to the learning capacity of individual students. Workers are expected to act more like professionals, taking responsibility for making decisions without turning to hierarchical structures. This requires new sets of competencies. Many countries have adopted pedagogical reforms with such characteristics as student-centered learning, competency-based curricula, and a focus on critical thinking. Also important are teamwork, creative thinking, and proactive learning.

Since currently the formal education system in Russia does not meet the needs of the knowledge-based economy, investment in quality basic education is vital to prepare future generations to be productive workers. Although the demographic profile of Russia's population will change, there is a need to sustain investment in pre-university programs for three reasons. First, the share of 0–19-year-olds will remain relatively constant in relation to the overall population, with only a moderate decline in absolute terms. Second, investment in the early years of basic education and both cognitive and non-cognitive skills has been shown to be vital to further skills acquisition and labor market outcomes later in life. And third, while the recent expansion of funding (from less than 3 percent of GDP in the late 1990s to 4.1 percent in 2010–12) demonstrates that the Russian state is paying more attention to education, the country's 15-year-olds continue to score significantly below OECD averages in the Program for International Student Assessment (PISA) reading, math, and science testing. Moreover, the Russian education system still mainly rewards those who are skilled at being passive knowledge recipients; such higher-order cognitive skills as flexibility, problem-solving, and judgment are inadequately rewarded (World Bank 2013).

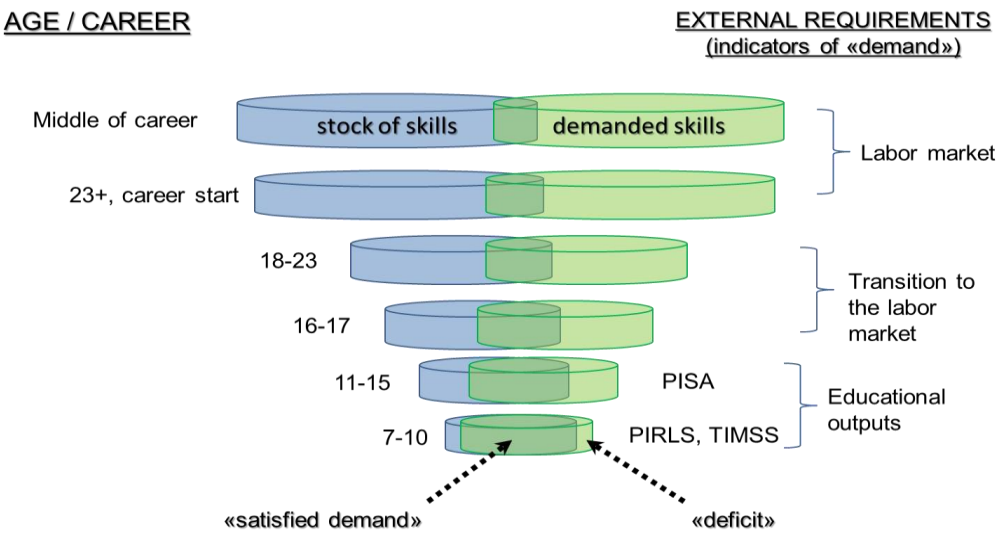
Promotion of social inclusion through adult education can improve the well-being of Russia's citizens and ease the impending burden of aging. The education system's clientele is changing along with Russia's general demographic profile, and the education needs of prime-aged and older workers need to be addressed. Moreover, the growing ranks of low-skilled immigrant workers who come into the Russian workforce as adults can be integrated into Russian society with targeted education programs. Finally, the impending growth in the relative proportion of elderly suggests that the country needs a broader set of adult education opportunities to promote healthy and active aging and help reduce the potential increase in the burden an aging population will impose on the health care and pension systems.

The traditional model of "one-shot" education can be modified to promote continuous learning and respond to the demands of a knowledge economy. Traditional education systems are usually portrayed as a pyramid, with the compulsory education system at the base. Subsequently, a subset of students is selected to continue education at each higher level of instruction. To address the growing demand for education for the purposes of social mobility, individual levels of education have usually become stratified, with different options for secondary or higher education made available to students of different abilities. Those who fall off the steps of the pyramid are sometimes reclaimed by vocational education programs and less formal options. Usually, those who finish one level of instruction without meeting the requirements of the next are expected to join the workforce, making formal education essentially a one-shot opportunity. With the need to continually renew skills and expertise to adapt to the demands of a knowledge economy, several elements of this traditional model are being modified. Although this has implications for compulsory education, with a new emphasis on educational success for all, adoption of a lifelong learning paradigm with a robust system of adult education is essentially a call for the transformation of post-compulsory education. Secondary, higher, and vocational education are increasingly expected to respond to the exigencies of competitiveness.

Skills Gap Growing as the Russian Workforce Ages

There is a skills gap in Russia's current and future workforce, and it grows with age. In Russia the one-shot approach to education is reflected in the growth of the skills gap within the workforce, which becomes wider with age. The skills gap grows as students progress through the education system and widens further as they enter the labor market (World Bank 2013; see Figure 1). Development of basic cognitive skills (literacy and numeracy) is adequate in primary education, but the quality of secondary education is not sufficient to supply the demands of an innovation-based economy. In 2006 Russia was ranked as the top global performer in reading achievement according to the Progress in International Reading Literacy Study (PIRLS) survey. Secondary education in Russia gives students an adequate supply of knowledge but is less capable of developing higher-order cognitive skills. As measured by the PISA international standardized tests in reading, math, and science for 15-year-olds, the quality of secondary education in Russia is higher than in other countries of similar per capita GDP but significantly below the OECD average.

Figure 1. Skills Demanded and Actual Skills Available, by Age Groups



Source: World Bank 2013.

Note: The benchmarks for skills demanded are set by the expected learning outcomes reflected in international education quality assessments and reported by employers in the firm survey conducted for this study.

Socio-emotional and higher-order cognitive skills are in great demand in Russia. In a World Bank survey (2013), employers reported especially severe shortages in socio-emotional skills, such as ability to work with people, and higher-order cognitive skills, such as ability to solve problems—more severe than shortages of technical skills. Problem-solving ability is in demand for all categories of workers. Many employees are called on daily to solve problems, and employers look for problem-solving ability in making hiring decisions. In addition to problem-solving deficiencies, managers often lack decision-making ability, leadership qualities, knowledge of foreign languages, and the ability to work with people; specialists lack decision-making ability and skills to work independently or cooperatively with others; blue-collar workers lack conscientiousness. Given such significant deficits in socio-emotional skills, workers who possess them can greatly improve their chances of finding jobs. In particular, efficient, persevering workers in Russia have better employment opportunities and higher incomes, and emotionally stable workers merit a large earnings premium.

Innovative companies face the greatest shortages in socio-emotional and higher-order skills. Innovative and traditional companies differ most in their need for the skills in which the economy is most deficient, with the highest unmet needs reported at the level of specialists. Innovative firms in general report a larger gap in all types of skill sets than traditional companies, and they cannot bridge the gap simply by raising salaries because they often seek combinations of skills, such as open-

minded and creative leaders, specialist-communicators, and creative blue-collar workers who show initiative, that are not available in the labor force at any price.

The limited competence of blue-collar workers can impede innovation and productivity growth and perpetuate earnings inequality and low social mobility. The PIAAC is a multicycle program to assess the professional skills and competencies of the working-age population (aged 16–65) in OECD countries, with about 5,000 people interviewed in each country. While the survey data for Russia are not fully representative of the entire country's working-age population (it excludes the population of the Moscow municipal region), it is informative of the pattern of skills gaps in the rest of the country. As can be seen in Figure 2, the skill level across the basic competencies in literacy and numeracy tends to decline with lower qualifications, and it seems especially low for semiskilled blue-collar workers; much of the apparent slope can be explained by the higher skills of workers with higher education (Figure 3). However, important differences remain even after taking into account other characteristics, which suggests that the nature of work and work-related tasks may be a factor in maintaining and possibly further developing information-processing skills. Indeed, blue-collar workers appear to have the fewest cognitive skills, especially problem-solving, although none of the differences are statistically significant at the 5 percent level. Low competence among blue-collar workers can be a cause for concern: it can impede innovation and introduction of any changes in the technological and organizational structures, which stifles productivity growth. For lower-skilled workers, the combination of inadequate education and lack of opportunities later in life to improve skills can form a vicious circle: poor education means fewer opportunities, and therefore there are fewer opportunities to become better educated.

