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Foreword

This Survey is published on the responsibility of the Economic and Development Review Committee of the OECD, which is charged with the examination of the economic situation of member countries.

The economic situation and policies of Slovenia were reviewed by the Committee on 7 June 2022. The draft report was then revised in light of the discussion and given final approval as the agreed report of the whole Committee on 23 June 2022.

The Secretariat's draft report was prepared for the Committee by Jens Høj, Martin Borowiecki, Lucia Russo, Federico Giovannelli and Peter Papež, with inputs from Alexia Gonzalez Fanfalone, Viktoria Kis, Maria Sobron Bernal, Vincenzo Spiezia, Marieke Vandeweyer and Benjamin Welby under the supervision of Mame Fatou Diagne. Research assistance was provided by Federico Giovannelli, and editorial support by Gemma Martinez.

The previous Survey of Slovenia was issued in July 2020.

Information about the latest as well as previous Surveys and more details about how Surveys are prepared is available at www.oecd.org/eco/surveys.

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BASIC STATISTICS OF SLOVENIA, 2021

(Numbers in parentheses refer to the OECD average)

LAND, PEOPLE AND ELECTORAL CYCLE					
Population (million, 2020)	2.1		Population density per km (2020)	104.4	(38.7)
Under 15 (%, 2020)	15.1	(17.8)	Life expectancy at birth (years, 2020)	80.5	(79.7)
Over 65 (%, 2020)	20.7	(17.4)	Men (2020)	77.8	(77.0)
International migrant stock (%, 2019)	12.2	(13.2)	Women (2020)	83.4	(82.5)
Latest 5-year average growth (%)	0.4	(0.6)	Latest general election		April-2022
ECONOMY					
Gross domestic product (GDP)			Value added shares (%, 2020)		
In current prices (billion USD)	61.6		Agriculture, forestry and fishing	2.4	(2.7)
In current prices (billion EUR)	52.0		Industry including construction	33.2	(26.2)
Latest 5-year average real growth (%)	3.2	(1.5)	Services	64.4	(71.1)
Per capita (thousand USD PPP, 2020)	39.7	(46.1)			
GENERAL GOVERNMENT					
Expenditure (% of GDP, OECD: 2020)	49.1	(48.5)	Gross financial debt (% of GDP, OECD: 2020)	94.6	(133.5)
Revenue (% of GDP, OECD: 2020)	43.9	(38.1)	Net financial debt (% of GDP, OECD: 2020)	34.5	(81.2)
EXTERNAL ACCOUNTS					
Exchange rate (EUR per USD)	0.85		Main exports (% of total merchandise exports)		
PPP exchange rate (USA = 1)	0.56		Chemicals and related products, n.e.s.	30.7	
In per cent of GDP			Machinery and transport equipment	30.4	
Exports of goods and services	83.5	(54.6)	Manufactured goods	17.4	
Imports of goods and services	78.2	(51.2)	Main imports (% of total merchandise imports)		
Current account balance	3.2	(0.1)	Chemicals and related products, n.e.s.	31.3	
Net international investment position	-6.8		Machinery and transport equipment	26.2	
			Manufactured goods	16.7	
LABOUR MARKET, SKILLS AND INNOVATION					
Employment rate (aged 15 and over, %, OECD: 2020)	55.7	(55.1)	Unemployment rate, Labour Force Survey (aged 15 and over, %, OECD: 2020)	4.8	(7.1)
Men (OECD: 2020)	60.2	(63.0)	Youth (aged 15-24, %)	13.1	(12.8)
Women (OECD: 2020)	51.2	(47.7)	Long-term unemployed (1 year and over, %, 2020)	1.9	(1.3)
Participation rate (aged 15 and over, %)	58.5	(60.3)	Tertiary educational attainment (aged 25-64, %, 2020)	35.9	(39.0)
Average hours worked per year (2020)	1,515	(1,687)	Gross domestic expenditure on R&D (% of GDP, 2018)	2.0	(2.6)
ENVIRONMENT					
Total primary energy supply per capita (toe, 2020)	3.0	(3.7)	CO2 emissions from fuel combustion per capita (tonnes, 2019)	6.3	(8.3)
Renewables (%, 2020)	18.5	(11.9)	Water abstractions per capita (1 000 m, 2020)	0.5	
Exposure to air pollution (more than 10 g/m of PM 2.5, % of population, 2019)	100.0	(61.7)	Municipal waste per capita (tonnes, 2020)	0.5	(0.5)
SOCIETY					
Income inequality (Gini coefficient, 2019, OECD: latest available)	0.246	(0.317)	Education outcomes (PISA score, 2018)		
Relative poverty rate (%, 2019, OECD: 2018)	7.4	(11.7)	Reading	495	(485)
Median disposable household income (thousand USD PPP, 2019, OECD: 2018)	25.9	(25.4)	Mathematics	509	(487)
Public and private spending (% of GDP)			Science	507	(487)
Health care (2020, OECD: 2019)	9.7	(8.8)	Share of women in parliament (%)	26.7	(32.4)
Pensions (2017)	10.5	(8.6)	Net official development assistance (% of GNI, 2017)	0.2	(0.4)
Education (% of GNI, 2020)	4.5	(4.6)			

Note: The year is indicated in parenthesis if it deviates from the year in the main title of this table. Where the OECD aggregate is not provided in the source database, a simple OECD average of latest available data is calculated where data exist for at least 80% of member countries.
Source: Calculations based on data extracted from databases of the following organisations: OECD, International Energy Agency, International Labour Organisation, International Monetary Fund, United Nations, World Bank.

Executive summary

The economy is facing headwinds

The strong growth momentum in 2021 has stalled (Table 1). The war in Ukraine and supply-chain bottlenecks are having negative impacts on economic activity, adding to the already high inflation through higher energy and food prices. The post-pandemic recovery was mainly driven by domestic demand, reflecting a fiscal stimulus of about 10% of GDP in 2020-2021 that supported incomes and businesses, and allowed economic activity to surpass its pre-pandemic level in 2021. Before the war, economic growth was facing growing headwinds, such as rising energy prices, continued international supply chain bottlenecks and labour shortages. The war in Ukraine has further heightened uncertainty.

Table 1. Strong growth is set to moderate

Y-o-y % changes	2021	2022	2023
Gross domestic product	8.1	4.6	2.5
Final domestic demand	10.0	9.0	2.4
Net exports (contribution to GDP growth)	-1.6	-3.7	0.2
Unemployment rate (% of labour force)	4.8	3.9	3.7
Harmonised consumer price index	2.0	7.6	6.0
Current account balance (% of GDP)	3.3	-1.5	-1.1

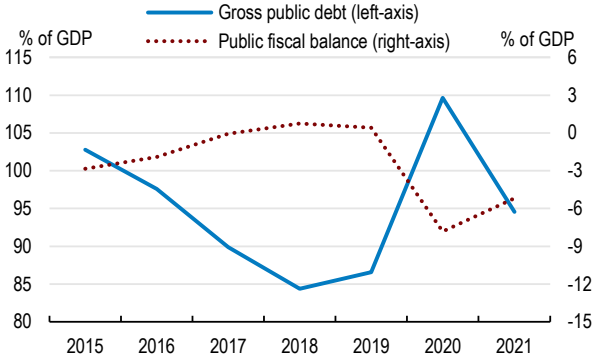
Note: Data for 2022 and 2023 refer to projections.
Source: OECD Economic Outlook 111 database.

The labour market is strong and tightening. The government's new short time work and furlough schemes contained the rise in unemployment during the pandemic. After the phasing out of the schemes, strong labour demand has allowed the unemployment rate to return to its pre-pandemic level. Employment reached a historic high in early 2022. Looking ahead, the tight labour market is expected to contribute to wage pressures in 2022 and 2023.

Inflation has increased to its highest level in 20 years. Initially, the rise in inflation reflected mostly international factors, such as higher energy prices, before domestic price pressures, in particular service prices, became important.

Fiscal policy has been supportive. As a result, public debt and the budget deficit remain high (Figure 1). The pro-cyclical fiscal stance added to demand pressures at a time when the ECB's monetary policy fell short of containing inflation expectations in Slovenia, as reflected in the steeper yield curve. Fiscal consolidation of ½ % of GDP will be implemented in 2022. Looking forward, a faster fiscal consolidation is needed to reduce demand pressures. Additional support may be needed for households most vulnerable to high food and energy prices, financed by savings in other recurrent spending.

Figure 1. Fiscal policy has been expansionary



Note: National accounts definition of gross public debt.
Source: OECD Economic Outlook: Statistics and Projections database.

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Structural reforms for stronger and more sustainable growth

Sustaining income convergence relative to richer OECD countries with an older and smaller workforce requires markedly improved productivity growth. This entails measures to raise investment in new technologies. Such efforts should be implemented alongside measures to improve the labour force participation of low-income and older workers, notably through longer working lives, and a more growth-friendly tax system.

Structural reforms are needed to prepare for the fiscal challenges associated with population ageing. The structural deficit on the public balance has widened with unfunded increases in pension benefits. This has contributed to one of the highest projected pension spending increases in the OECD. Population ageing is set to accelerate, requiring timely policy action.

Growth has become less CO_2–intensive. Nonetheless, more concerted action is needed to achieve the ambitious net-zero target by 2050. Carbon pricing varies across sectors and activities, leading to varying abatement costs, and thus higher costs of achieving environmental targets. The public sector is not leading by example as fragmented budgetary and planning policies

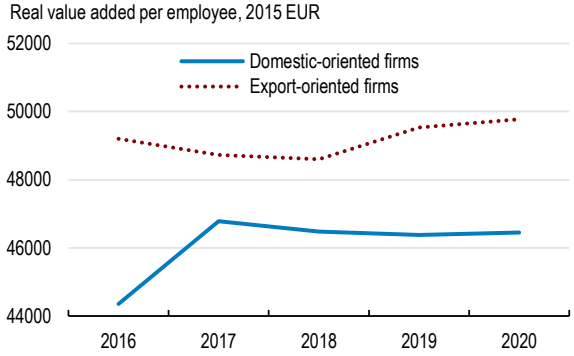
without consistent pricing of carbon mean that the cost of emission reductions varies across government programmes.

Labour taxes remain among the highest in the OECD, despite recent reforms. High labour taxation discourages labour force participation and reduces workers' incentives to invest in skills. High taxes also erode wage gains for high-income workers and make it more difficult to attract and retain high-skilled workers. In contrast, property taxes are low and many exemptions reduce the consumption and income tax base.

Business dynamisms is held back by regulatory burdens and widespread state-ownership. The regulatory burden is similar to the OECD average, but in no area is the country as competitive as dynamic market economies. State-owned enterprises (SOEs) still account for a larger share of employment than elsewhere in the OECD in spite of recent privatisations. State ownership persists in inherently competitive sectors such as tourism. The presence of a holding company improved the governance of SOEs. However, assets of the largest SOEs have been moved back under direct state ownership between 2018 and 2020, reversing previous reform efforts. In addition, the perception of corruption remains high despite the recent strengthening of the anti-corruption framework.

Productivity of the domestically-oriented SME sector is weak. This reflects weak product market competition. In contrast, firms that have integrated in international supply chains outperform in terms of productivity performance their domestically-oriented peers, reflecting international competition (Figure 2).

Figure 2. Domestically-oriented SMEs have lower productivity



Source: OECD calculations based on business survey data from the Statistical Office of Slovenia.

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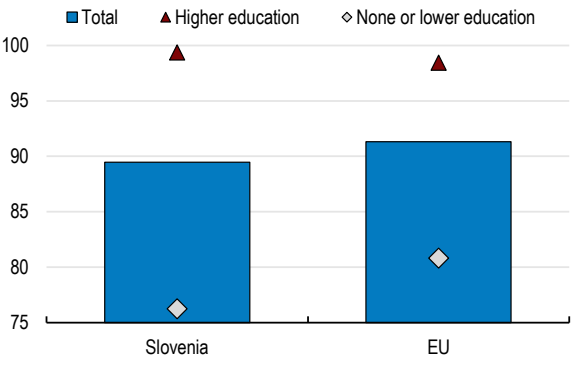
Supporting the digital transformation

The government wants to make Slovenia one of the five most digitalised EU countries. Achieving this requires addressing the relatively low digital competencies of the population and an insufficient rollout of broadband in rural areas. The establishment of the Government Office for Digital Transformation has improved coordination, but it lacks resources to monitor policy implementation.

The government can drive digitalisation. However, the use of e-government services among the population is low. This reflects that not everyone is using the internet, especially people with lower education (Figure 3). Most digital public services are offered on an opt-in basis. This means that digital services coexist with traditional ways of delivering, which limits the incentive to use and provide digital solutions, while increasing costs of service provision.

Figure 3. Many Slovenians are still offline

Individuals using the Internet - last 3 month, %, 2021



Source: OECD Information and Communication Technology database.

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Financing the digitalisation strategy is mostly through EU funds. This means that priorities are often set at the EU level. As the country develops national programs, a more coherent and strategic approach is needed, as well as greater efforts to identify market failures or other reasons for low digitalisation.

Connectivity in rural areas lags behind. Fast mobile broadband is broadly available. This reflects strong competition that led to lower prices. However, competition in the fixed broadband market is not sufficient to lower prices, leading to pockets of low connectivity in remote regions. The persistence of such pockets reflects that existing

subsidies for providing fibre in many cases do not cover the additional costs.

Digitalisation is held back by underdeveloped capital markets. Traditional banks provide limited credit to new digital firms. In contrast with other countries, there are relatively few new Fintech providers and the involvement of venture capital and institutional investors remains limited.

Improving skills and mobility for the digital transformation

Promoting digitalisation requires improved labour allocation and enhanced skill formation. The centralised wage-setting process reduces the allocative efficiency of the labour market. More efficient labour reallocation will support digitalisation, and thus income convergence with richer OECD countries as labour resources in underperforming firms are freed up to the benefit of more digitalised and productive firms. In addition, VET graduates have weak ICT skills and the university system provides an insufficient number of ICT specialists.

Immigration of high-skilled talent can help address skill shortages. However, strict immigration rules and cumbersome procedures to obtain working permits discourage immigration of high-skilled workers from outside the European Union. International students that have finished their studies cannot easily stay in the country to continue working. Also, the Slovenian language policy at universities discourages international students and researchers from coming to the country.

Rigid labour contracts in the public sector are holding back the hiring of key ICT personal. The highest public salary is fixed at five times the minimum wage in the economy, making it difficult for the public sector to attract people with specialised knowledge such as IT professionals, slowing the government's digitalisation efforts.

Digital skills and job mobility among older workers are low. This reflects seniority bonuses that increase with every year of work experience. Such bonuses lock older workers into their current job, thus reducing their incentives to invest in their digital skills as wages do not reflect productivity. The lock-ins also hamper efficient allocation of older workers to jobs with higher productivity.

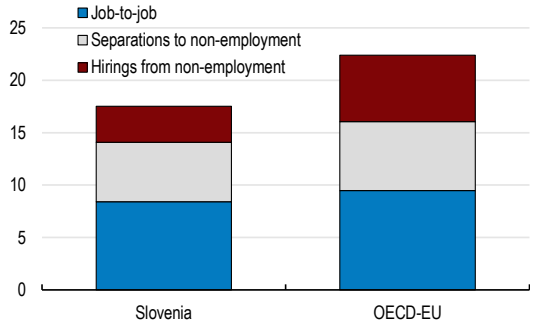
Skills are poorly matched to labour market needs for digitalisation. Vocational training mainly delivers theoretical training with little work-based learning and relatively little emphasis on developing digital skills. The apprenticeship system is limited to traditional occupations such as carpenter and tool maker, where the provision of digital skills is sparse.

Co-ordinated wage bargaining hampers labour reallocation to more productive and digitalised firms. Raising potential growth in face of a smaller and older workforce will have to increasingly rely on improved labour mobility and skill formation (Figure 4). This requires stronger incentives for workers to invest in their digital skills and move to higher productivity jobs.

The high minimum wage reduces employment opportunities and transitions for low-skilled workers. The minimum wage to the median wage ratio is among the highest in the OECD. Minimum wage growth is important for improving incomes of the poorest. However, fast increases relative to other wages reduce job creation for low-skilled unemployed people. Improving skills and job prospects for low-skilled workers is important as they are most affected by job displacement due to automation.

Figure 4. Labour market transitions are low

Labour market transitions, % of average employment, 2019



Source: Causa, O., N. Luu and M. Abendschein (2021), "Labour market transitions across OECD countries: Stylised facts", OECD, https://doi.org/10.1787/62c85872-en.

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Main Findings	Key Recommendations
Sustain the recovery and ensure fiscal sustainability	
The economy is running at full capacity with inflation above the ECB's 2% target and accelerating.	Implement fiscal consolidation to manage demand pressures.
Population ageing is accelerating, boosting ageing-related spending pressures.	Develop a medium-term fiscal consolidation plan to address the long-run challenges of ageing. Raise the minimum years of contributions required to retire, and use lifetime incomes to determine pension benefits.
Accelerate structural reforms for stronger and more sustainable growth	
High labour taxes deter labour market participation and investment in skills. Many exemptions and allowances narrow the personal income tax base.	Make the tax system more growth-friendly by further reducing labour taxes, and increasing consumption and property taxes. Broaden the personal income tax base by reducing allowances.
Public wage increases are pro-cyclical. Some occupations in the public sector experience labour shortages (e.g. health and IT specialists).	Establish a rules-based system for public wage increases subject to sound budget constraints, while allowing flexibility in public wage setting to address recruitment problems (such as in health and IT).
The tax system imposes heterogeneous abatement costs across sectors and activities.	Introduce and gradually align carbon taxes in residential, commercial and industrial sectors.
Large parts of the population are exposed to small particles.	Phase out fossil fuel-based boilers and complement the replacement subsidy for older wood-based boilers with regulatory requirements and financial sanctions.
Competition in product markets is low.	Continue privatisation efforts particularly in inherently competitive sectors such as tourism, and strengthen the corporate governance of State-Owned Enterprises.
The anti-corruption framework needs further strengthening to be more effective.	Continue efforts to fight corruption by strengthening the independence and bolstering the resources of the anti-corruption authority.
Supporting the digital transformation of the economy	
The territorial connectivity divide between urban and rural areas persists.	Align investment subsidies to reflect actual deployment costs, particularly in underserved areas.
Support programmes for the digital transformation of businesses have a top-down design, starting with EU funding.	Introduce input and output benchmarking in program management to evaluate effectiveness.
The use of most digital public services for households is voluntary, duplicating existing services	Move from opt-in (voluntary-based) to opt-out (compulsory-based) systems in e-government services.
Capital markets remain underdeveloped.	Promote digitalisation in the financial sector through evaluating the regulatory burden, and a closer alignment of FinTech regulations with other European countries.
Improving skills and mobility for the digital transformation	
Apprenticeships are rarely available in technical programmes.	Expand apprenticeships into technical programmes.
Co-ordinated wage bargaining hampers labour reallocation and investment in skills.	Encourage wage-setting at the firm level and determine framework conditions, such as seniority bonuses and minimum wages at the sectoral level.

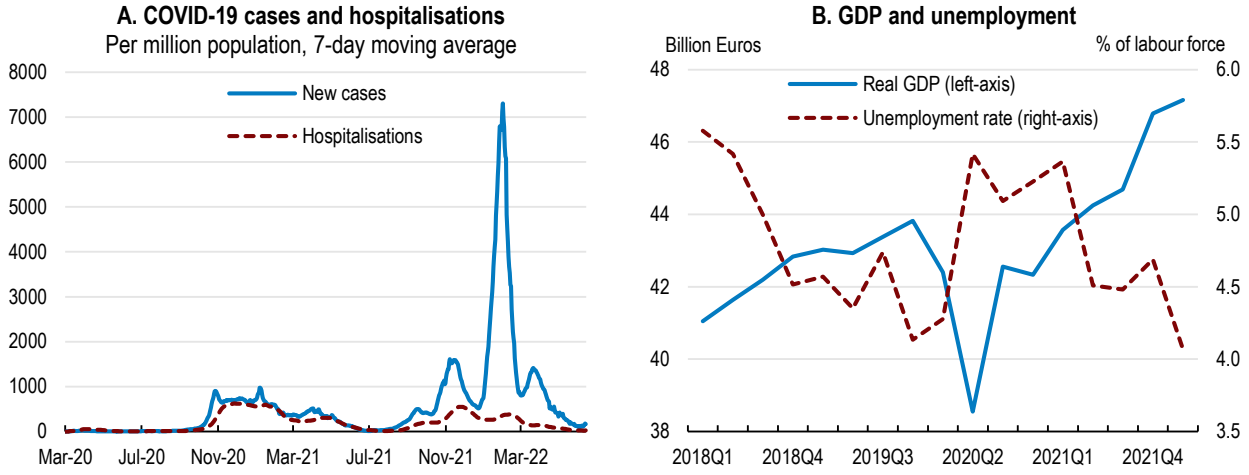
1 Key Policy Insights

The economy is performing well with strong economic growth and a tightening labour market. The near-term outlook remains positive but risks and uncertainty are high. On the other hand, population ageing will lead to a smaller and older work force, which means that sustaining economic growth and income convergence will increasingly rely on improving labour allocation, raising human capital and facilitating the adoption of new technologies, and in particular digitalisation. In addition, rising ageing-related public spending pressures threaten fiscal sustainability, while problems of access and adequacy issues need to be addressed in the health and pension systems.

The recovery continues but is subject to high uncertainty

The war in Ukraine interrupted the strong post-pandemic recovery, although headwinds in the form of international supply chain bottlenecks and higher energy prices were building up. Until then, economic activity surpassed its pre-pandemic levels in 2021. The labour market performance was strong with historically high employment and a low unemployment rate (Figure 1.1). At the beginning of 2022, wage growth slowed, reflecting the withdrawal of pandemic-related one-off government measures. Nonetheless, the tight labour market is expected to put pressures on wages throughout 2022 and 2023. Together with high food and energy prices, this will keep headline inflation elevated. The pace and strength of the recovery remain subject to considerable uncertainty, related to the impacts of the war in Ukraine. The conflict could create an energy crisis, which together with stronger wage growth could fuel a further rise in inflation expectations.

Figure 1.1. The COVID-19 pandemic had severe health and economic impacts



Source: OECD calculations based on Ourworldindata; and OECD Economic Outlook: Statistics and Projections database.

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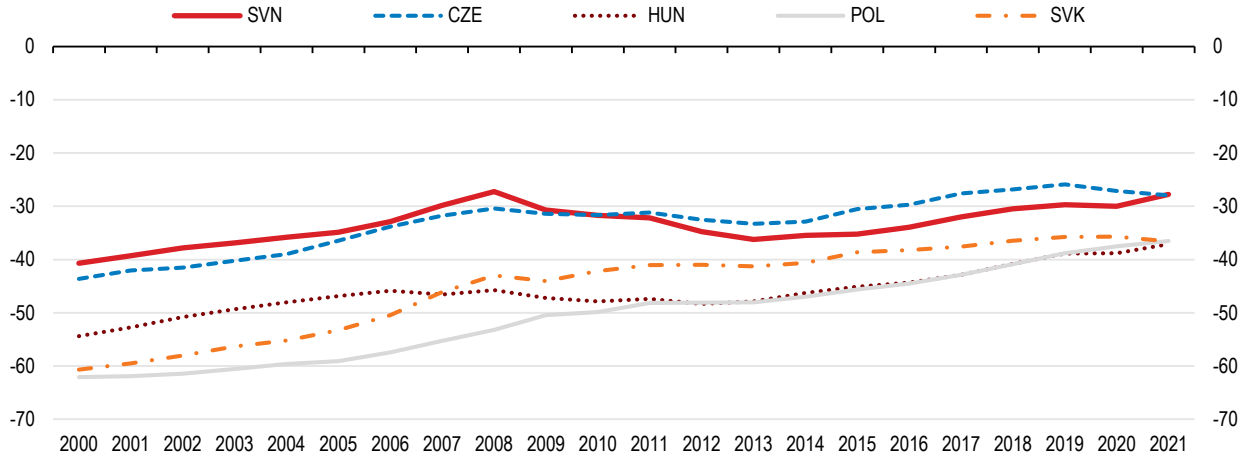
Income continued to converge towards richer OECD members (Figure 1.2). This reflected mostly strong employment increases, whereas the contribution from higher real wages was lower than in other Central and Eastern European economies. Growth was initially supported by faster productivity growth in 2016-2018, but productivity growth slowed prior to the pandemic. Vacancies were mostly filled through migration while potential domestic labour resources remained underutilised as reflected in the low labour force participation of people older than 60.

The COVID-19 pandemic has entailed large social costs, whose effects are still unfolding, as the pandemic has assumed a syndemic relevance, through the impact on social, economic, and psychological aspects of people's lives. According to the regularly conducted COVID-19 survey of the National Institute of Public Health, young people experienced a particularly large deterioration in their financial situation, likely related to the increase in youth unemployment (see below) (NIJZ, 2021[1]). More generally, financial security was among the most negatively affected areas during the pandemic. Those reporting a worse financial situation were also more likely to report mental health issues, with the share of persons reporting symptoms of anxiety and depression being highest among the 18-29 age group (NIJZ, 2021[2]).

Figure 1.2. Incomes are catching up

GDP per capita gaps to the upper half of OECD countries. Upper half is weighted by the population, % difference



Source: OECD National Accounts database; OECD Economic Outlook: Statistics and Projections database; and OECD calculations.

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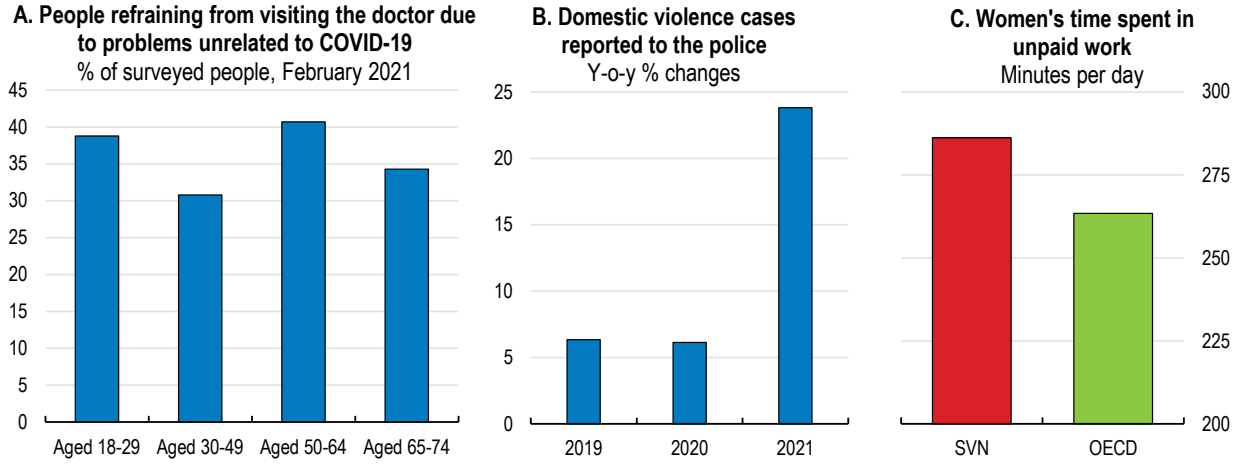
In 2020, the overall share of people at risk of poverty or social exclusion increased. This was particularly observed for the most disadvantaged groups, such as those with lower education, one-member households and retired women, but also, to a lesser extent, for people with tertiary education and households with more than one income (SURS, 2021[3]) (EAPN, 2021[4]). The pandemic also affected women's employment, given their high presence in the sectors most impacted by the crisis, such as health care (due to the over-exploitation of a limited workforce capacity), elderly home-care (due to high shares of women's unpaid work at home) and food and tourism (due to job losses) (Figure 1.3, Panel C) (EAPN, 2020[5]). Another area of concern is education, where results of the national knowledge assessments (NPZ) for 9-grade students for 2020-21 were lower than the average results in 2015-2019 in mathematics, although the number of tested students was too low to derive conclusions on average student performance (RIC, 2021[6]). The pandemic has also entailed a surge in domestic violence, especially against women and children. Police records show that such cases increased by almost 24% by mid-2021 – four times higher than the increases observed in the previous two years in the same period (Figure 1.3, Panel B) (EAPN, 2021[4]) (UNODC, 2021[7]).

Looking ahead, public authorities should not underestimate the long-term consequences of the COVID-19 pandemic on the population's health and well-being. The National Institute of Public Health expects increasing pressure on the health sector due to mental health problems and a possible rise in chronic non-communicable diseases related to the pandemic (see below). Moreover, social disparities may increase as the social effects of the pandemic have affected groups with weaker socio-economic backgrounds (NIJZ, 2021[8]).

Sustaining recent gains in employment and incomes in the face of an older and smaller workforce requires markedly improved productivity growth. Looking ahead, a key structural challenge is to improve the employment prospects of low-income and older workers through better incentives for life-long learning and improved mobility. Such efforts should be complemented by measures to shift to cleaner energy and new technologies, and accelerate the digital transformation of the economy. These policies should be implemented alongside measures to prepare public finances for the fiscal challenges associated with population ageing.

Figure 1.3. The social costs of the pandemic are still unfolding



Note: In Panel B, data refer to the first 7 months of the year.

Source: NIJZ, Results of the COVID-19 Survey (SI-PANDA); EAPN (2021), Report on monitoring poverty and social exclusion in Slovenia; and OECD Gender database.

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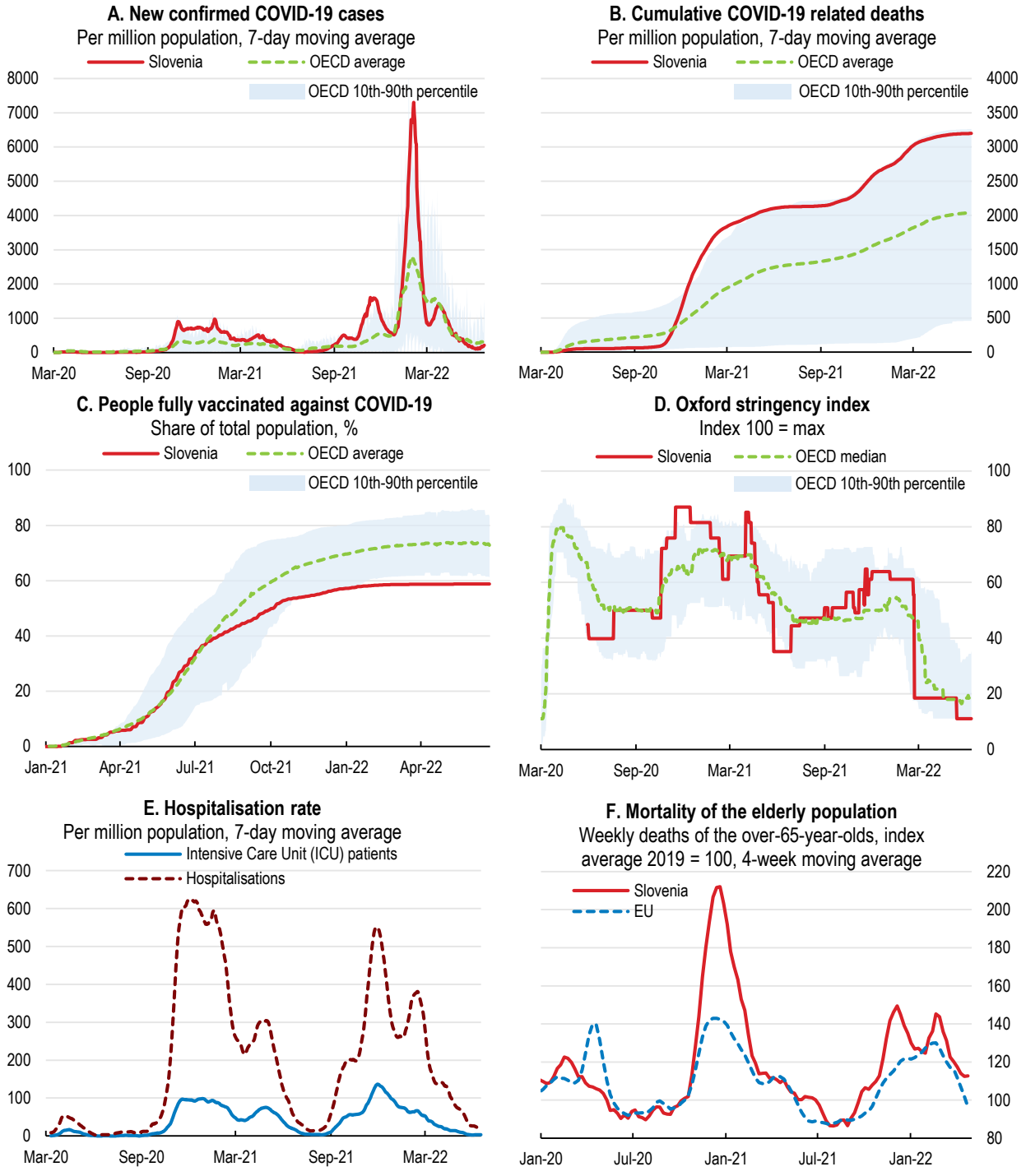
Against this background, the *Survey* has three main messages:

- Fiscal consolidation is needed to reduce demand pressures. This does not rule out additional support for most affected households by the energy crisis. But additional support will have to be financed by cuts to other government recurrent spending. Such efforts should be implemented alongside structural reforms to prepare public finances for the fiscal challenges associated with population ageing. This will require first and foremost measures to promote later retirement and longer working lives.
- Promoting productivity growth entails measures to raise investment in new technologies, particularly to foster the digital transformation of the economy. Such efforts need to be complemented by measures to improve the employment prospects of low-income and older workers.
- Greener growth necessitates further efforts to reduce emissions in a cost-efficient manner by realigning incentives embodied in environmental policies. This calls for the introduction of carbon taxes in non-ETS sectors, notably the residential, commercial and industrial sectors, and the phasing out of exemptions from excise duties.

The pandemic strained the health system

The vaccination rollout in early 2021 initially progressed fast but slowed down by summer 2021 (see below). This contributed to severe fourth and fifth waves in late 2021 and early 2022 (Figure 1.4). The reallocation of health resources to the treatment of COVID patients reduced outpatient and inpatient treatments (Figure 1.5, Panel A). For instance, 51% and 70% fewer patients were referred to inpatient care during the first wave of the pandemic in March and April 2020, respectively (Kuhar, Gabrovec and Albreht, 2021[9]). A consequence was a substantial increase in waiting times for elective surgeries, such as heart problems (Panel B). This suggests a reduced capacity to detect symptoms for many illnesses, such as cardiovascular problems. A concern is that foregone early treatments may potentially lead to more costly treatments in the future and higher mortality, putting additional strains on the health sector. Looking ahead, capacity constraints in hospitals should be addressed by enhancing outpatient care as was discussed in the last *Survey* (OECD, 2020[10]).

Figure 1.4. The healthcare situation worsened in late stages of the pandemic



Note: In Panel D, the index is a composite measure based on nine response indicators including school closures, workplace closures, and travel bans, rescaled to a value from 0 to 100 (100 = strictest). Unweighted averages for OECD aggregate in Panels A, B and C. In Panel F, the EU aggregate includes all 27 member economies with the exception of Ireland.

Source: Oxford Coronavirus government response tracker; OurWorldinData; Eurostat Demography and Migration database; and OECD calculations.

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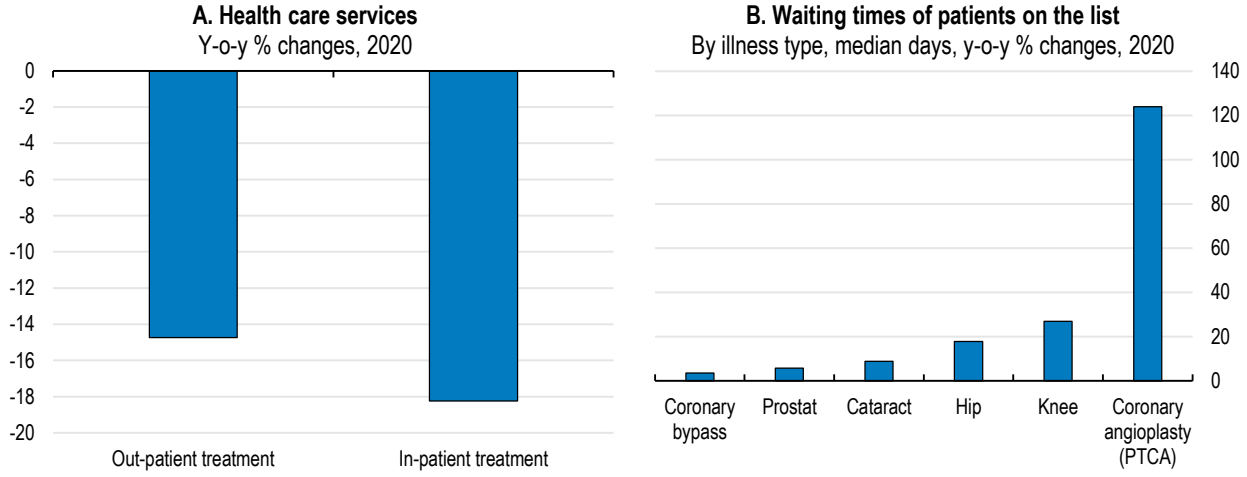
Figure 1.5. Capacity reallocation may increase mortality from other causes in the future



Source: National Institute of Public Health (NIJZ); and OECD Heath Statistics database.

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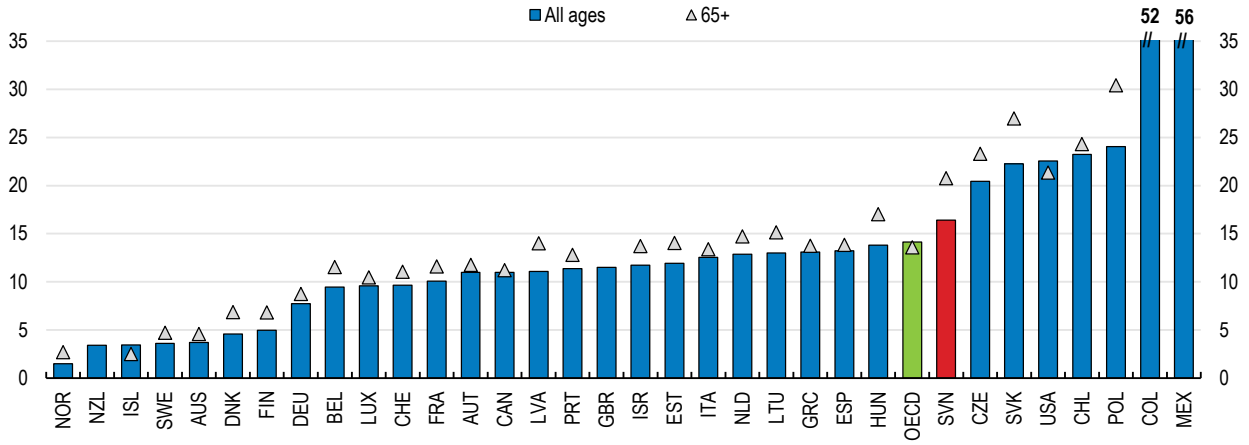
The pandemic limited physical activity, which potentially compounded the health effects of a general increase in unhealthy lifestyle choices and reduced prevention. The increase in consumption of tobacco, alcohol and unhealthy food was notably high for young people. Looking ahead, such changes are major risk factors for non-communicable diseases (NCDs), such as cardiovascular disease, cancer, diabetes and chronic lung disease (responsible for nearly three-quarter all deaths) (WHO, 2020[11]). Such potential negative long-term health effects are compounded by the decline in health promotion and prevention during the pandemic. For example, in early 2021, nearly 40% of the surveyed population refrained from visiting the doctor due to problems unrelated to COVID-19 (Figure 1.3, Panel A) (NIJZ, 2021[2]) (OECD, 2017[12]). A recent European study on cancer treatment disruptions during the pandemic shows that large numbers of patients were affected by treatment delays (European Cancer Organisation, 2021[13]). While specific data on untreated cancers are not yet available for Slovenia, evidence shows that patients' waiting times for selected elective surgeries (unrelated to cancer) picked up by almost four months in 2020, reaching some of the highest levels in the OECD (OECD, 2021[14]).

The pandemic had relatively severe health implications as Slovenia registered comparatively high excess mortality, leading to at least one year of lower life expectancy (Figure 1.6) (OECD, 2021[15]). Looking ahead, there are signs that the pandemic is becoming endemic (World Health Organization, 2022[16]), with seasonal COVID-19 outbursts, similar to the flu. According to the World Health Organisation, the best way to treat an endemic disease is to raise vaccination uptake among the population (World Health Organization, 2022[17]). However, vaccine hesitancy is high: only 60% of the population was fully vaccinated by March 2022. Moreover, vaccine scepticism goes beyond COVID-19 as illustrated by low flu vaccination rates and low confidence in vaccination already before the pandemic (OECD, 2022[18]). Better preparedness for future mass vaccinations calls for greater flexibility of the healthcare system. A way forward is to incentivise general practitioners to raise vaccination rates. In the United Kingdom, for instance, the National Health Service provides higher temporary reimbursement rates for COVID vaccinations to general practitioners during peak seasons. Efforts to increase the vaccination rate should be continued.

Figure 1.6. Excess mortality has been high

Excess mortality 2020-2021, %



Note: Excess mortality is calculated by dividing the actual number of deaths by the average number of deaths over 2015-19.
Source: OECD Health Statistics database.

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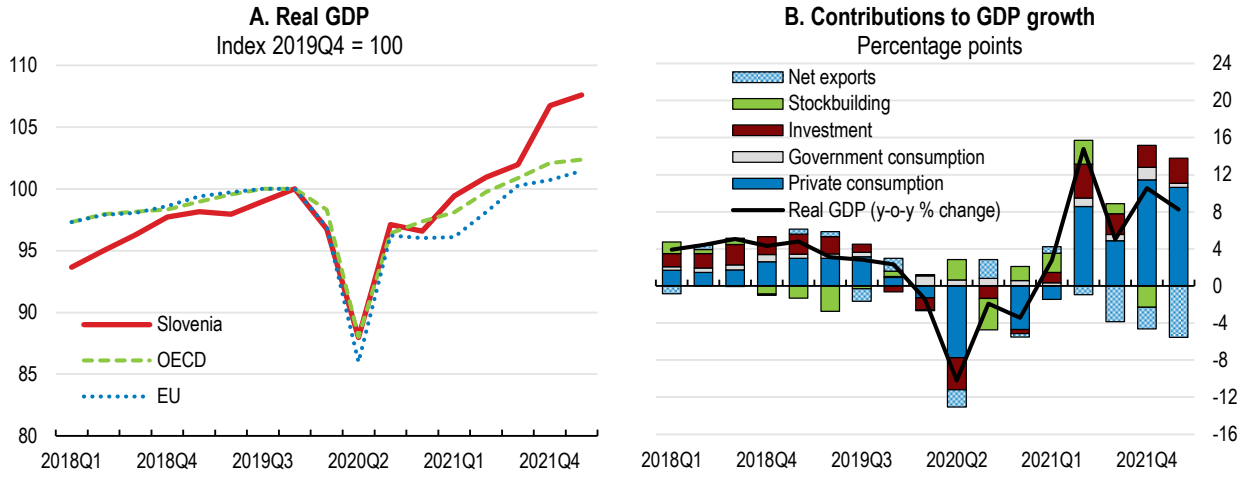
Economic prospects remain good despite elevated risks

The war in Ukraine is having negative impacts on economic activity. The conflict adds to the already high inflation through higher energy and food prices, putting pressure on the outlook for private consumption and investment. Until the outbreak of the war, the economy had experienced a strong recovery. Economic activity surpassed its pre-pandemic level by mid-2021 (Figure 1.7). The economic recovery benefitted from strong private consumption, reflecting fiscal support to households such as pandemic-related wage bonuses in the public sector and the government's short-time work and furlough schemes. Public consumption also contributed to growth as the government raised pension benefits. Together with stronger international demand, the rebound in domestic demand benefited manufacturing and many service sectors, leaving tourism as the most negatively affected sector. The demand recovery, together with increasing capacity constraints, bolstered investment. Imports grew stronger on the back of buoyant domestic demand, leading to a negative contribution of net exports to growth and a declining current account surplus.

The pandemic caused a number of supply-chain bottlenecks. Nonetheless, industrial production bounced back and by early 2021, output was already higher than before the onset of the pandemic (Figure 1.8, Panel A). Since then, industrial output continued to rise on the back of buoyant demand. Business confidence rose to an all-time high in summer 2021, but has been volatile since then, reflecting prolonged supply-chain disruptions. Consumer confidence continued to recover until summer 2021, when higher inflation started to dampen confidence (Panel B). The war in Ukraine is a key source of uncertainty. Direct trade with Russia and Ukraine is low, although nearly 100% of gas and 17% of oil and petroleum imports come from Russia (Figure 1.9, Panel A). Higher energy prices and disruptions to supply-chains are already weighing on consumer and business confidence. There might be more indirect effects, such as a further rise in energy costs and continued disruptions to international supply chains in the important automotive sector (Panel B). To ensure gas supplies in the event of a stop of Russian gas flows, the government is in contact with other foreign suppliers and is taking steps to secure LNG capacity in neighbouring countries. The war in Ukraine has also led to an inflow of about 18 000 Ukrainian refugees to Slovenia by May 2022. This is significantly less than in other Central European countries such as Poland, Hungary or the Slovak Republic (United Nations High Commissioner for Refugees, 2022[19]). Nevertheless, the government

expressed its willingness to host more refugees and granted Ukrainian refugees immediate residence and working permits (Government of Slovenia, 2022[20]; Euractiv, 2022[21]).

Figure 1.7. Economic activity surpassed its pre-pandemic level



Source: OECD Economic Outlook: Statistics and Projections database; and OECD calculations.

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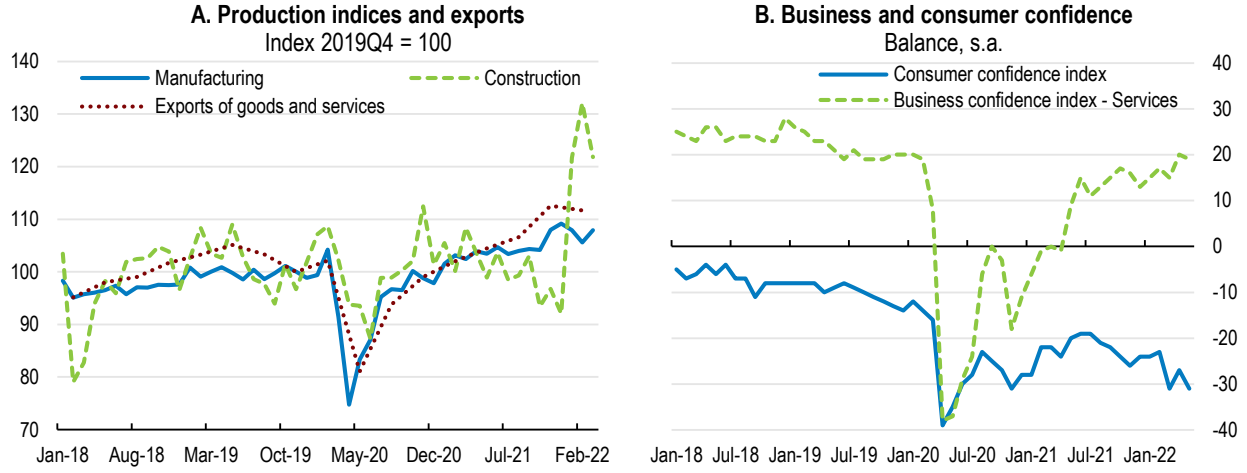
Figure 1.8. Production and business confidence bounced back before the war in Ukraine



Note: In Panel A, manufacturing and construction refer to seasonally adjusted production indices, while exports of goods and services are expressed in real terms.
Source: OECD Economic Outlook: Statistics and Projections database; and OECD Main Economic Indicators database.

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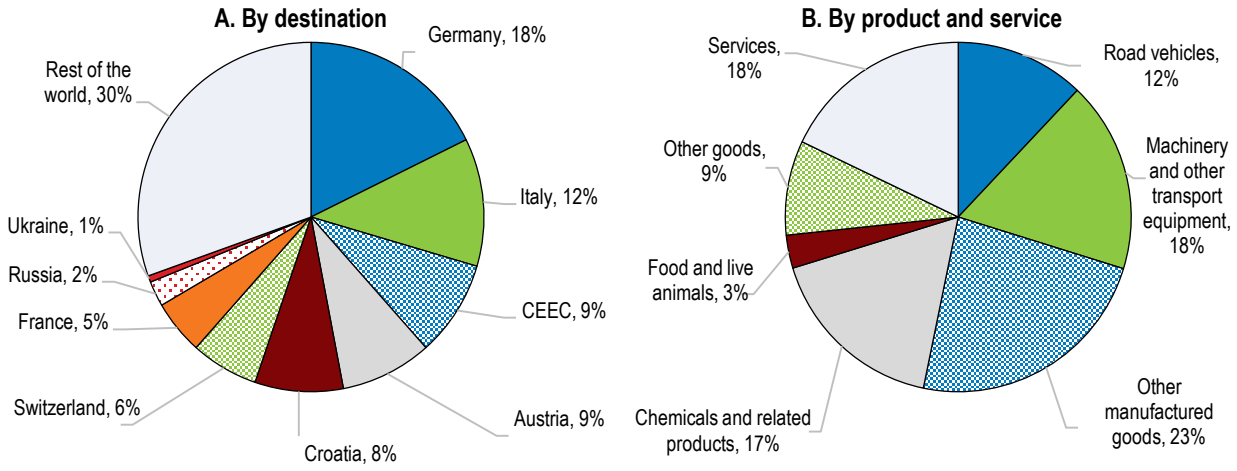
Figure 1.9. Exports are well diversified

Exports of goods and services, % of total, 2019



Note: In Panel A, the CEEC (Central and Eastern Europe Countries) aggregate includes Czech Republic, Hungary, Poland and Slovak Republic. In Panel B, the category "Machinery and other transport equipment" includes "Other transport equipment" (i.e. "Railway vehicles & associated equipment", "Aircraft & associated equipment; spacecraft, etc." and "Ships, boats & floating structures") and "Machinery" (i.e. "Power generating machinery and equipment", "Specialised machinery", "Metal working machinery", "Other industrial machinery and parts", "Office machines and automatic data processing machines", "Telecommunication and sound recording apparatus", and "Electrical machinery, apparatus and appliances, n.e.s."), in line with the Standard International Trade Classification (SITC) Revision 3, https://unctadstat.unctad.org/en/Classifications/DimSitcRev3Products_Official_Hierarchy.pdf. In Panel A and B, exports to Switzerland are less important once re-export of chemicals and related products are taken into account (only around 1.3% in 2019) (Bank of Slovenia, 2022[22]).
Source: OECD International Trade by Commodity Statistics (ITCS) database; OECD International Balanced Trade Statistics database; and OECD calculations.

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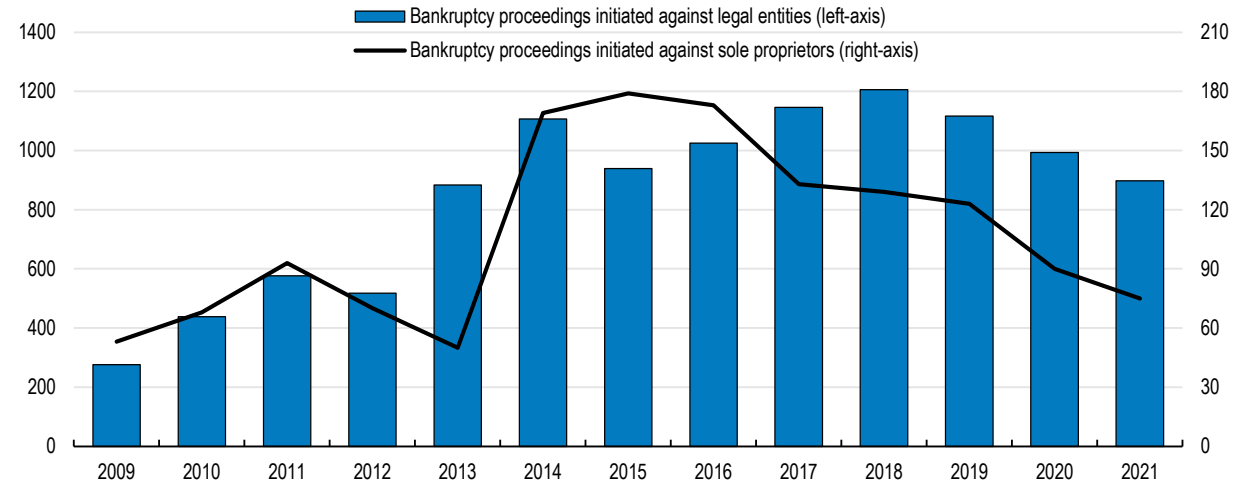
Bankruptcies remain below their pre-pandemic levels, reflecting generous COVID-19 related business support, a loan payment moratorium and the temporary halt of insolvency proceedings in 2020 and 2021 (Figure 1.10). Looking ahead, bankruptcies are expected to rise as government support has been withdrawn and the loan repayment moratorium has expired. This will affect in particular the hospitality sector, where non-performing loans have been rising since mid-2021. In addition, bankruptcies may rise in response to higher raw material and energy prices, leading to increasing producer prices. Given the current tight labour market, such a development can free up labour resources for the benefit of firms facing labour shortages. For this to happen, more efficient bankruptcy rules are needed to facilitate the transfer of under-utilised resources back into the productive part of the economy as well as a decentralised wage-setting process that improves the allocative efficiency of the labour market (see below).

