PILLARS – Pathways to Inclusive Labour Markets: The case study of Latvia

Part of Deliverable 7.4

June 2023

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This project receives funding from the European Union's Horizon 2020 Research and Innovation Programme under Grant Agreement No. 101004703.

1 Introduction

Latvia is a country in the Baltic region of Northern Europe. Its total population in small (1.9mln in 2021), compared to other EU countries. Almost a half of population (742 thousand people) live in the capital – Riga,[1] while the rest is scattered across the country. As a result, the degree of urbanisation is below the EU average (68.6%, compare to 75% in the EU on average).[2] Overall, the Latvian population has been decreasing in the last 20 years by 0.4-0.5% per year, due to high rates of emigration, aging population and low birth rates.[3] Thus, in 2022 only 9.4% of the total population represent youth, age 15-24, while the largest population group (41.8%) is 50 years of age and over.[4] In view of these, Latvia has increased its retirement age, raising it to 65 years, and more reforms are expected if the labour force will continue shrinking.

The ethic composition of the Latvian society includes the following groups: Latvian (57.7%), Russian (29.6%), Belarusian (4.1%), Ukrainian (2.7%), Polish (2.5%), Lithuanian (1.4%), and other (2%). As a result, the Russian-speaking population represents 33.8%.[5] Over 40% of active population has either higher (40.5%) or vocational (31.3%) education. However, the share of population with higher education among women is higher than among men, 51% and 30.2% respectively. The share of young adults (age 25-34) with tertiary attainment has increased considerably in Latvia in recent decades, from 17% in 2000 to 46% in 2021, which is above EU average (41.5% in 2021).[6] The quality of education in Latvia has been criticised, therefore the government continues to implement necessary reforms to raise teaching standards.[7]

Latvia is a small, open economy; therefore, its exports contribute more than half of its GDP. Given that the country is situated in the middle of the Baltic States and borders Russia and Belarus, Latvia has high-developed transit services. The key industries are timber and wood-processing, agriculture and food products, and manufacturing of machinery and electronics.[8] Based on the Regional Innovation Scoreboard, Latvia is classified as an emerging innovator, indicating a relatively low level of innovation, while Eurostat classifies the Latvian economy as a transition economy, given that its GDP per capita is between 75% and 90% of EU average.

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[1] https://www.worldometers.info/world-population/latvia-population/

[2] https://data.worldbank.org/indicator/SP.URB.TOTL.IN.ZS?locations=EU

[3] https://stat.gov.lv/en/statistics-themes/population/population/247-population-and-population-change?themeCode=IR

[4] https://www.lm.gov.lv/en/labour-market-reports-and-statistics

[5] https://www.countryreports.org/country/Latvia/population.htm

[6] https://www.oecd-ilibrary.org/sites/90f24437-en/index.html?itemId=/content/component/90f24437-en

[7] v

[8] https://www.countryreports.org/country/Latvia/economy.htm

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]
1 907 675	30.2	-4.1	72%	47.7%

2 Overview of the labour market in Latvia

Labour market trends and key skills in demand

Given that Latvia has a large share of population over 50 years of age, only around 1mln. are economically active. This leads to significant current and future labour shortages and mismatches. Thus, Latvia's level of employment is higher than the EU average (75.3% in Latvia and 73.2% across the EU in 2021). Unemployment in the country is strongly associated with education (i.e., higher levels of education result in lower unemployment), therefore unemployment rates among men are higher than among women. The levels of unemployment also significantly vary within the country, as they are strongly linked to levels of economic activity. For example, Riga is the economic centre of the country, therefore unemployment levels in the capital are lowest (4.6%). In contrast, the most economically inactive region, Latgale region, has the highest unemployment, namely 14.8%. Such unemployment pattens persist across years within the country. New enterprises tend to cluster in more economically developed areas/regions, therefore regions with traditionally high unemployment levels strongly depend on public support measures that stimulate local economy and/or support the unemployed.

Despite existing challenges, since 2013, Latvia has significantly improved its performance on a number of labour market indicators – long-term unemployment, unemployment, female unemployment, NEET. In view of interviewed experts, this is associated with the overall improvement of economic performance in the country and with the launch of targeted programmes for youth, women and long-term unemployed. More details on this can be found later in the report.