Figure 2. Levels of Competence by Occupation

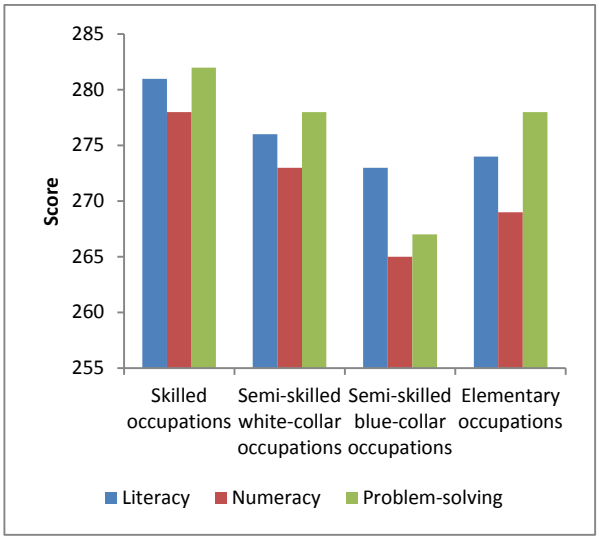
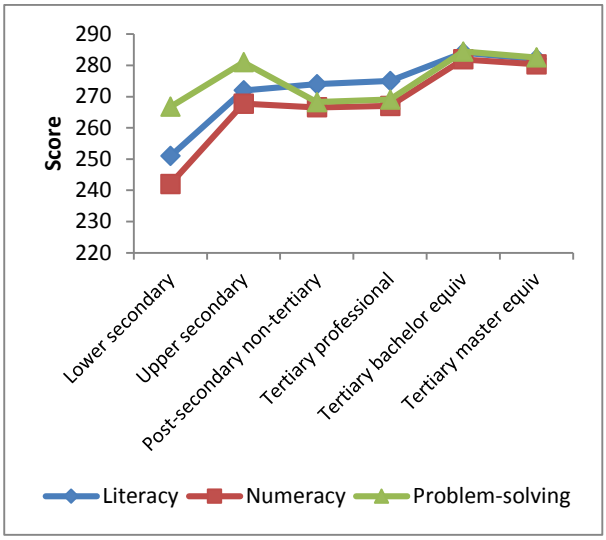


Figure 3. Levels of Competence by Education



Source: OECD PIAAC data.

Note: The data from Russia are preliminary and may be subject to change. The sample for Russia does not include the Moscow municipal region. The data published therefore do not represent the entire Russian resident population aged 16–65 but rather the Russian population excluding those residing in the Moscow municipal area.

Age and adult competencies have a complex relationship in Russia. Figure 4 shows scores in the three skills at 5-year age intervals. In general, the oldest are less skilled than younger age groups. However, unlike the strong monotonic negative relationship observed between age and skills in most other countries (see Figure 5 for Poland), the competencies of Russians do not vary much throughout the life cycle and peak in middle age. Moreover, the second-lowest estimated scores are obtained by the 30–34-year-olds in literacy and numeracy (although they are not significantly different from the average). Rather than age-related effects, the pattern seen could reflect more the drastic changes that have occurred in the Russian education and labor market over the past 20–25 years, which have affected particular cohorts. In particular, the relatively high performance of Russians in their 40s might be explained by their secondary or post-secondary education in the 1980s, when there was an emphasis on generic problem-solving abilities—practical and theoretical—in all fields. On the other hand, the skill set of the group aged 30–34, who had been in secondary education during perestroika and the formation of a new Russian state, may have been negatively influenced by the country's transformation. Whatever the cause, if further analysis confirms these preliminary results, adult

education can introduce targeted programs for this relatively low-performing cohort to increase their productivity and ultimately their employability.

Figure 4. Russia: Levels of Competence by Age Group

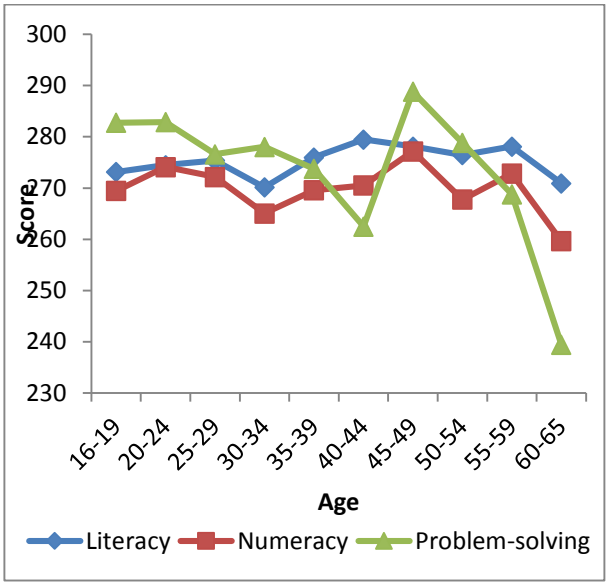
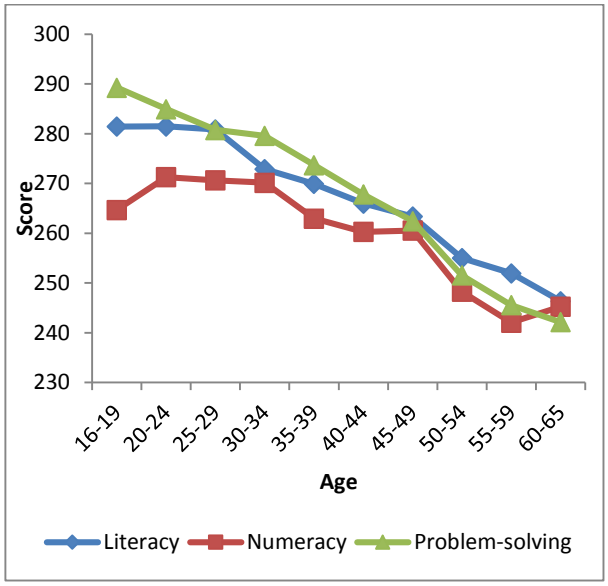


Figure 5. Poland: Levels of Competence by Age Group



Source: OECD PIAAC data.

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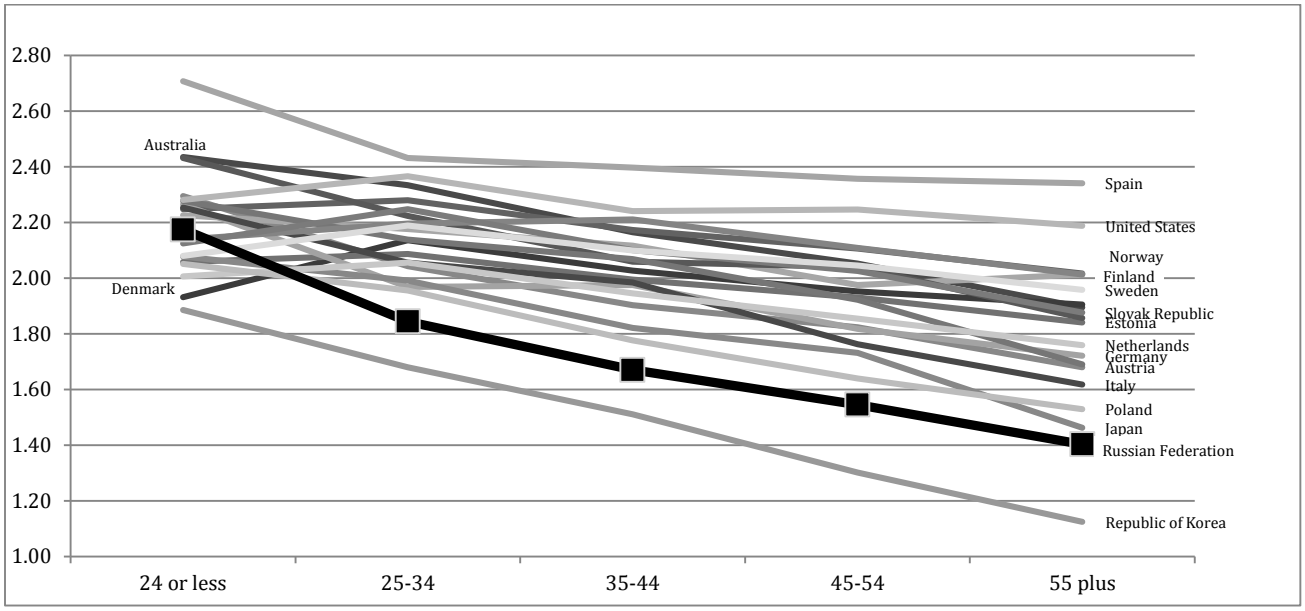
Worryingly for the country's future competitiveness in a knowledge-based economy, Russian adults perform poorly in on-the-job learning and use of information and communications technology (ICT) on and off the workplace. Learning at work—whether through direct training, peer-to-peer, observation, or encouragement of management to engage in improving production and processes—is closely correlated with productivity gains and innovation. According to the PIAAC index of learning at work (Figure 6), Russian prime-age and older adults perform poorly compared to the other countries studied, obtaining the second-lowest scores, above only the Republic of Korea. Similarly (see Figure 7), the application and use of ICT at the workplace in Russia is below other OECD countries. With the emphasis on increased application of knowledge in the productive sector as well as more extended application and use of ICT, it is evident that if Russia sharpened its focus on on-the-job training and ICT skills, it could reap significant payoffs in both productivity and innovation. Russia similarly performs less well in terms of ICT use at home (Figure 8). While Russia follows the

trend of other OECD countries, with fewer people using ICT as they get older starting as early as 25, the relative lower level of use of ICT should be contrasted with the growing demand for self-learning using distance technologies.