Government measures, including the short-time work and the furlough schemes, kept workers in employment during the first waves in 2020 and 2021. This kept the increase in the unemployment rate to only 1 percentage point between early 2020 and early 2021, or nearly 2 percentage points lower than during the similarly sized financial crisis. Another contributing factor was that the public health sector expanded employment (Figure 1.11). Thereafter, strong foreign demand and reduced restrictions allowed the labour market to return to its favourable pre-pandemic situation. Employment growth was broad-based with the exception of tourism. The labour market is very tight. By the end of 2021, employment reached a historic height, while the unemployment rate returned to its pre-pandemic level. The tight labour market is also reflected in rising labour shortages (Figure 1.12) (see below).

Figure 1.10. Government support averted bankruptcies

Number



Source: IMAD, Productivity Report 2021.

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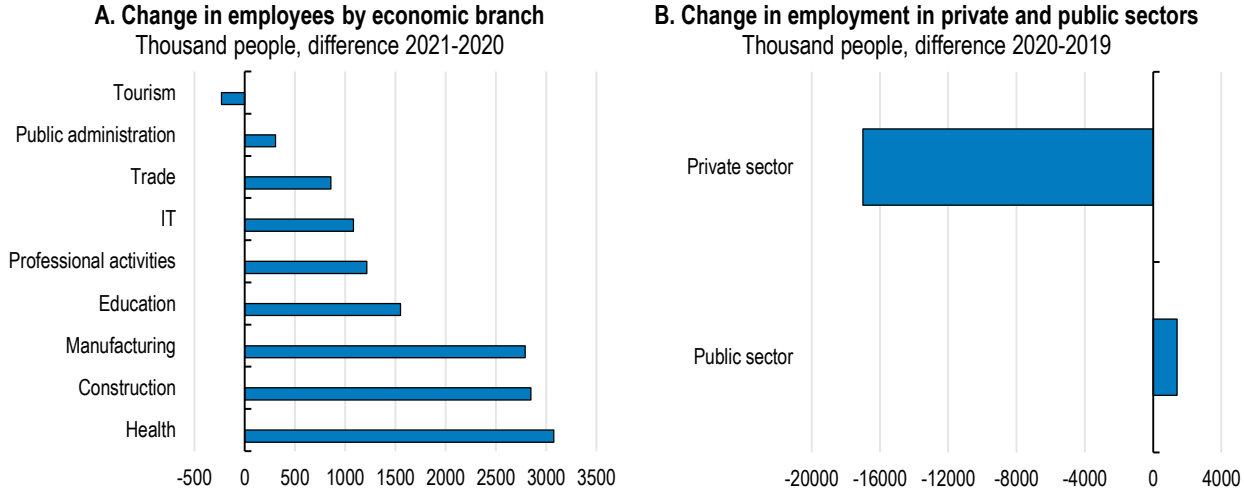
Figure 1.11. Employment growth is broad-based



Source: Statistical Office of Slovenia.

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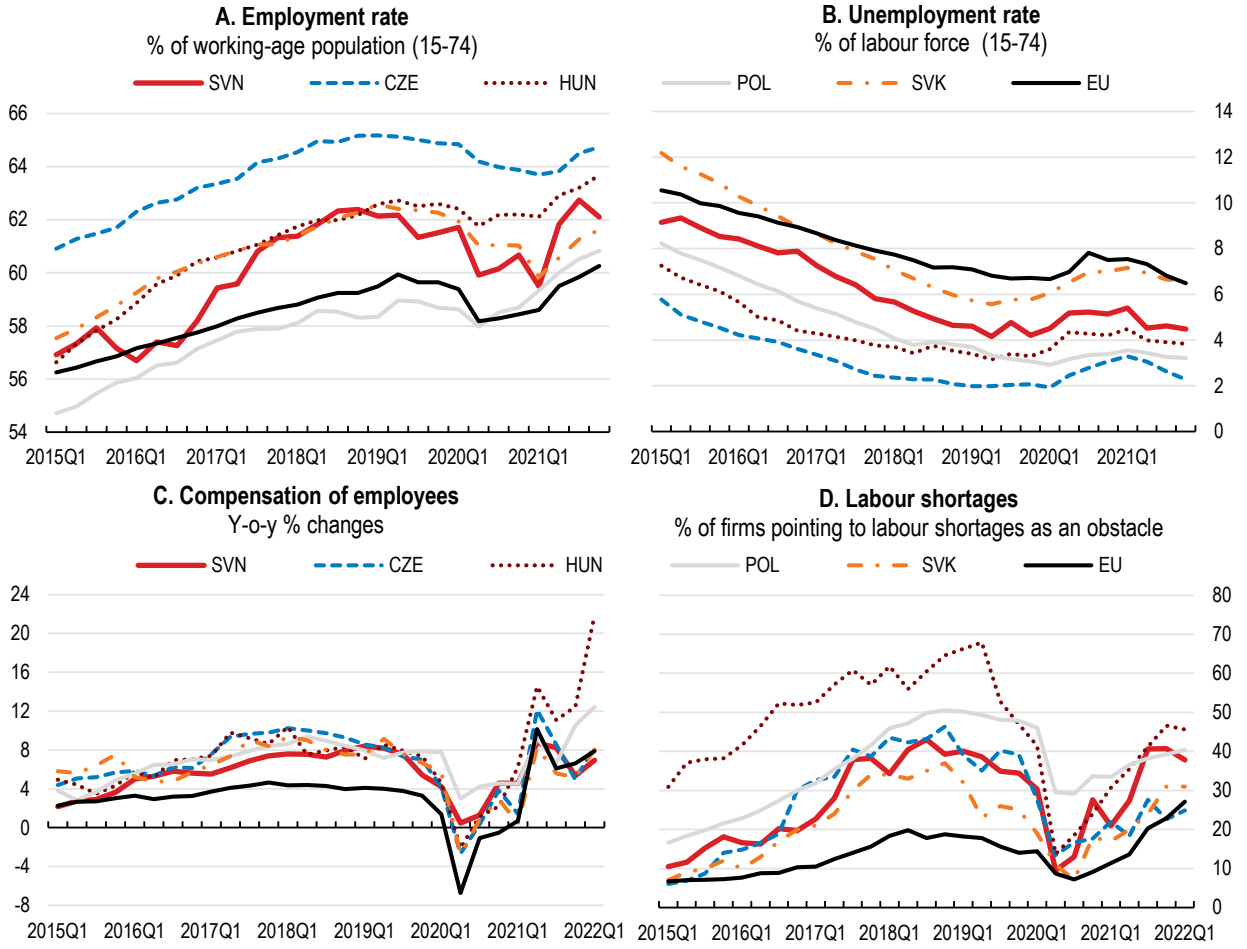
Figure 1.12. The labour market is tight



Note: Data are seasonally adjusted.
Source: OECD Main Economic Indicators database; OECD Labour Statistics database; OECD National Accounts database; and OECD calculations.

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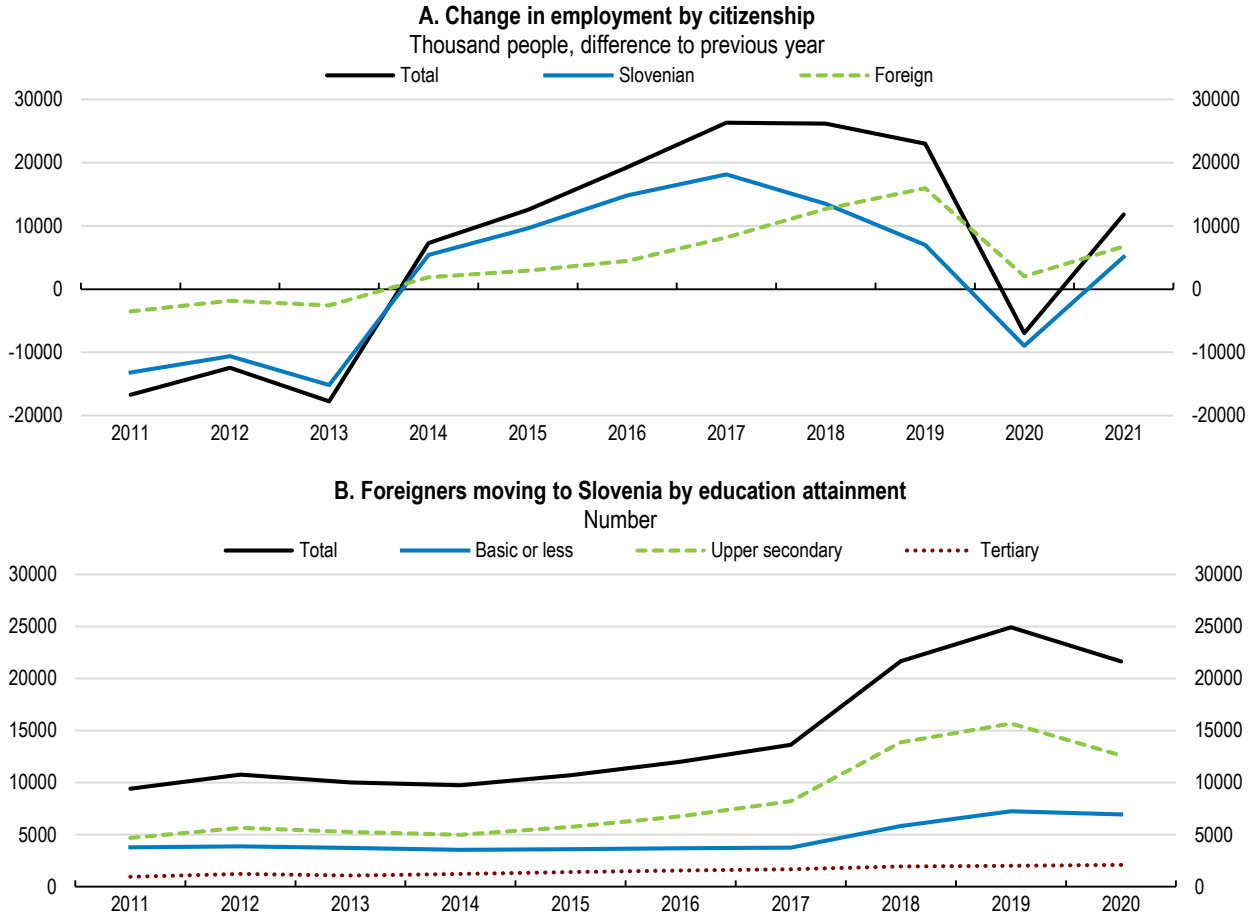
The inflow of mainly low- and medium-skilled immigrants was reduced in 2020 as the pandemic led the government to close the border (Figure 1.13). Thereafter, the inflow of foreign workers rose sharply again to levels seen before the pandemic as COVID-related restrictions were eased and labour demand grew strongly. Given the shortage of domestic labour, immigrants and cross-border commuters accounted for more than 50 per cent of new hires in 2021 (Statistical Office of Slovenia, 2022[23]). However, the inflow of low- and medium-skilled workers from neighbouring ex-Yugoslavian economies is not sufficient to meet strong labour demand, especially in the construction and tourism sectors. Looking ahead, Slovenia will face stronger competition for foreign workers as labour shortages continue to materialise in richer OECD countries.

Figure 1.13. The number of foreign workers is rising again



Source: Statistical Office of Slovenia; and OECD calculations.

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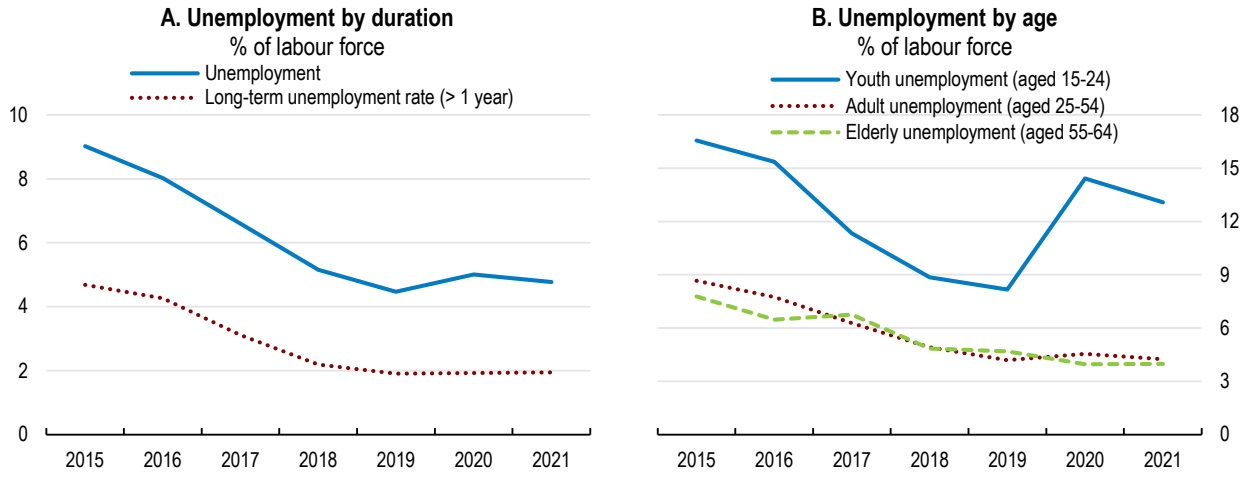
The crisis interrupted strong nominal wage growth 2020, which resumed again in 2021, reflecting the pandemic-related short-time work and furlough schemes as well as wage supplements in the public sector (Bank of Slovenia, 2022[24]). Wage growth slowed in early 2022 as these one-off measures were withdrawn before picking up again in spring 2022 on the back of higher wage growth in the private sector. The tightening labour market is expected to contribute to higher wage inflation in 2022 and 2023. Another driver of wage pressures is the minimum wage increase of 5% in early 2022, which affected 15% of all workers (Tax Administration of the Republic of Slovenia, 2021[25]). Earlier increases in the minimum wage relative to other wages reduced the job prospects of mainly low-skilled young unemployed (Laporšek, Vodopivec and Vodopivec, 2019[26]; Laporšek et al., 2019[27]) (OECD, 2020[10]). The strong minimum wage hike may have contributed to keeping their unemployment high during the post-pandemic labour market upswing as well (Figure 1.14). Yet real wage growth turned negative by end-2021 as consumer price inflation reached a 20-year high (Figure 1.15) (see below). Until then, real wage growth had outpaced labour productivity growth since 2019, reducing the sustainability of continued rapid wage increases (Figure 1.15). Other emerging Central and Eastern European economies had similar price dynamics, helping to preserve external competitiveness. On the other hand, dynamic wage and price developments could fuel a wage-price spiral. Such a development would erode external competitiveness.

Figure 1.14. Youth unemployment has been slow to come down



Source: OECD Labour Statistics database.

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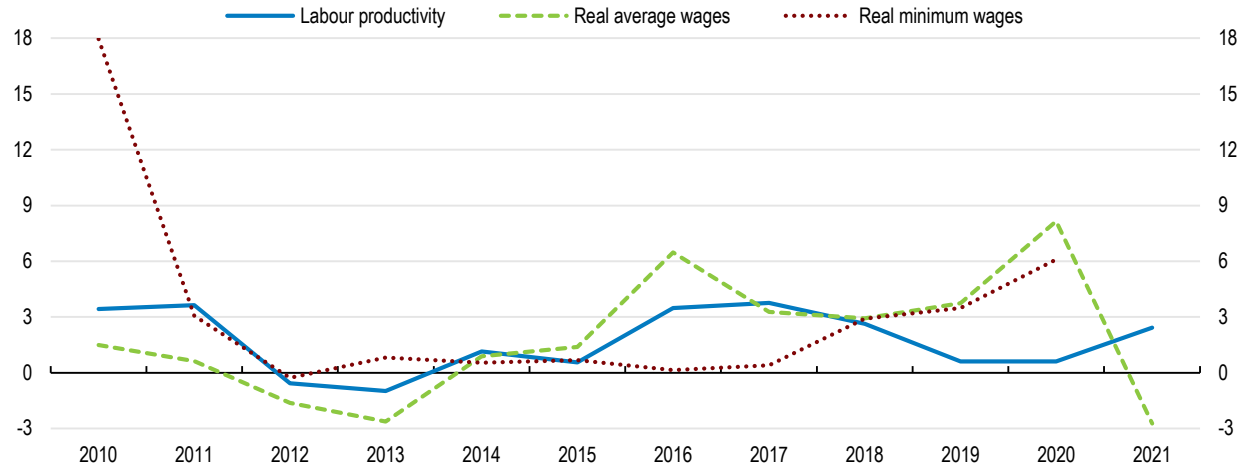
Figure 1.15. Wage growth outpaced productivity improvements

Wages and productivity, y-o-y % changes



Note: Labour productivity refers to real GDP (2019 prices) per total hours worked. Real average wages refers to the national-accounts-based total wage bill divided by the number of hours worked in the total economy, deflated by a price deflator for private final consumption expenditures in 2019 prices. Real minimum wages refers to the hourly minimum wage deflated by the consumer price index taking 2019 as the base year.
Source: OECD National Accounts database; OECD Labour Statistics database; and OECD calculations.

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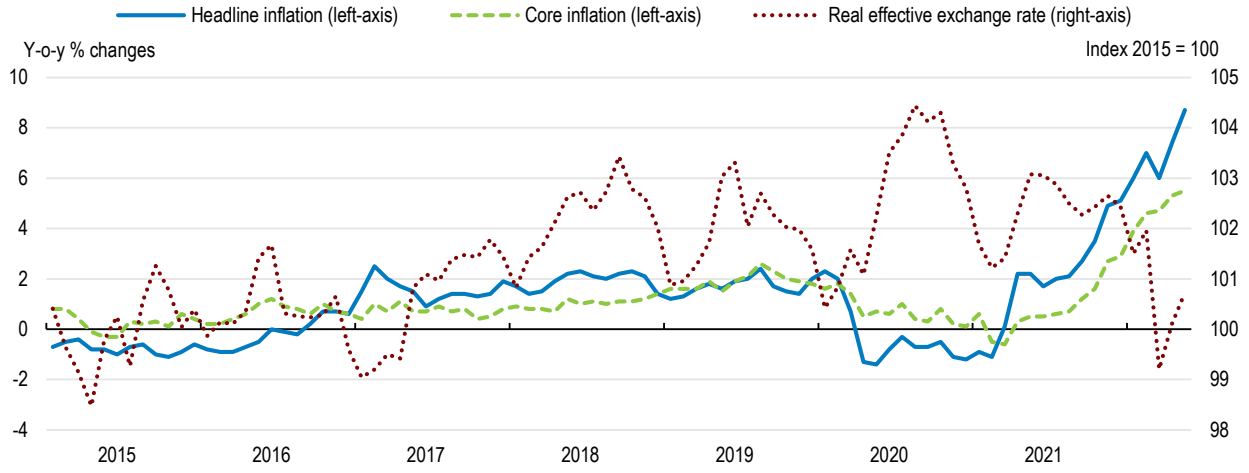
Inflation has remained consistently above the ECB's 2% target since summer 2021 and reached with 8.7% a 20-year high in spring 2022 (Figure 1.16). Initially, the increase in inflation reflected mostly higher energy prices in early 2021. Inflation has continued to increase as domestic price pressures have been rising sharply since mid-2021. Goods price inflation began to accelerate as consumer demand shifted from services to consumer goods and was fuelled further by global supply chain problems. This was followed by a sharp acceleration of service price inflation since end-2021. The tight labour market is expected to contribute to wage pressures and thus service price inflation throughout 2022 and 2023. The depreciation in the effective exchange rate in early 2022 further added to higher inflation by raising import prices. Since February 2022, the war in Ukraine has accelerated inflationary pressures stemming from higher energy prices. Energy price increases were dampened by the introduction of a temporary cap on fuel prices between mid-March and end-April 2022, before energy prices continued to rise. The price cap is set to increase contingent liabilities from state-owned energy companies by up to 0.2% of GDP. A better targeted measure is direct income support for low-income households, as introduced in April 2022 (OECD, 2022[28]).

Figure 1.16. Inflation pressures remain high



Note: Core inflation excludes food, energy, tobacco, alcohol.
Source: OECD Main Economic Indicators database.

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GDP growth is projected to moderate in 2022 and 2023, mostly reflecting the negative impact from the war in Ukraine (Table 1.1). The conflict will add to the already high inflation through higher energy and food prices, putting pressure on private consumption and investment. Nonetheless, economic activity will continue to expand and is projected to close the output gap in 2022. Economic growth will mostly be driven by private demand. Private consumption will benefit from real income increases on the back of a tight labour market. Investment will continue to expand on the back of inflows of EU funds. The labour market is expected to remain tight, with historically high employment and low unemployment rates continuing to put pressure on wages. Together with high and rising fuel and food prices, this will lead to higher headline inflation. The projections are based on the assumption that the Ukraine war will last a year. Additional support to households should be financed by spending cuts elsewhere as the current expansionary fiscal stance risks prolonging demand pressures. On the other hand, a short-lived conflict would remove the need for additional fiscal stimulus.

Table 1.1. Macroeconomic indicators and projections

	2019	2020	2021	2022[1]	2023[1]
	Current prices (EUR billion)	Annual percentage change, volume (2015 prices)			
Gross domestic product (GDP)	48.4	-4.2	8.1	4.6	2.5
Private consumption	25.4	-6.6	11.6	10.5	2.1
Government consumption	8.9	4.2	3.9	2.2	1.1
Gross fixed capital formation	9.5	-8.2	12.3	11.8	4.3
Housing	1.1	-0.2	0.5	10.3	6.2
Final domestic demand	43.7	-4.7	10.0	9.0	2.4
Stockbuilding[2]	0.5	0.1	0.8	0.0	-0.0
Total domestic demand	44.2	-4.6	10.8	7.0	2.4
Exports of goods and services	40.6	-8.7	13.2	5.4	3.4
Imports of goods and services	36.4	-9.6	17.4	10.5	3.3
Net exports[2]	4.2	-0.1	-1.6	-3.7	0.2
Memorandum items					
Potential GDP	. .	2.5	2.5	2.5	2.3
Output gap (% of potential GDP)	. .	-7.1	-2.1	-0.0	0.1
Employment	. .	-0.5	-0.7	2.3	0.5
Unemployment rate (% of labour force)	. .	5.0	4.8	3.9	3.7
GDP deflator	. .	1.2	2.6	5.4	6.0
Harmonised index of consumer prices	. .	-0.3	2.0	7.6	6.0
Harmonised index of core inflation[3]	. .	0.8	0.9	6.4	5.2
Household saving ratio, net (% of household disposable income)	. .	16.3	11.0	5.2	7.2
Current account balance (% of GDP)	. .	7.4	3.3	-1.5	-1.1
General government fiscal balance (% of GDP)	. .	-7.8	-5.2	-3.7	-3.6
Underlying general government fiscal balance (% of potential GDP)	. .	-4.3	-4.8	-4.5	-4.3
Underlying government primary fiscal balance (% of potential GDP)	. .	-3.0	-3.7	-3.3	-2.8
General government debt, Maastricht definition (% of GDP)	. .	79.8	74.7	73.5	73.3
General government net debt (% of GDP)	. .	40.2	34.5	35.0	35.8
Three-month money market rate, average	. .	-0.4	-0.5	-0.2	0.9
Ten-year government bond yield, average	. .	0.1	0.1	1.5	2.1

1. OECD estimates.
2. Contribution to changes in real GDP.
3. Index of consumer prices excluding food, energy, alcohol and tobacco.
Source: OECD Economic Outlook 111 database.

A major downside risk is that a combination of stronger wage growth and the energy price shock could further de-anchor inflation expectations and lead to a wage-price spiral. Another important risk is an embargo on Russian gas supply. On the upside, faster digitalisation, higher-than-expected productivity increases, and better labour utilisation could raise growth prospects. A more intensive use of labour resources and increased immigration could help to reduce wage pressures.

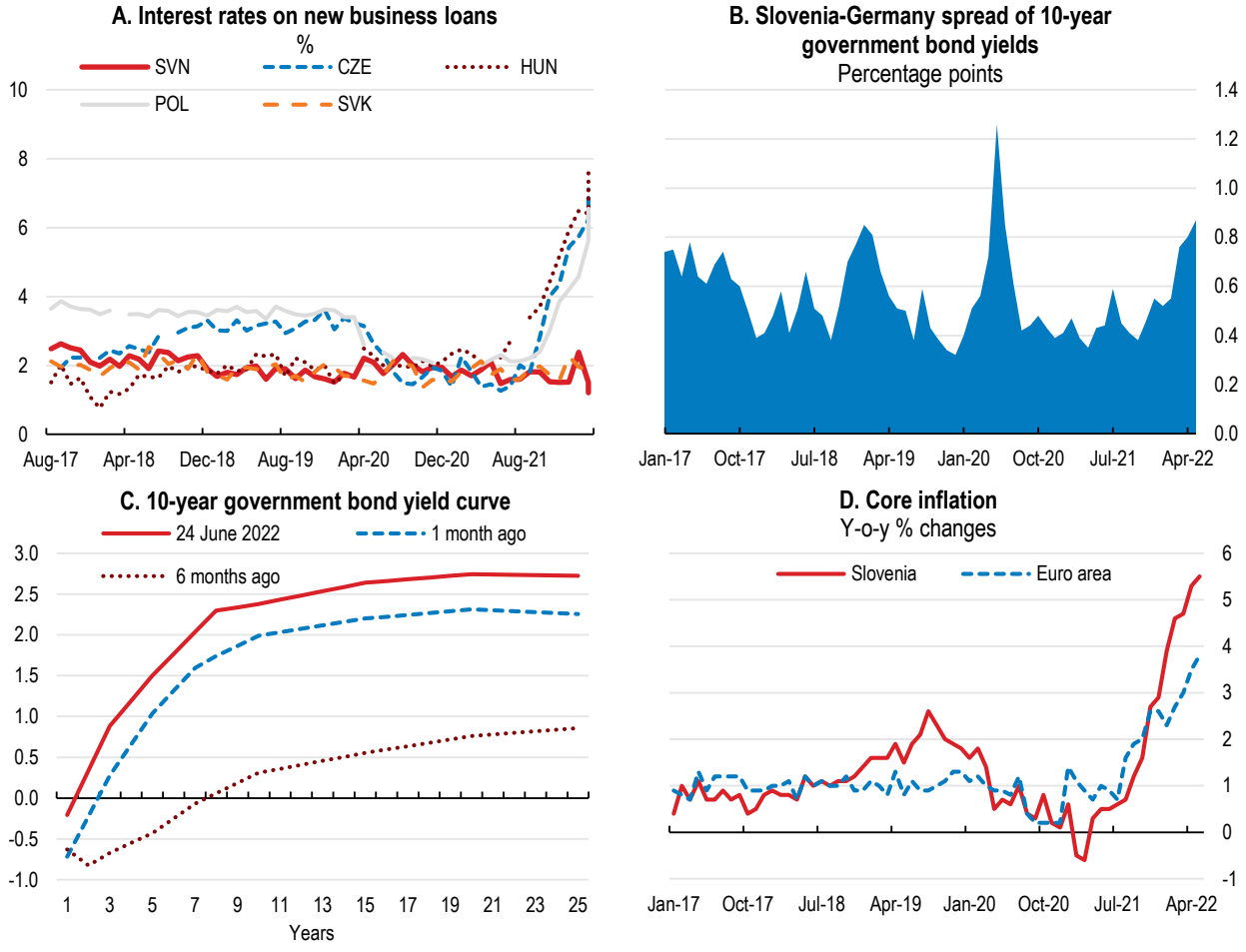
Table 1.2. Events that could lead to major changes in the outlook

Global energy and food crisis	An intensification of global trade tensions with large energy and food supply disruptions would lead to a further acceleration of inflation and a contraction of global trade, leading to stagflation.
Major international financial crisis	Markedly higher long-term yields could trigger domestic banking sector stress.
Outbreak of a new vaccine-resistant COVID variant	Further waves of infections could potentially lead to new lockdown measures and lower domestic spending.

Monetary conditions remain accommodative

Monetary conditions have been accommodative with low interest rates on business loans and low spreads over German 10-year government bonds until early 2022, when long-term interest rates started to increase (Figure 1.17). The ECB's accommodative monetary policy stance was appropriate for Slovenia, as inflationary pressures were low and the economy still recovering. However, strong growth since mid-2021 and a labour market showing signs of overheating suggest that the monetary policy stance fell short of anchoring Slovenian inflation expectations. Indeed, inflation has remained consistently above the ECB's target since summer 2021. The initial increase in inflation reflected external factors, such as higher energy prices, which were believed to be transitory. However, inflation has continued to increase as domestic inflation pressures, particularly service prices, have continued to rise. Another contributing factor to rising inflation was the depreciation in the real effective exchange rate since the end of 2021, followed by the strong rise in commodity prices resulting from the Ukraine war in early 2022. This supports the notion that inflation expectations have increased and that a price-wage spiral could be emerging, which eventually would lead to a steeper yield curve.

Figure 1.17. Monetary conditions remain accommodative despite inflationary pressures



Note: In Panel A, data refer to loans other than revolving loans and overdrafts, convenience and extended credit card debt.
Source: European Central Bank (ECB) database; Refinitiv Datastream; World Government Bonds.

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Looking forward, the European Central Bank is set to raise its policy rate in response to high European inflation. However, Slovenian core inflation is already above the Euro level. Should monetary conditions remain too loose, tighter fiscal would help to contain inflation expectations and avoid higher long-term interest rates with negative consequences for public finances, while also laying the ground for securing fiscal sustainability.

A deeper capital market can support digitalisation

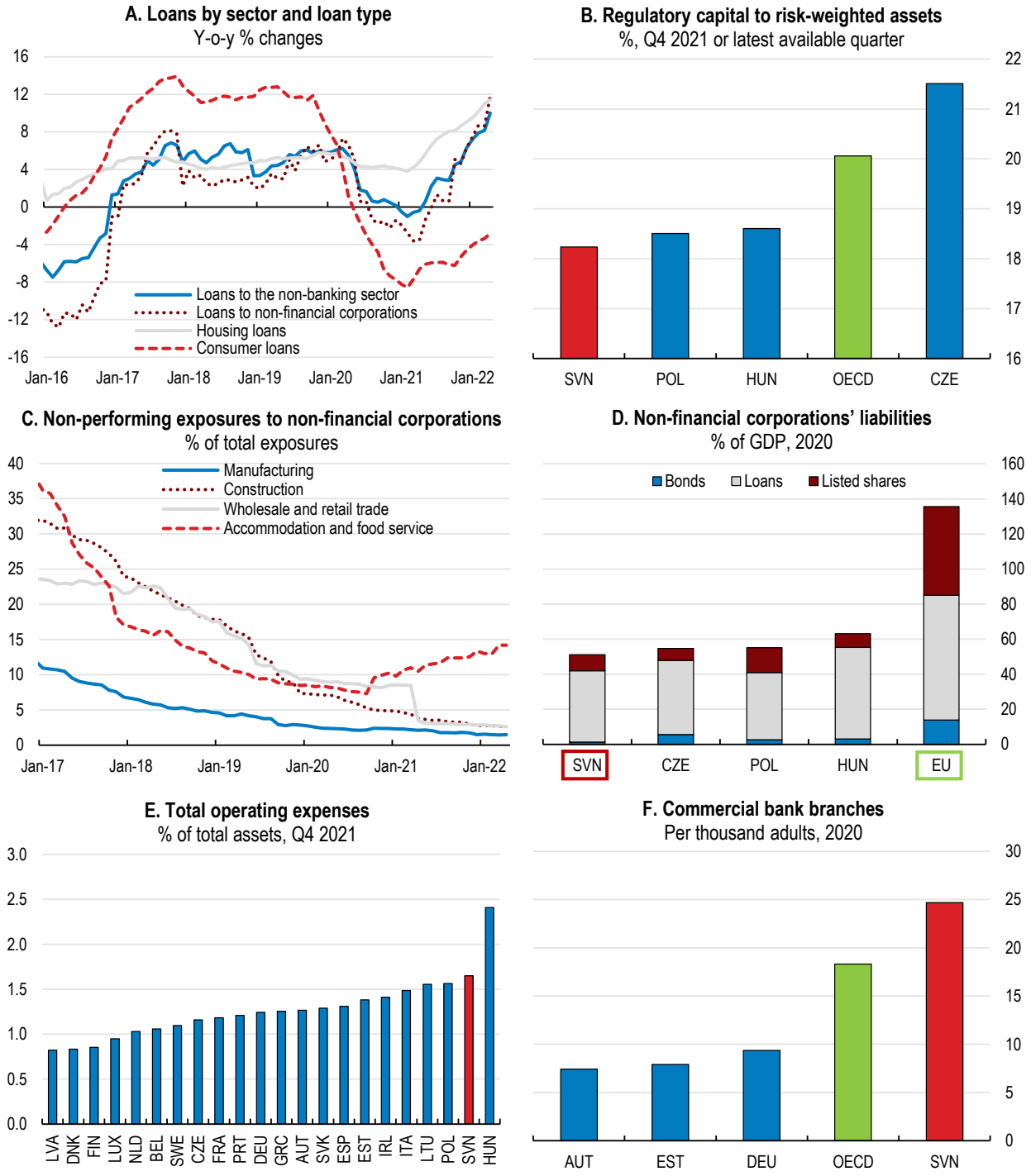
Financial risks in the banking sector are low. Banks remain well capitalised with an average capital adequacy ratio of 18.5%, above national and international regulatory requirements. The sector has been able to continue to provide credit to the private sector in spite of the COVID crisis (Figure 1.18, Panel A and B). Nevertheless, the pandemic has had an impact as the downward trend in the share of non-performing loans slowed since mid-2021, reflecting lower creditworthiness in the heavily affected hospitality sector (Panel C). At the same time, the quality of banks' loan portfolio declined, as the share of loans with higher default risk began to rise in the professional services and entertainment sectors. There is also a higher default risk of loans that were under the loan repayment moratoria in 2020 and 2021. Another risk to the quality of banks' loan portfolio stems from rising raw material and energy prices that might lead to a rise in bankruptcies. An additional concern for banks is that increasing interest rates could lead to higher defaults in the housing sector. So far, banks have not reacted by increasing provisions (Bank of Slovenia, 2022[29]). Looking ahead, banks should prepare for the likely increase in loan losses.

More structurally, the overreliance of businesses on bank credit remains a concern for securing financing for new and innovative firms, particularly in the service sector, which is key for faster digitalisation (Figure 1.18, Panel D). The traditional banking sector is not well suited to provide credit to new and riskier digital start-ups with innovative business models but little collateral (Chapter 2). Moreover, banks are also unlikely to step up lending for riskier activities given their declining profitability, which reflects high operating costs and low digitalisation (Bank of Slovenia, 2021[30]) (Panel E).

Public ownership may affect efficiency in the banking sector. For example, the number of commercial bank branches per population remains high (Figure 1.18, Panel F). Currently, the government continues to be the largest shareholder in the biggest bank. State involvement limits private investors' ability to restructure the bank's operations. Remaining public shareholdings in the largest bank should be re-examined.

Underdeveloped capital markets hold back digitalisation. Stock market capitalisation remains among the lowest in the EU and the OECD (World Bank, 2022[31]). A factor behind low capital market investment is the limited role of institutional investors, notably insurance companies. In contrast to most other OECD countries, the insurance sector is dominated by state-owned companies, although it is not obvious which market failures are addressed by state-ownership. Moreover, state-owned insurers are less active as institutional investors compared to their privately owned peers in Slovenia. Their investment portfolios consist mostly of low-risk government bonds, leaving investment in equity below levels of insurance sectors in most other OECD countries in 2021 (European Commission, 2019[32]; OECD, 2021[33]). To bolster capital market investment, privatisation efforts should go beyond banks into other areas of the financial sector, notably the insurance sector. This requires reviewing public ownership in the insurance sector to identify which areas can be privatised and following up by developing a privatisation programme for the insurance sector. Other sectors without obvious market failures that would justify state-ownership include tourism (see below).

Figure 1.18. Bank lending is strong but capital markets remain underdeveloped



Note: In Panel B, regulatory capital to risk-weighted assets ratio is calculated using total regulatory capital as the numerator and risk-weighted assets as the denominator. It measures the capital adequacy of deposit takers. Capital adequacy and availability ultimately determine the degree of robustness of financial institutions to withstand shocks to their balance sheets.

Source: Bank of Slovenia; IMF, Financial Soundness Indicators (FSIs) database; Eurostat Financial Balance Sheets database; European Central Bank (ECB) database; and World Bank database.

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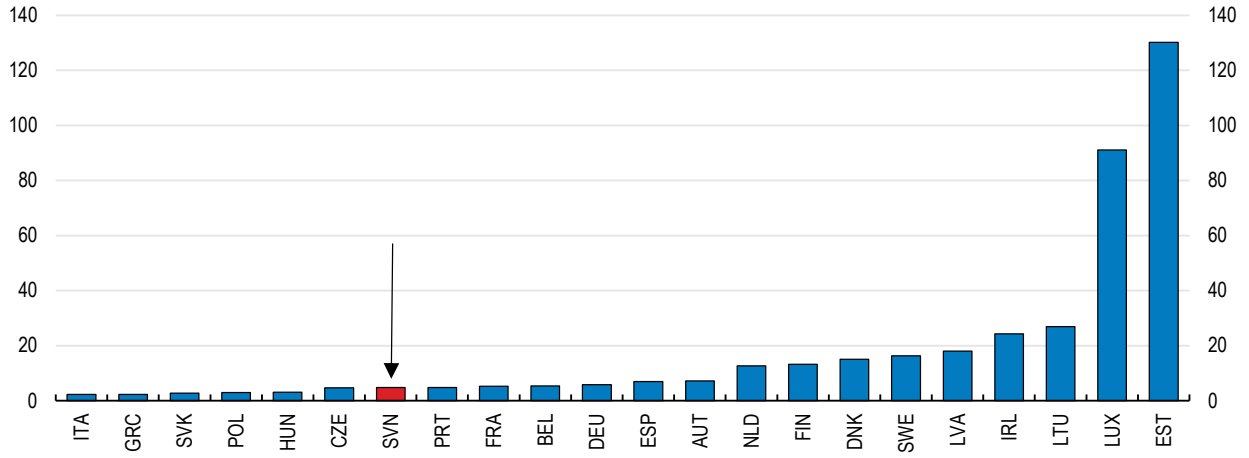
Financial innovation remains low

Financial innovation is lagging other countries and new market entry by FinTech start-ups is low (Figure 1.19). A concern is the limited progress in reducing entry barriers. For instance, efforts by the central bank to stimulate market entry in Fintech via regulatory waivers have had limited success (Bank of Slovenia, 2019[34]). The Bank of Slovenia established an Innovation Hub, which is dedicated to sharing knowledge and experiences among financial regulators and companies. Other countries have taken a much more proactive stance to favour entry of Fintech companies. In Lithuania, for instance, Fintech start-ups can apply for a Special Purpose Bank licence with lower capital requirements, which allows them to offer basic banking services. The Bank of Lithuania ensures a smooth licencing process not exceeding twelve months, and applications can be submitted in English (Invest Lithuania, 2022[35]). To bolster financial innovation, the regulatory burden, including the lowering of entry barriers, should be evaluated.

Figure 1.19. FinTech development is slow

Number of start-ups per million population, 2021



Note: Based on search "FinTech" in the field "description keywords".
Source: Crunchbase (database), https://www.crunchbase.com, accessed on 17 March 2022; OECD Demographic Statistics database; and OECD calculations.

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The government has taken only some action to accommodate latest FinTech developments (IFLR, 2020[36]). For instance, the government plan to make Slovenia a "Blockchain Hub", which includes a 2018 action plan to implement blockchain technology and to create a regulatory framework for cryptocurrencies, has remained largely unimplemented. Cryptocurrencies remain unregulated and a specific regulatory framework for Initial Coin Offerings does not exist. A draft law was adopted by the government in spring 2022 that introduced the taxation of capital gains from cryptocurrency assets by five per cent starting at EUR 10 000 (once transferred in a Slovenian bank account), but the objective is to increase fiscal gains rather than to promote a regulatory framework conducive to innovation. To ease the regulatory burden on FinTech companies, a regulatory sandbox could be introduced at the central bank, as done in many other OECD countries (ESAS, 2022[37]). Such a regulatory sandbox allows the supervisor to waive certain financial regulations to ease market entry and strengthen innovation. Regulatory sandboxes can be effective in spurring innovation. In the United Kingdom, for instance, FinTech start-ups entering the regulatory sandbox saw a 15 percent increase in their capital raised after they entered the sandbox, relative to FinTech firms that did not enter the sandbox (Cornelli et al., 2020[38]).

At the international level, Estonia, Latvia and Lithuania harmonised their regulations regarding e-money and payment licenses in 2018 to facilitate market entry of new financial players. Since then, the number of

new Fintech start-ups entering the market grew by 70% (Laidroo et al., 2022[39]; Swedbank, 2021[40]; Invest Lithuania, 2022[41]). Regional integration efforts should also go beyond FinTech markets, including more traditional financial instruments such as covered bonds. An example of successful regional integration is again the Baltic area, which led to the creation of a pan-Baltic capital market for covered bonds with a volume of 20% of regional GDP in 2018 (EBRD, 2020[42]; Scope Ratings, 2018[43]). A closer alignment of FinTech regulations with Central European countries would help bolster financial innovation. More generally, the *Survey* recommended a stronger regional integration of financial markets as another way to strengthen financial innovation (OECD, 2020[10]). So far, however, progress has been slow since 2016 when the Zagreb stock exchange acquired the Ljubljana stock exchange.

Green financing also remains underdeveloped (OECD, 2021[44]). A factor behind the low green investment is the lack of transparency about the criteria necessary to obtain green investment status. To strengthen green financing, regulation is needed to improve the financial disclosure of climate-change related risks. A first step forward is to align the rules for the financial disclosure of environmental costs with the European classification on green investment. Going beyond European legislation in this area could further promote green financing, for example by giving the central bank the regulatory power to verify climate-related risks in ' the financial statements of financial institutions as in the United Kingdom.

Table 1.3. Past recommendations on easing competition in the financial sector

Recommendations in previous Surveys	Action taken since the 2020 Survey
Use the Bank Asset Management Company (BAMC) to ensure swift restructuring of companies and effective liquidation of assets.	BAMC's mandate has been extended until 2022. NKBM and Abanka merged in 2020.
Transfer all assets in a company group to the Bank Asset Management Company.	The transferal of non-performing assets to BAMC has been completed.
The Bank Asset Management Company should remain independent, with the highest standards of corporate governance and transparency.	The BAMC has been strengthened by prohibiting its non-executive directors from having any managerial role in the BAMC.
Privatise state-owned banks without retaining blocking minority shareholdings.	Share sale of the largest state-own bank (Nova Ljubljanska Banka) has left the government a stake of 25% + 1 share. Full privatisation of the second-largest (ABANKA) has been completed.
Implement the new insolvency regulation system, and improve institutional capacity by training judges and insolvency administrators.	The new insolvency regulation system has been implemented.
Make out-of-court restructuring faster and more attractive.	No action taken.

Adopting a forward-looking fiscal policy

Fiscal policy is becoming pro-cyclical

Fiscal policy has been expansionary since the onset of the pandemic. In 2020, the government implemented a comprehensive fiscal stimulus package of around 5% of GDP to support economic activity and protect people and firms. Adding the effects of automatic stabilisers, the budget balance turned negative and deteriorated by 8 percentage points, leading to a budget deficit of 7.8% of GDP in 2020 (Table 1.4). The bulk of the fiscal expansion was COVID-related and consisted of wage support and direct subsidies to businesses, while discretionary spending on health was less sizeable. On the revenue side, tax deferrals and the exemption of employers' social security contributions reduced government revenues on a cash basis by nearly 1% of GDP.

In 2021, the composition of the fiscal stimulus changed. COVID-related discretionary spending was scaled back while there was a structural expansion of public investment and consumption. The latter reflected higher pension benefits due to a higher pension indexation and replacement rates, which were not financed by revenue-raising measures or cuts to government spending (see below). As a result, the budget deficit fell only marginally in 2021, reflecting discretionary budgetary measures of 5% of GDP and the continued operation of automatic stabilisers.

The composition of fiscal support changed again in 2022. The fiscal expansion now reflects a large increase in public investment in infrastructure, health and the green transition, which has a limited impact on the structural deficit. However, expansionary fiscal policy is also linked to an expansion of public transfers, which raised the structural deficit. Public transfers are set to increase in spite of lower spending on unemployment benefits. This reflects an increase in pension benefits due to a higher pension indexation and higher replacement rates. Additional temporary public transfers include targeted subsidies to households and businesses to mitigate the effects of increasing energy prices. These measures are expected to maintain the budget deficit at -3.5% in 2022, implying a fiscal consolidation of about ½ % of GDP.

A concern in the current situation is that the labour market shows signs of overheating (see above). This suggests that there is a need for policy measures to contain demand pressures. A faster fiscal consolidation should be implemented to contain demand pressures and prepare public finances for expected ageing-related spending increases. This does not rule out additional support for households most vulnerable to high food and energy prices. But additional support should be financed by cuts to other government spending. Prioritisation can be helped by government spending reviews as done in the United Kingdom for example.

Table 1.4. Fiscal indicators

Per cent of GDP

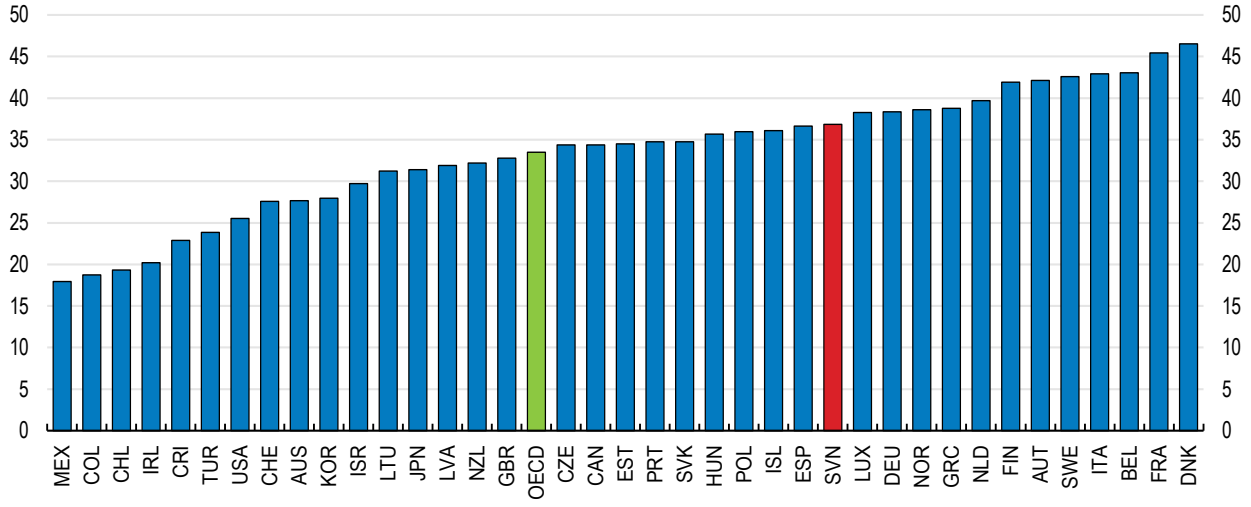
	2019	2020	2021	2022[1]	2023[1]
Spending and revenue					
Total revenue	43.8	43.5	43.9	45.2	44.5
Total expenditure	43.3	51.3	49.1	48.9	48.0
Net interest payments	1.5	1.4	1.1	1.2	1.5
Budget balance					
Fiscal balance	0.4	-7.8	-5.2	-3.7	-3.6
Cyclically adjusted fiscal balance[2]	0.7	-4.3	-4.2	-3.7	-3.6
Underlying primary fiscal balance[2]	2.2	-3.0	-3.7	-3.3	-2.8
Public debt					
Gross debt (Maastricht definition)	65.6	79.8	74.7	73.5	73.3
Gross debt (national accounts definition)[3]	86.6	109.7	94.6	93.0	92.8
Net debt	26.4	40.2	34.5	35.0	35.8

1. OECD estimates unless otherwise stated.
2. As a percentage of potential GDP.
3. National Accounts definition includes state guarantees, among other items.
Source: OECD Economic Outlook 111 database.

The structural deficit is high. This reflects the above-mentioned increase in pension benefits. In addition, the government passed a labour tax reform in spring 2022 to lower labour costs, which will see an increase in personal income tax allowances and lower personal income taxation for the highest income tax bracket (see below). Plans to raise the currently low property taxation to compensate the associated revenue loss were abandoned. Lower labour taxes are welcome as they will raise the labour force participation and support growth, especially since the tax burden is relatively high compared to other Central European economies (Figure 1.20). Moreover, the tax structure is heavily skewed towards social security contributions (Figure 1.21). However, lower labour taxes also lead to a rise in the structural deficit by 0.7 percentage point in 2022, which eventually will have to be financed.

Figure 1.20. The tax burden is relatively high

Total tax revenue, as % of GDP, 2020 or latest available year



Source: OECD Revenue Statistics database.

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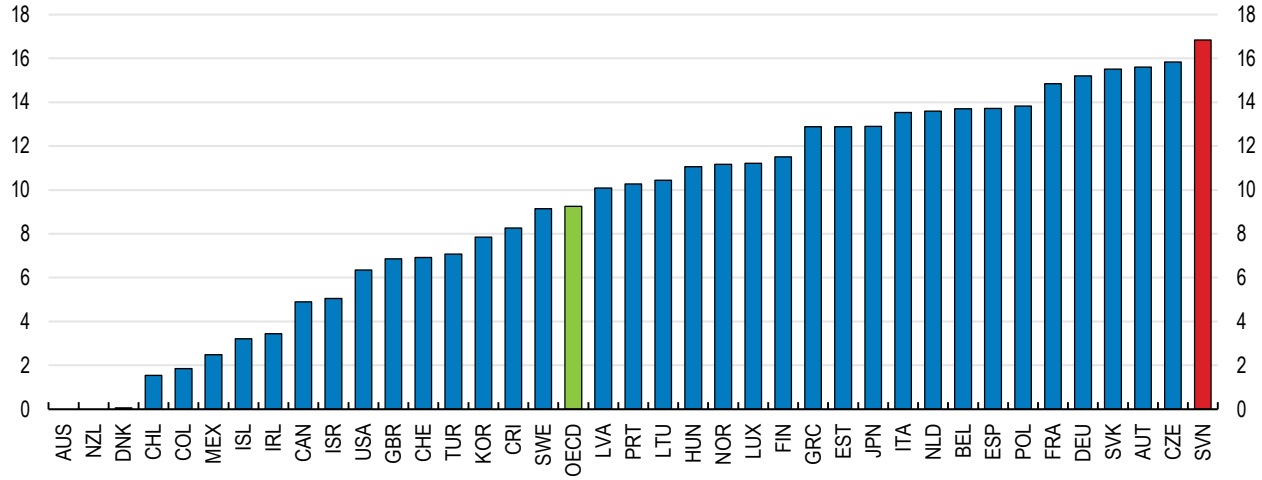
Figure 1.21. Revenues from social security contributions are the highest in the OECD

Tax revenue from social security contributions, as % of GDP, 2020



Note: Data for Japan refers to 2019.
Source: OECD Revenue Statistics database.

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The labour tax burden is high for all income groups, which discourages moving into employment and up the income ladder (Figure 1.22, Panel A and B). About 87% of additional gross earnings are lost to higher taxes and lower social benefits when a jobless single person takes up employment, which is 11 percentage point higher than the OECD average (OECD, 2018[45]). This means that unemployed workers have fewer incentives to move into employment than elsewhere. Further reducing the high taxes on labour will strengthen work incentives (see above).