[1] The EU average population density in 2021 was 109

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

Based on the Labour Force Survey of the Central Statistical Bureau (CSB), employers in Latvia are looking for skilled workers with (secondary) vocational or higher education.[1] The key skills that are in demand are flexibility/adaptability, multi-tasking, communication, Latvian and foreign languages (particularly English), planning/time management, organisational, digital and driving skills. It is anticipated that in the future, the demand for highly skilled workers will increase. However, if Latvia's demographic trends persist significant shortages in the areas of healthcare and social care, computer sciences, architecture and civil engineering, physical and engineering sciences are expected.[2]

Despite automation technologies reduce the number of low-skilled jobs, existing labour shortages in Latvia create demand even for jobs with medium and low-levels of qualifications. This situation creates disincentives for up/re-skilling and lifelong learning. In addition, the unemployed people over 50 years of age and those living in remote areas, in general, tend to have low willingness to participate in training, due to difficulties in acquiring new skills and in accessing education/training. Based on estimates of the Ministry of Welfare in 2023, around a half of all currently unemployed are low-skilled. Without training, these people will become long-term unemployed and are more likely to apply for early retirement. Given labour shortages in the country, such situation is highly undesirable. Thus, the government tries to introduce various measures to tackle it.

Major job sectors/industries

The Latvian economy is largely based on service industries including transportation, information technology, financial services, and construction.[3] Amon the manufacturing industries, the following make significant contribution - processed foods, processed wood products, textiles, processed metals, pharmaceuticals, railroad cars, synthetic fibers, electronics.

In the past years, the number of vacancies has been growing in the construction, transport/logistics, manufacturing, agriculture, forestry and fishing, mining, and quarrying sectors. This confirms that Latvia has a significant demand for jobs with medium and low levels of qualifications.

Key challenges on the labour market and vulnerable groups

The Latvian labour market has been strongly affected by the economic crisis of 2008 and the COVID-19 pandemic, although in view of experts, the structural economic challenges (i.e.,

[1] https://www.csp.gov.lv/en/dsa

[2] https://eures.ec.europa.eu/living-and-working/labour-market-information/labour-market-information-latvia_en

[3] https://www.trade.gov/country-commercial-guides/latvia-market-opportunites

dominance of low value-added production) and regional inequalities have a more significant impact on the labour market. Despite the current demand even for the low-skilled workers, it is believed that they are the most vulnerable group, as the job opportunities for them will be gradually disappearing. The low-skilled individuals in rural areas are even at higher risk of unemployment or under-employment.

The employability of older people (aged 50 and above), young people (15-24 years old) and of long-term unemployed has been decreasing in the last decade, due to a lack of relevant skills and knowledge. Overall, the public employment services report that over 80% of currently unemployed are low-qualified individuals. Currently, it is estimated that around 90 thousand people in Latvia need to undergo upskilling/reskilling to reduce a labour market mismatch. Lastly, the people with disabilities are a traditional vulnerable group, representing 14% of all currently unemployed.

A significant barrier in upskilling/reskilling of older and/or low-skilled people is their low motivation for training. The reasons for this are the following: first, the low-skilled people have a lack of interest towards any form of education; second, these individuals struggle to acquire new, relevant skills as they lack other skills/knowledge they could build upon or, in case of older people, their cognitive abilities are more limited due to age; third, people who have been long-term unemployed or live in communities with low level of economic activity struggle to find motivation to work full-time or to work at all. Lastly, the representatives of the public employment services argued that the Soviet heritage is expressed in a lack of entrepreneurial culture and apathy where individuals bear little responsibility for their lives and expect social protection from the state.

Besides low motivation for training among the low-skilled unemployed, many of them are not aware of how to access training and obtain relevant information through the PES.

Indicator	**Data**
Employment rate, 2021[1]	75.3%
Employment in high-tech sectors, 2021[2]	4.5%
Unemployment rate, 2021[3]	7.6%
Youth unemployment rate, 2021[4]	11.2%

[1] The EU average rate of employment in 2021 is 73.2%

[2] The EU average of employment in high-tech sectors in 2021 was 4%

[3] The EU average unemployment rate in 2021 was 7.2%

[4] The EU average youth unemployment rate in 2021 is 14.5%

Unemployment rate of males (15 years or over), 2021[1]	8.5%
Unemployment rate of females (15 years or over), 2021[2]	6.5%
Unemployment rate among individuals with less than primary, primary and lower secondary education (levels 0-2), 15 years or over, 2021[3]	14.5%
Unemployment rate among individuals with upper secondary and post-secondary non-tertiary education (levels 3-4), 15 years or over, 2021[4]	8.8%
Unemployment rate among individuals with tertiary education (levels 5-8), 15 years or over, 2021[5]	4.6%
Labour market slack, 2021[6]	14%