Figure 6. The Index of Learning at Work

(Averages for all adults, by age in 10-year bands, PIAAC 2012)



Source: OECD PIAAC data.

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Figure 7. The Index of Use of ICT Skills at Work

(Averages for all adults by age in 10-year bands, PIAAC 2012)

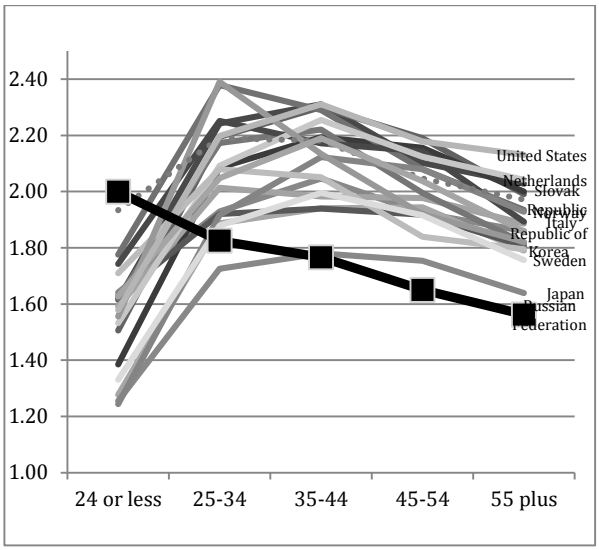
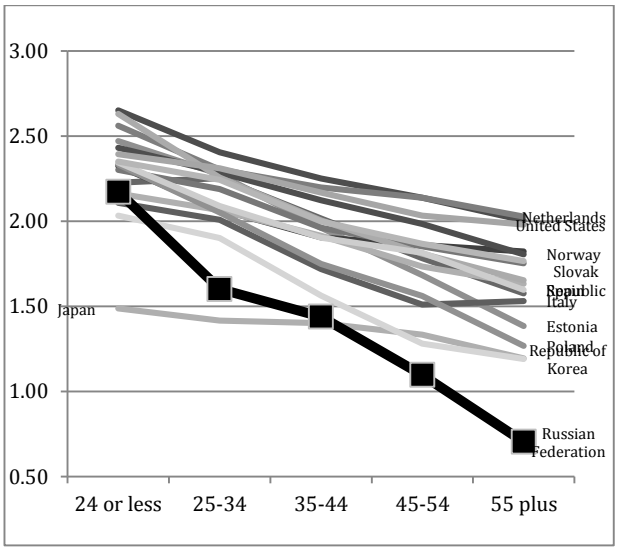


Figure 8. The Index of Use of ICT Skills at Home

(Averages for all adults by age in 10-year bands, PIAAC 2012)



Source: OECD PIAAC data.

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The Aging of Russia's Population Is Speeding up and the Working-Age Population Is Shrinking

In coming decades Russia's population will age due to increased longevity and relatively low fertility; moreover, the structural forces inherent in the current age pyramid will accelerate the shrinking of Russia's workforce. As can be seen from Figure 9 and Figure 10 and as is discussed in more detail in the companion study on active aging (Levin 2015), the Russian population is aging, although not as rapidly as in some other European countries. A population is considered relatively old when the share of those over 65 exceeds 8–10 percent (Kinsella and Velkoff 2001). In 2013, this share constituted about 13 percent of the total Russian population, an increase of 35 percent from 9.6 percent in 1989. This share has been stable for the last decade but is projected to grow to about 19 percent by 2031, according to Rosstat. Concurrently, and perhaps more importantly, the country

is already losing about 1 million workers a year, which implies an aggregate loss of more than 20 million workers by 2050.

This demographic challenge implies that the importance of adult education will grow in terms of supporting employability and increasing the productivity of every able-bodied individual. As the life expectancy of Russians improves, the potential for taking advantage of this increased longevity depends on whether they can attain longer and more productive working lives. Greater labor force participation at older years and higher productivity from each individual worker can turn the challenge of population aging into an opportunity. To achieve this objective, however, will require adaptation of the education system at all levels. Initial formal education needs to imbue the future labor force with ever-increasing human capital to compensate for the diminishing numbers of workers. However, these gains can only be observed in the medium term, as students in the reformed system work their way up the age pyramid. On the other hand, a broad-based and effective system of adult education, including skills upgrading and retraining, can give current workers second-chance opportunities to attain enhanced productivity and a longer working life, which would reap immediate payoffs. Moreover, the effectiveness of labor market or social protection reforms designed to incentivize the participation of older Russians in the labor force (discussed in the companion study on active aging, Levin 2015) depends vitally on their employability, which could be enhanced by targeted programs of adult education.

Figure 9. Share of People aged 65+ in Total Population, International Comparison, 2010 and 2050

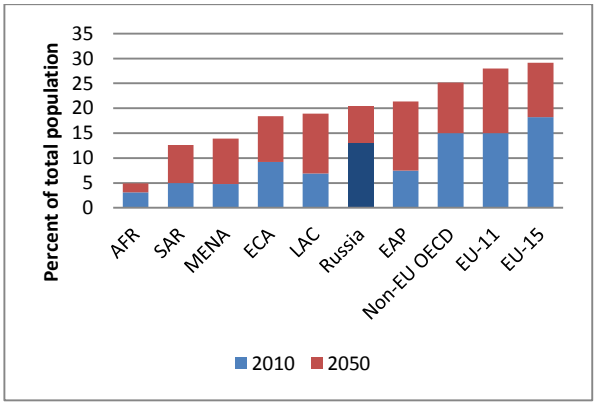
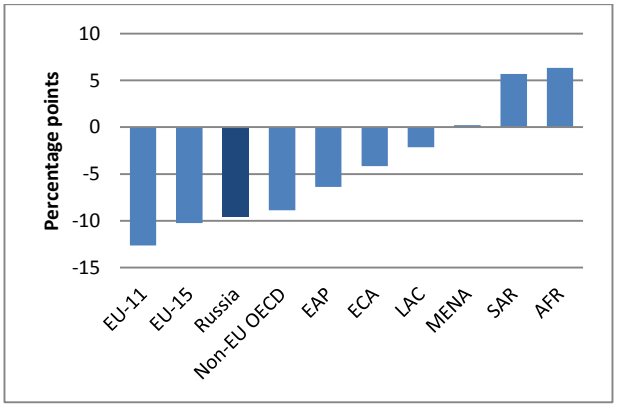


Figure 10. Size of the Working-age Population, International Comparison, 2010 and 2050



Source: UN Population Division data (2012 revision).

Note: AFR=Africa; SAR=South Asia; MENA=Middle East and North Africa; ECA=Europe and Central Asia; LAC=Latin America and Caribbean; EAP=East Asia and Pacific; Non-EU OECD=Non-European Union countries of Organization for Economic Cooperation and Development; EU=European Union.

II. Current State of Adult Education in Russia

Providers and Organization

Adult education is the most flexible and mobile step in the holistic system of lifelong learning. It should therefore meet the requirements of predictability, adaptability, and accessibility (Vishnjakova 1999). The objective of adult education is threefold: (1) to meet the needs of individuals in terms of self-improvement and adaptation to rapidly changing socioeconomic, political, moral, and psychological standards; (2) to provide society with individuals who are socially active, adaptable, law-abiding, and proactive members; and (3) to prepare competent and efficient employees who can take the country to a higher level of socioeconomic and cultural development.

Adult education in Russia can be both formal and nonformal. *Formal adult education* refers to secondary education, primary and secondary vocational education, higher education, postgraduate education (master's and doctoral studies), and professional development and retraining of specialists and managers who hold higher and secondary vocational degrees in universities, departments, and courses of professional development and professional retraining. *Nonformal adult education* refers to professionally oriented and general culture courses in national universities, adult education centers, lecture halls, and on television and various courses of intensive learning (Galichin, 2012).

The market for adult education services consists of providers supplying educational programs to a variety of consumers. Suppliers are private and public providers of educational services and networks of educational institutions, such as academies, institutions of professional development, training centers, corporate universities, purveyors of language, computer, accounting, and other courses, and people's universities. Consumers of educational services can be working adults, such as current senior officials and experts, civil servants, public sector employees, private entrepreneurs, and immigrant guest workers; individuals looking for jobs, such as the unemployed individuals and demobilized military; or nonworking individuals looking for personal development. Among the products exchanged on the market for adult education are programs of secondary, higher and postgraduate education; professional development programs; retraining programs and initial vocational education programs that involve retraining the unemployed; social education (initial

vocational education of immigrants, vocational rehabilitation programs); programs having no explicit occupational orientation; language courses; courses in psychology and design; and open enrollment and distance learning programs.

