



PILLARS – Pathways to Inclusive Labour Markets: The case study of the Prague region

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1 Introduction

Prague is the capital city of the Czech Republic, also considered a region – Prague agglomeration, at NUTS-2 level (CZ01). Thus, for consistency, it will be considered a region in the current report. The region has an advantageous geographic location, being in the centre of Europe and of the country. Its well-connectedness to other regions and countries is ensured by good infrastructure. In addition, Prague is considered the cultural, education, political and innovation centre of the country. This puts it in a more privileged position than all other regions in the country, as it houses key institutions of the Czech Republic.

The population of Prague has reached 1.3 million in 2021, which makes it most populous in the country.¹ Hence, the population density of Prague is high, even compared to other EU regions/cities. The population of the region has been growing, mostly due to increasing immigration from within the country and abroad. The Vietnamese community is among the fastest growing. Based on 2019 data, migrants account for 5.5% of the Czech population, while most of them reside in Prague. Immigration has been driven by increased demand in the workforce, especially in the industrial sector.

Prague has several highly ranked universities and offers free education for anyone, including from non-EU countries in Czech language.² This attracts students from the Eastern European countries and Russia. The tertiary education attainment in Prague is much higher than in the EU on average, namely 64.7% versus 41.5% respectively. Thus, the local economy has a large pool of youth and highly educated labour force.

The region has a diverse and growing economy that plays an important role in the country's overall economic development. Overall, Prague's economy is characterised by a high level of internationalisation and competitiveness. Based on the GDP per inhabitant in PPS, Prague ranks as the EU's third-richest region, following Luxembourg and Ireland's Southern region.³

¹ The total population in Czech Republic in 2021 was 10.5 million

² <https://www.immigration-residency.com/free-education-prague/>

³ <https://www.expats.cz/czech-news/article/prague-now-ranks-as-the-eu-s-third-richest-region-in-gdp-per-capita>

Total population in 2021	Population density (persons per square km) ¹ , 2021	Average crude rate of net migration plus statistical adjustment (2013-2020)	GDP per inhabitant in PPS (% of EU-27 avg. from 2020 average) in 2021	Tertiary education attainment (ages of 30-34), 2021 ²
1 335 084	2 714.3	6.7	203%	64.7%

2 Overview of the labour market in Prague

Labour market trends and key skills in demand

Given that Prague is the economic centre of the country, it provides many job opportunities for the surrounding Central Bohemian region and for the entire country. However, at the same time it absorbs labour from other regions, as wages in Prague are significantly higher than in the rest of the country and commuting to Prague is relatively easy. This leads to labour shortages, mismatches, and inequalities within the country.

The labour market in the region is characterised by low unemployment rate, namely 2.3% in 2021. Based on EURES, employers in Prague are showing interest in a variety of more and less skilled workers from mining, construction, manufacturing, transport and related fields (24.66% of vacancies); crafts persons and skilled construction workers (10.3% of vacancies); drivers and mobile facility operators (9.2% of vacancies); personal services workers – (8.2% of vacancies); cleaners and auxiliary workers (7.9% of vacancies), and information and communication technology specialists (7.5% of vacancies).³ Despite a high demand for labour across all skill levels, the workforce of the region is dominated by middle and highly skilled workers.

In view of local stakeholders, both technical and soft skills are essential for the labour market in Prague, as technological transformation has increased the need for greater creativity, stress resilience and collaboration. The labour market mismatch/slack in Prague is very low, compared to the EU on average, 3.5% versus 14% respectively. This is attributed to a diverse supply of labour, including foreign labour, and high education attainment. As a result, Prague has been experiencing a fast increase in labour productivity in the last decade.