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

Despite Latvia has experienced fast economic growth since 2000s, the productivity growth has been slow following the economic crisis of 2008. The key barriers for productivity growth have been a lack of human and financial resources, specifically a lack of labour and of needed competences, low number of PhD graduates, low public and private R&D&I expenditure.[7] These barriers have been aggravated by an under-developed STI ecosystem, weak linkages between industry and academia, and a relatively poor quality of higher education associated with relatively low wages of researchers/academics and an outdated knowledge.

According to the Regional Innovation Scoreboard, Latvia is considered an emerging innovator, which is the category of countries/regions with lowest levels of innovation in the EU. However, Latvia has made a significant progress in innovation performance since 2014, particularly on

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

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

[3] 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%

[4] 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%

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

[6] The EU average labour market slack in 2021 was 14%

[7] https://www.oecd.org/newsroom/latvia-improve-skills-innovation-and-business-conditions-to-optimise-the-strength-and-quality-of-future-growth.htm

the following indicators – international scientific co-publications, IT specialists, trademark applications and employment knowledge-intensive activities.

To stimulate innovation and productivity, the government has been promoting digital transformation and structural economic reforms, aiming to shift towards higher value-added production and services. In 2013, the government has set up the working group that included different Ministries[1], ICT associations, Chamber of Commerce and Industry, Employers' confederation of Latvia and Latvian Association of Local and Regional Governments. This working group developed the Information Society Development Guidelines 2014-2020 and, later, the Digital Transformation Guidelines 2021-2027.[2] The Guidelines represent a comprehensive strategy that focuses on the development of e-governance services, ICT research and innovation, digital skills, and infrastructure. In addition, the policymakers developed the national AI Strategy[3] (2020) and the National Development Plans 2014-2020, 2021-2027[4] that include several programmes on R&D&I, knowledge, and skills, and on implementation of the strategy for smart specialisation. The latter concentrates on building a knowledge-intensive bioeconomy, stimulating biomedicine, medical technologies and biotechnology, smart materials, technology and engineering, advanced ICTs, and smart energy.[5] The combination of sectoral/industrial, digital and smart specialisation policies have increased efficiency and allowed to build synergies to speed up technological transformation.

The education/training sector also has been actively involved in digitisation across all levels by introducing digital technologies and learning platforms, providing digital skills training and raising interest in the ICT sector through various events and training programmes. In addition, the public employment services have been promoting and providing the ICT training at all levels (i.e., from a beginner to advanced) for the unemployed individuals. As a result of all above-listed policies, during the last 10 years the export of IT services has doubled, the Internet usage has significantly increased, and the Latvian government is now one of leaders in e-services in the EU. However, the development of innovative industries is relatively slow, due to mentioned barriers. Thus, the innovative job creation effect is limited.

[1] Ministry of Defence, Ministry of Foreign Affairs, Ministry of Economics, Ministry of Finance, Ministry of the Interior, Ministry of Education and Science, Ministry of Culture, Ministry of Welfare, Ministry of Transport, Ministry of Justice, Ministry of Health, Ministry of Agriculture

[2] https://likumi.lv/ta/id/324715-par-digitalas-transformacijas-pamatnostadnem-20212027-gadam

[3] https://ai-watch.ec.europa.eu/countries/latvia-0/latvia-ai-strategy-report_en

[4] https://www.pkc.gov.lv/sites/default/files/inline-files/Summary_Latvian%20National%20Development%20Plan%202021-2027_final_pdf.pdf

[5] https://www.oecd-ilibrary.org/sites/e341ffed-en/index.html?itemId=/content/component/e341ffed-en

Given a relatively weak STI ecosystem and a lack of financial resources for R&D&I, the national/regional STI stakeholders have been focusing on international collaboration and partnerships. For example, the Latvian Council of Science actively promotes and coordinates international scientific cooperation through, for example, COST (European Cooperation in Science and Technology) for the creation of research networks, EUREKA (the world's biggest network for international cooperation in R&D and innovation, present in over 45 countries), Horizon Europe partnerships and bilateral cooperations. For Latvia, the EU STI programmes/projects represent a critical source of funding that drives technological transformation in the country.