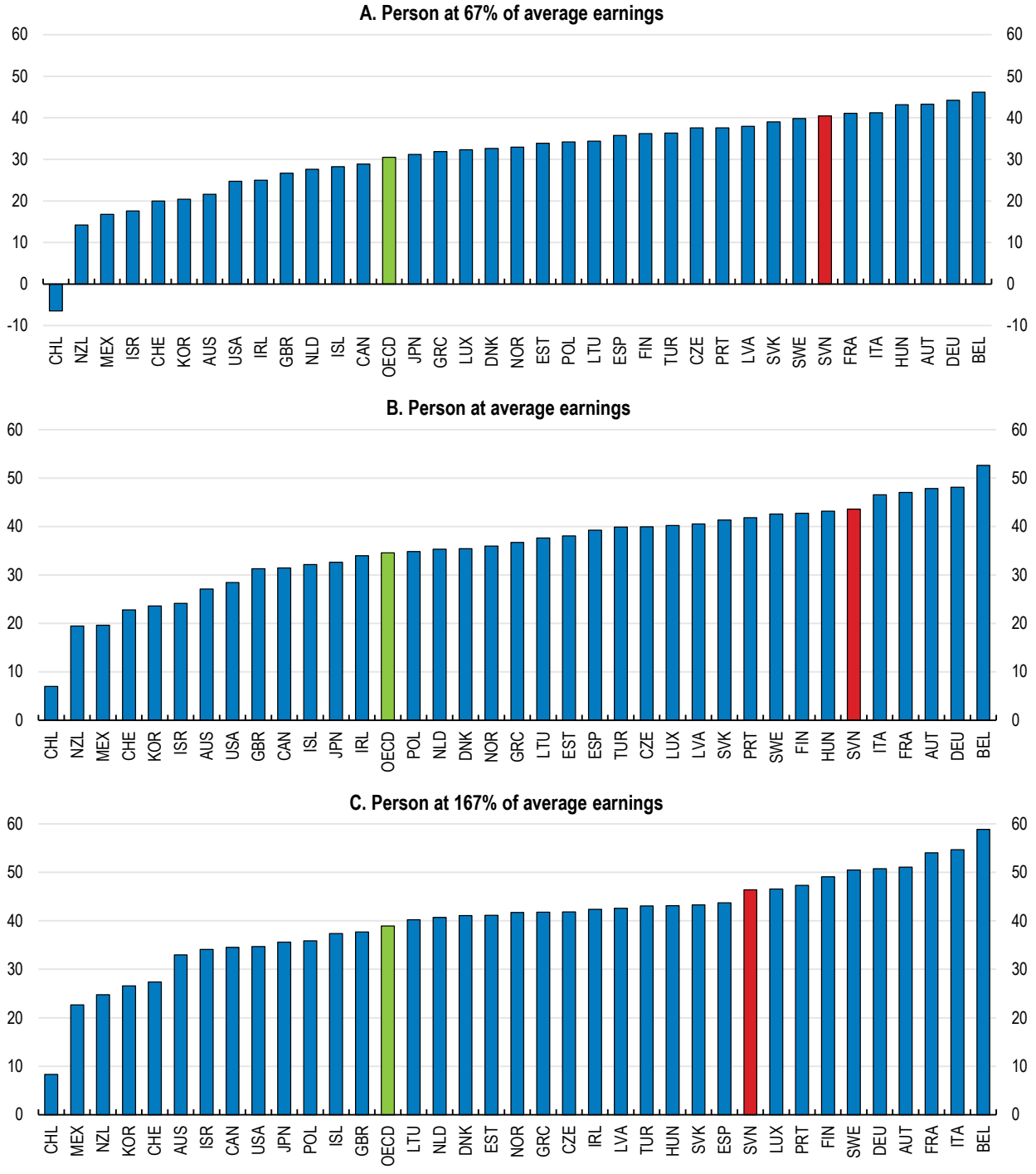
High labour taxation also affects the mobility of high-skilled workers. The average tax rates on higher incomes is high, although reforms in 2022 saw the reduction of the tax rate in the top tax bracket from 50% to 45%. Nonetheless, the high tax burden erodes wage gains for high-income workers, making it more difficult to attract and retain high-skilled workers (Figure 1.22, Panel C). In fact, immigration of high-skilled workers is low (see above). To attract foreign talent and Slovenians living abroad, the government could provide a lower, time-limited flat income tax for qualified workers starting from a certain income threshold, as in Denmark, the Netherlands or Spain. For instance, Denmark introduced in 1992 a flat income tax rate of 32% for high-earning foreigners (with monthly earnings above a EUR 9 356 in 2022), limited to seven years. Absent the special tax scheme, workers with earnings above the threshold would face a marginal tax rate of up to 52%. The scheme was very successful in attracting high-skilled foreign workers, with the number of foreigners paid above the eligibility threshold doubling relative to the number of foreigners paid slightly below the threshold after the scheme was introduced (Kleven et al., 2013[46]). Other options to attract foreign talent include easing immigration rules for high-skilled workers from outside the European Union. For example, residence and work permissions could be granted immediately for high-skilled workers (Chapter 2).

Making the tax mix more growth-friendly through further reducing labour taxes, including lower social security contribution rates, and implementing the announced property tax rise would help reduce the structural deficit and secure fiscal sustainability. Such a revenue-neutral reform could be implemented without hurting the poor by having a minimum threshold below which houses are not taxed. This would be relatively straightforward to implement as Slovenia has a system in place to value immovable property using market values. Other options to finance the cuts to labour taxes include raising indirect taxation and removing income tax exemptions. Currently, the standard VAT rate is 22%, although reduced rates of 5% and 9.5% apply for a wide range of goods and services, leading to an effective average VAT rate of 17%. Similarly, the personal income tax base is narrow, reflecting many exemptions and special tax provisions. In total, applying the standard VAT rate to all goods and services to achieve a broader-based VAT rate, and broadening the personal income tax base by reducing personal income tax allowances by 25% could finance an additional 10-percentage point reduction in social security contributions (OECD, 2018[47]).

The relatively high and growing wage bill in the public sector is another concern for the sustainability of public finances (Figure 1.23). This reflects a general lack of a structural approach to wage setting. Austerity measures after the financial crisis led to pay freezes for public sector employees. Then came strong wage hikes as public finances improved on the back of stronger economic growth in the mid-2010s. The government continued to increase public wages in the health sector throughout the pandemic, which might result in a structural expansion of public consumption if wages in other parts of the public sector catch up as foreseen by the unitary public pay system (see below). The result of this stop-and-go approach is that public wage policy has become pro-cyclical. A more structural approach to managing public wages would be to make public wage increases subject to private sector developments and sound budget constraints to moderate the growth of the wage bill as a share of GDP. This could be achieved through cash limits for the overall public wage bill as done, for instance, in the United Kingdom.

Figure 1.22. The labour tax wedge is high

Average tax wedge, for a single person (no child), as a % of labour cost, 2021



Note: The tax wedge is the sum of personal income tax and employee plus employer social security contributions together with any payroll tax less cash transfers.
Source: OECD Taxing Wages database.

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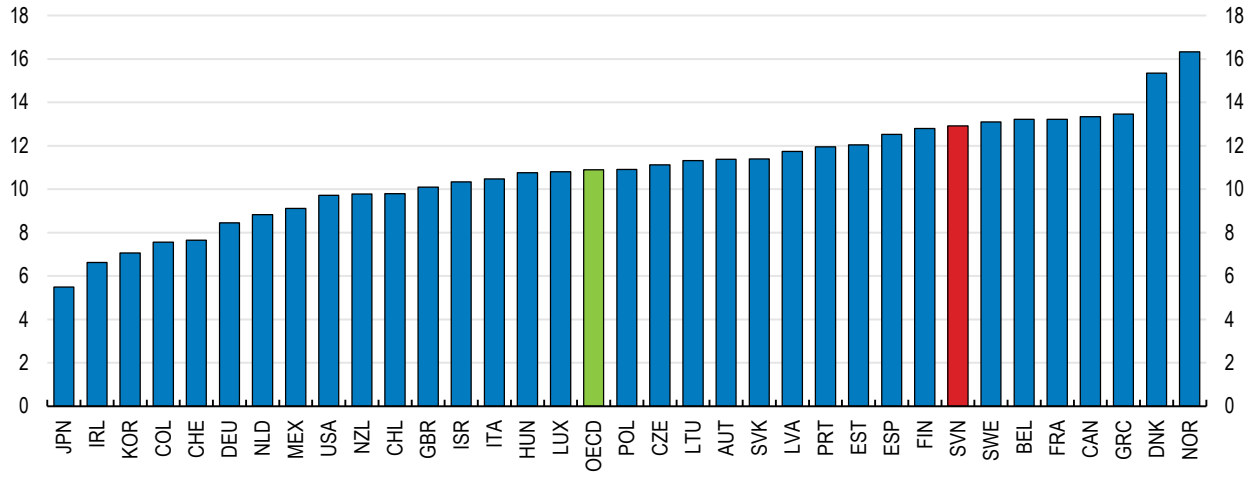
Figure 1.23. The wage bill is comparatively high

Compensation of government employees, as % of GDP, 2020 or latest available year



Source: OECD National Accounts database; and OECD calculations.

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The uniform public sector pay system is too rigid as pay rises in one sector trigger pay rises in all other sectors. For instance, public wages increased due to large COVID-related bonuses in the health sector in 2021 (see below). Higher wages in the health sector will help keep the sector competitive. However, this may have an impact on public finances by leading to strong wage increases in other public sectors (Fiscal Council of the Republic of Slovenia, 2022[48]). A more differentiated approach to public wages would allow to raise wages for occupations with recruitment problems such as in health and IT. In the United Kingdom, for instance, government departments can set higher wages for occupations with recruitment and retention problems such as in IT or health while overall wage negotiations remain subject to departmental spending limits set out by the Treasury (OECD, 2021[49]). Another approach is to link payment to performance as in France, as discussed in the last *Survey* (OECD, 2020[10]).

EU funds are providing an important economic stimulus. Additional money from the Recovery and Resilience Facility funds will finance investment in areas that the *Survey* identified as important for growth, notably in the green and digitalisation transformations, boosting the inflow of total EU funds to an average of 2.2% of GDP per year over 2021-26 (Box 1.1). However, a concern is that insufficient strategic planning, the fragmentation of public sector bodies, and weak inter-ministerial coordination are slowing down the implementation of key legislation, which is a pre-condition for the transfer of EU funds (OECD, 2018[50]; IMAD, 2021[51]) (see Chapter).

To secure the best use of EU funds, spending efficiency should be strengthened. In this respect, an issue is the top-down approach in allocating EU funds. First, priorities are identified at the EU level. Then, the government develops programmes to qualify for EU funding. In practical terms, this means that the government focuses on qualifying for EU funding, and subsequently identifies which areas to focus on. An example for such a top-down approach is the government's digitalisation strategy, which relies heavily on financing from the EU's Recovery and Resilience Facility funds to raise investment in ICT. However, relatively little efforts have been put into identifying market failures and other explanations for why firms are investing comparatively little in ICT. For instance, support is provided to both large firms and SMEs that have a digital strategy in place. In contrast, business surveys point to skill shortages as well as burdensome product market regulations as barriers to investment (European Investment Bank, 2022[52]). Better cost-benefit analysis will help make most out of EU funds, along the lines of the different social and economic needs as set out in the government's digital strategy. To raise spending efficiency, project

planning and selection should be improved. A way forward could be the use of input and output benchmarking to identify areas of relative weakness (see Chapter).

Table 1.5. Past recommendations on fiscal policy

Recommendations in previous Surveys	Action taken since the 2020 Survey
Maintain spending ceilings, pursue efficiency improvements, and adjust the structure of public spending	No action taken.
Focus fiscal consolidation on structural measures to increase cost efficiency.	Consolidation was mostly based on temporary measures that are now expiring. A substantial rise in pension benefits was agreed.
Increase recurrent taxes on real estate.	No action taken.
Adopt a credible and transparent expenditure rule, and appoint an independent and effective fiscal council to assess adherence.	A fiscal council has been appointed.
Focus fiscal consolidation on structural measures to increase cost efficiency in education, public administration and local government.	Some social spending measures have been made contingent on GDP and employment growth. Public procurement was centralised.
Avoid across-the-board cuts in the public-sector wage bill. Reinstate performance-related pay provisions, and use non-monetary incentives for public-sector workers. When cutting employment, reductions should avoid aggravating shortages of skills and competences.	The freeze in promotions and annual conditional pay increments of public servants has been lifted.

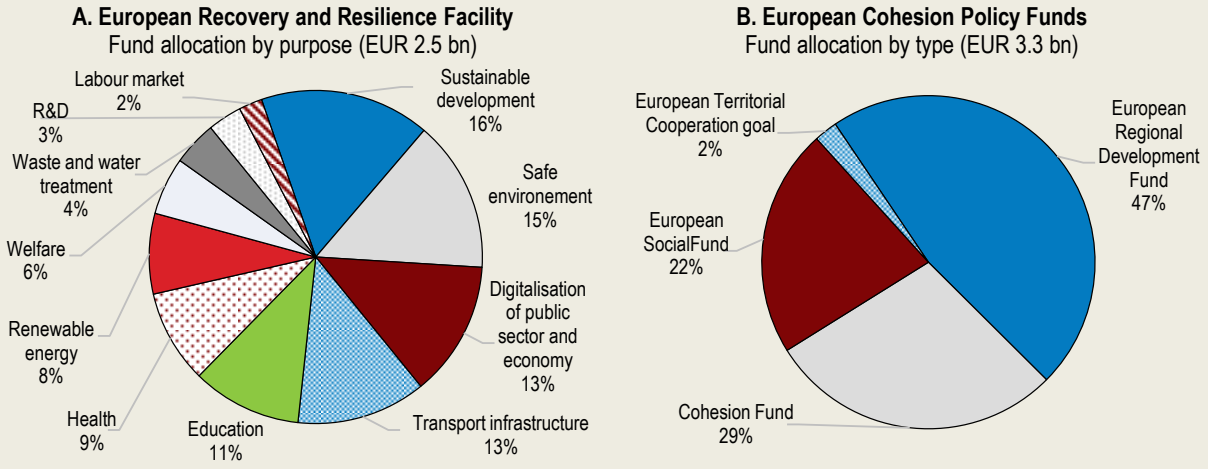
Box 1.1. EU funds will support the green and digital transitions

During the 2021-2027 programming period, Slovenia will receive European structural funds amounting to EUR 5.1 billion (6.4% of 2021 GDP). Nearly two-thirds of the funds are from the Cohesion Policy allocations, encompassing the European Regional Development Fund, the European Social Fund, the Cohesion Fund (for countries with a gross national income per capita below 90% EU-27 average), Just Transition Funds and the smaller European Interregional Fund, while the rest is related to the Common Agricultural Policy (European Commission, 2020[53]).

In addition, the NextGenerationEU temporary instruments will provide EUR 2.8 billion to boost the recovery from the pandemic's social and economic damages as well as facilitate the green and digital transformation. The key component of the NextGenerationEU is the Recovery and Resilience Facility (RRF) which will provide EUR 2.5 billion, of which EUR 1.8 billion are grants and EUR 0.7 billion loans (Figure 1.24). Slovenia will also receive EUR 0.3 billion from the NextGenerationEU's REACT programme (Recovery Assistance for Cohesion and the Territories of Europe) (Government of Slovenia, 2020[54]). The government plans to utilise the RRF in four priority areas: 1) the green transition, 2) the digital transformation, 3) the smart, sustainable and inclusive growth and 4) the health and welfare area, including investments and reforms in long-term care and social housing (Government of Slovenia, 2020[55]).

Nearly half of the funds will be allocated to the green transition (divided into grants and loans in equal proportions). Half of this will be used to secure a clean and safe environment. This includes investments to reduce environmental-related disasters, improve water infrastructure and services and strengthen the long-term resilience of forests to climate change. Funds will also be used to invest in sustainable mobility, by enhancing public transport infrastructures and increasing the use of alternative transport fuels, as well as improve energy efficiency and reduce greenhouse emissions, by raising the share of renewable energy sources. The rest of the funds will be used to improve energy efficiency in public buildings and support the circular economy.

Figure 1.24. EU resilience funds support many activities



Note: The Recovery and Resilience Facility (EUR 2.5 billion) consists of grants (EUR 1.8 billion) and loans (EUR 0.7 billion).
Source: Government of Slovenia; and European Commission.

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A third of allocated funds (mostly as grants) goes to the development of smart, sustainable and inclusive growth. Resources will be devoted to investments in R&D and innovation, boost productivity and improve the business environment conditions to attract investments, as well as support structural reforms in the labour market and pension schemes to respond to challenges posed by the ageing population. Moreover, funds will also be used to reform the education system and vocational training to improve the future workforce's competences in digitalisation and sustainable development. In addition, resources will be allocated to education and research infrastructures. Investments in the tourism sector and cultural heritage protection are also foreseen in this fund category.

Resources allocated to the health and welfare sector account for 15% of the RRF (mostly as grants). This will primarily focus on measures to support the digital transformation of the health system, improve skills of the healthcare personnel and ensure quality of care. Funds will also be used to strengthen long-term care and make it more accessible and inclusive. The plan also foresees investments in social housing to foster housing mobility and support disadvantaged social groups, such as deprived individuals and the young population.

The digital transformation will be entirely funded through grants (13% of the total RRF plan), including the digital transformation of the public sector and the economy. At the beginning of 2022, the government adopted the Digital Strategy for 2030 (Chapter 2) which was a pre-condition for the disbursement of the EU's RRF funds.

As argued above, improvements in EU funds spending efficiency are necessary to ensure a full absorption of the allocations. For example, at the beginning of 2022 the ratio of spent over planned EU funds (i.e., Cohesion Policy funds allocated over the 2014-2020 programming period) ranged between 70 and 80% (depending on the type of funds) (European Commission, 2022[56]).

Long-term fiscal challenges need to be addressed

Reducing public debt is a primary concern for many governments. Public debt increased after the financial crisis and again after the COVID crisis. Since 2019, public debt has increased by more than 10 percentage points of GDP. Fiscal consolidation that can lead to a reduction in public debt, and thus to more fiscal space, has only started in 2022. More importantly, there is no medium-term plan to address ageing-related fiscal spending increases, although the Resilience and Recovery Fund Plan set milestones for health and pension reforms to be adopted in the medium term. A faster fiscal consolidation will be needed to prepare for rising pension spending, and restore fiscal space to respond to future crises. Much more decisive and timely action is needed in face of ageing-related spending pressures (see below).

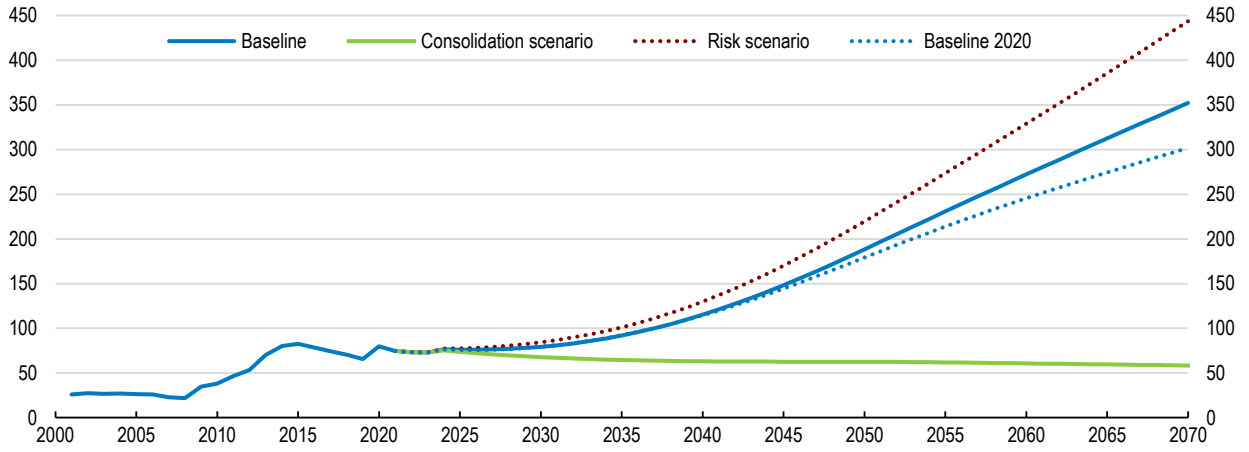
The public debt-to-GDP ratio will only increase moderately over the next decade, before rising considerably if some of the largest ageing-related spending pressures in the OECD are not contained (see below) (Figure 1.25, Baseline scenario). Compared with the last *Survey*, the public debt-to-GDP ratio is projected to worsen by more than 50 percentage points as a result of recent pension reforms that provided unfunded increases in pension benefit generosity (Baseline 2020 scenario) (OECD, 2020[10]; European Commission, 2021[57]). Public debt could be even higher in case long-term growth is lower than expected (Figure 1.25, Risk scenario).

Structural reforms are needed to secure fiscal sustainability. This includes the containment of projected ageing-related spending of around 7% of GDP by 2050, and which requires an improvement in the structural budget deficit of 3.7% of GDP by 2024, and thereafter a balanced primary balance (Figure 1.25, Consolidation scenario). Such a large fiscal challenge requires measures to sustain growth and reduce ageing-related spending, notably measures to incentivise longer working lives. In addition to increasing the statutory retirement age by 5 years, the tightening of eligibility criteria in unemployment benefit systems would raise the employment rate of older workers (+50) to the EU average, reducing fiscal spending by 3.5% of GDP as discussed in the last *Survey* (OECD, 2020[10]; OECD, 2022[58]). This would suffice to cover the projected increase in pension spending. However, additional efforts are needed to finance future health-related spending increases.

The recommended reforms in this *Survey* would substantially strengthen economic growth. The reforms would expand the tax base, creating fiscal space over the medium-term as structural fiscal gains amount to 5.1% of GDP (Box 1.2). For instance, aligning property taxation with the OECD average and broadening the VAT tax base by reducing exemptions would raise revenues by 1.2% of GDP and 1.8% of GDP, respectively. In addition, broadening the personal income tax base by reducing tax allowances by 25% could boost revenues by 0.8% of GDP (OECD, 2018[47]). The resulting fiscal space could be used to strengthen growth through lower labour taxes, or to counter the fiscal challenges associated with population ageing.

Figure 1.25. Spending pressures related to population ageing need to be addressed

General government debt, Maastricht definition, as % of GDP



Note: The baseline scenario assumes that increased spending on health and pensions will add an additional 8.2 percentage point of GDP to annual government spending by 2070, in line with European Commission (2021). The consolidation scenario assumes a primary balance of 0% of GDP from 2024, complying with medium-term objective from the government's Convergence Programme, which is subject to change. The risk scenario assumes that real GDP growth is 1 percentage point lower than currently projected for the entire simulation period, for example if structural reforms fail to raise productivity growth.

Source: Adapted from OECD (2021), OECD Economic Outlook: Statistics and Projections (database), June; Guillemette, Y. and D. Turner (2018), "The Long View: Scenarios for the World Economy to 2060", OECD Economic Policy Paper No. 22., OECD Publishing, Paris; and European Commission (2018), "The 2018 Ageing Report - Economic and Budgetary Projections for the 28 EU Member States (2016-2070)" Directorate-General for Economic and Financial Affairs.

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Box 1.2. The impact of selected policy recommendations

Table 1.6 presents estimates of the fiscal impact of selected recommended reforms based on the OECD Economics Department Long-term Model. The results are merely indicative and do not allow for behavioural responses. Table 1.6 quantifies the impact on growth of the main reforms recommended in this *Survey*.

Table 1.6. Illustrative fiscal impact of recommended reforms

Fiscal savings (+) and costs (-) after 10 years

	% of GDP
Reduce labour taxes to the OECD average.	-2.2
Broadening the personal income tax base by reducing tax allowances by 25%.	+0.8
Align property taxation with the OECD average.	+1.2
Reduce VAT exemptions to have a broader-based VAT rate.	+1.8
Total revenues	**+1.6**
Tighten eligibility criteria in unemployment benefit systems so as to align the employment rate of older workers with the EU average.	+1.0
Gradually increase the statutory retirement age to 67 and change the pension indexation from today's mix of 60% of wages and 40% of prices to full price indexation.	+2.5
Total expenditures	**+3.5**

Source: Simulations based on the OECD Economics Department Long-term Model and (OECD, 2018[47]).

Table 1.7. Illustrative impact on GDP per capita from structural reforms

Difference in GDP per capita level from the baseline 10 years after the reforms, %

	%
Competition reforms	
Reduce state-ownership and increase competition in service and network industries to levels of 5 best performing OECD countries.	+2.5
Labour market reforms	
Reduce labour taxes to the OECD average while increasing less distortive taxes.	+1.9
Tighten eligibility criteria in unemployment benefit systems and raise the minimum years of contributions required to retire so as to increase the effective retirement age by 2 years.	+2.0
Ensure that minimum wages grow slower than the median wage.	+1.1
Total impact on GDP per capita	**+7.5**

Source: Simulations based on the OECD Economics Department Long-term Model.

Pension reforms are needed to secure fiscal sustainability

Population ageing is leading to a smaller and older workforce with negative impacts on the sustainability of the pension system. By 2050, the already relatively high median age of the population will further increase to around 50 years, implying that a larger share of the population will have reached 50 years than almost anywhere else in the OECD (Figure 1.26, Panel A).

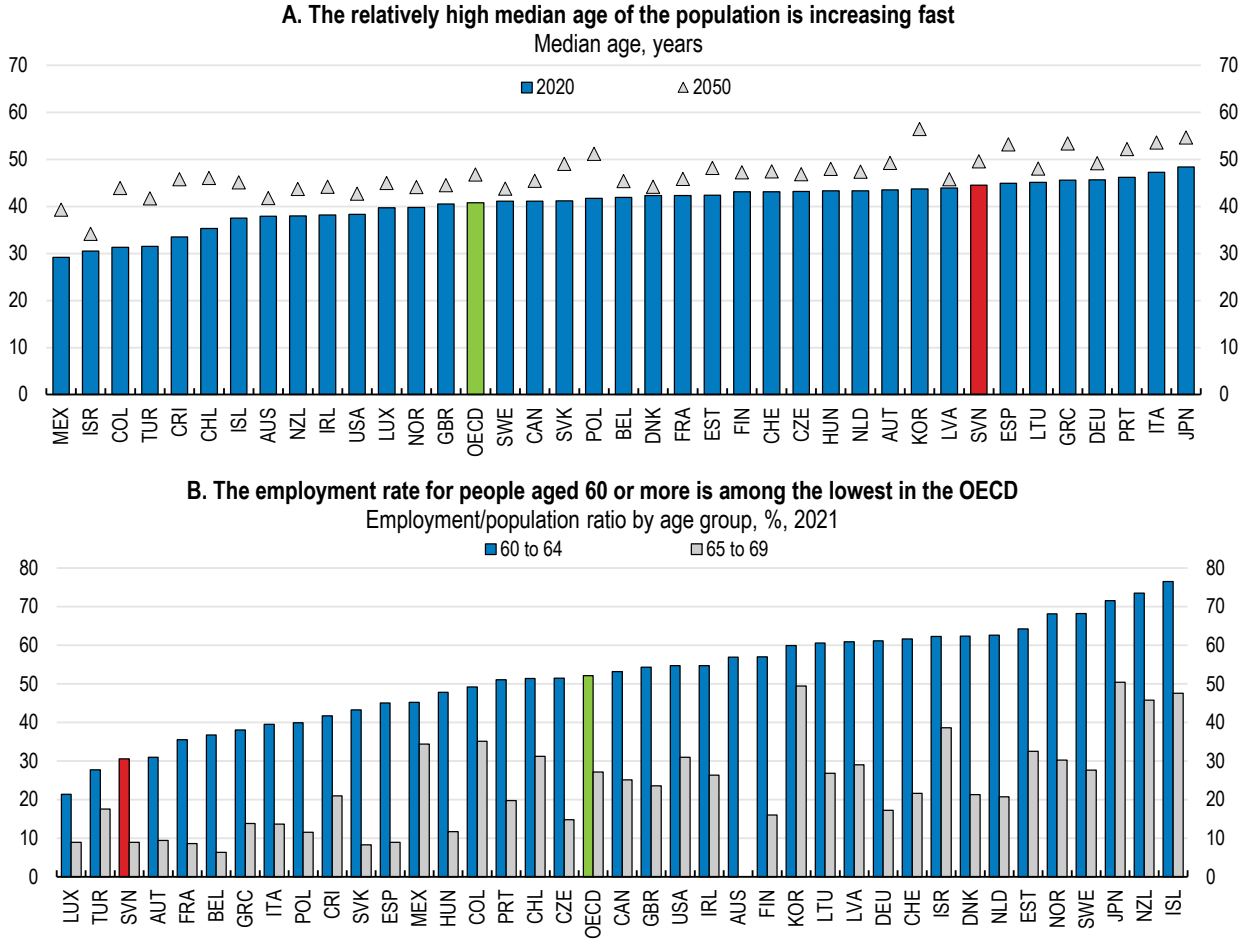
A key challenge is one of the lowest effective retirement ages in the EU despite recent increases, leaving Slovenians with longer retirement spans than elsewhere. The employment rate for the age cohort 60-64 remains only half the OECD average while almost no member of the age cohort 65-69 continues to work (Figure 1.26, Panel B). This reflects a retirement age of 60 for workers with a full 40 years contribution period (OECD, 2021[15]). Longer retirement spans combined with the higher old-age dependency ratio will feed into higher spending pressures in both the pension and health systems. Indeed, the projected pension and health-related spending is already among the highest in the OECD and is expected to reach 16% of GDP by 2050 (European Commission, 2021[57]). Only a rise in the labour participation of older workers can bring the pensions system back on a sustainable track. This requires measures to work past the age of 65, including increasing the statutory retirement age and linking it to gains in life expectancy, raising the minimum years of contributions required to retire, and using lifetime incomes to determine pension benefits as opposed to the currently best 24 consecutive years of contributions as discussed in the last *Survey* (OECD, 2020[10]). In addition, there are other options to finance future pension spending increases, such as higher contribution rates, but such a measure might have negative impacts on labour supply (OECD, 2022[58]).

In addition, many older workers are using unemployment as pathway to early retirement as discussed in the last *Survey* (OECD, 2020[10]).Unlike in other OECD countries, the older unemployed are treated favourably as their benefit duration increases with age and they have their pension contributions paid longer than younger unemployed, reducing work incentives. Since 2020, older unemployed workers (58+) with an accumulated 28 years of contribution can receive unemployment benefits for 25 months, compared to 12 months for other workers with equal contributions. In order to strengthen work incentives for older workers, the last *Survey* recommended removing these pathways (OECD, 2020[10]). So far, however, no substantial measures have been taken (Table 1.8). In Austria and Germany, for instance, lower unemployment benefits duration for older unemployed persons led to higher transition rates to employment as discussed in the last *Survey* (OECD, 2020[10]). Curtailing age specific rules for unemployed would contain ageing-related spending pressures and would help align the employment rate of older workers with the OECD average. Such efforts should be implemented alongside measures to raise labour demand for older workers, including the abolition of seniority bonuses (see below).

Higher pension costs stem mainly from the generous annual pension indexation, which links pensions to 40 percent wage inflation and 60 percent price inflation, and allows for annual discretionary allowances as happened in 2021. As a result, the deficit in the pension system is projected to reach 2.3 percent of GDP in 2022, before doubling by 2030 (European Commission, 2021[57]). To reduce the need for intergenerational transfers, the government should link pension benefits entirely to price developments and eliminate annual discretionary allowances, as recommended in the last *Survey*.

The deficit of the pension system also reflects that most workers contribute less over their work lives than they receive in pension benefits. As a result, low-and middle-income groups contribute much less than they receive in pension benefits, leading to large transfers in the system, and reducing working and saving incentives (OECD, 2020[10]). This reflects policy measures such as a minimum pension. In consequence, low-income earners with a full career receive a very high net replacement rate of 95% compared with an OECD average of 69% (OECD, 2022[58]). To reduce the deficit, lowering the minimum reference wage is one option to be considered.

Figure 1.26. The median age is high while employment rates among older people remain low



Source: United Nations, World Population Prospects 2019; OECD Labour Statistics database.

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Table 1.8. Past recommendations on the pension system

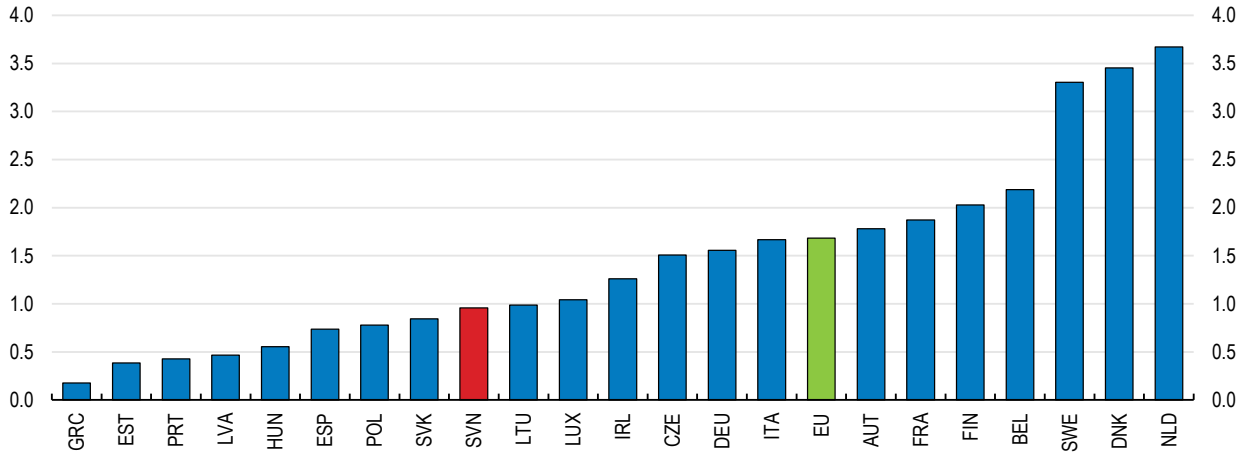
Recommendations in previous *Surveys*	Action taken since the 2020 *Survey*
Increase the statutory retirement age to 67 for both men and women. Link further increases, if needed, to gains in life expectancy.	Part of early retirement period for child-caring can be substituted with higher annual accruals.
Index pension benefits to price developments.	No action taken.
Adjust the parameters of the public pension system to better align contributions and benefits for all contributors.	No action taken.
Make bonuses and maluses symmetric and applicable at a fixed point, such as the statutory retirement age.	No action taken.
Make enrolment in the second pillar an opt-out choice.	No action taken.
Increase the ceiling for tax exempt contributions and reduce the associated tax advantages; introduce matching contributions for low wage workers.	No action taken.
Increase the statutory and minimum pension (for workers with qualifying contribution periods) ages, and link them to life expectancy.	No action taken.
Calculate pension rights based on lifetime contributions.	No action taken.

Preparing the health and long-term care systems for ageing-related challenges

Addressing structural issues in the health sector is key to fiscal sustainability. This includes ensuring competitive wages in the health sector. Moreover, public long-term care spending as a share of GDP is relatively low (Figure 1.27). Ageing will lead to different and higher demand for health and long-term care services. Providing needed services while containing cost pressures will require reforms that promote efficiency and satisfy changing health demands.

Figure 1.27. Public long-term care spending is relatively low

Public long-term care spending as % of GDP, 2019



Source: European Commission (2021), The 2021 Ageing Report: Economic and Budgetary Projections for the EU Member States (2019-2070), Directorate-General for Economic and Financial Affairs, Institutional Paper 079, Luxembourg.

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Wages in the healthcare sector wages experienced a rise in 2021 due to large COVID-related bonuses. Keeping wages in the health care sector competitive is necessary to avoid health care specialists leaving for better paying jobs elsewhere. However, the rigid and uniform public pay system foresees that the strong wage hike in the health sector may have an impact on public finances by leading to strong wage increases in other public sectors (Fiscal Council of the Republic of Slovenia, 2022[48]). As argued above, a more flexible approach is needed to wage setting in the public sector. This entails wage increases for occupations with recruitment problems such as health. To keep the public wage bill from spiralling out, overall public sector wage increases be subject to sound budget constraints as argued above.

The long-term care system is underdeveloped and fragmented. There are many different providers with their own eligibility criteria and financing, leading to uneven access (IMAD, 2018[59]). Home care is underdeveloped and there is little rehabilitation to enable people to stay in or return to their home (Oliveira Hashiguchi and Llena-Nozal, 2020[60]). To create a level playing field and allow people to organise their own care, the parliament passed a Long-Term Care Act in 2021 that provides a unified framework for long-term care, including a single point of access with common eligibility criteria. A new insurance will come into force in 2025 with pooled funding from the health and pension insurance. However, transfers from the state budget will be necessary to bridge funding gaps for long-term care. Instead, the system should be based on sustainable long-term funding. This entails strengthening health insurance for long-term care. In addition, equal access for all should be secured. This could entail complementing health insurance with vouchers for low-income individuals, as done in Germany.

Table 1.9. Past recommendations on health care

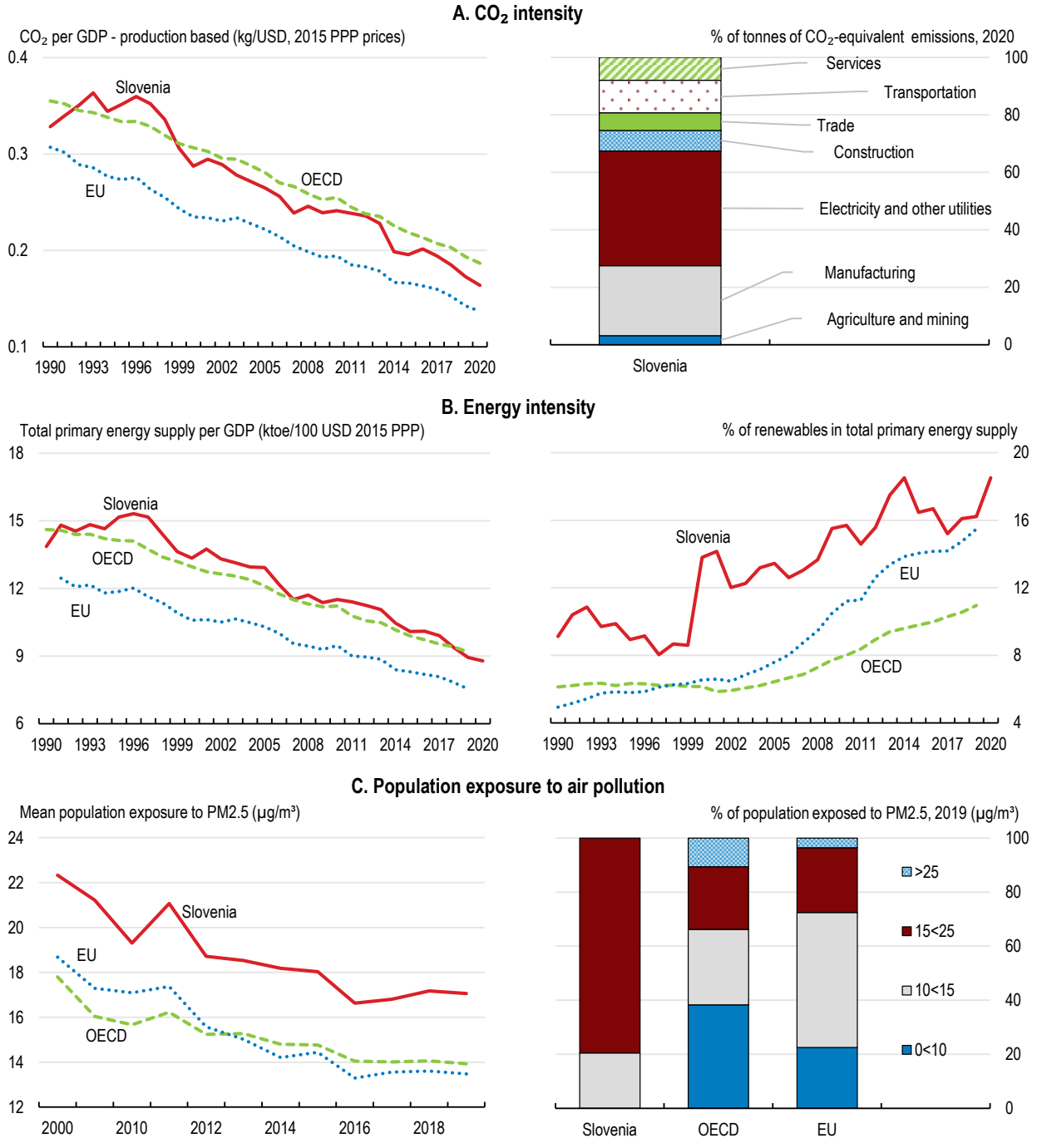
Recommendations in previous *Surveys*	Action taken since the 2020 *Survey*
Make the per-patient payment (capitation) and the fees-for-services cost reflective.	No action taken.
Use the per-patient payment to attract GPs to underserved areas.	No action taken.
Establish required minimum interventions for maintaining services, while giving management greater responsibility in service supply decisions.	No action taken.
Create a nation-wide monitoring system of quality, safety and efficiency.	No action taken.
Introduce selective public tenders for health services.	No action taken.
Use updated reimbursements for all acute services.	No action taken.
Ensure competitive salaries and performance incentives for doctors.	Salaries have been increased in 2022 but the implementation has been halted by the Constitutional Court.
Introduce integrated long-term care with common financing mechanisms and eligibility criteria.	The Long-Term-Care Act was adopted in 2021, providing common financing mechanisms and eligibility criteria.
Facilitate entry of private home care providers through quality and output-focused tenders.	Long Term Care Act has been adopted in 2021, integrating assessment criteria.
Equalise the contribution rates to the health fund.	No action taken.
Allow hospitals to adjust their health services to changing demand, including by closing under-performing departments.	No action taken.
Give hospitals greater scope to engage in multi-year investments and to keep their realised cost savings.	The Act on Provision of Funds for Investments in Slovenian Healthcare 2021-2031 has been adopted.

Promoting more environmentally sustainable growth

Many environmental indicators have improved in recent years. The CO_2 intensity of the economy has continued to fall. This is despite a failure to expand the share of renewable energy in energy production since the mid-2010s. Only in 2020 – a low energy consumption year – did the share increase, although not enough to reach the EU target of 20% (Figure 1.28, Panel A). On the other hand, a positive effect came from a relatively high share of environmentally related taxes, although this to a large extent reflects relatively high transport fuel consumption (Figure 1.28, Panel A and B). Another positive development has been a stabilisation in the emissions of greenhouse gases (GHG) per capita (Figure 1.29). The pandemic saw a temporary fall in GHG emissions per capita, which will likely reverse on the back of strong post-pandemic growth. On the other hand, little progress has been made in reducing the high share of the population exposed to fine particles (Figure 1.28, Panel C). Looking ahead, reaching the government's emission objectives in 2030 and 2050 requires an acceleration in the rate of emission reductions (Figure 1.29). Over the past couple of years, relatively few changes have been made to environmental policies, reflecting the policy focus on the pandemic. This contrasts with developments in the 2000s, which saw environmental policy stringency increase more than in most other OECD countries (Kruse et al., 2022[61]). Consequently, only few changes have been made to the most important environmental policy parameters since the last *Survey* (OECD, 2020[10]). Looking ahead, achieving the emissions objectives

requires significantly lower carbon intensity, which means that substantial additional policy measures are needed.

Figure 1.28. Growth has become less CO_2-intensive



Source: OECD Environment database; and OECD Green Growth database.

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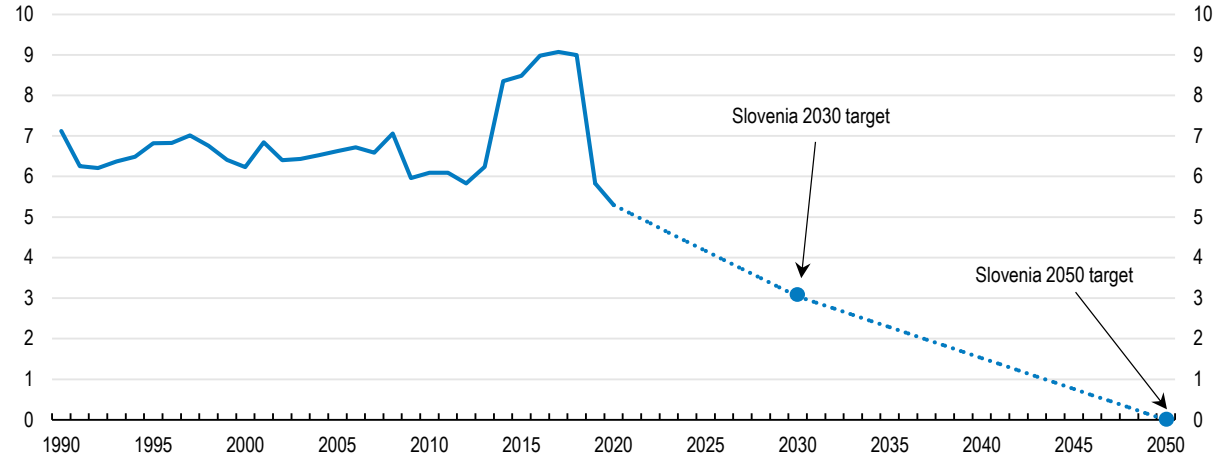
Figure 1.29. Greenhouse gas emissions reductions must accelerate

Net greenhouse gases emissions, tonnes of CO_2 equivalent per capita



Note: The greenhouse gas (GHG) emissions include those from the land use/land use change and forestry sector (LULUCF).
Source: OECD Environment database; OECD Population database; and OECD calculations.

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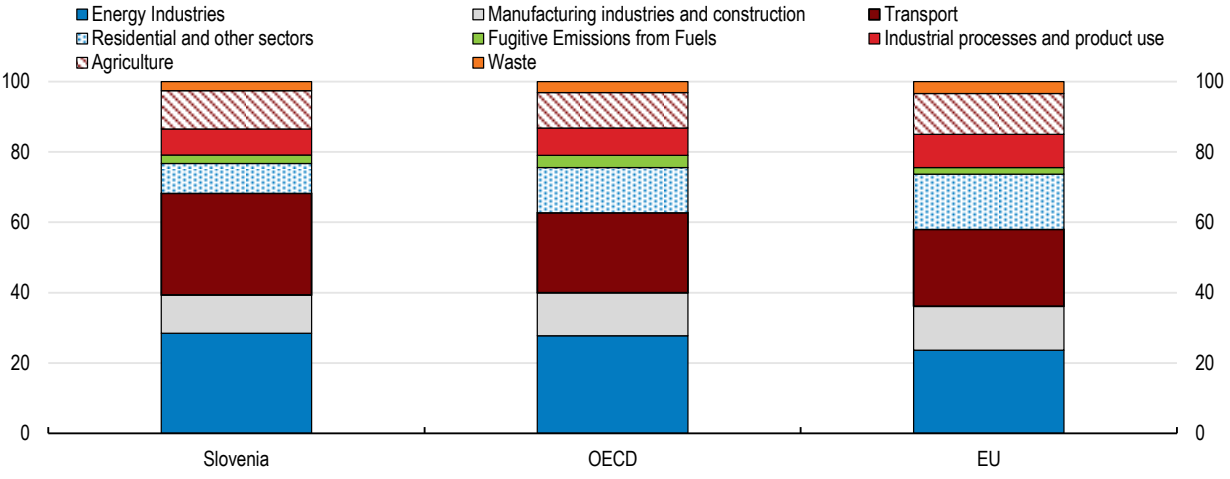
The main emitters of greenhouse gas emissions are the transport and energy sectors

Since the mid-2000s, GHG emissions have increased by a third in the transport sector. In contrast, nearly all other sectors have reduced their emissions. As a result, the transport sector accounts for a larger share of GHG emissions than the OECD average (Figure 1.30). In addition, energy industries (mainly electricity and heating production) account for a relatively large share of emissions despite the increasing share of renewables. This can be linked to the expansion of coal- (lignite-) based power production since 2016. Achieving environmental objectives will require all sectors to contribute, and can only be reached with significant emission reductions in the transport and energy sectors.

Figure 1.30. Transportation and energy account for a large share of greenhouse gas emissions

Greenhouse gas emissions shares, %, 2020



Note: The greenhouse gas (GHG) emissions exclude those from the land use/land use change and forestry sector (LULUCF).
Source: OECD Environment database; OECD Population database; and OECD calculations.

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The government's strategy for achieving environmental objectives is outlined in the Long-Term Climate Strategy (LCS) and the 2020 National Energy and Climate Plan (NECP), which is planned to be revised in 2024. The focus is on supporting environmentally friendly investments and green tax and budgetary policies with an increased use of market-based instruments. These include phasing out the 50% and 70% reimbursements of excise duties on liquid fuels to businesses and agriculture. Moreover, taxes on air pollution (essentially GHG emissions) will be increased so they are harmonised with the price on emission permits, the so-called ETS price, as part of a more general move towards using taxes to a greater extent to promote climate action (Box 1.3). Furthermore, state aid to the business sector is to be conditioned on low-carbon transitions, while promoting the use of private financing. Public procurement is to be subject to stricter regulation to promote green public procurements.

Green budgetary policies take environmental factors and risks into account in annual budgets and medium-term fiscal plans. Such an approach would replace individual measures to promote the green transition in the public sector that have typically reflected initiatives in specific areas rather than a concerted approach. Greening budgetary and planning policies in a consistent manner can be achieved by introducing an internal carbon price to be used in all aspects of public budgeting, planning, procurement and cost benefit analysis for projects with a carbon impact (OECD, 2018[62]). In the UK, for example, all government projects and regulatory changes with carbon impacts include are subject to analyses with an internal carbon price. Such a policy instrument would ensure an alignment of abatement costs across government programmes, allowing better identification and implementation of cost-efficient measures.

Box 1.3. The EU Emissions Trading Scheme and Market Stability Reserve

The EU Emissions Trading Scheme has operated since 2005, covering CO_2, N2O and PFC emissions from electricity generation, industry and intra-EEA flights in 23 European countries, amounting to about 40% of total EU emissions. Large emitters are required to hold permits equal to the quantity of their emissions. Currently, a bit more than a third of Slovenian greenhouse gas emissions are covered in the ETS. Until recently, an over-supply of emission allowances, free allocation and low carbon prices led to a limited effect on low-carbon investments in Slovenia.

The Market Stability Reserve from 2019 withdraws permits from the market if thresholds for the number of permits in circulation are exceeded and, from 2023 onwards, can trigger cancellation of permits. This aims to stabilise permit prices and reduce the "waterbed" effect, where additional abatement in one country allows an increase in emissions elsewhere. Together with the more ambitious emission reduction target of at least 55% by 2030, this has contributed to higher ETS prices since autumn 2020. In March 2022, the ETS price reached more than EUR 70/tonnes, surpassing the average taxation of CO_2 in Slovenia.

(OECD, 2018[63]); (Flues and van Dender, 2020[64]); (European Environment Agency, 2019[65]) (OECD, 2018[66]).

The intermediate 2030 emission objective is to reduce emissions from sectors not covered by the EU's ETS system by at least 20% compared with 2005. Part of the strategy to meet this objective is to phase out coal in electricity generation by 2033 (only affecting one state-owned power station operating since 2014 and one state-owned coal mine). Currently, practically all gas imports come from Russia. Thus, if coal is to be replaced by natural gas, the associated diversification to other importers could delay the decommissioning. Presently, the coal power station generates a third of all electricity production, using highly polluting lignite. Emissions from the transport sector will increase further in the medium term compared with 2005, before they would have to reach a 2050 net zero emission objective.