¹ The EU average population density in 2021 was 109

² The EU average of tertiary education attainment in 2021 was 41.5%

³ https://eures.ec.europa.eu/living-and-working/labour-market-information/labour-market-information-czechia_en

Major job sectors/industries

Based on data of 2022, Prague has been the headquarters for 661 357 businesses, which accounts for 22% of all business entities registered in the country.¹ The economy of Prague is predominantly service based, dominated by healthcare, financial and IT companies.² Even though jobs have declined in the manufacturing sector, Prague still holds the largest industrial centre in the Czech Republic. Among the key industries in Prague are listed automotive, electronics, biotechnology, software development, film production and tourism.³ Some of the major employers in Prague include Skoda Auto, Siemens, and Honeywell.

Tourism is an important economic sector, due to rich culture, history, and architecture that Prague can offer. The tourism industry, including hotels, restaurants, tours, and travel agencies, contributes nearly 60% to Prague's overall income.⁴

Key challenges on the labour market and vulnerable groups

The labour shortages and aging population are considered main challenges. Despite that Prague attracts labour, many, especially young people, pursue career in the Western European countries due to even higher wages. As a result, the demand for professionals with technical and medical education is particularly high.

The unemployment in Prague is strongly associated with the level of education. Those with less than primary, primary, and lower secondary education, or with a school leaving certificate but without an apprenticeship, are more likely to be unemployed. Among other vulnerable groups are listed older people (over 50), people with disabilities and Roma people. Despite health-related limitations, in all other cases, the level of education and skills serve as the main reason for exclusion from the labour market.⁵

Indicator	Data
Employment rate, 2021 ⁶	82.4%
Employment in high-tech sectors, 2021 ⁷	13.2%

¹ v

² <https://www2.deloitte.com/content/dam/Deloitte/cz/Documents/human-capital/Prague-Guide-to-the-Business-Services-Sector.pdf>

³ <https://www.prague.com/v/economy/>

⁴ <https://www.prague.com/v/economy/>

⁵ <https://documents.worldbank.org/en/publication/documents-reports/documentdetail/844291468193772025/%C4%8Cesk%C3%A1-republika-%C5%A0ance-na-zlep%C5%A1en%C3%AD-zam%C4%9Bstnanosti-rom%C5%AF>

⁶ The EU average rate of employment in 2021 is 73.2%

⁷ The EU average of employment in high-tech sectors in 2021 was 4%

Unemployment rate, 2021 ¹	2.3%
Youth unemployment rate, 2021 ²	5.6%
Unemployment rate of males (15 years or over), 2021 ³	1.8%
Unemployment rate of females (15 years or over), 2021 ⁴	2.9%
Unemployment rate among individuals with less than primary, primary and lower secondary education (levels 0-2), 15 years or over, 2021 ⁵	10.2%
Unemployment rate among individuals with upper secondary and post-secondary non-tertiary education (levels 3-4), 15 years or over, 2021 ⁶	3.1%
Unemployment rate among individuals with tertiary education (levels 5-8), 15 years or over, 2021 ⁷	1.3%
Labour market slack, 2021 ⁸	3.5%

3 Technological transformation and policies/instruments to stimulate innovative and inclusive job creation

Prague has been positioning itself as a strong technological innovator in the EU, especially after Karl Capek has invented the term “robot” in 1921.⁹ The region has been making consistent efforts to achieve and retain this status by actively following main technological trends of Europe, promoting it as a great place for innovation and by improving conditions for doing business. Thus, Prague has been gradually transitioning from the third to the fourth industrial revolution. Due to strong performance of the industrial and service sectors, this transition is accompanied by widespread and smart digitalisation, consistent with the smart

¹ The EU average unemployment rate in 2021 was 7.2%

² The EU average youth unemployment rate in 2021 is 14.5%

³ The EU average unemployment rate among males (15 years or over) in 2021 was 7%

⁴ The EU average unemployment rate among females (15 years or over) in 2021 was 8.1%

⁵ The EU average unemployment rate among individuals with less than primary, primary and lower secondary education (levels 0-2), 15 years or over, in 2021 was 13.9%