Based on the analysis of foreign investors, the business and investment environments in Latvia are relatively good.[1] Due to large number of state-funded incubators, accelerators, clusters and regional business centres, the start-up ecosystem in the country has been growing. Nevertheless, most tech hubs and clusters are small, lack resources, and, as mentioned earlier, the centres of economic activity (Riga and a few other larger cities - Ventspils, Liepaja, Daugavpils) pull human and financial resources from more peripheral areas. The significant barriers to entrepreneurship in the country are a lack of entrepreneurial skills and limited access to larger markets, due to geographic location. In light of geopolitical developments associated with Russia and Belarus, the Latvian economy also suffers, experiencing an unstable socio-economic environment and limited trade/transit routes.

Among the tech hubs that have been successfully supporting technological transformation of companies/organisations in Latvia, the Digital Innovation Hub – EDIH Latvia should be highlighted.[2]

The Digital Innovation Hub – EDIH Latvia is part of the European Digital Innovation Hub network, created by the European Commission. EDIH Latvia operates in accordance with the RIS3 of Latvia. It supports all entrepreneurs and SMEs, encourages digital transformation in manufacturing industries such as agri-food, electronics, engineering, timber and medicine, and provides the following services:[3]

- Arrange technology testing;
- Advise on attracting funding;
- Create an innovation boosting environment;
- Train digital skills.

[1] https://freepolicybriefs.org/2020/03/23/investment-climate-latvia/

[2] https://dih.lv/lv/par-mums/edic

[3] https://www.interregeurope.eu/good-practices/latvian-digital-innovation-hub-edih-latvia

As a result, EDIH Latvia stimulates the development of both the innovation and business ecosystems, while propelling digital transformation and smart specialisation.

The Hub is based on the collaboration between companies & business associations, entrepreneurship development regional centres, sectoral associations, universities & research centres, over 40 digital technology developers, and national & regional authorities. The effective collaboration between various stakeholders ensures success of the Hub.

Among the policy instruments that have been successfully stimulating innovative and inclusive job creation in Latvia is the business start-up programme for unemployed registered at PES.

The business start-up programme for unemployed is organised and promoted by the Latvian State Employment Agency since 2008. The aim of the programme is to provide advisory services and financial support to unemployed persons to launch a business and sustain it for at least 2 years. The unemployed individuals that have a relevant education background in business or demonstrate that they possess entrepreneurial skills and are willing to start own business are pre-selected for participation in the programme. Following that, participants attend a series of consultations that provide individual assistance to support the preparation and development of a business plan. This assistance is provided by external experts, business consultancies that have been contracted through the open tendering procedure. Once the plan has been developed, a business competition is launched. Based on results of the competition, participants with most innovative and feasible business plans receive a financial grant of up to 5000 EUR.

To support the implementation of a business plan, participants receive additional individual business consultations and a supervisor that supports and monitors progress for the next 2 years. If the grant has not been utilised or misused, the participant should return it. However, if a participant managed to develop own company, grant should not be returned and a participant is offered support by the local start-up business ecosystem.

The start-up programmes are often criticised by the PES. They are considered very costly, due to extensive support of a participant, and not effective, as very few unemployed individuals manage to build a start-up. However, the programme that has been developed in Latvia is successful, due to careful pre-selection of participants, assessment of business ideas and a high-quality of advisory support. Due to careful pre-selection of participants and a relatively small budget, the programme has a small scale, but a higher effectiveness rate.

4 Policies/instruments to prevent and mitigate job displacement

Latvia has many active labour market policy measures in place, which focus on re-integration of unemployed individuals on the labour market, particularly among disadvantages groups. The strength of the Latvian inclusive policy approach is not only the variety of available measures for different target groups, but also other supporting mechanisms that address challenges of the unemployed and the evidence-based, forward-looking policy design. The latter is informed by the labour market forecasting analysis platform that takes into account the impact of technological transformation on the labour market, although it does not focus only on the impact of automation technologies, but incorporates all types of technology-related effects.[1] These factors have yielded positive results, as based on the RCI, since 2013 Latvia has improved its performance on several indicators: long-term unemployment, unemployment, female unemployment and NEET. However, the total spending on ALMP measures is relatively low, compared to other OECD countries. For example, in 2016 the Latvian government spent only 0.15% of GDP on targeted training for particular groups, such as unemployed or inactive individuals or employed individuals at risk of involuntary job loss, compared to 0.36% across the OECD.[2] Thus, most offered trainings are short-term and do not result in effective upskilling and reskilling, unless funded by the unemployed themselves.