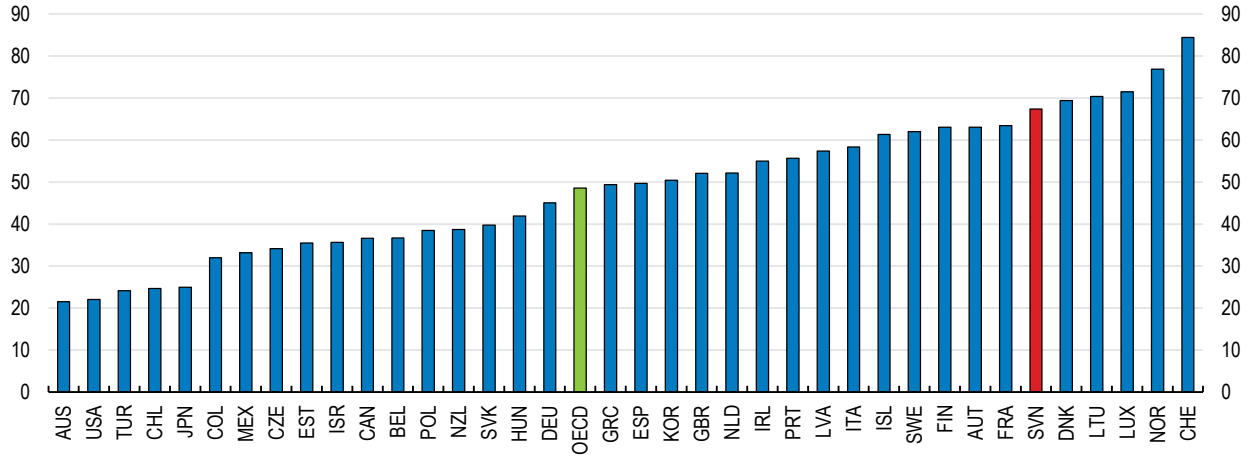
Effective carbon taxes vary across sectors and activities

Reducing emissions from non-ETS sectors has relied on a relatively high average pricing of carbon (Figure 1.31). This reflects a reliance on taxation in road transport, although this is well below best performance in the OECD (Figure 1.32, Panel A). However, half of all emissions are subject to low carbon prices, such as those from the residential, commercial and industrial sectors (Figure 1.32, Panel B). This reflects partly that a part of these emissions comes from ETS sectors, but also a prevalence of tax exceptions and reduced tax rates. In total, nearly a fifth of energy use is not subject to any effective carbon price at all, i.e. no ETS price or carbon tax. Moreover, half of all energy use is subject to an effective carbon price that is less than a quarter of an ETS price of EUR 60 – a level that the World Bank considers to be a mid-range 2020 benchmark and a low-end 2030 benchmark for effective carbon reductions (World Bank, 2017[67]). The large differences in effective carbon prices across sectors and activities lead to a substantial variation in abatement costs, increasing the cost of emission reductions (Figure 1.32, Panel B).

For non-ETS sectors, there is a carbon tax of EUR 17.2 per tonnes of CO_2 in place - a quarter of the level of ETS prices in spring 2022. NECP foresees an increase in the carbon tax to EUR 30 per tonnes of CO_2 by 2030 and that over time the tax should be realigned with the ETS price. This implies that current plans foresee a slow alignment of the carbon tax with ETS prices, entailing a prolonged period with different abatement costs. In contrast, OECD calculations indicates that to reach the government's 2030 emission reduction target would require an average effective carbon rate of EUR 120/tonnes and twice that level to reach the 2050 net zero emission objective (OECD, 2021[68]). An additional measure in the NECP is the planned abolishment of reimbursements of excise duties on energy products in transport by 2025 and in industry by 2030, or be conditioned on the implementation of emission reduction measures. Alignment of abatement costs across sectors and activities requires a faster increase in the carbon tax in the non-ETS sectors to the level of the ETS price and a phasing out of special treatments. The additional revenues could be used to support population groups that are most vulnerable to higher carbon taxes.

Figure 1.31. Carbon taxation in non-ETS sectors is relatively high

Carbon pricing score at EUR 60 per tonne CO_2, excluding emissions from the combustion of biomass, %, 2018



Note: The OECD aggregate is an unweighted average.
Source: OECD Tax and Climate database.

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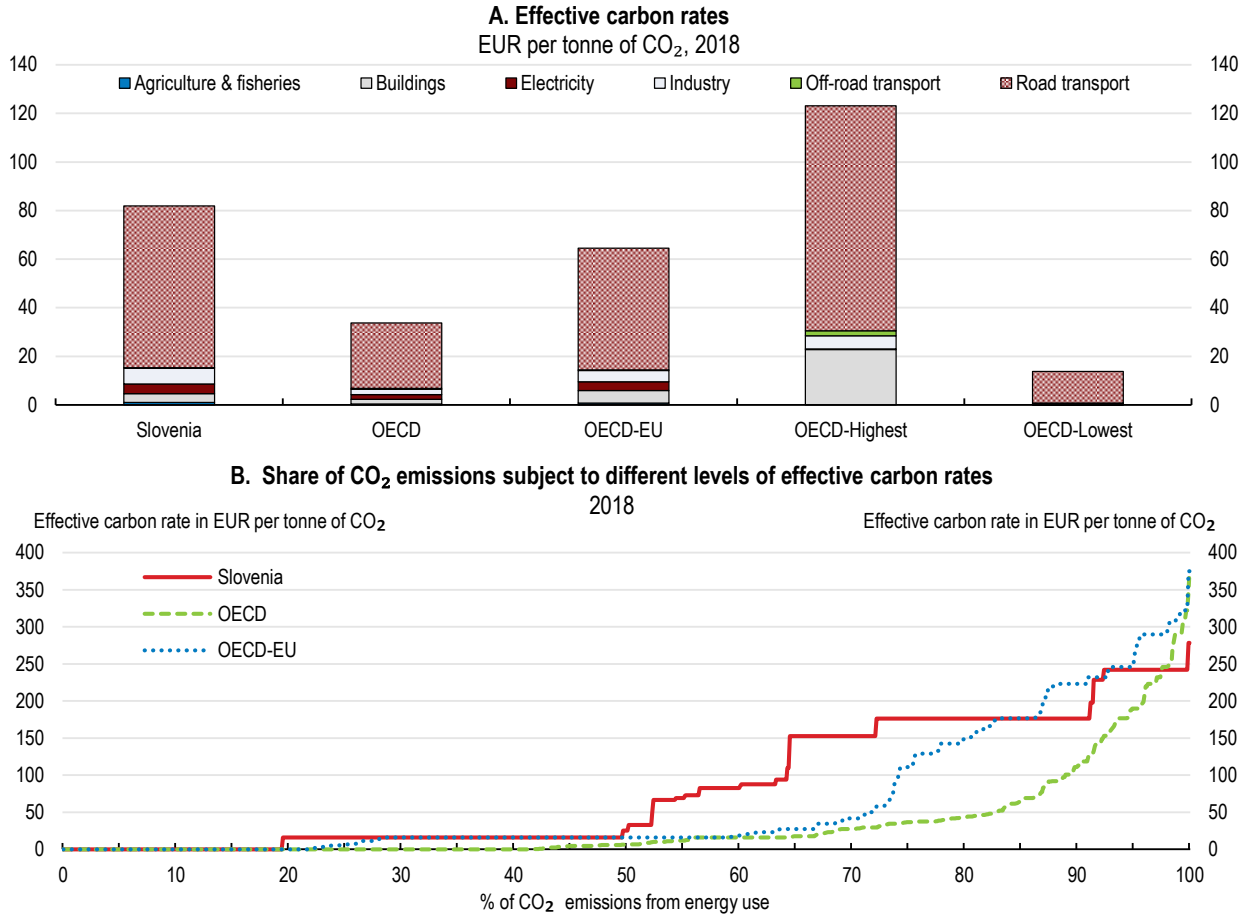
Figure 1.32. Exemptions reduce effective carbon rates



Note: In Panel A, the total effective carbon rate (ECR) corresponds to the average of the six sectors' ECRs weighted for the sectors' emissions.
Source: OECD (2021), Effective Carbon Rates 2021: Pricing Carbon Emissions through Taxes and Emissions Trading, OECD Publishing, Paris, https://doi.org/10.1787/0e8e24f5-en.

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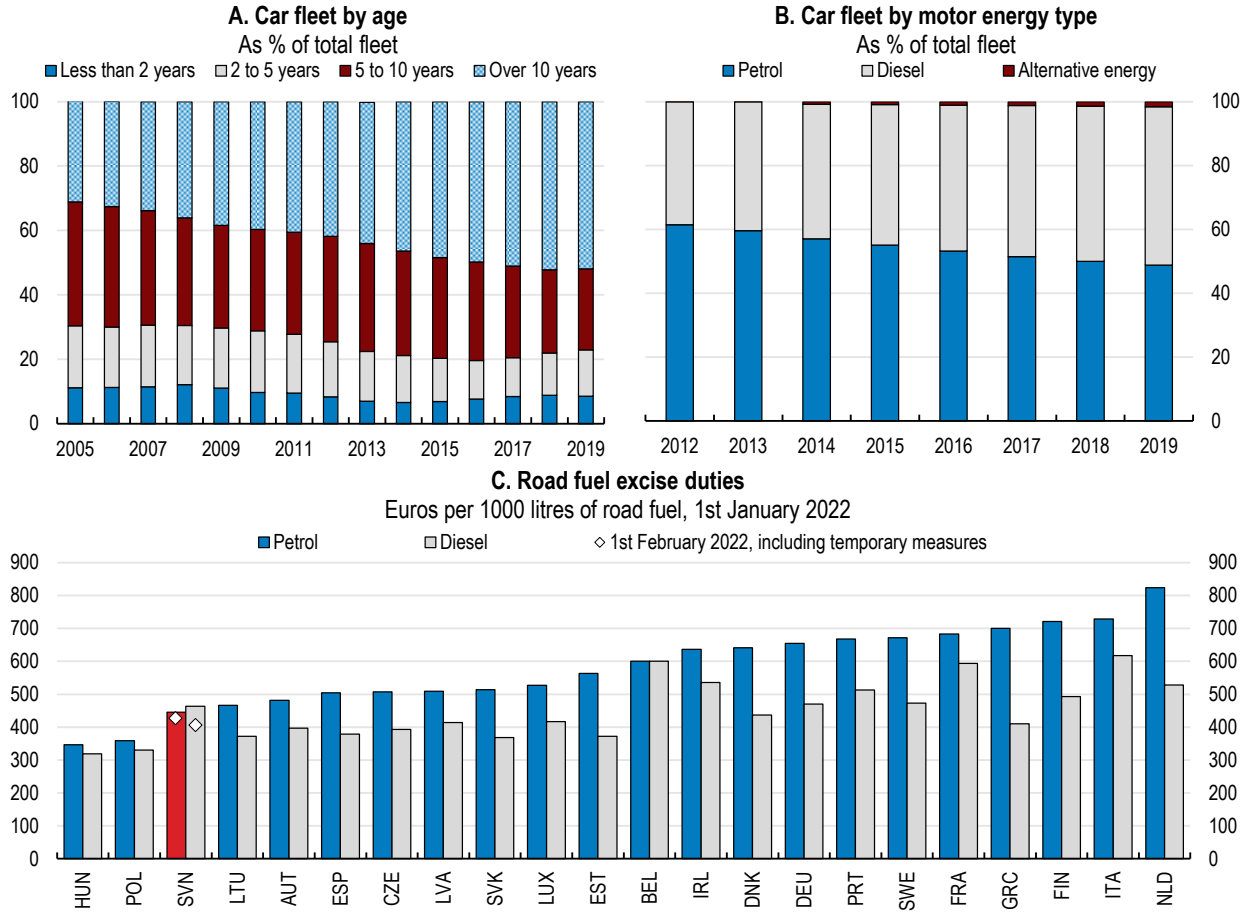
Emission reduction incentives in passenger transport have weakened

The policy for decarbonising the car fleet has been updated over the past half-decade to promote the use of electric vehicles (see below). The objective is to reduce emissions from private cars by gradually lowering the permitted emissions, so that after 2030 new cars are only allowed to emit less than 50 grams of CO_2/km. However, the car fleet has become less environmentally friendly with an ageing fleet with a higher share of cars with diesel engines (Figure 1.33, Panels A and B). A contributing factor to this development was a relatively low taxation of transport fuels. In addition, the difference in tax treatment of gasoline and diesel did not reflect the 14 % higher carbon content in diesel until 2021, when transport fuel taxation was lowered, but more so for petrol taxes, leaving them 4.1% below that of diesel (Figure 1.33, Panel C). This lasted until early 2022, when excise taxes on transport fuel were lowered temporarily, and particularly for diesel, in response to increasing energy prices, reverting back to relatively low taxes on diesel. Moreover, the vehicle taxation that is partly based on CO_2 emissions has not been effective in promoting a cleaner fleet. To reverse the increasing emissions from transport, the government should, once the temporary excise tax reductions expire, increase taxation of transport fuels and relatively more so for diesel to reflect its higher environmental harm. In addition, the government could consider basing the annual road usage fee on environmental factors, although a distance- and congestion-based road pricing system would have larger environmental effects. This could be combined with more ambitious

regulatory measures, such as the EU's proposed zero limit for emissions from 2035 or bans on diesel engines and the halt to sale of combustion engines earlier than 2035.

Figure 1.33. An aging car fleet is increasingly based on diesel



Source: Eurostat; and European Environment Agency.

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Incentives for passenger road transport have increased. In 2021, the fixed value commuting allowance (equal to the price of public transportation) was replaced with a tax free reimbursement rate of EUR 0.18 for each kilometre of commuting (or a fixed sum of EUR 140/month), greatly reducing commuting costs. The reimbursement rate can differ in the private sector, depending on the relevant labour market agreement. The reimbursement rate per litre of transport fuel for a car with average energy efficiency was higher than the price of transport fuels in early 2022. Moreover, the allowance is about 50 times higher than the CO_2 tax, nullifying the tax's emission reducing effects. In addition, the new allowance reduces incentives for using public transport, countering the government's strategy. In addition to expanding passenger train services, this includes a roughly 20% increase in regional public bus services and the introduction of more attractive ticketing schemes and better integrated planning and management of regional bus and train services. The increasing average age of cars means that the composition of the car fleet only changes slowly, so for road transport to contribute significantly to emission reductions, the government should envisage a relatively fast phasing out of the commuting allowance. This should be combined with distance and congestion-based road pricing to capture other non-climate change-related negative external effects from road transport, such as congestion and local air pollution, among other things, as recommended in the last *Survey* (OECD, 2020[10]).

The sale of electric vehicles is supported by a special low purchase tax rate of zero and direct subsidies up to EUR 4 500 – similar to measures in many other European countries (European Automobile Manufactures Association, 2020[69]). In addition, newer measures include linking vehicle taxation only to emissions, reducing taxation of private usage of company electricity cars to zero, and full VAT deduction for purchases of electric company cars. Nonetheless, the share of electric vehicles remains relatively low at ½ % of the total car fleet, although sales account for a larger share of new registrations. This may be linked to the fact that Slovenia has relatively fewer charging location than other European countries (Electromaps, 2022[70]). Moreover, the stations tend to be clustered around larger cities (particularly Ljubljana and Maribor) and other population and traffic centres, leaving smaller towns and remote areas relatively underserved (Prah, 2022[71]). Looking ahead, increasing the use of electric vehicles should be supported by higher taxation of transport fuels and a better developed network of charging stations. An annual road fee that is based on environmental factors could also help in this respect.

Public train transportation has on average lower total CO_2 emissions per passenger kilometre than other types of passenger transport, reflecting electrification of trains and the high share of renewables in power generation (Table 1.10). However, the average CO_2 emissions cover a very broad range of emissions from different train services, reflecting that public train transportation serves multiple public service objectives, including serving remote and thinly populated areas, providing services outside rush hours, etc. An improved mapping of emissions from various types of passenger train services, such as rush hour, remote areas, weekend and evening services, could together with an internal carbon price help to make public transport more environmentally friendly – an important consideration with the planned expansion of train transportation.

Table 1.10. Emissions from passenger transport

	Average total CO_2 emissions per passenger kilometer
Travel mode	Kg CO_2/pkm
Passenger car	0.126
Passenger train	0.051
City public transport – buses	0.078
Intercity public transport - buses	0.082

Note: include indirect emissions from electricity generation
Source: Ministry of Environment

Regulation could be supported by economic instruments

In the housing sector, the NECP prohibits the sale and installation of new oil boilers from 2023 onwards. A first key step in this direction should be to implement this measure and broaden it to all fossil-based boilers, including gas boilers. Moreover, a relatively large share of the population is exposed to fine particle pollution, arising from the continued use of older wood boilers and as recommended in the last *Survey*, the replacement subsidy should be combined with regulatory requirements and financial sanctions (OECD, 2020[10]).

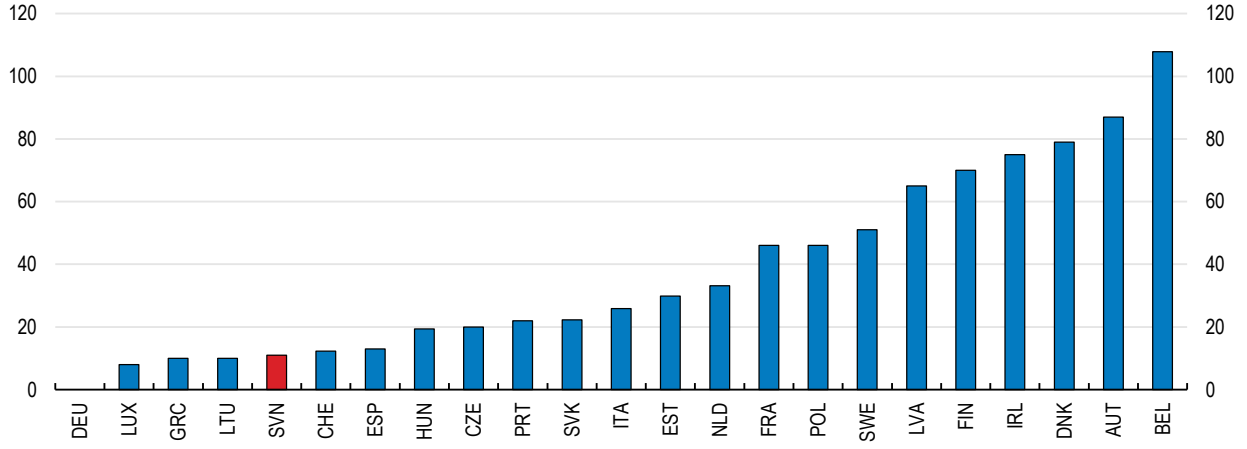
The sectors covered by the ETS system are subject to complementary emission reduction regulatory measures, such as supporting the development of combined-heat-and-power installations and renewable energy systems as well as for investments in energy efficiency and best available technologies from an environmental perspective. A more coherent and market-based approach would be to complement the ETS system with a carbon levy on emissions. The levy should only become effective if the ETS price falls below a certain level to secure more sustained emission reduction incentives. Such a system is in place in the Netherlands, where the floor price is increasing over time to ensure a gradual increase in effective carbon pricing, allowing firms a sufficiently long time horizon to adapt gradually their production technology towards zero net emissions while preserving their external competitiveness.

Investments in renewable energy are supported through a number of national and EU funds as well as a system of feed-in tariffs, which varies across technologies. Eligible beneficiaries are limited by their maximum capacity of 50 MW for wind mills, 20 MW for combined heating and power (CHP) and 10 MW for other renewable energy sources (RES). The technology bias in the feed-in tariff should be removed as recommended in the 2017 *Survey* (OECD, 2017[72]). The system of feed-in tariffs has evolved so all new beneficiaries are selected through an auction (via a competitive tender). Moreover, for RES and CHP plants, the aid comes in the form of feed-in premiums. Smaller operators can chose between tariffs and premiums. To enable Slovenia to comply with the EU objective of 20% share of energy consumption coming from renewable energy, the support system should evolve further. This could be, for example, by replacing all feed-in tariffs with a standardised feed-in premium as recently introduced in Greece, which would be a more market based instrument that could help reduce public support costs (OECD, 2020[73]). For larger renewable projects, the focus should be on using auctions, which in recent years have led to the instalment of renewable energy projects without the need for public money in a number of countries, including Denmark, the Netherlands, the UK, and the US to mention a few.

The cost-effectiveness of non-market instruments varies considerably. For example, the low use of landfills reflects that the authorities are gradually closing down landfills to achieve an EU target that landfills should only constitute 10 per cent of total municipal waste treatment by 2035 – a target was reached already in the mid-2010s. The reliance on regulation also means that little attention has been paid to raising the very low landfill tariffs (Figure 1.34). Looking ahead, there is a need for putting the limited landfill capacity to best use. This can be achieved by increasing landfill tariffs to at least reflect total costs of landfill management. This would observe the polluter-pays-principle and ensure that the remaining scarce landfill capacity is only used for difficult to treat and recycle waste. Likewise, the very low tariffs for waste and wastewater treatments should be adjusted upwards to reflect associated costs (Figure 1.35).

Figure 1.34. Landfill taxes are low

Landfill tax, Euro per tonne, situation as of 20th August 2021



Note: Data for BEL refer to Flanders; data for FRA refer to the average rates for waste in 'authorized' landfills with 75% energy recovery from captured biogas, in 'authorized' bioreactor landfill cells with biogas recovery and other 'authorized' landfills; data for ITA refer to the maximum tax allowed from national legislation (rates vary from region to region); data for SVK refer to the average of the different progressive rates; data for ESP refer to the average of the different regional rates; data for CHE refer to the average of rates for inert waste, stabilized waste, bottom ash, construction waste and underground landfill in a foreign country. Detailed information is available at the following link: https://www.cewep.eu/wp-content/uploads/2017/12/Landfill-taxes-and-bans-overview.pdf https://www.cewep.eu/landfill-taxes-and-bans/.
Source: Confederation of European Waste-to-Energy Plants (CEWEP).

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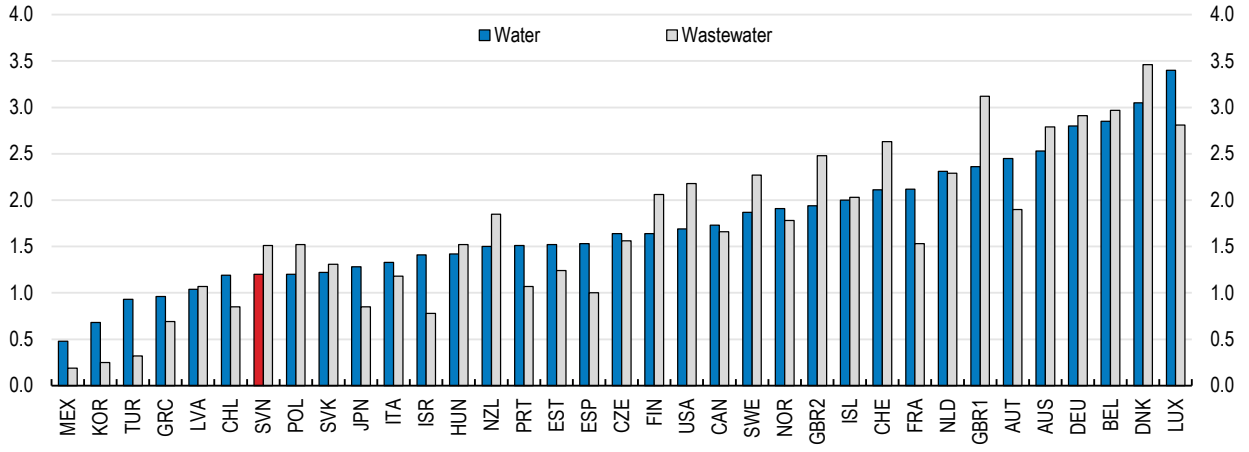
Figure 1.35. Tariffs for water and wastewater services are low

Tariff for water and wastewater services, USD per m³, 2017 or latest available year



Note: Data for GBR1 refer to Scotland, while data for GBR2 refer to England and Wales.
Source: OECD (2018), OECD Environmental Performance Reviews: Hungary 2018, OECD Environmental Performance Reviews, OECD Publishing, Paris, https://doi.org/10.1787/9789264298613-en.

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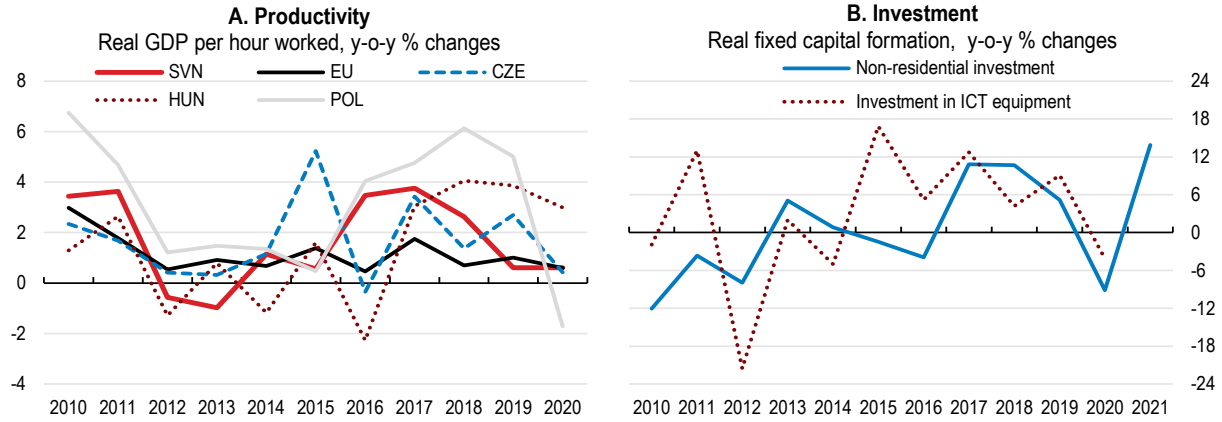
Table 1.11. Past recommendations on green growth

Recommendations in previous *Surveys*	Action taken since the 2020 *Survey*
Align effective tax rates on different forms of energy to reflect environmental damage.	No action taken.
Introduce congestion charges.	No action taken.
Avoid technology biases in renewable-energy subsidies.	No action taken.
Upgrade the railway system, and improve efficiency of railways, especially in the freight sector.	New investments from the EU Cohesion Fund announced in 2019 to upgrade the rail section near the border with Austria and increase freight-carrying capacity on the line. An important investment is also the second track of the Divača–Koper line. Spatial planning and other activities are under way to bring the regional network to modern double track standard, in order to allow for increased train capacity and frequency of service. Investments in regional railway networks are focused on upgrading from single track to modern double track standard.
Supplement the replacement bonus for old wood and oil boilers with regulatory requirements and financial sanctions.	Eco-fund has adopted new bonuses.

Stronger business dynamics is crucial for productivity growth

Productivity growth has been weak since the financial crisis. An exception was a short-lived acceleration between 2016 and 2018 on the back of a cyclical upswing in investment (Figure 1.36, Panels A and B). Sustaining income convergence with richer OECD countries in the face of an ageing and smaller workforce requires a markedly better productivity performance, especially among SMEs. However, productivity growth is hampered by low business dynamics, which reflects weak competitive pressures (Figure 1.37, Panel A and B). This is also slowing down digitalisation. Indeed, among SMEs, those that are integrated in global value chains have stronger incentives to invest in new digital solutions in order to remain competitive as they face international competition. In contrast, firms that are focused on less competitive domestic markets are increasingly lagging behind their export-oriented peers in terms of productivity and digitalisation (Panel C and D).

Figure 1.36. Strong investment drove productivity growth before the crisis



Source: OECD Productivity database; OECD Economic Outlook: Statistics and Projections database; and OECD National Accounts database.

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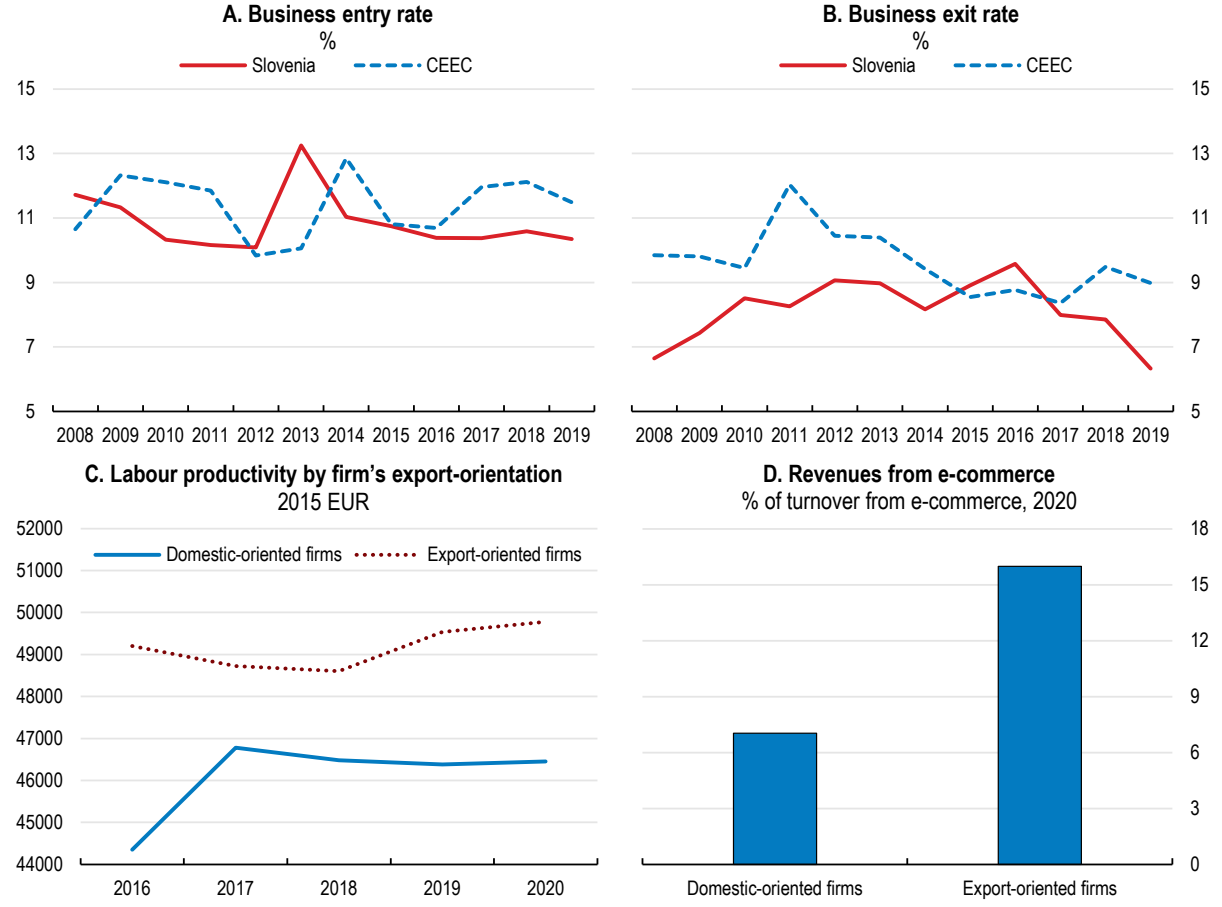
Figure 1.37. Business dynamics are low



Note: In Panel A and Panel B, data refer to the business economy except activities of holding companies. The entry rate refers to the birth rate defined as the number of enterprise births in the reference period (t) divided by the number of enterprises active in t. The exit rate refers to the death rate defined as the number of enterprise deaths in the reference period (t) divided by the number of enterprises active in t. The CEEC (Central and Eastern Europe Countries) aggregate includes Czech Republic, Hungary, Poland, and the Slovak Republic.
In Panel C and D, export-oriented firms are those that generate at least 35 percent of their revenues from exports.
In Panel C, labour productivity is measured as value added per employee.
Source: Eurostat Business demography by size class database; and OECD calculations based on business balance sheet and business survey data from the Statistical Office of Slovenia.

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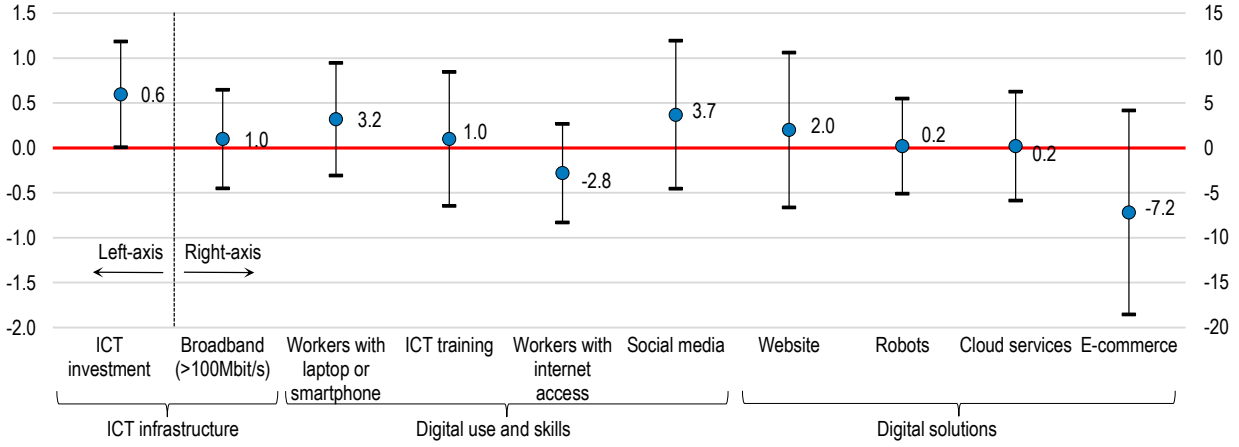
A particular concern is low ICT investment among the many domestically-oriented SMEs as these firms account for more than two-thirds of employment and value added in Slovenia, holding back productivity growth and digitalisation of the economy. A factor behind the low investment may be difficulties for these firms to access finance as traditional bank lending is not well suited for ICT investment, risk capital is not easily available and the stock market remains underdeveloped (see above). Easing access to finance can help raise ICT investment, which in turn can lead to significant productivity benefits according to an OECD firm-level analysis carried out for this *Survey* (Figure 1.38). Productivity benefits of ICT investment became apparent during the COVID-19 crisis, as many SMEs had to rapidly step up their IT capacities and introduce telework to continue operating. Indeed, firms that had invested relatively more in ICT already before the pandemic were able to grow stronger in terms of productivity and employment in comparison to their non-ICT intensive peers (Borowiecki, Giovannelli and Høj, 2022[74]).

Figure 1.38. ICT investment leads to higher labour productivity growth

Annual effect on firm-level productivity growth from an increase in ICT investment and digital adoption, %



Note: Labour productivity is calculated as value added divided by the number of employees. ICT investment is the logarithm of investment in ICT and includes hardware and software, e-commerce is the share of turnover from e-commerce in total turnover, and the adoption of each digital technology is measured through dummy variables indicating whether the firm has adopted the technology or not, including broadband (>100Mbit/s), a website for ordering and booking, cloud computing, social media, and industrial robots. Workers with internet access denote the share of employees with internet access for business purposes in total employees, workers with laptop or smartphone the share of employees with a laptop, tablet or smartphone that gives access to the internet (for business purposes), and ICT training is measured through a dummy variables indicating whether the firm has provided ICT training for its employees or not. A difference-in-difference model was estimated using the COVID-19 shock as natural experiment. Firm-level productivity growth is regressed on the interaction term between the 2020 dummy (capturing the COVID-19 shock) and the ICT investment and digital variables shown above. This interaction term measures whether firms that were more digitalised before the pandemic experienced a greater increase in labour productivity during the pandemic. Controls include capital per employee, exports, age, size, sector and year fixed effects and the digital and intangible variables shown above. Vertical spikes correspond to the 95% confidence interval. Data cover the years 2016-2020. Standard errors are clustered at sector levels.
Source: OECD calculations based on business survey data from the Statistical Office of Slovenia; and Borowiecki et. al (2022, forthcoming).

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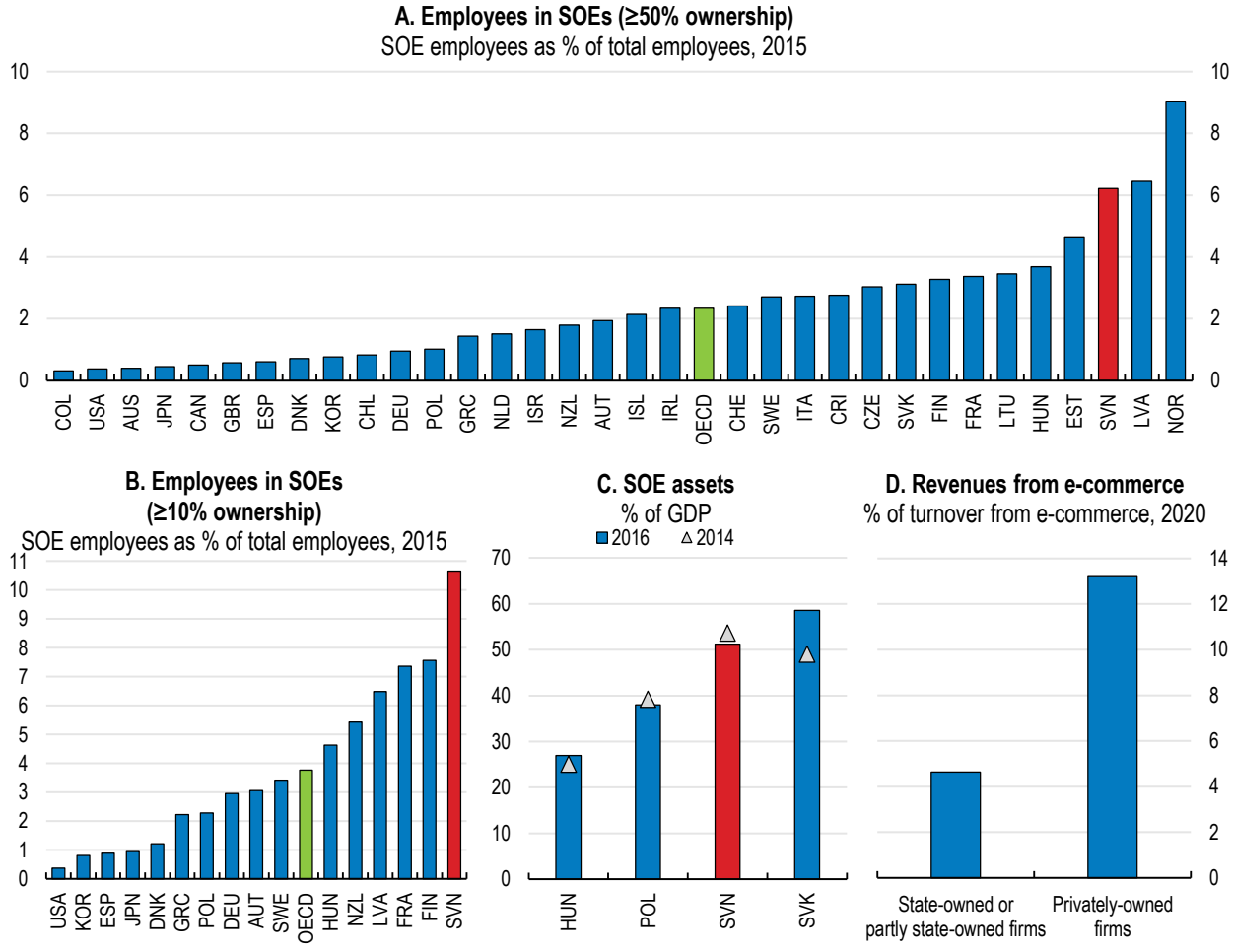
State-ownership holds back business dynamism

Low business dynamism reflects widespread state-ownership. Despite the privatisation of state-owned assets worth 1% of GDP since 2019, state-owned enterprises (SOEs) account for a larger share of employment than almost anywhere else in the OECD, including in sectors that are inherently competitive such as banking, insurance and tourism (see above) (SSH, 2021[75]) (Figure 1.39, Panel A to C). The share of employment in firms with state-ownership decreased in 2016 and 2017 due to privatisations, before the employment share in SOEs returned to about 11% between 2018 and 2020, according to Business Registry and Annual Accounts information of the Slovenian Statistical Office. Some estimates suggest that

SOEs account for up to 20% of non-financial employment once ownership by local governments and cross-ownership are taken into account (Ivanc, Marinšek and Domadenik, 2018[76]). Furthermore, state-ownership has increased in the tourism sector, reversing previous privatisation efforts (see below). The rationale for state-ownership in sectors such as banking, insurance and tourism is not clear as there are no market failures. State-ownership is also a concern for the digital transformation as SOEs lag behind their private peers when it comes to the uptake of new digital solutions, such as e-commerce (Figure 1.39, Panel D). Other barriers to business dynamics include burdensome bureaucracy and rigid labour market regulations.

To bolster more competitive markets and digitalisation, the government should strengthen privatisation efforts particularly in inherently competitive sectors such as tourism. At the same time, privatisation efforts in the banking sector should be completed and considered in the insurance sector (see above). This requires narrowing the group of SOEs that are considered important or strategic based on clear objectives, such as national defence and economic efficiency grounds. An alternative to privatisation is improving the governance of SOEs (see below).

Figure 1.39. State-ownership remains high



Source: EBRD (2020), "Economic performance of state-owned enterprises in emerging economies"; OECD calculations based on business survey data from the Statistical Office of Slovenia; and OECD calculations based on OECD National Accounts database and OECD (2017), The Size and Sectoral Distribution of State-Owned Enterprises, OECD Publishing, Paris, https://doi.org/10.1787/9789264280663-en.

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Public ownership expanded in the tourism sector in 2022 as the state asset management company (SSH) and the public pension fund (KAD) purchased a 43.2% stake in SAVA – a major tourism provider – from an international investment group, bringing public ownership to 90% (SDH, 2022[77]). The government considers tourism as a strategic sector and owns already 70% of total hotel capacity (Ministrstvo za gospodarski razvoj in tehnologijo, 2021[78]). In this respect, it is noticeable that tourism in Slovenia remains focussed on cultural heritage. Indeed, the government's objective is to become the European leader in digitalisation of cultural heritage (Tourism 4.0 (Arctur d.o.o.), 2021[79]). In contrast, modern tourism is increasingly connecting services to create experience-based tourism (OECD, 2019[80]). However, linking cultural heritage and other tourism services is hampered by a lack apps, websites, reservation systems and platforms that can connect tourism services. Developing such individual digital services often depend on nimble actors wanting to develop emerging market opportunities. This suggests that reducing public ownership in the tourism sector would improve the sector's growth prospects.

The State also owns other assets apart from SOEs, including 14% of agricultural land in Slovenia. About half of this state-owned agricultural land is used for other purposes than agriculture such as gardening for private purposes (Statistical Office of Slovenia, 2015[81]) (Bank of Slovenia, 2021[30]). This reflects that the state does not manage these assets with a view to generate revenues. For instance, rents for state-owned land are regulated below market prices (Table 1.12). The lack of market mechanism leads to a misallocation of state-owned land despite high and growing housing demand (Farmland and Forest Fund of the Republic of Slovenia, 2021[82]). Rents should follow market prices to ensure returns on assets for the state. Moreover, there are no clear rules for converting agricultural state-owned land into urban, buildable land. Having clear rules for selling state-owned land can help housing supply adjust faster to growing demand (see below).

Table 1.12. Regulated versus market rents

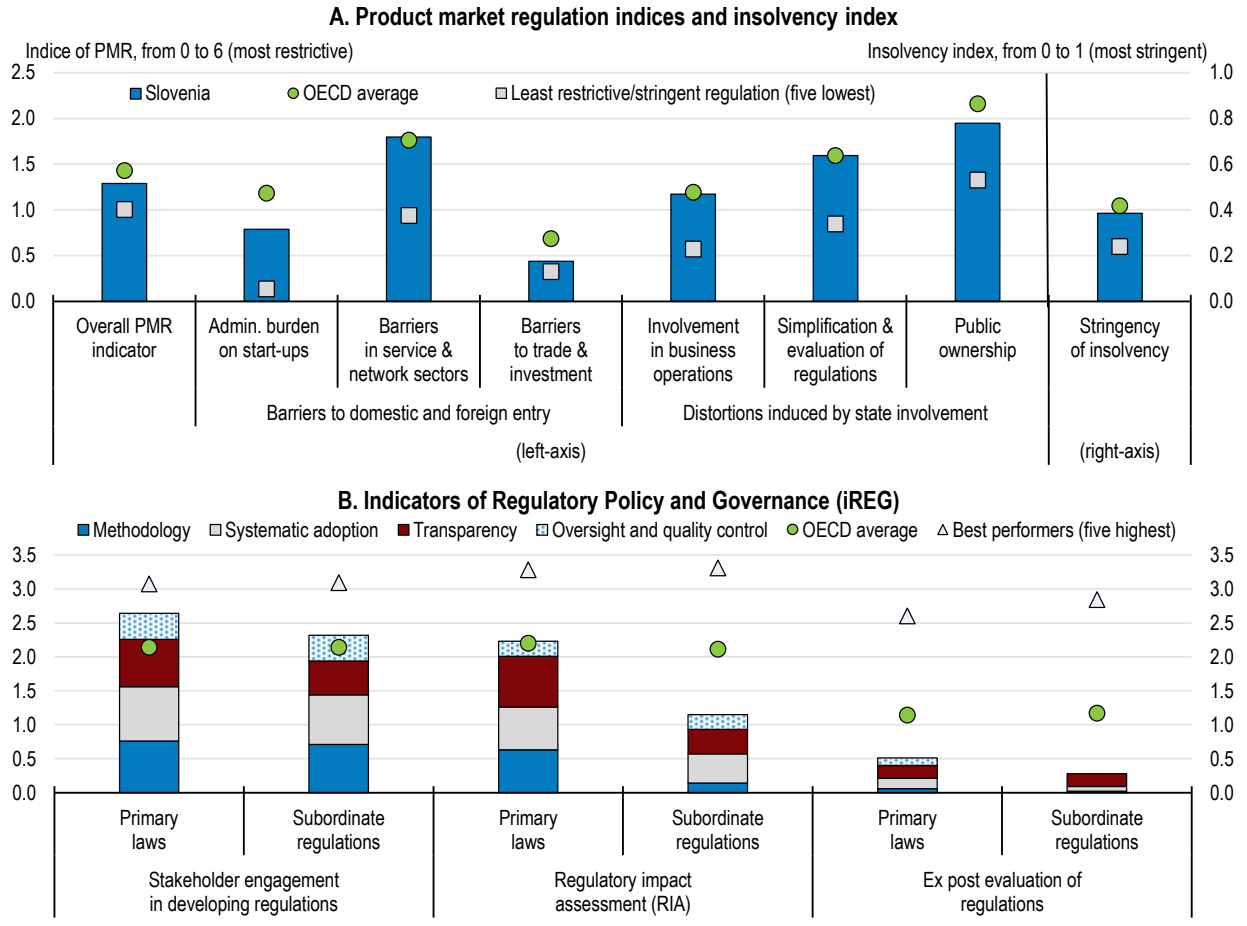
2021, in EUR

	Regulated price	Market price
Agricultural land	2 020/ha	21 451/ha
Non-agricultural land	1/sqm	11/sqm

Note: Agricultural land rent refers to the annual lease for arable land. Non-agricultural land refers to land near residential buildings such as yards and parking lots. Market-based rents for non-agricultural use based on rents for housing in 2020.
Source: Eurostat (2020[83]) and Farmland and Forest Fund of the Republic of Slovenia (2021[82]).

Overall, regulatory barriers are in line with the OECD average. However, in no area is Slovenia close to best OECD practice (Figure 1.40, Panel A). Stronger business dynamics to support faster income convergence requires a regulatory environment that is on par with dynamic market economies in the OECD. This could be furthered by making all new regulations subject to regulatory impact assessments, including on competition (Panel B). Other measures to strengthen competition include bolstering the resources and independence of the competition authority, for example through financing via a standalone line in the state budget as recommended in the previous *Survey* (OECD, 2020[10]).

Figure 1.40. There is scope to ease market exit and strengthen competition



Note: In Panel A, the Product Market Regulation (PMR) indicator is a composite index that encompasses a set of indicators that measure the degree to which policies promote or inhibit competition in areas of the product market where competition is viable. Scores range from 0 to 6 and increase with restrictiveness (data refer to 2018 an 2019). The Stringency of insolvency includes time to discharge, pre-insolvency regimes and the possibility of new financing and cram-down on dissenting creditors. Scores range from 0 to 1 and increase with stringency (data refer to 2016).

In Panel B, the more regulatory practices as advocated in the OECD Recommendation on Regulatory Policy and Governance a country has implemented, the higher its iREG score. The indicators on stakeholder engagement and RIA for primary laws only cover those initiated by the executive, 90% of all primary laws in Slovenia (data refer to 2021).

Source: OECD Product Market Regulation database; Adalet-McGowan et al. (2017), "Insolvency regimes, zombie firms and capital reallocation", OECD Economics Department Working Papers, No. 1399; and OECD Indicators of Regulatory Policy and Governance Surveys 2017 and 2021.

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Overly complex insolvency procedures delay the market exit of unproductive businesses. The involvement of courts in insolvencies is higher than in any other OECD country, leading to additional litigation costs for debtors and creditors, although Slovenia has made progress in this area since 2016 (Adalet McGowan, Andrews and Millot, 2017[84]). Particularly now there is a need to strengthen business dynamics as too many over-indebted firms are kept alive, binding too many resources. Barriers to exit, like barriers to entry, decrease the market disciplining mechanisms of the competitive process. Low market exit is a particular concern in the current situation as generous government support during the crisis contributed to historically low bankruptcy rates, pointing to the survival of many unproductive businesses (IMAD, 2022[85]). Other measures that prevented market exit during the pandemics included the loan repayment moratorium and a temporary halt to many insolvency proceedings in 2020 and 2021.

Ensuring that bankruptcies and restructuring are handled as efficiently as possible would help to accelerate market exits and free resources for more productive enterprises. A way forward is to promote timely out-of-court settlements. Such a development could be encouraged by lowering the share of creditors needed to approve out-of-court settlements from currently two-thirds to a half, as recently done in the Netherlands and the United Kingdom. This would prevent restructuring holdouts by minority shareholders. Other options include establishing legal conditions favouring new financing for distressed firms, promoting pre-insolvency frameworks and adopting specific procedures to facilitate SME debt restructuring (Demmou et al., 2021[86]).

Table 1.13. Past recommendations on the business environment

Recommendations in previous *Surveys*	Action taken since the 2020 *Survey*
Narrow the group of SOEs that are considered strategic.	The list of SOEs considered strategic remained unchanged.
Continue privatising state-owned enterprises, and sell controlling interests in firms operating in competitive markets.	Privatisation of state-owned assets worth 1% of GDP since 2019. NKBM and Abanka were privatized, while the State maintained a 25% + 1 share stake in NLB.
Prepare an asset management strategy, and strengthen the corporate governance of SOEs by appointing professional board members.	Assets of the three largest SOEs were moved back under the direct ownership of the State between 2018 and 2020.
Introduce the "silence is consent" rule for issuing business licenses, and accelerate construction permit and property registration processes.	No action taken.