The adult education system in Russia can be organized based on the differing objectives of consumers. Four components of the adult education system can be identified based on distinctive consumer groups with different objectives for seeking adult education:

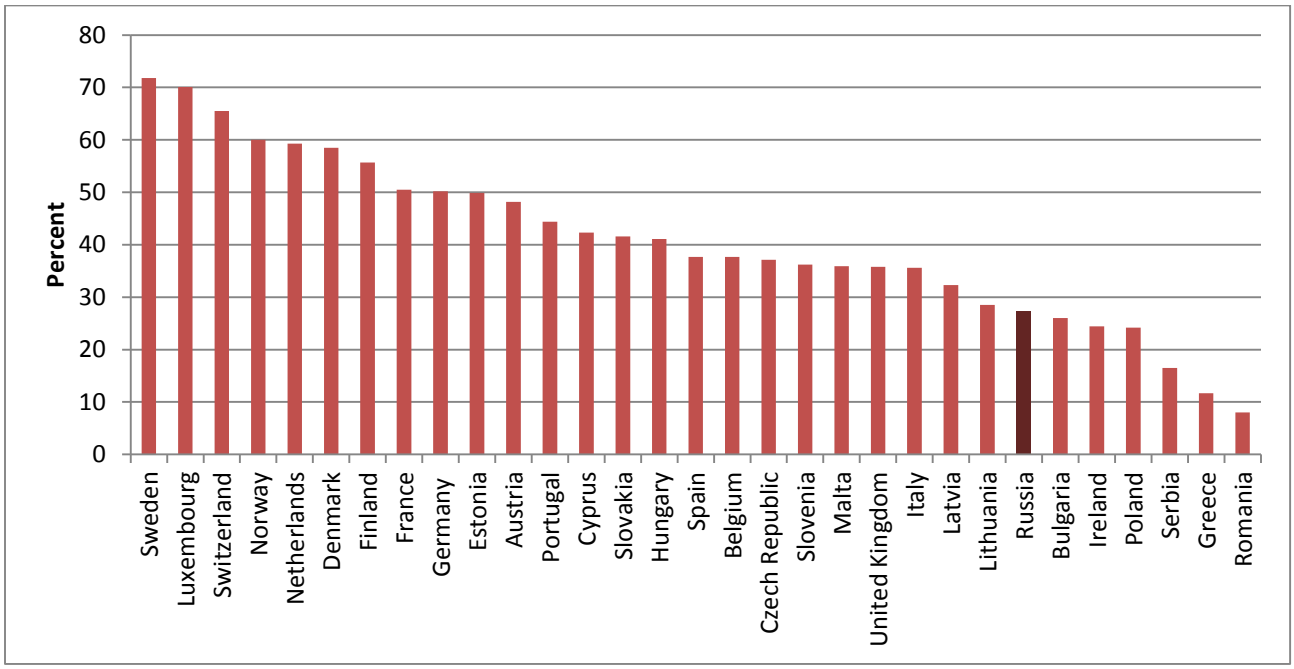
1. *Firm employees*: The first component covers wage employees by continuous professional education (CPE), which helps to build the professional basis of human resources for a modern high-tech economy. Within this group, employees of large companies, small and medium firms, and state-owned enterprises can be further distinguished.
2. *Vulnerable groups*: The second component aims to enhance the social inclusion of vulnerable groups, such as immigrants and the elderly, who participate to become better adapted to changing life conditions. This component includes education directed to adaptation and rehabilitation of social and occupational groups otherwise unable to adapt themselves to the rapid changes in the social environment.
3. *Individuals interested in new occupations or second careers*: Component three offers programs for the professional development of individuals attempting to change careers or start their own businesses (for example, hairdressers, masseuses, web designers, and entrepreneurs).
4. *Individuals interested in personal development*: Finally, a diverse set of programs is designed to fulfill the individual's need for personal development, which may or may not be tied to a current or future job, such as courses on languages, psychology, culture, cooking, communication skills, driving skills, computer literacy, personal growth and development, and public speaking courses.

Coverage of Adult Education in Russia, especially CPE

Participation in adult education in Russia is relatively low. Existing statistics do not constitute a comprehensive picture of conditions and development trends in adult education; many pertinent questions will be left unanswered until the reporting improves. Until recently, a reliable comparison of adult education coverage rates was virtually impossible. The statistical yearbook *Education in the Russian Federation: 2007* (Higher School of Economics 2007) was the first to have a section on lifelong learning that supplied adult education statistics. In Russia, continuous education in 2006 covered 22.4 percent of adults aged 25–64. In 2008, this figure rose slightly, to 24.8 percent (according to statistical digest *Education in the Russian Federation: 2010*). By 2013, according to *Indicators of*

Education: 2013, 27.3 percent of Russian adults were engaged in some form of adult education. Figure 11 shows that Russia is lagging behind not just the best-performing countries, like the Nordics, where more than half of all adults take adult education courses, but also some of its Eastern European peers, such as Slovakia, Hungary, the Czech Republic, and the Baltic states, many of which are also struggling with low productivity and an aging labor force.

Figure 11. Adult Participation in Formal and Nonformal Education, Russia and Selected Comparators



Source: Russia (*Indicators of Education: 2013*), other countries: Eurostat 2011 Adult Education Survey.
Note: 2013 data for Russia; 2011 data for other countries.

The structure of adult education in Russia has shifted away from pursuit of formal education toward CPE and self-education. Table 1 presents data on the participation of adults in continuous education; it demonstrates slow but growing coverage until 2010, reaching 30 percent of adults aged 25–64, and a slight decline in 2012 to 27.3 percent. While the share of Russians pursuing formal education (secondary, vocational, and postgraduate degrees) has dropped from 4.5 percent of the adult population to 2.7 percent, CPE and self-learning have gone up. The share of adults engaged in CPE rose significantly, from 8 percent in 2006 to 14.8 percent in 2010, though it went down to 13.5 percent in 2012. As discussed earlier, growth in CPE is likely to reflect higher employer emphasis on and demand for skills training. Meanwhile, the proportion of people who opt for self-education went

from 17.4 percent in 2006 to 24.4 percent in 2012. This is probably due to the development of information technologies and online education. Internet-based learning may become a useful instrument for expanding adult education in Russia, especially given its vast territory.

Table 1. Participation in Continuing Education, Respondents Aged 25–64, Percent

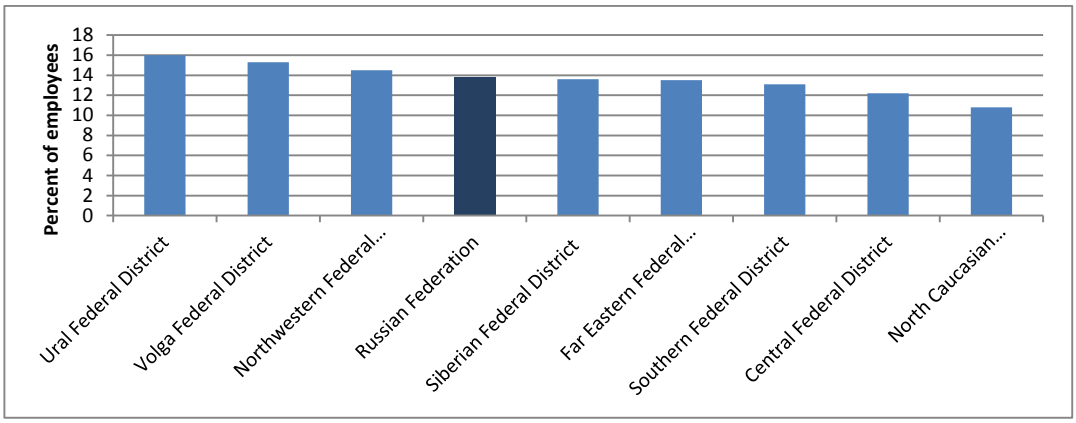
	2006	2008	2010	2012
Total participants in last 12 months	**22.4**	**24.8**	**30.4**	**27.3**
By type of lifelong learning				
Formal education:	**4.5**	**2.7**	**2.4**	**2.7**
Continued professional education	**8.0**	**12.1**	**14.8**	**13.5**
Self-education, including:	**17.4**	**20.9**	**24.4**	**24.4**
Self-education with use of printed materials	12.7	12.8	13.6	15.4
Visits to libraries, museums, exhibitions, etc.	6.3	4.4		
Learning though training programs on radio and TV	2.0	3.1	3.8	4.3
Learning using audio or videotapes and other technical means	2.9	3.1		
Internet-based learning (from 2010: learning with a computer, including Internet-based learning)	0.8	2.1	7.9	4.6
Learning through supervision and mentorship	3.7	5.6	5.1	4.2

Source: Indicators of Education: 2013, http://www.hse.ru/primarydata/io2013.

