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BETTER POLICIES FOR BETTER LIVES

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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 the Slovak Republic were reviewed by the Committee on 20 October 2021. The draft report was then revised in the light of the discussions and given final approval as the agreed report of the whole Committee on 29 November 2021.

The Secretariat's draft report was prepared for the Committee by Oliver Roehn and Hyunjeong Hwang, under the supervision of Mame Fatou Diagne. Statistical research assistance was provided by Federico Giovannelli. Publication coordination was provided by Alexandra Guerrero.

The previous Survey of the Slovak Republic was issued in February 2019.

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BASIC STATISTICS OF SLOVAK REPUBLIC, 2020*

(Numbers in parentheses refer to the OECD average)**

LAND, PEOPLE AND ELECTORAL CYCLE					
Population (million)	5.5		Population density per km²	113.5	(38.6)
Under 15 (%)	15.6	(17.8)	Life expectancy at birth (years, 2019)	77.5	(80.2)
Over 65 (%)	16.7	(17.4)	Men (2019)	74.3	(77.6)
International migrant stock (% of pop., 2019)	3.4	(13.2)	Women (2019)	80.8	(82.9)
Latest 5-year average growth (%)	0.1	(0.6)	Latest general election	February-2020	
ECONOMY					
Gross domestic product (GDP)			Value added shares (%)		
In current prices (billion USD)	105.1		Agriculture, forestry and fishing	2.4	(2.8)
In current prices (billion EUR)	92.1		Industry including construction	29.5	(26.3)
Latest 5-year average real growth (%)	1.3	(0.8)	Services	68.1	(71.0)
Per capita (thousand USD PPP)	32.0	(46.3)			
GENERAL GOVERNMENT					
Expenditure (% of GDP)	45.6	(49.8)	Gross financial debt (% of GDP,OECD: 2019)	79.3	(109.0)
Revenue (% of GDP)	40.1	(38.9)	Net financial debt (% of GDP, OECD: 2019)	50.9	(68.0)
EXTERNAL ACCOUNTS					
Exchange rate (EUR per USD)	0.88		Main exports (% of total merchandise exports)		
PPP exchange rate (USA = 1)	0.53		Machinery and transport equipment	64.5	
In per cent of GDP			Manufactured goods	14.4	
Exports of goods and services	85.3	(50.6)	Miscellaneous manufactured articles	9.0	
Imports of goods and services	83.8	(47.1)	Main imports (% of total merchandise imports)		
Current account balance	-0.4	(0.0)	Machinery and transport equipment	50.7	
Net international investment position	-70.7		Manufactured goods	14.0	
			Miscellaneous manufactured articles	10.3	
LABOUR MARKET, SKILLS AND INNOVATION					
Employment rate (aged 15 and over, %)	55.1	(55.1)	Unemployment rate, Labour Force Survey (aged 15 and over, %)	6.7	(7.1)
Men	62.4	(63.0)	Youth (aged 15-24, %)	19.3	(15.1)
Women	48.3	(47.7)	Long-term unemployed (1 year and over, %)	3.0	(1.3)
Participation rate (aged 15 and over, %)	59.0	(59.5)	Tertiary educational attainment (aged 25-64, %)	26.8	(39.0)
Average hours worked per year	1,572	(1,687)	Gross domestic expend. on R&D (% of GDP, 2018)	0.8	(2.6)
ENVIRONMENT					
Total primary energy supply per capita (toe)	2.9	(3.7)	CO2 emissions from fuel combustion per capita (tonnes, 2019)	5.3	(8.3)
Renewables (%)	12.8	(11.9)	Renewable internal freshwater resources per capita (1 000 m³, 2018)	0.1	
Exposure to air pollution (more than 10 µg/m³ of PM 2.5, % of population, 2019)	100.0	(61.7)	Municipal waste per capita (tonnes, 2019)	0.4	(0.5)
SOCIETY					
Income inequality (Gini coefficient, 2019, OECD: latest available)	0.22	(0.32)	Education outcomes (PISA score, 2018)		
Relative poverty rate (%, 2019, OECD: 2018)	7.8	(11.7)	Reading	458	(485)
Median disposable household income (thousand USD PPP, 2019, OECD: 2018)	16.4	(25.4)	Mathematics	486	(487)
Public and private spending (% of GDP)			Science	464	(487)
Health care (2019)	7.7	(8.8)	Share of women in parliament (%)	22.7	(31.5)
Pensions (2017)	7.7	(8.6)	Net official development assistance (% of GNI, 2017)	0.1	(0.4)
Education (% of GNI, 2019)	3.8	(4.4)			

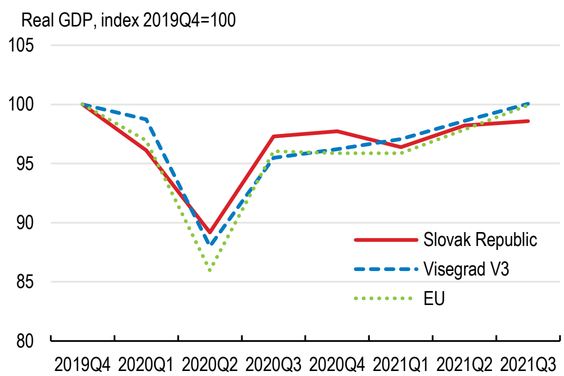
* The year is indicated in parenthesis if it deviates from the year in the main title of this table. ** Where the OECD aggregate is not provided in the source database, a simple OECD average of latest available data is calculated where data exist for at least 80% of member countries.
Source: Calculations 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 recovering from a deep shock

Activity has rebounded after a deep economic contraction, but risks to the outlook remain high. The overall impact on employment has been limited thanks to timely policy support, in particular job retention schemes.

Figure 1. Activity has rebounded



Note: Visegrad V3 includes Czech Republic, Hungary and Poland.
Source: OECD Economic Outlook database.

StatLink https://doi.org/10.1787/888934296116

The impact of the crisis differed significantly over time and across sectors, firms and workers. Manufacturing output recovered quickly in 2020 but the recovery has been interrupted recently due to supply shortages, notably in the automotive sector. Due to the long-lasting restrictions, the economic fallout and job losses were more pronounced in the services sectors, disproportionally affecting low-skilled workers and youth. Employment among these sectors and groups remains well below the pre-pandemic levels.

The recovery is set to accelerate (Table 1). The latest pandemic wave, a relatively low vaccination rate and supply disruptions will weigh on private consumption and export growth in the near term. The recovery is projected to accelerate in 2022 and 2023, on the back of strong investment growth, aided by EU structural funds and the new EU Recovery and Resilience Facility. Risks surrounding the outlook remain high.

Table 1. The recovery is set to accelerate

	2020	2021	2022	2023
Gross domestic product	-4.4	3.2	5.0	4.8
Unemployment rate (%)	6.7	7.0	6.4	5.8
Consumer price inflation	2.0	2.8	5.4	2.6
Fiscal balance (% of GDP)	-5.5	-6.7	-4.4	-2.5
Public debt (Maastricht, % of GDP)	59.7	60.5	58.2	56.7

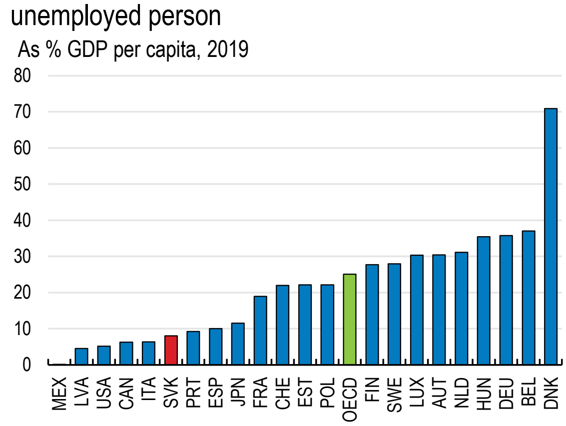
Source: OECD Economic Outlook: Statistics and Projections database.

Risks in the financial sector should be closely monitored. Adequate capital and liquidity buffers in the Slovak financial system are contributing to stability. Yet, credit defaults and market corrections may materialise once policy support is fully withdrawn. The build-up of imbalances has continued in the housing market, partly as a side effect of low interest rates, raising risks.

Targeted policy support should be maintained until the recovery is well underway to avoid long-lasting scars from the pandemic. Spending on active labour market policies is low and not sufficiently directed towards training measures (Figure 2). Stepping up training, including for workers on short-term working schemes, is crucial to help job transitions and reduce long-term unemployment, which is particularly prevalent among the low-skilled and Roma.

Figure 2. Spending on active labour market policies is low

Spending on active labour market programmes per unemployed person



Source: OECD Labour Market Programmes database.

StatLink https://doi.org/10.1787/888934296135

The authorities' have supported firm liquidity but companies may still face deteriorating balance sheets. Speedy restructuring of viable firms in temporary distress can prevent their unwarranted liquidation, and should be facilitated outside courts. Further streamlining insolvency procedures can facilitate necessary economic adjustments.

The government has set up an ambitious recovery programme, emphasising reforms and investment in education, health care, a greener economy and innovation**.** To ensure swift and effective implementation, further efforts are needed to raise Slovakia's chronically low absorption rate of EU funds by streamlining public procurement and enhancing public investment governance.

Fiscal consolidation should be gradual. In the medium-term, the planned multi-annual spending ceilings, together with the existing national debt brake, can help bring public finances back on a more sustainable path, but should be set in a way that avoids derailing the economic recovery. Better integrating spending reviews into the budget process can improve spending efficiency, while safeguarding growth-enhancing investment.

Preparing for rapid population ageing

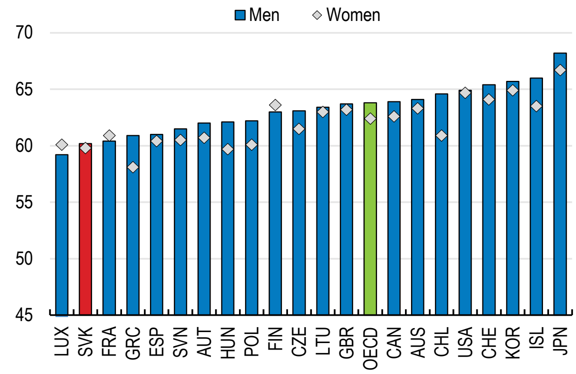
Rapid population ageing will exacerbate fiscal challenges and weigh on long-term growth. Addressing these pressures will require pension, health and long-term care, and labour market reforms.

The ratio of retirees to the working-age population will more than double in the next 30 years. On current policies**,** ageing will increase spending on pensions, health and long-term care by over 10 percentage points, more than elsewhere in the EU. Together with falling revenues, this will jeopardise fiscal sustainability. In addition, a shrinking working age population will weigh on growth.

The effective retirement age is among the lowest in the OECD (Figure 3**),** reflecting a low statutory retirement age and many pathways to early retirement. Extending working lives by linking future retirement ages to increases in life expectancy, as planned by the government, would significantly improve the sustainability of the public pension system and ensure adequate pension income in the future.

Figure 3. The labour market exit age is low

Effective labour market exit ages by sex, 2020



Source: OECD Pension at a Glance database.

StatLink https://doi.org/10.1787/888934296154

The government should close pathways to early retirement. The early retirement option for mothers should be phased out. Access to disability pension should be tightened including by updating assessment criteria.

Improving health outcomes is essential to prolonging working lives. Life expectancy is three years lower than on average in the OECD, reflecting high preventable mortality. Preventive care is weak, due to an insufficient number of general practitioners, their narrow set of competencies, and an ineffective payment system. Overlapping tasks across many small hospitals contribute to inefficiencies, recurrent over-indebtedness of hospitals, and suboptimal performance.

The long-term care sector is ill-prepared for future demand increases. The sector is over-reliant on informal and institutional care. The provision of long-term care services is fragmented between the health and social care sectors, as well as between different government levels, creating inefficiencies and reduced access. Moreover, the long-term care system lacks a dedicated and sustainable funding source.

Older people face a range of labour market barriers. They experience higher job strain than in other OECD countries, partly due to inflexible working arrangements. Older workers also benefit less from training opportunities, even though the risk of their skills becoming obsolete due to technological change is highest.

Increasing employment rates of mothers with young children, the low-skilled and Roma, together with older workers, is essential to mitigate the impact of a shrinking work force. Government plans to enhance access to pre-school facilities are welcome. Family benefits need to be reviewed with a view to reduce incentives for mothers with young children to stay at home. The tax-wedge for low-income earners is high, reducing employment opportunities for the low-skilled. Integrated policy responses are needed to improve employment of the Roma.

Boosting productivity and greening the recovery

Sustaining productivity gains, historically largely based on integration into global value chains, is essential to revive economic convergence and boost living standards in Slovakia's ageing society. This will require strengthening Slovakia's own capacity to innovate and adopt new technologies.

Productivity growth and economic convergence to high-income OECD countries has slowed since the global financial crisis. Strong productivity gains of firms in the competitive manufacturing sectors have not sufficiently spilled over to small and domestic firms in the service sector, reflecting the duality of the Slovak economy. The crisis has accelerated the digital transformation, but the uptake of digital technologies of firms is low and uneven, limiting the potential for future productivity growth.

Improving educational outcomes and investing in skills should be a priority (Figure 4**).** Early childhood education, better training and pay for teachers, and improved opportunities of children from disadvantaged families are key to improving educational performance and inclusiveness. Strengthening the responsiveness of the educational system to labour market needs and investing into adult learning would ensure adequate skills in a globalised and digitalised economy and address the rise of automation, which is more acute in Slovakia than elsewhere in the OECD.

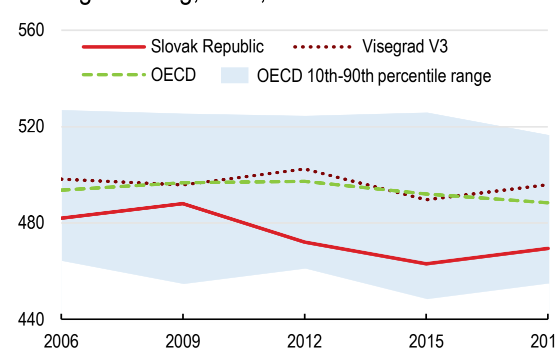
Research and innovation capacity need to be enhanced. Planned reforms of the higher education system can help to improve research quality. Higher, more sustainable and less fragmented support for business research and development can help accelerate technology diffusion. More efforts are needed to attract high-skilled foreign and Slovak workers living abroad.

Deploying reliable digital infrastructure and enhancing digital government services is key to enabling the digital transformation across the economy and society. Improving access to high-speed broadband networks, particularly in rural areas, may require additional public investment. Concerns about the security of digital public services must be addressed.

Further improving the business environment can foster business dynamism. Despite progress to reduce administrative burdens, regulations in a number of areas, especially for start-up firms remain more restrictive than in other OECD countries. Continuing judiciary reforms are needed to fight corruption and foster efficiency and trust.

Figure 4. Educational outcomes are weak

Average reading, math, science PISA score



Note: Visegrad V3 includes Czech Republic, Hungary and Poland.
Source: OECD PISA database; and OECD calculations.
StatLink https://doi.org/10.1787/888934296173

Meeting the new ambitious climate objectives will require sizeable investment and reductions in emissions. Planned investments in housing renovations including replacement of inefficient and high-emission boilers and heaters will improve energy efficiency and reduce air pollution, which remains a serious health concern. More coherently pricing carbon and environmentally harmful activities is needed to reduce emissions cost-effectively.

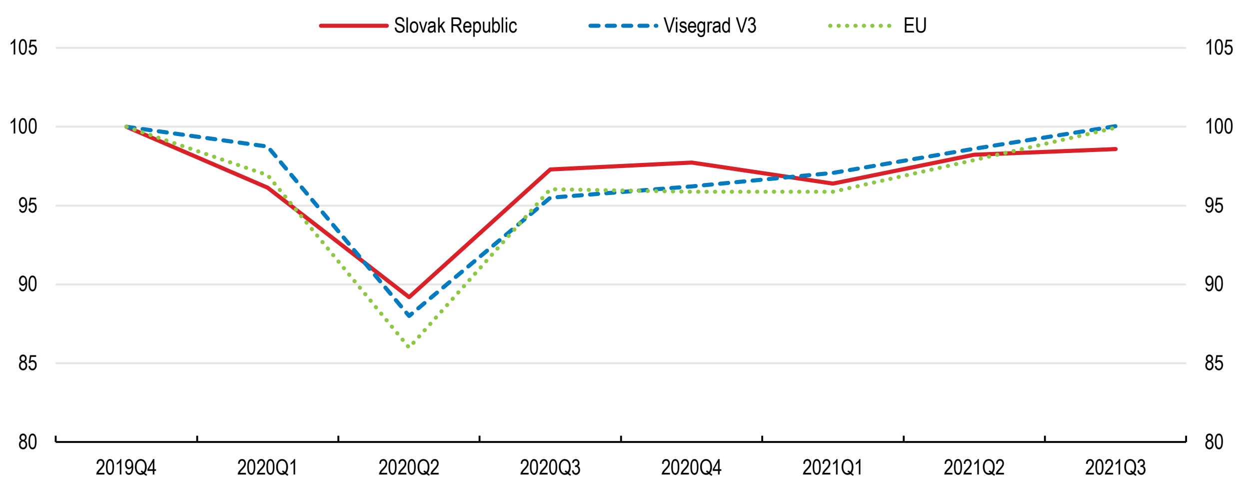
MAIN FINDINGS	KEY RECOMMENDATIONS
Supporting the exit from the crisis	
The share of the population fully vaccinated is about 25 percentage points below the EU average as of early-January 2022.	Continue efforts to accelerate vaccinations.
The crisis has hit low-skilled workers particularly hard. Long-term unemployment remains high.	Expand active labour market programs, in particular re-training measures for the low-skilled
The crisis has differing impacts across sectors. Too early withdrawal of support would trigger unnecessary bankruptcies and labour shedding, and may result in scarring and increased vulnerability. Ageing will create substantial fiscal pressures in the long-term.	Continue to provide targeted fiscal support until the recovery has become self-sustained. Adopt and stand ready to implement a medium-term fiscal consolidation strategy to prepare for long-run fiscal challenges, including ageing, and strengthen implementation of the savings measures identified in the spending reviews. Strengthen the rules-based fiscal framework by implementing multi-annual expenditure ceilings while adjusting the escape clause of the debt rule to allow flexibility in times of crisis.
The number of firms with liquidity and debt problems may increase and congested courts may prevent a timely restructuring of viable firms.	Promote out-of-court restructuring proceedings, especially for small and medium-sized enterprises.
The ambitious national recovery plan contains numerous reforms and investment of 6.9% of GDP. The absorption rate of EU funds has been historically low.	Streamline public procurement verification and control procedures. Further strengthen cost-benefit analysis and oversight of public investment over the project life-cycle.
The labour tax wedge is high, particularly for low-income earners. Tax revenues from property and environmental harmful activities are low.	Reduce the tax wedge in particular for low-income earners. Shift the tax mix towards property and environmental taxes.
Preparing for an ageing society	
Pension expenditures are expected to rise faster than in most EU countries, partly reflecting the low effective retirement age.	Link the future statutory retirement age and the minimum number of years of contributions required for retirement to life expectancy. Phase out the early retirement option for mothers. Reconsider the planned introduction of the parental bonus.
The gatekeeper role of primary care is hampered by an insufficient number of general practitioners, a narrow set of GP competencies, and an ineffective payment mechanism.	Introduce pay-for-performance payment schemes to increase the attractiveness of the GP profession.
There are many small hospitals, which leads to inefficiencies, recurrent over-indebtedness, and suboptimal performance. The implementation of the hospital network reform has been delayed several times.	Implement the hospital network reform and create a nation-wide centralised system for hospital quality assessments, monitoring and evaluations.
Home and community based long-term care is underdeveloped, reflecting limited financial and human resources.	Improve funding for and quality of home and community based care. Introduce voucher schemes for long-term care. Provide training to informal caregivers.
Paid parental leave is very long, reducing work incentives for mothers with young children. Long absences from the labour force negatively affect their career prospects and earnings, contributing to a large gender wage gap. There is a lack of childcare facilities, especially in some regions. Participation taxes for second earners are high, notably for low-income households, reflecting the high net nursery fee.	Reduce the maximum duration of parental leave and make part of it conditional on the father's participation. Expand the supply of high-quality childcare facilities, especially in underserved regions, and improve affordability of nurseries for low-income households.
Boosting productivity and greening the recovery	
Educational outcomes are weak and strongly dependent on socioeconomic background.	Strengthen initial and continuing teacher training with a focus on methods to identify and address learning weaknesses. Increase the number of teaching assistants speaking Roma, and provide Slovak language support for Roma children.
Business R&D and the share of innovative companies is very low. The share of firms receiving government support for innovation is low.	Expand the use of direct R&D support, such as grants, and make the R&D tax allowance refundable for small and young firms.
The administrative burden on start-ups is relatively high.	Reduce the administrative burden on start-ups by introducing "silence is consent" licensing rules.
Despite recent improvements, perceived levels of corruption are high.	Continue efforts to fight corruption including by adopting and implementing ongoing reforms to strengthen trust in the judiciary and public sector integrity.
Only 30% of carbon emissions were priced above EUR 30 per tonne of CO_2, a low-end estimate of the social costs of carbon. Air pollution remains high.	Introduce an explicit carbon tax in sectors not covered by the EU-ETS and gradually phase out remaining environmentally harmful subsidies. Redistribute revenues towards the most vulnerable households. Accelerate the green transition by investing in energy efficiency renovation in buildings and sustainable transport.

1. Key Policy Insights

Slovakia is recovering from the COVID-19 crisis. The impact of the crisis has been severe (Figure 1.1). Economic activity rebounded strongly in the second half of 2020 as manufacturing output recovered quickly. However, the pace of the recovery has slowed since then and GDP remained about 1.5% below its pre-pandemic level in the third quarter of 2021. Uncertainty around the outlook remains high with relatively low vaccination rates and supply shortages, notably in the automotive sector.

Figure 1.1. Activity has rebounded but the pace of the recovery has slowed

Real GDP, index 2019Q4=100



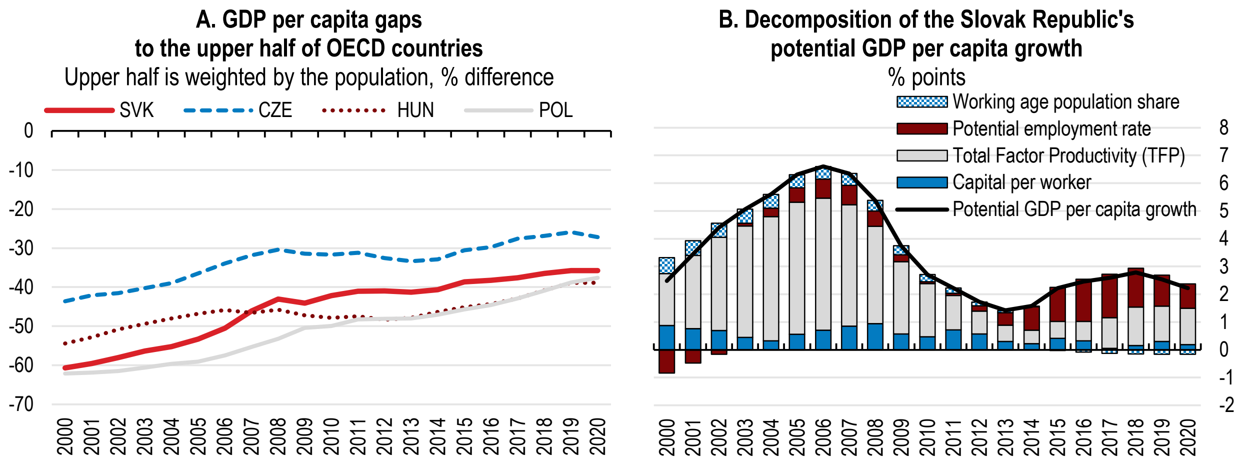
Note: Visegrad V3 includes Czech Republic, Hungary and Poland.
Source: OECD Economic Outlook: Statistics and Projections database.

StatLink https://doi.org/10.1787/888934296192

The authorities took swift and effective measures to protect vulnerable households and firms. Relatively low public debt and deficits before the crisis provided the space for a significant fiscal expansion to support the economy. Extra spending reinforced health sector capacity, while job retention schemes and support to self-employed workers helped save jobs and limited household income declines. Liquidity measures, including loan payment deferrals and loan guarantees, kept firm insolvencies low. An ambitious recovery plan (Box 1.1) and substantial inflows of EU funds provide a unique opportunity to strengthen the recovery, provided that investments and accompanying reforms are implemented effectively and in a timely manner. This will require efforts to improve public procurement and public investment governance to raise Slovakia’s chronically low absorption rate of EU funds.

The crisis may exacerbate some of Slovakia’s structural weaknesses and challenges. The convergence process, relying strongly on foreign direct investment and international trade, had already started to moderate after the Global Financial Crisis (Figure 1.2). The COVID-19 crisis hit small firms particularly hard, threatening to aggravate the duality of the Slovak economy with large productivity differences between small domestic firms on the one hand, and highly productive, large, mostly foreign-owned firms in the car and electronics manufacturing sectors on the other hand. The automotive sector has been an important driver of growth, but a durable shift of demand towards electric cars could create new challenges and opportunities for production and jobs in the sector. The pandemic has already and may further accelerate the digital transformation and automation. While these trends can boost productivity, they can also have important consequences for the labour market in Slovakia due to its large share of low-skill routine jobs, which are at risk of automation (Figure 1.3, Panel A). Boosting productivity is particularly crucial to sustaining living standards in Slovakia's rapidly ageing society, with one of the fastest future declines in working-age population in the OECD. At the same time, the pandemic adds to the fiscal challenges from ageing.

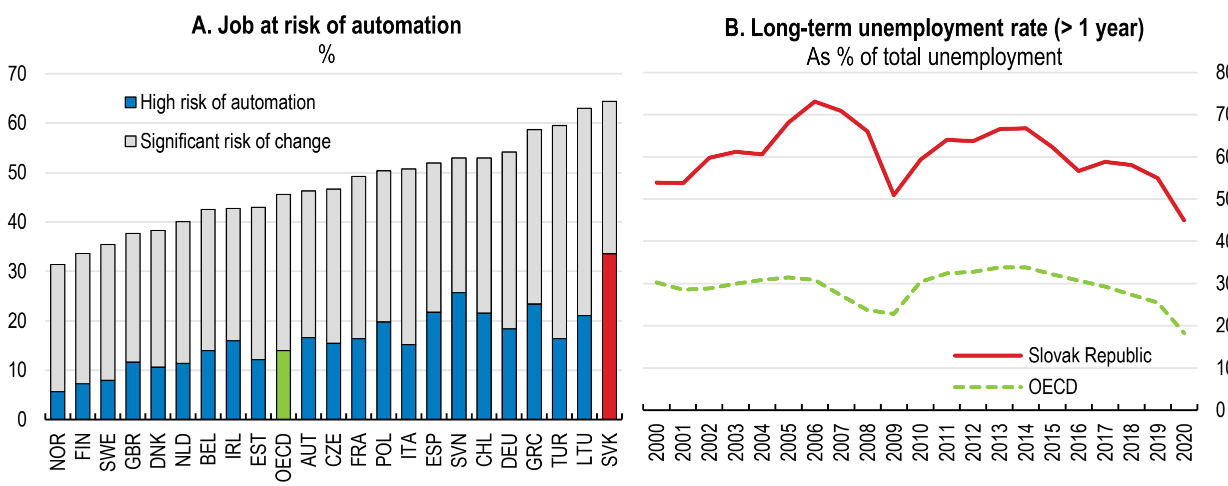
Figure 1.2. The convergence process started to slow already after the global financial crisis



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

StatLink https://doi.org/10.1787/888934296211

Figure 1.3. Employment is vulnerable to automation and long-term unemployment is high



Note: In Panel A, jobs are at high risk of automation if the likelihood of being automated is at least 70%. Jobs at risk of significant change are those with the likelihood of being automated estimated at between 50 and 70%. Data for Belgium correspond to Flanders and data for the United Kingdom to England and Northern Ireland.

Source: OECD (2019), OECD Employment Outlook 2019: The Future of Work, OECD Publishing, Paris, https://doi.org/10.1787/9ee00155-en.

StatLink https://doi.org/10.1787/888934296230

Inequality and poverty are low overall in Slovakia, but socioeconomic and wellbeing gaps remain significant in a number of areas. Despite improvements in recent years, long-term unemployment remains high (Figure 1.3, Panel B) and is particularly prevalent in the east and some central regions, and among the low-skilled. The Roma, about 8% of the population, often live in poverty, with very low educational outcomes, employment rates, and life expectancy. Air pollutions remains high and health care outcomes have not improved significantly, with life expectancy at birth three years lower than the OECD average. Education results are weak and highly dependent on socio-economic background. This calls for stepping up the quality of public services in the Slovak Republic, the efficiency of which is lagging behind other countries.

Against this backdrop the main messages of the Survey are:

- Macroeconomic policy should remain flexible, with targeted support, if needed, to avoid long-term scars from the pandemic. At the same time, the government should design a fiscal consolidation strategy to be implemented once the recovery is firmly underway.
- To sustain the convergence process and make growth more inclusive and sustainable, the government needs to promote adequate skills, foster domestic innovation capacity, and better price environmentally harmful activities.
- To prepare for an ageing society, pension, health/long-term care, and labour market reforms are needed to extend working lives, improve the health of the ageing population, and enhance the efficiency of public spending.

The economy is recovering after a deep shock

Consecutive waves of infections have restricted economic activity. After a mild first wave of the pandemic, Slovakia experienced a severe second infection wave (

Figure 1.4, Box 1.2). With new COVID cases subsiding, a gradual reopening of the economy started in April 2021, and the state of emergency declared in March 2020 ended in May 2021. Since August 2021, infections and hospitalisations have been rising again, largely due to the spread of the Delta variant. In response, containment measures were tightened again, and at the end of November 2021 a two week lockdown and a 90-day state of emergency introduced. Since mid-December, shops, close-contact services, restaurants and hotels have gradually re-opened for vaccinated people and people, who have recovered from COVID-19.

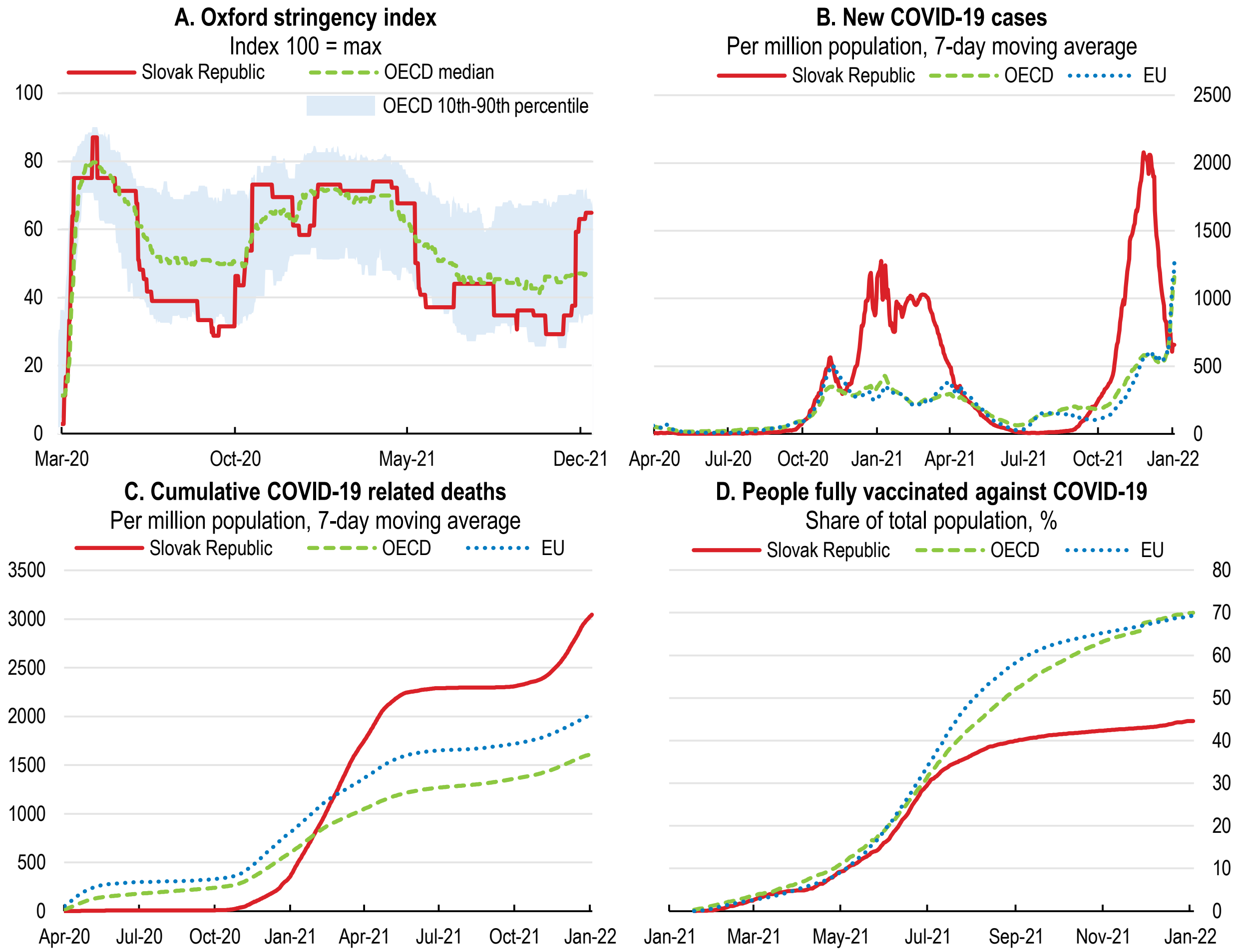
The relatively low vaccination rate poses risks. The government launched its vaccination programme in December 2020. The roll-out of vaccines was slow at the beginning, like in most EU countries, but accelerated from April 2021. However, by early-January 2022, only around 45% of the population was fully vaccinated, around 25 percentage points below the EU average. Vaccination rates are particularly low in several eastern regions. To increase vaccination rates, the government introduced financial incentives (vaccination lottery, cash payments for seniors aged 60 and above) and deployed mobile vaccination teams to better reach certain population groups and regions. According to a recent study (Adamus et al., 2021) the main causes of low vaccination are widespread fears of vaccines and their side effects. The immediate policy priority must be to continue with efforts to accelerate vaccinations to save lives and reduce the risk of renewed lockdowns. Efforts to enhance trust in vaccinations by providing reliable information and tools to detect misinformation can contribute to reducing vaccine hesitation. For instance, Spain began systematically monitoring disinformation and implemented action plans in response. In the United Kingdom, the Department for Digital, Culture, Media and Sport launched a targeted campaign to tackle false vaccine information shared amongst ethnic minority communities. The UK and Israel also involved trusted community leaders in campaigns to enhance trust and tackle false information (OECD 2021g).