⁶ The EU average unemployment rate among individuals with less than primary, primary and lower secondary education (levels 3-4), 15 years or over, in 2021 was 7.6%

⁷ The EU average unemployment rate among individuals with tertiary education (levels 5-8), 15 years or over, in 2021 was 5.4%

⁸ The EU average labour market slack in 2021 was 14%

⁹ <https://www.ishares.com/us/insights/robotics>

specialisation policy, and by a change from low-cost labour-based production to value-added and final production.¹

The STI landscape in Prague is quite diverse, as many stakeholders are engaged in innovation-related activities. In the last fifteen years, the largest industries and service sectors in the region have been investing in R&D to innovate their products/services and to export them. As a result, the number of R&D staff in companies and universities has doubled, while R&D funding has exceeded 2% of GDP.² The SME and start-ups are relatively innovative and have a high propensity to collaborate with others, therefore employment in fast-growing enterprises is above average.³ To promote the culture of entrepreneurship and innovation, the policymakers have been introducing several initiatives, such as...

- Contests to award the most innovative company;
- An Entrepreneurship Academy which encourages entrepreneurship and creativity;
- Projects that foster entrepreneurship and creative thinking in secondary schools.

In addition, several NGOs in Prague support young entrepreneurs and entrepreneurial education.

Junior Achievement is a programme that aims to develop students' ability to work in a team, communicate, independently organize, make decisions, and take responsibility. Students are encouraged to select short-term education programmes to develop specific competences (business plan development, financial planning, critical thinking, basics of accounting etc.).

The programme is run by JA Czech – an international non-profit educational organization whose mission is to provide young people with practical economic education, develop their knowledge and skills.⁴ The NGO offers subsidised education/training programmes for young people and teachers. In addition, it connects youth to companies, thereby contributing to employability of youth.

The Junior Achievement programme is considered successful for the following reasons:

- It empowers young people. Even if they do not become entrepreneurs, the programme allows to develop a variety of critical skills, such as communication, teamwork, organisational, critical thinking, writing etc.

¹ https://projects2014-2020.interregeurope.eu/fileadmin/user_upload/tx_tevprojects/library/file_1636033337.pdf

² <https://www.oecd.org/innovation/czech-republic-fourth-industrial-revolution.htm>

³ <https://www.oecd.org/regional/Regional%20Innovation%20Diffusion%20-%20Czech%20Republic.pdf>

⁴ <https://jaczech.org/o-n%C3%A1s/p%C5%99%C3%ADnos-ja-czech/>

- Participation rate in the programme was high, due to successful promotion and trust to the NGO, which has a long presence in the community.

The government also took steps to support innovative industries and the development of new ones by establishing excellent scientific centres throughout the country. These centres focused on building partnerships with local and foreign research and industrial organisations, thereby supporting the deployment of the IT, nanotechnology, biotechnology, nuclear and non-nuclear energy sectors, aerospace and the chemical industries.¹ Additional support for industries and innovative SMEs and start-ups is provided by Czechinvest and Czechtrade that promote internationalization, export and trade.

In effort to simulate Industry 4.0, the government in the Czech Republic has formed the Alliance Society 4.0, which aims to implement the transformation of the country, focusing on international cooperation with Germany and Japan through STI partnerships, facilitated through universities and innovation centres. Advanced manufacturing, cybernetics, AI and Internet of Things are part of the strategy for Industry 4.0. To support their deployment, the government is investing in the following areas - connectivity and mobility, education and labour market, e-governance, security, industry, entrepreneurship, and competitiveness.²

Despite many experts argue that commercialisation of research is low in Prague and over 80% of innovation in the region is produced by companies, in recent years many research organisations have been actively engaged in STI-related collaboration. These include the Czech Institute of Informatics, Charles University, Robotics and Cybernetics (CIIRC) of the Czech Technical University and many others. An increasing commercialisation has been attributed to the establishment of knowledge and technology centres at universities and research organisations, and to public financial incentives for partnerships.³ Currently, the Czech government continues to stimulate long-term industry-academia cooperation through grants.