In comparison to other OECD countries, Russia's coverage of CPE is very low. The rate of participation in CPE programs in European countries varies from 14 percent of employees in Greece to almost 60 percent in the Czech Republic (Cedefop 2008). In Russia, according to Rosstat's bulletin "Continued Professional Education of Workers in Firms in 2013," CPE programs were attended by just 13.8 percent of all employees, putting Russia significantly behind more advanced OECD countries.

There is considerable regional variation in CPE coverage. As education in Russia is, in principle, provided by the regions, it is not surprising that there is significant regional variance in the scope and focus of adult education. The Ural Federal District had the highest CPE participation rate at 16 percent and the North Caucasian Federal District had the lowest at less than 11 percent (Figure 12).

Figure 12. Participation in Continuous Professional Education in 2013, by Federal District



Source: Rosstat 2013 data.

Prime-aged workers comprise half of CPE participants in Russia, but workers under 40 are most active. According to official statistics, in 2013 about 4.4 million employees in Russia received CPE. Of those, more than half (2.3 million) were prime-aged adults (30–49 years); 24 percent were younger than 30; and 18 percent were of pre-retirement age (50–59 years). Less than 5 percent of all employees who received CPE in 2013 were 60 and above (Figure 13). While the age breakdown of education participants is affected by the age pyramid structure, workers aged 25–39 are the most active in obtaining CPE, with more than 16 percent participating. They are followed by 40–49-year-olds at 15.2 percent and workers under 25 at 14 percent. Participation in CPE rapidly declines as workers reach the pre-retirement years (Figure 14). Thus, while younger and older workers may need more training to become or remain productive, they currently benefit least from CPE.

Figure 13. CPE Participants by Age, 2013

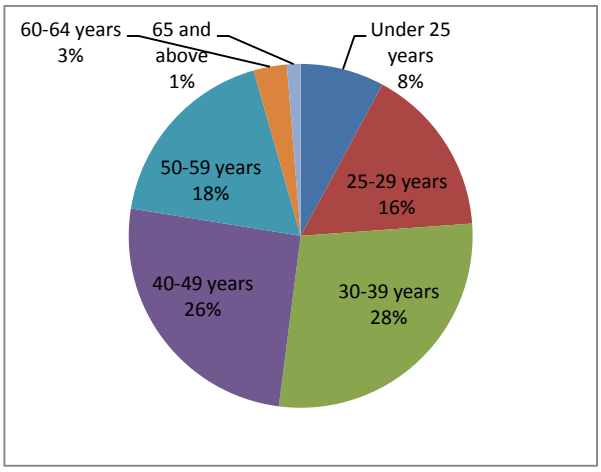
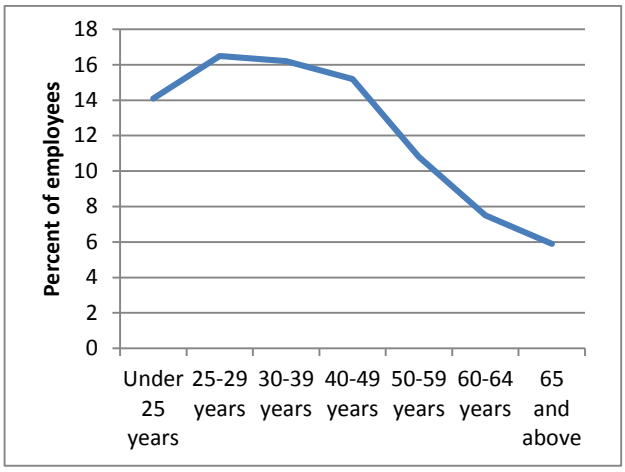


Figure 14. Participation Rate in CPE by Age, 2013

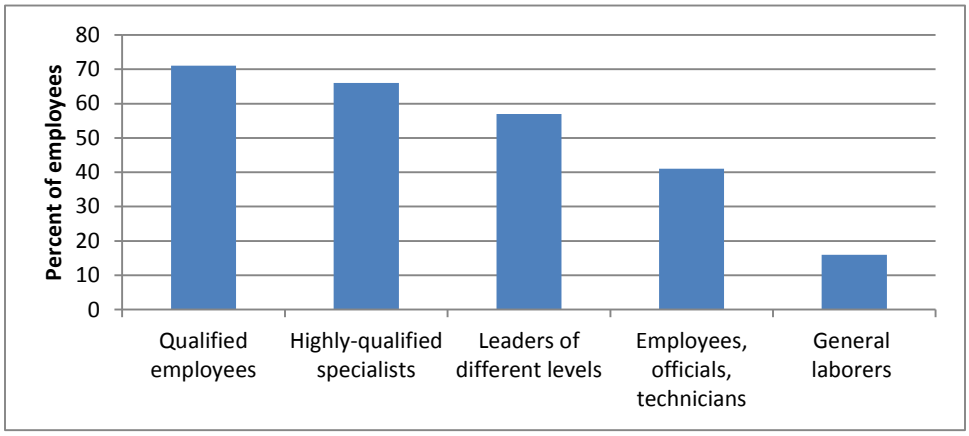


Source: Rosstat 2013.

Low-skilled workers are least likely to obtain professional education, which is a significant cause for concern. According to Higher School of Economics statistics, qualified and highly qualified employees are most active in professional development (see Figure 15). Given the minimal competence of low-skilled workers, as demonstrated by the OECD PIAAC results, and the heightened demands for skills and qualifications as workers engage in increasingly complex tasks, the low uptake of professional education by least-skilled workers can become an obstacle to promotion of the knowledge-based economy in Russia and can perpetuate earnings inequality and lack of social mobility.

Workers in manufacturing and social services comprise more than half of all participants in CPE, but those in mining firms are by far most likely to benefit from it. Almost 25 percent of all CPE participants in Russia work in manufacturing firms, about 20 percent work in education, and another 13 percent in health and social services (Figure 16). However, participation rates in CPE look quite different (Figure 17): 26 percent of workers in mining participate in CPE, the highest participation rate of all sectors. The transport and communication sector and utilities and manufacturing also have high participation rates; workers in wholesale and retail trade, agriculture, fishing, and hotels and restaurants are the least likely to take up such training. By age group, employees aged 25–29 are the most active CPE participants except for wholesale and retail trade and social services (including education and health), where the most active group is aged 30–49.

Figure 15. Employees in Training, by Qualification



Source: Higher School of Economics 2012, Monitoring of Economics of Education.

Figure 16. CPE Participants by Industry, 2013

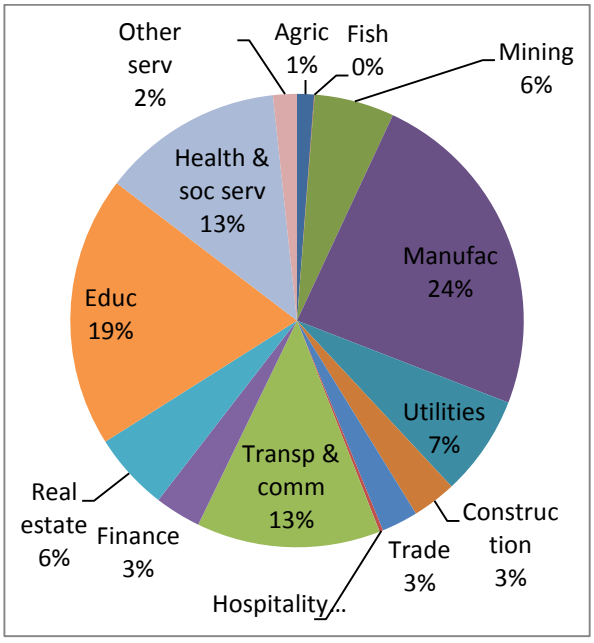
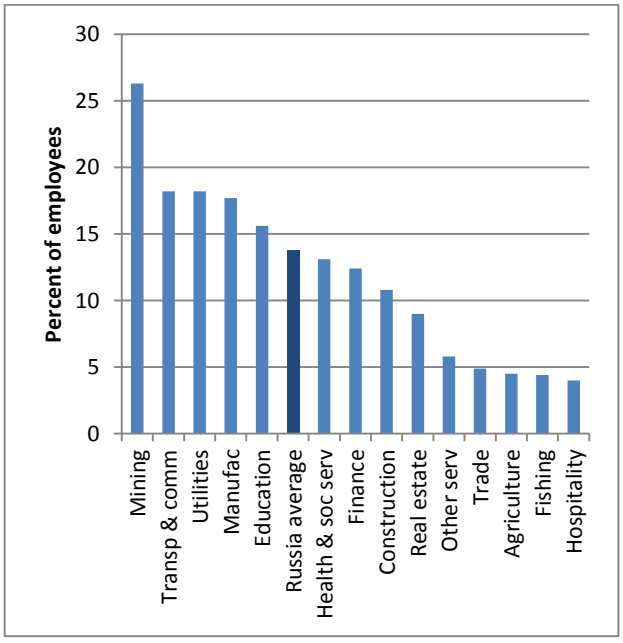


Figure 17. Participation Rate in CPE by Industry, 2013



Source: Rosstat 2013.