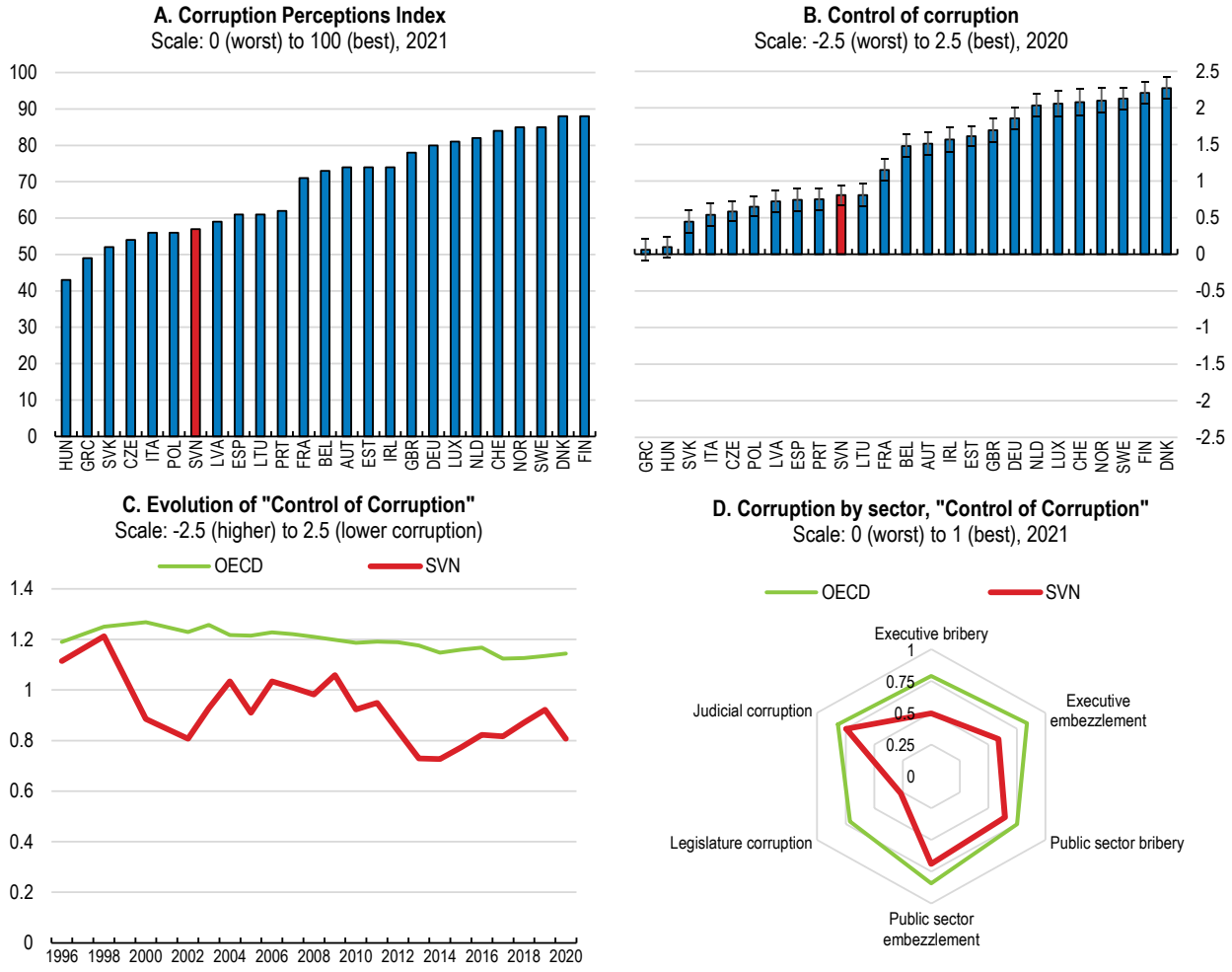
Corruption and lack of public integrity dampen business dynamics

The government has continued to improve the anti-corruption framework. Nevertheless, the perception of corruption remains relatively high, which as described in the last *Survey* mostly refers to public power being exercised for private gains (Figure 1.41) (OECD, 2020[10]). A third national anti-corruption strategy (2017-2019) contributed to raising awareness of integrity matters amongst public officials, ensuring a more efficient use of public funds and improving transparency in regulations and procedures (European Commission, 2020[87]). In 2020, an amendment to the Integrity and Prevention of Corruption Act sought to strengthen the institutional and legal anti-corruption framework by reinforcing the independence of the Commission for the Prevention of Corruption (CPC), through more transparent procedures for appointing its leadership, and strengthening rules on lobbying, conflict of interest and asset declarations. The principal measures included stricter rules for public servants taking positions in the private sector, the protection of whistle-blowers and broader asset declaration requirements (European Commission, 2021[88]). The Commission has also seen an increase in funding, but challenges remain. Full staffing is still not reached and restrictions on public spending limit the use of already allocated funds. For example, limited human resources had a negative impact on the effective performance of the Commission's function of monitoring assets declarations of public officials (European Commission, 2021[88]). As recommended in the last *Survey*, the government should complement the measures to enhance the commission's independence with ensuring it has adequate resources, powers and procedures to fight corruption effectively.

A fourth anti-corruption strategy is being prepared. The new strategy is expected to also address outstanding issues from the third strategy, such as the measures related to the implementation of integrity tools for the preparation of efficient management plans of state-owned real estate and the adoption of a harmonised code of ethics for the Slovenian diplomatic corps (Government of Slovenia, 2021[89]). A draft whistle-blower protection law is currently undergoing an inter-ministerial review (Slovenia, 2022[90]). The OECD recommends that, when transposing the Whistleblowing Directive, Slovenia should ensure that public and private sector employees who report suspected acts of foreign bribery continue to be protected from disciplinary or discriminatory action. The authority competent to receive reports should also have sufficient human and financial resources (OECD, 2021[91]). Other challenges remain notably in the judicial system, public procurement, political involvement in SOEs and public integrity. The latter, in particular, is key for improving trust in public institutions. Citizens' trust in institutions, such as the government, the parliament, juridical courts, the police, and the civil service is relatively low compared to other OECD countries (Figure 1.42) (Slovenian Judiciary, 2020[92]) (OECD, 2021[93]). This may have a negative impact

on the functioning of public administration in general. For example, it may be a factor behind the low vaccination rate (European Commission, 2021[94])

Figure 1.41. Perceived corruption is relatively high



Note: Panel B shows the point estimate and the margin of error. Panel D shows sector-base10d subcomponents of the "Control of Corruption" indicator by the Varieties of Democracy Project.

Source: Panel A: Transparency International; Panels B & C: World Bank, Worldwide Governance Indicators; Panel D: Varieties of Democracy Project, V-Dem Dataset v11.

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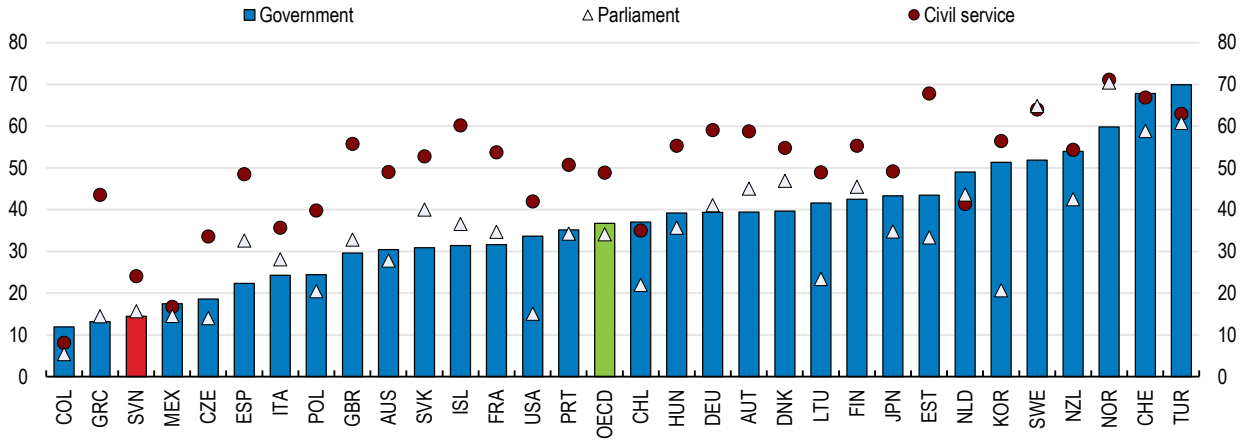
Figure 1.42. Trust in public institutions is low

Trust in government, the parliament and the civil service, %, 2018



Source: OECD (2021), Government at a Glance 2021, OECD Publishing, Paris, https://doi.org/10.1787/1c258f55-en.

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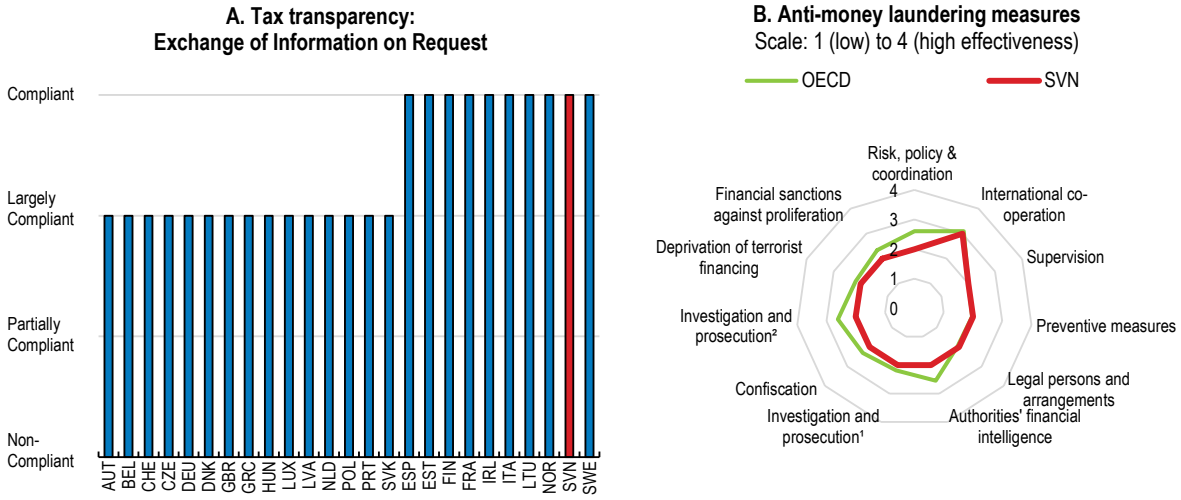
The judiciary system has improved in terms of reducing backlogs and the length of trials, although COVID-19-related increases could be observed in both areas in 2020 (European Commission, 2021[88]) (European Commission, 2021[95]). The Supreme Court has introduced innovative judicial practices to improve communication and preparation of judges and increase trust in the judiciary, such as on-line training for new and senior judges, mentorship programmes for new staff and courts users and other stakeholders workshops (Council of Europe, 2019[96]). These measures contributed to a better functioning judiciary system that can deter anticompetitive practices and strengthen public integrity (OECD, 2013[97]) (European Commission, 2020[98]). However, the OECD has expressed concern over the allegations of political interference in law enforcement agencies tasked with investigating and prosecuting corruption and foreign bribery, as well as in public institutions in charge of preventing corruption and raising awareness among public institutions. Such alleged interference risks undermining efforts in improving the regulatory and judiciary system (OECD, 2021[91]). Moreover, the length of trials in complicated white-collar cases, such as money laundering (Figure 1.43), remains among the highest in the EU, reflecting judges' lack of economic and financial expertise and a scarcity of prosecutors, due to a lengthy process for their appointment, including the recent delayed nomination of the European Delegated Prosecutors to the European Public Prosecutor's Office (EPPO) (European Commission, 2021[95]) (Council of Europe, 2018[99]). In this context, the statute of limitation for corruption offences, which is generally 10 years (with some exceptions), may be insufficient to ensure the resolution of this type of cases, given the lengthy judicial proceedings (European Commission, 2021[88]). In this respect, better and more specialised training of judges and prosecutors, and measures to accelerate the process for their appointment while ensuring its transparency and safeguarding their professional independence, are needed to better prosecute economic and financial crimes (OECD, 2021[100]).

The strong legal foundation of public procurement has been supported by measures to improve transparency and bolster competition, for example through the promotion of e-procurement and SMEs participation (European Commission, 2020[87]). The Ministry of Public Administration and the Ministry of Health are investigating measures to further improve public procurement, particularly following allegation of political pressures in the rewarding of procurement contracts for medical ventilators (European Commission, 2021[88]) (OECD, 2021[100]). Nonetheless, competition in public procurement remains relatively low and integrity in ensuring compliance with the rules is perceived to be weak (European Commission, 2020[87]). In 2020, nearly half of all contracts were awarded to single-bidders, which was the second highest in the EU. In recent years, more than 25% of contracts were negotiated without any call

for tenders, which was among the largest shares in Europe (European Commission, 2021[101]). In terms of EU-funded public tenders, the European Commission's Anti-Fraud Office (OLAF) has recommended financial recoveries for a relatively high share of payments (European Commission, 2021[102]). These findings contribute to the business sector's high perception of corruption in public procurement with half of all businesses believing that corruption has prevented their company from winning a public tender or a public procurement contract, compared to the EU average of 30%, and almost all businesses considering corruption to be widespread (European Commission, 2019[103]) (OECD, 2021[100]).

Figure 1.43. There is room to improve the efficient prosecution of anti-money laundering cases



Note: Panel A summarises the overall assessment on the exchange of information in practice from peer reviews by the Global Forum on Transparency and Exchange of Information for Tax Purposes. Peer reviews assess member jurisdictions' ability to ensure the transparency of their legal entities and arrangements and to co-operate with other tax administrations in accordance with the internationally agreed standard. The figure shows first round results; a second round is ongoing. Panel B shows ratings from the FATF peer reviews of each member to assess levels of implementation of the FATF Recommendations. The ratings reflect the extent to which a country's measures are effective against 11 immediate outcomes. "Investigation and prosecution1" refers to money laundering. "Investigation and prosecution2" refers to terrorist financing.
Source: OECD Secretariat's own calculation based on the materials from the Global Forum on Transparency and Exchange of Information for Tax Purposes; and OECD, Financial Action Task Force (FATF).

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Public procurement could be strengthened by developing communities (bringing together civil servants as well as key stakeholders within the procurement system) to share best practice, hence helping to share knowledge, develop expertise, build trust and implement solutions faster across the procurement system. This may reinforce the public procurement system by ensuring that information flows correctly between public oversight groups and institutions, as well as supporting the perception that public procurement rules are respected (OECD, 2020[104]). Moreover, initiatives to promote public tender participation of foreign companies should be envisaged to enhance competition in a small-size country like Slovenia, where the number of bidders is often very limited. For example, despite foreign firms being allowed to participate in tenders, the required application documents have to be submitted in the Slovenian language (CSMR, 2022[105]).

Political influence could be reduced in appointments in SOEs boards. Such appointments may represent a source of possible conflict of interests, which should be discontinued. Moreover, governance of state-owned enterprises was weakened between 2018 and 2020, when the assets of the three largest SOEs were transferred from the Slovenian Sovereign Holding (SSH) back into direct state-ownership (Box 1.4). This is not compliant with the OECD guidelines on corporate governance of SOEs of a clear separation between the state's ownership function and its role of market regulator or industrial policy-maker to prevent

conflicts of interest (OECD, 2015[106]). Furthermore, an unclear separation between the ownership and regulatory role of the state may undermine its credibility and reputation in the eyes of the general public and further weaken trust in institutions. The management of SOEs should be kept under the SSH responsibility also for strategic assets.

Box 1.4. Corporate governance of SOEs

In 2015, the government moved supervision and management of most SOEs to the Slovenian State Holding. The advantage of such a move was to promote an arms-length administration of SOEs to limit political influence, separate the ownership role of the state from its regulatory responsibilities, and focus governance of SOEs on performance (OECD, 2021[100]). In 2020, the holding managed more than 50 SOEs with assets worth about 21% of GDP. This arms-length approach was partly reversed with the transfer of assets of the three largest SOEs back into direct state-ownership between 2018 and 2020 (SSH, 2020[107]). The SOEs operate in the energy, insurance and pharmaceutical sector.

The corporate governance of SOEs relies on improving their financial performance through (negotiated) agreements with the holding. However, this is not combined with performance-related pay for SOEs' managers. In contrast, their salaries are set by law. Increasing performance-based elements in managers' remuneration could incentivise better financial performance. Another concern is that many SOEs have a high share of politically affiliated supervisory board members.

Without a strong public integrity system, measures to improve the functioning of the judiciary, better regulate the public procurement system and avoid conflict of interest are not enough to prevent corruption. Furthermore, a strong integrity system has beneficial effects on improving trust in public institutions. The involvement of citizens and civil society organisations can further help to enhance this process, by playing a watchdog role in monitoring the government and promoting an efficient allocation and spending of public funds (OECD, 2017[108]). Good initiatives to enhance the participation of both citizens and the business sector in policy-making exist, such as "E-Democracy", "Stop.bureaucracy" and "I-suggest-to-the-Government". Yet, trust and satisfaction with democracy are particularly low in Slovenia compared to other OECD countries (OECD, 2021[93]) (Government of Slovenia, 2022[109]) (Government of Slovenia, 2022[110]) (Government of Slovenia, 2022[111]). Indeed, the Council of Europe's Group of States against Corruption (GRECO) finds that the government has made only modest progress to create an internal mechanism to promote awareness of integrity matters and recommends Slovenia to implement an overall integrity plan to strengthen the ethical conduct of all public institutions and further raise awareness of integrity challenges (GRECO, 2021[112]).

Table 1.14. Past recommendations on public procurement and corruption

Recommendations in previous *Surveys*	Action taken since the 2020 *Survey*
Strengthen ex-ante and ex-post oversight and dissuasive sanctions.	No action taken.
Enable larger procurement contracts through international cooperation.	New Public Procurement Act has been adopted.
Enhance independence, resources, powers and procedures of the anticorruption authority.	New Prevention of Money Laundering and Terrorist Financing Act has been adopted.

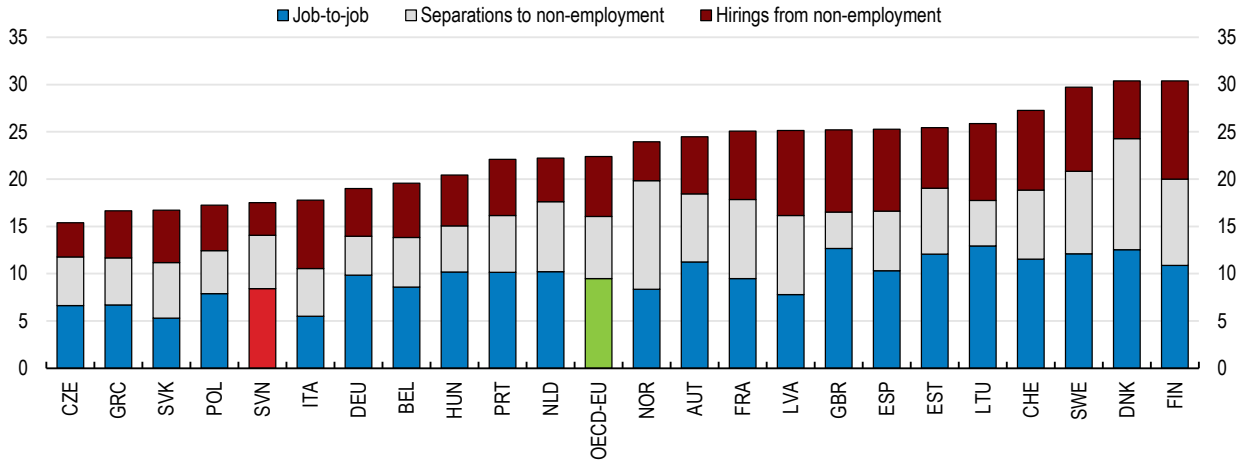
Labour reallocation is key for productivity growth and inclusion

Improving labour reallocation will help ease labour shortages in the short-term. Raising labour mobility is also important in the longer-term as ageing will lead to a smaller and older workforce and, hence, more permanent labour shortages. Furthermore, more efficient labour reallocation will also support productivity growth, and thus income convergence with richer OECD countries as labour resources in underperforming firms are freed up to the benefit of more productive enterprises.

The job-to-job transition rate is similar to the European average. However, raising productivity growth, and thus strengthening income convergence, requires more dynamic job transition rates (Figure 1.44) (Engbom, 2022[113]). The wage setting process ensures that workers receive similar wage increases within a very compressed wage structure, creating a disconnection between individual productivity and wages as discussed in the last *Survey* (OECD, 2020[10]). This leaves workers with few incentives to change job or invest in training to get a better-paid job. Improving labour mobility requires a more decentralised wage setting process where wages are set at the firm level, allowing firms to pay higher wages to attract productive workers. Framework conditions such as seniority bonuses and minimum wages should continue to be set at the sector level, as discussed in the previous *Survey* (OECD, 2020[10]).

Figure 1.44. There is scope to raise labour market transitions

Labour market transitions, % of average employment, 2019



Note: Labour market flows for European countries are computed as the number of working-age individuals moving between two statuses from one year to another as a share of average employment between these two years. Job-to-Job flows measure job changes from one job to another. Hirings from non-employment and Separations to non-employment include flows from and to both unemployment and inactivity.
Source: Causa, O., N. Luu and M. Abendschein (2021), "Labour market transitions across OECD countries: Stylised facts", OECD Economics Department Working Papers, No. 1692, OECD Publishing, Paris, https://doi.org/10.1787/62c85872-en.

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A large state-owned sector and low mobility from the public to the private sector hamper productivity growth. SOEs account for a larger share of employment than in most other Eastern and central European economies (Borkovic and Tabak, 2020[114]). This reflects slow privatisation efforts (see above). What is more, SOEs bind labour resources that can be used more effectively in the private sector. Accelerating the privatisation process could free labour resources for the benefit of more productive firms, which are experiencing labour shortages (Borowiecki et al., 2022 forthcoming).

Rigid labour contracts in the public sector are holding back the hiring of key ICT personal. Currently, eight out of ten public sector employees are civil servants with secure, permanent contracts (Ministry of Public Administration, 2021[115]). However, high-skilled professionals have few incentives to move to the public sector, as their wages would be lower than in the private sector (IMAD, 2019[116]). The public sector could introduce contracts with better pay but with less security to attract high-skilled workers such as IT talent. This would help attract more IT talent to the public sector and help digitalisation efforts by the government.

The compressed wage structure in itself discourages investment in skills and training as associated gains are not rewarded (Chapter 2). Workers do not have sufficient incentives for upskilling, as their wages do not change when they move to a new job. Especially low-skilled workers that do not realise their training needs also face higher risks of unemployment as digitalisation is increasingly shifting labour demand towards medium- and higher-skilled jobs (Box 1.5). Looking ahead, the digital transition will require stronger incentives for workers to adapt their skill set, particularly low-skilled workers that are most at risk of displacement. A more decentralised wage setting can provide the needed incentives for training and thus help workers to faster relocate to jobs where they can better use their skills. Another factor that discourages training is the lack of life-long learning. To support lifelong learning among younger adults and older workers aged 65 and more, the government adopted in 2022 the National Programme of Adult Education in the Republic of Slovenia 2021-2030. The National Programme establishes a system of quality assurance of adult learning providers.

Box 1.5. The impact of digitalisation on the Slovenian labour market

The impact of digitalisation on the labour market was analysed using administrative and business survey data for the period 2016 to 2020 (Borowiecki, Giovannelli and Høj, 2022[74]; Miho, Borowiecki and Høj, 2022[117]). Results show that firms that invest in ICT and adopt digital technologies are creating jobs. ICT-intensive firms in particular have had stronger employment growth since 2016 relative to less ICT-intensive firms. The COVID-19 shock has accelerated this process. During the pandemic, ICT-intensive firms managed to grow in terms of employment. Only manufacturing firms that use robots to automate tasks registered job losses, although the creation of jobs in other ICT-intensive firms more than compensated for these losses.

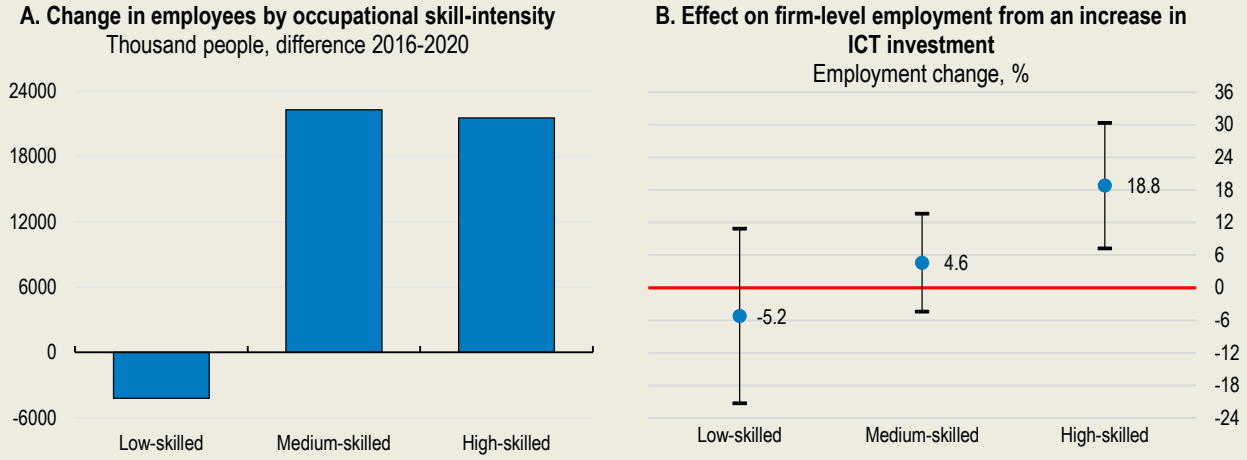
A concern is that the rigid wage setting process slows down productivity-enhancing reallocation. This is reflected in the finding that ICT-intensive and productive firms do not pay higher wages than their less productive peers. This may reflect that these firms hire mostly young workers aged 35 or younger (see below). This also stands in contrast to economies with more dynamic and mobile labour markets, where workers relocate faster to jobs where they can get higher wages (Engbom, 2022[113]).

Another concern is that state-involvement reduces labour reallocation. Employment growth in high-productivity firms was lower in sectors with a higher SOE employment share. Thus, privatisation efforts can lead to stronger productivity via the reallocation of labour from SOEs to the private sector.

Digitalisation and inclusiveness

Overall, digital firms (in terms of ICT investment) managed to raise productivity and benefit from higher market demand, allowing them to employ more workers. However, this job growth is not evenly distributed: it benefits high-skilled workers, but not low or medium skilled workers (Figure 1.45). Furthermore, younger workers (35 or less) benefit relatively more from digitalisation than older workers (50+) as ICT-intensive firms increasingly hire younger workers. This may reflect that older workers receive a wage premium for age, irrespective of their skill-level, discouraging employers from hiring older workers in the first place.

Figure 1.45. Employment gains have been concentrated among medium- and high-skilled workers



Note: Panel B shows the effect on employment from a 1 percentage point increase in ICT investment. ICT investment includes investment in ICT equipment, software and data. Skill-intensity is measured as occupational skill intensity. A fixed effects OLS panel model was estimated. Log firm-level employment is regressed on investment in ICT for different skill groups, capital per employee, exports, age, size, sector and year fixed effects. Vertical spikes correspond to the 95% confidence interval. Data cover the years 2016-2020. Standard errors are clustered at sector level.

Source: OECD calculations based on Structure of Earnings Statistics of the Statistical Office of Slovenia; and Miho et. al (2022, forthcoming).

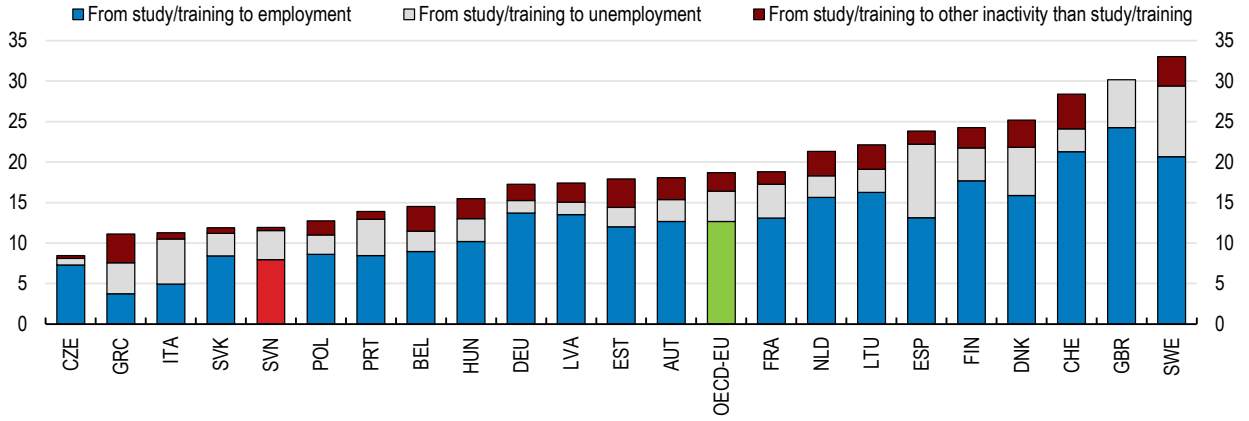
StatLink https://stat.link/7w0ydc

Another sign of a rigid labour market is that relatively few graduates move into employment (Figure 1.46). They also often work in jobs for which they are overqualified (Chapter 2). This reflects that the education system is only slowly adjusting to new labour market needs, leading to mismatches between the skills of graduates and the skills demanded in the labour market. The structure of the economy remains heavily dependent on medium-skilled jobs that require strong technical and vocational skills. In contrast, the vocational education system mainly provides theoretical training with few work-based learning elements (Chapter 2). This reflects that apprenticeships remain limited to a small set of traditional vocational occupations, such as carpenter and tool maker. The government is currently studying the introduction of apprenticeships in technical programmes. Apprenticeships should be extended into technical programmes. At the same time, efforts to encourage companies to provide apprenticeship contracts should be strengthened. Such efforts could entail, for instance, information sharing on costs and benefits to employers as done in Austria, Germany, and Switzerland. Other options include matching of apprentices to SMEs by dedicated sectoral or regional agencies, as happens in Australia.

Geographical mobility is low as less than 0.5% of hirings are filled with people moving from Eastern parts to Western parts of the country, or vice versa (Causa, Luu and Abendschein, 2021[118]). A factor behind low geographical mobility is the rigid housing market with large regional price differences, limiting the options for jobseekers from poorer areas to move to prosperous regions. Meanwhile, supply is only slowly adjusting to high house prices. This reflects stringent zoning rules and lengthy processes for obtaining construction permits, which limit the responsiveness of housing supply to changes in demand as discussed in previous *Surveys* (OECD, 2017[72]; OECD, 2020[10]). A more flexible housing supply could be encouraged by easing regulatory burden. An additional constraint on housing supply is state-ownership of land (see above). Applying market-based rents for State-owned land and having clear rules for selling state-owned land can help housing supply adjust faster to growing demand.

Figure 1.46. Labour market transitions of students are low

Labour market transitions of students, %, 2019



Note: The transitions of study/training to employment, unemployment, and inactivity between t and t+1 are computed as a share of the total students at the period t. The transition from study to inactivity other than study is not reported for the United Kingdom due to data unavailability.
Source: Causa, O., N. Luu and M. Abendschein (2021), "Labour market transitions across OECD countries: Stylised facts", OECD Economics Department Working Papers, No. 1692, OECD Publishing, Paris, https://doi.org/10.1787/62c85872-en.

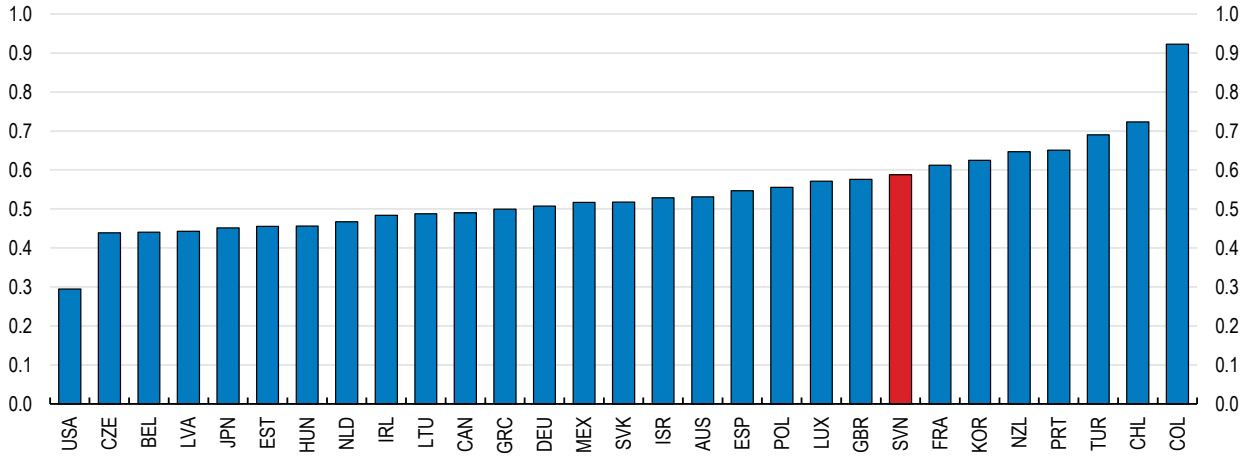
StatLink https://stat.link/1ida9t

Another structural challenge is the lowest transition rate from unemployment into a job among European countries (Figure 1.44). Transitions into employment remain low despite the tight labour market (see above). In fact, most jobs created during the post-pandemic recovery were filled by foreign workers. On the other hand, there were relatively few transitions from unemployment into employment. This means that unemployed workers have fewer incentives to move into employment than elsewhere. This affects in particular older workers. A factor behind their low employment transitions may be automatic seniority bonuses that increase with every year of work experience, increasing their risk of long-term unemployment. Such seniority bonuses also lock older workers into their current job, limiting job-to-job mobility and thus hampering the allocation of workers to jobs with higher productivity as discussed in the last *Survey* (OECD, 2020[10]). Lower seniority bonuses can be set at the sectoral level. So far, however, only construction and trade do so. This means that most sectors fall back on bonuses as set out by national law. Abolishing seniority bonuses or extending the role of social partners in setting seniority bonuses to all sectors could help improve job prospects of older workers.

A barrier to the transition to employment is the relatively high minimum wage. The minimum wage to the median wage ratio is among the highest in the OECD (Figure 1.47). Minimum wage growth is important for improving incomes of the poorest. However, minimum wage increases that are faster than other wage increases reduce the creation of jobs for low-skilled unemployed and training incentives, leading to low-skilled workers being trapped in low-paying, low-skill jobs. To improve job opportunities, the government is providing wage subsidies for low-skilled workers. For instance, the Employ.me (Zaposli.me) programme offers employers a subsidy to employ older jobseekers from Eastern Slovenia. A more efficient solution are wage agreements that ensure that minimum wage growth does not outpace median wage growth, or letting social partners determine the appropriate level of minimum wages at the sectoral level. Other factors behind the lower employment rate of low-skilled workers include skill mismatches (see above).

Figure 1.47. The minimum wage is relatively high

Minimum relative to median wage of full-time workers, ratio, 2020



Source: OECD Labour Earnings database.

StatLink https://stat.link/qdrgib

Table 1.15. Past recommendations on labour market policies

Recommendations in previous *Surveys*	Action taken since the 2020 *Survey*
Better target assistance to the long-term unemployed and the low skilled.	
Increase the gap between the minimum and median wage.	The minimum wage was increased more than the median wage in the period 2020-2022.
Reduce top tax rates on labour income. Better target family benefits and strengthen means testing of education-related benefits.	A lowering of tax rates in the top income bracket came into force in 2022. The general personal income tax allowance was increased.
Improve general skills of vocational students through use of problem based learning, combined with retraining of teachers.	With the support from EU Recovery and Resilience Facility funds, the government plans to modernise VET and technical programs with a focus on digital and green competencies, sustainability and the right balance between general and professional competencies. Teachers will be trained in the use of digital tools in the pedagogical process.
Raise the work-experience content of technical programmes.	Apprenticeships were re-introduced but only 14 programmes have been developed so far and enrolment remains low.
Distribute adult training vouchers, or provide tax credits to increase workers' training opportunities. Increase training to help long-term unemployed to re-enter the labour market, including through a change in career.	The government introduced training vouchers for young adults and older people aged 55 and more in 2022.
Eliminate the legal requirement that wages increase automatically with age.	No action taken.
Reduce favourable treatment of older workers in unemployment benefit, disability and social assistance systems by curtailing age-dependent rules.	No action taken.
Determine more of the framework conditions at the sectoral level, such as seniority bonuses and minimum wage levels. Give social partners greater responsibilities in the wage bargaining process at the firm level.	No action taken.
Tax commuting allowances along with other wage income.	No action taken.

MAIN FINDINGS	RECOMMENDATIONS (key recommendations are in bold)
Sustain the recovery and ensure fiscal sustainability	
The economy is running at full capacity with inflation above the ECB's 2% target and accelerating.	**Implement fiscal consolidation to manage demand pressures.**
In mid-2022, the share of population that is fully vaccinated remained below the EU average	Continue efforts to raise vaccination rates.
Population ageing is accelerating, boosting ageing-related spending pressures.	**Develop a medium-term fiscal consolidation plan to address the long-run challenges of ageing.** **Raise the minimum years of contributions required to retire, and use lifetime incomes to determine pension benefits.** Increase the statutory retirement age to 67 years, and link it thereafter to gains in life expectancy.
The long-term financing of the new long-term care system has not been secured.	Secure sustainable long-term funding by strengthening health insurance for long-term care, while guaranteeing equal access for all.
Accelerate structural reforms for stronger and more sustainable growth	
High labour taxes deter labour market participation and investment in skills. Many exemptions and allowances narrow the personal income tax base. There is room to reduce the VAT gap.	**Make the tax system more growth-friendly by further reducing labour taxes, and increasing consumption and property taxes.** **Broaden the personal income tax base by reducing allowances.** Simplify the VAT system by moving towards a broader-based standard VAT rate.
Public wage increases are pro-cyclical. Some occupations in the public sector experience labour shortages (e.g. health and IT specialists).	**Establish a rules-based system for public wage increases subject to sound budget constraints, while allowing flexibility in public wage setting to address recruitment problems (such as in health and IT).**
Spending efficiency is a concern for the increasing inflow of EU funds, reaching 2.2% of GDP per year over 2021-2026.	To secure the best use of EU funds, improve planning and cost-benefit analysis of investment projects.
The long-term care system is underfinanced and fragmented.	Introduce common financing mechanisms and eligibility criteria for long-term care.
The tax system imposes heterogeneous abatement costs across sectors and activities.	**Introduce and gradually align carbon taxes in residential, commercial and industrial sectors.**
Large parts of the population are exposed to small particles.	**Phase out fossil fuel-based boilers and complement the replacement subsidy for older wood-based boilers with regulatory requirements and financial sanctions.**
Fragmented budgetary and planning policies impose heterogeneous abatement costs across government programmes.	Introduce internal carbon prices in all budget and planning preparations.
Promote business dynamics for stronger productivity growth	
Competition in product markets is low.	**Continue privatisation efforts particularly in inherently competitive sectors such as tourism, and strengthen the corporate governance of State-Owned Enterprises.**
Slow insolvency processes hold back business dynamics.	Expand the possibilities for out-of-court settlements for debt restructuring.
Capital markets remain underdeveloped.	**Promote digitalisation in the financial sector through evaluating the regulatory burden, and a closer alignment of FinTech regulations with other European countries.**
Public procurement lacks competition.	Remove burdens on foreign companies to participate in tenders by publishing in English.
The anti-corruption framework needs further strengthening to be more effective.	**Continue efforts to fight corruption by strengthening the independence and bolstering the resources of the anti-corruption authority.**
Lengthy judicial proceedings reduce trust in the judicial system.	Strengthen the resources of the Public Prosecutor's Office, including for hiring of experts. Accelerate the process for appointment of prosecutors.
Political appointments in State-Owned Enterprises reduce trust in public institutions.	Transfer the management of all State-Owned Enterprises to the Slovenian Sovereign Holding.
Strengthen labour reallocation for productivity and inclusion	
Co-ordinated wage bargaining hampers labour reallocation and investment in skills.	**Encourage wage-setting at the firm level and determine framework conditions, such as seniority bonuses and minimum wages at the sectoral level.**
The high minimum wage reduces employment opportunities for low-skilled people.	Ensure that minimum wage growth does not outpace median wage growth.
A rigid housing market limits the responsiveness of housing supply to demand.	Ease the regulatory burden, including zoning rules and rules for converting state-owned agricultural land into urban land.

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2 Digitalising the Economy

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The government's ambitious digitalisation strategy (Digital Slovenia 2030 Strategy) aims at putting Slovenia among the five most digitalised countries in Europe. Achieving this objective would foster productivity growth and help offsetting the negative effects of a declining labour force. While Slovenia performs well in several areas of the digital transformation, further efforts are needed to achieve the government's ambitious objective. These include reducing the urban-rural gap in high-speed broadband access, supporting the digital transformation of businesses, fostering digital innovation, improving digital government, upgrading ICT-related skills and attracting foreign ICT specialists.

The government's ambitious digitalisation strategy (Digital Slovenia 2030 Strategy) aims at putting Slovenia among the five most digitalised countries in Europe. Achieving this would bolster income convergence as the associated optimization of work processes and operations lead to higher productivity and new business models, important developments to offset the negative growth effects of a declining and ageing labour force.

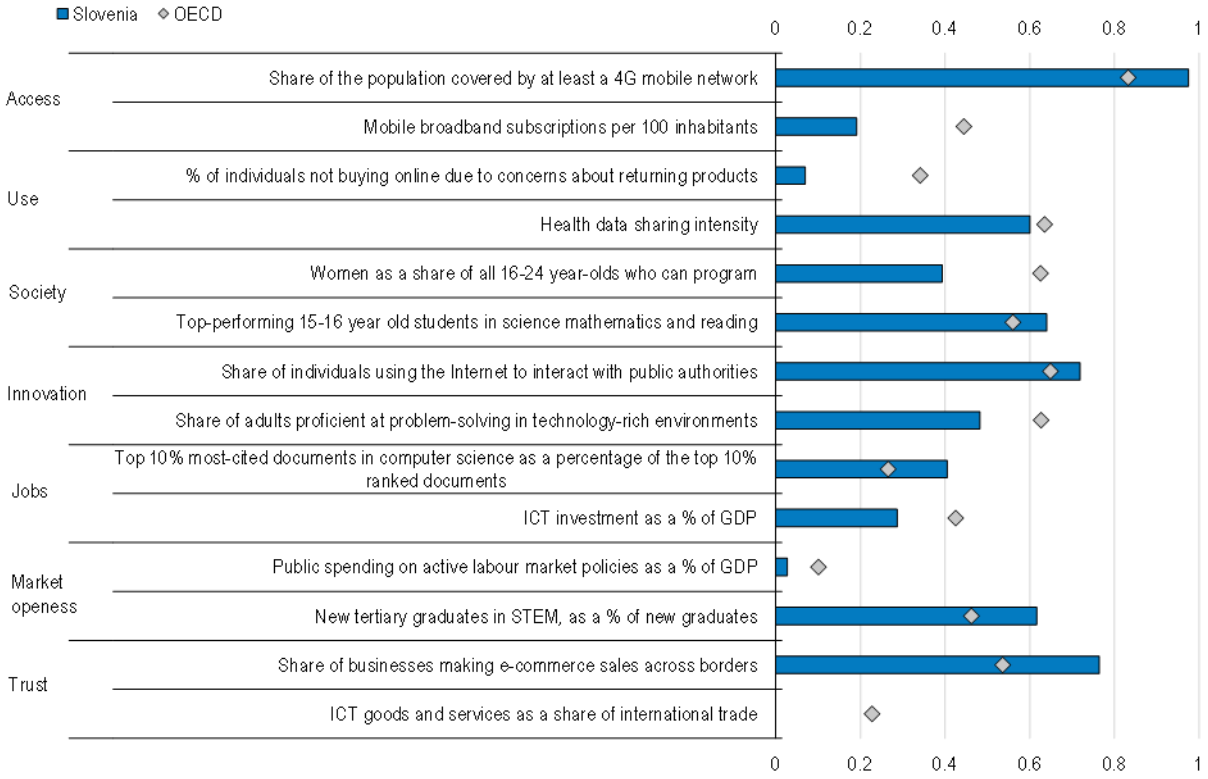
The COVID-19 pandemic accelerated the pace of digitalisation, but to a lesser extent than in other European countries, as the share of workers teleworking during the first and second waves of the pandemic was below the EU average (Ker, Montagnier and Spiezia, 2021[1]). Similarly, only 7% of businesses started or increased efforts to sell online during the pandemic, as compared with an average of 12% in the EU. In the education sector, the shift to distance learning during the first wave of the pandemic made more evident the digital divide in rural areas, and the limited readiness of teachers and students to teach and learn online. Looking ahead, further digitalisation progress will hinge on the ability of the population to connect and use digital technologies, both privately and professionally, and on the government to be the digitalisation leader.

Supporting a coherent and efficient digital transformation

In many respects, Slovenia performs well in the digital transformation, notably in terms of broadband coverage and young people's human capital (Figure 2.1). However, the country is underperforming its OECD peers in a number of areas. In terms of access, the digital divide in connectivity between urban and rural areas is high (see below). A low level of basic digital competencies in the population affects the share of Internet users, particularly those among the older population and in the poorest groups. This also manifests itself in a relatively low share of employment in digital-intensive sectors. Most indicators related to digital innovation and market openness are lagging those in other countries. Slovenia ranks in an intermediate position in the EU Digital Economy and Society Index (DESI) – a position it has maintained over the past decade (IMAD, 2020[2]; European Commission, 2022[3]). In sum, digitalisation efforts need to be stepped up to achieve the government's ambitious digitalisation objective.

The digital transformation affects several policy dimensions in an interrelated way. For instance, by matching labour demand and supply online, digital work platforms create opportunities to develop new business models, and for workers to find new sources of income, influencing both innovation and labour market policies. Thus, policies to foster digitalisation should be addressed by a coherent approach across government (OECD, 2020[4]). The digital transformation policy objectives over the period 2016-2020 were formulated in a national digital strategy, Digital Slovenia 2020. The associated implemented policies and investment were limited in scope, leaving key remaining gaps, such as insufficient human capital development, low use of Internet and integration of digital technologies in businesses (MJU, 2020[5]). In particular, public investment in digitalisation is highly dependent on EU funds and its level as a share of GDP has been on a declining trend in the past two decades. Currently, Slovenia invests 0.5 percentage points of GDP, less than the EU average and 2 percentage points of GDP less than the top five countries in smart, digital-innovation transformation (IMAD, 2022[6]).

Figure 2.1. Slovenia is lags behind in a number of areas of digital transformation



Note: Indicators normalised to 0-1, 1 = top OECD country and 0 = bottom OECD country.
Source: OECD Going Digital Toolkit, https://goingdigital.oecd.org/.

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The new digital transformation strategy, Digital Slovenia 2030, still has to be adopted. Since 2022, the preparation of the strategy is coordinated by the new Government Office for Digital Transformation. This Office, led by a Minister of Digitalisation, was created to enhance coordination and delivery of measures for digitalisation. However, as the responsibility for the development of sectoral strategies lies with line Ministers, this setting may potentially lead to a lack of coherence across policies, measures and sectors. For instance, the Ministry of Economic Development and Technology already adopted in January 2022 the strategy for the digital transformation of the economy, which was before the publication of the Government Office's guidelines (Government of Slovenia, 2022[7]). For the time being, a strengthened mechanism for governance was developed only for the digital transformation of public administration (with the re-establishment of the Council for Informatics Development), while it is unclear what system of checks and incentives will be adopted to ensure implementation of measures within the individual strategies. Furthermore, responsibility for implementation, including the required budget, sits outside the Government Office. To strengthen cooperation and to avoid silos between the Government Office and line Ministers, formal institutional and budgetary arrangements will be necessary to ensure that the sectoral agendas work coherently with one another and are implemented as planned.

Digital Slovenia 2030 will be aligned with the overall EU objectives for the digital decade (the Digital Compass and the Digital Policy Programme) and will reflect commitments set out in the National Recovery and Resilience Plan (NRRP) (Chapter 1). As with the previous strategy, EU structural funds will constitute a main source of funding. Through the NRRP, EUR 532.7 million will be channelled to finance measures supporting the green and digital transitions (Table 2.1). In the plan, EUR 315.4 million (12.5% of the total envelope of about EUR 2.48 billion) are allocated to measures directly contributing to the digital

transformation and the rest to measures in other areas which also partially contribute to digitalisation. Compared to neighbouring and comparable countries in terms of GDP, Slovenia will invest relatively less in the human capital for digital transformation, while largely focusing on the digitalisation of the public sector (Figure 2.2).

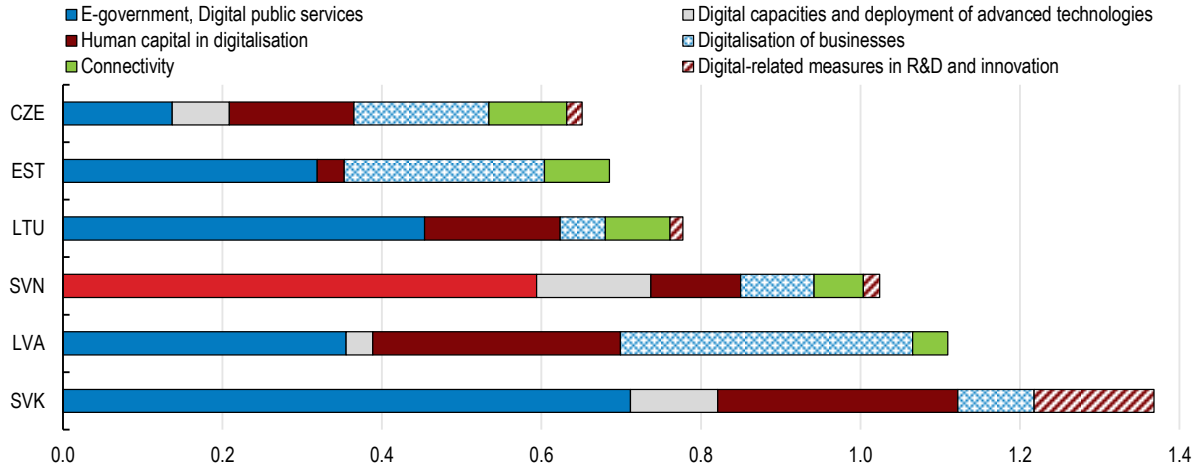
Table 2.1. Funding for the digital transition under the National Recovery and Resilience Plan

Component	Funding (EUR million)	Primarily contributing to digital transition	Partially contributing to digital transition
Digital Transformation of the Public Sector and Public Administration	260.2	x	
Digital transformation of the economy	56.5	x	
Renewable energy and energy efficiency	32.0		x
Sustainable mobility	30.1		x
Clean and safe environment	0.9		x
Research, development and innovation	10.0		x
Transformation of Slovenian tourism and investments in infrastructure in the field of tourism and cultural heritage	1.0		x
Strengthening competences, in particular digital competences and those required by the professions of the future and the green transition	60.3		x
Health	83.0		x
Total contribution to digital transition	**532.7**		
Total funding Slovenian NRPP	**2 480.0**		

Note: the acronym NRRP refers to the National Recovery and Resilience Plan for Slovenia
Source: (European Commission, 2021[8]), Commission Staff Working Document: Analysis of the recovery and resilience plan of Slovenia, European Commission.

Figure 2.2. Investment focuses on the digital transformation of the public sector

Planned expenditure in digital objectives of the NRRPs per policy area 2021-2026, as % of GDP



Note: GDP at market prices, 2021.
Source: OECD based on (European Commission, 2022[9]), *Recovery and Resilience Scoreboard*, and National Recovery and Resilience Plans.

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A key objective of digital transformation policies is to enhance the resilience of the economy and society against possible disruption brought about by digital security incidents. In 2019, 13.6% of firms experienced digital security incident, just above the EU average. In contrast, the 84% share of firms using one or more ICT security measure was 8 percentage points lower than the EU average and well below the near

universal use in the top-5 EU countries. In 2021, the Government Information Security Office (GISO) was established, succeeding the Information Security Administration of the Republic of Slovenia, and is responsible for national information and cyber security. GISO connects stakeholders in the national information security system and coordinates the operational capabilities of the system. In addition, the office supervises the implementation of the digital security measures set by the Information Security Act (ISA) for essential services providers, digital service providers and state authorities. Moreover, GISO finances partly or fully two national awareness programmes. The Safe on Internet programme focuses on the general public and SMEs (https://www.varninainternetu.si/). This is complemented with Cybersecurity vouchers for SMEs. The Safer Internet programme targets children, youth, parents and teachers (https://safe.si/).

These initiatives are welcome, but digital security risk management should play a more prominent role in the government's strategy. This requires elevating digital security from being merely a technical issue to the top of the decision making process. Therefore, programmes to raise awareness and promote risk assessment should be scaled up to reach a much larger number of individuals, firms and public bodies. In addition, measures are needed to incentivise critical infrastructure and services operators to adopt advanced technologies, e.g.: IoT, artificial intelligence, big data and blockchain, to strengthen their digital security. Likewise, the growing shortage of digital security skills in terms of technical security experts and business managers should be addressed. Such a development could also encourage digital security innovation and help foster a vibrant digital security industry. This should be supported by stronger cooperation with private sector stakeholders and work on the development of digital security services and solutions.

Expanding high-quality connectivity at affordable prices

Ubiquitous access to fixed and mobile high quality broadband at competitive prices is key for the digital transformation, as illustrated by the COVID-19 pandemic: Mobility restrictions due to the health emergency caused a surge of traffic on communication networks and Internet traffic exchanged at Internet Exchange Points (IXPs) soared by more than 58% in the OECD area. In Slovenia, 20% of employees reported to have worked partially or completely from home during 2020, which would have not been possible without connectivity and Internet traffic grew by 52% (Eurostat, 2021[10]) (OECD, forthcoming[11]).

Connectivity further underpins the use of all advanced digital technologies, such as artificial intelligence (AI) and the Internet of Things (IoT). The development of such digital technologies will increase data traffic, which will require policies and regulatory measures to promote investment, reduce barriers to broadband network rollout, and increase affordable access to high quality networks. .