Among the central organisations that were founded in Prague to drive innovation is Prague Innovation Institute.

Prague Innovation Institute (Praha Inovační) has been established in 2020 to facilitate connections between education, public sector and entrepreneurs in Prague. In essence, the role of the innovation center is to support innovating stakeholders in addressing various

¹ <https://www.oecd.org/innovation/czech-republic-fourth-industrial-revolution.htm>

² http://www.czech-research.com/wp-content/uploads/2018/01/Industry-4.0_WEB.pdf

³ https://projects2014-2020.interregeurope.eu/fileadmin/user_upload/tx_tevprojects/library/file_1636033337.pdf

challenges that they face. Thus, the Institute facilitates access to funding, expertise, relevant stakeholders through events, workshops, matchmaking activities.

Prague Innovation Institute is the only innovation center in the country focused on advancement of education, as it realises importance of education for innovation. They cooperate with schools at every level of the educational system, raising awareness among school directors and teachers about the industry needs, importance of innovation and of entrepreneurship skills. The Institute supports the adoption of modern technologies in education, energy industry, sustainable development, and waste management.

In addition, the Institute runs a business incubator (Enterprise and Innovation Centre) to support start-ups and spin-offs, which also serves as a meeting place for researchers and professionals from public administration, non-profits, and business.

For many years, the policymakers in Prague did not see the need to create a multi-functional organisation that would focus on connecting the education, business and innovation stakeholders and would foster collaboration between them. However, as the innovation ecosystem in Prague has been expanding, becoming more fragmented, and the innovation stakeholders were faced with multiple challenges, the government decided to establish Praha Inovační.

The success of the Institute is attributed to several factors:

- Due to engagement with various stakeholders, the Institute understand their needs and complexities associated with their collaboration. Thus, it is best positioned to propose effective collaboration models for them;
- The Institute acts as an adviser to the policymakers. The insights about the needs, challenges of different stakeholders and potential solutions are passed to the policymakers to design effective policy instruments;
- Prague Innovation Institute effectively uses soft instruments (i.e., discussion forums) to facilitate collaboration between the stakeholders, due to high professionalism of its staff;
- Due to multi-functional purposes of the Institute, it serves as a one-stop-shop for education, business and innovation stakeholders.

The key weaknesses that hamper technological transformation in Prague include a relatively low R&D investments, insufficient funding for R&D at research organisations, a lack a coherent strategy and dependence on EU funding. In addition, bureaucracy and existing legal/regulatory framework discourage innovation. Currently, these challenges are being in the focus of the Prague Innovation Institute.

4 Policies/instruments to prevent and mitigate job displacement

In view of experts, the technological transformation in Prague has been gradual, driven by investments of employers. The slow process of change allowed the labour market to adapt, therefore the policymakers do not consider the impact to be very disruptive. Until 2016, little research has been conducted on the impacts of technological transformation on the labour market in Prague, as the Czech Republic has no unified system for producing and interpreting skills intelligence. The Czech Statistical Office and the National Institute for Education have been conducting ad hoc regional labour market forecasts, labour market monitoring and skills assessments by sector councils and training providers.¹ As a result, the government, education/training sector and PES still lack an insight on what skills should be trained.

Some interviewed experts admitted that an increasing number of workers in Prague are afraid that their tasks/jobs will be replaced by automation technologies. In response to this, the Czech government has been launching communication campaigns about the benefits of technological transformation.

In 2016, the Ministry of Internal Affairs and Communications in the Czech Republic conducted the first strategic study which assessed the challenges of Industry 4.0, the impacts of digitization on the labour market and on society, in general. Based on its findings, the Action Plan “Work 4.0” was developed in 2017, consisting of the following 4 strategic goals:²

- Regulation of the impact of technological changes on labour demand,
- Support for further education,
- Setting conditions on the labour market in connection with technological changes,
- Regulation of the impact of technological changes on selected social aspects.