Box 1.1. The Recovery and Resilience Plan

The plan contains 66 structural reforms as well as planned investment spending of EUR 6.575 billion (6.9% of GDP) over the period 2021-26, built around 7 policy areas:

- **Green Economy (EUR 2.3 billion):** a) expansion and modernisation of renewable energy capacity and infrastructure; b) renovation of residential and public buildings to improve energy efficiency; c) enhancing sustainable transport infrastructure including by fully electrifying the rail network and promoting public transport; d) decarbonising industry including by ending support for lignite coal combustion at Nováky power plant and supporting best-available technology adoption in industrial production and processes; e) support climate change adaptation of regions with an emphasis on nature and biodiversity protection.
- **Education (EUR 0.9 billion):** a) improving the inclusiveness of education for example by providing additional resources to pre-school education and a legal right for a kindergarten place from the age of 3, support measures for children with special needs, and measures to remedy the impact of the pandemic; b) reform of the school curriculum emphasising critical thinking, digital and soft skills and investment to improve digitalisation of schools; c) improving the performance of higher education institutions by changing the funding system, a systemic evaluation of scientific performance, a new accreditation system of institutions and a governance reform.
- **Science, research and innovation (EUR 0.7 billion):** a) improve the coordination of innovation policy, support for research collaboration between companies, academia and research institutes, and R&D investment in the areas of decarbonisation and digitalisation of the economy; b) attract and retain high-skilled students and workers for example by simplifying residence permit procedures, simplifying recognition of foreign qualifications, expanding scholarships for the best domestic and foreign students and internationalising the academic environment.
- **Health (1.5 billion):** a) modernising, improving access to and efficiency of the hospital sector and strengthening primary care including via additional investment and a reform of the hospital network, central management of the largest hospitals and further digitalisation of the healthcare sector; b) improving access to and quality of mental health care and c) improving affordable and high-quality long-term care for example by integrating social and health care services, reforming financing, and expanding community social care capacities.
- **Public administration and business environment (EUR 0.5 billion):** a) reduce regulatory burdens on firms (including by introducing ex-post regulatory impact assessments), digitalise insolvency procedures, and improve public procurement; b) justice reform mainly to streamline and accelerate court decisions by strengthening the specialisation of judges and improve the integrity and independence of the judiciary; c) measures to improve the fight against corruption and money laundering, and investment to increase the capacity of the police force and fire and rescue systems.
- **Digitalisation (EUR 0.6 billion):** reforms and additional investment to accelerate the digital transformation, notably to improve the digitalisation of schools and government services, connectivity via high-speed networks, digital skills and cybersecurity.
- **Fiscal reforms:** a) pension reforms to improve the sustainability of the public pay-as-you-go system, increase pension income from the private fully funded system and improve transparency about pension entitlements; b) introduction of multi-annual public expenditure ceilings; c) public investment management reform; d) pro-growth tax reform.

Figure 1.4. Infections have risen amid low vaccination rates



Note: In Panel A, 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 B, C and D.
Source: Oxford Coronavirus government response tracker; OurWorldinData; and OECD calculations.

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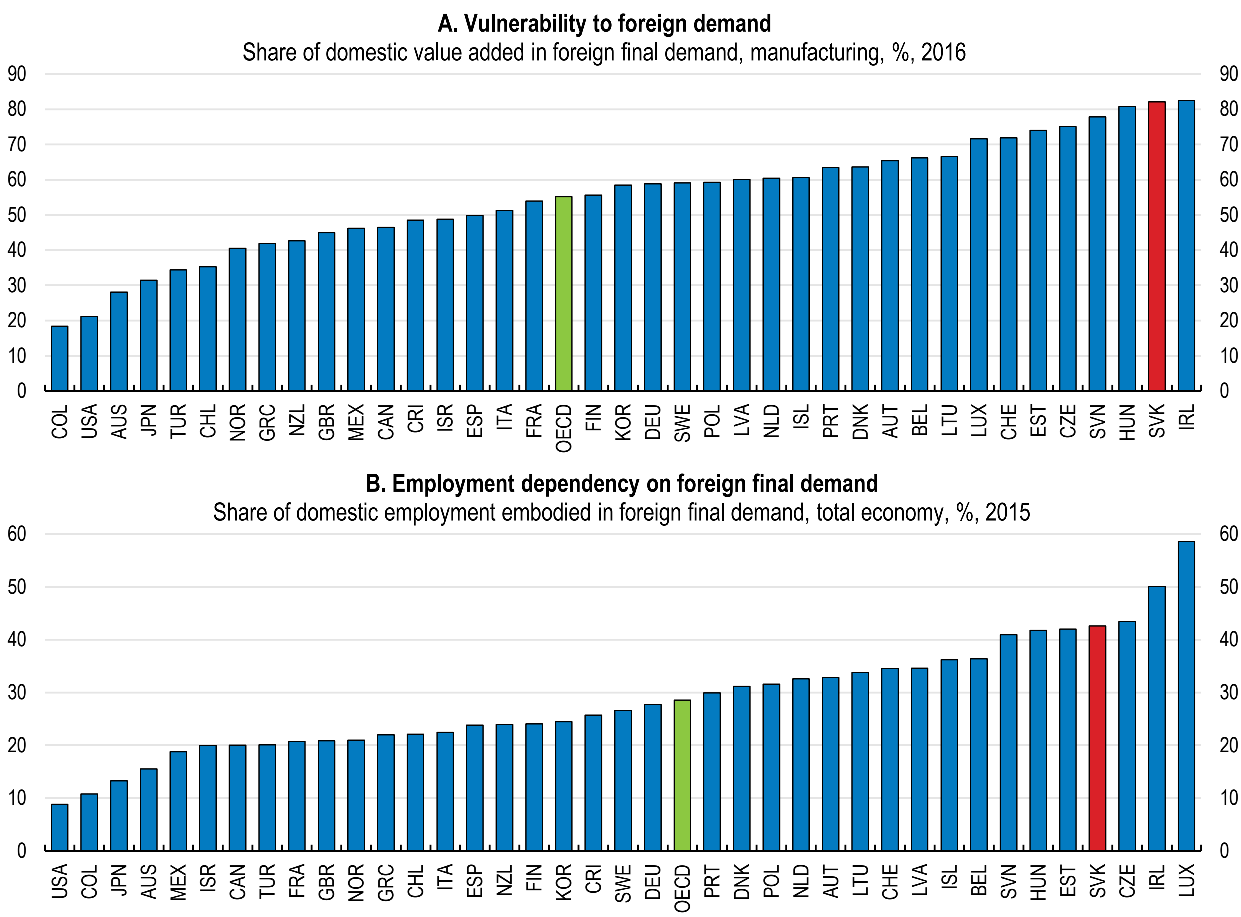
Box 1.2. Mass testing in the Slovak Republic

Testing played a prominent part in the public health response to the second wave of the pandemic. The government launched two mass antigen testing campaigns in October/November 2020 and January 2021. Testing was voluntary but certain restrictions were only lifted for people providing a negative test. Over 80% of the age-eligible population (10-64 years and older adults in employment) were tested during the autumn 2020 campaign. A scientific evaluation of the 2020 campaign estimated that mass testing, together with the isolation of positive cases, reduced infection prevalence by over 80% after two weeks in the 41 counties that participated in two rounds of testing (Pavelka et al., 2021). While the effects of testing and quarantining are difficult to disentangle from non-pharmaceutical measures to restrict contact and mobility, the campaign took place while primary schools and workplaces were mostly open. Despite these encouraging results, infections and deaths rose strongly again in the winter, suggesting that mass testing and isolation strategies would have to be conducted repeatedly within short time periods to have a sustained impact on infection dynamics.

Economic activity rebounded thanks to policy support, the deployment of vaccines and the gradual opening of the economy. The economy experienced a sharp contraction in 2020 due to the health situation, strict containment measures and Slovakia's high exposure to shifts in foreign demand (Figure 1.5). Manufacturing output recovered quickly in the second half of 2020. The economic impact of the second wave of the pandemic was more limited to services even as private consumption contracted and the saving rate increased significantly. As the economy reopened, consumption and investment grew strongly in the second quarter of 2021.

The latest wave of infections and supply shortages especially in the automotive sector are interrupting the economic recovery. Quarterly GDP growth slowed to around 0.4% in the third quarter of 2021. Retail and recreation mobility has fallen, retail sales have moderated, and consumer confidence weakened amid tightened containment measures. Car manufacturers had to temporarily suspend production again due to supply shortages, with car and industrial production and exports slowing markedly (Figure 1.6). The automotive sector accounts for around 3.5% of total employment, over a quarter of total exports, and 11% of value-added if indirect effects to other sectors are taken into account. At the same time, inflation surged due to increases in energy and food prices, an excise tax hike on tobacco, and rising prices of construction input materials.

Figure 1.5. Slovakia is highly exposed to shifts in foreign demand



Note: Unweighted average for the OECD aggregate.
Source: OECD Trade in Value Added (TiVA) database; and OECD Structural Analysis (STAN) database.
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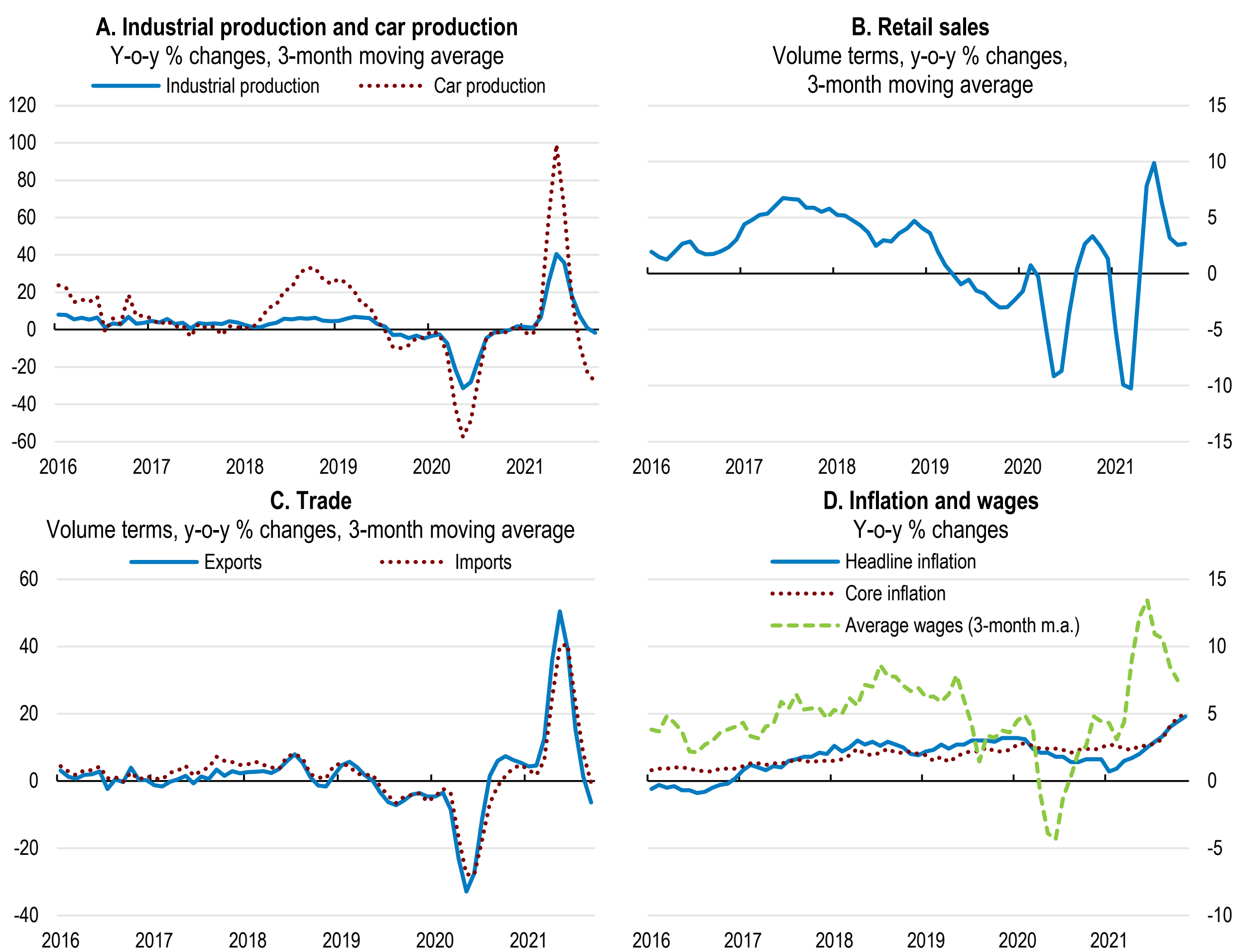
GDP growth will accelerate in 2022 and remain strong in 2023 (Table 1.1). Containment measures will weigh on activity in contact-intensive services sectors and interrupt the recovery in private consumption and the labour market in the near-term. Supply disruptions will slow export growth in particular of the automotive sector. Under the assumption that the health situation improves and supply restrictions gradually ease in the first half of 2022, GDP growth will accelerate in 2022 and 2023, aided by strong investment financed by EU recovery and structural funds. The Ministry of Finance expects the country to draw funds from the EU Recovery and Resilience Facility of around 1.3% of GDP in both 2022 and 2023, mainly for investments. The government budget deficit will narrow as activity picks up and emergency measures are gradually phased out. Wage growth will increase strongly in the private sector but will remain more contained in the public sector. Inflation will accelerate further in 2022 on the back of increases in administered energy prices but will moderate in 2023 as supply shortages ease.

The uncertainty surrounding the outlook is high. Consumption could be stronger if the saving rate is normalised faster than assumed. A substantial deterioration of the health situation due to the Omicron or other variants of the virus requiring renewed strict and nationwide containment measures would weigh on the labour market and private consumption and further delay the recovery. Longer-lasting supply-chain disruptions than assumed in the projection pose negative risks to exports and investment and could lead to higher inflation, eroding the purchasing power of households. Finally, a slower absorption of EU funds would curb investment growth. The effects of more extreme shocks are discussed briefly in Table 1.2.

Figure 1.6. Activity has lost momentum and inflation is picking up



Note: In Panel D, inflation series refer to harmonised CPI. Core inflation refers to the overall index excluding energy, food, alcohol and tobacco.
Source: Statistical Office of the Slovak Republic; Eurostat; and OECD calculations.

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Table 1.1. Macroeconomic indicators and projections

	2019	2020	2021	2022	2023
	Current prices (EUR billion)	Annual percentage change, volume (2015 prices)			
Gross domestic product (GDP)	94.0	-4.4	3.2	5.0	4.8
Private consumption	53.2	-1.5	1.1	3.6	2.9
Government consumption	18.4	0.9	3.3	2.8	0.7
Gross fixed capital formation	20.3	-11.6	-0.7	15.0	14.5
Final domestic demand	91.9	-3.2	1.2	5.6	4.8
Stockbuilding[1]	1.9	-2.2	2.6	0.1	0.0
Total domestic demand	93.8	-5.1	3.9	5.5	4.7
Exports of goods and services	86.7	-7.4	10.7	2.6	5.6
Imports of goods and services	86.4	-8.4	11.5	3.2	5.4
Net exports[1]	0.3	0.9	-0.5	-0.5	0.1
Memorandum items					
Potential GDP		2.4	2.0	2.0	2.3
Output gap (% of potential GDP)		-5.7	-4.5	-1.7	0.8
GDP deflator	..	2.4	2.3	4.0	2.3
Employment	..	-2.0	0.3	1.3	0.8
Unemployment rate (% of labour force)	..	6.7	7.0	6.4	5.8
Harmonised index of consumer prices	..	2.0	2.8	5.4	2.6
Harmonised index of core inflation[2]	..	2.4	3.3	4.5	2.4
Household saving ratio, net (% of household disposable income)	..	5.1	5.2	3.2	3.2
Current account balance (% of GDP)	..	-0.4	-1.1	-2.2	-1.9
Underlying general government fiscal balance (% of potential GDP)	..	-2.9	-4.7	-4.6	-3.9
Underlying government primary fiscal balance (% of potential GDP)	..	-1.9	-3.8	-3.7	-3.0
General government financial balance (% of GDP)	..	-5.5	-6.7	-4.4	-2.5
General government debt, Maastricht definition (% of GDP)	..	59.7	60.5	58.2	56.7
General government net debt (% of GDP)	..	50.9	54.9	54.9	53.6
Three-month money market rate, average	..	-0.4	-0.5	-0.5	-0.5
Ten-year government bond yield, average	..	0.0	-0.1	-0.2	-0.1

1. Contribution to changes in real GDP, actual amount in the first column.
2. Index of consumer prices excluding food, energy, alcohol and tobacco.
Source: OECD Economic Outlook: Statistics and Projections database.

Table 1.2. Possible extreme events that could lead to major changes in the outlook

Shock	Possible Impact
Renewed COVID-19-outbreaks due to new variants and/or lower vaccine effectiveness	Reintroduction of strict confinement measures, heightened uncertainty and possible supply chain disruptions, with major impacts on consumption, investment and exports.
A surge in non-performing loans	Banks could lower credit supply with negative repercussions on the real economy. A need for public support to banks could put additional pressure on public finances.
Increase in global protectionism or reshoring of global value chains	Lower global trade would be particularly harmful for a small open economy like Slovakia.

Financial stability risks should be monitored

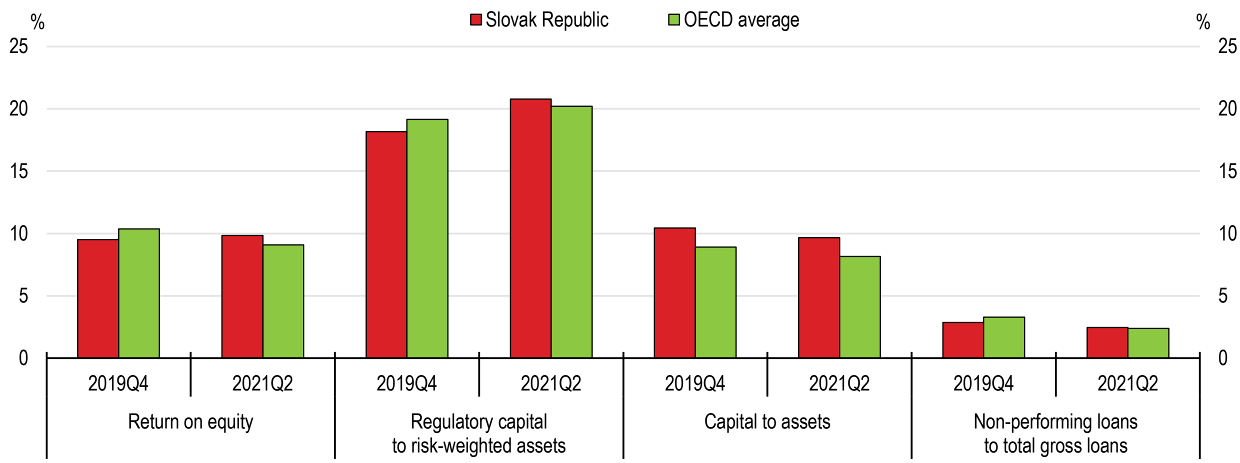
The authorities took a number of steps to ensure sufficient liquidity in financial markets, support credit growth and keep loan delinquencies low. In August 2020, the National Bank of Slovakia reduced the countercyclical capital buffer for banks from 1.5% to 1%. At the same time, it issued a recommendation to banks to restrict dividend payments to shareholders to maintain capital buffers. The authorities also facilitated the temporary granting of loan servicing moratoria by banks. By the end of September 2020, about 11% of all household loans were under moratoria, with a slightly higher share in the consumer credit segment. In addition, 12% of firm credits were under moratoria, with particularly high shares in the accommodation and food service sectors (around 50%) and the arts, entertainment and recreation sector (around 33%) (NBS, 2020a). Finally, government-guaranteed loans introduced as part of the pandemic response also supported credit to the private sector. By the end of the first quarter of 2021, the total amount of government guarantees provided during the crisis stood at around EUR 800 million (0.8% of GDP) (NBS, 2021c).

As support measures are expiring, financial vulnerabilities may rise. Most of the loans under moratoria are to borrowers with higher risk characteristics even before the crisis, such as households with higher debt-service-to-income ratios and firms with higher debt and lower liquidity ratios (NBS, 2020a). Loan delinquencies started to increase from the third quarter of 2020, but the level remains modest. By the end of August 2021, about 5.6% of household and 4.7% of firm loans that ceased to be under moratoria experienced repayment difficulties (NBS, 2021e). The central bank estimates that by the end of 2021, around 1-4% of all household loans and 3-7% of all firm loans may be at risk of becoming non-performing (NBS, 2021c).

Going forward, it will be important to find the right balance between supporting firms and allowing for the necessary adjustments in the business sector. A temporary insolvency moratorium for firms was in place until December 2020. A new permanent framework was introduced in January 2021, which allows debtors to apply for a moratorium of up to six months until the end of 2022. Under the new framework, a majority of creditors need to consent to the moratorium, restricting eligibility compared to the previous framework. The new scheme should be continuously assessed to ensure that it does not prevent the restructuring of viable firms or the liquidation of non-viable firms, and does not create a backlog of insolvency cases. Further efforts are also needed to strengthen pre-insolvency procedures and early warning mechanisms, and streamline insolvency procedures (see below).

The profitability of banks has recovered (Figure 1.7), after a sharp drop in their return on equity due to increased loan loss provisioning. The abolition of the bank levy in July 2020 also supported profits. Banking sector profitability has been on a downtrend before the crisis, mainly due to the prolonged low interest rate environment. This has led banks to step up their lending activity especially housing loans, with household indebtedness increasing fast, albeit from a low level. The Slovak banking sector consists predominantly of foreign-owned domestic banks (mainly owned by banking groups from Austria, Italy and Belgium) or branches of foreign banks. The three largest banks (all foreign-owned) account for more than half of total banking assets. Bank loans are largely financed via domestic deposits. Authorities consider that the banking sector remains well capitalised (Figure 1.7). Capital ratios moderately increased compared to pre-crisis levels, in part thanks to the retention of earnings. The results of stress tests also show that capital adequacy ratios are unlikely to fall below pre-crisis levels even in an unfavourable scenario (NBS, 2021c). Nevertheless, financial authorities should continue to monitor closely the forward-looking plans of banks for resolving NPLs and ensuring resilient capital positions.

Figure 1.7. The banking sector appears resilient



Note: 2021Q2 data for the OECD average is calculated on the basis of latest available quarter for the OECD countries, ranging from 2020Q2 to 2021Q2.
Source: IMF Financial Soundness Indicators database.

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Risks in the housing market have risen. House prices have continued to grow during the pandemic. Real house prices have grown on average by around 5% per year between 2014 and 2020 and price growth accelerated further in 2021. The impact of the crisis has been more pronounced on the rental market. Rental prices in Bratislava decreased for the first time in a decade at the beginning of 2021 compared to the beginning of 2020 (NBS, 2021b). Also, house price affordability deteriorated as the pandemic had a negative impact on employment and wages. Consequently, the National Bank of Slovakia estimated that house prices have been over 20% above levels justified by fundamental factors in the third quarter 2020, compared to an overvaluation of about 7% before the crisis (NBS, 2020a). Strong mortgage credit growth over the last decade has increased the exposure of banks to the real estate sector, with mortgages accounting for around 50% of the total loan portfolio at the end of 2020. While macro-prudential measures taken since 2016 have mitigated the risks to the banking sector, new lending just below the regulatory limits (loan-to value ratios of 71%-80% and debt-to-income ratios of 7 to 8) has increased in recent years (IMF, 2021). The authorities should therefore closely monitor developments in the housing market and adjust macro-prudential measures if necessary.

In the medium term, it will be crucial to strengthen housing supply. For instance, building permit procedures are lengthy. The government's plans to streamline processes are welcome but will take time to show effects. In addition, increasing the supply of public housing for rentals could help develop the rental market and reduce pressure on house price inflation. The homeownership rate in Slovakia is among the highest in the OECD and the rental market is largely limited to the Bratislava region. Raising recurrent taxes on immovable property and linking them to the value of the property can also help dampen overheating pressures.

Ensuring a job-rich recovery

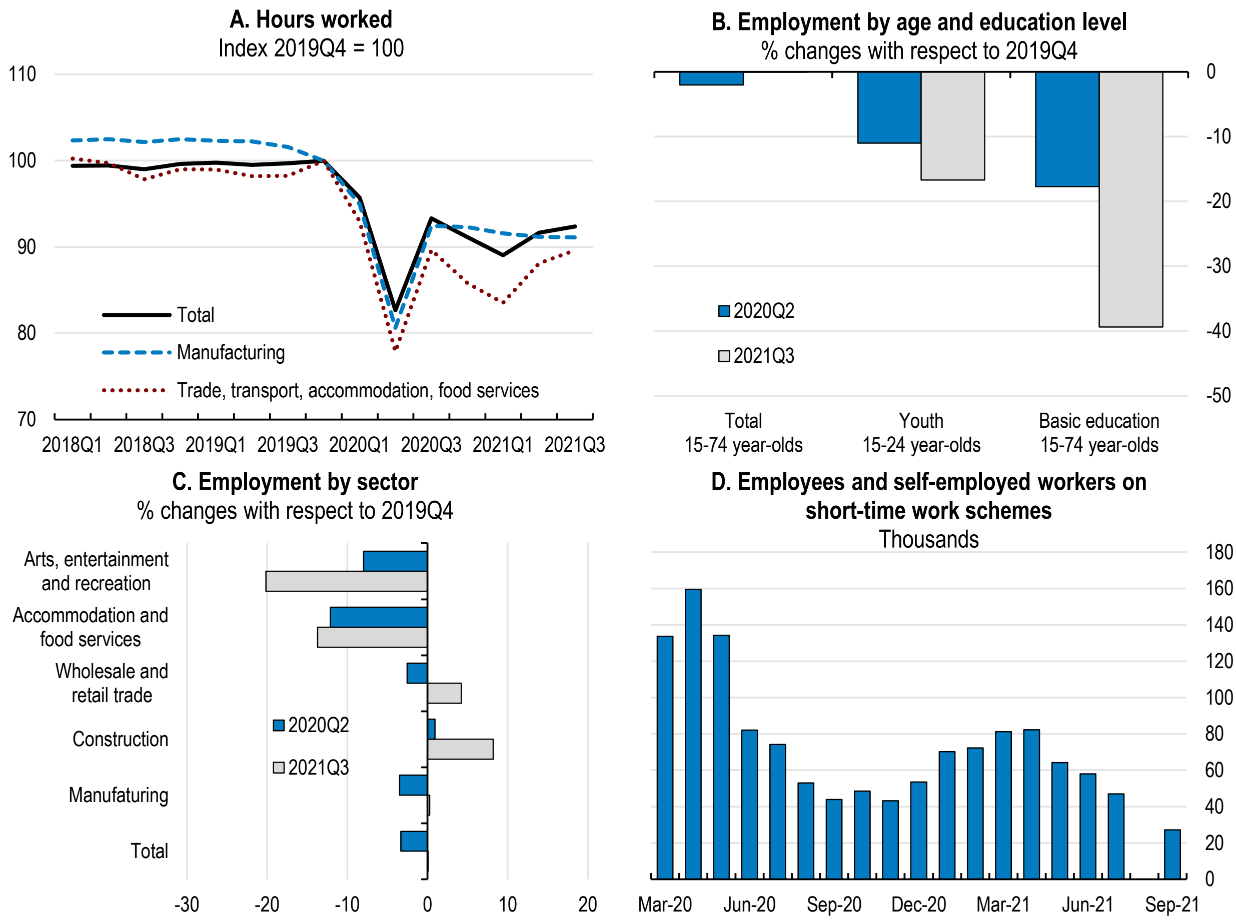
The impact of the crisis on the labour market has been uneven across sectors and groups (Figure 1.8). Hours worked fell sharply during the crisis, and were still around 8% below pre-pandemic levels in the third quarter of 2021. Overall losses in employment were more moderate thanks to job retention schemes. However, employment in the services sectors was hard hit, especially in accommodation and food services, and arts, entertainment and recreation and is still far below pre-pandemic levels (Panel C). In addition, the young and low skilled (Panel B) as well as workers on temporary contracts and the self-employed suffered the strongest employment losses.

To preserve employment and support household income the government introduced job-retention schemes, expanded paid sickness and care benefits to households and extended unemployment benefit duration. Among the job retention schemes, firms hard-hit by the crisis could receive wage subsidies for workers on reduced hours. Firms and the self-employed could also receive lump-sum grants conditional on the revenue decline. Eligibility to and the generosity of the benefits was increased during the second wave of the pandemic. For example, wage subsidies originally covered up to 80% of the average earnings of employees on reduced hours, but were increased in October 2020 and again in February 2021 to cover 100% of the labour costs. The schemes have recently been prolonged and are set to expire at the end of February 2022. At the height of the crisis, around 160 000 employees on reduced hours were supported by wage subsidies (Figure 1.8, Panel D). While large firms in industry benefited most from the retention schemes during the first lockdown, smaller firms in tourism; accommodation and food service activities, and certain segments of retail trade received a larger share of aid during the second lockdown (NBS, 2021a). The National Bank estimates that government support measures saved around 64 000 jobs (2.6% of total employment) (NBS, 2020b).

A permanent version of the short-time working scheme will come into force in March 2022 as a tool to support employment in future crises. Firms are eligible if a third of employees work less than 10% of regular weekly working time and the employer has to keep the supported worker for at least two months after end of the aid. Support covers 60% of the average hourly earnings of the employee and is limited to 6 months with a possibility of extension. Experience from OECD countries during the global financial and COVID-19 crisis suggest that well-designed job retention schemes should be timely, targeted and temporary (OECD, 2021e). For example, it will be important that firm eligibility to the new scheme is regularly reassessed to ensure that the scheme remains well targeted. In Switzerland, for instance, firm eligibility is reassessed every 3 or 6 months. In addition, to avoid preventing a desirable reallocation of workers across firms and sectors, the costs to employers of unworked hours could be increased over time. Reducing replacement rates of job retention schemes to unemployment benefits over time can help reduce incentives for workers to stay in unviable jobs. Furthermore, allowing workers on short-time work to register with the employment services to receive job-search assistance or career guidance can help smooth job transitions. Finally, workers on the short-term working schemes should also be given the option to receive training as for example in in France, Germany, Japan and Portugal. France has been successful in engaging workers on job retention schemes with training during the COVID-crisis, thanks to a well-established infrastructure of adult learning coupled with generous financial incentives that for example fully covered training expenses (OECD, 2021e).

The crisis has led to a strong increase in telework but not all sectors and employees have benefited equally. The option to telework was introduced in the labour law already in 2007 in Slovakia. However, given the structure of the Slovak economy with a large share of employment in manufacturing, the uptake of telework has been significantly lower than in other countries prior to the crisis. In 2019, the share of workers working at least partially from home was around 9.5% compared to an EU average of 14.5% and more than 30% in some Nordic countries (EC, 2020a). During the crisis, telework increased markedly in Slovakia, with around 30% of survey respondents indicating working from home in April/May 2020 (Eurofound, 2020). While telework has helped cushion the crisis impact on employment and income, it may aggravate some inequalities in the labour market. For example, low income and lower educated individuals more often work in occupations that cannot be performed from home (NBS, 2021d, Dujava and Peciar, 2020). In Bratislava, thanks to a larger share of public administration jobs, 54% of jobs can be performed from home compared to the national average of around 35% (NBS, 2021d). To ensure that the gains from telework are shared widely, the government should promote the diffusion of managerial best practices, self-management and ICT skills, investments in home offices, and fast and reliable broadband across the country (OECD, 2020a). Furthermore, better access to childcare facilities is crucial for parents with young children to be able to telework.

Figure 1.8. The impact on the labour market was uneven across sectors and workers



Note: In Panel A, data refer to employees and self-employed. In Panel B, data for the basic education category refer to employed people with less than primary, primary and lower secondary education (ISCED levels 0-2). In Panel B and C, data for 2021 are based on a different methodology for Labour Force Survey (LFS) statistics, according to a new EU regulation. In Panel D, only recipients under First Aid schemes 1 and 3a are shown, which correspond most closely with a short-term working scheme.

Source: OECD National Accounts database; OECD Labour Statistics database; Eurostat; and Based on Baliak, Domonkos, Fašungová, Hábel, Chujac, Komadel, Veselková. (2021). Prvá pomoc Slovensku: priebežná správa o sociálnej pomoci pracujúcim a rodinám (Aktualizácia 18) ["First Aid" for Slovakia: interim report on the aid to workers and families (18th update)]. Bratislava: Social Policy Institute / Ministry of Labour, Social Affairs and Family https://www.employment.gov.sk/files/slovensky/ministerstvo/analyticke-centrum/analyticke-komentare/isp_2021_prva_pomoc_update18_final.pdf.