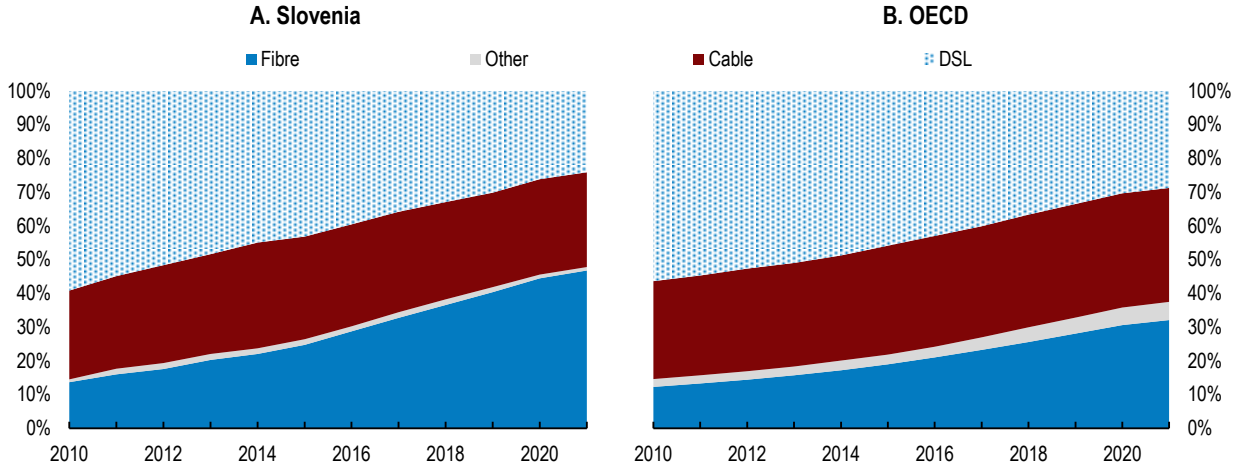
Expanding high-quality connectivity and bridging existing divides

To foster mobile and fixed broadband connectivity, a key element is deploying fibre deeper into networks to bring advanced digital technologies, such as the IoT and AI, to their full potential. Fibre is also required for 5G networks as it connects cell sites through what is called "backbone" and backhaul" connectivity, making fixed and mobile broadband infrastructure complementary.

Fixed broadband penetration was, at 31.3 subscriptions per 100 inhabitants in June 2021, lower than the OECD average of 33.8, and much lower compared to the top five European Union (EU) performers (43.9). On the other hand, access to high speed fibre networks was much higher than the OECD average, as the share of fibre-to-the-home (FTTH) subscriptions over total fixed broadband reached 46.8%, above the OECD average of 32.1% (Figure 2.3), but well below the top five EU performers (74.7%). Moreover, only half of all firms have a high-speed broadband subscription, just above the OECD average, but well below leading countries (e.g. 80% in Denmark and 73% in Sweden).

Figure 2.3 The quality of broadband has increased

Technology mix of fixed broadband subscriptions in Slovenia and the OECD



Note: Data for 2021 refer to Q2 2021.
Source: OECD Broadband Portal database, https://www.oecd.org/sti/broadband/broadband-statistics.

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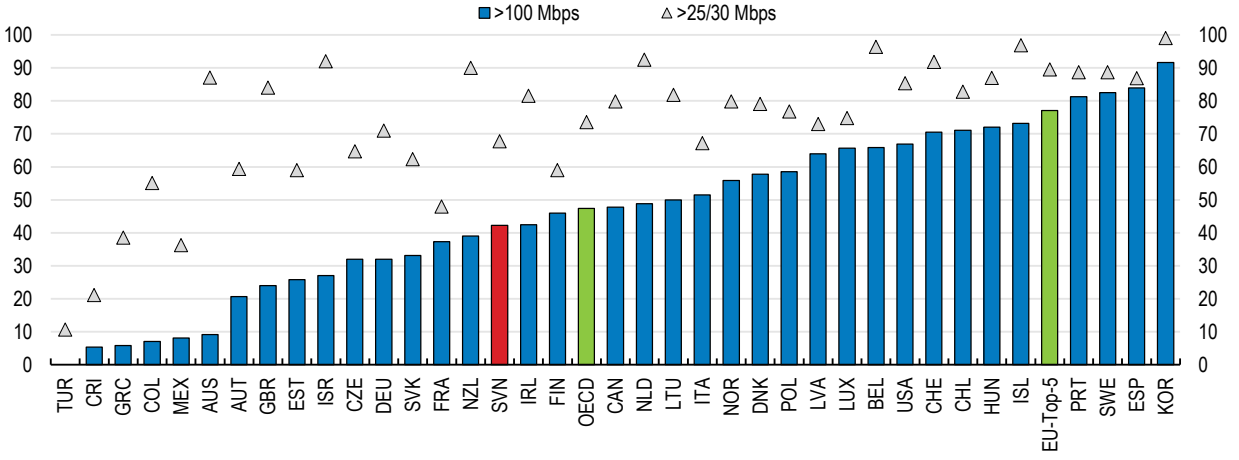
Still, a concern is that the quality advantage in fibre deployment is not reflected in actual experienced and advertised speeds, which lags behind the OECD average and peer countries. The share of subscriptions in the higher advertised speed tiers was lower than the OECD average, and significantly lower than the EU top five performers (Figure 2.4). In addition, actual download speeds experienced by users for fixed network is below the OECD average, and lags behind OECD leading countries, according to three different providers of speed tests (Figure 2.5).

Figure 2.4. The share of broadband subscriptions in higher speed tiers is relatively low

Fixed broadband subscriptions with contracted speed faster than 25/30 Mbps and 100 Mbps, June 2021



Source: OECD Broadband Portal database, https://www.oecd.org/sti/broadband/broadband-statistics.

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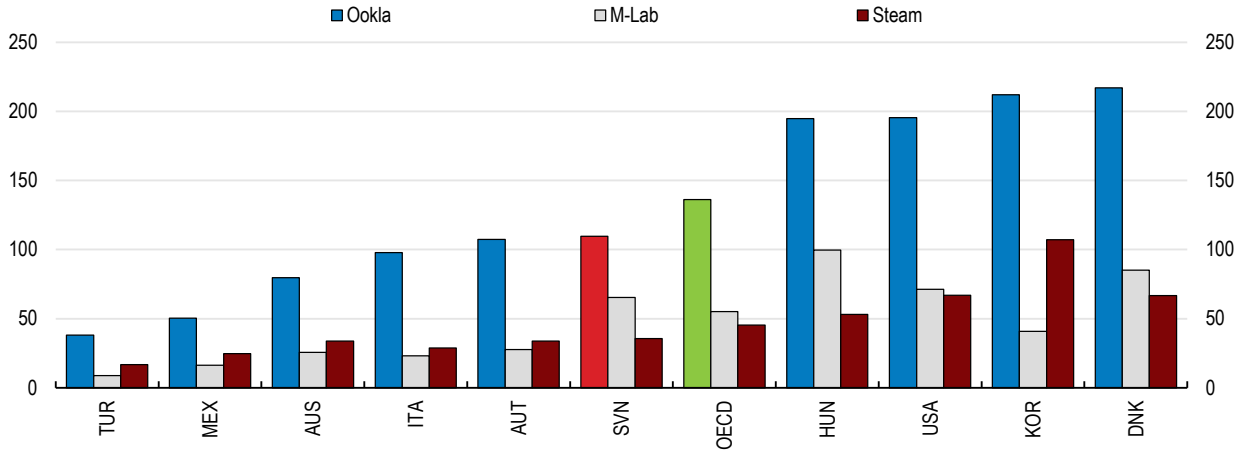
Figure 2.5. Slovenia lags behind OECD leading countries in experienced fixed broadband speeds

Average experienced download speed of fixed broadband connections, Mbps, 2021



Note: Speedtest (Ookla) data are for June 2021; M-Lab (Worldwide Broadband Speed League) speeds were measured from 1 July 2019 to 30 June 2020; and Steam data are for February 2021.
Source: Ookla (2021), "Speedtest Global Index", www.speedtest.net/global-index ; M-Lab (2021), "Worldwide Broadband Speed League", www.cable.co.uk/broadband/speed/worldwide-speed-league; Steam (2021) "Steam Global Traffic Map", https://store.steampowered.com/stats/content.

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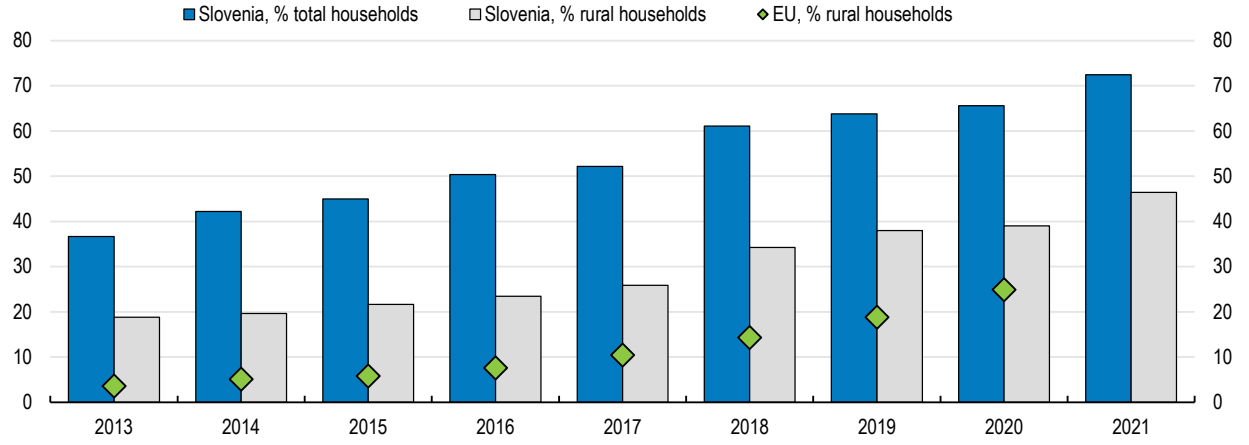
A key element to improve the speed performance experienced by users is to entice operators to invest in upgrading communication networks. To that end, the regulator, AKOS, should continue to encourage operators to extend fibre backbone and backhaul connectivity, either through wholesale access remedies, or via infrastructure-based competition (see below). An additional way to entice operators to invest in upgrading their networks is by increasing transparency for end-users on the broadband performance they receive from operators. AKOS sponsors a broadband performance measurement tool relying on volunteer tests (AKOS Test Net), which could be complemented by periodically publishing actual broadband performance results per provider (AKOS, 2022[12]).

The availability of fibre-to-the home (FTTH) connections, associated with very-high capacity and symmetrical speeds, varies across the country, notably between urban and rural areas. In 2021, only 46% of rural households were located in areas where such connections were available, compared to 72% of households overall (Figure 2.6). Policy efforts to bridge territorial connectivity divides are paramount to ensure an inclusive digital transformation, where fostering competition and promoting investment are key to expand broadband. In areas where market forces have not proven able to fulfil all policy objectives, such as in rural and remote areas, a range of approaches are available and are currently used (i.e. coverage obligations in spectrum auction and public funding to expand connectivity in rural/remote areas).

Figure 2.6. Connectivity divides between rural and urban areas are persistent

% of households (rural vs. total) living in areas where fibre-to-the-home (FTTH) connections were available



Note: FTTH refers to fibre-to-the-home. The EU average is not available in 2021.
Source: European Commission (2021[6]), Broadband Coverage in Europe 2020, a study by IHS Markit, Omdia and Point Topic for the European Commission, https://digital-strategy.ec.europa.eu/en/library/broadband-coverage-europe-2020; EU Digital Agenda Data Visualisation Tool - Data & Indicators – https://digital-agenda-data.eu/datasets/digital_agenda_scoreboard_key_indicators/visualizations.

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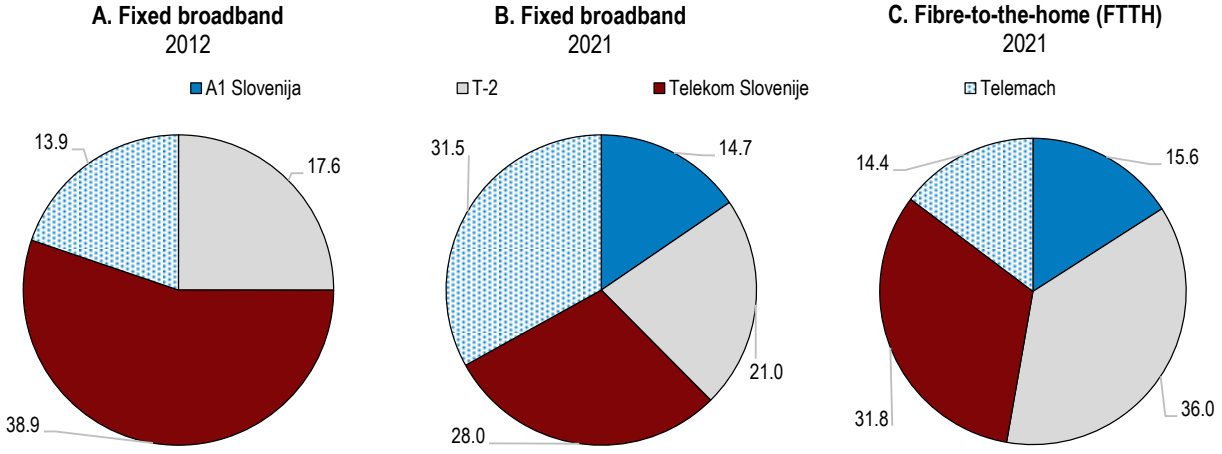
Mobile broadband services have been a major driver of increasing connectivity. Nonetheless, mobile broadband penetration lags behind the OECD and peer countries. In June 2021, the 88.8 mobile broadband subscriptions per 100 inhabitants was well below the OECD average of 121.4 and the average of the top EU performers of 137.1 (OECD, 2022[13]). Faster mobile broadband is being introduced with the first launch 5G commercial services in 2020, reaching a third of the population by the end of the year. Important prerequisites for a wide 5G deployment are spectrum availability and the deployment of fibre deeper into mobile backbone and backhaul networks (OECD, forthcoming[11]).

In April 2021, a successful (5G) multiband spectrum auction took place, distributing the market frequency bands coined as “5G pioneer bands” (the 700MHz, 3.6 GHz and 26 GHz bands) in the EU. This will eventually allow faster rollout of 5G networks by all mobile network operators in the market. Network operators need to deploy more fibre in their networks to enable 5G, and as such, the regulator could take further measures to incentivise fibre rollout by all operators (see below).

The fixed broadband market has become more competitive over the past decade. The incumbent’s (Telekom Slovenije) market share has fallen from 38.9% to 28%, as the main competitor (Telemach) became the largest player (Figure 2.7). In 2021, the mobile market had four mobile network operators (MNOs) – three with roughly equal market shares and a small operator. In addition, several mobile virtual network operators (MVNOs) have a combined market share of 6% (AKOS, 2021[14]).

Figure 2.7. The incumbent's market share in the fixed broadband market has been declining

Market shares of the Slovenian fixed broadband market in terms of subscribers, %



Note: Data are for Q4 2012 and Q3 2021.
Source: AKOS (2021[14]), "Portal e-Analyst on n the electronic communications market in the Republic of Slovenia", Home: PORTAL eAnalitik (akos-rs.si).

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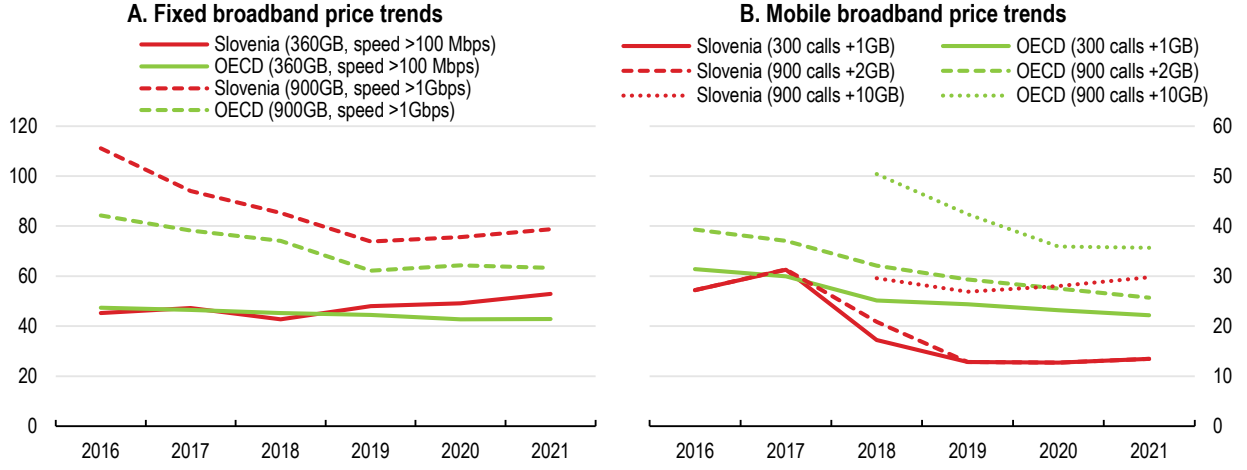
Mobile broadband prices for most baskets are lower than the OECD average. However, packages with a high data content are still relatively expensive compared with best practice in Europe. On the other hand, prices in the fixed broadband market are more expensive compared to the OECD average (Figure 2.8).

Figure 2.8. The prices of fixed broadband services remain higher than the OECD average

Fixed broadband and mobile broadband price evolution, USD PPP



Note: For mobile broadband baskets: From May 2018, the 900 calls+ 10GB profile became available.
Source: OECD and (Strategy Analytics, 2021[15]).

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Comparatively high fixed broadband prices tend to reflect high deployment costs. Slovenia has sparsely populated regions, where 58% of the population lives in cities with less than 50 000 inhabitants, a third more than the OECD average. This may lead to relatively high investment costs, playing a role in terms of

positive business cases for broadband rollout (OECD, 2020[16]). The regulatory framework could include measures to lower operators' network deployment costs (see below).

There is scope to increase competition in the communication market

Several approaches have been taken by OECD countries to promote broadband development and foster competition, including the promotion of end-to-end infrastructure competition and the promotion of common wholesale infrastructures with regulated or non-regulated wholesale access focusing on competition at the retail level (i.e. "last mile" or access part of the network) (OECD, 2021[17]). The approach in Slovenia has been dual, with both asymmetric regulated wholesale access of the incumbent's network to foster retail-based competition, as well as a push for infrastructure competition.

Competition in the telecommunication market has progressed to the point where prices in many instances are below the OECD average (i.e. in the mobile market). However, not all prices are at competitive levels and infrastructure-based competition has not progressed sufficiently. Barriers remain for a competitive communication market in terms of infrastructure access and incentives to invest in network deployment. Moreover, given that market players undertake the vast majority of the investment for network rollout in the communication sector, policies that reduce barriers and costs of network deployment and provide incentives to invest are key to extend higher quality networks. This reduces the need for public investments to areas where business cases are not likely to be viable, and where alternative approaches (e.g. through public-private partnership or public funding) might be needed.

Barriers to broadband network deployment include the difficult coordination of digging and trenching works and obstacles getting access to rights of way due to a decentralised nature of granting these permits that rely on municipal authorities. This issue may be even more acute than in other OECD countries due to the low population density in the many municipalities. To provide further incentives to invest in broadband network rollout and upgrades, AKOS should focus on measures to reduce rollout costs as slow administrative process regarding permits and rights of way and inefficient dispute resolution processes hamper the speed of broadband deployment.

Measures to shorten administrative approval times and streamline rights of way processes, respecting the responsibilities of relevant entities at different levels of government, are being implemented. For example, the sectoral legislation accelerated approval procedures for rights of way (Electronic Communication Act "ZEKom-1", article 20) whereby the first operator or utility provider to obtain the access of rights of way could allow the joint use by any other network operator. However, in practice, this is a complex and lengthy process. The proposed amendments to the Electronic Communications Act (ZEKom-2) include that any rights of way should be extended automatically to all operators, which is a welcome development.

Fibre deployment is being fostered via co-investment agreements. AKOS has made important steps to facilitate investment in broadband networks by providing maps of underlying wholesale infrastructure, so that operators can plan their deployments (through the public portals "Geoportal AKOS", and the "Infrastructure Investment Portal"). "Geoportal AKOS" could be improved with additional features, such as the identification of available public assets to be used for infrastructure rollout (e.g. public buildings available to place cellular base stations), and by displaying the prices of usable assets directly to network operators.

Infrastructure sharing is an additional measure to reduce network deployment costs. AKOS encourages voluntary passive infrastructure agreements by providing guidelines. In addition, the dominant fixed operator is subject to ex-ante infrastructure sharing obligations. During the process of adopting the Electronic Communications Act in 2022, a proposal to extend the joint use of passive infrastructure as a symmetrical regulation to all players in the market was discussed; however, views on this matter differ. Regardless of whether symmetrical regulation is established, settling disputes among operators in a timely manner appears to be an obstacle. A dispute resolution mechanism among operators would be helpful to avoid further administrative delays.

Closing down of legacy networks, such as copper, would boost the deployment of high-capacity networks. One of the main challenges that AKOS faces is how to adapt the regulatory framework to transition away from legacy networks and provide incentives to boost the deployment of "future proof" access technologies, such as fibre. Concerning the decommissioning of the copper network, the historical incumbent is allowed to switch-off parts of copper network, if a parallel fibre network is deployed or another open access network is available. To boost infrastructure-based competition, the regulator could consider furthering relaxing ex-ante regulation on the incumbent in the fixed wholesale market in areas deemed as competitive (such as larger urban areas), while relying on infrastructure sharing obligations in areas where there is no business cases for rolling out fibre (i.e. rural and remote areas).

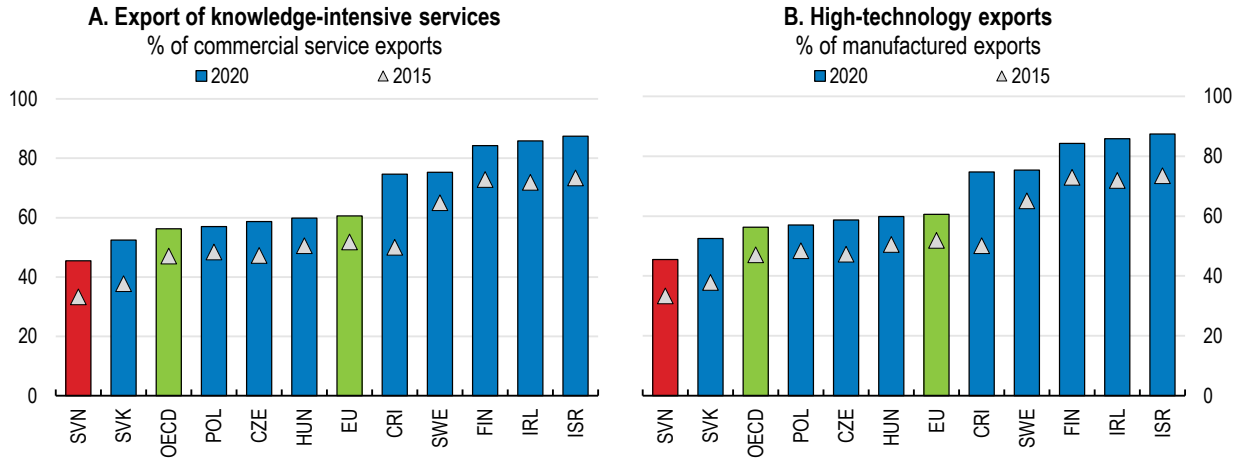
A growing number of OECD countries, including Slovenia, consider access to the Internet as a basic right for citizens and have changed their legal frameworks to include broadband as part of their universal service framework. In addition, as most OECD countries, Slovenia established connectivity targets in the National Broadband Plan, the 2020 NGN Next Generation Broadband Network (NGN). This plan was updated in 2018, and allocates public funds to co-finance broadband deployment in "white areas", i.e. in sparsely populated areas where broadband service is underserved or lacking as they are commercially unattractive for private players (Government of Slovenia, 2021[18]).

An important policy issue is how to design public funding tenders to co-finance the expansion of broadband networks in "white areas". A concern with respect to current co-financing, raised by market players, is that effectively the state co-finances 50% in most "white areas", which does not sufficiently take into account the actual cost of providing fibre to individual locations, in particular in rural areas. A new public tender to co-finance the rollout of open high-capacity broadband networks (through a programme called "GOŠO 5") was closed in December 2021 and is currently being implemented (Government of Slovenia, 2021[19]). Nonetheless, two calls for public tenders were left unanswered in the past. Thus, there seems to be room for improving the public tender design, for example by the use of cost-benefit analysis and detailed cost models to target state aid successfully. Therefore, granular data on broadband access should be used for calculating co-financing rates for each "white area".

Accelerating the digital transformation in the economy

Income convergence vis-à-vis richer OECD countries requires stronger productivity growth supported by higher value-added production and exports. However, the share of high and medium-high tech manufacturing in total manufacturing has been declining in the years 2015-2019. Other weaknesses include a relatively low high-technology intensity of merchandise exports. A recent positive development is an increase in the share of knowledge-intensive exports of total service exports during the pandemics (Figure 2.9). More broadly, productivity growth has been insufficient to accelerate income convergence. Indeed, increasing low labour productivity is one of the main challenges for closing the income gap (Chapter 1).

Figure 2.9. Slovenia lags behind in exports of high-tech goods and knowledge-intensive services



Note: Knowledge-intensive services are computer, communications and other services. High-technology exports are products with high R&D intensity, such as in aerospace, computers, pharmaceuticals, scientific instruments, and electrical machinery.
Source: World Bank (2022), World Development Indicators.

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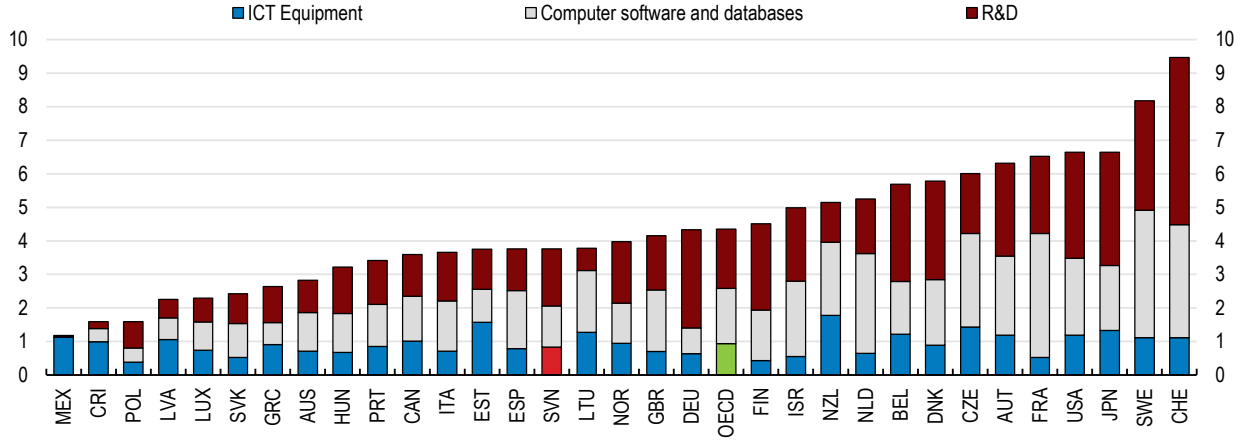
Investing in digital technologies is key to spur productivity growth

Key to achieve faster productivity growth is investment in new technologies. However, in the past decade, investment in information and communication technologies (ICT) has been on a downward path, leaving current investment in ICT below the OECD average (IMAD, 2020[2]) (Figure 2.10). A factor behind the low investment may be that SMEs, and particularly domestically oriented ones, have limited access to external funding for investment in ICT. Higher ICT investments are also needed to achieve the government's digitalisation objectives.

Figure 2.10 Investment in ICT is relatively low

Investment in gross fixed assets, as % of GDP, 2020 or latest available year



Note: Investment in other fixed assets, i.e.: non-ICT equipment, machinery and building are not shown. OECD is an unweighted average of available countries.
Source: OECD National Accounts database.

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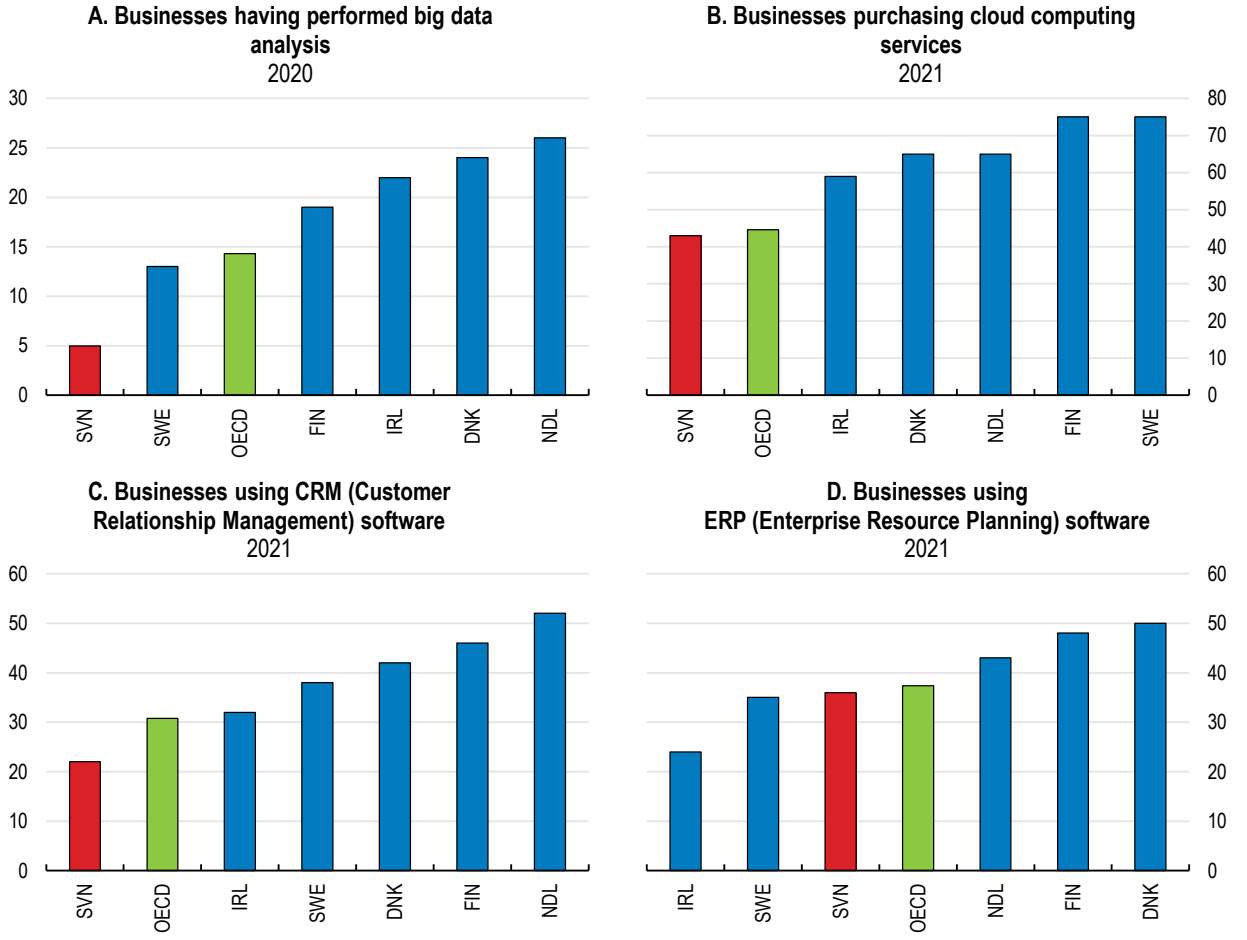
On average, firms have adopted digital technologies to the same degree as in other OECD and EU countries. Basic ICT tools such as broadband and websites, which enable firms to digitise information and establish a presence online, are widely diffused. The COVID-19 pandemics boosted adoption of advanced technologies, such as the Internet of Things (IoT) and Artificial Intelligence (AI). The use of these technologies among all enterprises jumped by 33 and 10 percentage points, respectively, from 2020 to 2021, bringing Slovenian firms among the top users in the EU. The share of firms using industrial robots is also well above EU average. However, firms lag behind in tools enabling higher integration of information and processing across business functions, i.e. Enterprise Resource Planning (ERP), and tools allowing firms to collect, integrate, process and analyse information related to their customers, such as Customer-Relationship-Management (CRM) (Figure 2.11).

Figure 2.11. Firms lag behind in adoption of several ICT tools

As % of enterprises with 10 or more employees



Note: Firms with 10 or more employees, excluding financial sector. ERP stands for enterprise resource planning, CRM for customer relationship management. Data on Cloud Computing refer to purchase of cloud computing services used over the Internet. OECD is an unweighted average of available countries based on the latest available year.
Source: OECD ICT Access and Usage by Businesses database, http://oe.cd/bus.

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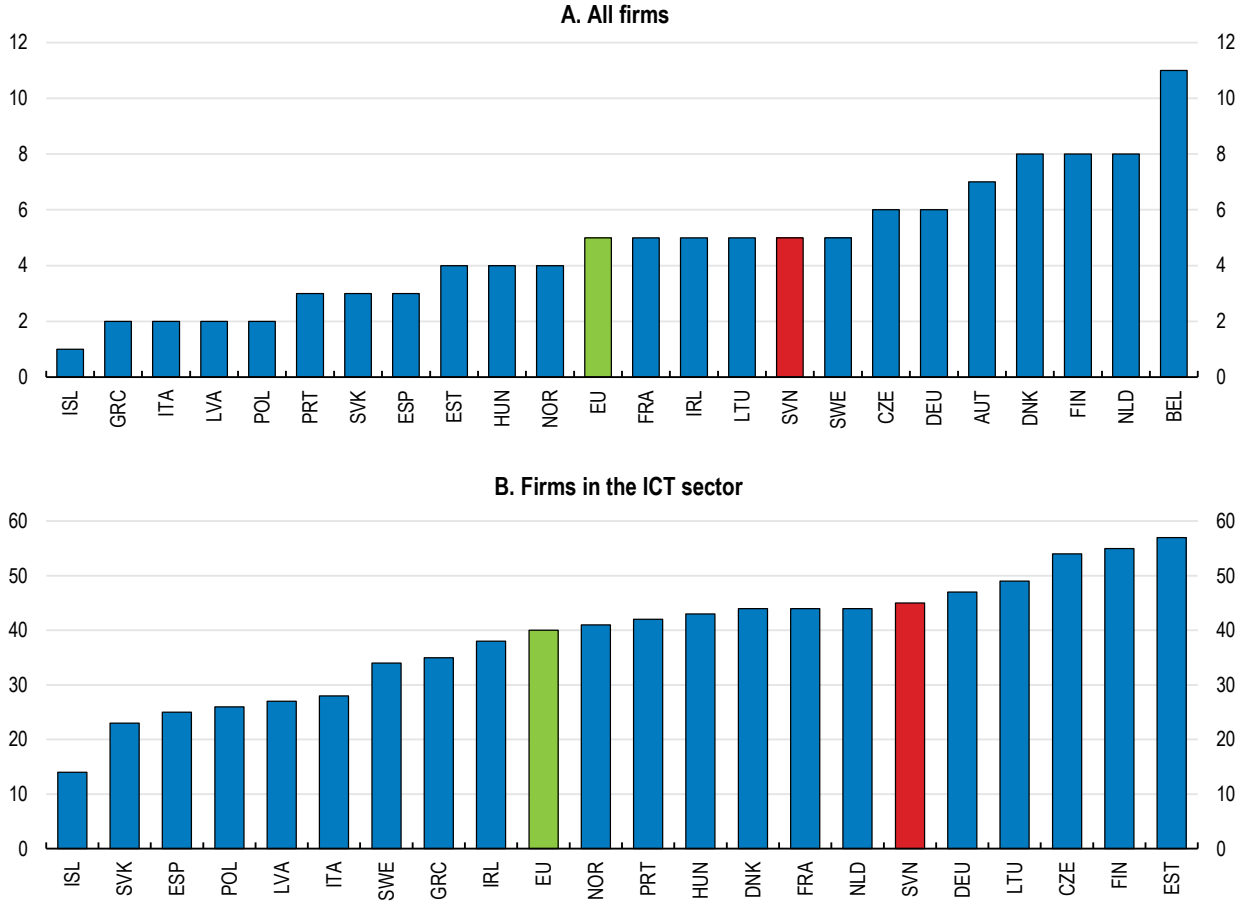
Creating value with data is at the core of the digital transformation, enabled by the convergent use of advanced technologies. IoT, for instance, can provide streams of real time data that can be made actionable thanks to big data analytics and AI. Data help explore new areas of product and service development, helping to gain critical insights about market trends, consumer demand and the behaviour

of competitors. Data analysis also allows to optimise development, production and distribution processes; tailor the product and service offering to specific demands; and rapidly adjust to changes in demand (OECD, 2020[20]). For more comprehensive digital transformation and data-driven innovation, firms will need to adopt those ICT tools and activities that enable them to collect, store, exchange and process data. Firms lag behind their counterparts in leading EU countries in the adoption of these tools and activities, notably big data analytics and cloud computing (Figure 2.11). The share of firms that purchase cloud computing is 23 percentage points below the best performing countries, whereas only 5% of firms perform big data analysis, well below the OECD average and far behind the best performers.

Firms need highly skilled workers to use advanced digital tools, but only 17% of firms employ ICT specialists, 4 percentage points below the OECD average and 13 percentage points less than the best OECD performing countries (Belgium and Ireland). Moreover, demand for ICT specialists outstrips supply and particularly firms in the ICT sector have hiring problems (Figure 2.12). Investing in human capital is key to move forward with a comprehensive digital transformation of the economy. To support an accelerated digitalisation of enterprises, the government should favour broad-based policies aimed at tackling skills shortages for workers in general and for ICT specialists.

Figure 2.12. There is a lack of ICT specialists

Firms that find it hard to fill vacancies for jobs requiring ICT specialist skills, as % of firms, 2020



Note: In Panel B, 2019 for Greece and Portugal.
Source: Eurostat.

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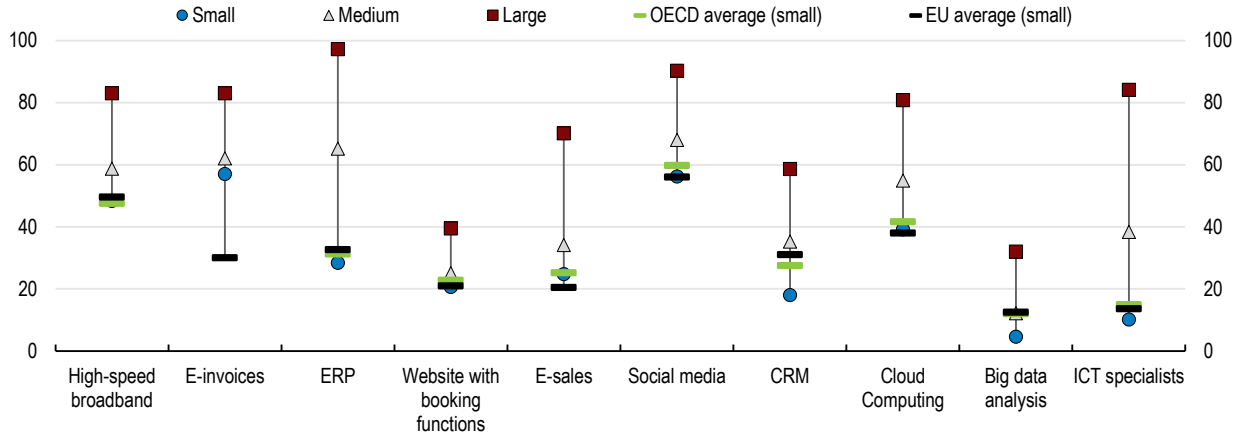
The digitalisation gap between SMEs and larger firms is relatively large. On average, SMEs use digital technologies to a degree comparable to OECD and EU peers, but well below best practises (Figure 2.13). Furthermore, the sizable gap with larger enterprises reflects low use of, particularly, human capital, ERP, e-sales and cloud computing. SMEs face several size-related barriers in terms of awareness, skills and finance for adopting new digital tools and implementing complementary organisational changes. These barriers are a symptom of imperfections in product, credit and labour markets. They may also reflect the disproportionate impacts of regulatory complexities, administrative burdens and policy inefficiencies on this business population (OECD, 2019[21]). SMEs report that their main barriers to faster digitalisation are a lack of human and financial resources, excessive costs of digitalisation and lack of knowledge (Digital Innovation Hub Slovenia, 2020[22]). An example of the lack of awareness is SMEs' low use of cloud computing -- a technology facilitating access to a range of low-cost computing services, such as extra processing power and storage capacity, reducing costs of up-front investments in hardware.

Figure 2.13. SMEs lag behind in use of digital tools and technologies

As % of enterprises in each employment size class, 2021 or latest available year



Note: "All", "Small", Medium" and "Large" refer to enterprises size categories of respectively 10 or more employees; 10 to 49; 50 to 249; and 250 or more. ERP stands for enterprise resource planning, CRM for customer relationship management; high-speed broadband are subscriptions with 100+ Mbps. Data for big data analysis, e-Invoices and ICT specialists refer to 2020. Data on website refer to businesses with a website allowing for online ordering or reservation or booking. Data on Cloud Computing refer to purchase of cloud computing services used over the Internet. OECD is an unweighted average of available countries based on the latest available year.
Source: OECD ICT Access and Usage by Businesses database, http://oe.cd/bus.

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The government provides a range of measures to promote digitalisation in enterprises, particularly SMEs that appear well suited to the needs of SMEs (Table 2.2). However, these measures are small in scale and not system-oriented. Support measures consist broadly of vouchers and of consulting services. The latter are supplied by the Digital Innovation Hub (DIH) – the "one-stop-shop" where businesses can access all government programmes for digitalisation. With the exception of training and selected digital marketing tools, however, the vouchers do not finance the actual implementation of the strategy or the investment in equipment. Thus, their impact on digital adoption may be limited. In addition, the range of tools that can be financed is narrow (marketing, cybersecurity), hindering adoption of a broader set of technologies. Slovenia may look at the examples of other OECD countries to enlarge the range of policies to help SMEs digitalise (Box 2.1). A further problem is a lack of systematic evaluation of public programmes to assess whether the allocated funding has effectively achieved the expected outcomes (OECD, 2019[21]).

Table 2.2. Programmes supporting digitalisation of enterprises in Slovenia, 2018-2023

Instrument	Description	Budget (EUR million)	Type of support provided	Implementing body
Digital Innovation Hub (DIH)	The "one stop shop" for digitalisation. It creates the ecosystem, enables information and promotion, advice and mentoring and prepares analysis.	2.6	DIH Slovenia provides, connects and supports knowledge, business expertise, technologies, and exchanges best practices.	Digital innovation hub Slovenia (chosen through a public tender) https://dihslovenia.si/
"Digital" vouchers	Vouchers for raising digital competences, preparing digital strategy, enabling cyber security and implementing digital marketing for SMEs	8.5	Support for SMEs, up to 10 000 EUR/voucher	Ministry of Economic Development and Technology is the intermediary body. Slovene Enterprise Fund implements the public calls. Digital Innovation Hub Slovenia prepares the catalogue of mentors and trainings. Regional SPOT points help SMEs applying the public call (vouchers). https://podjetniskisklad.si/sl/razpisi
Support for SMEs e-business	SMEs going international and supports digitalisation of fairs, e-exchanges among partners, web pages, internet trade and strengthening competences	9.45	5 000 – 30 000 EUR/enterprise	SPIRIT Slovenia implements the public tender for E-business.
Support for SMEs implementation of digital transformation and Industry 4.0	Support to different fields (Big Data, Internet of Things, Block chain, AI, Machine Learning).	12.4	30 000 – 100 000 EUR/enterprise	Public tender for SMEs digital transformation.
Total		**32.95**		

Source: OECD, Digital Economy Policy Platform (DEPP), edition 12/12/2021, https://depp.oecd.org/

Box 2.1. OECD countries use a wide range of policies to help SMEs digitalise

OECD countries offer a wide range of policies to help SMEs digitalise, ranging from grants that subsidise investments in digital technologies to training to help firms implement investments at their own cost.

Australia's Small Business Digital Champions project supports 100 small businesses. The project has a total budget of AUD 8.9 million, and provides up to AUD 18 500 in assistance, with additional support from partner firms. Of these small businesses, 15 were chosen as Digital Champions and received mentoring from high-profile business people to guide them through the digital transformation. This process is then documented and showcased online. The programme is complemented by the "Digital Solutions" programme of the Small Business Advisory Service, which focuses on firms in regional locations. SMEs pay a (subsidised) fee for advice on implementing digital technologies, such as websites, e-commerce, social media and small business software. The programme also offers advice on online security and data privacy.

In Denmark, the Danish Business Authority distributes grants (valued at approximately EUR 1 300) to 2 000 SMEs under the SMV:Digital programme. The grants are used for private consultancy to help the SMEs identify digital opportunities with a special focus on e-commerce, prepare business cases for digital transformation and implement digital solutions.

Portugal also has a grant scheme to assist SMEs with the use of digital technologies in fields such as e-commerce, online marketing, website development and big data. The grant covers 75% of eligible expenses up to EUR 7 500 for projects that take up to one year to implement.

Austria does not offer grants, but does help SMEs digitalise through the KMU Digital programme. The programme includes: 1) an online tool to allow firms assess their level of digital maturity; 2) an individual consultation to examine what can be improved and how; 3) a consultation focused on the specific needs of the firm (in areas such as e-commerce, IT security, data protection and digitalisation of internal processes); and 4) digital skills training courses for entrepreneurs and employees.

Finally, Chile's innovation agency recently launched the Digitalise Your SME (Digitaliza tu Pyme) programme to provide e-commerce courses (78 hours of classroom experience), in which small business owners can learn about digital marketing, the use of social networks and electronic commerce. By the end of the programme, participants should understand processes associated with e-commerce such as the use of online platforms.

Source: OECD, Digital Economy Policy Platform (DEPP), edition 12/12/2021, https://depp.oecd.org/

An office for the Portfolio Management of projects is established within the Government Office for Digital Transformation. However, the office will not develop a common cost-benefit approach to prioritize and assess projects. Business support programmes lack an established set of indicators to track both input (spending) and output (effects) of their operation. This lack of benchmarking means that projects are difficult to compare, limiting programme monitoring and evaluation. The government should establish clear priorities and targets, enabling the use of benchmarking indicators for each spending instrument and its achievements to evaluate measures and monitoring programme implementation, allowing programme adjustments if necessary.

The strategy for digitalisation of the economy focuses on supporting firms with their combined uptake of advanced technologies (e.g. AI, IoT, big data analytics, cloud computing, Augmented Reality, Virtual Reality and block chain). Current plans are to finance 20 consortia bringing together large companies and SMEs. However, the economic rationale of providing direct subsidies to larger and well-advanced firms is unclear. There is also a risk of picking winners and losers, instead of favouring uptake of technologies generally among firms. Furthermore, the rationale of setting up consortia to receive funding is imprecise. In principle, larger firms could enter into partnerships with smaller, less digitalised ones, to transfer technology and knowledge. However, this appears not in the programme's objectives. Better identification of the market failure intended to address, as well as the mechanisms to allocate funding, would allow more efficient spending of resources.

Organising, managing calls for proposals, and running the programme results in higher administrative costs than other forms of business support, such as tax credits. Italy, for instance, is using tax credits (under the plan currently named "Transition 4.0") to incentivise private investment in Industry 4.0 tangibles and intangibles. These credits are higher than the normal ones for equipment, and support training activities to gain or strengthen knowledge of relevant technologies (e.g. big data and data analysis, human-machine interface, Internet of Things, digital integration of business processes, IT security). The programme has had positive results in terms of investment in tangible assets and complementary skills (MEF, 2020[23]). In 2022, the government introduced general tax relief for investment in equipment and intangibles. The government should amend this measure by targeting advanced ICT technologies.

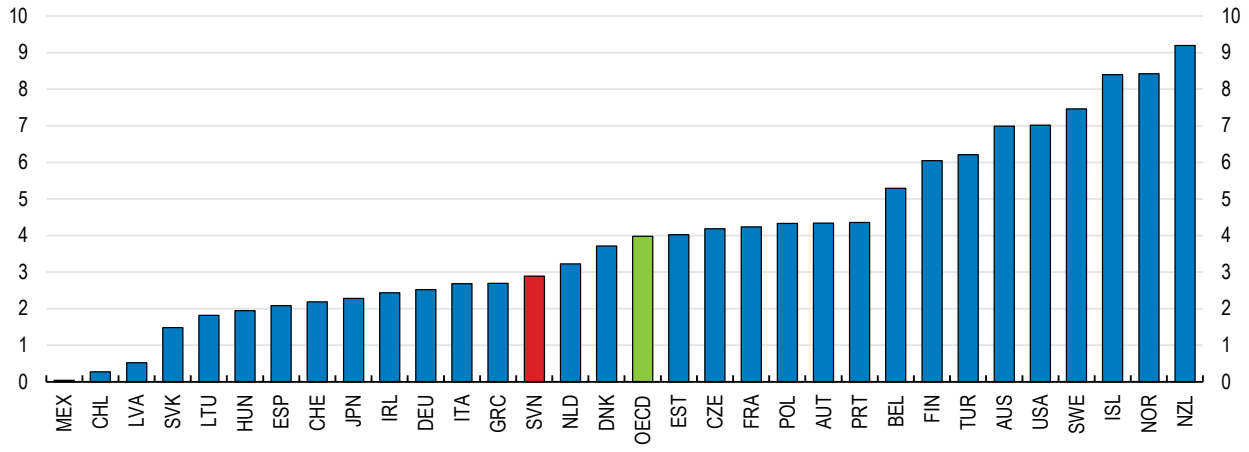
Improving technology transfer and boosting support to the innovation ecosystem

Slovenia is lagging behind in a number of indicators on innovation in the digital field (Figure 2.1). The quality of the scientific research in computer science is comparable to OECD peers, but only 6.2% of IP5 patents (patents filed in at least two patent offices worldwide, including one of the five largest IP offices)

were on ICT-related technologies – less than a third of the OECD average. The ICT sector also spends below the OECD average on Research and Development (R&D) (Figure 2.14).

Figure 2.14. Spending in R&D in the ICT sector is lower than the OECD average

Spending in R&D, as % of ICT sector value added, 2017



Source: OECD Research and Development Statistics database.

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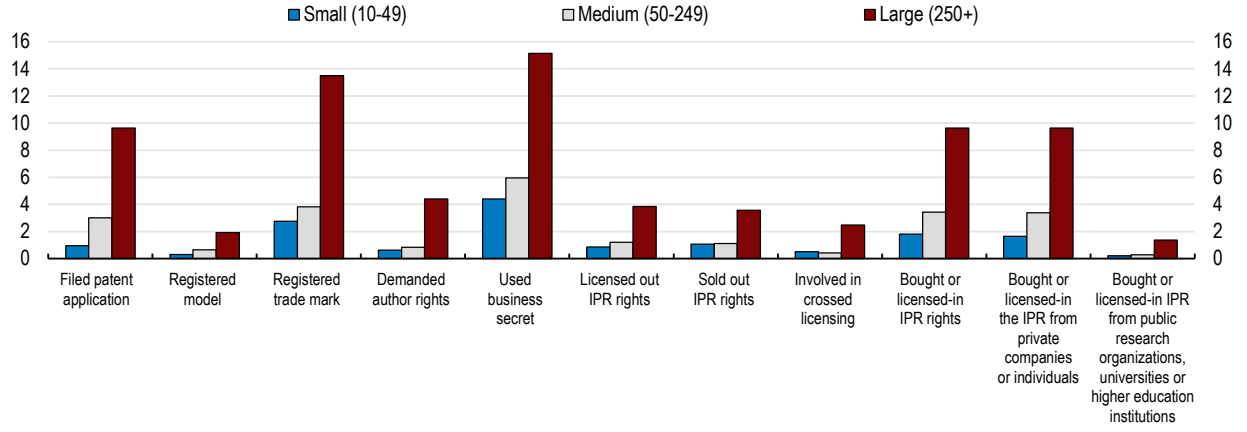
A major problem for commercialisation of digital innovation is the lack of a supportive environment for public research organisations to bring innovations to the market. A particular difficulty is that most of ICT innovations (software) cannot be patented, leaving copyright as the only way to protect them. However, there is no mechanism for researchers to be remunerated for copyright, while they are entitled to receive about one third of income from licensing of a patent. Over the past decade, the technology transfer offices received non-stable funding and were not subject to a government strategy for technology transfers, reducing their effectiveness as intermediaries in the commercialisation of intellectual property rights (IPR) (Stres and Pal, 2020[24]). Until recently, researchers also lacked incentives to create spin-offs. The new Research and Innovation Activities Act, which entered into force in January 2022, allows institutions to become co-owners of spin-offs. However, the process may be quite lengthy and cumbersome, as the organisation needs the consent of the founder of the public research organisation, i.e. the Slovenian government, to establish a company, upon proposal of the board of directors. A more agile process, based for instance on tacit consent after a certain time lag, would help to achieve higher uptake of this measure and simplify spin-off formation from universities.