The vast majority of workers engaged in CPE participate in professional development in their own specialization rather than retraining. About 90 percent of all CPE participants received training in their own specialization (that is, professional development); only 10 percent were being

retrained (Rosstat 2013). Retraining was highest in construction (27 percent) and manufacturing (18 percent) and lowest in health (6.1 percent) and education (5.4 percent).

Shorter training modules were in greatest demand. In 2013, education and training programs lasting 72–300 training hours (9–37 days) were most in demand; about 2.1 million people enrolled. Longer programs of 300–500 hours (about 37–62 days) had enrollments of 115,000 and those 500–1,000 hours (62–125 days) had enrollments of 250,000 employees. About 21,500 people enrolled in programs longer than 1,000 hours. More than 185,000 people—almost 8 percent of those who participated—obtained CPE using distance learning technologies (Rosstat 2013).

Education Programs and Models

Russia has a robust industry of adult education providers. CPE provision is supervised exclusively by the Ministry of Education and Science of the Russian Federation. The system consists of more than 1,350 educational institutions and structural units of specialized higher and secondary educational institutions, which deliver CPE programs for professional development and retraining. However, according to official statistics, more than 2,000 educational institutions in Russia have CPE programs, many of which are regional or local institutions. These 2,000 providers do not include the millions of learners and workers enrolled in short-term and in-house training programs of less than 72 hours (<9 days). If the number of private and corporate providers who do mainly in-house training and professional development is included, the number of educational institutions delivering CPE programs would amount to about 3,000 providers, institutions, and public and private businesses (*Ministry of Education and Science of the Russian Federation 2009*). The vast majority (92.1 percent) of the programs relate to professional development and training; retraining comprises 7.9 percent (*Ministry of Education and Science 2009*).

To date, there is no single regional model of adult education. Although regional and local institutions provide the lion's share of education, training, and continuing professional development, no single regional model of adult education and CPE has arisen. On their own initiative, various regions have created their own models taking into account regional context, local socioeconomic and market conditions, the human resource base, and demand specifics. Most professional and skills development efforts so far are targeting the labor force. Little attention is devoted to retirees, immigrant workers, or others outside the formal labor force.

Tatarstan's model of regional professional development and retraining offers an example of effective cooperation between public and private stakeholders. The CPE system of the Republic

of Tatarstan is designed to support its petrochemical and refinery companies by assuring a continuous supply of professional staff. The region therefore arranges high-quality training for specialists and creates an efficient professional development system for all employees in the industry and for university faculty. This model engages a variety of stakeholders: general education institutions, nongovernmental organizations (NGOs), vocational schools, university faculty, highly qualified practitioners in petrochemical, oil refining, and related industries and economic branches, in-house trainers, government and municipal managers, visiting professors from other regions, foreign experts, and teachers. Tatarstan also provides logistical support by integrating into the training process the use of training and research laboratory facilities at educational institutions, production and training classes at companies, and use of company industrial sites and machinery. This model has created a favorable environment for cooperation between public and private stakeholders while maximizing the use of available resources and facilities.[**] This regional model of CPE collaboration could serve as an example to other regions of how to build effective CPE models. It represents a comprehensive system designed to ensure its development through the active use of both internal resources and opportunities offered by the external environment.

The CPE model in the Kaluga region illustrates effective use of partnerships with international investors. Russian and German partners in professional education actively cooperate in the Kaluga region. For instance, in the Information Technologies and Management College, which operates in partnership with the Kaluga and Volkswagen Automobile Group, more than 6,000 employees have completed professional development training. Kaluga Governor Anatoly Artamonov has announced that a new regional project supported by Russia will shortly be launched to expand the pharmaceutical complex in Obninsk. TÜV Rheinland will contribute to construction of a training center for the pharmaceutical industry. Cooperation with German partners is also expected at the university level.

Certain principles are prerequisites for a regional CPE model. Among these are (1) transparency, with clear links between educational institutions, companies, and their environment; (2) dynamism, as the model continuously adapts to changing conditions; (3) regional adaptation, with the organization and content of education oriented to local conditions and labor markets, and dependence on specific economic and social conditions for regional development; (4) integration, implying incorporation of all elements of an education cluster into the process of professional

[**] Vyazma branch of Moscow State University website, "Regional Model of lifelong professional education." (http://vfmgiu.ru/chto_novogo_v_visshem_obrazovanii_450/model_nepreriv_professionalnogo_obrazovania_467/index.html).

training for efficient use of resources; (5) continuity, meaning coherence between training programs at all educational levels and graduate skill sets that respond to the requirements of client companies; and (6) highly intense training and more efficient learning through the use of new technologies, forms, and methods.

CPE in large corporations is mainly carried out by corporate universities. These appeared in Russia in the 1990s during perestroika when such international companies as Coca-Cola, McDonald's, Motorola, Samsung, and Shell entered the country. Creation of a corporate university requires significant time and financial resources and the availability of a sound tangible and technical human resource base—most of which are not available or affordable for every company. Corporate training centers tend to exist in large and rapidly developing sectors and companies, often concentrated in extractive industries. They include such Russian companies as Severstal, VympelCom, Russian Railway, Wimm-Bill-Dann, Norilsk Nickel, PROTEK, Svyazinvest, Rosgosstrakh, and RUSAL.

Corporate universities provide education programs that are tailored to company needs. The Russian Public Opinion Research Center surveyed representatives of the corporate universities and training centers of 11 large Russian companies, both to explore the place and role of corporate training in the structure of Russian education and to determine the capacity and possible forms of interaction between corporate forms of learning and state-run universities (*Ministry of Education and Science 2009*). The survey found that corporate training focuses on practical and tailored skills needs at all levels of the company: different training programs for middle and top management, career programs to train future managers, development and training of a young professionals' pool, and professional development for technicians, as well as mandatory training and certification of all workers. Given the predominance of corporate universities in the extractive and construction and transport industries, they virtually monopolize the niche market for engineering education in the broad sense and contribute to the training of professional personnel at nearly all levels of education from secondary vocational through postgraduate. From a business perspective, corporate universities are considered critical for maintaining competitiveness, being able to adapt to new methodologies or technologies, and supporting employee career development.

Like regional CPE, Russia has no single model of a corporate university; every corporation strives to create a model that is optimized for its own purposes. For instance, the ANO Sberbank Corporate University is a key instrument for implementing the Sberbank Bank Group Strategy, which entails both systematic training and development of managers and maintaining the high status of its

brand and competitiveness. The Sberbank model has four basic functions:†† (1) train personnel at all levels; (2) manage knowledge and consolidate and share personnel experience across units and departments; (3) create a single corporate culture that will safeguard and enhance company values; and (4) enhance innovation. It is evident that many large corporations in Russia—international and domestic—have already adjusted to ever-changing market demands by establishing robust corporate universities.

The market for private training providers is highly concentrated in Moscow and St. Petersburg. Today, there are about 2,000 education and training providers operating in Russia. Based on research by the Begin Group, this market segment has developed very unevenly across Russia and is dominated by the economic growth centers of Moscow and St. Petersburg. For the past five years, only 35 percent of providers have been operating outside these two cities. However, the steady growth of this market for educational and training services is based on increasing volatility in the external business environment (that is, more competition, identification of new training needs, and fast alternation of product generations) and a growing understanding of the importance of skills renewal and the role of knowledge in achieving sustainable competitive advantages (Vlasova, Ilina, & Morohina 2012). Thus, with the right incentives and support this market could be extended to respond to the needs for adult education outside the workforce.

Though the market for private and corporate training is growing, it is still small and uneven. A survey by Amplua Broker (Trainings.ru) in 2008 aimed to assess the situation and trends in personnel training, development, and assessment services in Russia, which at the time included 1,175 providers of such services, with 883 of them based in Moscow. The results suggest that although the market for personnel training and development services is nearly 20 years old, it has only recently begun to develop: average age of provider firms in Russia was only 6 years (47 percent of providers were formed during 2001–2004, and 6.6 percent were in the start-up stage of less than 3 years). Although the survey response rate on annual revenues was quite low (about 30 percent), there is indicative evidence that many providers are quite small. However, the market is expanding, with more providers holding corporate training and seminars (93 percent of providers in 2008 versus 72 percent in 2006). The five fastest-growing areas of training and development and HR services in 2008 were (in descending order of importance): (1) services of trainers as motivational speakers; (2) ready-made training programs developed by the customer or its partners; (3) training of the

†† Sberbank (website), "Corporate University of Sberbank" (http://sberbank.ru/oldmoscow/ru/about/philanthropy/staff/corp_univ/).

customer's in-house trainers; (4) coaching of customer employees; and (5) business simulations. The most popular topics for educational events delivered by providers in 2008 were management and leadership as well as communication and negotiation.