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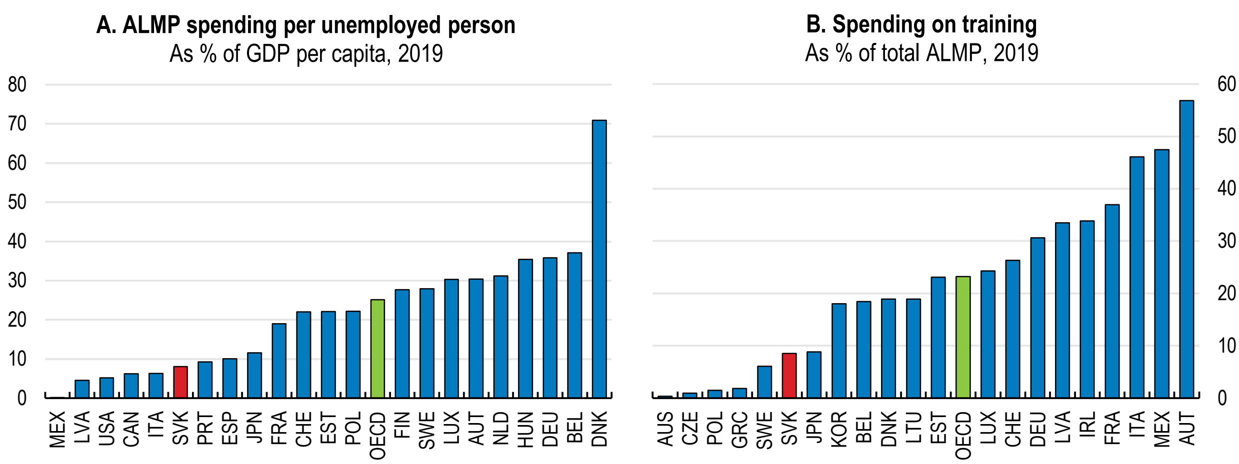
Despite some progress, long-term unemployment and the low employment rates of mothers with young children, the low-skilled, Roma and older workers remain important structural labour market challenges. Mobilising these underutilised labour resources is also crucial to counter the aging-related contraction of the labour force and its negative fiscal impacts (Chapter 2). In 2019, more than half of the unemployed were out of work for a year or more compared to about a quarter on average in OECD countries. Long-term unemployment is particularly prevalent in the East of Slovakia and among the Roma population. Long periods of unemployment have scarring effects, and the long-term unemployed are more difficult to bring back into jobs.

Moreover, the gender pay gap is high, especially among tertiary educated workers. This reflects that women are overrepresented in relatively lower paying public sector jobs as well as long career breaks associated with having children (OECD, 2019a). The employment rate of young women with small kids is among the lowest in the EU. For example, the employment rate of mothers aged 20-49 with two children below six years is 40% compared to an EU average of close to 70%.

Activation policies and training should be stepped up to help the unemployed transition to new jobs after the crisis and reduce long-term unemployment. Spending on active labour market policies is low (Figure 1.9), relies heavily on EU funding and therefore lacks sustainable funding from the national budget. The recent increase of national funding for ALMP measures is therefore welcome and should continue (Table 1.3). Spending is allocated mostly to employment incentives, while resources for training are low (Panel B). The share of unemployed adults participating in formal and non-formal job-related learning is the lowest among all OECD countries (OECD, 2019b). Training is provided mainly through the REPAS+ and KOMPAS+ programmes with some encouraging results, but often does not reach the lowest skilled who need training the most (OECD, 2020b). Strengthening the counselling and guidance capacity of the public employment service and effective profiling of jobseekers is needed to identify jobseekers' needs and the most relevant training paths. Career counselling should be accessible to all adults irrespective of their labour market status to increase labour mobility and mitigate the impact of automation. Procured training programmes should also be regularly evaluated to ensure high quality. To improve employment services, the network of labour offices needs to be expanded in underserved regions or municipalities and should be better integrated into the employment registration process to expand access to training opportunities for hard-to-reach unemployed adults (OECD, 2020b).

Figure 1.9. Activation policies and training should be expanded



Note: ALMP refers to active labour market programmes.
Source: OECD Labour Market Programmes database.

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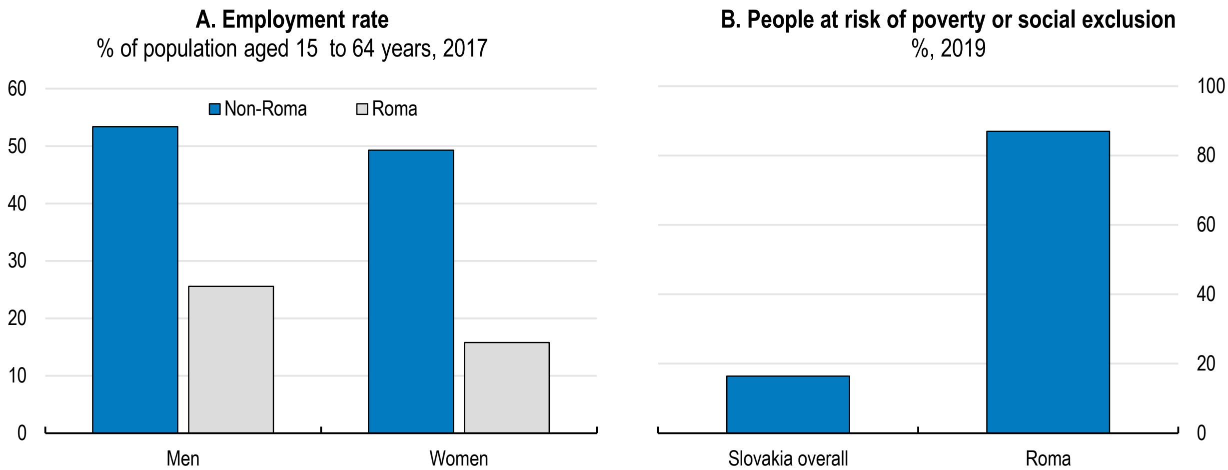
Improving the labour market outcomes of the Roma requires integrated policy approaches. As analysed in detail in the previous *Survey* (OECD, 2019a), the labour market outcomes of the marginalised Roma community significantly lag behind that of the general population. The employment rate of Roma men is only half of that of non-Roma men, and the gap is even larger for women (Figure 1.10, Panel A). Moreover, the Roma mostly work in low-skilled, seasonal jobs and the informal economy, making their employment highly vulnerable to shocks and the economic cycle. Consequently, most Roma live at risk of poverty (Panel B). The majority of labour market programmes that reach unemployed marginalised Roma are public work schemes, which do not provide relevant skills. Second-chance education should be strengthened by designing and developing networks of relevant programmes. In addition, tackling the labour market challenges of the Roma requires holistic approaches that cut through several policy areas. This includes better access to education, including pre-school education and child-care facilities (see below), health care services (Chapter 2), as well as adequate infrastructure to connect Roma settlements to job markets. Policies across these areas also need to be better coordinated. The recent relocation of the Plenipotentiary for Roma communities from the Ministry of Interior to the Office of the Government to strengthen its role within the government is a step in this direction (Table 1.3).

Figure 1.10. Employment rates of Roma are very low and most Roma are at risk of poverty



Note: In Panel B, for Roma data refers to 2016.
Source: Ministry of Finance (2020a), Groups at Risk of Poverty or Social Exclusion Spending Review, Bratislava, March 2020; and Eurostat.
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More efforts are needed to increase the employment rates of mothers with young children and older workers, as discussed in detail in Chapter 2. The planned expansion of pre-school and child-care facilities is welcome and should be implemented without delay. The lack of high-quality and affordable pre-school facilities constitutes an important barrier for female labour force participation. The maximum duration of parental leave is long and should be shortened, and part of the parental leave made conditional on the father's participation. In Iceland and Sweden such conditioning of parental leave led to a doubling in the number of parental leave days taken by spouses or partners (OECD, 2016a). Existing family cash benefits should be closely evaluated with a view to design them in a way to avoid strong disincentives for mothers to take up work. Evidence suggests that helping women combine career and family with the provision of good quality childcare facilities has a greater positive effect on childbirth than cash benefits (OECD, 2011). In addition, benefits should be shifted to reduce very high net childcare costs, in particular for low-income parents. Labour market barriers for older workers should be removed. In particular, older workers benefit less from training opportunities, and they experience higher job strain than in other OECD countries, partly due to inflexible working arrangements. An adult learning strategy targeting older workers is needed, given that they are particularly vulnerable to rapid technological changes that make existing skills obsolete. Improving working conditions is also important, for instance by developing flexible working arrangements, which are barely used in Slovakia (Chapter 2).

Table 1.3. Past OECD recommendations on labour market and social policies

Recommendations in previous Surveys	Actions taken since 2019
Increase spending on active labour market policies to further reduce the caseload for job counsellors, and continue to foster re-training measures in line with labour market needs.	Spending on active labour market policies increased by around 17% in 2020, with the share financed from the state budget almost doubling, to around 50%.
Make a significant part of a couple's parental leave available only to fathers, to allow them to better share child-rearing tasks and reduce the labour market disadvantage of mothers.	As of 1 May 2021, a father no longer needs to submit a caretaking declaration and agreement with the mother upon entering parental leave, therefore easing the administration burdens.
Involve Roma in the development and operation of integrated health, education and employment services.	As part a pilot project starting in late 2021, a new position of "assistant educator" in pre-primary education will be introduced, favouring Romani speakers and / or applicants from local communities.
Give the office of the Plenipotentiary a bigger role in coordinating national policies and ensuring integrated provision of public services to Roma where they live.	A new strategy for Roma integration was approved in 2021. The Office of the Plenipotentiary has been relocated to the Office of the Government in July 2021 to strengthen its role.

Providing targeted fiscal policy support while preparing for long-term fiscal challenges

Targeted fiscal policy support should be provided in the short-term

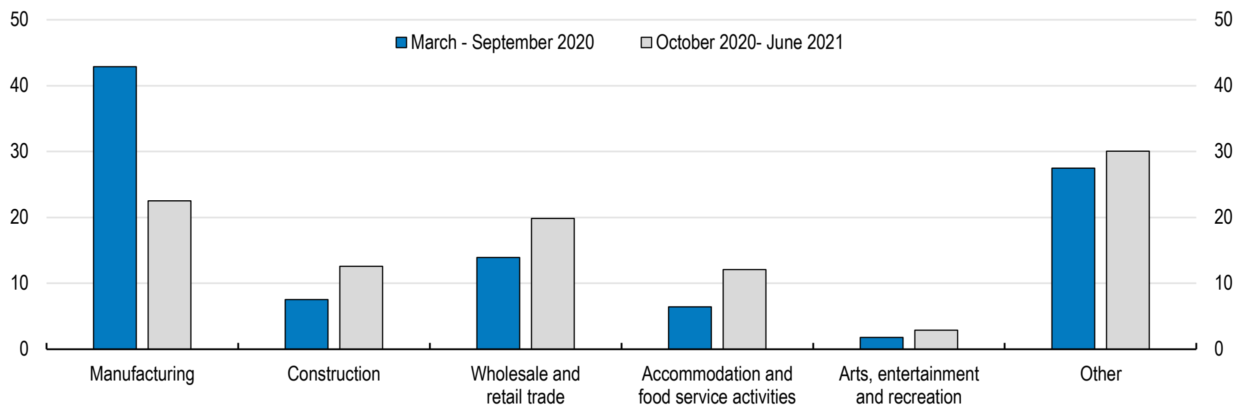
The fiscal response to the crisis has been substantial. The government introduced direct fiscal support of about 2.1 % of GDP in 2020 (MoF, 2021), somewhat lower than in other OECD countries. In addition, liquidity support in the form of government-guaranteed loans and tax deferrals amounted to 1.6% of GDP (MoF, 2021). Faced with a significantly deteriorating health situation related to the second wave of the pandemic, budgetary resources to tackle the impact of the pandemic have been significantly increased in 2021, to around 3.3% of GDP. The budget for 2022 includes direct budgetary measures to combat the pandemic in the amount of 0.7% of GDP. Labour cost subsidies, grants for firms and self-employed workers as well as sickness and care benefits were extended until end-February 2022. Eligibility for support measures was widened and benefit levels increased during the second wave and again in November and December 2021. The sectors claiming most of the labour cost subsidies and grants shifted over time, with the share of service sectors rising (Figure 1.11). In addition, the government targeted some measures to sectors most affected by the crisis, such as special job retention schemes and subsidies in the cultural, gastronomy and tourism sectors.

Fiscal policy should remain supportive until the recovery is self-sustained, but become more targeted to avoid scarring effects from the crisis. Ending special crisis-related support measures should be contingent on removing confinement measures that limit doing business in high-contact sectors. At the same time, support should increasingly shift to facilitate a reallocation of labour and capital to expanding sectors and prevent the crisis from eroding the economy's growth potential. For example, active labour market policies, such as targeted hiring subsidies, training and reskilling especially to the young and long-term unemployed, would help workers transition to the more dynamic parts of the economy and limit the rise in long-term unemployment. Targeted solvency support to viable firms, especially SMEs in hard-hit sectors, could help avert un-necessary bankruptcies.

An abrupt removal of fiscal support should be avoided so as not to derail the recovery. Despite its severity, the recession in 2020 did not trigger an escape clause from the national debt rule, which targeted a debt level of 47% of GDP in 2020. However, the election of a new government in 2020 and the government reshuffle in the spring of 2021 temporarily suspended the strictest sanctions under the rule (i.e. a balanced budget) until mid-2023. As public debt is likely to exceed 55% in 2023, the current debt rule would trigger rapid consolidation, requiring a balanced general government budget in 2024. To avoid a strong fiscal contraction, the government has proposed an amendment to the constitutional law, which instead foresees a one percentage point of GDP improvement of the structural budget balance per year starting in 2023, together with permanent modifications to the fiscal rules (see below).

Figure 1.11. Government support has increasingly shifted to services

Average monthly share in total aid under the First Aid programme



Source: Based on Baliak, Domonkos, Fašungová, Hábel, Chujac, Komadel, Veselková. (2021). Prvá pomoc Slovensku: priebežná správa o sociálnej pomoci pracujúcim a rodinám (Aktualizácia 18) ["First Aid" for Slovakia: interim report on the aid to workers and families (18th update)]. Bratislava: Social Policy Institute / Ministry of Labour, Social Affairs and Family https://www.employment.gov.sk/files/slovensky/ministerstvo/analyticke-centrum/analyticke-komentare/isp_2021_prva_pomoc_update18_final.pdf.

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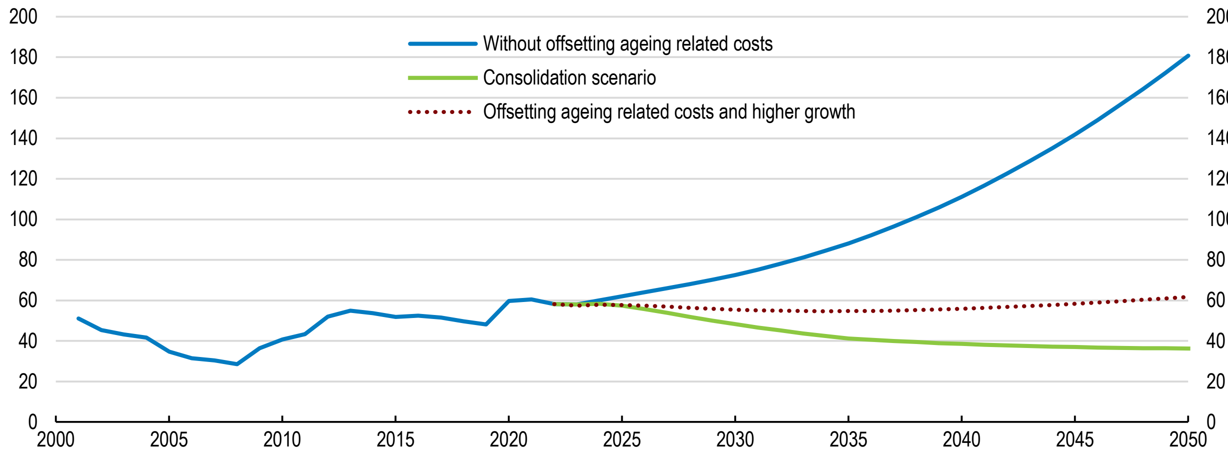
Addressing long-term fiscal challenges

While fiscal policy should remain supportive in the near term, the authorities should already start to design a medium-term credible and transparent fiscal consolidation strategy, to be implemented once the recovery is firmly underway. As a result of the pandemic, the gross public debt-to-GDP ratio has surged to over 60%. While the public debt level remains modest by international comparisons, it is unprecedented in Slovak history. Net debt increased more modestly as Slovakia raised more funds on international capital markets than needed to finance the deficit, resulting in an increase in financial assets. Ageing will create substantial fiscal pressures in the long-term. Without measures to contain ageing-related costs, debt would rise to close to 180% of GDP by 2050 (Figure 1.12). In contrast, assuming ageing costs are contained and growth is one percentage point higher, the debt-to-GDP ratio would stabilise around the current level of 60% of GDP, highlighting the importance of structural reforms, such as those recommended in this Survey (Box 1.3), in achieving debt sustainability. Still, this debt level would be substantially above the national debt target of 40% by 2028. Consolidation to achieve a structural budget surplus of 0.5% of GDP in 2028, in line with Slovakia's preliminary medium term objective, would bring public debt below 40% of GDP by 2035.

The medium-term fiscal consolidation strategy should be designed in a way to avoid harming growth and equity. On the expenditure side, priority should be given to addressing the pressures from ageing and increasing efficiency. For example, reforms to lengthen working lives can improve pension sustainability, while optimising the hospital network can help reap efficiency gains in the health care sector. National expenditure reviews have identified a number of additional areas for efficiency gains in public spending that can generate fiscal savings without harming outcomes. Implementing multi-annual spending ceilings can help enhance the credibility of the fiscal consolidation strategy, improve fiscal sustainability, and strengthen incentives to incorporate expenditure reviews into the budgetary planning process. On the revenue side, priority should be given to broadening tax bases, reducing tax expenditures and improving tax collection. A tax reform to reduce distortions to growth and strengthening work incentives can further help consolidation efforts.

Figure 1.12. Ageing creates fiscal pressures

General government debt, Maastricht definition, as a percentage of GDP



Note: The scenario “without offsetting ageing-related costs” is based on the Economic Outlook 110 STEP projections until 2023, the OECD long-term model thereafter, and increased spending on health, long-term care and pensions, which will add an additional 8 percentage point of GDP to annual government spending by 2050, in line with European Commission (2021). The consolidation scenario assumes an improvement of the primary balance by 1 p.p. of GDP per year between 2024 and 2028, in line with the preliminary medium-term objective from the government's Stability Programme. A balanced primary balanced is assumed after debt falls below the debt target of 40% of GDP. The "offsetting ageing-related costs and higher growth" scenario assumes that ageing related costs are offset and real GDP growth is 1 percentage point higher than currently projected for the entire simulation period, for example thanks to structural reforms that 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 (2021), "The 2020 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 1.3. Quantifying the impact of selected reforms on growth and fiscal balances

The impact of some key structural reforms proposed in this Survey are estimated in Table 1.4 using historical relationships between reforms and growth in OECD countries. The estimates are illustrative.

Table 1.4. Illustrative impact of selected reforms on GDP per capita

Effect on level of GDP per capita through total factor productivity and employment

Reform	10 year effect
Boosting active labour market policies	2.3%
Increasing spending on early childhood education and care	1.0%
Increasing business R&D	1.4%
Linking retirement age to life expectancy and phasing out early retirement for mothers	0.5%
Reducing the average labour tax wedge (revenue neutral)	0.8%
Total impact	6.0%

Note: i) increase in spending on ALMP by 0.3% of GDP to the level of OECD average; ii) increase of spending on early childhood education and care to OECD average; iii) business sector R&D increased by 0.9% of GDP to the level of the OECD average; iv) assumed increase in the effective retirement age by 0.5 years compared to current rules; v) reduction in the average labour tax wedge by about 3.5 percentage points, i.e. half of the difference to the OECD average.
Source: OECD calculations based on Égert and Gal (2017)

Table 1.5 quantifies the illustrative direct gross fiscal impact of selected recommendations included in the Survey. A number of recommendations are not quantifiable in terms of their fiscal impact and there will be additional revenues associated with higher GDP and employment induced by structural reforms.

Table 1.5 Illustrative direct fiscal impact of selected recommended reforms

Reform	Fiscal cost (-)/ saving (+) in % of GDP in 10 years
Boosting active labour market policies	-0.3%
Increasing spending on early childhood education and care	-0.2%
Increasing government support for business R&D	-0.1%
Improving access to and quality of home and community based long-term care	-0.7%
Reducing the labour tax wedge, financed by increasing property and environmental taxes and moving towards a single VAT rate	0%
Linking retirement age to life expectancy	+0.3%
Increasing health care efficiency	+0.5%
Improving VAT tax collection	+0.5%
Implementing half of the savings identified in recent spending reviews (public employment/wages, defence and IT spending)	+0.6
Overall impact	+0.6%

Note: i) increase in the level of spending on active labour market policies to the OECD average (0.5% of GDP); ii) increase of spending on early childhood education and care to OECD average (0.8% of GDP) iii) increase of direct government funding and government tax support for business R&D to the OECD average level (0.15 % of GDP), iv) increase in spending on LTC to the EU average; v) linking retirement age to life expectancy is based on Slovak Ministry of Finance estimates assuming that ¾ of the increase in life expectancy is translated into increases in the effective retirement age; vi) Ministry of Finance estimate of increase in tax revenues of bringing the VAT gap in Slovakia (20%) to the EU average (11%); vii) potential long-term efficiency gains in the health care sector based on national spending reviews.
Source: OECD Secretariat and MoF (2021).

Improving spending efficiency and enhancing the fiscal framework

Ensuring a gradual improvement in the structural deficit to put debt on a downward path while not jeopardising the recovery, will require further efforts to improve spending efficiency and enhance the fiscal framework. The structural budget balance started to deteriorate in 2018 despite robust growth and a strong labour market (CBR, 2021). In addition, more than one percentage point of the deterioration of the budget deficit between 2019 and 2020 is due to measures unrelated to the crisis (e.g. increase of the 13th pension payment, minimum pensions and family benefits) and to a lesser extent the materialisation of budgetary risks (e.g. overestimation of non-tax revenues) (CBR, 2021). Since 2016, the Value for Money division in the Ministry of Finance has completed over a dozen spending reviews, which identified potential for efficiency gains and savings in the investigated areas. However, its recommendations have not been systematically implemented in the budget. Spending reviews completed in 2020 identified a saving potential of EUR 1.1 billion (1.2% of GDP), mainly in the areas of public employment and wages, defence and IT spending (MoF, 2021). Earlier reviews of health care spending also pointed to long-term saving potential of around EUR 465 million (0.5% of GDP). The government should implement the saving measures thus identified and thrive to incorporate expenditure reviews better into the medium-term budgetary planning process.

The government plans several reforms to enhance the fiscal framework. For example, the government plans to introduce multi-annual expenditure ceilings, which have been a constitutional provision since 2011, but have not yet been implemented (Table 1.6). Expenditure limits are to be set for 4 years over the term of a new government and linked to long-term fiscal sustainability indicators (Box 1.4). The planned introduction of spending limits is welcome as expenditure rules tend to improve fiscal sustainability and have higher compliance rates than other rules as expenditures are under the direct control of the government (Lledo et al., 2018; OECD, 2021). Spending ceilings can also help better incorporate expenditure reviews into the budgetary planning process. The spending limits should also include tax expenditures as planned. In addition, the proposed design of the spending rule is likely to support countercyclical fiscal policy. For example, as expenditure limits are defined in level terms and not as a percentage of GDP, the limits constrain spending in boom times when cyclical revenues are high. In addition, by excluding cyclical unemployment benefits from the ceiling, the rule allows automatic stabilisers to operate both on the spending and revenue side in times of adverse shocks. In contrast, the additional introduction of a tax revenue ceiling, as currently discussed in Slovakia, should be avoided. Added to the debt and expenditure rules, a revenue ceiling would overly restrict macroeconomic stabilisation efforts. Moreover, revenue ceilings can by themselves be pro-cyclical as they for instance may require tax reductions in boom times. They can also hinder tax collection efforts and do not help ensure fiscal sustainability (Lledo et al., 2018).

In addition, the government plans to switch the national debt rule from gross to net debt targets by adjusting gross debt for liquid financial assets (Box 1.4). A net debt target can facilitate efficient public debt and liquidity management. The net debt target would be set at 46% of GDP in 2022 and gradually fall to 35% of GDP in 2034. If net debt exceeds the target, corrections of the structural budget balance are required according to four sanction bands. The highest sanction band, requiring at least a balanced structural balance, would be reached at a net debt level above 55% in 2023 and gradually fall to 50% in 2034. In addition, reforms are also proposed to the escape clause, with the aim of providing greater flexibility in extraordinary circumstances such as severe recessions. The proposed amendments consider *inter alia* a suspension of sanctions for one year if GDP drops by more than 3% over a year and for two years if GDP falls by more than 6%.

The responsibilities of the fiscal council are set to be expanded. The fiscal council, established in 2012, is widely perceived as independent and non-partisan, with strong analytical capabilities (OECD, 2020c). The new responsibilities of the fiscal council would include calculating expenditure ceilings according to the legislation and assessing compliance with them, as well as new reports on fiscal risks and pension sustainability. Expanding the responsibilities of the council is welcome. However, in order to reduce capacity constraints, which were present before the new responsibilities (OECD, 2020c), staffing may have to be increased. This would also help the council conduct costing of government policy initiatives more proactively.

Box 1.4. Current fiscal rules and proposed reforms

Current fiscal rules

Debt rule

- Ceiling: In 2020, the gross debt (Maastricht definition) ceiling was set at 47% of GDP. The ceiling is set to gradually fall by 1 percentage point per year to 40% of GDP in 2028.
- Sanction bands: If debt exceeds the ceiling, the following sanctions apply according to five sanction bands (as of 2020): 1) 47-50% of GDP: the Ministry of Finance must propose measures to reduce debt; 2) 50-52% of GDP: salaries of government members are frozen at the previous year level; 3) 52-54% of GDP: expenditures (excluding some such as debt service and EU funded expenditures) have to be cut by 3% in the current year and expenditures are frozen at this level in the following year; 4) 54-57% of GDP: next year's general government budget has to be balanced or in surplus; 5) above 57% of GDP: a vote of confidence in the parliament is triggered.
- Escape clause: sanction will not apply in case of war. In addition, the strictest sanctions (bands 3-5) do not apply a) for 2 years after the Manifesto of the new government is approved by the Parliament; b) for 3 years if year-on-year GDP growth falls by 12 percentage points, c) for 3 years if the response to a banking crisis, a natural disaster or international treaties require additional expenditures of more than 3% of GDP.

Proposed reforms to fiscal rules

Modified debt rule

- Debt definition: Net debt instead of gross debt. In particular, gross debt is adjusted for liquid financial assets (currency and deposits, short- and long-term debt securities).
- Ceiling: The net debt ceiling is to be set at 45% of GDP in 2022 and to gradually fall to 35% of GDP in 2034.
- Sanction bands: The sanction bands are to be reduced from five to four and include specific consolidation requirements (as of 2022): 1) 45-48% of GDP: improvement in structural balance by at least 0.5% of GDP; 2) 48-52% of GDP: improvement in structural balance by at least 0.75% of GDP; 3) 52-55% of GDP: improvement in structural balance by at least 1% of GDP; 4) above 55% of GDP: at least a balanced structural budget and vote of confidence in parliament.
- Escape clause: Adjustments to provide more flexibility in times of crisis by lowering the thresholds that trigger the escape clause. In particular, no sanctions apply for one year if GDP drops by more than 3% in a year or for two years if GDP drops by more than 6% in a year. In addition, strictest sanctions (band 4) do not apply for one year if the response to a banking crisis, a natural disaster or international treaties require additional expenditures of more than 2% of GDP. Sanction band 4 also does not apply if sanctions according to bands 1-3 were fulfilled in previous years, if net debt was below the debt ceiling in the previous year or for one year after a new government is formed.

New expenditure ceiling

- Expenditure ceilings are set by the fiscal council for 4 years over the term of a new government and linked to long-term fiscal sustainability indicators. The ceilings are set in nominal level terms.
- Expenditure ceilings cover more than 80 % of general government expenditures. Debt service expenditure, EU funded expenditure, contributions to the EU budget, expenditures of local governments, one-off expenditures and cyclical unemployment benefit expenditure are excluded from the ceiling.
- The ceilings are updated by the fiscal council every year or at the request of the Ministry of Finance to reflect *inter alia* legislative changes that affect long-term sustainability of public finances, deviations from the ceiling in the previous year, changes in EU funding or contributions, and in case of severe changes to underlying macroeconomic assumptions.

The governance of public investment spending and public procurement should be further strengthened, in particular in light of the substantial expected inflows of EU funds in the coming years. The oversight role of the Ministry of Finance's Value for Money division in the selection and implementation of public investment project was strengthened in 2020. To improve the public investment framework further, sectoral and regional investment plans should be integrated into a national investment plan, and a project pipeline of appraised projects based on published selection criteria established (IMF, 2019). Budgeting of capital expenditures should be based on investment plans prepared by line ministries according to a predefined methodology ensuring cost-efficient delivery of economic and social benefits. Furthermore, a specialised unit could be established to strengthen the financial oversight of major state-owned enterprises.

The public procurement verification and control procedures should be further streamlined as their complexity has been one of the reasons for Slovakia's chronically low drawing of EU funds (EC, 2020b). Efforts to adequately train public procurement staff should continue. Slovakia has taken further steps to professionalise the public procurement staff and the Public Procurement Office opened regional offices in 2020 to help with legal interpretation of the procurement law and training activities at local level. In addition, the Public Procurement Office is preparing conflict of interest guidelines. To tackle corruption and fraud related to the management of European Structural and Investment Funds, the corruption risk assessment should be further enhanced, including by making better use of data driven tools and national and external databases (OECD, 2019c). In addition, a more systemic approach to fraud and corruption is needed, including by establishing formal mechanisms for coordination among authorities and better training to manage fraud and corruption risks (OECD, 2019c).

Pension, health and long-term care reforms are needed to contain fiscal pressures from ageing, as discussed in detail in Chapter 2. EU projections indicate that ageing-related expenditures as a share of GDP could rise by more than 10 percentage points by 2070, more than in almost all other OECD countries. The effective labour market exit age is among the lowest in the OECD. Prolonging working lives through linking the statutory retirement age to life expectancy, as the government plans, will improve pension sustainability significantly, and mitigate negative effects of ageing on growth. In contrast, the proposed introduction of the so-called parental bonus, which is a bonus to the pension benefits of parents as a percentage of their children's social security base, should be reconsidered as it hampers pension sustainability. In addition, the early retirement option for mothers should be phased out. Moreover, stronger financial (e.g. pay-for-performance schemes), and non-financial incentives may be needed to strengthen the gatekeeping role of GPs, and increasing the specialisation of many small hospitals can improve efficiency. Constructing an integrated long-term care model as recommended in previous *Surveys* would reduce inefficiencies and improve access to long-term care services (OECD, 2017).

Making the tax system more growth and environmentally friendly

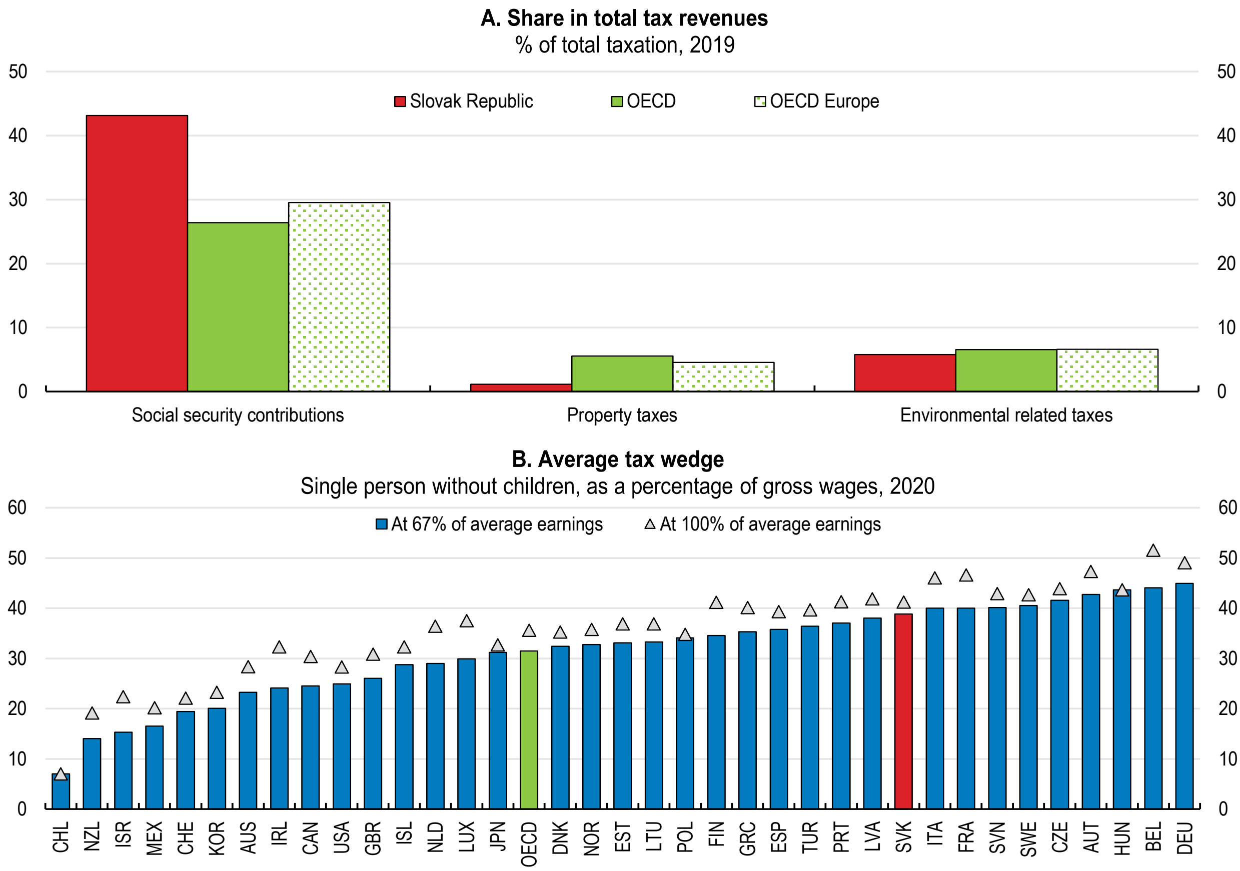
Overall, the tax burden increased over the last decade and was close to the OECD average of around 34% of GDP in 2019. The tax mix relies heavily on social security contributions (Figure 1.13, Panel A). This is also reflected in an internationally high tax wedge in particular on low-income earners (Panel B), with likely negative effects on the employment of low-skilled workers. The high tax wedge is largely due to high employer social security contributions and in particular high health insurance premia by international comparison. Rapid population ageing will put further pressure on the financing of social security systems and hence contribution rates. In contrast, the tax burden on property and environmentally harmful activities is comparatively low.