The active labour market policy measures in Latvia include:

- Job search assistance and guidance – profiling and individual job search plan, organisation of information days, career guidance consultations, PES portal of CV and vacancies;
- Training programmes – measures to increase competitiveness (basic competences), reskilling/upskilling training programmes, on-the-job training;
- Employment programmes – subsidised employment for the most vulnerable groups of unemployed, temporary subsidised employment, paid temporary public works, entrepreneurship and self-employment;
- Other measures – measures aimed at long-term unemployed with addiction problems, promotion of regional mobility.

Besides these measures, there are programmes that target youth, older people, individuals with disabilities, and support social entrepreneurship. In view of the Ministry of Welfare that has the responsibility of reducing unemployment and developing active labour market

[1] https://prognozes.em.gov.lv/lv/darbaspeka-pieprasijums

[2] https://www.oecd-ilibrary.org/sites/e341ffed-en/index.html?itemId=/content/component/e341ffed-en

policies, the most effective measure to tackle unemployment is training. Based on estimates of the PES, participation in training increases employability by 30%. However, Latvia experiences several challenges related to training: as mentioned earlier, a lack of motivation among the unemployed to participate in training, large number of training providers with various degrees of quality training, lack of culture of lifelong learning, accessibility of training. To tackle these challenges, supporting mechanisms have been developed. Specifically:

- Career councillors, recruited at PES, either have an educational background in psychology or receive psychology training to motivate the unemployed people to re-integrate on the labour market. In addition, many trainings are provided in-person to stimulate positive social interaction and willingness to return to work among the unemployed individuals;
- The Latvian government has set up the Human Capital Council that focuses on stimulating lifelong learning and reintegration of currently inactive members of the labour force on the labour market;
- To stimulate accessibility of training and of employment opportunities for individuals living in distant or rural areas, the PES offers online trainings and regional mobility support.

In Latvia, the regional mobility support is available to the unemployed to reach workplaces or trainings during all training period or first 4 months if a person starts labour relations. The location of work/training should be at least 15 km and not more than 110 km from a declared residence place. The support partially covers transportation and/or living costs (up to EUR 150 per month for rent and EUR 7 per day for transportation). An exact amount of support depends on real costs of transportation or living, based on submitted expenses.

Currently, 50% of the unemployed in Latvia that undergo training use the regional mobility support. Such measure is effective in the contexts of limited local training/employment opportunities. It partially covers costs to motivate participation in education/training and to ensure that support is valued, as personal resources also are invested. In addition, the measure helps to develop a habit of travelling to work or training, especially for the long-term unemployed.

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

Most Latvian companies do not fully realise the potential of automation technologies and invest relatively little in skills of their employees, especially in ICT training. This is associated

with a lack of expertise on what technologies could be effective/useful and how they should be adopted, as well as, due to insufficient financial resources that could be invested in innovation and other risk-related activities, as the majority of companies in Latvia are SMEs. Investment in employee upskilling and lifelong learning are not common (only 6% of adults are engaged in lifelong learning in Latvia), due to a lack of culture of continuous adult learning, especially among low-skilled.[1]

To support both employers and employees in their journey of/towards technological transformation the Latvian government has outlined the following actions in the "Digital Transformation Guidelines for 2021-2027":[2]

- Employers will be motivated and financially supported to develop the digital skills needed for their employees- in public and private sector;
- The Digital Innovation Hub (EDIH Latvia) will provide services to SMEs' and sectors where digital and related technologies are slow to learn, transfer knowledge between regions, provide thematic services, including artificial intelligence, high performance computing, cyber security and other advanced digital skills;
- State will provide support for training and retraining of professionals to work with new digital technologies and processes;
- Awareness campaigns about importance of digital skills, technologies and services will be organized for different target groups with most appropriate outreach channels.

In this context, EDIH Latvia is one of key stakeholders that supports and guides companies/organisations that committed to technological transformation. However, the resources of the Hub are also limited, therefore many companies look for technology experts in the private sector, which at this stage seems to be limited.

The discussions between the trade unions and employers' representatives on the impact of automation technologies on workplaces reveal that few employees have concerns about working, employment conditions.[3] Overall, employees feel protected through existing labour regulations and assume that technological transformation may increase salaries, improve work processes and working conditions.