III. Adult Education in Russia: Achievements and Constraints

Government Strategies and Potential for More Adult Education

The strategic objectives of Russia's adult education system are formulated in several government documents. The main areas of reform and modernization and the medium-term objectives for social and economic development are formulated in the *Concept of Long-term Social and Economic Development of the Russian Federation through 2020* (Ministry of Economic Development 2008), which considers human capital central to economic development. The purpose of the state program "Development of Education in 2013–2020" is to provide high-quality education in accordance with the changing needs of the population and future tasks; one of the program's main objectives is to create a flexible system of CPE that is accountable to the public in developing human potential and addressing Russia's current and future social and economic development needs. It recognizes that the competitiveness of a modern innovative economy increasingly depends on the quality of its professional staff, their level of socialization, and thus the skills they possess and are able to continuously renew (see Section I). Currently just getting started, the program aims to promote achievement of the following human potential objectives:

- Dissemination of healthy lifestyle standards
- Transition to personalized continuous education available to all individuals
- Introduction of innovative technologies in health and education, including staff capacity building.

The expansion in adult education coverage and enrollment has been accompanied by more public spending. Public spending on CPE more than doubled from 2000 to 2005, exceeding the growth of all other levels of education except higher and postgraduate (Figures 18 and 19). Starting in 2005 growth in public spending on CPE slowed, and by 2011 it was taken over by growth in preschool education and was similar to the growth in secondary vocational education. In 2014, the

government of the Russian Federation planned to allocate more than RUB 400 million for CPE.[‡‡] Close analysis of spending on this type of education relative to other levels is warranted.

Figure 18. Spending on CPE, 2000–11

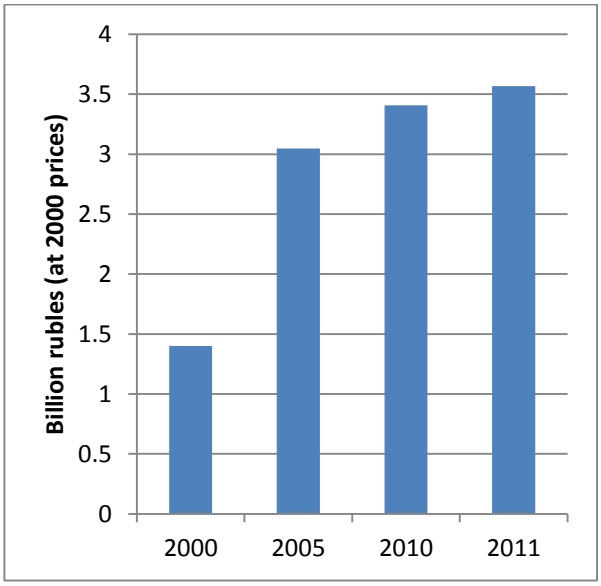
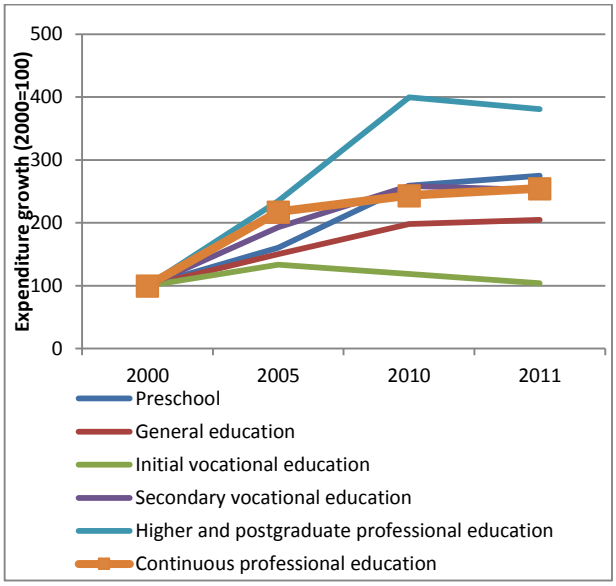


Figure 19. Spending by Level of Education, 2000–11



Source: Education in Numbers: 2013.

Although still lagging behind Europe in terms of coverage, adult education in Russia is evolving. Currently covering about 30 percent of working-age adults, Russia's system of adult education can be characterized by an expansion of supply (including the number and diversification of providers), demand (as can be seen in the growth of participation in CPE and self-learning), and products on offer (the range of educational services). The funding available for adult education has grown in recent years.

There has been active development of education targeted to socially vulnerable categories, such as the elderly, the unemployed, immigrants, and individuals demobilized from the Armed Forces. Recently, in several regions there has been a flurry of new educational programs for the elderly, some incorporating innovative forms of learning, which suggests active demand from older people for participation in the educational process. Finally, there is robust development of training for the unemployed, with more than 3,000 professional educational institutions engaged on contract in active labor market programs. Coordination and methodological support for retraining

[‡‡] http://www.finmarket.ru/news/

the unemployed is provided by 72 Public Employment Service training centers in addition to professional training for those not employed. In more than 40 job clubs employment service agencies train the unemployed in active and independent job search. Employment centers in Chelyabinsk, St. Petersburg, Novgorod, Kostroma, Kurgan, Vladimir, and other locales have extensive experience with this. In accordance with Russian Federation Government Regulation #224 'On Organizing Training of Unoccupied Population in the Basics of Entrepreneurship,' unemployed individuals are provided with information, consultation, and education on how to organize entrepreneurship activities, such as self-employment. Most training centers are equipped with multimedia computer labs, where interactive training programs are introduced.

Education of immigrants is an issue that has been gaining attention in recent years in the context of adult education. CPE development is interconnected with the concern for social inclusion of the adult population, including immigrants, most of whom need both professional and social adaptation: more than 50 percent have no professional education, and more than 6 percent have only general secondary education (*Ministry of Education 2009*). Migration in Russia, as in many countries, is seriously affecting social, economic, and political life. For Russia, the urgency of the problem of integrating immigrants is due to a significant increase in immigrants arriving to work, most of whom do not possess the skills and professional competencies in demand in the labor market.

Russia is implementing several projects to train immigrant workers, but more can be done to improve their social inclusion. Various courses and Russian language circles, which social, religious, and national associations have created, had an enrollment of 618 foreign nationals in 2008, 657 in 2009, and 958 in 2010 (Federal Migration Service 2011). Currently, in cooperation with the Federal Migration Service one NGO organizes Russian language classes for potential labor immigrants from the Kyrgyz Republic and Tajikistan. This project will train a small number of students (100 in each country) at vocational schools. In addition to learning Russian, they will also learn a trade and will be given help with finding work in that trade in Russia. However, immigrants are marginalized in Russia's society. There is currently an effort to establish a Russian Federation state policy for continuous education that would apply to citizens of the Commonwealth of Independent States (CIS). Continuous education is carried out by forming a single (common) educational space of CIS members based on adult education and outreach activities in accordance with regulations adopted by the Russian Federation and other CIS member states. The Russian Federation continuous education policy was incorporated into the CIS Draft Action Plan for the Concept of Adult Education in CIS Member States (CIS Council 2009).

Finally, there have been special government initiatives to train individuals discharged from military service as a result of the reform of the Russian Armed Forces. Among a variety of programs for these individuals are the state program of social adaptation of servicemen discharged from the Armed Forces and government retraining programs for demobilized servicemen. It is estimated that about 50 percent of service members transferred from active to reserve duty need retraining. This work is being successfully carried out in Moscow, Kaluga, Sverdlovsk, and other oblasts.

BARRIERS TO EXPANDING ADULT EDUCATION IN RUSSIA

Russia does not yet have a comprehensive policy framework for adult education. It has so far failed to establish an effective, flexible, and generally recognized system for provision of educational services to adults. Such a system would be responsive to changing needs for education and capable of solving social and economic, political, and educational tasks in the interests of the individual, the state, and society, at and beyond the workplace. Such a system would cover all fundamental aspects of work and social life (economy, politics, social relations, culture, education, and retirement). More importantly, as no country has a single system or structure for adult education, it is critical to have a comprehensive policy in place that, among other things, articulates how various systems and models are connected. There need to be clear occupational standards, an accreditation and quality assurance system, a certification and equivalence system, and adequate financing and incentives.