A tax reform with the aim of shifting the burden from labour to consumption, property and environmentally harmful activities, as is planned in the government recovery programme, has the potential to reduce distortions to economic growth (Arnold et al. 2011). A tax system that relies less on taxes from labour would also make tax revenues more resilient to the impact of ageing.

Instead of raising the VAT rate, the government could consider broadening the VAT base. The standard VAT rate at 20% is close to the average rate across OECD countries but somewhat lower than in neighbouring CEE countries. A reduced VAT rate of 10% and exemptions exist for a number of goods and services, such as certain food items, including fruits and vegetables, and accommodation services (OECD, 2020d). Preferential rates and exemptions are frequently used to address equity issues. However, this is often inefficient, because exemptions and preferential rates benefit all households, including the affluent (OECD, 2018). Furthermore, differential VAT rates provide opportunities for tax evasion by re-classifying goods to benefit from lower rates. Finally, raising VAT revenues through base broadening instead of rate increases tends to be more growth-friendly (Acosta-Ormaechea and Morozumi, 2019). The government should assess the costs and benefits of the reduced rates, and should gradually align those that mainly benefit higher income households to standard rates.

The government should increase revenues from property taxation and change the tax base for recurrent taxes on immovable property to market values. Recurrent taxes on immovable property are less distorting than taxes on labour. However, as many low-income households own their homes through restitution in Slovakia, property taxes could impose a heavy burden on such households. To avoid regressive effects and make higher property taxes more politically acceptable, a minimum amount of the property value could be exempted or means-tested exemptions for low-income households introduced. Tax increases could be phased in gradually, and deferrals for liquidity-constrained households introduced. In addition, Slovakia is one of few OECD countries that still uses an area-based assessment for recurrent real estate taxes. Basing real estate taxes instead on regularly updated market values could increase revenues without increasing tax rates. In addition, it would make property taxation fairer and can reduce house price volatility.

Figure 1.13. Revenue relies heavily on social security contributions and the tax wedge is high



Note: The OECD and OECD Europe aggregates are an unweighted average of the countries in the group. In Panel B, 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, expressed as a percentage of labour costs for a single person (without children) on average earnings.
Source: OECD Global Revenue Statistics database; OECD Environmental policy database; and OECD Taxing wages database.

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The government should also broaden the base for social security contributions. The self-employed often pay only the minimum or no social security contributions, due to a high degree of discretion in setting the contribution base (Chapter 2). The government should better align the contribution base between employees and the self-employed with similar earnings. In addition, the tax treatment of pensions is very generous - both pension contributions and benefits are fully exempt from income tax and social security contributions. As contributions to health insurance entitle contributors to health coverage the same year, pensioners should be liable for such contributions. While this would reduce the net replacement rates of pensioners, which are above the OECD average, the negative effect could be offset by changes in pension parameters. A more targeted approach would be to only keep health contribution exemption for low-income pensioners.

To improve environmental outcomes, environmental taxes should increase and be adjusted to ensure a more consistent pricing of carbon and other pollutants across fuels and uses (see below). In 2018, only 30% of carbon emissions were priced above EUR 30 per tonne of CO_2, a low-end estimate of the social costs of carbon (OECD, 2021a). Remaining fossil fuel subsidies, such as the exemption of natural gas from excise taxation for consumption for certain purposes, should be phased out. In the medium-term, the government should consider introducing an explicit carbon price in sectors not covered by the EU-ETS, such as transport and buildings. However, higher carbon prices should be accompanied by measures to cushion the effect on the poor and improvements in public transport services, especially in rural areas.

Efforts to improve tax collection and reduce tax evasion should continue. The collection of VAT has improved significantly but the VAT gap remains very high at 16% in Slovakia compared to an average gap of 10% in the EU (EC, 2021a). Bringing the VAT gap to the EU average could increase tax revenues by around 0.5% of GDP (MoF, 2021). Tax evasion is also an important concern for the corporate income tax (CIT). For example, (deliberate) non-compliance with the CIT resulted in estimated tax revenue losses for the small and medium-sized firms segment of close to EUR 360 million (0.45% of GDP) or 25% of the CIT revenues from such firms in 2015 (Chudy et al., 2020). Non-compliance was particularly prevalent in micro-firms and in the wholesale and retail sector. The full rollout of electronic cash registers and the planned introduction of electronic invoicing from 2022 has the potential to reduce VAT and CIT evasion. The availability of electronic invoicing systems can also allow tax administrations to pre-fill CIT and VAT return to reduce compliance costs, as in done in a pilot project for VAT returns in Spain for example (OECD, 2021f). Taxpayer education programmes targeted at micro and small businesses can also improve compliance. Reducing CIT non-compliance requires strengthening and better targeting audits through risk-based analytical tools, and centralising the selection of audits across units of the tax administration based on transparent selection criteria. Resources for tax audit are often used ineffectively on inactive firms, highlighting the need to frequently update the taxpayer register (Chudy et al., 2020). Improving corporate income tax collection could create room to lower the statutory corporate income tax rate, with potential positive impacts on FDI inflows. The CIT rate at 21% is close to the (unweighted) OECD average but higher than in several Central and Eastern European countries.

Box 1.5. International examples to improve tax collection

Electronic invoicing: In Hungary, in the year of the introduction of the mandatory online invoice data reporting (2018), the VAT payment balance increased by 11% compared to the previous year and showed a further increase of 15% in 2019. The system allowed the national tax administration to detect fraudulent invoicing, take more targeted and faster action against international offenders, and make a clear distinction between fraudulent and compliant taxpayers.

Voluntary compliance: Canada's Revenue Agency's Liaison Officer Service is designed to help small businesses and self-employed individuals by providing them with free, personalised support, information, and guidance about their tax obligations and responsibilities. The objective is to reduce their compliance burden by making it easier for them to comply and to avoid costly intervention in the future. It takes an innovative approach by shifting to offer the service from in-person visits to virtual ones through telephone and secure videoconference platforms.

Audits: In Canada, Artificial Intelligence (AI) techniques were applied to all stages of the internal audit, evaluation, and risk management processes by Canada Revenue Agency. For instance, in 2021, full populations were analysed using machine learning models rather than a random sample when searching for potential risks of internal fraud, allowing to make more informed decisions on how to mitigate the risk of fraud.

Source: (OECD, 2021f)

Table 1.6. Past OECD recommendations fiscal framework and tax policies

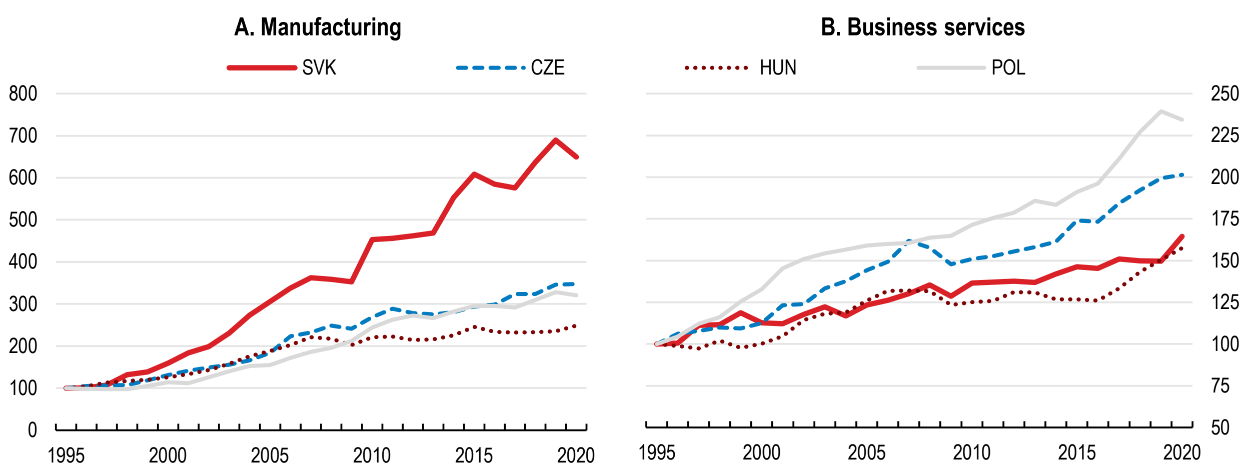
Recommendations in previous Surveys	Actions taken since 2019
Implement the constitutional provision of multi-annual binding spending ceilings to reinforce budget discipline in upturns	In 2020, the government submitted to the National Council an amendment to the constitutional act on budget responsibility to implement spending ceilings and the transition to net debt targets.
Strengthen the Value for Money initiative, use the results to develop concrete proposals for efficiency improvements, and integrate them in medium-term fiscal planning	New amendments to the budgetary rules strengthen the oversight function of the Value for Money Department in the selection and implementation of public investments. EUR 107 million worth of saving measures identified in the 2019 spending review on health care were included in the 2021 budget.
Further shift the tax burden from labour to less distortive bases such as property, alcohol and environmental externalities such as air pollution. Increase energy taxes.	No action taken.
Further enhance the efficiency of tax administration. Continue efforts to improve tax collection.	The use of electronic cash registers for all taxable persons is mandatory from 2020, with an online connection to the financial administration ('eKasa').

Transforming Slovakia into a knowledge-based society

Boosting productivity growth is key to accelerating economic convergence and improving living standards in ageing societies. Productivity growth in Slovakia has significantly slowed since the global financial crisis (Figure 1.2), even if it remains high by international standards. The slowdown partly reflects diminishing benefits from Slovakia's integration into global value chains and has been accompanied by a marked downturn in FDI inflows. However, it is also due to limited knowledge spillovers from large, multinational enterprises, concentrated in the manufacturing sector, to smaller, domestic firms in the services sector (OECD, 2019a). Productivity gains in services sectors have been modest compared to peers (Figure 1.14). To sustain productivity growth, Slovakia needs to broaden its drivers of growth and develop its capacity to innovate and adopt new technologies.

Figure 1.14. Productivity gains have been large in manufacturing but modest in services sectors

Gross value added per hour worked, constant prices, index 1995=100



Note: Business services exclude real estate.
Source: OECD Productivity database.

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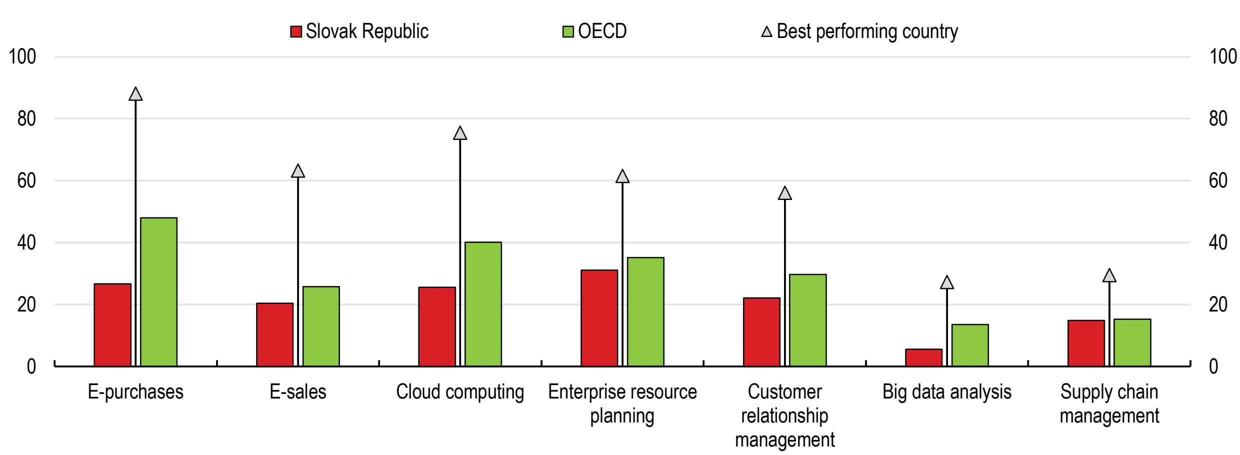
The COVID-19 crisis provides challenges but also opportunities for productivity growth and inclusion. Falling investment, supply chain disruptions, lower mobility of workers across sectors and firms, erosion of unemployed workers' human capital and students' educational losses because of school closures may jeopardise prospects for productivity and inclusiveness (OECD, 2021b). At the same time, the crisis has accelerated the digital transformation. The surge in telework, the large rise in e-commerce, and the continuity of access to public services during lockdowns are a testament to these changes (OECD, 2020a; OECD, 2021b). The recovery provides a unique opportunity, helped by the Next Generation EU funds, to ensure that the benefits from the digital transformation are broadly shared.

Indeed, Slovakia has a vast underexploited potential to unleash the benefits of the digital economy. The country is severely lagging behind in a number of dimensions of the digital transformation. For example, Slovakia only ranks 22 out of the 27 EU countries in the European Commission's Digital Economy and Society Index (EC, 2021c). In addition, firms lag in the adoption of many digital tools and technologies compared to firms in other OECD countries (Figure 1.15), with smaller firms significantly lagging behind larger firms.

A broad range of policy actions are needed to foster technology diffusion and productivity growth. This includes ensuring adequate skills, complementary investments in intangible assets (e.g. R&D), enhancing the business environment to foster business dynamism, as well as better access to digital infrastructure and government services (OECD, 2021b). The potential gains in terms of technology adoption and productivity growth are large (Figure 1.16). To address some of the shortcomings, the government launched the *2030 Digital Transformation Strategy for Slovakia*. The 2019 A*ction Plan for the Digital Transformation of Slovakia for 2019 – 2022* prioritises measures in the areas of: a) education to improve employability and digital skills of the workforces; b) data and digital economy (e.g. network, innovation ecosystem, smart mobility, Fintech); c) modernisation of the public administration; and d) the development of artificial intelligence. Furthermore, in 2021 the government adopted a *Strategy and Action Plan for Improving Slovakia's position in the Digital Economy and Society Index (DESI) until 2025* with complementary measures.

Figure 1.15. Firms' adoption of digital technologies is low

% of firms which adopt each technology



Note: The OECD aggregate is an unweighted average across all OECD countries for which data are available, taking the latest available year (ranging from 2020 to 2014, depending on the country and on the technology). For Slovak Republic, data for e-sales, cloud computing and big data analysis refer to 2020; data for enterprise resource planning and customer relationship management refer to 2019; data for e-purchases refer to 2018; data for supply chain management refer to 2017.
Source: OECD ICT Access and Usage by Businesses database.

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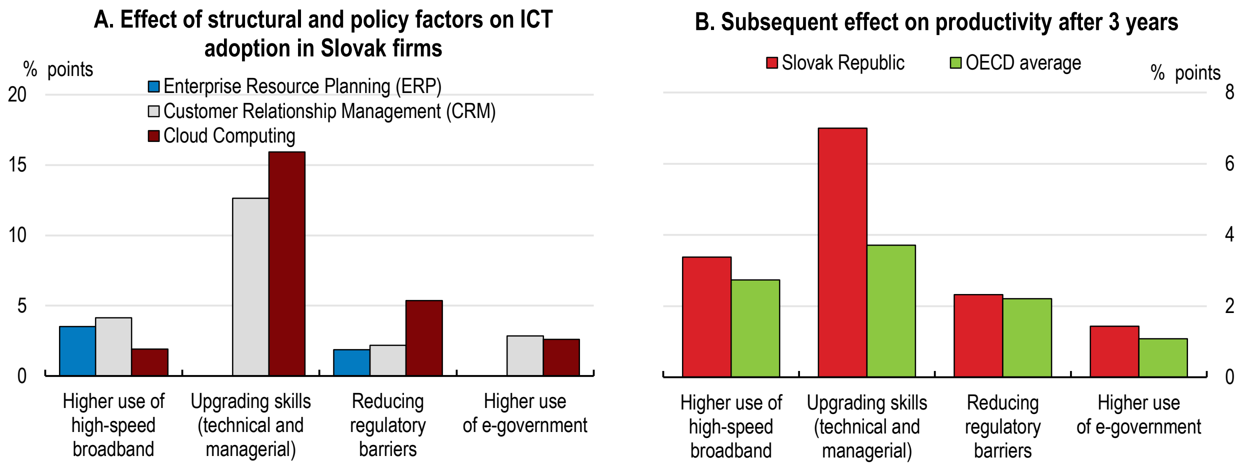
Figure 1.16. The potential to foster technology diffusion and productivity growth is large



Note: Estimated effect on the average adoption rate of selected ICTs (Panel A) and the multi-factor productivity (MFP) of the average firm (Panel B) of a range of policy and structural factors. For each of the underlying indicators, it is assumed that half of the gap to the best performing country in the sample is closed. It is also assumed that policy factors in each group are largely independent from each other.

Source: Based on Sorbe, S., et al. (2019), "Digital Dividend: Policies to Harness the Productivity Potential of Digital Technologies", OECD Economic Policy Papers, No. 26, OECD Publishing, Paris, https://doi.org/10.1787/273176bc-en.

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Improving educational outcomes and enhancing skills

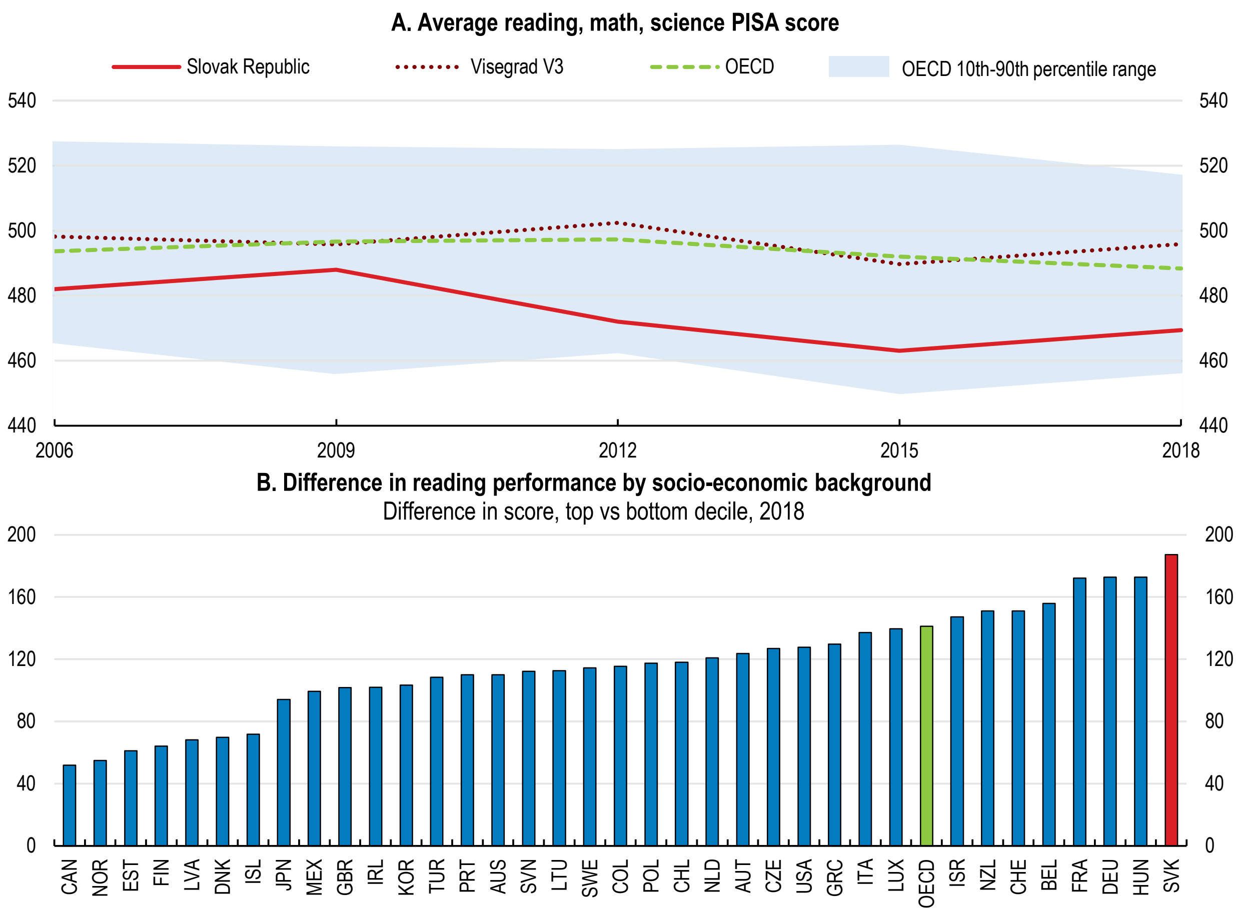
Educational outcomes remain weak. The skills of 15-year-old Slovaks, as measured by the latest PISA results, lag significantly behind those in other OECD countries, especially in reading and science literacy, while results in mathematics are close to the OECD average (Figure 1.17, Panel A). Despite a slight improvement compared to 2015, overall educational outcomes are weaker than a decade ago, in particular in science (OECD, 2019d). In addition, roughly a third of students are low performers in reading, compared to less than a quarter on average in the OECD.

Significant equity concerns also remain and may be exacerbated by the COVID-19 crisis. The impact of students' socio-economic background on student performance is the strongest in the OECD (Figure 1.17, Panel B). Outcomes are particularly weak for the Roma population. The difference between the 2015 PISA scores of Slovak Roma and non-Roma speaking students in mathematics and reading equals almost 160 points, a gap equivalent to almost five years of schooling (OECD, 2019a). In the Slovak Republic, low- and high-performing students are more often clustered in the same schools than on average in the OECD (OECD, 2019e). The COVID-19 crisis may further aggravate these differences. During the first wave of the pandemic, about 7.5% of the primary and secondary student population were not involved in distance education. The share of pupils with special needs, from disadvantaged socioeconomic backgrounds, and in the eastern regions of Slovakia, where most of the Roma population lives, was disproportionally higher (Ostertágová, Čokyna, 2020). Similarly, survey evidence suggests that during the second wave around 10% of pupils did not participate in distance learning (Ostertágová, Rehúš, 2021).

High-quality pre-primary education is crucial for developing children's skills and improving the inclusiveness of the educational system. The participation rate of children in pre-school education has increased in Slovakia, but is still substantially below EU and OECD averages (Figure 1.18, Panel A). Enrolment in pre-primary education is also highly heterogeneous. The enrolment rate of 3-5 year olds in households that receive assistance in material need (AMN) and households from the marginalized Roma community (MRC) are substantially lower (Figure 1.18, Panel B). In addition, districts with higher unemployment rates exhibit significantly lower pre-primary enrolment rates (OECD, 2020b). Insufficient supply of places, in particular in municipalities with a high share of Roma population, are one of the reasons for the low enrolment rates (MoF, 2020a; OECD, 2019a).

Pre-primary education will become mandatory for 5-year-olds from the 2021/22 school year. The recovery plan also foresees additional investment in pre-school facilities. This is crucial to avoid future demand from 5-year olds crowding out younger children and to ensure high-quality education. The government should continue to expand early childcare opportunities to younger children, for example with a legal entitlement for 3 and 4 year-olds to attend pre-primary education as is planned in the recovery programme (OECD, 2020b). To ensure participation of disadvantaged groups, priority should be placed on raising awareness of the positive long-term effects of pre-primary education and building trust through relationships with parents, especially in Roma communities. Designated contact persons, who are trained and equipped with necessary language skills, could help with administrative requirements for enrolment (OECD, 2020b). There is also scope to adjust financial and non-financial assistance. For example, school meal subsidies have been shown to improve enrolment among Roma children (MoF, 2020a). However, only about one-third of children at risk of poverty or social exclusion in kindergartens received meal subsidies and the subsidy has not been raised in nominal terms since 2011. In addition, improving public transportation between Roma settlements and municipalities with pre-school facilities could strengthen participation in pre-school education.

Figure 1.17. Educational outcomes are weak and vary strongly with socio-economic background



Note: In Panel A, Visegrad V3 includes Czech Republic, Hungary and Poland. In Panel B, when scores for the bottom decile were not available, either the second or middle decile scores were used to compute the top-bottom-decile difference. Similarly, when scores for the top decile were not available, the ninth decile scores were used.

Source: OECD (2019), PISA 2018 Results (Volume I-III), OECD Publishing, Paris; OECD (2016), PISA 2015 Results (Volume I-III), OECD Publishing, Paris; OECD (2013), PISA 2012 Results (Volume I-III), OECD Publishing, Paris; OECD (2010), PISA 2019 Results (Volume I-III), OECD Publishing, Paris; OECD (2008), PISA 2006 Results (Volume I-III), OECD Publishing, Paris; and OECD calculations.

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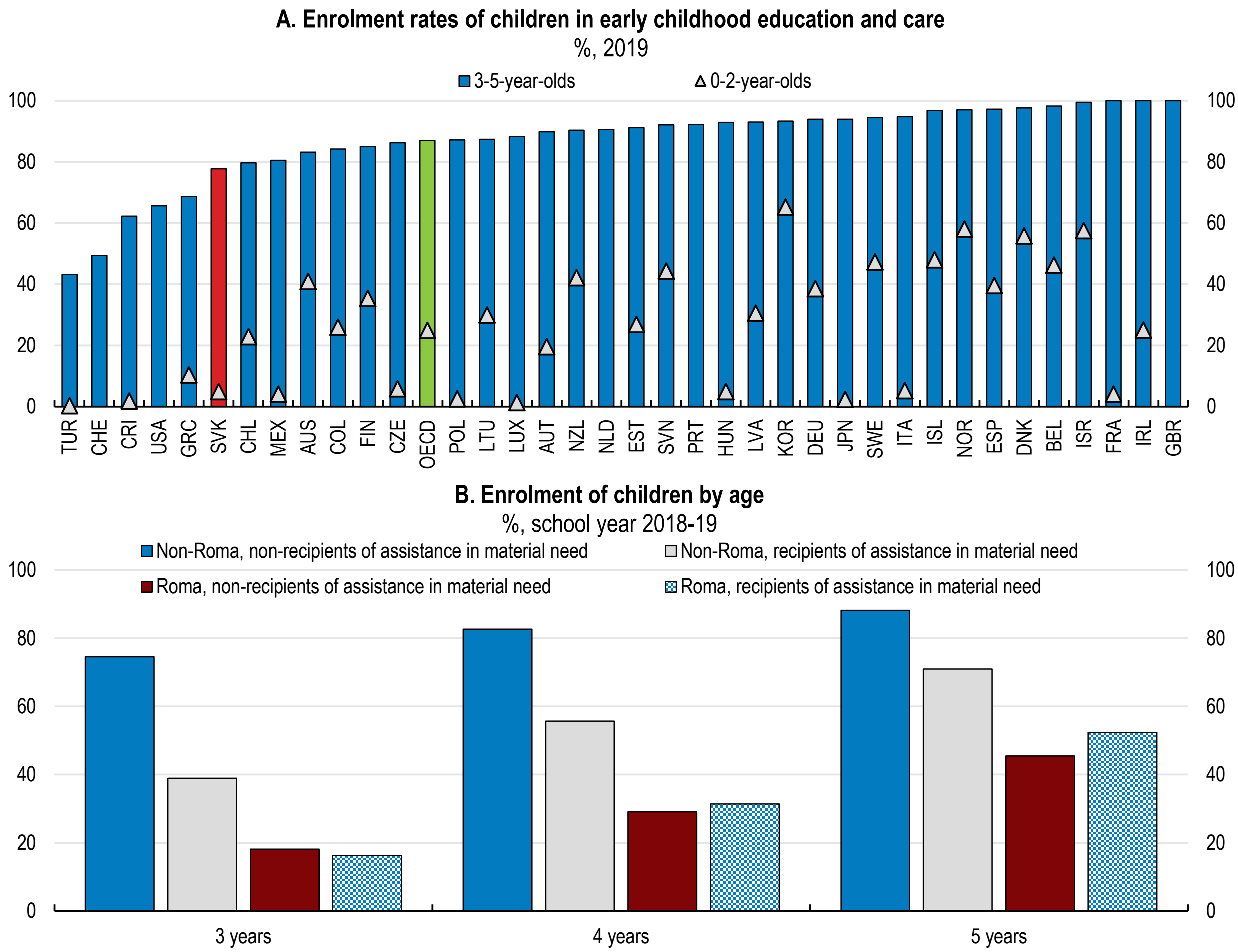
Figure 1.18. Enrolment in pre-school education is low and heterogeneous



Source: OECD Education database; ministerial IS; Central Labour Office; Ministry of Interior; and the Atlas.

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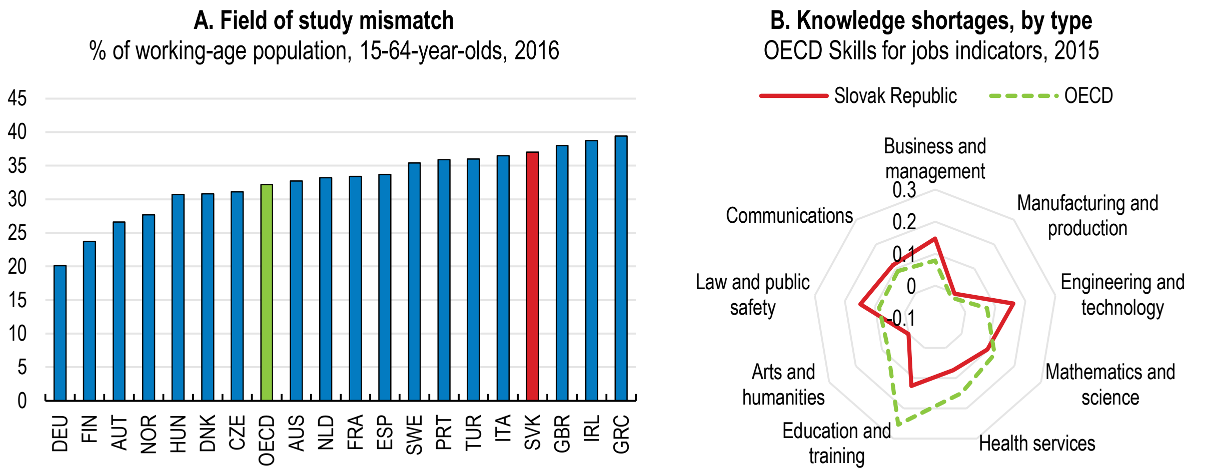
Building a strong teaching workforce is critical for improving the skills of youth. A number of factors hinder Slovakia's capacity to attract and retain high-quality teachers in the education system. For example, only 4% of teachers believe that teaching is a profession valued by society, the lowest among TALIS participating countries (OECD, 2020b). Despite recent increases, teachers still only earn around 70% of the average tertiary-educated person in Slovakia (MoF, 2020b), compared to around 90% on average in the OECD (OECD, 2020f). Higher pay can attract better teachers but this should be flanked by measures to improve the training and work environment of teachers. The *OECD Skills Strategy* (OECD, 2020b) stresses, for example, the need to foster practical aspects in the higher education institution's curriculum of teachers, unifying teaching standards across the system and improving the mentoring programme for young teachers. In addition, the diversity of professional development opportunities should be enhanced with a focus on areas with the greatest needs, such as educating pupils from disadvantaged backgrounds. The recovery programme includes several welcome reforms. For example, the planned regional support centres for teachers, will *inter alia* provide assistance in curriculum development, mentoring, counselling and consultation activities (Table 1.7). In addition, grants will be provided to universities for new programmes that support the introduction of inclusive education, the education of pupils with different mother tongues and the development of digital competences in the teacher training curriculum.

More attention needs to be paid to the most vulnerable students and schools. The number of early-school leavers has increased strongly in recent years. In 2017-2018, 37% of 16-year-olds from marginalised Roma communities had dropped out before the final year of lower secondary education (MoF, 2020a). In addition, too many students from disadvantaged backgrounds are enrolled in special needs schools. The number of pupils in special education in Slovakia is nearly four times higher than the EU average, with around half of these students from families receiving material needs assistance or from marginalised Roma communities. The government plans to improve the assessment of mental disabilities to reduce the number of students transferred to special schools and to better integrate students with light mental disabilities into the regular school track. However, even if enrolled in regular schools, vulnerable students are not always supported adequately. Besides the need to provide better training to teachers dealing with vulnerable students, stronger co-operation and communication between schools, vulnerable students' families and social services is needed. Increasing the diversity of the teaching workforce for example through more Roma teachers and teaching assistants can heighten intercultural awareness and teachers can act as a positive role models (EC, 2016). Examples of successful projects show that Roma teaching assistants improve the educational achievements of Roma children and help change attitudes of Roma parents towards higher school attainment (OECD, 2019a). To tackle these issues, the government plans to adopt an Inclusive Education Strategy. Implementation of the strategy as well as sustainable financing of the planned measures will be crucial. In addition, kindergartens with a high proportion of children from socially disadvantaged backgrounds will be able to apply for support to hire assistant teachers. Priority will be given to Roma-speaking candidates from the local community.