In 2021, the Cabinet of Ministers approved Education Development Guidelines 2021-2027 "Future Skills for Future Society", which includes adult education and lifelong learning. However, in practice, policy instruments for lifelong learning are limited to short-term training

[1] https://www.cedefop.europa.eu/en/countries/latvia

[2] https://digital-skills-jobs.europa.eu/en/actions/national-initiatives/national-strategies/latvia-digital-transformation-guidelines-2021-2027

[3] https://arodbiedribas.lv/en/lbas-2/

projects.[1] Among the successful training programmes that stimulate lifelong learning, support employers, employees during technological transformation, as well as, unemployed individuals, is the "Future skills initiative".

The "Future skills initiative" has been launched in 2021 as a pilot and, following its success, it became a permanent programme. The "Future Skills Initiative" finances training provided by massive online learning course platforms with a particular focus on:

- ICT
- business
- data science
- professional language learning
- transversal skills

The platforms that offer training (e.g., Coursera, edX, FutureLearn) must comply with a set of criteria of the Cabinet of Ministers to ensure high quality of training. One of the key criteria is that the platform must be hosted by at least 10 higher education institutions included in the World University Ranking.

The initiative funds employed and unemployed individuals up to 500 EUR, with 50% of pre-financing. Individuals can participate in multiple courses, while the unemployed are also eligible to a stipend (5 EUR per day).

In 2022, the number of MOOCs offered through the initiative has reached 936, while the number of participants reached 936, of which 673 were women. The initiative has been successful due to selection of relevant themes/topics of trainings (especially in the context of technological transformation), online format that increased accessibility and flexibility of trainings, high quality standards, availability for all population groups that responds to needs of all individuals (employers, employees and unemployed) and stimulates lifelong learning, and due to reduction of financial barrier for participation in training.

6 Lessons learned

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

- In view of limited financial and human resources for STI, the international collaboration and partnerships are essential for technological transformation and innovative job creation.

[1] https://www.cedefop.europa.eu/en/countries/latvia

- The combination of sectoral/industrial, digital and smart specialisation policies increase efficiency and allow to build synergies to speed up technological transformation.
- Availability of human resources and needed skills/competences are essential for every step towards innovative job creation. In case of Latvia, the education system does not adequately support acquisition of essential skills/competences and knowledge, due to relatively low wages of researchers/academics and an outdated knowledge.
- The Latvian government introduced comprehensive policies/strategies for digital transformation and structural economic reforms. However, the progress is slow, due to a lack of human, financial resources, and entrepreneurial culture, under-developed STI and business ecosystems.
- The geographic and geopolitical factors may significantly affect the local economy, its potential and entrepreneurship by limiting access to markets, trade, and transit routes, and creating an unstable socio-economic environment.
- The centres of economic activity (i.e., large cities) pull human and financial resources from more peripheral areas. Thus, these areas need public interventions to improve their attractiveness for business and STI, and to enhance their connectivity to centres of economic activity in a mutually beneficial way.
- Innovation/tech hubs and business support centres that have an extensive network of partners/collaborators can effectively stimulate the development of innovation and business ecosystems that are critical for innovative job creation.

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

- The ALMP should incorporate a comprehensive package of measures for different target groups and other supporting mechanisms that address challenges of the unemployed. The design of the ALMP should be evidence-based and forward-looking, informed by the labour market forecasting analysis.
- Trainings are considered the most effective measure for re-integration of the unemployed on the labour market. However, a lack of financial resources for training result in limited upskilling and reskilling, unless funded by the unemployed themselves.
- Among the key barriers that prevent re-integration of unemployed on the labour market is a lack of motivation to participate in training, poor quality of some trainings and limited accessibility of training for individuals in rural/distant areas. The PES staff should receive psychology training to motivate the unemployed individuals to return to work, as well as launch activities that stimulate social engagement and lower barriers to access training/employment.

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

- The culture of lifelong learning is essential for enhancing resilience and adaptability of human resources on the labour market. In case the culture of lifelong learning is weak, the policymakers should facilitate access to training via free/subsidised courses, offer flexible learning formats (e.g., online, at own pace, at convenient time), and ensure high quality of training.
- Upskilling/reskilling of low-skilled individuals is highly problematic, due to their unwillingness to participate in any form of training.
- SMEs typically lack financial resources for innovation and other risk-related activities. If a regional/national economy is dominated by SMEs, the policymakers should develop instruments, mechanisms that provide expertise and access to finance that supports technological transformation.