Croatia Policy Note: Education 2017

A focus on efficiency, access, skills, and jobs

Reforming the System Toward Strategic Results

Key Message(s)
Youth have been significantly affected by the lack of economic growth, evident in youth unemployment rates around 45 percent, limited job prospects, and a skills mismatch. Despite a number of recent education reforms, including a national curriculum framework in preschool, primary, and secondary education, as well as a secondary school-leaving exam and the piloting of performance-based financing in tertiary education, demographic decline means that increasing emphasis needs to be placed on improving the quality of general education, lifelong learning programs, and adult education to ensure a competitive and adaptive workforce.

Key Action(s)
- Amend existing education strategies at the national level and for each sub-sector, to best align with EU expectations and conditionalities.
- Develop action plans for implementing the activities required to achieve the aims of the amended strategies.
- Improve the quality of general education to mitigate the challenges posed by population decline, aging, and the skills mismatch.
- Provide better labor market information on job trends and skills to strengthen labor market outcomes of graduates from education in its different levels to support improved relevance across all employment sectors.
- Consider piloting performance-based financing in non-university education, to promote outcome driven budgeting and broader institutional accountability.
- Maximize the development of skills for jobs through targeted curriculum adjustments across all education sectors and the development of apprenticeships, reskilling programs, and lifelong learning programs to address high youth unemployment.

Where Croatia Stands Now

Since the global financial crisis that began in 2008, growth in Croatia has been marred by a prolonged recession.

Recent accession to the EU has contributed to the return to positive, but low, economic growth in 2015. The effects of the recession, however, point to areas for overdue policy reforms to reduce poverty and unemployment which have increased in recent years.

Demographic decline, aging, and lost years of employment are significant barriers to growth. As the recovery from the lengthy recession continues, Croatia’s growth prospects remain vulnerable to dual demographic trends of a population that is both aging and shrinking. These challenges prompt the need to balance policy reforms in education and the broader economy. For Croatian living standards to converge with its Western European neighbors, the labor force must be more productive and become more flexible in a rapidly changing labor market, where the employment participation rate has experienced a downward trend since 2008.

In addition to demographic decline and aging, years of lost employment is also a significant problem. Among 25-34 year-olds, 35-44 year olds, and 45-54 year olds, the average Croatian spends three years in unemployment or inactivity. This number doubles among 55-64 year olds. Among women, the average female in
Croatia spends 17 years of her working life in unemployment or inactivity. This compares unfavorably with other EU countries.

These adverse population trends have current and long-term implications for Croatia’s human capital and macroeconomic agenda. Human capital remains critical to Croatia’s service sector which dominates the country’s employment landscape. Expanding employment, both through increasing the employment rate and the length of the working life, will be key to resolving the impacts of demographic decline and population aging.

Opportunities to enhance skills have not been leveraged, as evidenced by low labor productivity. Participation in lifelong learning remains rare, with a rate of 2.5 percent – much lower than the EU average of 10.7 percent. Croatia’s lifelong learning participation is the third lowest in the EU, slightly higher than Bulgaria and Romania.

Croatia’s lack of economic growth in recent years is reflected in low labor productivity. In addition to expanding employment by increasing the employment rate and the working life of individuals, productivity gains are central to addressing demographic decline and aging. While many European neighbors experienced low, but positive growth in productivity relative to the United States, Croatia’s productivity declined significantly and now lags many EU countries. As such, there is a dual challenge to increase both labor force participation and labor force productivity.

Youth are most affected by the struggling economy. There is a strong generational dimension to employment. Youth are among the most affected by the struggling economy. Youth without tertiary education struggle more to find a job than in other EU countries. The employment rate of recent tertiary education graduates aged 25-29 years old is 69 percent – below the EU average of 79 percent. Among those in the same age group, the employment rate of early school leavers is alarming at 30 percent – significantly lower than the EU average of 52 percent.

The skills gap is evident throughout the Croatian education system. In 2009, a World Bank report on Croatia’s convergence process to join the EU, made note of factors contributing to the skills gap, including: deficiencies in the provision of vocational education and training (VET), couple with an inadequate match between courses offered and labor market needs; low participation in lifelong learning; and rigidities of tertiary education in adapting to the needs of the economy. Given these factors and recent data, it is apparent that the skills gap remains largely unaddressed.

Addressing the Challenges in Education and Training

International evidence shows the economic impact of workforce skills on growth and shared prosperity. This evidence suggests that quality of education—particularly the development of cognitive skills—is one of the most important determinants of long-term economic growth.