Skills mismatches and shortages are significant, especially in areas related to the digital economy and entrepreneurship. Skills mismatches can negatively affect economic growth through their effects on increased labour costs, lower labour productivity growth, slower adoption of new technologies and lost production associated with unfilled vacancies (OECD, 2016b). Field-of-study mismatch, meaning that workers educated in a particular field work in a different field, is high (Figure 1.19, Panel A). Critical shortages exist in particular in engineering and technology as well as in business and management (Panel B). While literacy and numeracy skills of adults are comparatively strong in Slovakia, many adults do not have the right skills to succeed in an interconnected, digital world. Self-assessed digital skills are lower than in most EU countries, especially among older workers (Eurostat, 2021). Shortages exist in ICT related skills such as complex problem solving and systems skills. According to the Survey of Adult Skills (PIAAC) data, fewer than 35% of 25- 34 year-old Slovaks score high in problem-solving in technology-rich environments, compared with an OECD average of almost 45%. There are also shortages in some technical and managerial skills such as operations analysis, programming and resource management skills.

Figure 1.19. Skills mismatches are high and skills shortages in some segments significant



Note: In Panel A, field-of-study mismatch indicates the workers employed in a different field from what they have specialised in. In Panel B, positive values indicate skill shortage while negative values point to skill surplus. The larger the absolute value, the larger the imbalance. The OECD Skill for jobs indicators are constructed by an index of the labour market pressure on occupations, which is multiplied by an index of skill intensities. First, the labour market pressure (shortage/surplus) is identified at the occupation level from labour market data such as wage growth (measured in terms of deviation from the long-run trend of the whole economy). Then, this is used to map occupations that are in shortage or surplus into the underlying knowledge types/skills requirements (for e.g. computer and electronics) for these occupations. The underlying knowledge types/skills requirements for each occupation are defined in O*NET and measured in terms of a min-max scaling varying between 0 and 1.
Source: OECD Skills for Jobs database.

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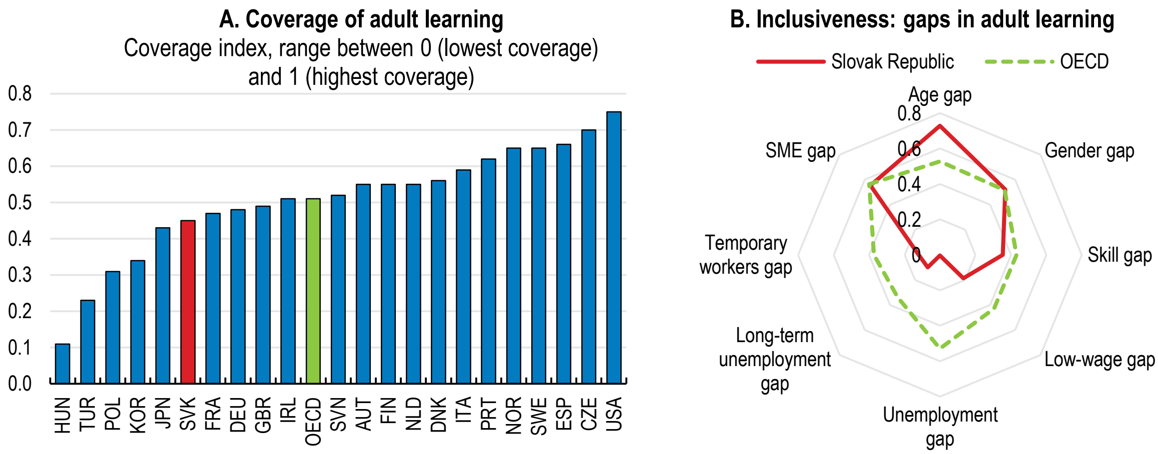
Reducing skills imbalances and shortages calls for further progress in disseminating information about labour market and skills needs. The authorities have set up a graduate tracking system as recommended in previous *Surveys* (Table 1.7). However, further room exists to consolidate results from several skills assessment and anticipation exercises and better tailoring them to the respective users (OECD, 2020b). Consolidated results could be made available in the form of a report (e.g. as in Norway) or in an electronic portal (e.g. as in Estonia). A one-stop-shop portal that allows students and their families to access information on labour market and skills needs and study opportunities, as in Denmark and Poland, could be established. Career guidance in schools and higher education institutions can also be strengthened by setting up clear standards and providing targeted funding. Another way of aligning student choices with labour market needs is to allow enrolment in VET programmes with a work-based learning component only once a placement with a company is secured, as done, for example, in Denmark, Germany and Switzerland.

Further progress is needed to make the educational system more responsive to labour market needs. Since the 2016/17 academic year, the funding per student for vocational schools reflects to some extent labour market demand for different occupations. In 2015, the government introduced a dual VET model to increase opportunities for work-based learning. However, uptake of the dual model remains low and participation by SMEs is limited. To improve participation by firms, financial incentives (tax deductions or subsidies) have been enhanced. These financial incentives should be evaluated. Funding could be enhanced to support the set-up of employer training associations (esp. among SMEs) as in Switzerland and Austria. In these association groups of employers share the costs of organising work-based learning. The government could also consider setting up local trade committees that provide information to local firms, help schools with curriculum development and support quality assurance as in Denmark (OECD, 2020b).

Incentives in tertiary education could also be further strengthened to align outcomes better with labour market needs. For example, the funding formulas of higher education institutions could be further refined to partly reflect the employability of graduates, by making use of the newly established graduate tracking database. As argued in previous *Surveys* (Table 1.7), the uptake of professional/vocational bachelors should be further encouraged. This could be done by including this goal in performance agreements or by introducing a separate funding model and governance structure to transform some existing higher education institutions into professionally-oriented institutions (e.g. in Italy and the Netherlands). These professionally-oriented institutions could specialise in the delivery of professional bachelor programmes and more applied research (e.g. in the Netherlands) (OECD, 2020b).

There are important gaps in the life-long learning system in Slovakia. The coverage of the system is low compared to other OECD countries (Figure 1.20, Panel A). Participation is particularly low for groups that would benefit most from adult learning participation. Participation among the low skilled, low-income workers as well as the unemployed is among the lowest in the OECD (Panel B, OECD, 2019b).

Figure 1.20. Participation in life-long learning is low and unequal



Note: Indicators normalised to 0-1, 1 = top OECD country and 0 = bottom OECD country. “Coverage” assesses the extent to which individuals and employers are engaged in adult learning; “Inclusiveness” looks at how equitable participation in adult learning is across countries. More specifically, in Panel B, age gap shows the percentage point difference in participation between older (>55) and prime age population (25-54); gender gap shows the percentage point difference in participation between women and men; skill gap shows the percentage point difference in participation between low-skilled and medium/high-skilled adults; low-wage gap shows the percentage point difference in participation between low-wage and medium/high wage workers; unemployment gap shows the percentage point difference in participation between the unemployed and employed; long-term unemployment gap shows the percentage point difference in participation between long-term unemployed and employed; temporary workers gap shows the percentage point difference in participation between workers on temporary and permanent contracts; and SME gap shows the percentage point difference in participation between workers in SMEs and larger enterprises.
Source: OECD Dashboard on priorities for adult learning database.

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To strengthen participation in lifelong learning, the government plans to adopt a new lifelong learning strategy in 2021. It will be important that such a unified strategy clearly sets out the governance structure with the aim to improve: a) coordination and co-operation between ministries, levels of government and stakeholders; b) financing arrangement to encourage uptake of life-long learning; and c) existing socioeconomic and regional inequalities in access (OECD, 2020b). Slovakia also plans to introduce pilot individual learning accounts from 2021 to 2027, similar to schemes in Scotland, Canada, France and the Netherlands. This plan is welcome, but it is important that the system is accompanied by strong guidance to steer training into relevant labour market fields, a robust quality assurance of training providers, and the programme should be regularly evaluated. Moreover, Slovakia's National Programme for the Development of Education considers introducing tax allowances for companies that invest in the training of their employees. If implemented, these tax incentives should be well-targeted. For example, SMEs could be allowed to deduct a greater amount of training costs from their taxable base (as in Malta) or the tax benefit could be limited to SMEs. Tax deductions could also be limited to non-wage costs so that companies do not have an incentive to give training to high-wage earners only. Finally, tax deductions should only apply to approved training courses (OECD, 2020b). Some adults are effectively excluded from training opportunities due to the lack of basic skills, in particular among the Roma. To enhance basic skills, the government could scale up successful projects involving direct field work to reach vulnerable groups.

Table 1.7. Past OECD recommendations on education and skills

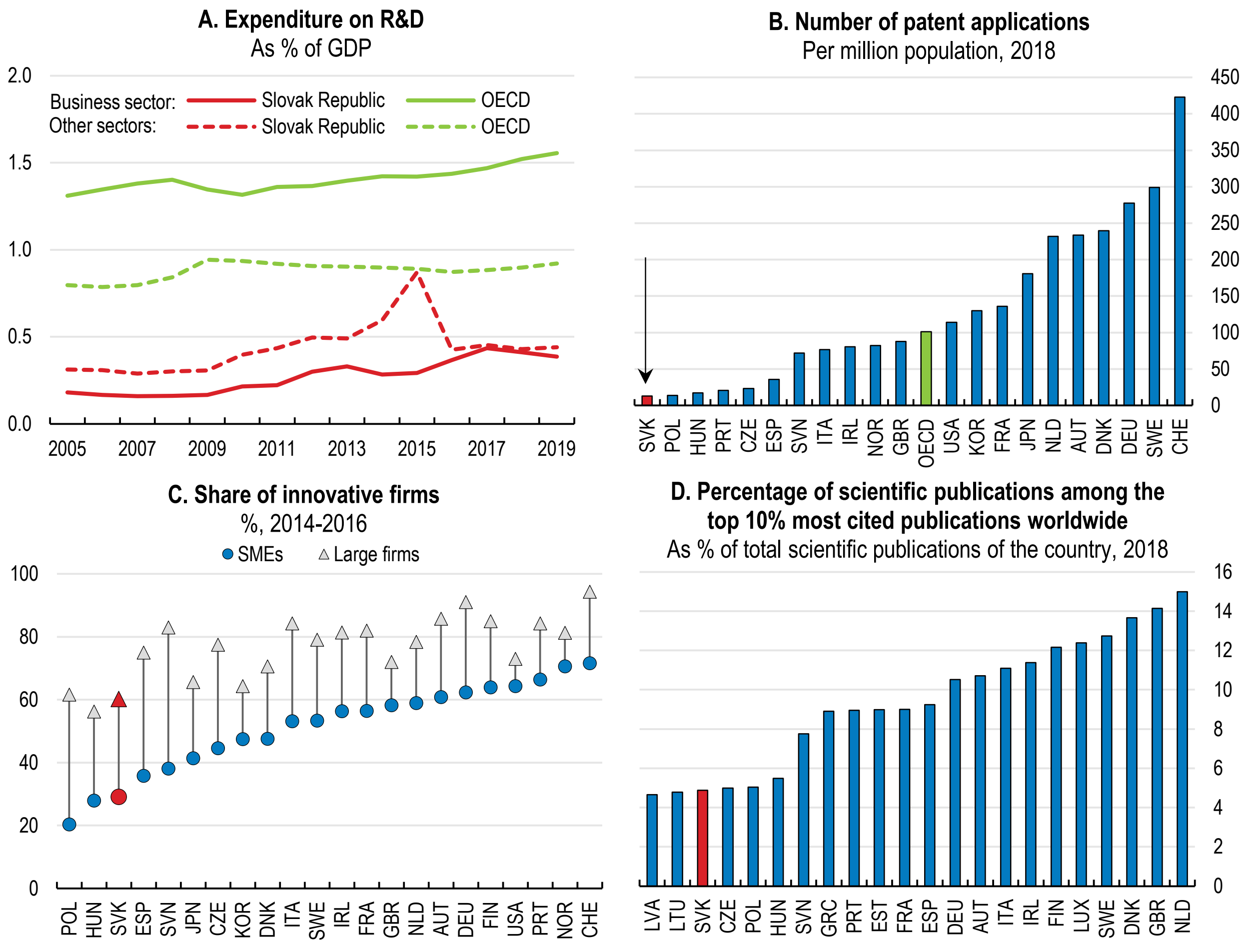
Recommendations in previous Surveys	Actions taken since 2019
Continue to expand the provision of high-quality early education and care, engage with parents to advertise its benefits, and remove financial barriers to attendance.	Compulsory pre-primary education is introduced for all children who reach the age of 5 by 31 August 2021. A legal right to early care facilities for 4 year-olds is planned for 2024, and for 3 year-olds for 2025.
Provide more funding for disadvantaged schools, particularly for Roma teaching assistants and higher salaries for teachers teaching in disadvantaged schools.	Salaries for teachers have been increased by 10% in 2019 and 2020. From January 2021, municipalities receive higher per capita allocation for educating children with special educational needs in kindergartens. From September 2020, about 3000 additional teaching, psychological and social assistants in kindergartens, basic and secondary schools.
Strengthen initial and continuing teacher training with a focus on methods to identify and address learning weaknesses.	Project on professional development of teachers including on crisis and post-crisis management and school interruptions over the period 2020-22. From September 2021, pilot project to establish regional support centres for teachers (peer mentors) to help schools and teachers in the areas of curriculum development, inclusive education, pupils' skills acquisition, and digital tools to evaluate pupils' educational progress.
Reduce the participation of Roma in special schools by better diagnostics and outreach towards Roma parents.	No action taken.
Publish high-quality analysis of graduates' labour market outcomes.	A tracking database for secondary and tertiary graduates was launched in early 2020.
Further involve businesses in higher education governance and introduce a general system of career guidance	Project (2016-2020) to increase the attractiveness and quality of dual VET programmes e.g. by improving information and teacher training. New accreditation standards for higher education institutions require strengthened stakeholder involvement, in particular of employers.
Create vocational bachelor programmes and strengthen practical experience in higher education curriculum.	From 2020, higher education institutions receive a financial bonus for graduates from vocational bachelor programmes.

Strengthening research and innovation capacity

Slovakia's innovation capacity is markedly lagging behind peers. Expenditure on research and development (R&D) is internationally low, especially business R&D (Figure 1.21, Panel A). R&D expenditure in other sectors is highly dependent on EU structural funds. After increasing until 2015, R&D expenditure declined again sharply related to the start of the new EU funding cycle. To reduce dependence on EU funds, it will be important that the government follows through with its commitment to increase R&D funding from the national budget by 0.05% per year over the period 2021-30. Slovakia also lags significantly behind in patent applications (Panel B), and the share of innovative firms (Panel C).

The government plans ambitious reforms to improve the quality of tertiary education. As highlighted in previous *Economic Surveys* (OECD, 2019a, 2017), the quality of higher education institutions needs to be improved: Slovak higher education institutions are poorly ranked by international comparison, they produce many publications but often of weak quality (Figure 1.21, Panel D), and tertiary education is relatively closed to international influences with a low share of foreign students and teachers. To improve quality, the independent Slovak Accreditation Agency for higher education was established in late-2018 and is now fully operational. The independent agency published binding standards of quality assurance for higher education institutions in 2020 with the goal to bring these in line with European standards. Funding for higher education institutions was updated in 2021 with a stronger weight on research output. In addition, performance contracts will be introduced in 2022, in which higher education institutions have to fulfil specific quality criteria based on audits to receive agreed funds. The performance contracts and planned mergers of higher education institutions will support the profiling, diversification, and creation of larger higher education institutions that will be better able to attract funding for high-quality research.

Figure 1.21. The innovation performance is weak



Note: In Panel B, the number of patent applications refers to applications by inventor and priority year to the PCT (Patent Co-operation Treaty), the EPO (European Patent Office) and the US (US Patent and Trademark Office).
In Panel C, SMEs refer to firms with 10 to 246 employees, while large firms to firms with 250 employees or more.
Source: OECD Main Science and Technology Indicators database; OECD Patents Statistics database; OECD Innovation Indicators database; European and Regional Innovation Scoreboards 2021; and OECD calculations.

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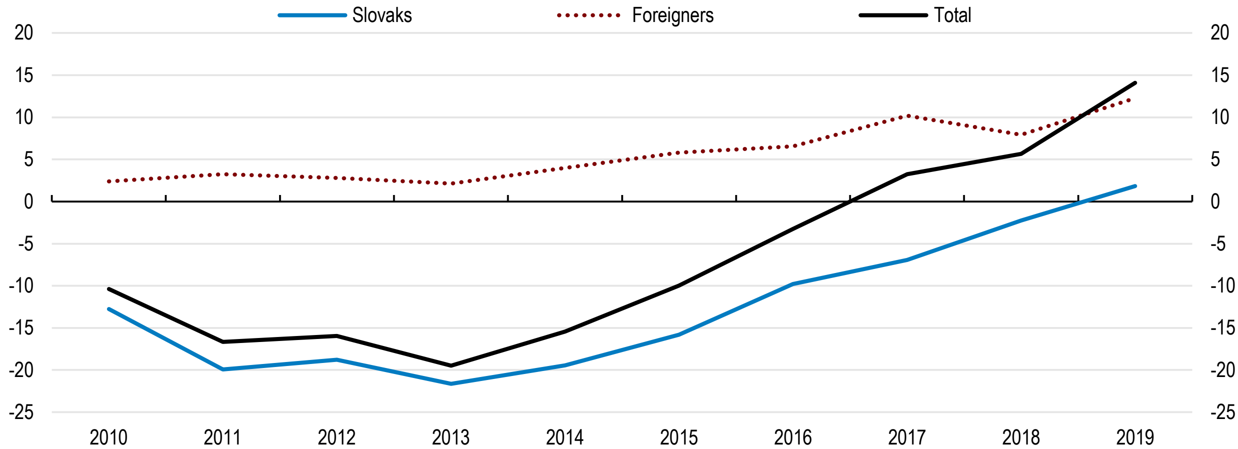
These planned reforms are welcome and in line with recommendations in previous *Economic Surveys* (Table 1.8). It will be crucial that the reforms are supported by adequate funding of higher education institutions, which is low by international comparisons (OECD, 2019a). In addition, research collaboration with innovative companies should be strengthened in the assessment of higher education institutions and public research institutions, and funding should effectively distinguish high- from low-quality research. In addition, higher education institutions need to be able to offer well-remunerated and high-quality research positions to attract high-quality foreign faculty members. As an intermediate step, the government should promote academic exchange programmes and scientific collaboration (OECD, 2019a).

Immigration is low and many high-skilled Slovaks leave the country. Net emigration from Slovakia has been stopped in the recent past, as more foreigners enter the country and fewer Slovaks leave (Figure 1.22). Nevertheless, immigration remains very low in comparison with other OECD countries and neighbours. Moreover, the share of Slovak high-school graduates that study abroad is the second highest in the OECD (Figure 1.23). The students who leave are the most successful students according to examination results and few of them intend to return home after their studies (Martinák and Varsik, 2020). This implies that Slovakia is losing some of its most-skilled workforce and potential researchers.

Figure 1.22. Net emigration has been stopped

Migration balance, thousands people



Note: The migration balance represents the difference between immigration and emigration flows.
Source: Ministry of Finance of the Slovak Republic.

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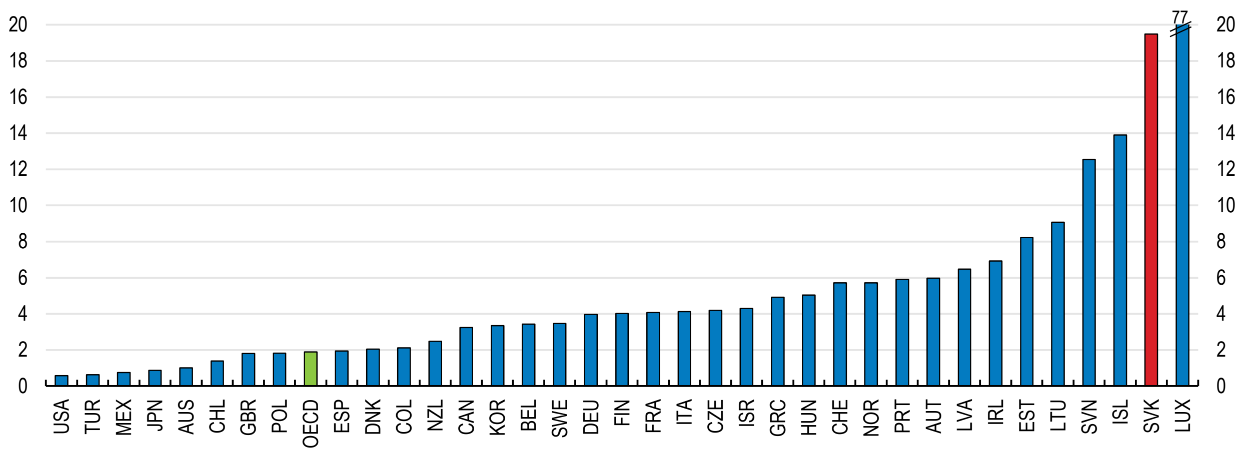
Figure 1.23. The share of tertiary students enrolled abroad is very high

Share of national tertiary students enrolled abroad, %, latest available year



Note: National tertiary students are calculated as total enrolment minus foreign students instead of total enrolment minus international students for CZE, GRC, ITA, KOR, SVK and TUR.
Source: OECD Education at a Glance database, last time updated on 16-09-2021.

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The government has continued to streamline the immigration process. A new law took effect in January 2019 to reduce the maximum processing time for work authorisations for so-called “shortage occupations” from 90 to 30 days. As part of the recovery programme, the government also plans to establish a fast-track scheme for highly qualified workers to further reduce the maximum time to acquire a work and residency permit. In addition, the list of “shortage occupations” will now be updated on a quarterly basis instead of annually. Finally, a new system streamlines the residency process (OECD, 2020g).

The government should further enhance efforts to attract and retain high skilled labour, including by encouraging return migration. The authorities could consider introducing a one-stop-shop portal with employment opportunities for foreign workers and Slovaks abroad similar to systems in Sweden, Estonia or Lithuania. Services to integrate foreigners could be strengthened, such as through the recognition of qualification (as in Austria), counselling (as in Germany), civic integration (as in Belgium) and language training (as in Portugal) (OECD, 2020b). To attract Slovak workers from abroad, the government should also develop and implement a diaspora engagement strategy, in close cooperation with representatives from social partners and NGOs (OECD, 2020b).

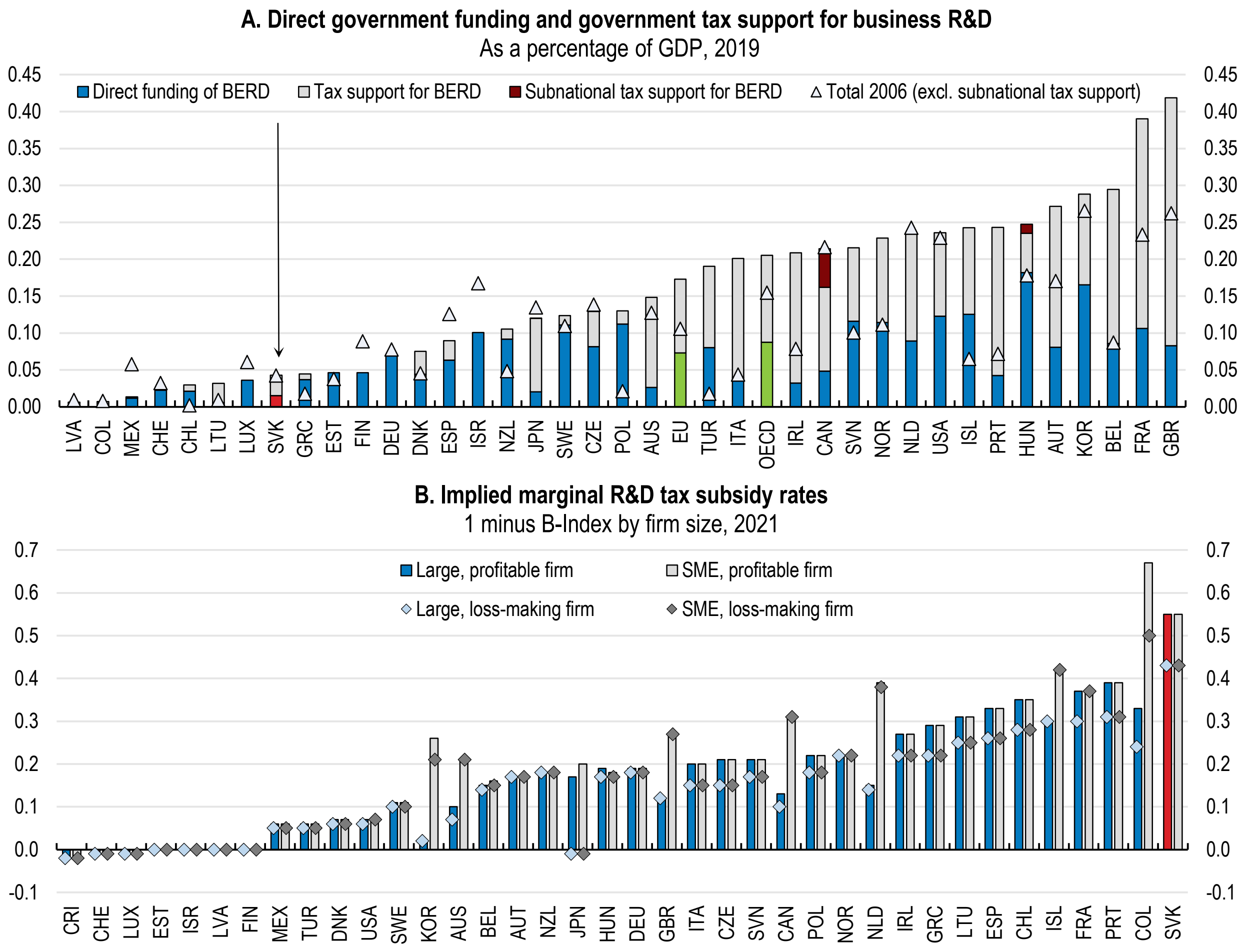
Government support for business R&D investment is low by international comparison (Figure 1.24). Similarly, the share of firms receiving support for innovation, at 4% of all firms, is low compared to an average OECD share of 11% (OECD, 2019f). Evidence suggests that public R&D funding can reduce the costs of adopting new technologies and ideas and hence speed up technology diffusion (Berlingieri et al., 2020). The government introduced a new R&D tax allowance in 2015 and increased the tax allowance significantly in 2018 and 2020 to 200% of eligible R&D expenditure. With the latest change, the marginal tax subsidies are among the most generous in the OECD (Figure 1.24). The authorities plan to reduce the tax allowance again to 100% in 2022. Take-up of the tax incentive by firms has increased over time, and in 2018 around 280 firms benefited from the R&D tax incentive (EC, 2020b). However, the share of SMEs receiving R&D tax support was only 30% in 2018, a much lower share than in many OECD countries (OECD, 2020h).

Given its high generosity, the tax scheme should be carefully evaluated. In particular, it should be assessed whether the scheme overly favours incumbents (Bravo-Biosca et al., 2016) and consideration could be given to target the scheme better to small and young firms. To benefit small and young firms, it is important that tax benefits include carry-forward provisions or cash refunds (Appelt et al., 2016). The R&D tax allowance in Slovakia can be carried forward up to five years. This is welcome, but cash refunds may be more beneficial for young firms, who may not have sufficient tax liability for several years and need financial support early in the innovation process. This concern is particularly relevant in Slovakia, given that external financing and especially venture capital opportunities are very limited (EC, 2020b). Australia, Canada, France and the United States are examples of countries that offer refundable R&D tax incentives that particularly target smaller R&D performers. Expenditure-based tax incentives could also go beyond R&D and target innovation activity more broadly, and include, for example, training, ICT investment or IP acquisitions as eligible expenditures. For example, the French innovation tax credit includes patent fees as eligible expenditure for SMEs, which may help small firms adopt new technologies.

The authorities could also give greater priority to direct support schemes, such as grants. Recent OECD research (OECD, 2020i) highlights the complementarity between tax incentives and direct funding for innovation support. R&D tax incentives tend to encourage experimental development more strongly, while direct funding tends to encourage basic and applied research. In addition, while tax incentives avoid “picking winners”, direct grants have the advantage of being easier to target to projects with high social returns (e.g. Appelt et al., 2016). Support could, for instance, be targeted to foster closer co-operation between private and public research and could help strengthen the country’s research capacities in areas such as the automotive sector where expertise already exists. The government could also directly support the establishment of venture capital funds. In Israel, for example, the government established the YOZMA group in the early 1990s, which took equity stakes in Israeli start-ups and provided equity guarantees for foreign investors. As the venture capital industry grew and matured, the government successfully phased out its equity involvement in the late 1990s (OECD, 2003). Furthermore, R&D tax incentives might generate more opportunities for tax evasion, for example by mischaracterising ordinary expenditures as R&D expenditures. This is a relevant concern in Slovakia given longstanding tax evasion problems (OECD, 2017).

The success of innovation policies will crucially depend on whether it is possible to streamline the currently fragmented governance system. Policy development and implementation suffer from a lack of coordination between ministries and implementing agencies, and the lack of a comprehensive, long-term research and innovation strategy (EC, 2020b). Major reforms have been regularly postponed. As part of the recovery programme the government plans to establish a single entity to coordinate the research and innovation support ecosystem. A strategic analysis unit is expected to take charge of the innovation strategy and the evaluation of existing instruments.

Figure 1.24. Overall public R&D support is low but tax incentives are very generous



Note: In Panel A, BERD refers to business enterprise R&D expenditure.
In Panel B, data reflect the tax treatment of R&D expenditure for SMEs and large enterprises in OECD countries, some of which, but not all, offer tax incentive support for business R&D expenditure. Data do not reflect preferential provisions for start-ups, young firms or a specific subset of SMEs (e.g. innovative SMEs). The B-index is a proxy for examining the implications of tax relief provisions, quantifying a number of qualitative features of a national tax system in the form of estimates of implied R&D tax subsidy that apply to generic or model types of firms. The B-index specifies the pre-tax income needed for a representative company to break even on a marginal, monetary unit of R&D outlay, taking into account provisions in the tax system that allow for an enhanced treatment of R&D expenditures. This includes preferential tax relief provisions in the form of more favourable tax credit or allowance rates that apply to SMEs in some countries. A representative firm is typically defined as one with sufficiently large profits to be able to fully make use of earned tax credits in the reporting period. It is customary to present this indicator in the form of an implied subsidy rate, namely one minus the B index. More generous provisions imply a lower "breakeven" point and therefore a higher tax subsidy. Implied marginal R&D tax subsidy = 1 minus B-Index.
Source: OECD R&D Tax Incentive database.

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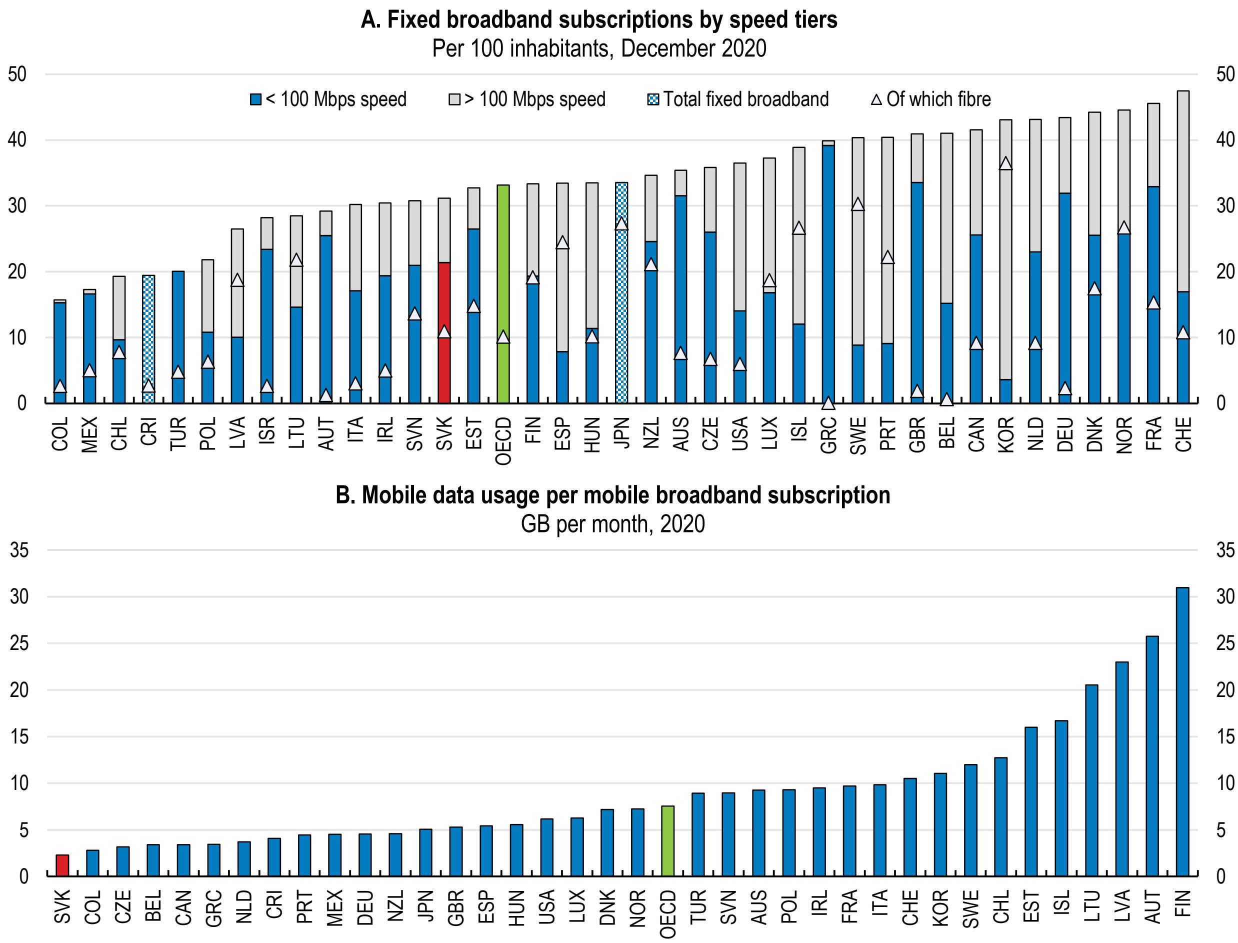
Table 1.8. Past OECD recommendations on innovation

Recommendations in previous Surveys	Actions taken since 2019
Include research collaboration with innovative companies in the assessment of universities and public research institutions.	3% of the funding of higher education and public research institutions is dependent on collaboration with innovative companies.
Create larger, internationally visible research units and reorient higher education institutions research funding to foster research at high international standards; adapt evaluation criteria accordingly.	The funding formula for higher education institutions has been updated with a stronger weight on research activity and outputs, effective from 2021. The independent Slovak Accreditation Agency is operational and will regularly assess the quality of higher education.
Continue to simplify work visa and residence procedures for highly skilled workers.	A new law took effect in January 2019 to reduce the maximum processing time for temporary residence permits for employment purposes from 90 to 30 days. The labour market test has been shortened and a new system streamlines the residency process.
Carefully monitor the implementation of the more generous R&D tax incentives recently adopted. Make the tax credit refundable.	The volume-based R&D tax deduction was increased from 150% to 200% and the carry-forward provision was extended from 4 to 5 years in 2020. The tax incentives have not been evaluated.
Consider providing direct support for centres of competence to strengthen public-private collaboration for research and innovation in areas such as the automotive industry.	No action taken.