The Action Plan concentrates on vocational training and digital skills, integration of vulnerable groups, labour mobility, modernisation of labour market services and more effective targeting of the ALMP. However, the recognition of the job displacement effect and the analysis of the future of work led the policymakers to review the entire education/training system.

Overall, the education system in the Czech Republic is considered relatively good. In recent years, significant attention has been paid to updating the teaching methods through

¹ <https://www.cedefop.europa.eu/en/data-insights/skills-anticipation-czechia>

² <https://ec.europa.eu/social/main.jsp?langId=en&catId=1047&newsId=9208&furtherNews=yes>

technologies, artificial intelligence, and virtualization.¹ The schools in the country receive significant fundings at all levels and have a relatively high degree of independence. However, the current education system heavily relies on personalities of school directors/headmasters, given a high degree of school independence. Some directors/headmasters are committed to continuous improvements in a school system, while others are more conservative and do not wish to adopt novel technologies, methodologies. As their decisions influence the future generation, the Czech government is currently working on a new model of education that will build a more solid and sustainable system.

In view of experts, besides a strong influence of school leaders, the education system in Prague suffers from a lack of systematic approach to teacher development, weak linkages between the education sector and industries, limited flexibility in adjustment of the education programme to the labour market needs, and a lack of career counselling at education institutions and at PES. Above-listed challenges do not apply to all schools, as the quality of education differs across them. Among the most progressive schools in Prague that focuses on collaboration with industries and apprenticeships were mentioned Smíchovská SPŠ.

Smíchovská SPŠ is a secondary school in the Czech Republic.² The school encourages students to design projects and start-ups right at the school premises. The education at school includes different areas of IT, such as cybersecurity, Internet of Things, virtual and augmented reality, computer game development, robotics. Modern laboratories such as the Physics Laboratory, the Cybernetic Polygon, the Virtual and Augmented Reality Laboratory, the IoT Laboratory and the classrooms of the Polytechnic Nest are built at the Smíchovské SPŠ.

The school is very popular in Prague and receives the highest number of applications among all secondary schools. Its success is related to the following factors:

- The school invests in training of teachers and in cooperation between students and graduates of other schools;
- The education programme and technologies/facilities at the school allow students to acquire relevant knowledge and skills, particularly in light of technological transformation;
- The school collaborates with start-up incubators and coworking centres to support entrepreneurship among students and to organise conferences and events.

¹ https://www.dotaceeu.cz/getmedia/72fcdd78-bea4-4dc0-be62-49de158ef079/NKR-zari-2019_AJ.pdf.aspx?ext=.pdf

² <https://www.ssps.cz/>

Based on consulted stakeholders, the ALMP in the Czech Republic should be better connected to education/training to ensure a better match with the labour market needs. Overall, the package of the ALMP instruments in the country is relatively standard. It includes (re)training, investment/financial incentives to an employer for the creation of new jobs, community service or public works, bridging contributions (i.e., a contribution to a self-employed person).¹ However, one initiative, the “Outplacement Project”, has been considered very successful by the experts for mitigating unemployment following technological transformation, as it stimulates social responsibility of employers and mitigates mass unemployment.

In 2020, the Czech Republic has launched the “Outplacement Project” to support individuals at risk of unemployment, particularly in cases where their companies undergo structural, technological transformations which are likely to lead to mass layoffs. The Project helps workers to find a new job during their notice period or in case their employment is threatened. Thus, laid-off employees have a chance to get re-training and to find a new job even before the end of the current employment relationship.²

The Project provides the package of the measures:

- Employers receive counselling on how to arrange the process of contract termination and/or training;
- The PES encourage employees to get support through the Project;
- Employees are offered trainings in the field of labour law, financial literacy, and soft skills to enhance these essential skills. The training courses are provided immediately once an employee joins the Project, even during current employment;
- Training activities are offered, according to individual requirements and relevance for the labour market;
- Employment mediation will be offered to resolve disputes;
- Accompanying measures will be launched to stimulate retraining and employment. Such measures may include reimbursement of travel expenses, childcare services.