There are three dimensions of skills. It is possible to differentiate skills along separate, yet mutually reinforcing dimensions. These dimensions are cognitive, socio-emotional, and technical skills.

Cognitive skills include literacy and numeracy – as measured in PISA (Programme for International Student Assessment) – but can also include competencies like critical-thinking and problem solving.

Socio-emotional skills capture one’s ability to interact with others, as well as determination, and focus on getting a job done.

Technical skills capture one’s ability to perform technical tasks in any occupation – e.g. work performed as a plumber or engineer.

It is important to note that measuring the level of educational attainment is not necessarily a proxy for measuring actual skills. While many countries in Central and Eastern Europe have seen educational attainment expand – such as years of education and level of education completed – since the start of the economic transition, they have not necessarily seen improvements in their performance in international student assessments that measure cognitive skills, such as PISA.

Evidence from PISA has been used to measure the impact of cognitive skills on GDP growth. Leading researchers estimate that a score improvement of roughly 47 points in PISA would imply an increase of the annual growth rate of GDP per capita by 1 percentage point.

---

Evidence also suggests that both the share of students achieving basic literacy and the share of top-performing students are vital for growth. A recent OECD (2015) report presents economic returns to universal basic skills, defined as all students enrolled in secondary schooling, and the performance of those young people currently not in school raised to achieving Level 1 skills (420 points) in PISA by 2030.

While low income countries with lagging education systems stand to gain the most, advanced middle income and high income countries can expect a significant boost in long run economic growth (until 2095) solely from making their education systems deliver better for the weakest students. The report on universal basic skills finds that, high income countries could gain a 3.5 percent higher discounted average GDP over the next 80 years if they were to ensure that all students achieve basic skills defined as Level 1 in PISA. Almost all of the observed gains come from improving achievement at the bottom socio-economic groups, since enrolment in these countries is near universal. A significant share of Croatian 15 year-olds currently perform below Level 1 in PISA. Ensuring universal basic skills in Croatia would add 3.9 percent discounted future GDP.3

Croatia’s performance in PISA declined between 2012 and 2015, retaining a notable skills gap. Croatia’s performance indicates somewhat sharp decline, after relative stability since its initial participation in this OECD-delivered exam 2006.

In 2009, there was a decline across all subjects – math, reading, and science, which was mitigated by a genuine rebound in scores in 2012. In 2015, however, scores in science and math declined by 16 and 13 points, respectively, potentially indicating a concerning lack of sustained impact from education reforms attempted to date. It is also possible that some systemic shocks took place during this intervening period between 2012 and 2015, which could explain the decline. More research is needed to understand why improved assessment outcomes have not been sustained since 2006. Also important to highlight, in PISA 2015, there was a wide gap in scoring achievement between the top and bottom socioeconomic groups in Croatia. This gap of 87 score points is a slight increase in the gap from the 2012 exam and is roughly equal to three years of schooling, similar to OECD countries.

The high share of low performers has adverse implications for individuals at various stages of life and for the economy overall. Based on PISA 2015 Croatia has continued to reduce the share of 15 year-olds performing below basic proficiency in reading, compared with 2006. However, the share of 15 year-olds performing below the same level in mathematics increased to 32 percent. This increase is alarming, and points to significant challenges regarding cognitive skills for the present and the future at various levels of the education system. The high share of 15 year-olds performing below basic proficiency in math indicates a poor foundation of cognitive skills. The lack of cognitive skills constrains the ability of individuals to learn in higher education, vocational education and training, as well as lifelong learning, or find and retain a productive

---

2 ibid

Improving the skill level of low-performers would contribute to a narrowing of the skills gap and provide a boost to long-run growth. As mentioned above, Croatia would likely experience a boost to long-run growth by focusing on the weakest students, given its classification as a high-income country. Beyond aggregate growth, education improves the living standards of individuals. More educated individuals are able to acquire even more skills — and higher-order skills as well — making them more productive and employable. Through more, higher-order skills, individuals can extend their labor market participation over their lifetime. This skill acquisition, in turn, leads to higher earnings and better quality of life. The declining labor force participation rate requires policy reforms to reduce unemployment — particularly among youth — and increase productivity. As such, education reforms designed to provide higher order skills address this need.

Education is a primary engine of social mobility: human capital is a key asset in income generation and, hence, critical to reducing poverty and increasing shared prosperity. Croatia’s youth are not currently able to serve as agents of growth or development at the rate they ought, however. At more than 45 percent, Croatia has one of the highest rates of youth unemployment in Europe, trailing only Greece and Spain.