Ensuring communication infrastructure and e-government services for all

Access to reliable and fast fixed and mobile broadband connections constitutes the backbone of a knowledge-based and digital economy. The COVID-19 pandemic has shown the essential role of broadband networks as work and education have shifted to homes. In Slovakia, fixed broadband subscriptions are slightly below the OECD average (Figure 1.25), with the share of high-speed internet subscriptions (speed faster than 100 Mbps) at 30%, lower than the OECD average at around 40%. In contrast, the share of fibre connections is slightly above the OECD average. Fibre networks can facilitate the deployment of 5G mobile networks, which offload mobile traffics into fixed networks. The deployment of 5G networks is underway, with 66.7% of the spectrum (which meets the technical conditions specified by EU law) having been assigned for 5G use as of August 2021. 5G auctions on the 700Mhz band concluded in November 2020 and licences until 2040 were sold to three operators. Slovakia is lagging behind most OECD countries in terms of mobile subscriptions and especially in terms of on mobile data usage (Figure 1.25). Low mobile data consumption may be linked to comparatively higher prices among peers for larger mobile data packages (EC, 2020e).

Figure 1.25. Fixed and mobile connectivity and usage lags behind many OECD countries



Note: In Panel A, data on fibre refer to 2020. In Panel B, data for JPN and the USA refer to 2019.
Source: OECD Broadband database; and OECD Broadband Portal.

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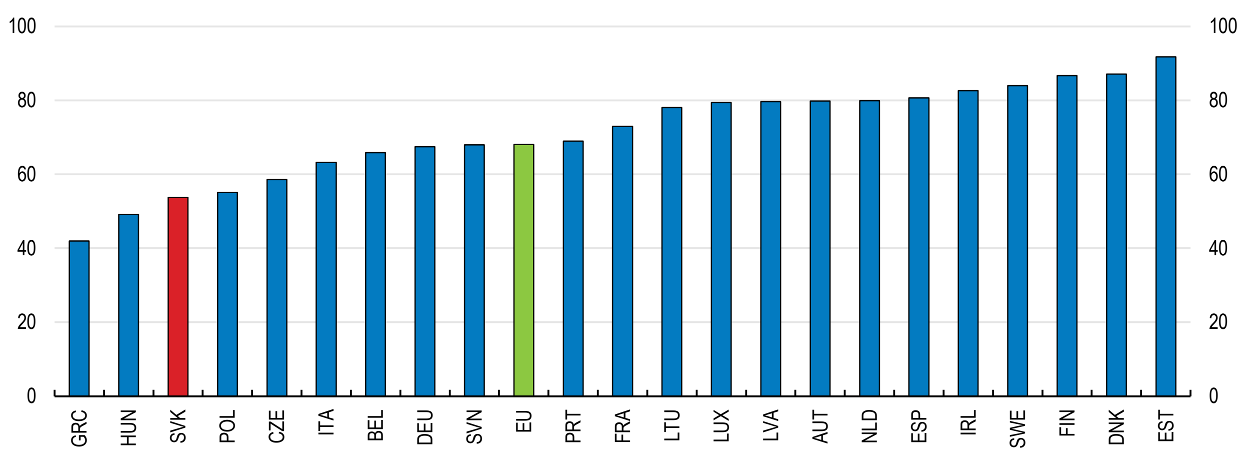
The government approved a new national broadband plan in March 2021 to align Slovakia's connectivity ambitions with EU targets. The main aim of the plan is to reduce regional differences in broadband access. According to plans of telecom operators, by the end of 2022, 59% of households will have access to ultra-fast broadband Internet (speeds of at least 100Mbit/s, expandable to 1Gbit/s), while the rest have lower speeds and about 2% of households will have no internet connection. The broadband plan's target is to provide ultra-fast internet access to all households by 2030. The investment costs to achieve this target are estimated at EUR 960 million. Most of the funds should come from private sources, with the remainder from public and the European Investment and Structural Funds.

Providing public services online can help consumers and businesses become familiar with new digital forms of communication. Indeed OECD research has shown that greater use of digital government services can speed up the diffusion of digital technologies in the economy more broadly and strengthen productivity growth (Sorbe et al., 2019, Andrews et al. 2018).

There is still significant scope to improve and expand digital government services (Figure 1.26). Slovakia is especially lagging behind in e-government users, with only 52% of Slovak Internet users who submit forms to public institutions doing so online, compared to 67% on average in EU countries (EC, 2020f). Other areas where Slovakia is lagging behind are the extent to which the government uses pre-filled forms in their interactions with citizens and open government data. The government has an ambitious agenda to improve digital government services. The national digitisation strategy aims to improve the public administration's use of data for analytical purposes. In addition, the government plans to create a central authority to design and manage digital public services. The adequate staffing and competencies of such a central authority will be key to its success. Other government priorities are to improve the user-friendliness of services, introduce a system to monitor the performance and costs of IT projects, and improve public procurement of IT equipment and services (MoF, 2020b). These plans are commendable. However, success will crucially depend on whether trust in e-government services is improved. Currently, 19% of Slovaks are concerned about the security of digital public services and limit or avoid electronic communication with public authorities, compared to just 8% on average in EU countries. Involving a broader group of stakeholders, in particular consumers, in designing new services and making them more user friendly can help increase trust (EC, 2020e).

Figure 1.26. E-government services can be expanded

Digital Economy and Society Index: Digital Public Services, score from 0 to 100, 2021



Note: "Digital Public Services" is one of the 5 dimensions in the Digital Economy and Society Index by the European Commission. This dimension measures both the demand and supply sides of digital public services as well as open data. Specifically, it measures: e-government users, Prefilled forms, Online service completion, Digital public services for businesses and open data. More details can be found in the Digital Economy and Society Index Report 2021.
Source: European Commission, Digital Economy and Society Index Report 2021.

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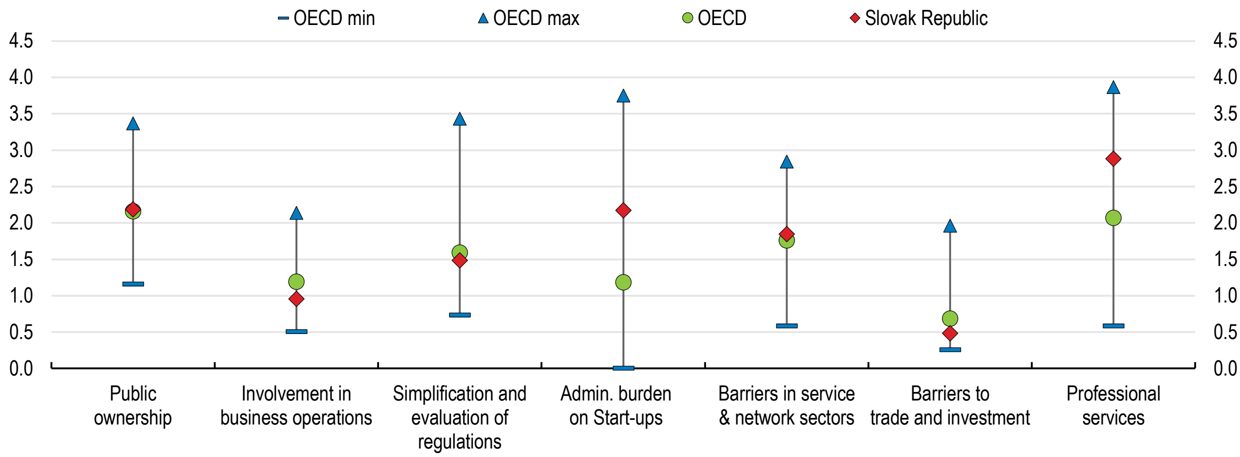
Improving the business environment

Business dynamism is essential for the diffusion of digital tools and activities and for productivity growth (Sorbe et al., 2019, Andrews et al. 2019). Enhancing business dynamism requires reducing barriers to the entry and growth of young innovative firms, facilitating a smooth exit of the least productive firms, and enabling fluid movements of labour and capital from declining to growing firms and industries, as well as within firms.

Fostering competition by easing product market regulations

The overall strictness of product market regulations according to the OECD Indicators is slightly more restrictive than on average in OECD countries and peer economies (Figure 1.27). Slovakia's administrative burdens for start-ups, mainly due to licences and permits, remain high. In addition, public ownership remains widespread in some network sectors such as gas and rail. Finally, regulations also overly restrict competition in professional services especially for lawyers, notaries, architects and civil engineers.

Figure 1.27. There is scope to ease regulations in some areas



Note: 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.
Source: OECD Indicators of Product Market Regulation database.

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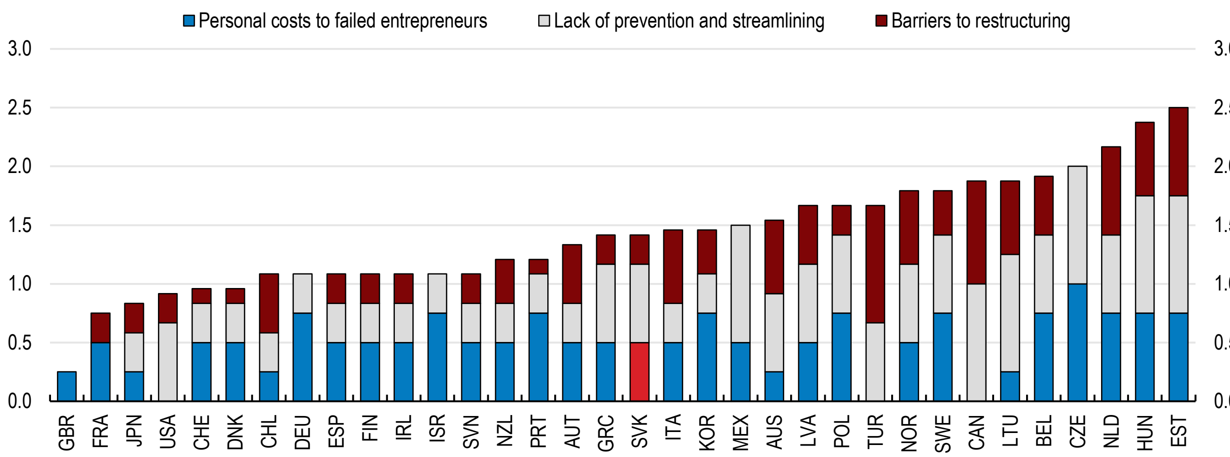
Administrative burdens continue to be reduced. Between 2017 and 2019, the authorities announced three packages totalling 94 measures to reduce red-tape, of which 70 had been implemented by end-2020 according to the Ministry of Economy (MoE, 2021). In June 2020, the government launched another package ("lex corona") with over a hundred measures, which the authorities believe will save entrepreneurs EUR 100 million a year (Table 1.9). Measures include higher thresholds for mandatory financial audits, simplified energy audits and a provision that tax and levy laws will change only once a year, to make legislation more predictable. The government is also implementing the "Once is Enough" initiative, under which authorities are obliged to use available registers to access various certificates and licences so that businesses are required to file necessary documentation only once for all purposes. However, reforms to streamline construction permits have been delayed. A new construction and spatial planning act is planned for 2021 with the aim to shorten the decision making process and digitalise land-use plans. This reform process should be expanded. For example, in order to further reduce the burden on businesses, the authorities could follow Portugal's example and adopt a "silence is consent" rule for administrative procedures as and when appropriate.

In 2018 the government adopted the "Regulatory Impact Assessment (RIA) 2020" strategy, which aims *inter alia* at improving the quality of ex ante assessments of regulations and introducing ex post evaluations. A pilot project to test the new methodology for ex post assessments of regulations started in 2020. In addition, in 2021 the government approved legislation for a "one-in, two out" principle, according to which the costs for businesses and citizens of any new regulation have to be quantified and regulations phased out that save businesses and citizens twice the amount. A recent *OECD Regulatory Policy Review* of Slovakia (OECD, 2020j) assessed that the RIA 2020 strategy follows international best practice, committing the highest political level to an explicit whole-of-government strategy to improve regulatory quality. Nevertheless, the report identifies several areas for improvement. For instance, there is a need to strengthen the analytical capacity through continuous training on regulatory management tools and more systematically involving the analytical units of the Ministries in the RIA process. While early-stage consultations with businesses are well developed, efforts are needed to include other stakeholders more systematically. The institutional set-up could be strengthened by centralising regulatory oversight functions into one body and giving this oversight body greater powers.

Making the insolvency regime more effective would reduce barriers and costs to firm restructurings or exits. This can spur productivity-enhancing capital reallocation, encourage risk-taking activities and facilitate technological experimentation (Adalet McGowan et al., 2017). OECD research (Adalet McGowan and Andrews, 2018; Figure 1.28) points to the need to strengthen early warning tools and pre-insolvency regimes in Slovakia that could help prevent firms falling into distress and streamline processes. In addition, a lack of distinction between honest and fraudulent bankruptcies may lead to stigmatisation and inhibit bankrupt but honest entrepreneurs to restart a business. The government is collaborating with the European Commission to assess the efficiency of the insolvency regime and in September 2021 the Ministry of Justice submitted draft legislation to reform in particular the pre-insolvency restructuring process.

Figure 1.28. Insolvency procedures can be further streamlined and prevention strengthened

Scores in selected aspects of insolvency schemes, 2016



Source: Adalet McGowan, M. and D. Andrews (2018), "Design of insolvency regimes across countries", OECD Economics Department Working Papers, No. 1504, OECD Publishing, Paris, https://doi.org/10.1787/d44dc56f-en.

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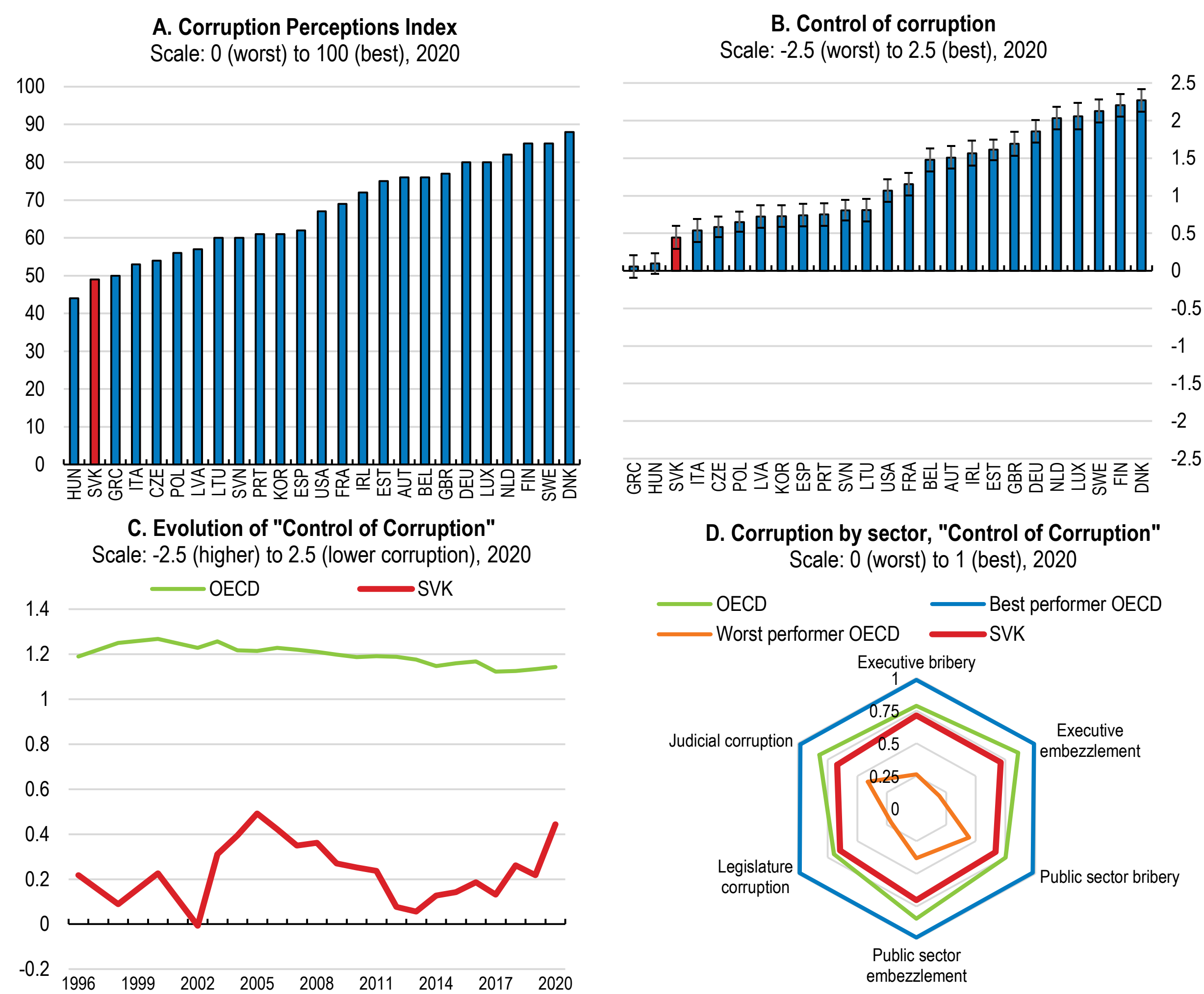
Judicial efficiency has improved thanks to ongoing reforms. Courts perform efficiently in terms of length of proceedings and clearance rate in litigious civil and commercial cases (EC2020g, EC 2020h). Some challenges remain concerning administrative cases and the efficiency of processing these cases has recently further deteriorated (EC, 2021b). To improve efficiency, the authorities have for several years collaborated with the Council of Europe European Commission for the Efficiency of Justice (CEPEJ). An increasing number of CEPEJ's recommendations are being implemented. This includes the introduction of so-called flying/hosting judges to address temporary workload challenges in individual courts, legislative measures to de-register old, inactive enforcement cases that had been a drain on resources and an ambitious project on "case weighting", to determine the complexity of a case and establish the necessary resources (EC, 2020b). In 2021, the Ministry of Justice also introduced draft legislation to reform the court map, in line with CEPEJ's recommendations, which aims for instance to reduce the number of district courts and strengthen the specialisation of courts and judges. In addition, a new Supreme Administrative Court, which took up work in August 2021, will likely improve specialisation and efficiency of administrative justice procedures. Stronger promotion of the use of alternative dispute resolution (ADR) methods as legitimate means to resolve legal disputes could further improve efficiency. Moreover, the quality of digital services (e.g. electronic court files) can be further enhanced and the establishment of a new electronic business register has been postponed due to delays in public procurement (Supreme Audit Office of the Slovak Republic, 2020).

Making further progress in the fight against corruption

Corruption distorts competition, the allocation of resources and access to public goods, which can discourage business dynamism, investment and innovation, and raise inequalities. High levels of perceived corruption and a low level of trust in institutions are longstanding concerns in Slovakia (Figure 1.29). Moreover, the perceived levels of independence of the judiciary are low, despite some recent improvements in the perception of firms. For example, 88% of companies consider corruption to be widespread (compared to an EU average of 63%) and 53% of companies consider that corruption is a problem when doing business compared to an EU average of 37% (EC, 2020i). In 2019, a number of cases of high-level corruption were revealed, including undue political influence over the judiciary and individual cases of alleged abuse of office by judges and prosecutors, sparking public protests. The new government that came into office in the spring of 2020 has identified the fight against corruption as a core priority, and several arrests and criminal proceedings against entrepreneurs and officials have ensued. Making further progress in the fight against corruption is particularly important in light of the substantial inflows of EU funds in the coming years.

Figure 1.29. Perceived corruption is high



Note: Panel B shows the point estimate and the margin of error. Panel D shows sector-based 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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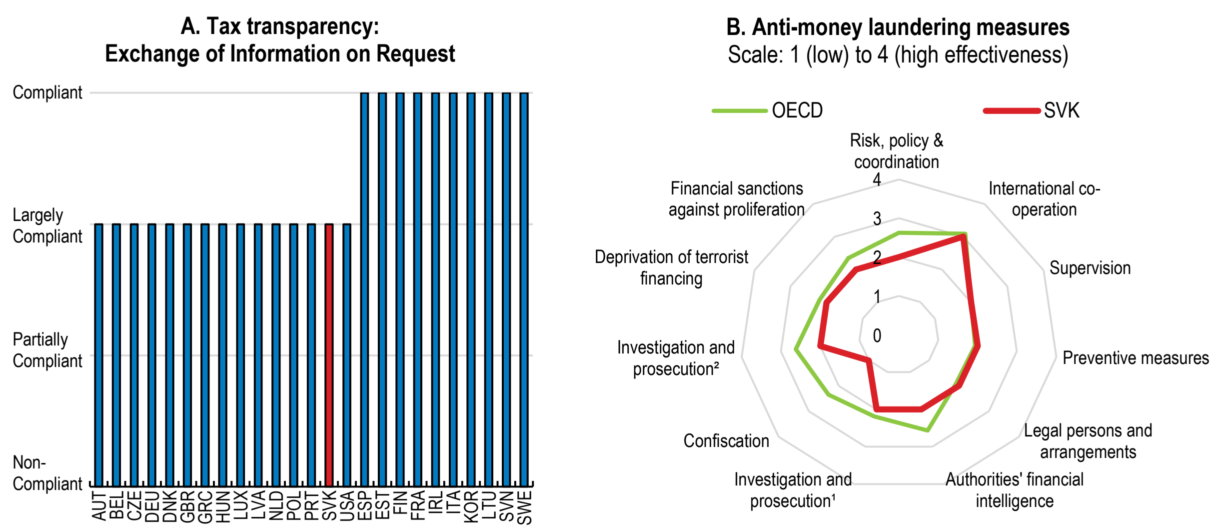
The criminal legal framework for fighting corruption is broadly in place and specialised institutions have been set up (EC, 2020g) (Figure 1.30). As a response to the OECD Anti-Bribery Convention Phase 3 and Phase 1bis reports, provisions on foreign bribery offences have been amended and Slovakia adopted new legislation on criminal liability of legal persons in 2016. The Working Group on Bribery (WGB) recommended that Phase 4 consider the courts' interpretation of particular elements of the new law, which lacked clarity. Furthermore, a Code of Conduct for civil servants entered into force in January 2020, setting out the fundamental principles of ethical behaviour, including rules on acceptance of gifts and other benefits. A new Whistleblower Protection Act came into force in 2019 and, as a result, an independent office for complaints was established. However, several problems remain. The capacity of the National Crime Agency to detect and investigate corruption offences can still be enhanced by investments in specialisation, dedicated analytical expertise and integrity trainings (EC, 2021b). Post-employment restrictions for public officials could be strengthened, for example by extending cooling off periods to senior civil servants involved in top-executive functions and by rules preventing top officials from lobbying activities after leaving office (GRECO, 2019). Lobbying remains unregulated and lacks a legal definition. Clear rules governing lobbying also need to be established together with their proper monitoring and enforcement (EC, 2021b; EC, 2020g; GRECO, 2021). Draft legislation on lobbying and post-employment restrictions are planned or at initial stages.

Figure 1.30. The anti-corruption framework is broadly in place



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 prosecution[1]" refers to money laundering. "Investigation and prosecution[2]" 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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Judicial independence is crucial to tackling corruption effectively. The new government has implemented a number of constitutional reforms in this regard. This includes strengthened competencies and changes to the composition and appointment process of the Judicial Council, which is the self-administration body of the judiciary with key roles in the appointment, suspension and dismissal of judges as well as in maintaining judicial ethics. The reforms *inter alia* aim to guarantee regional representation and to strengthen the controls of the asset declarations of judges. New rules were introduced so that candidates for both the prosecutor general and the special prosecutor have to undergo a public hearing in parliament. In addition, the appointment process of the constitutional court has been reformed, introducing a qualified majority for the election of candidates for judges of the Constitutional Court together with appropriate anti-deadlock mechanisms. Finally, an age-limit for judges has been introduced. However, guidance on the proper application and enforcement of the new judicial code of conduct is still incomplete. While judges and prosecutors are forbidden from taking gifts in their professional capacity and controls of asset declaration have been strengthened, the threshold for declaring gifts received in a private capacity remains high and is still to be changed (GRECO, 2021).

Table 1.9. Past OECD recommendations on business environment

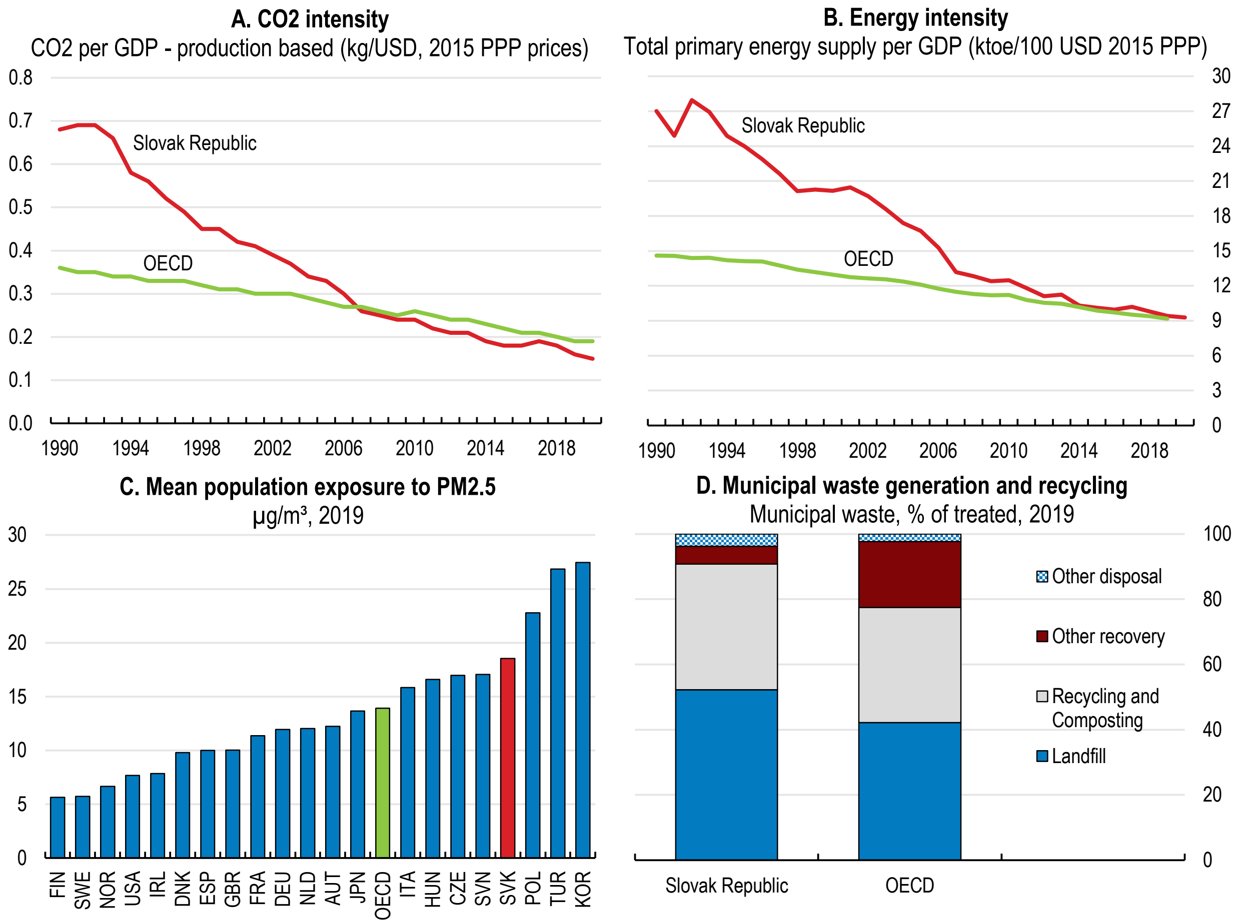
Recommendations in previous Surveys	Actions taken since 2019
Further reduce the administrative burdens on enterprises by developing e-government, especially services to businesses, and adopt a "silence is consent" rule for administrative procedures, as and when appropriate.	In 2020, the government introduced under the so-called "Lex Corona" over 100 measures to reduce administrative burdens for businesses. In 2021, the government approved legislation to implement the one in/one-out (until end 2021) and one-in/two out (from 2022) principle, according to which the costs for businesses and citizens of any new regulation have to be quantified and regulations phased out that save businesses and citizens twice the amount.
Accelerate the handling of insolvency procedures	In response to the COVID-19 pandemic, a bankruptcy moratorium was in place until end-2020. From 2021 permanent legislation is in force that allows for temporary bankruptcy moratoria (up to 6 months), to facilitate out-of court pre-insolvency restructuring procedures. A draft bill to reform pre-insolvency restructurings, introduce an early warning tool and accelerate the corporate bankruptcy process is in early stages of the formal consultation process.
Lower licensing restrictions for legal services, architects and engineers.	No action taken.
Continue to work with the ongoing Council of Europe project on judicial reform, and implement its suggestions.	Implementation of reforms is ongoing, for example with the introduction of so-called flying/hosting judges to address temporary workload challenges in individual courts and a draft law on a new court map to strengthen specialisation and efficiency of courts and judges to be implemented in 2023 .
Further strengthen the efficiency and independence of the judicial system. Continue to increase judicial capacity in particular through investment in IT systems.	The competencies of Judicial Council have been strengthened. The appointment process of the constitutional court has been reformed to strengthen independence.

Transitioning to a carbon neutral economy

Over the past three decades, Slovakia has significantly reduced its carbon and energy intensity, mainly thanks to changes in the structure of the economy, but progress has slowed in recent years and air pollution remains high (Figure 1.31). While the share of emissions from energy combustion (excluding transport) has fallen markedly in the past three decades to around half of total greenhouse gas emissions in 2018, the share of emissions from the transport sector and industrial processes have increased to 18% and 22% in 2018, respectively. Exposure of the population to ambient particle matter ($PM_{2.5}$) is one of the highest in the OECD (Figure 1.31). Reducing this type of pollution to WHO recommended levels could avert up to 1600 premature deaths per year and reduce associated mortality and morbidity costs, which have been estimated between 3.6% and 6.9% of GDP in 2017 (World Bank and IEP, 2021).

The National Energy and Climate plan targets a 20% reduction for GHG emissions outside the ETS system by 2030 compared to 2005. Slovakia has also endorsed the EU goal of climate neutrality by 2050, and adopted a low-carbon strategy in February 2020. These ambitious targets will require additional policy action. Moreover, the government targets a share of renewables in energy consumption of 19.2% (from currently around 17%) and an improvement in energy efficiency of 30.3% by 2030. The investment costs are estimated at EUR 8 billion by 2030. The national recovery plan allocates EUR 2.3 billion to green investment projects, in particular for building renovations, sustainable transport projects (e.g. electrifying and modernising the rail network) and renewable energy projects (e.g. new and modernised capacity, more efficient electricity grid). Frontloading investment towards sectors that can accelerate the green transition can simultaneously address recovery, climate and energy objectives (OECD, 2020k; OECD 2020l). The recently established International Programme for Action on Climate (IPAC) can help Slovakia track and assess progress in achieving its emission reduction targets (OECD, 2021c).

Figure 1.31. Green growth indicators



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

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The authorities should more coherently price carbon to reduce emissions cost effectively. In 2018, only 30% of carbon emissions were priced above EUR 30 per tonne of CO_2, a low-end estimate of the social costs of carbon (OECD, 2021a). Emissions priced above EUR 30 originated almost exclusively from the transport sector. More uniformly pricing carbon across sectors and industries would provide more consistent price signals and thus contribute to cost-effective abatement. As recommended in previous Surveys (Table 1.10), introducing an explicit carbon tax in sectors not covered by the EU-ETS would help reduce emissions cost effectively, make renewable energy generation more competitive and help further reduce air pollution. In addition, fossil fuel subsidies blur price signals and increase abatement costs. The government decided to end subsidies for coal in electricity generation (mainly feed-in tariff for lignite) by 2023. This should be complemented by phasing-out other environmentally harmful subsidies, such as the exemption of natural gas from excise taxation for several purposes such as consumption by households, processing of minerals and in combined heat-and-power plants. While subsidies for household consumption of natural gas may improve affordability, the measure is not well targeted, and support can be shifted to more efficient types of subsidies that do not counter climate objectives. The extra revenues from higher carbon taxation or from phasing out of fossil fuel subsidies could be used to reduce the tax wedge or to avoid real income losses, in particular for low-income households. For example, in British Columbia in Canada part of the carbon tax revenues were used for lump-sum transfers to households and cuts in other taxes.