Many SMEs do not actively search for or explore new production processes and business practices. Less than 6% of SMEs are managing intellectual property rights, a trend that is common to SMEs across OECD countries (Kergroach, 2021[25]). In general, firms, and in particular SMEs, rely very little on intellectual property developed by public research organisations, preferring contract and collaborative cooperation to buying licenses and patent right (Figure 2.15) (Stres and Pal, 2020[24]). The underlying problem here is that knowledge on digital technologies cannot easily be transmitted, requiring adaptation to each specific application (Guellec and Paunov, 2018[26]). Some countries, such as Belgium, Estonia or Portugal (EC-OECD, 2022[27]), are responding to this need through subsidising innovation vouchers that companies can use to request R&D support from a public research organisation for the development of new production processes or the improvement of existing ones. A similar Slovenian innovation voucher programme was in place in the period 2007-2013 but was discontinued due to budgetary constraints. Such a voucher programme could be re-established to reduce cooperation barriers with academia and increase uptake of digital technologies.

The government is also promoting Industry 4.0, one of the smart specialisation areas defined in the context of the EU cohesion funds. The term refers to the interconnected use of advanced technologies (e.g. IoT, AI, big data analytics, cloud computing, Virtual and Augmented Realities) in production to enable new and more efficient processes and create new goods and services (OECD, 2017[28]). The government has created the Strategic Research and Innovation Partnership (SRIP) Factory of the Future (FoF) as a public-private partnership to develop new products and technologies with higher added value. Such initiatives in other countries also include a demonstration centre, providing an environment for the application and implementation of Industry 4.0 principles technologies, thus facilitating larger deployment in enterprises (Box 2.2). A demonstration centre for Industry 4.0 would allow enterprises to access new technologies and practical training as well as testing R&D knowledge in a real industrial environment, thus spurring higher uptake and innovation.

Figure 2.15. SMEs rely very little on IPR developed by public research organisations

As % of total firms in the firm's class, 2016-2018



Source: Statistical Office of Slovenia.

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Box 2.2. Demonstration and testing facilities for digital technologies

Some countries have established new facilities for demonstration and testing of digital technologies to increase adoption. For instance, the SME 4.0 Competence Centres in Germany offer SMEs access to demonstrations of Industry 4.0 technologies and sector-specific applications (e.g. 3D printing, sensors). These demonstration facilities are often located at universities and allow simulation of business and production processes in a similar to real-world environment.

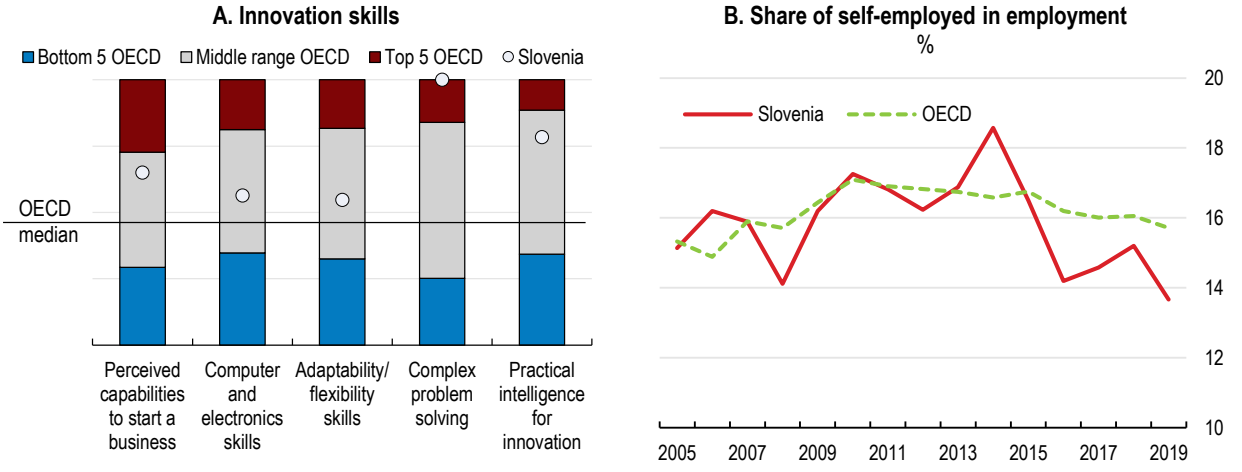
The Industry Platform 4 FVG, established in the Italian region of Friuli Venezia Giulia, offers access to testing equipment, prototyping tools and demonstration labs.

Several Austrian universities (TU Wien, TU Graz and Johannes Kepler University Linz) have also set up pilot factories, where SMEs have the chance to test new technologies and production processes without affecting production in their own facilities.

Source: OECD (2019), *Digital Innovation: Seizing Policy Opportunities*, https://doi.org/10.1787/a298dc87-en

Firm creation is relatively slow, although the population has the required skills to start a business, leading to a nearly 10% lower share of start-up firms (up to 2 years old) in the business population than the OECD average (Figure 2.16). A number of institutions are in place to support innovative start-ups, with the universities of Ljubljana and Maribor having technology parks and incubation programmes for start-ups (Box 2.3). Several other accelerators (ABC Accelerator), start-up schools and local incubation programmes exist in the country, supported by private and public funding.

Figure 2.16. Innovation skills are high but the share of self-employed is low



Source: OECD (2021), OECD SME and Entrepreneurship Outlook 2021, OECD Publishing, Paris, https://doi.org/10.1787/97a5bbfe-en.

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Box 2.3. Higher Education Institutions' entrepreneurship education for SMEs

The 2021 OECD review of the higher education institutions' support of innovation and entrepreneurship found that their entrepreneurship education was an important element in the government's entrepreneurship support (OECD/EU, 2021[29]). A key development was the 2020 establishment of a Strategic Council for Entrepreneurship in Education to bring together researchers and representatives from the private sector to formulate an action-plan to develop entrepreneurship education across all levels of education, including life-long learning training.

In 2017, performance-based funding was introduced, amounting to 3% of the total public funding of higher education, to stimulate collaboration activities in higher education. In addition, many HEIs have created technology transfer offices (TTOs) and research centres to support innovation and knowledge transfer (for instance in the Universities of Primorska and Ljubljana). Moreover, such offices and centres represent learning opportunities for researchers to develop cutting edge-technology to respond to the needs of industry. In addition, a knowledge and technology transfer (KTT) consortium (2017-2022) was created to associate TTOs from public universities and research centres to offer a pool of technologies and products to private companies. A further step to stimulate research and knowledge transfer involves internationalisation of the higher education system, although the number of international students and lecturers remain relatively low.

Education of entrepreneurship takes various forms. Higher education institutions are increasingly developing courses and organising extra-curricular activities (such as festivals) to foster students' entrepreneurial mind-sets. The latter encompasses soft and technical skills to allow creative problem-solver individuals to operate in complex contexts that helps individuals cope with globalisation and digitalisation. Entrepreneurship education connects to different objectives. While generating start-ups is always a popular objective, entrepreneurship training is delivered also in life-long learning activities

(such as GEA College, a private HEI whose Centre for Vocational Schools delivers entrepreneurship courses). In addition, entrepreneurship education is tailored to prepare individuals that will work in local SMEs and/or take over a family business. Entrepreneurship education is also connected to digital research and teaching. For example, the University of Primorska's HICUP Lab (Humans Interacting with Computers) hosts a group of international researchers working on making digital resources more interactive and profitable for users.

A number of challenges remain. Funding was found to be too low to boost cutting-edge research, knowledge transfer and entrepreneurship development. Moreover, long-term funding mechanisms are lacking as most current funding is for time-limited projects and based on competitive bidding for grants allocated by the government, the EU, private donors. Perhaps more problematic, there are few incentives for researchers and teachers to carry out knowledge transfer activities as these are not recognised in HEI employees' job description or through remuneration and promotion criteria. Another area of concern is the lack of a national evaluation system to measure research impact and knowledge transfer activities as found in Australia, Italy, the Netherlands, and the United Kingdom. Even at the local level, such evaluation is limited, as most HEIs do not track progress in these areas. The exception is the University of Ljubljana, which has developed some key performance indicators to track the achievement of knowledge transfer objectives and start-up development (such as number of spin-offs, number of start-ups, patents, and license created).

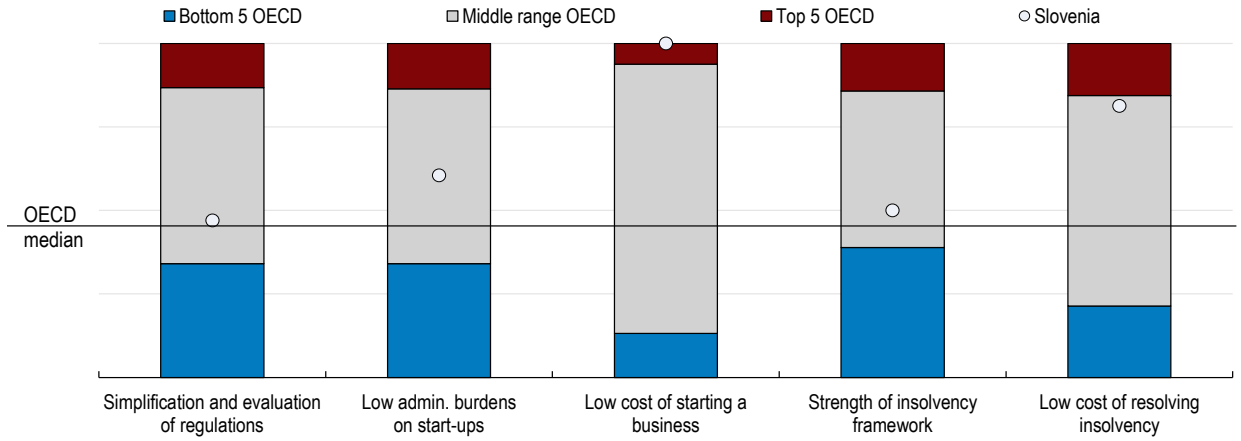
Going forward, the government should increase performance-based funding, while requiring all HEIs to develop evaluation systems, which could be used for national assessments. Staff engagement could be promoted by considering knowledge transfer as criteria for evaluation, promotion and remuneration.

The government's Action Plan Slovenia - the Land of Innovative Start-up Enterprises identifies talent attraction as one of the main obstacles for further developing the start-up ecosystem (Ministry of Economic Development and Technology, 2018[30]). The high tax burden on labour (Chapter 1) increases barriers to young innovative enterprises to hire high-skilled workers, putting Slovenia at a disadvantage in the global race for digital talent. Internationally, high-tech start-ups often use stock incentives schemes to recruit and retain talent. However, the lack of capital gains taxation means that exercised stock options are taxed as personal income. This typically means that the highest marginal tax rate is applied. In contrast, if the workers were remunerated with the same amount in the form of wage income over a number of years, the average tax rate would be lower. Thus, stock options could be treated as wage instalments (Demmou and Franco, 2021[31]). In 2020, France introduced changes to stock option rules, including introducing friendlier taxation for stock options granted by non-French issuing companies, and with a flat tax 30% applying to income from capital and an employer social security contribution rate of 7.5% of the initial value of the share option. Likewise, Slovenia could introduce capital gain taxation with the possibility of favourable treatment of stock options, while ensuring that tax planning and arbitrage opportunities are not created.

The business environment is in many respects favourable (Figure 2.17). The one-stop-shop business Point SPOT provides all the information related to setting up and operating a business for EU, EEA and Swiss entities. Any EU citizens online can carry out the registration of a sole trader or a single-member limited liability company, but legal and organisational forms that include multi-member limited liability companies require founders to appear before a notary. Recapitalising a company also requires investors to be physically present. Such barriers reduce investment incentives. To increase the attractiveness to foreign firms and investors the need for in-person verification should be replaced by an eNotary function that allows online registering.

Figure 2.17. Further progress could be made to ease the regulatory burden on entrepreneurs

Entrepreneurship regulatory framework, benchmark index



Source: OECD (2021), "Sources of SME&E resilience in Slovenia", in OECD SME and Entrepreneurship Outlook 2021, OECD Publishing, Paris, https://doi.org/10.1787/5a4a6e0d-en.

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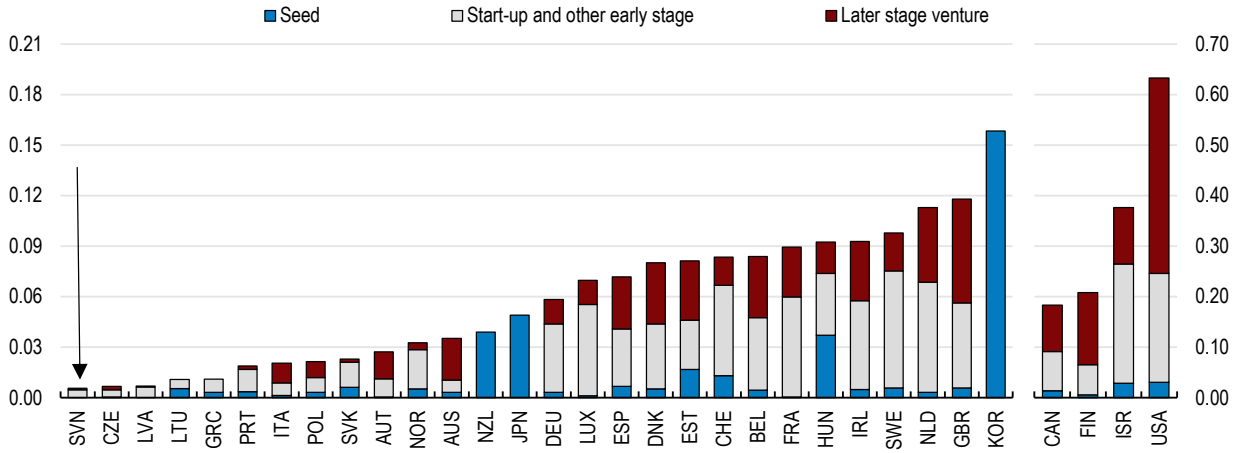
One of the largest challenges for establishing a new business is access to finance. Bank financing constitutes almost the exclusive source of external funding for SMEs (EIB, 2021[32]). Stock market capitalisation and venture capital (VC) investments remain among the lowest in the EU and OECD (World Bank, 2022[33]) (Figure 2.18) (Chapter 1).

The government, through the Slovene Enterprise Fund, provides financing at favourable conditions to micro, small and medium-sized enterprises, through guarantees for bank loans with interest rate subsidies. In addition, a variety of programmes support young enterprises (start-ups) in different development stages. These include grants for innovative start-ups and seed capital in the form of convertible loans and equity investments, as well as an equity financing for fast-growing innovative start-ups (Slovene Enterprise Fund, 2022[34]). However, high-risk financing for later stages of growth is largely absent. In the UK, the Seed Enterprise Investment Scheme (SEIS/EIS) provides tax reliefs to individuals who invest in certain companies, social enterprises, or Venture Capital Trusts (UK Government, 2022[35]). Spain has also introduced a reduction in the corporate tax rate for venture capital companies and exemptions from capital gains for those investing in smaller, younger and unlisted firms (OECD, 2021[36]). Following these examples, Slovenia should introduce tax deductibility of start-up and growth financing for innovative start-ups and SMEs. Other options to bolster finance for start-ups include increased entry of Fintech companies (Chapter 1).

Figure 2.18. Venture capital investments are very low

Venture capital, as % of GDP, 2020 or latest available year



Note: For Korea, Japan and New Zealand, breakdowns of venture capital by stage are not available.
Source: OECD Entrepreneurship Financing database.

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Increasing availability and uptake of digital services

Digital government is a cornerstone in the government's effort to digitalise the economy (Box 2.4). Slovenia performs slightly above the OECD in the development of digital government, scoring well in the provision of open data (OECD OUR Data Index), but lagging behind in data-driven orientation (Figure 2.19). The latter could be instrumental in using data to anticipate and respond to the needs of users to help deliver better services and policies. This could be supported by better promotion of data integration, access, sharing and use across the public sector (OECD, 2020[37]).

Box 2.4. Digital government can be further improved

The 2021 OECD review of digital government in Slovenia identified an ongoing commitment for using digital technologies and data to provide more effective and efficient public services, putting the country above the OECD average for both Digital Government (15th) and Open Government Data (10th) (OECD, 2020[37]; OECD, 2020[38]; OECD, 2021[39]). Other important achievements include consolidating central government websites into GOV.SI (https://www.gov.si) as the primary destination for information, and eUprava (https://e-uprava.gov.si) as the main entry for accessing public services. In addition, the growing maturity of tools to manage digital identity was critical in enabling increasing numbers of citizens to access the services they needed when the COVID-19 pandemic made online channels the only option. Finally, the public sector has made great strides in the access, sharing and use of data. This is reflected in efforts made to foster a strategic approach towards publishing Open Government Data (*Odprti Podatki Slovenije OPSI*, https://podatki.gov.si) as well as the development of the infrastructure to support data interoperability within government, in the form of the common application building block TRAY *(Skupni aplikacijski gradnik Pladenj*).

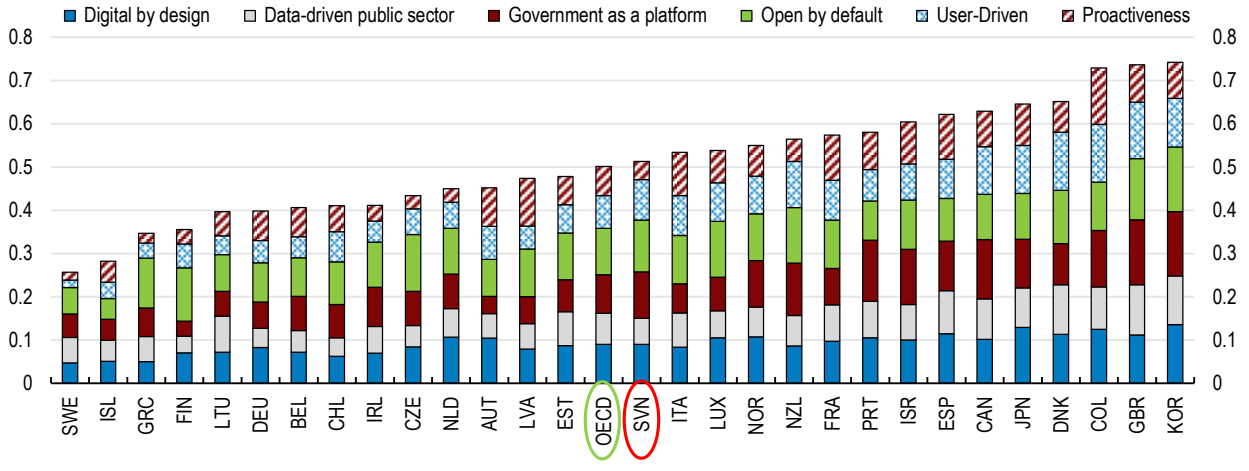
As a new digital government strategy is being prepared, the greatest challenge is to ensure a consistently high level of digital government maturity throughout the public sector. The OECD's Recommendation on Digital Government Strategies (OECD, 2014[40]), Digital Government Policy

Framework (OECD, 2020[41]) and the recommendations contained within the Digital Government Review provide the basis for identifying the following priorities:

- Secure consensus in the creation of the new strategy among the most relevant actors (the Ministry of Public Administration and the newly formed Government Office for Digital Transformation) as well as throughout public sector institutions to ensure that the strategy is a collective endeavour with shared responsibility and sense of ownership.
- Support the new strategic efforts with the renewal of oversight of digital government procurement, delivery and design through, for example, standardising business cases or assuring quality against commonly agreed quality standards to help encourage collaboration, avoid duplicated effort, and solve cross-government challenges.
- Develop a people-centred service design culture throughout the ecosystem for designing and delivering public sector services to ensure greater consistency in the approaches and capability between different organisations and suppliers. Creating working environments that encourage digital transformation require strategic approaches to: leadership for championing user needs; organisational redesign for encouraging more flexible working; job families to distribute decision making; and training activities to equip all public servants with the core skills identified by the OECD as being necessary to support digital government (OECD, 2021[42]).
- Promote a comprehensive approach towards data management in the public sector that aligns with the OECD Framework for a Data-Driven Public Sector (OECD, 2019[43]) to ensure the governance and application of public sector data can unlock its full potential in contributing to proactive, seamless and above all, trusted, public services. Leadership is again particularly important both from the centre in the form of a Chief Data Office(r) but also at the level of public institutions through the identification of data stewards and resourcing of dedicated teams.

Figure 2.19. Digital government is average

OECD Digital Government Index, 2019, score 0 (worst) to 1 (best performer)



Note: Data are not available for Australia, Hungary, Mexico, Poland, Slovakia, Switzerland, Turkey and the United States.
Source: OECD Survey on Digital Government 1.0.

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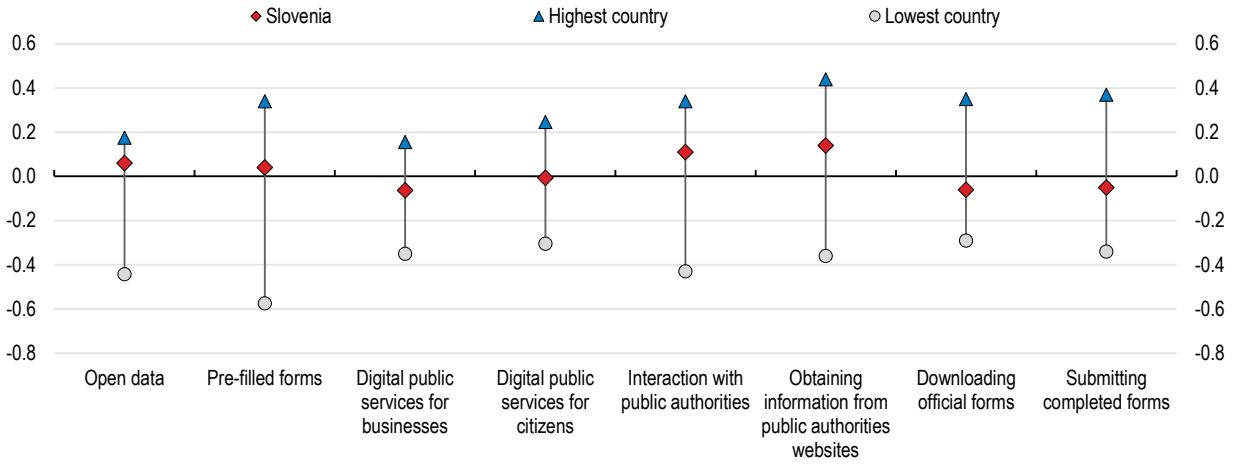
The use of the Internet to interact with and obtain information from public authorities is commonplace. However, the share of users downloading and submitting forms through the Internet is below the EU average and far from the best performing countries (Figure 2.20). The migration to a single government platform GOV.SI is expected to simplify the user experience of accessing services. Nonetheless, user experience is impaired by the silo approach across government in the provision of digital services. Joined up services from different silos can result in savings for the public administration and for citizens, as shown by the electronic sick leave scheme (eBOL). Since February 2021, doctors share the eBOL with employers through the business portal SPOT. Employees do not receive paper forms, nor have they to share them with the employers, and have access to their own data through the portal of the Health Insurance Institute. This has resulted in estimated annual savings of EUR 11.5 million. In general, the scope for digitalisation in the health sector can be exploited further (Box 2.5).

The public administration has a common building block (TRAY platform) for electronic data enquires and collection from heterogeneous data sources, but several public organisations responsible for primary registers do not use it. The Financial Administration, for instance, has its own process for exchange of data with other bodies in the public administration. Improving data infrastructure and standardisation is a key factor to increase interoperability between databases and exchange of data among bodies of the public administration (OECD, 2021[39]).

Figure 2.20. Availability and use of digital public services can be further improved

EU = 0



Note: Open data is a composite indicator which measures to what extent countries have an open data policy in place, the estimated political, social and economic impact of open data and the characteristics (functionalities, data availability and usage) of the national data portal. Pre-filled forms (score 0-100) is the amount of data that is pre-filled in public services' online forms for the life events included in the scope (Regular business operations and Business Start-up, Moving, Owning and driving a car, Starting a small claims procedure, Family, Career and Studying); Digital public services for citizens (score 0 - 100) indicates the share of administrative steps that can be done online for major life events for citizen (Regular business operations and Business Start-up, Moving, Owning and driving a car, Starting a small claims procedure, Family, Career and Studying) birth of a child, new residence, etc.); Digital public services for businesses (score 0-100) broadly reflects the share of public services needed for starting a business and conducting regular business operations that are available online for domestic as well as foreign users. Indicators on use are expressed as a percentage of individuals.
Source: DESI (2021), individual indicators, https://digital-agenda-data.eu/; Eurostat Digital Economy and Society database, https://ec.europa.eu/eurostat/web/digital-economy-and-society.

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The General Administrative Procedure Act prohibits administrations to ask citizens for the same information if data is already available in the competent agency. However, only guidelines for information solution development covering the Once-Only-Principle (OOP) are in place. Introducing compensations for households that have to provide data more than once would provide incentives for the administrations to apply the OOP more stringently.

Box 2.5. Digitalisation in the health sector needs a long-term strategy

There is a relatively large scope for digitalisation in the health sector and an ambitious e-Health programme has been in place over the last five years to improve service quality, integrate the existing disparate health information systems across the health care system and capture and optimize the use of enhanced health data. However, the e-Health programme lacks in comprehensiveness. For example, telemedicine is underdeveloped and which uses digital technologies to provide remote delivery of health care services. Such as allowing healthcare providers to evaluate, diagnose and treat patients without the need for an in-person visit, creating the opportunity to cut costs and save time for both providers and patients. However, such services are rarely reimbursed by the health insurance.

TeleKap (Telestroke) is among the few telemedicine programmes covered, which. contributes to the treatment of stroke. The system operates through audio-video conferencing in 12 hospitals and enables immediate treatment of patients, even in hospitals where the neurological service is not available, and is often decisive for a better outcome of this acute disease. Since 2021, telemonitoring of COVID patients is also reimbursed by the health insurance. Despite the potential cost savings and efficiency gains, most telemedicine services are not covered in the compulsory health insurance from the Health Insurance Institute of Slovenia (ZZZS) or are not fully developed.

The eConsultation (ePosvet) provides for electronic communication between healthcare professionals, family doctors and specialist. The service enables consultations between general practitioners and medical specialists about a specific patient, leading to gains in terms of reducing waiting periods and expending treatment processes. However, the eConsultation does not allow the patient to have direct contact with healthcare professionals. (DIGIT ZDRAV).

Another example of e-Health services with further development potential is the zVEM portal and its mobile application, which provide patients with full access to their healthcare documentation, referrals, appointments, prescriptions and records of medication dispensed, but does not provide access to their information about compulsory health insurance and complementary, voluntary health insurance. Such information is provided by ZZZS online. Incorporating health insurance in the ZVEM portal would create a “one-stop shop” where patients could book appointment and communicate with doctors as well access eBOL (electronic sick leave certificates) and other ZZZS documents online. Thus, to fully exploit the scope for digitalisation in the health sector, funding should be expanded to other e-health services and health technology assessments should be used to identify suitable e-health services to be eligible under the health insurance.

More broadly, there is a need for a comprehensive long-term digital health strategy to enhance cooperation among stakeholders and provide clear priorities and objectives.

About 38% of individuals not using government digital services state that they do not have to submit forms to authorities online, a much higher share than in other EU countries. This lack of need reflects that most public services are still provided in traditional forms. Moreover, when such services are offered digitally, there is no obligation or incentive for citizens to use them, reflecting an essentially opt-in approach. For example, in the personal income tax system, taxpayers receive as a default pre-filled personal income tax declarations by mail and return it as well by post. Only a third of taxpayers use the online possibility for their tax declarations, and only a quarter the mobile app developed by the Financial Administration. In contrast, businesses have the obligation to submit their tax declarations online through the national electronic tax management system (eDavki). Likewise, businesses are required to send invoices to the public administration entities only through electronic means. Moreover, all communication between government bodies is being switched to e-communications.

The recently adopted Debureaucratisation Act introduces the possibility for citizens to provide their email address and telephone number on a voluntary basis to receive government communications electronically, including the possibility for replacing the current use of physical letters for the tax declaration with electronic communication. The coexistence of physical and digital government services increases cost of provision. Efficiency gains would be increase with the share of the population only using digital government services. Moving from the opt-in approach to an opt-out approach in digital government services, progressively within a set schedule, would nudge a greater use of digital services. Such a shift would need to be accompanied by the provision of support and training to help the less digitally skilled part of the population. For example, Latvia promotes digital literacy among adults through the network of public libraries, which act as free Internet access points and centres for the development of basic digital skills (OECD, 2021[44]). This could be combined with introducing advantages for those using digital services to further incentivise uptake. In France, individuals that submit their tax declarations online benefit from automatic filling and calculations, while longer time for returning their forms.

Increased use of digital government services requires standardised electronic identification (e-ID). At present, a common national electronic identifier is lacking. Electronic identification is provided by private and public sector actors (Box 2.6). The government's SI-PASS is available on over 45 different websites. However, only 35% of public institutions use it. In addition, 7% of public institutions use their in-house developed solution (OECD, 2020[37]). For instance, the Ministry of Financial Administration recently released its own mobile application, adding to its existing mobile identification method. Fragmentation and legacy issues have to be solved to have a single national electronic identifier (OECD, 2021[39]).

Box 2.6. Electronic identification (e-ID) means in Slovenia

Currently, three e-ID means are in use:

- SI-PASS: a single account enabling online registration for a number of different electronic service providers and electronic signing of applications and other documents.
- Mobile identity smsPASS: a way of logging in to SI-PASS, based on two-factor authentication of the user that provides his or her unique identification, enabling electronic signing of documents and reliable identification of the user when using e-services
- Qualified Digital Certificates, issued by four different providers:
    - SIGEN-CA (for individuals and businesses); SIGOV-CA (for civil servants), issued by SI-TRUST, the National Trust Services Center of Slovenia (within the Ministry of Public Administration);
    - Posta@CA (issued by Pošta Slovenije);
    - AC NLB (issued by Nova Ljubljanska Banka);
    - Halcom CA (issued by Halcom).

The three e-ID means enable access to online services on the eGovernment portal (e-uprava.gov.si).

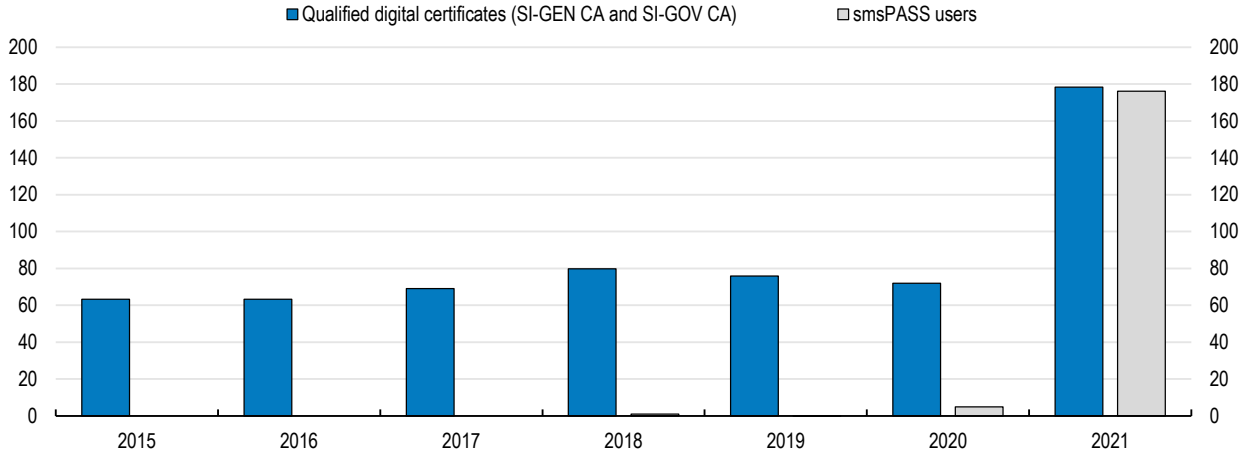
In order to use SI-PASS, the user needs to have an account on the SI-PASS website. This, together with a valid SIGEN-CA digital certificate or smsPASS mobile identity enables to access government services. SI-TRUST manages SI-PASS and issues smsPASS mobile identity certificates.

The new national biometric identification card, which was launched in March 2022, will serve as electronic identification to authenticate via SI-PASS.

Delays in adopting electronic identification and the fragmented offer have resulted in limited uptake of electronic identification. Indeed, only a fifth of the population uses the SI-PASS, even as the possibility to retrieve COVID-19 certificates online boosted the uptake of the SI-PASS (Figure 2.21). To obtain an electronic identity (activate the SMS Pass or a digital certificate), citizens need to visit an administrative unit or other registration point, creating an obstacle for adoption. For example, during the COVID-19 pandemic citizens needed the SI-PASS to access their health data on the zVEM digital health (ezdrav) portal, but despite additional registration capacity, the demand surge led to a backlog of applications. Electronic identification needs to rely on secure identification, but other countries do so via electronic means. In Italy, for instance, the national e-ID (SPID) can also be obtained through a video call with an authorised operator. In the same vein, Slovenia should replace the need for physical authentication with electronic methods.

Figure 2.21. The pandemic has triggered a quicker uptake of electronic identification means

Number of qualified digital certificates issued and new SmsPASS users, thousands



Source: Ministry of Public Administration of Slovenia.

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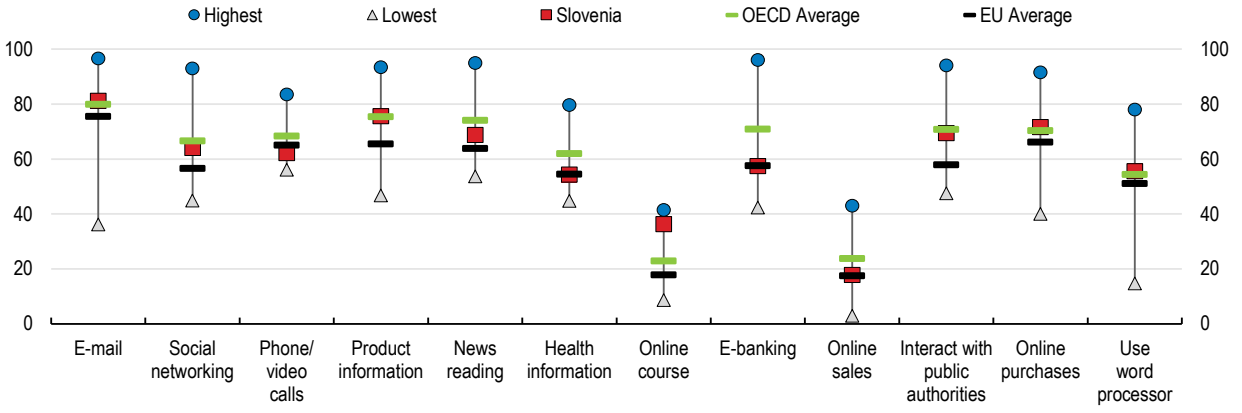
Improving skills and the labour market for the digital transformation

Like their OECD peers, Slovenians use the Internet for a variety of purposes, although comparatively less for phone and video calls and e-banking (Figure 2.22). Among those not using the Internet, lack of digital skills is the third most cited reason, after lack of need and interest. Close to 18% of people that do not shop online express concerns about the security of online payments or privacy (e.g., the provision of credit card information or other personal data), also pointing to limited familiarity with the digital environment.

Figure 2.22. Slovenians have a varied use of the Internet, although they lag behind in e-banking use

As % of all individuals aged 16-64 years-old, 2021 or latest available year



Source: OECD ICT Access and Usage by Households and Individuals database, http://oe.cd/hhind.

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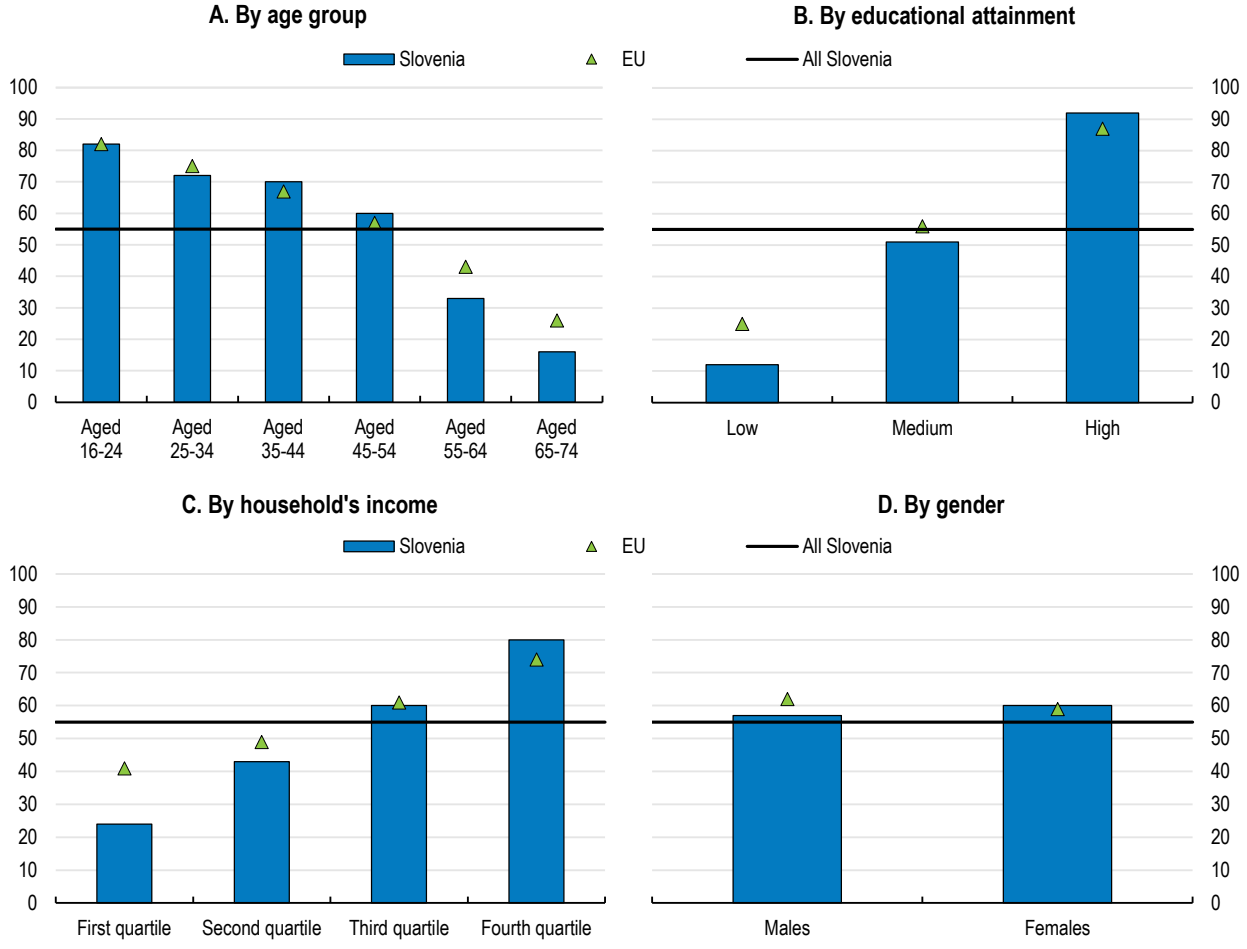
Nearly half of the working age population lacks basic digital skills, a share that is below the EU average (Figure 2.23). Persistent disparities in Internet use reflect socio-economic and demographic conditions. The low-skilled and the inactive (retired or other inactive) are particularly at risk of digital exclusion. Internet use does not differ much by gender; although for lower levels of education females have lower usage than males. The youngest, the highly educated and those with higher incomes have rates of digital skills that are in line with the EU average. Individuals with a well-rounded skill set in terms of literacy, numeracy and problem solving in technology-rich environments can be expected to use digital tools more efficiently, carry out more sophisticated activities online and better adapt to digital transformation (OECD, 2020[45]). Nevertheless, data from the Programme for the International Assessment of Adult Competencies (PIAAC) show that Slovenians lack these foundational skills, as the large majority of adults have low proficiency in problem solving in technology-rich environments (see above).

A third of young adults with upper secondary or VET qualification have weak digital problem solving skills, i.e.: the ability to access and interpret information in digital environments to perform practical tasks. This share is much higher than for those with a tertiary education (Figure 2.24). The VET sector is relatively large: 71% of upper secondary students pursue the vocational or technical track, against an OECD average of 42% (OECD, 2020[46]). Thus ensuring that all those leaving the VET system have the skills to thrive in a digital world is essential. Tertiary education offers additional skills development to some VET graduates: 35% of technical or vocational graduates enter short-cycle tertiary education. The share of those progressing to bachelor programmes is unknown, but close to half of bachelor level students have a VET background. However, VET graduates who do not enter tertiary education or drop out (two third of bachelor students with a VET background fail to graduate within three years after the theoretical duration of the programme) are left poorly prepared for succeeding in digital environments.

Basic education is designed to develop generic digital competences and VET is expected to enrich these with subject-specific digital competences. However, the 2018 TALIS survey shows that VET teachers lag behind other countries in how much they let their students make use of ICT for coursework (Figure 2.25). The survey also found that 35% of VET teachers felt that were able to support their students learning through the use of digital technology only "to some extent" or "not at all" (OECD, 2021[47]). The COVID-19 crisis has given a new push for the use of digital tools, imposing the widespread use of distance learning across the education and training system. There is now an opportunity to continue and further enhance the use of these tools, and address obstacles that prevent their widespread use. VET teachers should receive targeted technical support and training to be able to make full use of the potential of digital technologies in VET instruction. Denmark, for example, has established dedicated support centres to help VET teachers increase the use of technology in teaching (Box 2.7).

Figure 2.23. Digital skills are low among people with low income and low education

% of individuals who have basic or above basic overall digital skills, 2019

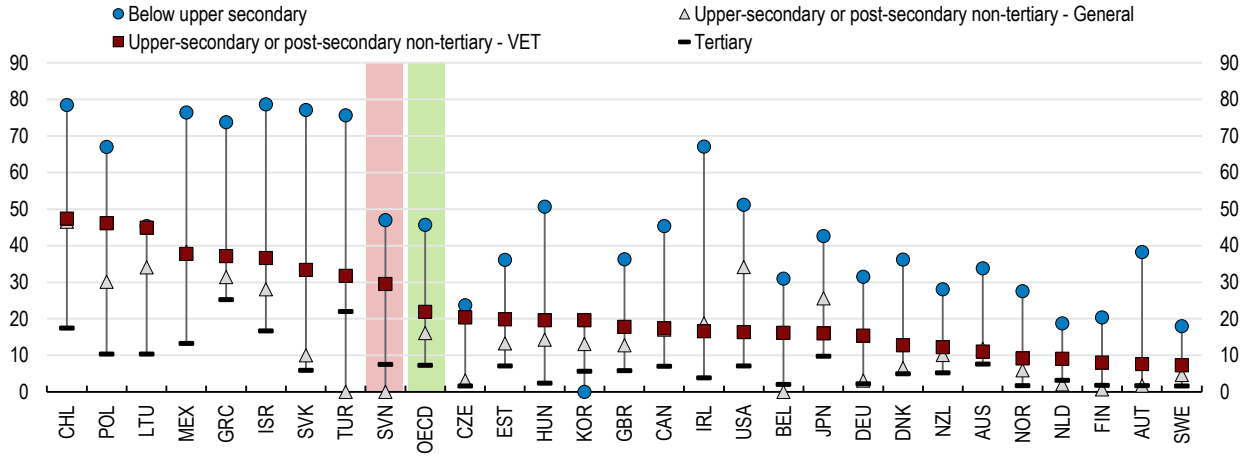


Note: Data by educational attainment and by gender refer to individuals aged 25-64.
Source: Eurostat.

StatLink https://stat.link/2zuv5a

Figure 2.24. Young workers with VET qualifications have weaker digital problem solving skills

% of individuals aged 16 to 34 performing at PIAAC level 1 or below in problem-solving in technology-rich environments, by level and orientation of educational attainment



Note: Includes individuals aged 16 to 34 not in formal education. General and VET refer to upper-secondary or post-secondary non-tertiary education levels. Belgium refers to Flanders only, the United Kingdom to England and Northern Ireland. At or below level 1 in problem-solving includes adults with no computer experience and adults who failed the ICT core test.
Source: (Vandeweyer and Verhagen, 2020[48]) using data from the Survey of Adult Skills (2012, 2014, 2017).

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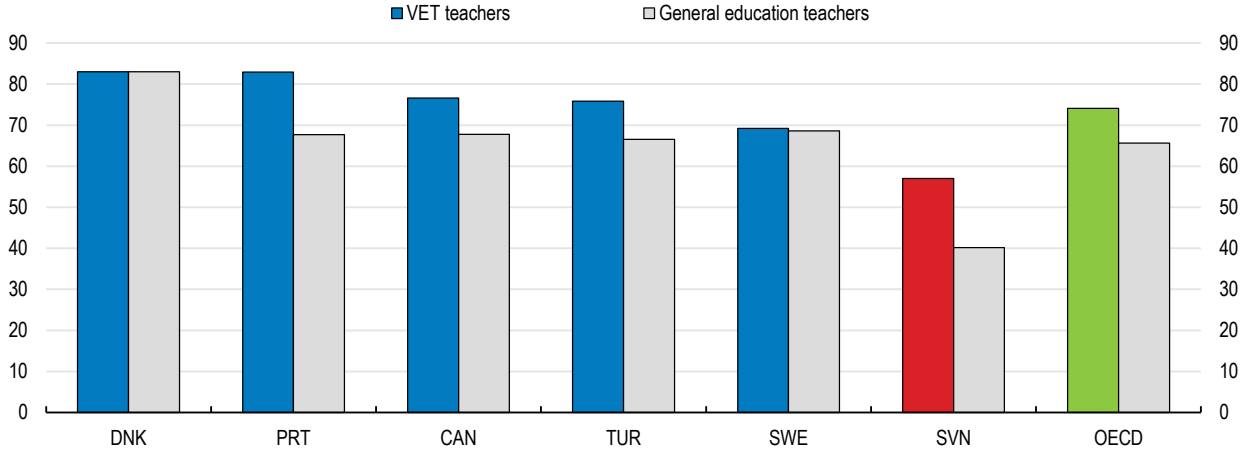
Figure 2.25. VET teachers make relatively limited use of technology

% of upper-secondary education teachers who let their students use ICT for projects and classwork "frequently" or "always"



Note: VET teachers are those who reported in TALIS that they were teaching practical and vocational skills in the survey year in upper secondary programmes (ISCED 3), regardless of the type of school where they teach. The reported average corresponds to the unweighted average for the six OECD member countries/regions in the sample.
Source: (OECD, 2021[47]) using TALIS 2018 data.

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Box 2.7. Specialised centres to promote technology use in VET in Denmark

The "Knowledge Centre for IT in Teaching" promotes the use of digital technologies in VET by supporting teachers in the use of IT across all subjects. The centre also provides professional development for VET teachers, covering both theoretical and practical elements. The centre also has a network of pedagogical staff and a network of school leaders to facilitate the exchange of ideas, practical and technical knowledge, and help identify solutions to common challenges.

In addition, the government created two Knowledge Centres for Automation and Robot Technology, promoting innovation in education and industry and helping VET schools make use of advanced technologies. Each centre works with over a dozen nearby VET schools. They provide teachers with material, such as teaching tutorials or short courses in Industry 4.0 and robots. Specialised facilities in the centres demonstrates to teachers and students the use robots in workplaces.

The centres lend digital machinery to VET teachers, provide them with training materials, and technical support with the objective of enabling teachers to set up and operate these technologies and incorporate them into their teaching practice. The centres also provide technological resources for VET programmes in the areas of industrial automation, mechanics, electronics, welding, data and communication, and education.

Source: (OECD, 2021[47])

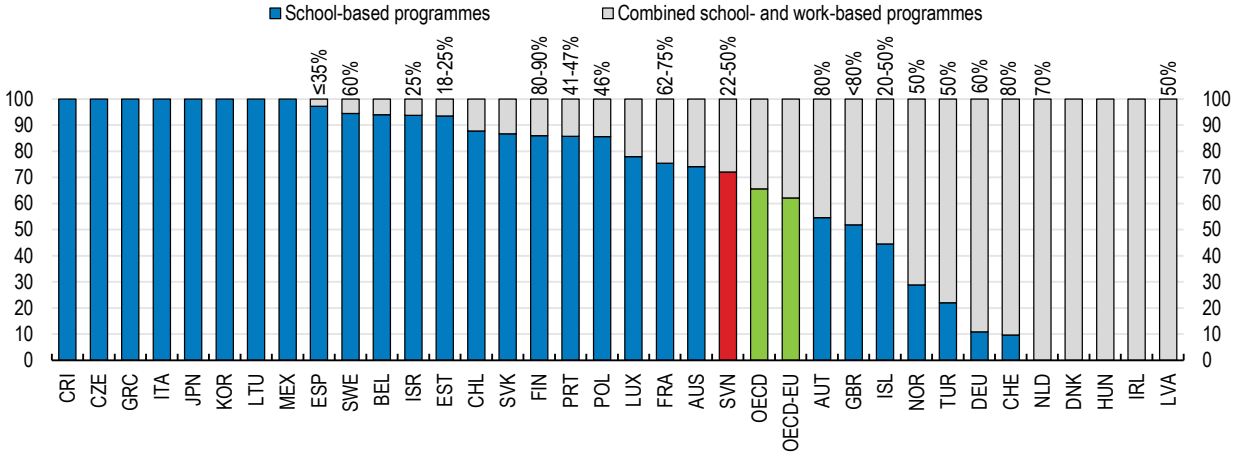
VET students in work place training have access to the latest technologies used in industry, helping them develop more advanced and applied digital skills, complementing basic skills developed in the school-based part of VET. In addition, they can learn from professionals skilled in the use of those technologies and learn in real work situations. Admittedly, companies vary in their use of digital technologies. Nevertheless, building on the existing capacity in companies to train VET students is likely to be more efficient than replicating digital tools and work situations at schools. Schools tend to struggle to attract professionals acquainted with currently used technologies and hire them as teaching staff. Bringing students to workplaces, allowing them to learn from their colleagues helps solve that problem.

The potential of work-based learning as a vehicle for the development of digital skills remains unexploited. The use of work-based learning in technical and vocational programmes has increased, but only a quarter of upper-secondary VET students are in programmes with a substantial work-based component (i.e. accounting for at least 25% of the programme duration) (Figure 2.26). This is much lower than in countries with strong apprenticeship systems, such as Germany and Switzerland. The proportion of time spent in work-based learning in VET programmes with substantial work-based learning averages 22-50% against 60% in in Germany, 80% in Switzerland.

For the vast majority of upper-secondary vocational students work-based learning involves 24 weeks of placement over three years. In technical upper secondary programmes, work-based learning is much shorter: eight weeks over four years (OECD, 2020[49]). In addition, disruptions due to the COVID-19 pandemic have deprived nearly a quarter of students from benefitting from work-based learning (OECD, 2021[50]). The introduction of apprenticeships in 2017 is a welcome development. Nonetheless, the sector remains small with around 1% of vocational students pursuing this route, which remain limited to a small set of "traditional" vocational occupations (e.g. electrician, carpenter or toolmaker). Extensive work-based learning should be developed in all vocational and technical programmes, including those in highly technical areas that make use of digital skills.

Figure 2.26. VET students have limited access to work-based learning

Distribution of upper secondary VET students by type of vocational programme, %, 2018



Note: Full- and part-time students enrolled in public and private institutions. Figures on top of the bars refer to the most typical duration of the work-based component as a percentage of the total programme duration for combined school- and work-based programmes.
Source: (OECD, 2020[46]).