How Croatia Can Maximize Skills for Jobs and Economic Growth

Croatia’s education reforms in recent years have covered many aspects of the system, ranging from preschool to university. The most recent education strategy — the Strategy for Education, Science, and Technology — was adopted in 2014, with a focus on reforming the education and training system.

The next wave of policy reforms should be guided by the need to promote a more modern skills agenda. Specifically, additional reforms in education should prioritize the development of relevant cognitive and adaptive skills. These skills are central to policies intended to expand employment and productivity. As such, a number of policy options are presented below to emphasize the need for such skills.

1. Improve the quality of general education to reduce inequities and stem the impact of the demographic decline. Evidence from PISA suggests a need to address the quality of general education to reduce the inequity between the top and bottom socio-economic groups. As discussed, students in the bottom socio-economic group are roughly two years behind their peers in the top group. To reduce inequities, it is important to understand the key factors which affect student achievement in the contexts that are specific and particular to the Croatian reality. Such knowledge comes through comprehensive data collection and analysis of existing conditions, to support impact evaluations of any policy and activity levers implemented to address national concerns.

Leading researchers have determined that teacher quality is the main school-based predictor of student achievement. As such, to ensure a high quality cadre of teachers, a national system of competence standards for teachers should be developed. The development of such a system is in the education strategy. Implementation of the strategy has been slow, however. Croatia needs to remedy the large share of its 15-year olds with poor math skills to ensure growth in the long-term and mitigate the challenges posed by population decline, aging, and the skills mismatch. Improving the quality of teachers in general education will help reduce the performance gap among socio-economic groups.

2. Better labor market information is needed to improve the relevance of skills developed through education. A growing challenge for policymakers globally is the need not only for more immediate job creation but to supply the job market with a workforce equipped with the relevant and adaptable skills for both the present and the future labor market. Improved labor market information on job trends and skills is needed to overcome these challenges. Better labor market information would help to reduce skills mismatches and enhance the responsiveness of education, at various levels, to labor market needs. The demographic trends facing Croatia require strategic thinking about skills for the present and skills for the future. Periodic skills assessments and surveys of the business environment can provide key evidence-based insight into balancing labor force needs in the short-, medium-, and long-term. Regarding evidence-based insight on skills, Croatia participates in many global assessments such as PIRLS, PISA, and TIMSS. Students in the cohorts being assessed, however, are at most 15 years old. On average, these students are still a few years away from joining the labor force. In upper secondary education, there are no evidence-based tools to support reforms designed to: evaluate the quality of student competencies over time and across countries. Students participating in the first PISA cohort from Croatia in 2006 are between 23-25 years old today. While PIAAC (Programme for the International Assessment of Adult Competencies) evaluates competencies, it focuses on
the working-age population. The cohorts being assessed in PIAAC include individuals of upper secondary school age, but the assessment is intended for working-age adults, not students. Croatia’s absence from competency-based assessments – such as PIAAC – which evaluate adults is a missed opportunity to gather critical data on various skills to help address the skills mismatch.

3. Build on the progress of current higher education reforms. The implementation of performance-based funding (PBF) in higher education is a growing global trend as countries face persistent budgetary pressures in education and across their fiscal obligations. In countries where the majority of higher education institutions (HEIs) receive public funding, PBF is a recognized tool to implement more efficient and adaptive funding norms. Moreover, PBF can help to achieve improved quality and relevance, research excellence, and better accountability and autonomy, among others important outcomes of finance reform. PBF allows for flexibility in selecting appropriate indicators to achieve wide-ranging goals.

Existing PBF reforms in Croatia began in 2012 with pilot funding agreements for its public universities. These reforms aim to maximize the quality and accessibility of the higher education system. Full funding agreements are intended to be implemented in another phase of reforms. The transition to performance-based funding in Croatia coincides with the unforeseen advent of a new public university and anticipated fiscal challenges across the entire national budget. The existence of indicators as the basis for funding norms, however, results in clear guidelines for both established and nascent institutions to contribute to the national agenda. This agenda prioritizes an increase in the number of low-income students; enrolled STEM students; student transitioning to their second year; grants provided to students; as well as improved university management.

In addition to governments introducing PBF in higher education globally, the policy interest in implementing this funding approach for other sectors of education is also growing. The non-university higher education sector could build on the existing public university reforms to further improve the education sector by introducing PBF to all public HEIs. These HEIs would include polytechnic institutions and colleges.