Employers also benefit from the Project, as workers can be retrained for another position at a low or no cost. In case companies decide to hire more employees following participation in the Project, the PES can contribute to their wages. More details on benefits for employers are provided below:³

¹ <https://www.mpsv.cz/web/en/employment>

² <https://www.uradprace.cz/web/cz/outplacement-out->

³ <https://www.uradprace.cz/web/cz/-/outplacement>

- The team of the PES visits the employer's workplace to encourage employees to join the Project;
- Support with planning re-training and providing employee upskilling/reskilling;
- Up to 100% coverage of employee salary for the duration of training;
- Contribution to the training costs of employees, up to 85%;
- Contribution to the wages of new employees, a maximum of CZK 15,000 per month for up to 9 months.

The Project has been very successful, due to its comprehensive support to both employers and employees. It has encouraged training, offered support to employers and employees on how to organise upskilling/reskilling and reduced costs, and mediated all processes to reduce social tensions. In addition, the Project has encouraged social responsibility of the employers and collaboration between PES, employers, and employees.

5 Policies/instruments to support employers and employees during job transformation

In view of experts, the technological transformation in Prague has been increasing work intensity and the number of part-time jobs. The latter has mixed reaction, as some people appreciate availability of free time, while others are more concerned with reduced incomes due to new employment arrangements. The system of social dialogue in Prague is well-established, therefore, despite technology-induced transformation of workplaces, the working/employment conditions of most employees in the region are decent.

Recently, trade unions in the Czech Republic have been supporting the self-employed, which includes platform workers, to increase their collective bargaining power.¹ The EU lobby also supported this process, however, in view of experts, more support for platform workers is needed. Currently, negotiations are taking place across different sectors.

The labour shortages in Prague encourage organisations that undergo technological transformation to upskill/reskill their employees. However, not all organisations are willing to do this or have sufficient resources for training. A larger problem stems from the fact that most employers are not aware what skills and what trainings should be provided to employees, especially during internal restructuring of business processes following technology adoption. Typically, employers formulate their requests to the policymakers and to PES not in terms of

¹ https://www.etuc.org/sites/default/files/publication/file/2018-10/Trade%20unions%20protecting%20self-employed%20workers_EN.pdf

skills, but in terms of occupations. For example, they point to a shortage of engineers or cybersecurity specialists. This creates a challenge for developing necessary training for occupations in demand. In case a company cannot find suitable training and cannot access support from industry or business associations, then it designs its own training.

According to the Czech Labour Law, the employer may require an employee to take part in courses or training, or similar initiatives. An employee's participation in such activities shall be considered as working time for which the employee is entitled to his/her wage or salary. The employer shall bear the costs connected with updating of qualification.¹ Overall, adult education and lifelong learning are unpopular in Prague, as the interviewees argue that there has been a lack of strong promotion of lifelong learning and of training instruments. Thus, many employers and employees in the region are not aware about existing free training platforms. The key barriers for lifelong learning include unwillingness to invest financial resources and time. In addition, some trainings do not offer qualifications following completion or organisations do not recognise these qualifications. The Ministry of Education, Youth, and Sports of the Czech Republic has charged the National Pedagogical Institute with the mission to address challenges associated with qualifications.

The National Pedagogical Institute of the Czech Republic (NPI) prepares strategies for further development of general, vocational, art and linguistic education, continuing teachers' education, and the area of pedagogical-psychological, educational and career counselling.² Through 14 regional centres, NPI provides support to teachers, trainers and schools across all educational levels, except higher education.