Energy combustion in the residential sector accounts for around 11% of total greenhouse gas emissions and almost 80% of $PM_{2.5}$ emission. This is primarily due to the use of inefficient and high-emission boilers and heaters, and burning of poor-quality fuel such as coal, wood or waste (OECD, 2020e). The focus on building renovations in the recovery programme is therefore welcome. The National Air Pollution Control Programme includes subsidies to replace old boilers, differentiated registration fees of heating devices according to environmental standards, and better connections of households using wood or coal to heating with gas. Support for the replacement of boilers should favour renewable energy (e.g. solar) over fossil fuel systems (e.g. natural gas). Additionally, the government should support financial instruments such as grants or micro-loans for investments in energy efficiency measures in particular for low-income and energy-poor households.

Further efforts are needed to improve air quality. The government's plans to increase air pollution charges (e.g. on nitrogen oxides, sulphur dioxide), which had not been changed since 1998 and are low by international comparison (OECD, 2020e), are welcome and should be implemented without delay. Moreover, Slovakia should close the gap between petrol and diesel excise taxes. Diesel fuel is taxed at a much lower rate than petrol, with the gap being one of the highest in the OECD, despite diesel's higher emissions of air pollutants per litre (e.g. nitrogen oxides and fine particulates).

Slovakia also needs to make further progress in promoting a circular economy. Moving to a circular economy, e.g. by promoting re-use, recyclability and secondary raw materials markets, can boost Slovakia's resource productivity and efficient use of natural resources, reduce greenhouse gas emissions (OECD, 2019g), generate cost savings and create jobs. Despite progress in recycling municipal solid waste, landfilling remains the dominant waste management strategy, with more than half of waste volume in 2019 still disposed in landfills (Figure 1.31, Panel D). Landfills are the largest single source of methane emissions in Slovakia, accounting for around a fourth of total emissions. The tax on landfilling of municipal waste is low compared to other EU countries (OECD, 2020e). It should be increased to better reflect private and environmental costs related to soil, water and air pollution and to ensure that solid waste is diverted away from landfills. The government plans to further increase the landfilling tax rate, which is necessary to halve the landfilling rate to 25% by 2035 – the national target set in the new Environmental Strategy of the Slovak Republic 2030. This could be complemented by expanding pay-as-you-throw systems, which currently only cover around 13% of citizens (IEP, 2019), to make waste sorting more financially attractive; a tax on waste incineration (e.g. in Austria) in order to prevent diversion from landfilling to incineration; and taxes on packaging (e.g. in Belgium and Latvia) (OECD, 2020e). A forthcoming OECD report in support of Slovakia's Circular Economy Roadmap also points to the need to improve sustainable production in Slovakia's manufacturing and metals production and processing industries, for example by developing a secondary raw materials strategy. In addition, the government could stimulate research and innovation in areas related to the circular economy.

Table 1.10. Past OECD recommendations on environment

Recommendations in previous Surveys	Actions taken since 2019
Align the implicit taxation on emissions of CO2 and other pollutants across different fuels and uses. Consider introducing a CO2 tax in sectors not covered by the EU- ETS and raising the tax rate on diesel.	No action taken.
Gradually phase out coal subsidies and tax breaks for energy use.	Subsidies for coal in electricity generation will end in 2023 as the benefitting coal power plant is scheduled to close.

Table 1.11. Recommendations on macroeconomic and structural policies

MAIN FINDINGS	RECOMMENDATIONS (key in bold)
Supporting the exit from the crisis	
The share of the population fully vaccinated is about 25 percentage points below the EU average as of early-January 2022.	**Continue efforts to accelerate vaccinations**.
The build-up of imbalances has continued in the housing market. Strong mortgage credit growth over the last decade has increased the exposure of banks to the real estate sector.	Closely monitor developments in the housing market and adjust macro-prudential measures if necessary
The crisis has hit low-skilled workers particularly hard. Long-term unemployment remains high.	**Expand active labour market programs, in particular re-training measures for the low-skilled.** Strengthen the counselling and guidance capacity of the public employment service and effective profiling of jobseekers.
The crisis has differing impacts across sectors. Too early withdrawal of support would trigger unnecessary bankruptcies and labour shedding, and may result in scarring and increased vulnerability. Ageing will create substantial fiscal pressures in the long-term.	**Continue to provide targeted fiscal support until the recovery has become self-sustained.** **Adopt and stand ready to implement a medium-term fiscal consolidation strategy to prepare for long-run fiscal challenges, including ageing, and strengthen implementation of saving measures identified by spending reviews.** **Strengthen the rules-based fiscal framework by implementing multi-annual expenditure ceilings while adjusting the escape clause of the debt rule to allow flexibility in times of crisis.**
The number of firms with liquidity problems and high debt may increase and congested courts may prevent a timely restructuring of viable firms.	**Promote out-of-court restructuring proceedings, especially for small and medium-sized enterprises.**
The ambitious national recovery plan contains numerous reforms and investment of 6.9% of GDP. The absorption rate of EU funds has been historically low.	**Streamline public procurement verification and control procedures.** **Further strengthen cost-benefit analysis and oversight of public investment over the project life-cycle.**
The labour tax wedge is high, particularly for low-income earners. Tax revenues from property and environmental harmful activities are low. Slovakia is one of few OECD countries that still uses an area-based assessment for recurrent real estate taxes. Despite substantial improvements, the VAT tax gap is much higher than on average in the EU. Corporate income tax evasion also remains high.	**Reduce the tax wedge in particular for low-income earners.** **Shift the tax mix towards property and environmental taxes.** Change the tax base for recurrent taxes on immovable property to regularly updated market values. Fully roll out electronic cash registers, implement electronic invoicing, and strengthen audits through risk-based tools.

Boosting productivity and making the recovery more inclusive and environmentally sustainable	
Educational outcomes are weak and strongly dependent on socioeconomic background. There is a lack of childcare facilities, especially in some regions.	**Expand the supply of high-quality and affordable childcare facilities, especially in underserved regions.** **Strengthen initial and continuing teacher training with a focus on methods to identify and address learning weaknesses. Increase the number of teaching assistants speaking Roma, and provide Slovak language support for Roma children.**
Vocational education has little work-based learning. Participation of firms in the dual VET programme remains low.	Evaluate financial incentives for firms to participate in the dual VET programme and support the establishment of employer-led training associations.
Immigration is low and many high-skilled Slovaks leave the country.	Enhance efforts to attract and retain high skilled labour, including by developing and implementing a diaspora engagement strategy.
Business R&D and the share of innovative companies is very low. The share of firms receiving government support for innovation is low. The R&D tax allowance is among the most generous in the OECD and the share of SMEs receiving R&D tax support is relatively low. The tax allowance will be lowered in 2022.	**Expand the use of direct R&D support, such as grants, and make the R&D tax allowance refundable for small and young firms.** Evaluate the R&D tax allowance scheme. Strengthen research collaboration with innovative companies in the funding of higher education institutions and public research institutions.
Slovakia is lagging behind in e-government users and trust in e-government services is low.	Expand usage of e-government services and improve trust by involving a broader group of stakeholders in designing new services.
The administrative burden on start-ups is relatively high.	**Reduce the administrative burden on start-ups by introducing "silence is consent" licensing rules.**
High levels of perceived corruption, a low level of trust in institutions, and a perceived lack of independence of the judiciary are longstanding concerns in Slovakia, despite some recent improvements.	Continue with efforts to fight corruption including by adopting and implementing ongoing reforms to strengthen trust in the judiciary and public sector integrity. Strengthen post-employment restrictions for public officials by extending cooling off periods to senior civil servants involved in top-executive functions and by rules excluding top officials from lobbying activities after leaving office. Complete guidance on the proper application and enforcement of the new judicial code of conduct and lower the threshold for declaring gifts received by judges and prosecutors.
Only 30% of carbon emissions were priced above EUR 30 per tonne of CO_2, a low-end estimate of the social costs of carbon. Air pollution is high. Landfilling remains the dominant waste management strategy, with more than half of waste volume still disposed in landfills.	**Introduce an explicit carbon tax in sectors not covered by the EU-ETS and gradually phase out remaining environmentally harmful subsidies. Redistribute revenues towards the most vulnerable households.** **Accelerate the green transition by investing in energy efficiency renovation in buildings and sustainable transport**. Continue to increase the landfill tax to better reflect environmental costs. Expand the coverage of pay–as-you-throw systems and consider introducing a tax on waste incineration in the medium-term.

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2 Tackling the challenges of population ageing

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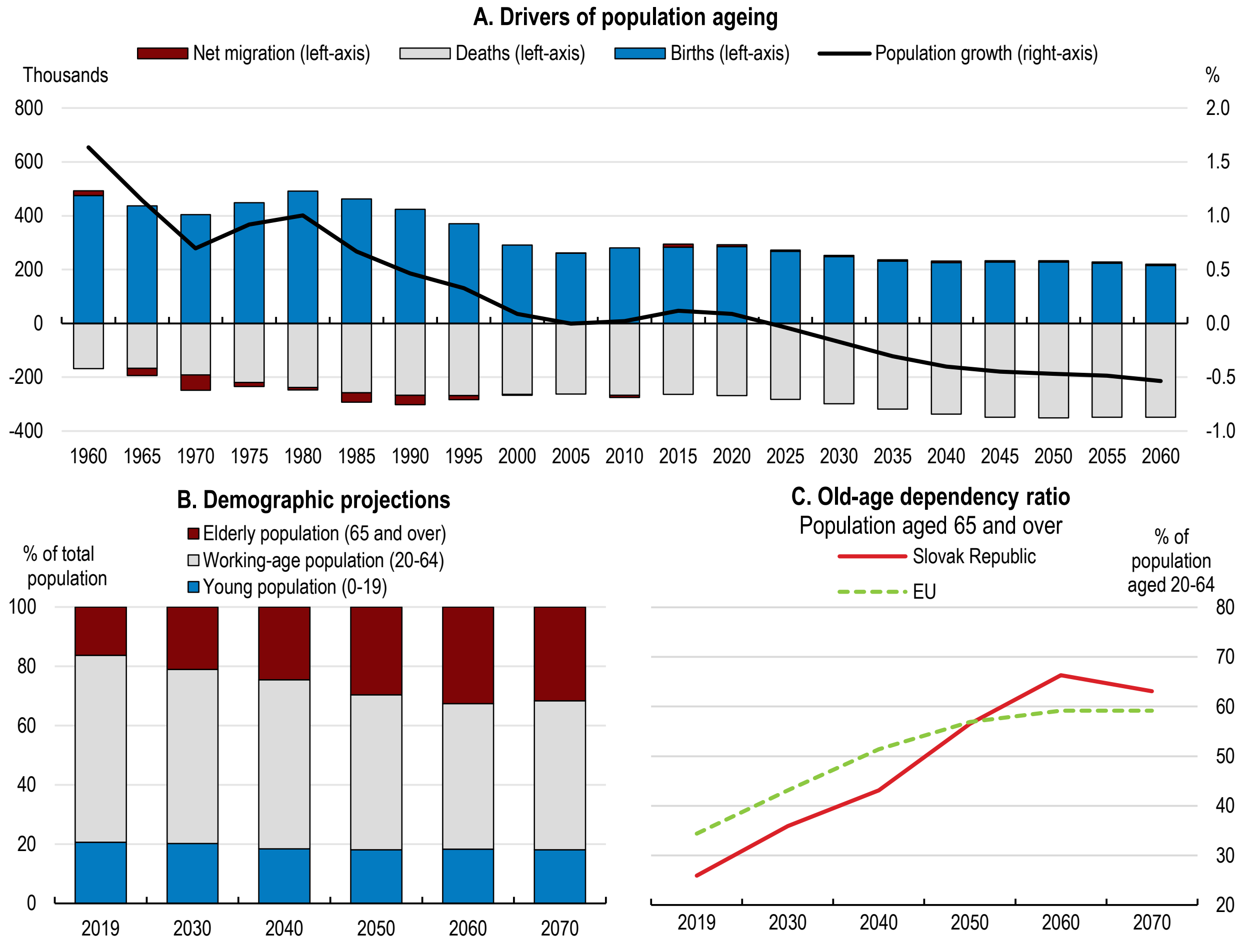
Slovakia's population is ageing rapidly, with the share of the working-age population expected to shrink by about a fifth in the next 30 years. Ageing-related costs are projected to increase much more strongly than in other EU countries and ageing will put pressure on potential growth and living standards. To prepare for an ageing society, pension, health and long-term care, as well as labour market reforms are needed to extend working lives, improve the health of the ageing population, and enhance the efficiency of public spending. Linking the retirement age to life expectancy and tightening early retirement pathways notably for mothers and disability pensioners is important to extend working lives and improve pension sustainability. Health outcome are lagging behind other OECD countries largely due to high preventable mortality, especially among disadvantaged groups, highlighting the importance of a national strategy to reduce preventable mortality, as well as targeted approaches. Measures are also needed to improve the efficiency of health and long-term care spending, notably through reforming the network of hospitals, expanding central procurement of pharmaceuticals, and expanding the supply of in-home long-term care services. Higher employment of older workers is hampered by a range of labour market barriers, including fewer training opportunities, higher job strain, and a lack of flexible working arrangements. Labour participation of mothers with young children is also low, reflecting excessively long parental leave, low financial work incentives, and a lack of childcare facilities.

Ageing exerts greater spending pressures than elsewhere

Slovakia's population is ageing rapidly, with rising life expectancy and declining fertility rates (Figure 2.1, Panel A). The share of the working-age population is expected to shrink by about a fifth between 2021 and 2050 while the share of the population aged 65 and above will double (Panel B). As a result, the old-age dependency ratio is projected to increase substantially and surpass the EU average by 2050 (Panel C). The fact that people are living longer is an accomplishment in itself and brings new opportunities for workers, firms and society, but ageing also creates important challenges for pension and health care systems.

Figure 2.1. The population is ageing rapidly



Note: In Panel A, population growth rate data are averages over the five years to the date shown.
Source: United Nations (2019), World Population Prospects: The 2019 Revision, Online Edition; 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; and OECD calculations.

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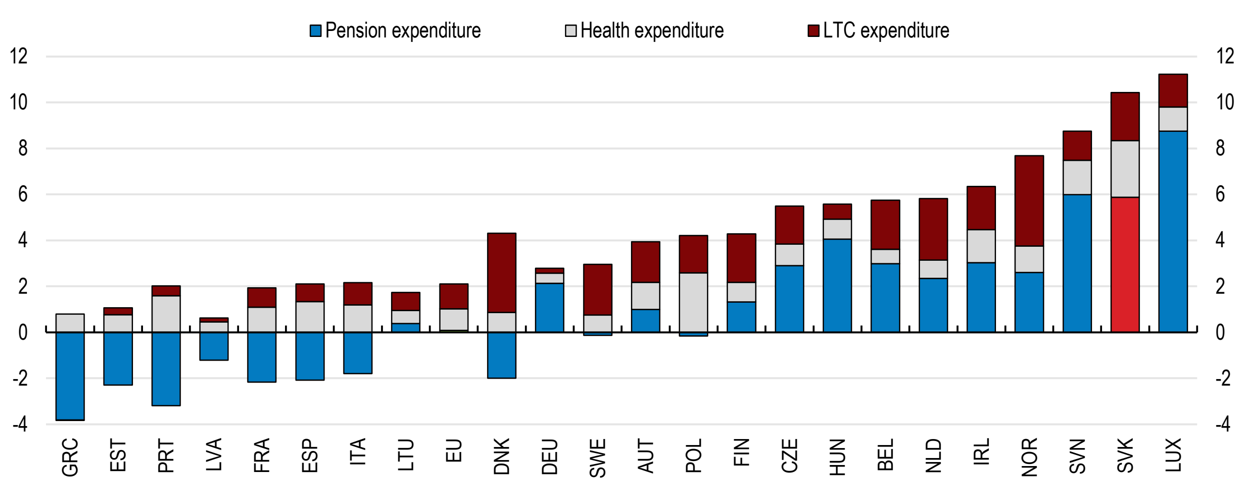
Ageing puts long-term fiscal sustainability at risk, exacerbates fiscal challenges from the COVID-19 crisis and weighs on potential growth. The pandemic has led to a surge in public debt to around 60% of GDP in 2020, a level which is internationally still relatively low but historically unprecedented for Slovakia. Official projections suggest that ageing-related spending, notably on pensions, health care and long-term care, could increase by more than 10 percentage points of GDP by 2070, one of the largest increases among OECD countries (Figure 2.2). At the same time, ageing will result in lower tax revenues because less people will be active in the labour market. This is a particular concern in Slovakia as the country's tax mix is heavily reliant on social security contributions on labour income. Unless policies are put in place to mitigate these adverse effects, ageing will jeopardise fiscal sustainability (Chapter 1). Also, population ageing puts pressures on living standards as aggregate employment rates fall, and ageing may adversely impact investment and productivity. For example, the real GDP per capita of Slovakia could fall by as much as 19% between 2018 and 2050 if employment rates in all age cohorts remained unchanged at today's levels, the largest decrease among all OECD countries (OECD, 2020a).

To mitigate the adverse impacts of ageing, it is key to improve the sustainability of the pension system and the efficiency of public spending, and to promote healthy ageing, extend working lives and boost labour market participation. Ageing is high on the political agenda, and the government has recently enacted several policies to address its adverse effects and included a number of reform proposals in the Recovery and Resilience Plan, but more action is needed. Against this background, the chapter discusses policy options along three dimensions: the pension system, health/long-term care, and the labour market.

Figure 2.2. Ageing-related public expenditures are expected to increase rapidly

Change in expenditure between 2019 and 2070, % points of GDP



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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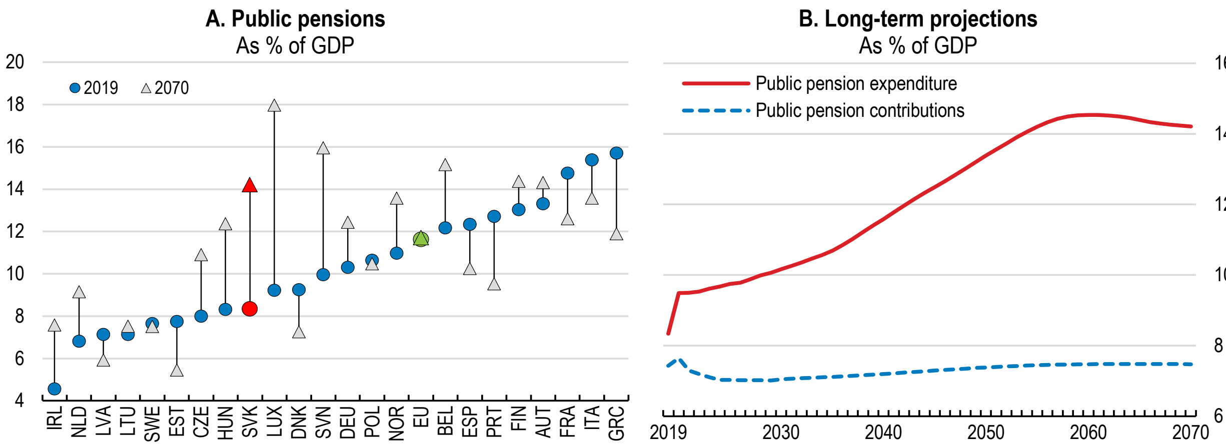
Preparing the pension system for ageing

Population ageing as well as recent reforms put pressure on the sustainability of public pay-as-you-go pension system. Slovakia's pension system has been reformed several times in the past, with some backtracking of reforms and subsequent reinstatement, highlighting the political difficulties of pension reforms as in other countries. In 2019/20, several reforms were enacted to improve pension income (e.g. increase of the 13th pension) but they also severely jeopardised the sustainability of the pension system (Box 2.1). Most notably, the link between the retirement age and life expectancy, which had been in place since 2017, was abolished, and a retirement age cap of 64 years introduced.

While in 2020 and 2021 the authorities have taken some steps to improve sustainability, including by making the 13th pension payout conditional on pension income again (as was the case for the previous Christmas bonus) and by freezing minimum pensions at their current levels, more is needed to close the large public pension funding gap. Under current policies, expenditure is projected to surge by 6 percentage points of GDP between 2019 and 2050, faster than in most other OECD countries (Figure 2.3, Panel A), and the gap between pension expenditures and contributions will increase from 1.5% of GDP in 2019 to more than 7% of GDP in 2060 (Panel B). The public pension reforms recently proposed by the Ministry of Labour are expected to narrow the financing gap only by around 1/3 of the projected gap in 2060 (Box 2.2). This large pension gap will raise the burden on future generations, as a shrinking share of the working age population will have to pay benefits of the increasing share of pensioners. Hence, further improving the sustainability of the public pension must be a priority.

Figure 2.3. Public spending on pensions is projected to increase sharply



Source: European Commission Ageing Report (2021) and the Ministry of Finance of the Slovak Republic.

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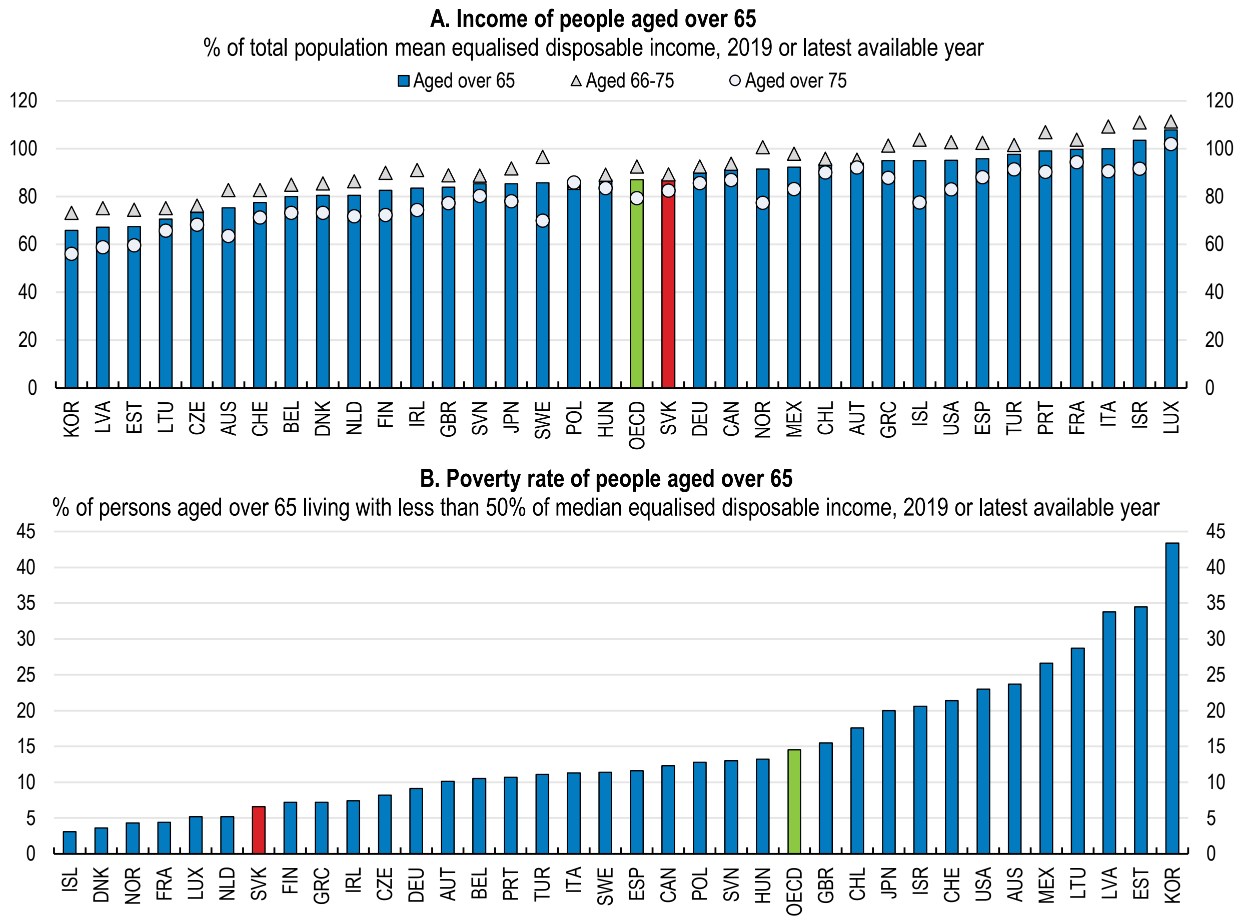
The pension system contributes to low old-age poverty and inequality. The relative disposable income of the elderly is close to the OECD average (Figure 2.4, Panel A), and old-age poverty is low (Panel B). Moreover, income inequality among the population aged 65 and above is among the lowest in the OECD, with a Gini coefficient of disposable income at 0.21, significantly lower than the OECD average at 0.31. This reflects relatively long average contribution periods (42 years for men, 40.8 years for women) of current pensioners, low-income inequality among the working-age population, relatively high replacement rates, and redistribution within the pension system. Nevertheless, ageing and labour market trends may pose risks to pension adequacy in the future. Many pensioners, especially women, receive pensions just above the poverty threshold (Figure 2.5). In addition, about 74% of all pensions are below the monthly minimum wage. The freezing of the minimum pension, which is currently 33% of the average wage, may risk people falling under the poverty threshold in the future. In addition, technological change may lead to more career interruptions and non-standard forms of work, putting further pressure on pension income (OECD, 2019a).

Figure 2.4. Disposable income of the elderly is close to the OECD average, and old-age poverty is low



Source: OECD Income Distribution Database (IDD).

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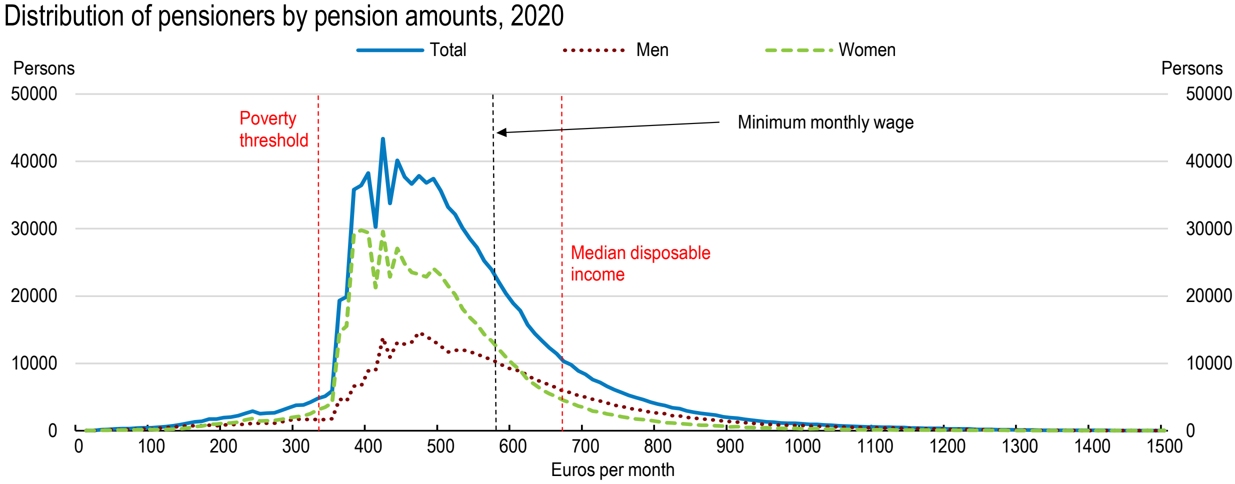
Figure 2.5. Many pensions are close to the poverty line

Distribution of pensioners by pension amounts, 2020



Note: Pensions refer to all public pensions including old-age, survivor pensions, minimum pensions, and the 13th pensions. The poverty threshold is defined as 50% of the median disposable income.
Source: OECD calculations based on data from the Ministry of Finance of the Slovak Republic.

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Box 2.1. The Slovak pension system and recent reforms

The Slovak pension system is based on three pillars:

- A mandatory, public, earnings-related, defined-benefit (pay-as-you-go), point-based pension system. It includes old-age, early old-age, disability, and survivor benefits. The minimum period of participation to be entitled to pension benefits is 15 years. People with less than 15 years of contribution can apply for means-tested social assistance of around 18% of the average gross wage (single pensioner). A minimum pension was introduced in 2015. Eligibility to a minimum pension requires 30 years of pension contributions on annual earnings of at least 24.1% of the average wage. A separate public pension system exists for armed forces but coverage is limited (around 3% of all old-age pensioners in 2016).
- A voluntary, private, earnings-related, defined-contribution, fully-funded pension scheme, which was introduced in 2005. Participation was mandatory until 2013. A person can enter until the age of 35. If a person opts into the private system, the total employer pension contribution rate (14%) is split between the public (currently 8.75%) and the private (currently 5.25%) pillar. The contribution rate to the private pillar is set to gradually rise to 6% in 2024.
- A personal voluntary supplementary pension scheme, which is open to anyone over the age of 18. Supplementary pension insurance is mandatory for specified categories of employees, such as certain arduous jobs (e.g. miners) and artistic professions.

Recent major reforms:

In 2019/20, reforms capped the retirement age and raised the income of pensioners:

- Retirement age: The link between statutory retirement age and life expectancy established in the reform of 2012/13 and in effect from 2017, was abolished. Instead, a cap of the statutory retirement age at 64 (to be reached in 2030) was introduced in the Constitution.
- Early retirement of mothers: The previous convergence of the retirement age between women and men was abolished. Instead, mothers can permanently retire 6 months earlier for each child up to three children. This right is, under certain conditions, transferable to fathers.
- Minimum pension: The minimum pension after 30 years of contributions was increased from 136% of the subsistence level (EUR 286) to 33% of the average wage (EUR 334). Indexation was changed from inflation to average wage.
- Christmas bonus/13th pension: In 2019, the Christmas bonus, which was a supplement to low pensions paid once a year, was doubled, with the maximum supplement increasing from EUR 100 to EUR 200, and the upper ceilings for eligible pensions increased from 60% of the average wage to 65%. In early 2020, the 13th pension replaced the Christmas bonus. The 13th pension is paid to each pension recipient regardless of the amount of the person's pension and amounts to the average pension of a type (e.g., old-age or disability).

In 2020/21, adjustments were made to contain pension expenditures:

- Statutory retirement age: The retirement age cap was abolished from the Constitution but still remains in the social security law.
- Minimum pension: Minimum pensions are frozen at the current level (33% of the average wage after 30 years of qualified contributions in 2018) from 2020.
- 13th pension: The payout amount again depends on the amount of a person's pension and ranges from EUR 50 (for pensions above EUR 910) to EUR 300 (for pensions below EUR 215).

Box 2.2. Slovakia's draft pension reform and estimated impacts on pension expenditures

The Ministry of Labour presented a draft pension reform of the 1 pillar (PAYGO system) at the end of July 2021. Main elements are:

- Linking the statutory retirement age to life expectancy: The statutory retirement age is to be linked to the median life expectancy gains over a (moving average) of the median life expectancy gain to smoothen any sudden increases or decreases caused, for instance, by the COVID-19 crisis.
- Early retirement after 40 years of contributions: The condition is not to be linked to life expectancy gains. The malus for early retirement is 0.3% for every 30 days before reaching the statutory retirement age.
- Parental bonus: Every parent can receive a pension supplement of 2.5% of the social security base of each child. The bonus is to be paid out to the parents who receive old-age pensions and whose children pay social security contributions in the Slovak Republic.
- Reduced growth rate of the pension point value: The pension point value is set to increase by 95% of the average wage growth instead of 100%.
- Abolition of the ceiling on pension contributions: The upper contributions ceiling which is currently at seven times the average wage is to be abolished.

Most of the measures in the reform are designed to yield savings, with the notable exception of the parental bonus, projected to cost an additional 0.6% of GDP per year.

Table 2.1. Projected impact of the proposed pension reform on public pension sustainability

% of GDP, minus (-) refers to savings and plus (+) refers to extra expenditures[1]

Reform measures	2023	2030	2040	2050	2060	2070
Linking retirement age to life expectancy	-0.0	-0.1	-0.8	-1.7	-2.0	-2.2
Retirement after 40 years of contributions	0.0	0.0	0.1	0.1	0.1	0.1
Parental bonus	0.5	0.6	0.6	0.6	0.7	0.6
Decreased growth of current pension point value	-0.0	-0.0	-0.1	-0.3	-0.5	-0.6
Abolition of the ceiling on contributions	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
Cumulative effect[2]	**0.4**	**0.3**	**-0.6**	**-1.5**	**-2.0**	**-2.3**

1. The table shows the projected impact of the proposed pension reform on public pension sustainability compared to the baseline that represents the current setting of the Slovak pension system.
2. The cumulative effect does not add up to the sum of each estimate, as it takes into account interactions between reform measures.
Source: The Ministry of Finance of the Slovak Republic.

An alternative reform package, in line with the recommendations in this Chapter, could yield larger savings in the pension system and close about half of the funding gap (Table 2.2). Other reforms recommended in this Chapter to improve health outcomes and labour market participation of certain groups (e.g. older workers, mothers, Roma) would further improve pension sustainability, but impacts are difficult to quantify. The remaining gap should be financed by a combination of efficiency savings of public expenditure and additional revenues (e.g. through improved tax collection) as discussed in Chapter 1.