The main obstacles to creating an effective adult education system in Russia are

1. *A regulatory deficit.* There is no concept of adult education in the Russian Federation Law on Education. Nor is there a clear strategy for financing such a system through loans, subsidies, targeting, and tax incentives.
2. *Insufficient theoretical foundation for adult education and its practical application.* Emerging findings from neurology, psychology, and education research suggest that mature brains and developing brains learn differently (Johnson & Taylor 2006 and Maestas & Zissimopoulos 2010, cited in Schwarz et al. 2014). Some abilities, such as performance and speed in solving new tasks, peak earlier in the lifecycle; others, such as verbal fluency, are preserved much longer. Older brains are better able to see the big picture and often use shortcuts to find solutions based on accumulated experience and knowledge. Effective adult education takes these differences into account and adapts teaching principles and strategies to the comparative advantages of mature brains. In many European countries, there is a long tradition and a rich history of andragogy (teaching strategies focused on adults). Currently,

Russia is actively developing the theory and practical application of andragogy, but virtually all adult education is still built on traditional pedagogical principles, which significantly reduces the efficiency of training for adults.

3. *Lack of a system for training specialists in adult education.* Teachers offering educational services to adults in Russia have no special training for teaching adults of different age groups and from different socioeconomic backgrounds. At best, these are academic faculty, but as a rule they often lack a pedagogical education and have had no special training for teaching adults.
4. *Limited information about adult education and about alternative tools (ICT and distance learning) to support it.* There is not much information about the availability of adult education options and the opportunities it offers for professional development and retraining. While distance learning has expanded in recent years, the use of ICT at home and at the workplace leaves considerable scope for improvement.
5. *Lack of an evaluation and certification system.* Currently, Russia has no standard system of evaluation and recognition of nonformal learning. With nonformal and informal learning in adult education growing, putting in place a system of records and recognition/certification of these types of education will be critical for both expansion of the system and for quality assessment and control. In many countries, adult education is officially considered part of the continuous education system along with formal education. Furthermore, recognition of nonformal and informal learning leads to visible results obtained outside formal education and thereby makes educational trajectories more flexible. In the OECD Education Committee project, "Recognition of Non-formal and Informal Learning and Credit Transfer," recognition of the results of these forms of education is seen as a process that leads to the attainment of economic, social, psychological, and educational benefits and advantages. Many OECD countries have programs to assess skills already obtained, in order to give adults the possibility of continuing their education based on their current skills level rather than based on previous formal qualifications.
6. *Lack of tools to assess the scale and impact of adult education.* To link adult education, in particular CPE, to social and economic development objectives, it is important that tools to measure the impact and scope of adult education are available. In other countries, CPE is often measured by the number of hours of training conducted.

IV. Policy Considerations for Adult Education in Russia

Among policy considerations that can help improve and expand the adult education system in Russia are the following:

1. *Establish and refine the legal framework for adult education.* A Federal Law on Adult Education would help to lay the regulatory foundation for the adult education system by ensuring, among other things, that

- adult education is institutionalized as an independent and leading area for development of education in the country as a whole;
- establishment, operation, and development of adult education have economic support from state budget funds, funds of businesses, entrepreneurs, public foundations, and organizations;
- activities of institutions offering adult education are based on sound legal and economic foundations; and
- Russian policy is congruent with the legislative acts of the CIS member states and other countries in the field of adult education.

A series of actions, bylaws, and regulations can expand on the details outlined in the proposed federal law.

2. *Formulate an organizational structure for adult education.* Setting basic parameters for how adult education is structured can help support its institutionalization and growth.

- *Educational institutions and subdivisions*. An effective system of adult education encompasses state, public, and private forms. Along with evening secondary schools, adult education centers, institutes and faculties, people's universities, and various state, cooperative, and public training courses for adults, Russia can work to establish new ways to organize adult education, involving emerging businesses and public organizations and associations, and establishing mixed public-social and public-private forms of adult education on conditions of social partnership.
- *Management.* In current social and economic conditions, the best forms of adult education are demand-driven, with the demand, in principle, determining the supply of programs

and course offerings. Close monitoring of the supply-demand matchup in federal, regional, and municipal educational services markets can help to ensure their better functioning.

- *Research, marketing, and outreach.* Intensive and rigorous research is needed to determine the specific educational needs of people of different ages and socioeconomic backgrounds and to examine how consumers are informed about and oriented to the educational services market. To achieve this aim, a public information service can be established for both advocacy and outreach.
- *Data and information collection and support.* The effective evolution and functioning of adult education is vitally dependent on an adequate statistical base on the provision (demand and supply) and quality of adult education programs and courses.
- *Distance learning and using the Internet for greater outreach.* Using modern technology, including the Internet, can vastly increase coverage of and access to adult education in Russia.

3. *Better formulate theories and methodologies*. Effective adult education is based on adult learning theory, *andragogy*, and the concept of free or 'open' adult learning (open learning), reflecting continuing learning throughout a person's life and based on the psychology of adult learning. Andragogical models use learning materials and teaching methods created specifically for adults, taking into account new insights from the neuroscience on aging brains and social and psychological changes with age. For example, at least two studies have shown that older adults gain more from performing procedural (hands-on) activities than from conceptual training (Mead & Fisk 1998 and Mead et al. 1997, cited in Charness and Czaja 2006).

4. *Train staff*. To ensure quality in adult education, the law could describe the responsibilities of specialists in adult education, such as teachers, consultants, tutors, administrators and managers, employees handling information and orientation, social workers, and employees of rehabilitation correctional institutions. Complementary to this is, of course, specific teacher training for adult educators and trainers. This would entail systematic retraining and professional development as well as postgraduate education for andragogy specialists at different levels.

5. *Promote demand through awareness campaigns and financial incentives.* Regular public and social events can be organized to promote the idea of adult education, continuing learning, and continuous personal improvement throughout life. A greater role for state, local government, public and private companies and organizations, and public organizations and individuals in conducting

social and public activities can encourage the development of adult education in Russia through such means as social partnerships. Individual demand can also be stimulated through financial incentives, such as tax credits or paid education leave from employment in combination with study loans/grants or vouchers (UNESCO Institute for Lifelong Learning 2009). Eligibility for these incentives could be universal or targeted to specific groups that are under-represented in adult education, as is done in Sweden. Demand-oriented incentives, such as the training vouchers given out in Austria and Germany, motivate individuals to be active consumers and create competition among providers (UNESCO Institute for Lifelong Learning 2009).

6. *Organize public-private partnerships and give the private sector a larger role.* Experience in many countries suggests that public-private partnerships can make adult education more effective. Employer associations can draft professional qualification standards that meet the needs of their specific labor market. The state can engage employers in monitoring the quality of educational services and in formation and approval of qualification requirements (professional standards and competencies) as their industries develop. For small and medium enterprises, government can facilitate investment in training by creating an infrastructure for industrywide training programs, as is done in Italy and Australia, or offering cofinancing (UNESCO Institute for Lifelong Learning 2009). Another option is to follow the example of France or Hungary and impose a levy that can be used for a national training fund or to finance training for contributing firms (UNESCO Institute for Lifelong Learning 2009).

7. *Define professional standards and competencies.* Professional standards that define requirements for the content and conditions of work, qualification, and competence of employees by various qualification levels within a specific area of professional activity provide the foundation for continuous education programs. Based on the presidential decrees issued in May 2014, adoption of the National Plan for developing professional standards would establish a solid economic base for continuing social development. Professional standards ensure that training is related to the requirements of the modern labor market. The Russian Federation on November 29, 2012 issued Government Regulation #2204–r "On Approval of the Plan for the Development of Professional Standards for 2012–2015" and further approval of this regulation was obtained by the May 7, 2012 Presidential Decree #597 "On Measures for the Implementation of the State Social Policy." It was intended that by 2015 at least 800 professional standards would be adopted.§§

§§ By May 2015, only around 450 standards were listed in the Registry of Professional Standards on the dedicated website of the Ministry of Labor and Social Policy, http://profstandart.rosmintrud.ru/en/reestr-professionalnyh-standartov.

V. CONCLUSION

Given the phenomenal social and economic changes over the past decade, the Russian education system has had to be in a constant state of response and has done so fairly successfully. Like Europe and Japan, Russia's population is getting older and earlier low fertility rates mean that the workforce is losing about 1 million workers a year. While fertility rates show signs of improvement, increases in longevity (even from very low levels, especially among men) drive population aging and changes in the age structure of the population and the workforce. Some part of the workforce will be filled by low-skilled immigrants, many of whom do not speak Russian. As discussed in the companion study on active aging, beyond the changing need for skills, Russia will be faced with the need to address the workplace environment and skills needs of the growing ranks of older workers, an increasing number of pensioners, and the influx of low-skilled immigrant workers. Expansion of lifelong learning, including a robust system of adult education, can help Russia to meet these challenges and ensure longer and more prosperous lives. A strategy for developing adult education, including passage of a legal framework that allows for institutionalization of adult education as an independent and leading area of educational services, can help achieve these objectives.

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