Among the key missions of NPI is to develop standards of vocational CVET qualifications, to oversee the certification of vocational qualifications and to handle issues concerning the recognition of certified qualifications. In addition, it also supports career guidance at schools and cooperates with career guides for the labour market via networks such as Euroguidance.

The work of NPI has been stimulating adult, lifelong learning in the Czech Republic, as it supported the education/training providers in acquisition of certifications, which triggered the provision of qualifications for individuals that attended training programmes of these education/training providers. The qualifications issued by the education/training providers are in line with the European Qualifications Framework. Hence, they are recognised in the Czech Republic and in the European Union.

¹ <https://www.eurofound.europa.eu/observatories/emcc/erm/legislation/czechia-employees-obligation-to-undertake-training>

² <https://en.npi.cz/our-tasks>

The effectiveness of the work of NPI has been ensured by the following factors:

- NPI has developed standards of vocational CVET qualifications in consultation with experts and stakeholders;
- NPI has promoted the recognition of qualifications by launched an open platform that publishes information about approved professional qualifications;
- NPI provides detailed instructions on how the examination for each qualification should take place, thereby ensuring compliance with standards.

6 Lessons learned

Stimulation of innovative and inclusive job creation, powered by automation technologies:

- Image-making, promotional activities can be very effective in building confidence of the stakeholders about the economic potential of a region, and in stimulating R&D, innovation activities.
- Strong economic performance supports innovation, as companies/organisations have resources for experimentation and are willing to become more competitive.
- Investment in the collaborative business culture is essential, as it involves many stakeholders in innovation and entrepreneurship-related activities, including research organisations, NGOs. In addition, it stimulates the development of start-up and SME ecosystems, which have a higher innovative job creation effect.
- Industry-academia collaboration is typically challenging, due to the research focus of universities and an academic approach to collaboration. To increase commercialisation, the policymakers should invest in the establishment of knowledge and technology centres at universities and research organisations, and provide financial incentives for (long-term) partnerships between academia and industry leaders.
- Multi-functional innovation centres that would focus on connecting the education, business and innovation stakeholders may be very effective in fostering collaboration between them.
- The legal framework and bureaucracy that are oriented towards stability may serve as significant barriers to innovation.
- High-quality education is a pre-condition for any innovative activity and entrepreneurship. Thus, the education system should be flexible to market needs. This is conditional on collaboration between the education and industries, and on knowledge/skills of teachers.

Prevention and mitigation of job displacement, following adoption of automation technologies:

- The slow process of technological transformation in Prague allowed the labour market to adapt, therefore the policymakers have not considered the impact to be very disruptive. As a result, little research on the impacts of the labour market were conducted, and currently the government, education/training sector and PES lack an insight on what skills should be trained.
- In Prague, the government launched communication campaigns about the benefits of technological transformation to address fears of the population about job displacement. The effectiveness of such campaigns has been undetermined.
- The challenges posed by automation technologies for the future of work require the policymakers to review the entire education/training system to ensure their suitability.
- The education system in Prague suffers from strong influence of school leaders, a lack of systematic approach to teacher development, weak linkages between the education sector and industries, limited flexibility in adjustment of the education programme to the labour market needs, and a lack of career counselling at education institutions and at PES.
- To ensure effectiveness of the ALMP instruments they should be connected to education/training and focus on mitigating unemployment, while PES should strengthen relations with employers to provide adequate support and to stimulate social responsibility of employers.

Supporting employers and employees during job transformation, following adoption of automation technologies:

- A good system of social dialogue ensures decent working/employment conditions of employees, despite job transformation.
- The platform workers should be supported at the EU level to increase their bargaining power.
- Labour shortages encourage organisations that undergo technological transformation to upskill/reskill their employees. To support organisations with upskilling/reskilling, it is critical to understand what skills are needed.
- A lack of strong promotion of lifelong learning and of training instruments leads to low participation in adult/lifelong learning.
- To stimulate trainings, the national governments should develop clear standards for qualifications and promote their recognition.