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Technical programmes target occupations that are likely to use digital skills (e.g. electro-technician, computer technician). Apprenticeships were traditionally rooted in skilled trade and craft occupations in many countries, but international experience shows that it is possible to expand the approach well beyond. Countries, like Switzerland, that make extensive use of apprenticeships have successfully diversified its coverage (Box 2.8). For example, in Germany the most popular apprenticeship occupations are in the management and retail sector (BIBB, 2021[51]). Slovenia should introduce apprenticeships in technical programmes to develop digital skills among VET students. Given the time involved in introducing and scaling up new apprenticeship programmes, such a measure should be combined with increasing the duration of the existing work-based learning component in technical programmes.

Box 2.8. Switzerland: a large and diversified apprenticeship system

Upper secondary level apprenticeships are offered in a diverse range of occupations in Switzerland. Programmes have diversified beyond fields traditionally targeted by VET (like construction and manufacturing), into all economic sectors. For example, programmes are available in commercial areas (e.g. salesperson, office assistant), healthcare (e.g. medical assistant), culture and media (e.g. interactive media designer), and transport and logistics (e.g. logistician).

Several apprenticeships are available within the field of ICT and "Information technologist" was the 5th most popular apprenticeship occupation in 2021. Other target occupations in ICT include ICT technician, ICT system operator and mediamatics technician. Upon qualification, various learning opportunities are available at tertiary level: pursuing a professional examination after obtaining several years of work experience (targeted titles include cyber security specialist and ICT manager) or studying for a bachelor's degree (e.g. informatics, business informatics) at a university of applied sciences or university.

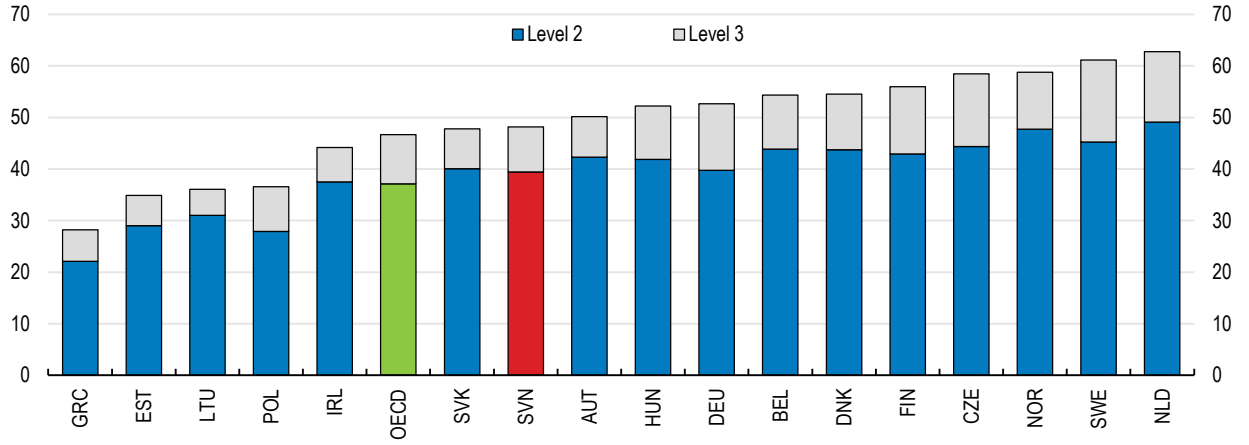
Source: (SBFI, 2021[52]) (SDBB, 2022[53])

Higher education could foster digitalisation

The higher education system equips graduates with basic digital skills that are broadly comparable to their peers in EU countries (Eurostat, 2022[54]). A similar picture emerges from the OECD Survey of Adult Skills that shows that half of higher education graduates aged 25-65 years have an intermediate or advanced level of digital problem-solving skills, close to the average of OECD countries (Figure 2.27).

Figure 2.27. Higher education provides graduates with relative good digital solving skills

% of 25-65 year-olds with higher education scoring at Level 2 or 3 in the problem-solving in technology-rich environments component of the OECD Survey of Adult Skills



Note: The OECD Survey of Adult Skills defines problem-solving in technology-rich environments as "using digital technology, communication tools and networks to acquire and evaluate information, communicate with others and perform practical tasks".
Proficiency in this domain is measured at four levels [below level 1 (the lowest) to level 3 (the highest)].
Each country or economy participated in one (or two) of the three rounds of the OECD Survey of Adult Skills in 2012, 2015 or 2018.
Source: OECD (2019[55]), Skills Matter: Additional Results from the Survey of Adult Skills, https://dx.doi.org/10.1787/1f029d8f-en.

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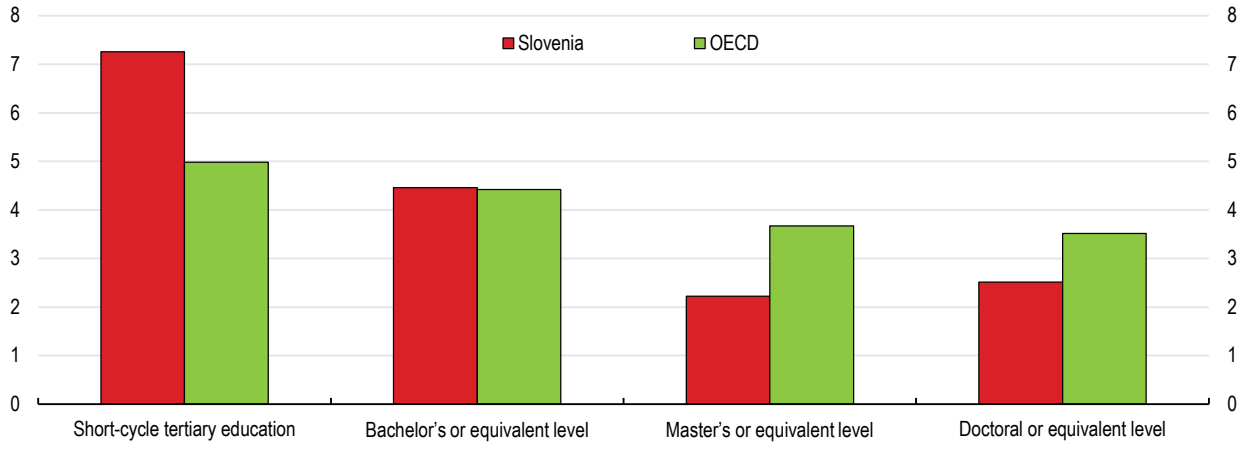
A concern, though, is that higher education is behind other OECD countries in developing advanced digital skills. The shares of ICT graduates at the short-cycle tertiary education and bachelor's levels are relatively high, but the shares of master's and doctorate graduates specialised in ICT are below the OECD average (Figure 2.28). This relatively low supply of ICT graduates is insufficient to meet current (Chapter 1) and future labour market demand for advanced digital skills (IMAD, 2021[56]). Indeed, improving Slovenia's international digital ranking requires increasing the high-skilled IT workforce.

The relatively high employment rates for ICT graduates reflect the high demand for ICT specialists, which are at par or higher than for other graduates and nearly 100% for advanced degree holders (Figure 2.29). Indeed, most ICT students find employment immediately upon obtaining a bachelor's degree or even before completing it (OECD, forthcoming[57]). Despite the high employment rates, relatively few graduates in other fields fill the unmet demand for ICT specialists, unlike in other countries. A study of four US states shows that more than one-third of job postings in ICT occupations have job requirements that include other fields of study. Particularly in demand are graduates in business and engineering studies, who are often able to signal their advanced digital skills to employers through alternative credentials such as industry recognised IT certifications (Brüning and Mangeol, 2020[58]). Graduates in these fields constituted over one-third of all Slovenian higher education graduates in 2019 – a substantial potential of digital talents (OECD, 2021[59]). However, the employment rate of business graduates is below the overall employment rate for all graduates, suggesting that their potential may not be fully utilised, either because of their lack of advanced ICT skills or unsuccessful signalling of their skills to employers (OECD, 2021[59]).

Figure 2.28. There are relatively few master and doctorate graduates in ICT

Share of higher education graduates in ICT fields among all graduates, by level of education, %, 2019



Source: OECD Education Statistics database.

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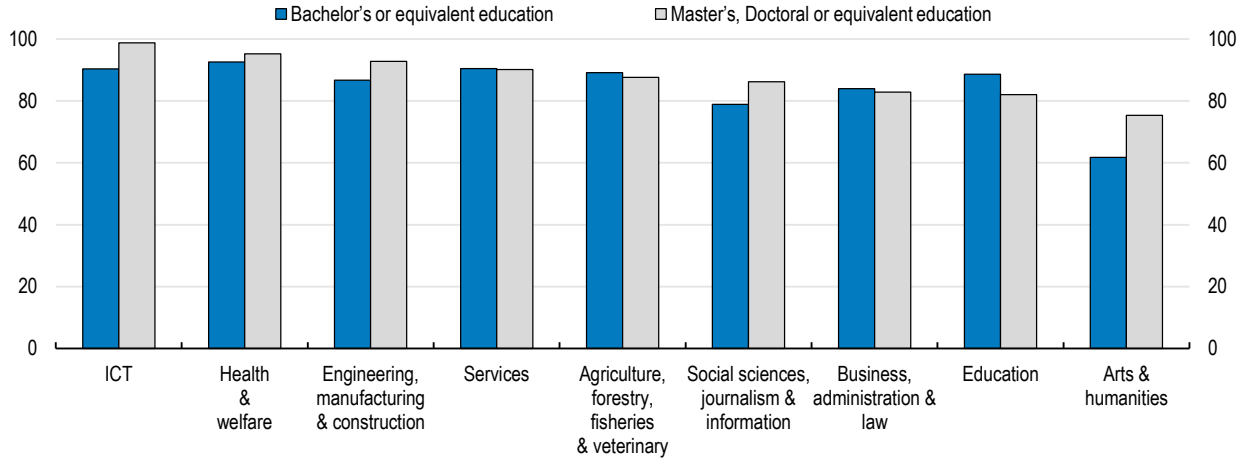
Figure 2.29. ICT graduates have high employment rates

Employment rates of higher education graduates by field of study, 25-34 year-olds, %, 2018



Note: The figure does not include data at the short-cycle tertiary education level and data for natural sciences, mathematics and statistics as the number of observations was below the publication limit.
Source: OECD Education Statistics database.

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Higher education could also help to address the increasing need for upskilling and reskilling of the workforce, since a relatively high number of jobs are at risk of automation or significant change in response to the adoption of new technologies (see below) (Nedelkoska and Quintini, 2018[60]). Moreover, the number of jobs at risk is likely to increase further as the digital transformation of the economy entails the introduction of advanced technologies and new business models, adding to the need for strengthening the skill base of the labour force. In 2019, around two-thirds of the labour force aged 25-64 had basic or higher digital skills, well below the share in the top five EU countries (Eurostat, 2022[54]).

A key to increasing the number of students in ICT-related studies is to improve study and career guidance for prospective students. This is already happening to some extent. Students and parents are provided information about future studies and careers through career advisors at schools, outreach activities organised by higher education institutions, and a nationwide information event called *Informativa* (OECD, forthcoming[57]). In many OECD member countries, public web portals with detailed labour market information supplement such information campaigns (OECD, 2021[61]). Ireland, for instance, launched *CareersPortal* in 2008 to support youth and adult learners to make informed study and career choices, helping users explore different career options and learn labour market demand, salary range and possible education pathways of various occupations (Hofer, Zhivkovikj and Smyth, 2020[62]). Introducing such a portal with detailed labour market information could help attract more students to the ICT field.

A special concern in this respect is that female students comprise the majority of higher education graduates, but relatively few of them pursue ICT programmes (OECD, 2021[59]). Other countries use information campaigns and targeted initiatives to assist female students in overcoming gender biases in occupational choices. For example, France's study and career information website *Onisep* includes testimonies from female workers in traditionally male-dominated professions (Hofer, Zhivkovikj and Smyth, 2020[62]). In Austria, the City of Vienna organises the *Vienna Daughters' Day*, where girls aged 11-16 years old spend a day at companies operating in the fields of science and technologies to get familiar with these fields (OECD, forthcoming[57]). Such targeted campaigns with role models could be conducive to raising the share of female ICT students.

Higher education institutions could also assist schoolteachers in fostering digital skill development at lower levels of education to increase students' interests in ICT careers. The low level of integration of ICT activities in primary and secondary education has trigged a political discussion about the potential introduction of computer science and informatics as a compulsory subject early on (IMAD, 2021[56]). In 2017-18, the European Social Fund provided a budget of EUR 1.3 million to three universities to support the integration of ICT in teaching and learning at the school level, encompassing more than 3 000 higher education teachers and students in teacher education programmes (European Commission, 2020[63]). The continuation of this type of support to both new and experienced teachers could help foster students' digital skills and potentially increase their interest in continuing studies in the field of ICT.

Funding is another tool to promote enrolment in ICT programmes. At the secondary education level, *Scholarships for Shortage Occupations* are used to encourage students to enrol in VET programmes for shortage occupations, including ICT professions (Government of the Republic of Slovenia, 2020[64]). However, at the higher education level, there are no financial incentives for students to enrol in ICT programmes and for higher education institutions to increase their offerings in the field. Some OECD countries use such funding to promote the development of advanced digital skills. Estonia, for example, has established the *IT Academy* – a collaborative initiative among the government, education institutions and ICT companies – which provides scholarships to students and grants to higher education institutions to promote the development of digital skills (OECD, 2019[65]).

About 53% of bachelor students in Slovenia completed their programme in 2017, against 67% on average in the OECD countries for which data are available (OECD, 2019[66]). This includes bachelor students in ICT fields. Enticing them to return to higher education to complete or enrol in advanced degree programmes could bolster the number of high-skilled ICT specialists. Higher education stakeholders point

to the need for more flexibility in the system that allows working adults to return to higher education. The government may consider increasing the flexibility of the system to facilitate the return to higher education among ICT workers, by allowing learners to follow smaller units of learning without enrolling in a full degree programme.

Upskilling and reskilling of the workforce is another area that needs more involvement of higher education institutions. Currently, there is some scope for targeted ICT learning in higher education, as all students have the freedom to choose 10% of their curricula, including short courses on digital skill development (OECD, 2021[67]). In addition, the government plans to integrate micro-credential programmes – short target learning courses – focusing on digital skill development into all higher education programmes. This may raise the base level of digital skills among higher education graduates, as well as equip non-ICT graduates to fill some of the unmet demand for ICT specialists upon graduation.

These efforts could be widened to support digital skill development in the workforce by strengthening higher education institutions' lifelong learning provision. However, higher education institutions receive no funding to develop short programmes targeting adult learners. At the same time, learners are unaccustomed to financing their studies, as there is no general tuition fee. Existing financial support for education - scholarships, tax benefits and training leave - mainly covers company-specific training for working adults or degree programmes for younger learners (OECD, forthcoming[57]). Some OECD countries support upskilling and reskilling of the workforce by developing micro-credential programmes with the collaboration between higher education institutions and industry partners. The Ontario government, for example, financed thirty-six micro-credential pilot projects developed through a partnership of higher education institutions and industry partners for the period of 2019-2021, nine of which focused on the development of digital skills (OECD, 2021[67]). The scope of the planned micro-credential programmes could be extended to include adult learning.

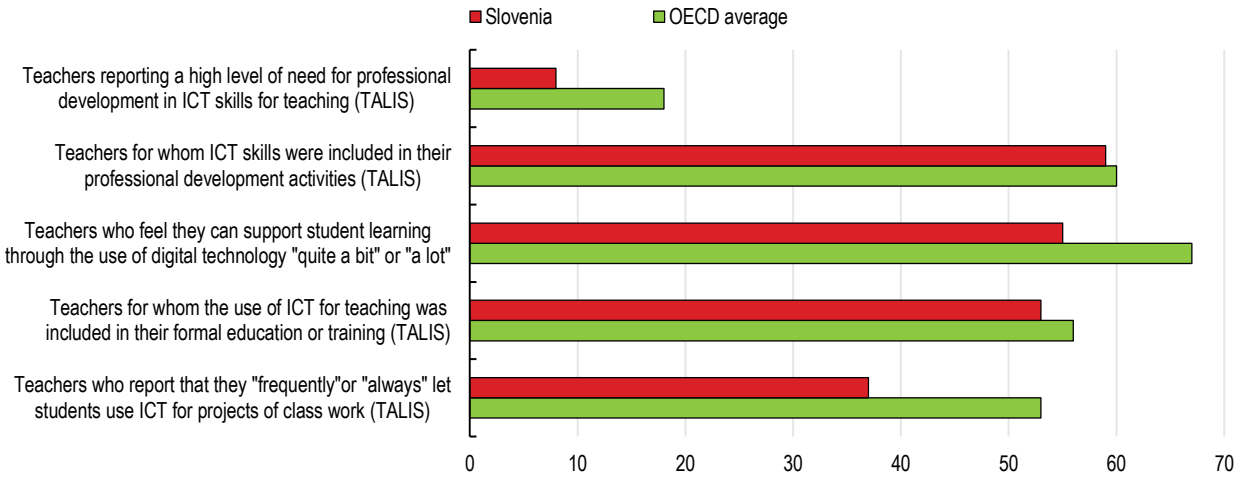
The Resolution on the National Programme (Master Plan) of Adult Education in the Republic of Slovenia 2021-2030 was adopted in March 2022. The Resolution aims to promote inclusive lifelong learning to all adults who have completed basic education or are at least 15 years old. The Master Plan includes targeted guidance and tailored learning, though a wide community partnerships at the local level and a network of high-quality trainers, supported by the Slovenian Institute for Adult Education. In particular, short-cycle ICT courses, e.g.: 100 hours, will be offered to students and teachers, leading to micro-credentials.

Satisfying the demand for ICT specialists

Since 1994, Slovenia has adopted a number of ICT initiatives in education (Ministry of Education, Science and Sport in Slovenia, 2016[68]). Furthermore, digital education is included in the National Digital Strategy 2020. Moreover, ICT tools in schools appear as adequate in international comparisons, but important gaps remain in teachers' ability to use the tools effectively (OECD, 2020[69]) (Figure 2.30). Before the pandemic, teachers reported that they used ICT for projects of class work to a lesser extent than OECD peers. During the implementation of emergency measures in response to the COVID-19 pandemic, 70% of teachers evaluated the distance learning as less efficient than work in class and more demanding and stressful (Institute of National Education, 2020[70]). The closure of schools and shift to distance learning demonstrated the importance of addressing the digital divides in computer equipment and connectivity in rural areas, and of stepping up teachers' digital competences and improve readiness for online learning.

Figure 2.30. Teachers' preparedness for ICT-based teaching was limited prior to COVID-19

% of teachers



Note: The OECD average refers to the average of OECD countries participating in TALIS 2018.
Source: OECD TALIS 2018 database.

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The National Digital Education Action Plan, developed by the Minister of Education, Science and Sport and the Digital Education Program Council, focuses on improving infrastructure, e-learning platforms, teachers' upskilling and support to schools' principles in developing digital transformation plans. This includes the introduction of compulsory study of computer science and informatics in elementary and high schools. Similar reforms to raise ICT literacy are taking place internationally, including in Canada, France, Portugal and the UK (OECD, 2020[45]). The inclusion of ICT subjects in schools signals the importance attached to students learning how to conduct a variety of tasks related to information processing in various digital contexts. However, it is equally important that schools and teachers create enough opportunities for students to use ICT and digital technologies in learning, so to foster digital skills in a more comprehensive approach rather than stand-alone ICT classes. The framework developed by the Australian Curriculum Assessment and Reporting Authority (ACARA) is an example to develop digital skills in this way (Box 2.9).

Digitalising the economy requires an increasing number of ICT specialists. The public employment services provides information on short-term labour market needs. However, there is no system for medium-term forecasting of knowledge and competence needs. This has contributed to the observed increase in the mismatch between the qualifications of the labour force and the labour market needs. For example, the share of highly qualified people employed in occupations that do not require tertiary education has more than doubled to 15.6% in 2018. A rigorous and systematic method to assess current and prospective skill needs, such as the Skills Assessment and Anticipation (SAA) methodology, should be developed (OECD, 2016[71]).

Box 2.9. Learning digital skills at school through a comprehensive approach

In Australia, ICT capability development is organised around the following dimensions:

- Managing and operating ICT (e.g. managing data, selecting and using software)
- Communicating with ICT

- Creating with ICT (e.g. using ICT to generate ideas or manage digital solutions for issues arising in learning activities)
- Investigating with ICT (e.g. finding and analysing information, verifying sources and reliability of digital data)
- Applying social and ethical protocols and practices when using ICT (e.g. recognising intellectual property, applying personal security protocols).

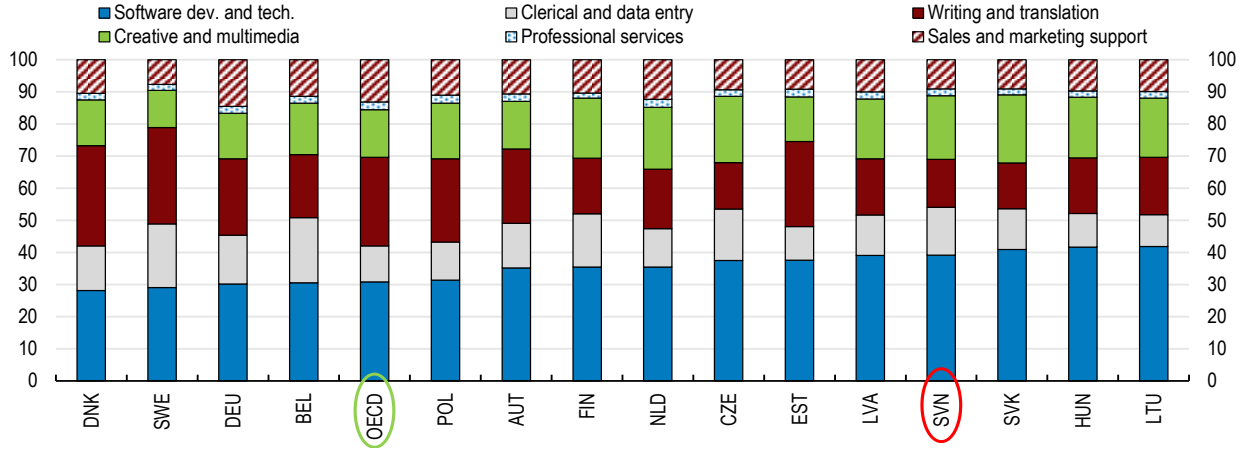
Students' proficiency is assessed in all these dimensions and across all school years as the development of ICT capability is considered a learning continuum. At the same time, ICT capability supports student learning in all subjects covered by the curriculum. For instance, students may use digital tools to create artworks, look for and critically analyse online information about historical events, or investigate mathematical concepts using multimodal technologies. A digital technologies learning area is also part of the curriculum, focusing on "understanding the characteristics of data, digital systems, audiences, procedures and computational thinking".

Source: (OECD, 2020[45]), *Digital Economy Outlook 2020*.

Currently, there are increasing shortages of ICT workers (Employment Service of Slovenia, 2021[72]). Data from jobs posted in freelance platforms show that software developers are most in demand, followed by writers and translators (Figure 2.31). Moreover, firms increasingly have troubles in filling vacancies, and more so than in other EU countries (Figure 2.32). The average share of graduates in ICT is slightly above the EU average in share of graduates in ICT. The inability of the education system to match the demand for ICT graduates reflects a relatively small wage premium in IT occupations (Figure 2.33). To a large extent, a small wage premium despite shortage of ICT workers is the result of the highly coordinated wage bargaining system, where the narrow wage distribution does not reflect changes in the relative demand for different occupations.

Figure 2.31. Software developers are in high demand

Main skills demanded in the online labour market, share of project/task occupations, %



Note: Each bar displays employer countries' share of projects/tasks posted on online labour platforms between January and July 2018 by the occupation of project/task. The Online Labour Index is based on tracking all projects and tasks posted on the five largest English-language platforms, which account for at least 70% of all traffic to online labour platforms. OECD refers to an unweighted average.
Source: Online Labour Index in (Kässi and Lehdonvirta, 2018[73]).

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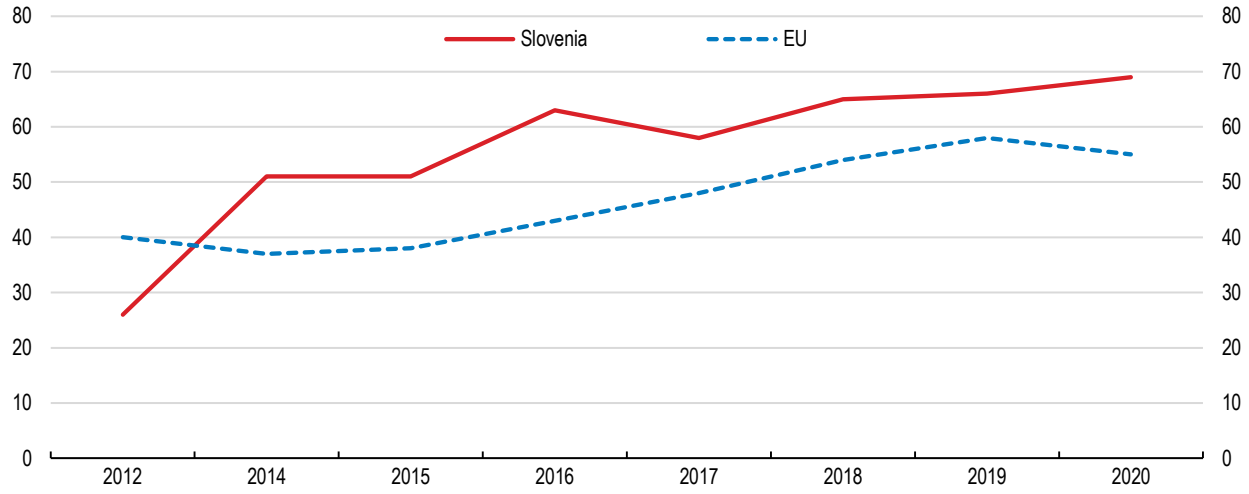
Figure 2.32. Enterprises have increasing difficulties in recruiting ICT specialists

Firms that had hard time to fill vacancies for jobs requiring ICT specialist skills, as % of firms which recruited / tried to recruit personnel for jobs requiring ICT specialist skills



Source: Eurostat.

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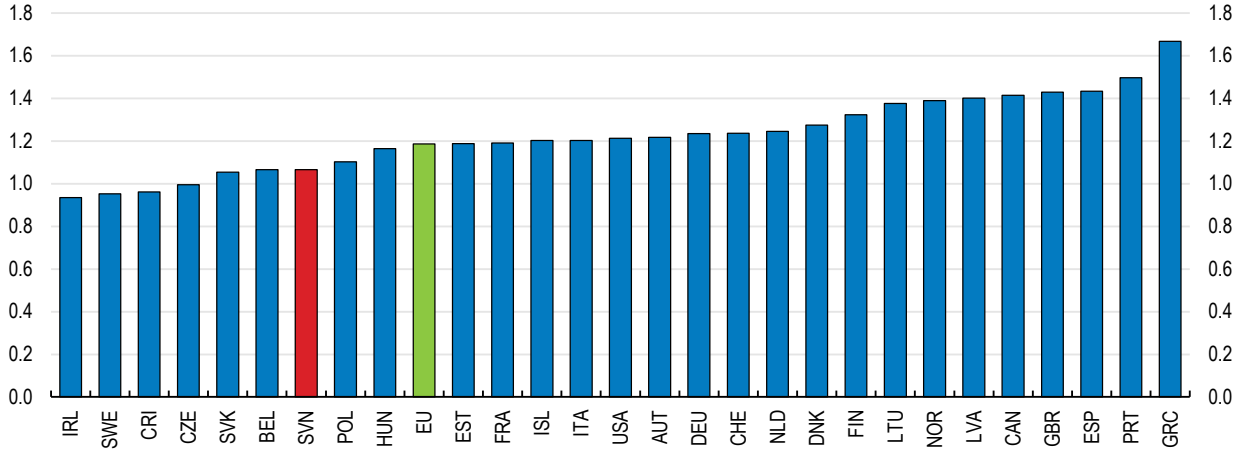
Figure 2.33. The wage premium for IT workers is among the lowest in the OECD

Wage premium, ratio, 2020 or latest available year



Note: IT and other information services correspond to classes 62 and 63 of the International Standard Industry Classification (ISIC Rev. 4). The wage premium is defined as the ratio of the sector's wage relative to the average wage to the average labour productivity of the sector relative to the average productivity of the whole economy. A value above (below) 1 measures the wage premium (gap) for the employees in "IT and other information services". Data for Germany, Ireland, Latvia, Lithuania, Poland, Portugal, Spain, and the United Kingdom refer to 2019. Data for Canada, France, Norway, Sweden, Switzerland and the EU refer to 2018.
Source: OECD National Accounts database.

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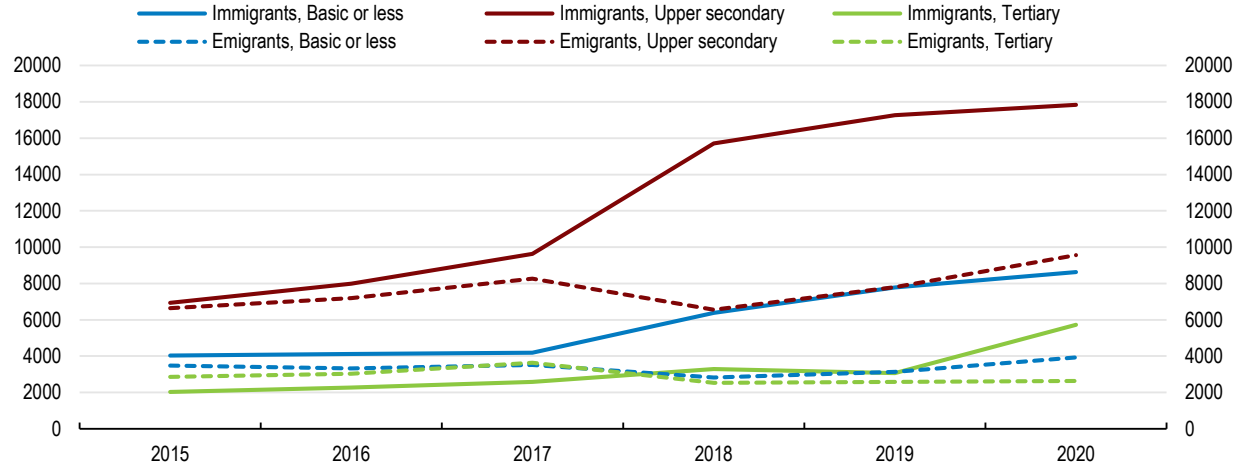
In 2021, a reform of the corporate income tax introduced a special tax relief for companies that employ professionals in shortage, as defined by the Ministry of Labour every year. However, this measure risks creating distortions in the market and subsidising employers for hiring certain categories of workers rather than those that are needed. For this purpose, other countries, such as Denmark and the Netherlands, use a special time limited flat income tax for foreign specialists with a salary above a certain level. Such a measure could help to overcome the barriers to hiring experts from the public sector's wage limitation rules.

Attracting skilled workers from abroad can help meet skills needs. However, most of the immigrant workers are medium-skilled workers, although more recently more tertiary educated workers are entering (Figure 2.34). Following the EU Single Permit Directive, non EU-nationals have to apply for a single permit for work and residence in Slovenia. High skilled workers may be eligible for an EU Blue Card, a temporary residence permit for the purpose of highly qualified employment. Blue Card criteria are a higher education degree and an employment contract of at least one year with a salary of at least 1.5 times the average annual gross wage. An additionally condition, for both the work permit and the EU Blue Card, is that there are no suitable candidates in the register of unemployed persons. This labour market test can be quite lengthy and cumbersome. On average, over the years 2019-2021, only 185 work permits per year were issued to foreign IT workers, out of total 23 665 permits issued every year.

Other countries, such as Germany, have simplified the hiring of skilled migrants from outside the EU, in particular ICT specialists. Workers from outside the EU with an appropriate qualification and a level of proficiency in the German language no longer need to have a work contract to reside in Germany, but can instead obtain a six-month residence permit allowing them time to find a job. Moreover, ICT specialists only have to prove work experience and there is no labour market test. The Slovenian schemes should be reformed along similar lines, by lifting the labour market test and reducing the salary threshold for ICT occupations. This could be supported by making work permit procedures available in other languages.

Figure 2.34. Slovenia attracts mostly workers with medium level of education

International migrants aged 15 or more, by education level



Source: Statistical Office of Slovenia.

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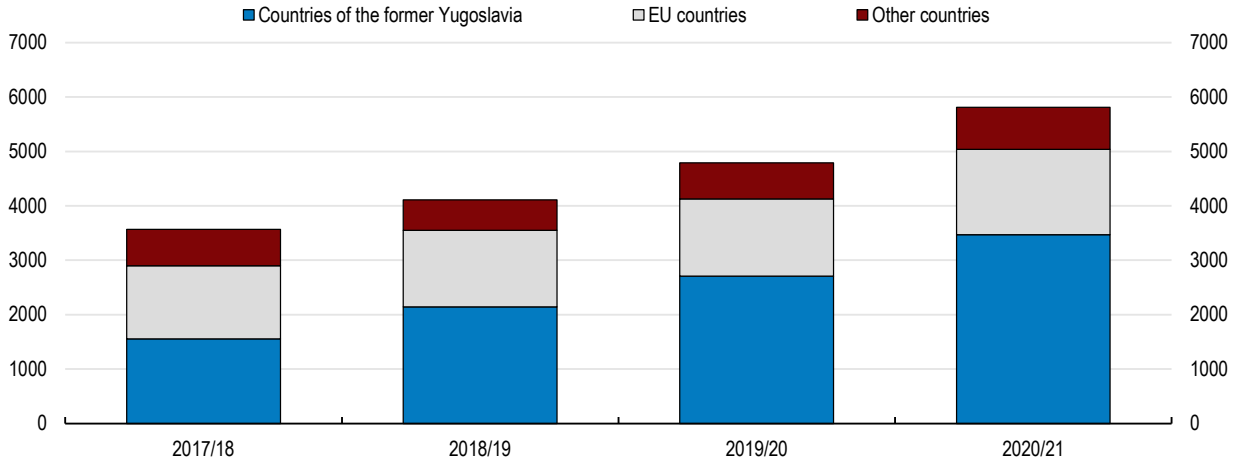
Slovenia attracts a growing number of international students, particularly from countries from the former Yugoslavia (Figure 2.35) (Box 2.10). However, no measures are in place to facilitate obtaining of a work permit by non-EU foreign people who completed their studies in Slovenia can apply for a single permit to search for employment and work in Slovenia. The transition from tertiary studies to the domestic labour market could be facilitated further by automatically granting such permits.

Figure 2.35. Slovenia increasingly attracts tertiary students from the former Yugoslavia

Foreign students in tertiary education by group of countries, by academic year



Note: Data include students in undergraduate (academic higher education), graduate (master) and doctorate programmes.
Source: Statistical Office of Slovenia.

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Digitalisation may bring many new opportunities for workers, but also an increased risk of job automation associated with digitalisation and other new technologies. Recent studies suggest that a quarter of workers face a high risk of seeing their jobs automated, almost twice as high as other countries (IMAD, 2020[2]) (Nedelkoska and Quintini, 2018[60]). Moreover, projections of labour demand in 2030 point few new job openings for workers with low skills qualifications, but nearly 50% more job offers for high- and medium-skilled workers (CEDEFOP, 2020[74]). Either way, maintaining full employment requires retraining and reskilling of workers.

Spending on labour market training is half of the OECD average and employees mostly rely on their employers to fund their training, as employers can deduct training expenses from their tax liabilities. However, workers in larger firms participate mostly in these trainings, including in ICT, reflecting that small enterprises often lack capacity to support training (Figure 2.37) (Table 2.2). The government is providing support, for instance through training vouchers for digital skills. This could be expanded by increasing support to firm-sponsored training in SMEs, e.g. increasing the scale of programmes for training vouchers, or by introducing measures at the individual level, e.g. tax deductions or tax credits, training vouchers, individual learning accounts and income-contingent loans (OECD, 2021[75]).

Box 2.10. Internationalisation of higher education is hampered by regulation

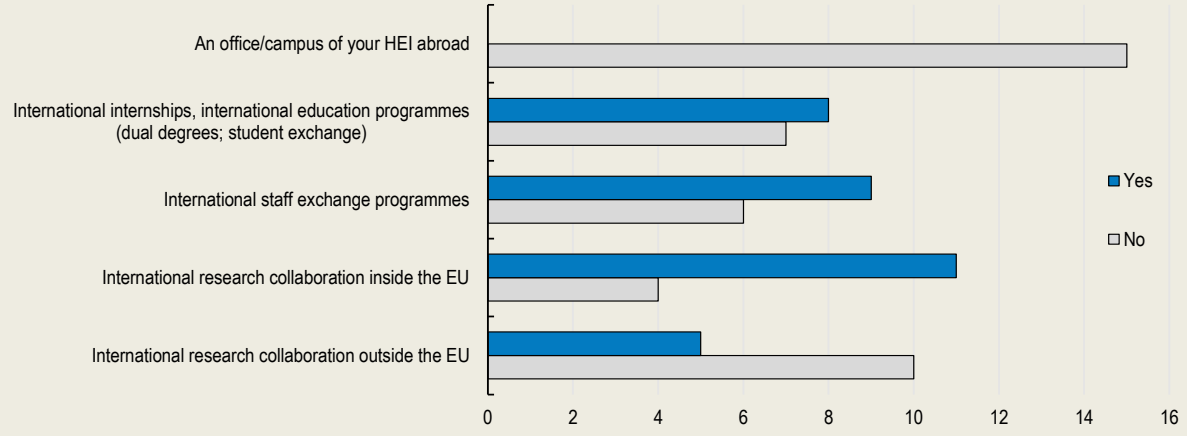
Over the past decade, the government has internationalised higher education system by stimulating research collaboration, modernising pedagogy and introducing new forms of learning (European Commision, 2022[76]). The 2016-20 strategy for internationalisation of HEIs had four pillars, including international mobility of students, researchers and staff (into Slovenia and abroad), international cooperation in research and development. In addition, it had a special focus on the Western Balkans as a

targeted region for strategic partnerships and mobility programmes (Ministry of Education, Science and Sports of Slovenia, 2016[77]). The government has recently established a council with experts dedicated to internationalisation and the 2021-2030 National Programme for Higher Education includes strengthening internationalisation of higher education as a key pillar.

A review on entrepreneurship and innovation in higher education in Slovenia found that half of HEIs have put in place recruitment policies to attract international staff, while nearly all have internationalisation as a priority in their written strategies (Figure 2.36) (OECD/EU, 2021[29]). A good example of the implementation of the internationalisation strategy is the University of Ljubljana, which has several bachelor and master degree programmes in English (University of Ljubljana, 2022) (University of Ljubljana, 2022[78]). In addition, the doctoral school has 21 doctoral degree programmes in different fields open to Slovenians and external applicants (EU and non-EU members). Some of these programmes are interdisciplinary and coordinated with other institutions (for instance the doctoral programme in Biomedicine is done in partnership with the Josef Stefan Institute). Expanding the number of English language programmes is hindered by the requirement that the same programmes also have to be taught in Slovenian.

Figure 2.36. Internationalisation is a priority for nearly all HEIs surveyed

Number of responses



Note: Higher Education Institutions (HEIs) responded to the question: "Please indicate which of the following elements, if any, feature in your HEI's strategy".
Source: OECD (2021), HEI Leader Survey of Slovenia.

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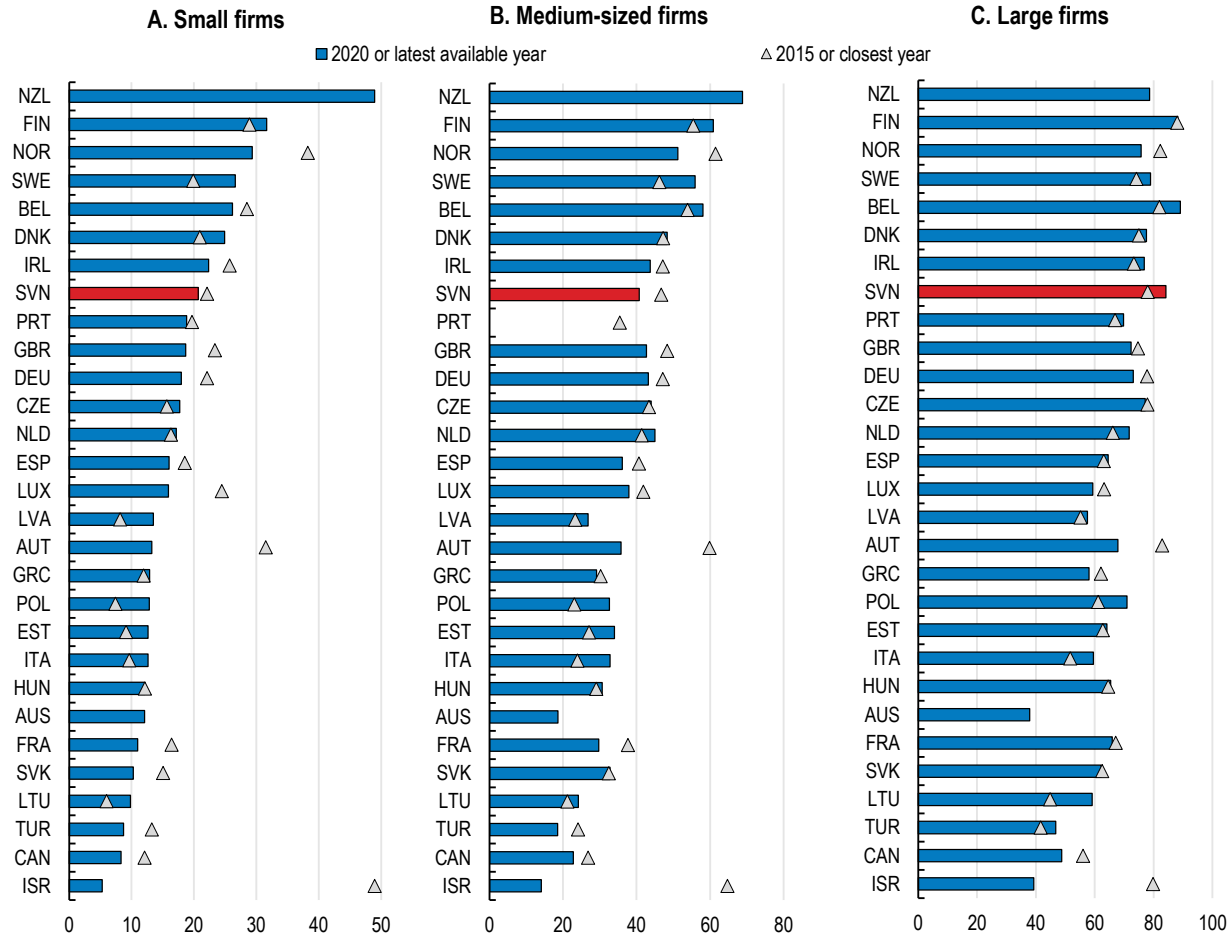
A problem, though, is that the link between internationalisation and entrepreneurship is relatively weak. Less than half of HEIs encourages internationalisation of entrepreneurial practices and fewer connect with international start-up networks and incubators abroad.

Internationalisation remains hampered by several factors. First, the Slovenian language first policy means duplication of teaching efforts, discouraging offering courses in English. Moreover, the policy also means that working papers are mostly published in Slovenian, although academic papers and research can be in English if required by academic evaluation. To attract further foreign students and researchers, restrictions on the use of English should be eased, particularly at master and PhD levels, while appointments and career advancements should be dependent on international recognised research and experience.

Figure 2.37. ICT training is mostly provided in large firms

Firms providing ICT training, as % of all firms in each size group



Source: Eurostat.

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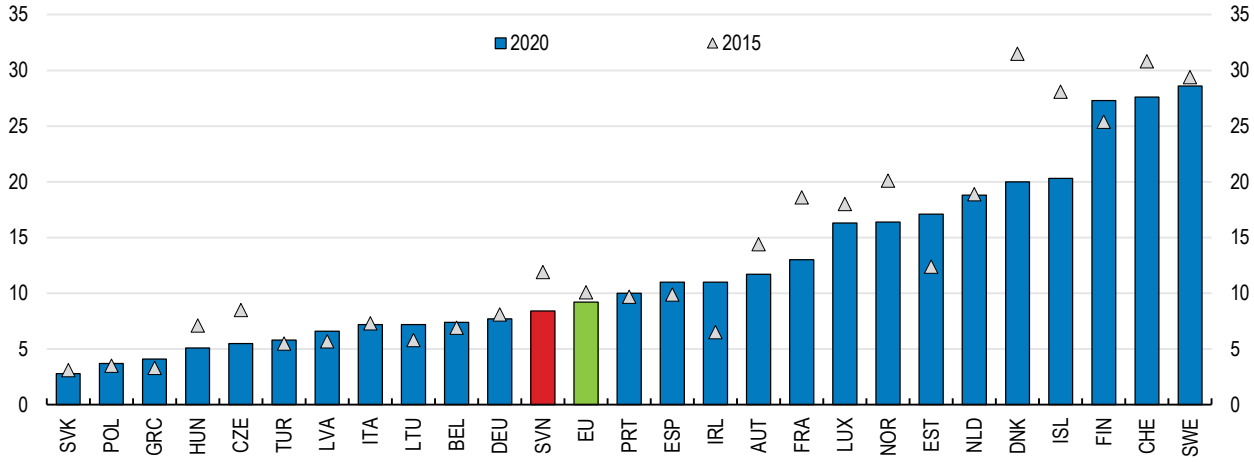
Outside firms, demand for adult training is low, as participation in lifelong learning is low and falling (Figure 2.38). The highly coordinated wage bargaining system has led to a narrow wage distribution, which do not reflect changes in the relative demand for different occupations, and thus provides few incentives for retraining. Indeed, this has led to one of the lowest wage elasticity to productivity, implying a weaker link between productivity and wages than elsewhere (Figure 2.39). Retraining incentives are further muted by the strong seniority element in wage increases, particularly as pathways, via unemployment and disability insurance, into early retirements provides exit routes for workers whose productivity has fallen below their wages (OECD, 2020[79]). As recommended in the last *Survey*, more decentralised wage determination where wages are negotiated at the firm level and framework conditions are negotiated centrally could increase incentives for workers to upgrade their skills (OECD, 2020[79]).

Figure 2.38. Participation in adult learning has been decreasing

Participation in adult learning in the last 4 weeks, as % of the population aged 25-64



Source: Eurostat Adult Learning: Participation Rate in Education and Training database.

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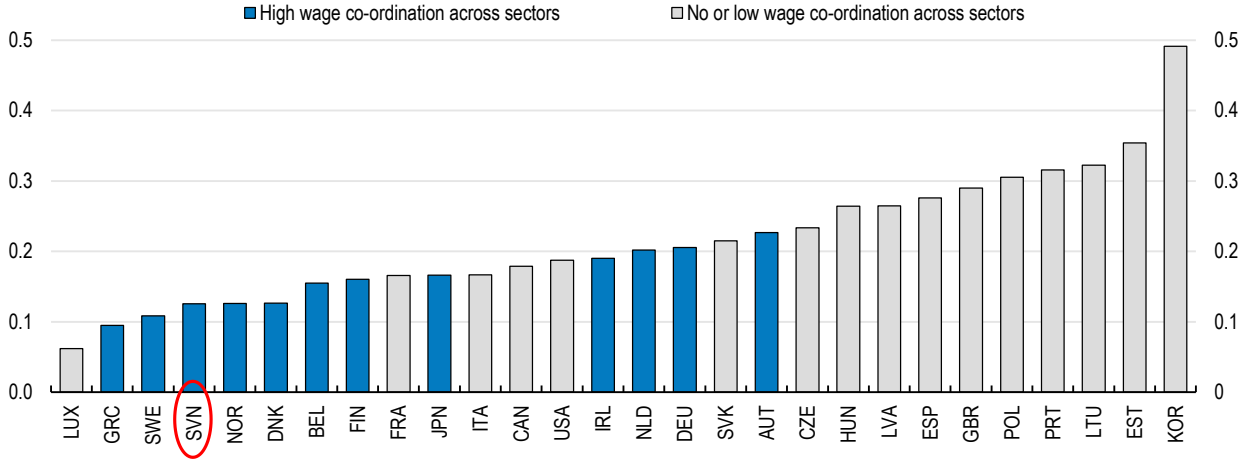
Figure 2.39. Misalignments of wages with productivity is strong

Wage elasticity to productivity



Note: Results are based on Ordinary Least Squares (OLS) regressions of the log hourly wage on log hourly labour productivity across sectors. The regressions include country-year dummies. Co-ordination is classified as high for a country if in the majority of the years in the sample it is classified as high.

Source: (OECD, 2019[80]), *Negotiating Our Way Up: Collective Bargaining in a Changing World of Work.*

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Table 2.3. Recommendations

MAIN FINDINGS	RECOMMENDATIONS(key recommendations are in bold)
Expanding high-quality connectivity at affordable prices	
Slovenia lags behind the OECD average and peer countries in terms of advertised speeds and actual experienced speeds.	Periodically publish actual broadband performance results per provider to foster competition and improve the quality of networks.
The territorial connectivity divide between urban and rural areas persists.	**Align investment subsidies to reflect actual deployment costs, particularly in underserved areas.** Reduce network deployment costs by streamlining access to rights of way and dispute resolution mechanism for infrastructure sharing issues.
Accelerating the digital transformation of the economy	
Coordination challenges between the Government Office and line Ministries need to be addressed.	Strengthen formal institutional and budgetary arrangements to ensure that the sectoral agendas work coherently with one another and are implemented as planned.
Support programmes for the digital transformation of businesses have a top-down design, starting with EU funding.	**Introduce input and output benchmarking in program management to evaluate effectiveness.**
Technology transfers from academia to industry are limited.	Make government approvals for creating spin-offs tacit after a short period. Introduce innovation vouchers for SMEs to contract R&D support from academia. Establish a demonstration centre for new digital technologies.
There is a lack of risk capital for financing innovative start-ups.	Provide investors with tax deductibility for start-up and growth financing for innovative start-ups and SMEs.
Improving delivery of digital services	
The activation of the government e-ID (SI-PASS) requires in-person physical recognition.	Introduce digital recognition methods.
The use of most digital public services for households is voluntary, duplicating existing services	**Move from opt-in (voluntary-based) to opt-out (compulsory-based) systems in e-government services.** Ensure an inclusive transition to digital service through convenient and accessible public support places throughout the country. Use incentives for individuals, such as longer deadlines or prefilled forms, to adopt digital solutions for services.
Improving skills and the labour market for the digital transformation	
There is a growing shortage of high-skilled IT workers	Reduce requirements for high-skilled non-EU foreign workers to be able to work in Slovenia. Provide automatic work permit for foreign students after completing their Slovenian studies.
Apprenticeships are rarely available in technical programmes, where vocations typically have a relatively high ICT content. VET graduates have insufficient ICT skills	**Expand apprenticeships into technical programmes.** Provide technical support and training to VET teacher to use digital technologies in VET instruction. Increase the duration of work-based learning in technical programmes.
Higher education institutions contribute relatively little to the digital transformation of the economy	Improve study and career guidance for prospective ICT students Use information campaigns and targeted initiatives to attract more female ICT students. Offer scholarships to boost enrolment in master and doctoral ICT studies. Provide non-ICT graduates with more advanced ICT skills. Raise digital knowledge among higher education students through short targeted ICT learning programmes. These should also be open for lifelong-learning programmes.
Digitalisation will increase the number of SME jobs at risk	Increase subsidies for firm-sponsored training in SMEs, either as training vouchers or as tax credits or deductions.

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SLOVENIA

Slovenia's strong post-pandemic recovery has been hit by strong headwinds from the war in Ukraine, higher energy prices, and supply chain bottlenecks. At the same time, the strong labour market performance has led to historically high employment, low unemployment and widespread labour shortages. Thus, inflation will remain high as growth slows. Looking further out, population ageing will lead to a smaller and older workforce, while the number of pensioners increases. Financing the fiscal costs of population ageing requires containing ageing-related spending increases in the pension, health and long-term care systems. Furthermore, sustaining growth and income convergence will increasingly rely on improving labour allocation, while supporting productivity growth through higher investments in new technologies, such as digitalisation. The successful digitalisation of the economy will have positive impacts on productivity growth and inclusiveness. An important element in any digitalisation strategy is to secure affordable and widespread connectivity. Moreover, the public sector's digitalisation efforts will encourage households and firms to adopt such new technologies. This, however, depends on the education and training system's ability to provide students at all levels and workers with better digital skills.

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