4. Accelerate policies to address high youth unemployment. Workforce development can also contribute to a significant reduction in youth unemployment. Performance-based funding reforms being implemented in public universities would be a driver of workforce development as the higher education sector becomes more relevant and cost efficient through the selected performance indicators. These reforms would not, however, impact individuals who have already graduated, and remain unemployed. The longer an individual is unemployed, the more hurdles he/she has to face in (re)joining the labor market. The long-term unemployed face both a deterioration of skills and social stigma. As such, a combination of complementary programs targeted toward apprenticeships, reskilling, and lifelong learning are policy options which can address high youth unemployment in Croatia.

Regarding apprenticeships, an EU-led response to utilizing apprenticeships more effectively was launched in 2013. The European Alliance for Apprenticeships convenes policymakers, leaders of industry, businesses, and education/training providers, among others, to promote apprenticeship programs across Europe. It remains to be determined how useful a broader apprenticeship system would be for Croatia, but given the focus on jobs and skills across the region—particularly to reduce youth unemployment—the utility of apprenticeships deserves closer consideration. As a member of the Alliance, therefore, Croatia has indicated its commitment to this potential tool by outlining its plans to develop a system of quality apprenticeships to provide relevant skills and competencies based on labor market needs. To date, the Alliance’s progress is foundational: youth guarantees; and pledges from chambers of commerce, social partners, and VET providers. As such, there is a need to accelerate the initiatives of the Alliance locally to achieve its objectives, and reduce youth unemployment. High youth unemployment requires strong action in the short- and medium-term.

How the World Bank Has Supported Croatia Education in the Past

In recent years, the World Bank has supported education reforms in Croatia to develop a national curriculum framework for preschool, primary, and secondary education. In addition, the Bank has supported the introduction of a secondary school-leaving exam and the implementation of major school construction and rehabilitation programs.

Most recently, the World Bank provided advisory services to both the Ministry of Science and Education and higher education institutions in mapping out the obstacles to and opportunities for expanded use of performance funding for higher education institutions.

As Croatia continues to develop its path for growth after a prolonged recession, the World Bank Group can support the Government’s ongoing efforts to reform and strengthen the education system utilizing tools such as
advisory services, technical assistance, investment financing for policy reform, and strategic frameworks to enhance the use and absorption of EU funds.

How the World Bank Group Can Support Further Reforms

After the experience of executing many education projects in Croatia and through ongoing discussions with former and current Ministry of Science and Education staff, the following opportunities are likely to offer the greatest impact on issues of education efficiency, access, and relevance:

- Technical assistance to support the amending existing education strategies (and any subsidiary strategies, including but not limited to higher education, lifelong learning, infrastructure, and early school leaving).
  - In light of European Union norms and requirements for utilization of EU funds, the advisory service could focus on supporting the achievement of the conditions and expectations of the EU to access and utilize effectively vital funds needed to invest strategically in key education reforms.
  - Moreover, these amended strategies could position Croatia well for expanded cross-border competition within the EU, as the reforms articulate a strategic orientation in line with neighboring countries.
  - The Bank could provide technical advice and support for the development of Action/Implementation Plans and Roadmaps for achieving the strategic aims developed within the amended strategies across all education sectors.

- Continued support for strengthening the infrastructure for expanded use of performance-based funding or examining other potential finance reform opportunities for Croatian higher education.
  - Working with MSE higher education leaders and staff to further refine the strategic context and all relevant strategies and laws to support higher education finance reform, leading toward optimal outcomes.
  - Working directly with the universities, to implement the stages of the roadmaps proposed in the recent World Bank technical advisory services project (2015-2016) and to develop roadmaps for those not included in the original exercise.
  - Continuing to provide training opportunities and resources for both Ministry and university leaders on the variety of options available for utilizing finance and government strategically to achieve identified goals.

- Support for pre-tertiary and tertiary technical and vocation education and training (TVET) opportunities
  - Recognizing the need to directly confront perceived and real skills mismatches between education graduates and the labor market, the Bank could lead diagnostic work with the MSE and institutions, to determine barrier to success in terms of curricular and pedagogic delivery of relevant learning opportunities.
  - The Bank could also conduct a review of the systems articulation between traditional and vocational secondary education and the tertiary sector, to examine opportunities for greater efficiencies and more relevant outcomes from these large education sectors. From the review, the Bank team would work with the MSE to roadmap and implement strategic activities that would be geared toward sustainable reforms and improved social and economic outcomes.