Table 2.2. Projected impact of alternative reform package on public pension sustainability

% of GDP, minus (-) refers to savings and plus (+) refers to extra expenditures

Alternative reform package	2023	2030	2040	2050	2060	2070
Linking retirement age to life expectancy	-0.0	-0.1	-0.8	-1.7	-2.0	-2.2
Decreased growth of current pension point value	-0.0	-0.0	-0.1	-0.3	-0.5	-0.6
Phasing out early retirement of mothers	-0.1	-0.2	-0.2	-0.2	-0.2	-0.1
Abolition of the 13th pension	-0.4	-0.4	-0.6	-0.7	-0.8	-0.7
Cumulative effect[1]	**-0.4**	**-0.7**	**-1.7**	**-2.9**	**-3.4**	**-3.6**

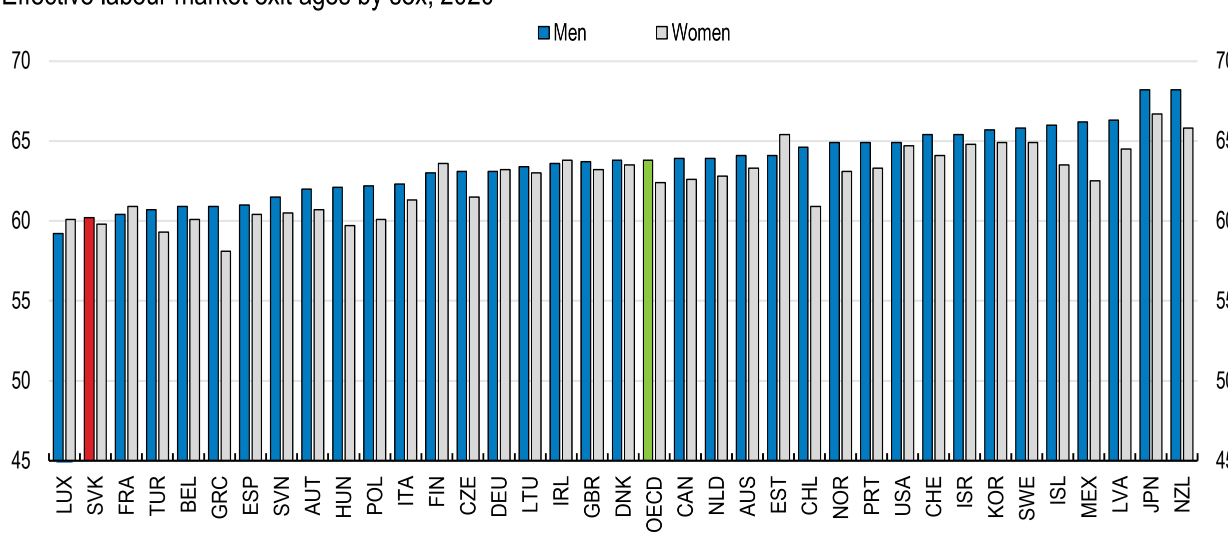
1. The cumulative effect does not add up to the sum of each estimate, as it takes into account interactions between reform measures.
Source: OECD calculations and Ministry of Finance of the Slovak Republic.

Improving the financial sustainability of the public pension system while ensuring adequate pension income

The age of effective labour market exit is among the lowest in the OECD (Figure 2.6), reflecting, among other things, a relatively low statutory retirement age, together with the possibility to retire early and other pathways into early retirement such as disability pensions. The statutory retirement age was 62.7 years for both men and women without children in 2020. The 2012/13 pension reform introduced a link between retirement age and life expectancy effective from 2017, but the link was abolished in 2019, and a retirement age cap of 64 years introduced. The cap has been recently abolished, but a new setting for the statutory retirement age is still in the legislative process. While the time spent in retirement is currently slightly below the EU average, reflecting low life expectancy (see the section below), it will become one of the longest in the future (Figure 2.7).

Figure 2.6. The effective labour market exit age is among the lowest in the OECD

Effective labour market exit ages by sex, 2020



Source: OECD Pension at a Glance database.

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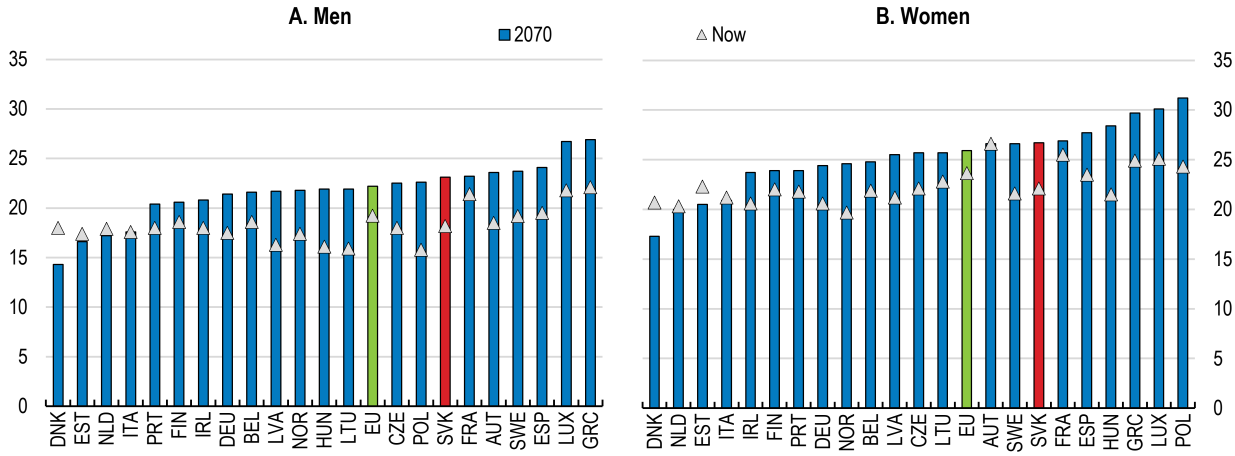
Figure 2.7. Expected years in retirement will be among the longest in the EU



Note: Bars represent expected years on pension for a person entering the labour market at the age of 22 with currently known changes in pension age and projected life expectancy at 65 in 2070. The triangle-markers represent expected years on pension for a person retiring now (in 2018) and who entered the labour market at the age of 22.
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; OECD Pension at a Glance database; and OECD Health Statistics database; and OECD calculations.

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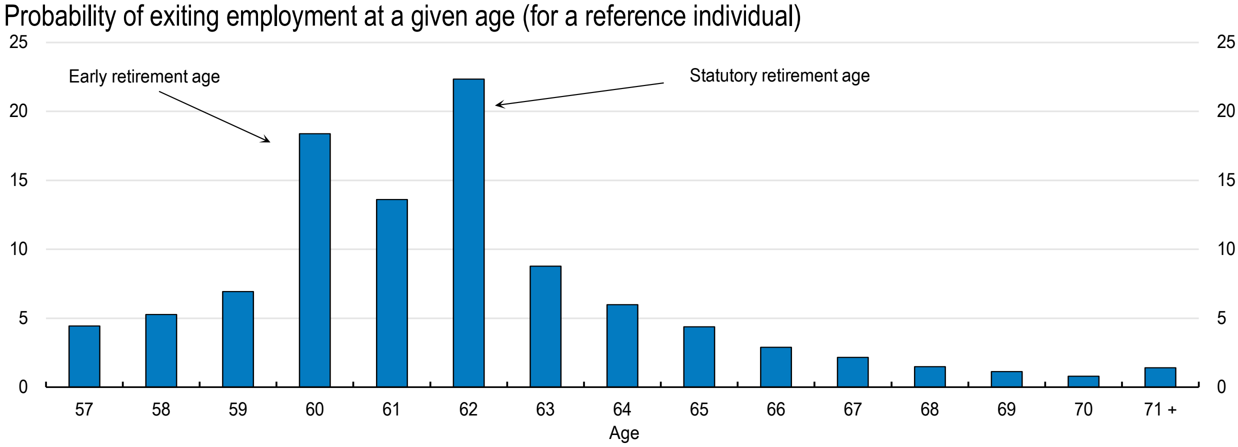
Raising the retirement age will be essential to improve sustainability. New research conducted for this Survey shows that early and statutory retirement ages have a strong impact on people's decision to retire in Slovakia (Figure 2.8, Fodor et al., 2022). Re-establishing the link between the retirement age and life expectancy as proposed will help improve sustainability, and will help extend working lives. Simulations suggest that by 2070, pension spending would decrease by 2.2 percentage points of GDP compared to current policies (Figure 2.9). Besides improving sustainability, extending working lives in the face of ageing is crucial to alleviate negative effects on growth and living standards. There are different design options to link the retirement age and life expectancy. Gains in life expectancy do not need to be fully translated into increases in retirement ages. For example, in Finland and Portugal, the statutory retirement age increases by two-thirds of the gains in life expectancy at age 65.

Figure 2.8. Early and normal retirement ages have a strong impact on actual retirement in Slovakia

Probability of exiting employment at a given age (for a reference individual)



Note: The reference is an individual with the most common characteristics in the modelling sample, i.e., not entitled to any benefits, with secondary education, working in manufacturing, living in a city, not Roma, without health impairment, married, aged 57, with two children, working in 2013 and male.
Source: Fodor et al. (2022).

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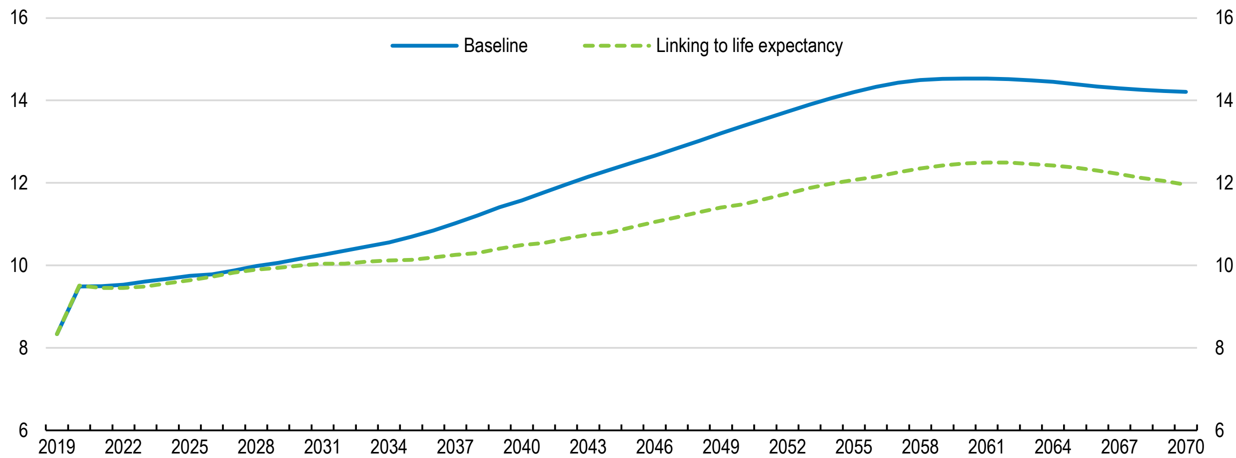
Figure 2.9. Longer working lives mean lower pension expenditures

Public pension expenditures, % of GDP



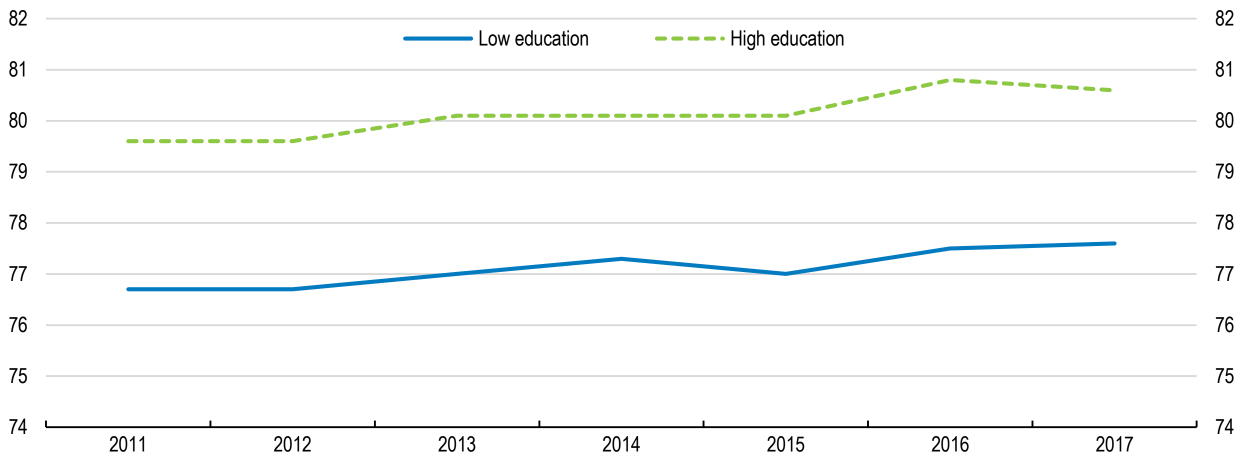
Note: The simulation assumes that 100% of the increase in life expectancy is translated into an increase in normal retirement age and 75% in the effective retirement age. The baseline assumes that the normal retirement age is capped at 64 from 2030.
Source: Ministry of Finance of the Slovak Republic.

StatLink https://doi.org/10.1787/888934296933

The authorities should carefully design the proposed option to allow early retirement after a minimum number of years of contribution to avoid a further deterioration of pension sustainability and negative effects on growth. The reform proposed to allow retirement after 40 years of contributions. The 40-year requirement is at the low-end of countries with similar schemes, such as in Belgium (42 years) and Germany (45 years), but can be justified by the lower life expectancy in Slovakia, especially among lower educated people who generally start their career earlier (Figure 2.10). To avoid incentivising early retirement, principles of actuarial neutrality should be applied. The proposed reform envisages a penalty of 3.6% per year before reaching the statutory retirement age (Box 2.2). In addition, in the current system, early retirement is possible up to two years before reaching the statutory retirement age. In that case, the pension is reduced by approximately 6.5% per year. On the other hand, the pension is increased by 6% per year for every additional working year above the statutory retirement age. The penalties for the two early retirement options should be equalised and aligned with what is implied by actuarial neutrality. OECD calculations suggest an actuarially neutral bonus/malus of around 5.5% per year assuming a statutory retirement age of 64 in the future and indexation of pension in payment to prices (based on OECD, 2017a). However, a higher retirement age than 64 in the future would *ceteris paribus* imply a higher actuarially neutral bonus/malus. Hence, the bonus/malus system should be regularly re-assessed. Moreover, the minimum contribution requirement should increase in the future in line with gains in life expectancy to avoid negative effects on growth and people leaving the labour market with low pension entitlements. For instance, Belgium and France have recently increased the minimum contribution requirement reflecting gains in life expectancy.

Figure 2.10. Inequalities in life expectancy are persistent but gains have been broad-based

Life expectancy at birth in the Slovak Republic



Note: Low education level refers to upper secondary and post-secondary non-tertiary education. High education level refers to tertiary education.
Source: Eurostat.

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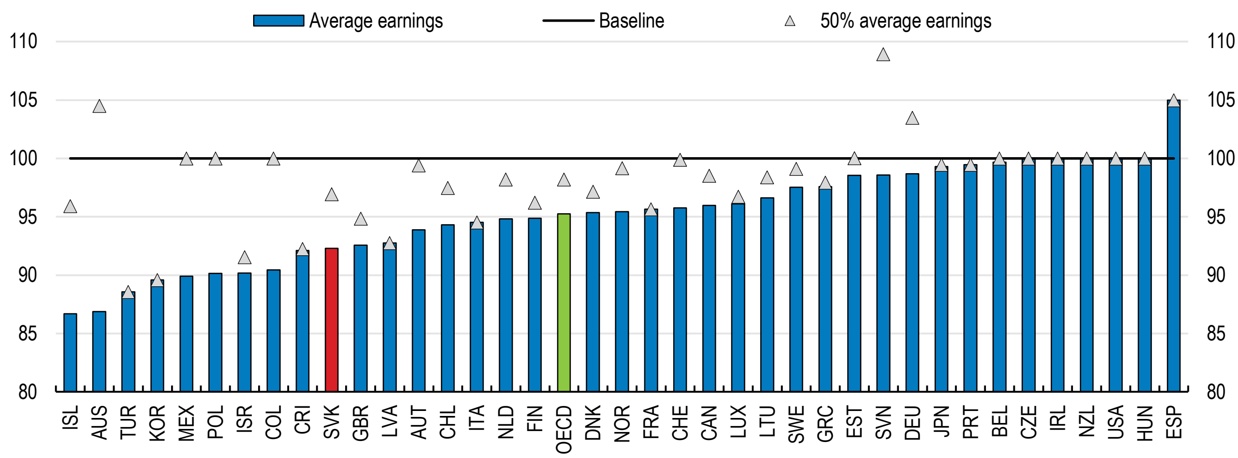
Care should be taken that the link between retirement age and life expectancy does not reinforce inequalities, penalising more those with low socio-economic background who tend to have a shorter life expectancy. This would notably be the case if the gains in life expectancy would disproportionately favour people with higher socio-economic backgrounds. In Slovakia, differences in life expectancy are persistent, but gains in life expectancy have been broadly similar between different socio-economic groups in recent years (Figure 2.10). The persistent inequalities in life expectancy should be addressed by health policies as discussed in the next section.

The early retirement option for mothers should be phased out. Currently, women are allowed to retire 6 months earlier for each child (up to three children), without penalties. This affects negatively on the sustainability of the pension system and lowers pension incomes for women. The government plans to increase the credited pension points during a mother's childcare career breaks. Since 2004, mothers have been granted pension credits for childcare periods as if they earned 60% of the national average wage two years before the childcare break (approximately the minimum wage). A moderately higher pension credit could be warranted, given that childcare breaks currently lead to higher pension income losses in Slovakia than, on average, in the OECD (Figure 2.11). However, this should be combined with phasing out the early retirement option for mothers to offset negative effects on pension sustainability.

Figure 2.11. Childcare career breaks lead to smaller pension entitlements than elsewhere

Gross pension entitlements of low and average earners with a 5-year childcare break versus worker with an uninterrupted career



Note: Figure in brackets refers to increase/decrease in retirement age. Individuals enter the labour market at age 22 in 2020. Two children are born in 2028 and 2030 with the career break starting in 2028. Low earners in Colombia, New Zealand, the Slovak Republic and Slovenia are at 66%, 60%, 53% and 55% of average earnings, respectively, to account for the minimum wage level.
Source: OECD (2021), Pensions at a Glance 2021: OECD and G20 Indicators, OECD Publishing, Paris.

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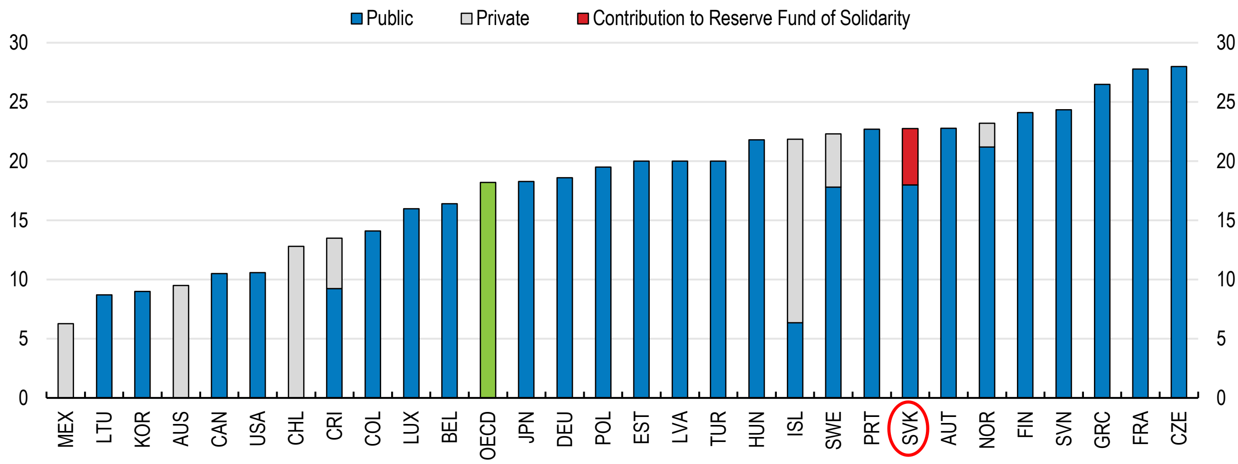
The early retirement pathway through disability benefits should be tightened. Many older workers still use disability as a pathway to early retirement. Nearly 10% of older workers withdraw full disability benefits (Fodor et al., 2022). The share of people withdrawing disability benefits is relatively high compared to peer countries with similar health outcomes such as Poland, Hungary, and the Czech Republic. For example, Slovakia has a similar number of disabled pensioners compared to Hungary, despite having a population half the size. Slovakia also spends a significantly higher amount on disability pensions (0.95% of GDP compared to 0.8% of GDP on average in the other Visegrad countries). This reflects outdated and less stringent assessment criteria, which have not been updated since 2004. There is an increasing trend among the OECD countries to shift the focus from evaluating incapacity to work towards assessing the remaining work capacity. In Estonia, for instance, workability assessments are used by the Estonian Unemployment Insurance Fund to find options for suitable work based on the remaining work capacities. Also, work rehabilitation should be further developed and made mandatory for receiving disability pensions as in Luxembourg, Switzerland, New Zealand, Norway and Sweden. Evidence suggests that work rehabilitation is effective in developing lost skills (Joss, 2002; Legg, Drummond and Langhorne, 2006; Govender and Kalra, 2007). Re-assessments of work capacity can also be made while they are still employed, as in Austria. Some workers may be redirected to less physically demanding occupations before reaching partial disability. The reassessment should be done frequently, for instance annually, given that the longer a disability spell lasts, the more difficult the return to work becomes, as shown for Sweden and the United Kingdom (OECD, 2015; Melkersson, 1999; Jenkins and Rigg, 2004).

Contribution rates should not be increased to improve sustainability, as the labour tax wedge is already high. To increase contributions, the contribution ceiling on wages was increased several times in the recent past and is currently at seven times the average wages. The reform proposes to abolish the contribution ceiling altogether (Box 2.2, see below). The pension contribution rate is currently around the OECD average (Figure 2.12). However, in Slovakia, employers additionally pay contributions into a so-called “Reserve Fund of Solidarity”, at a rate of 4.75%, which is mainly used to finance public pension expenditures. In addition, overall social security contributions in Slovakia are high especially for low-income workers (see Chapter 1). Hence, further increasing the contribution rate would likely result in adverse effects on employment.

Figure 2.12. The effective pension contribution rate is above the OECD average

Effective contribution rate on average earnings for old-age and survivor pension schemes, %, 2020



Note: Data refer to mandatory pension contribution rates for an average worker in 2020. Data for the OECD aggregate refers to the total effective contribution rate.

Source: OECD (2021), Pensions at a Glance 2021: OECD and G20 Indicators, OECD Publishing, Paris.

StatLink https://doi.org/10.1787/888934296990

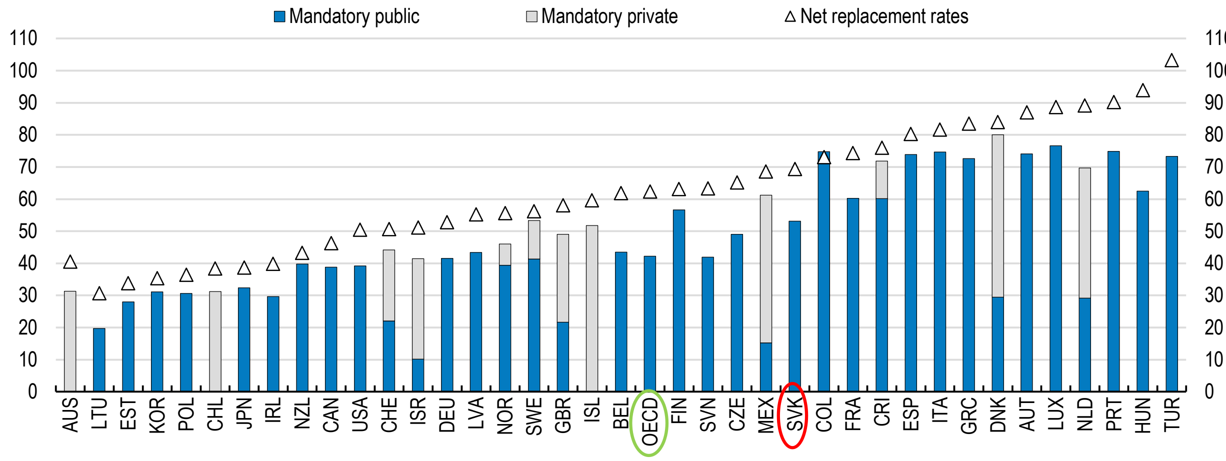
Net replacement rates are relatively high. The gross replacement rate of a worker with an average wage is around 50 percent, which is close to the OECD average (Figure 2.13). However, thanks to the very generous tax treatment of pensions – both pension contributions and benefits are fully exempt from taxes and social security contributions – the net replacement rate is above the OECD average.

Pension benefits may have to be adjusted to improve pension sustainability. The proposed reform envisages slower growth of the pension point value, which is welcome (Box 2.2). In addition, automatic adjustments to pension benefits could be introduced. This could help ensure financial sustainability, reduce the need for recurrent discretionary adjustments and improve the predictability of future pension entitlements. Several OECD countries use automatic adjustments. For example, Finland and Japan link pension entitlements to life expectancy. In Germany, which also has a point-based pay-as-you-go system, the pension point value is linked to the ratio of contributors to pensioners. If the ratio increases, past contributions will be uprated by more than average wage growth and vice versa; however, benefits are not allowed to fall in nominal terms. Furthermore, the parameters (e.g. the point value) of the pension system should be adjusted so that replacement rates do not increase with the (increasing) statutory retirement age due to longer contribution periods once the link to life expectancy is established. Finally, the government could temporarily suspend the 13th pension (Box 2.1) at least for high-income pensioners. Suspending the 13th pension could significantly improve pension sustainability. According to projections of the Ministry of Finance, expenditures on the 13th pension are expected to rise from 0.2% of GDP in 2019 to 0.75% in 2070 under the current setting.

Pensions in payment will be indexed to (pensioners) inflation from 2022. Pensions in payment were indexed to a combination of wage and price growth until 2017 and between 2018 and 2021 to (pensioners) inflation with a guaranteed minimum increase of 2% of the average old-age pension. From 2022 pension will be indexed to (pensioners) inflation only, without the guarantee. The indexation to inflation is welcome given the sustainability challenges and will ensure that pensioners maintain purchasing power, even if it also implies that pensions will fall relative to average incomes.

Figure 2.13. The gross and net replacement rates are above the OECD average

Gross pension replacement rates from mandatory public and private pension schemes and total net replacement rate, % of individual earnings



Note: Theoretical replacement rates for a full career worker.
Source: OECD (2021), Pensions at a Glance 2021: OECD and G20 Indicators, OECD Publishing, Paris.
StatLink https://doi.org/10.1787/888934297009

The proposed reform plan to introduce the so-called "parental bonus" should be reconsidered. The Ministry of Labour proposed to introduce a parental bonus according to which the pension benefits of every parent would be increased by 2.5% percent of the social security base of each child. According to the Ministry of Finance, this measure would raise pension spending by around 0.6% of GDP annually (Box 2.2). Besides jeopardising pension sustainability, the policy has indeterminate efficiency and also raises equity issues as the bonus favours parents of more affluent children. A likely aim of the policy is to increase old-age income of parents who may have lower pension due to childcare career breaks. A more effective policy would be to increase the pension points for childcare career breaks as suggested above or to ensure adequate minimum pension entitlements (see below). In addition, as discussed below, reducing excessively long parental leave periods and improving the supply of affordable childcare places would help reduce labour market barriers of women and hence raise pension entitlements.

Introducing pension monitors, as planned by the government, would help workers make informed retirement decisions. Almost all OECD countries provide on-line information about public pensions, and many also for private pensions (OECD, 2016a). In Sweden and Denmark for example, workers can access personal information, such as their contribution period and accumulated savings/accruals. Calculations and simulators are also used to provide personalised information about expected retirement age and benefits. In Slovakia, information about pension entitlements from the public pension system is currently not available. Some fund management companies provide simulators or calculators for the private pension system (IOPS, 2019). Therefore, the government's plan to provide annual standardised information on pension entitlements from all three pillars is welcome.

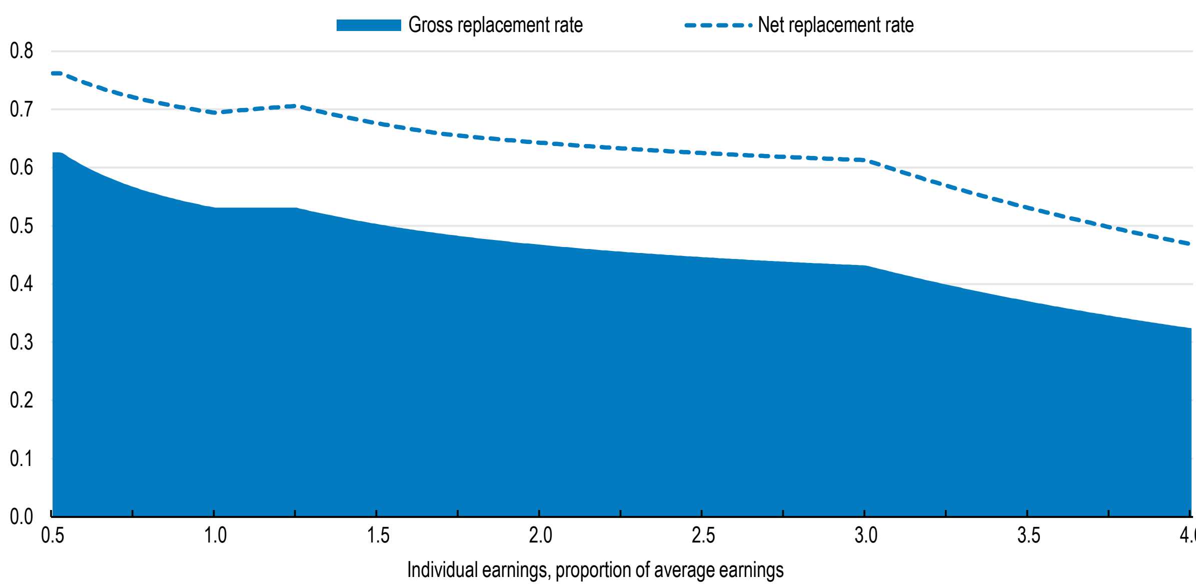
Strengthening the link between earnings and pension entitlements while ensuring broad access to adequate minimum pension income

As in most other OECD countries, the link between earnings and pension entitlements in the Slovak pay-as-you-go system is weakened due to a number of redistributive elements, potentially reducing work incentives and incentives to contribute to the system. In the Slovak point-based system, pension benefits at retirement are determined by the average pension point, the contributory period, and the current pension point value. The pension point is calculated as the ratio of an individual's earnings to the economy-wide average earnings so that an individual with earnings equal to the average wage receives a pension point of one. However, a so-called solidarity factor increases pension points lower than 1 and reduces pension points higher than 1.25. In addition, the (unsolidarised) average pension point cannot exceed 3. This cap on pensionable earnings implies an upper ceiling on pension benefits at retirement of around EUR 1705/month after 40 years of contributions. Moreover, as pension contributions are capped at 7 times the average wage, contributions on earnings between 3 and 7 times the average wage do not result in any additional pension entitlements, making these contributions de facto taxes. As a result, accrual rates and replacement rates fall sharply with income (Figure 2.14). While this increases solidarity, it can potentially reduce work incentives and increase incentives for high-income earners to reduce pension contributions, for example by becoming self-employed, and for the self-employed to incorporate and limit the salary they pay themselves.

The government should avoid further increasing the gap between the upper ceilings on pension contributions and pensionable earnings. The proposed reform includes a plan to abolish the cap on pension contributions, which will further weaken the link between earnings and pension entitlements. The reform could increase pension contributions by around 0.2% of GDP per year, according to the Ministry of Finance. However, this effect could be potentially offset through worsened work incentives and incentives to contribute to the system.

Figure 2.14. The pension point system is highly redistributive

Replacement rates by income level



Source: OECD (2021), Pensions at a Glance 2021: OECD and G20 Indicators, OECD Publishing, Paris.

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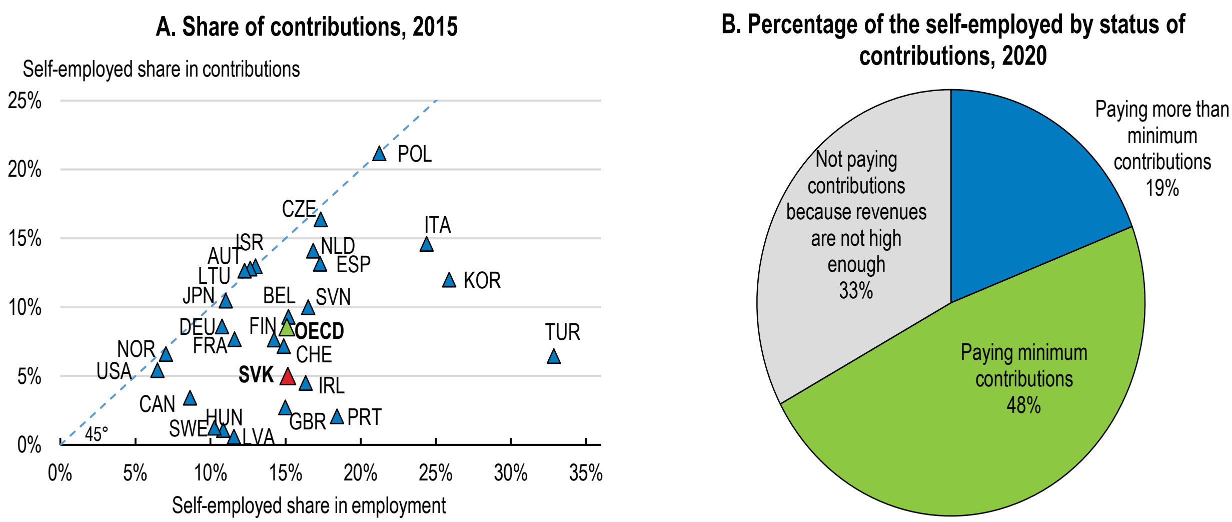
The self-employed contribute significantly less to the pension system than dependent workers. In 2015, the self-employment represented around 15 percent of total employment (slightly more than the OECD average), but their share in total contributions was only 5%, almost half of the OECD average (Figure 2.15, Panel A). Almost half of the self-employed pay minimum contributions and a third pay no contributions (Panel B).

The low pension contributions of the self-employed reflect several factors. First, the self-employed have a high degree of discretion in setting their contribution base, and the contribution base is not fully harmonised between self-employed and dependent employees. The self-employed can currently deduct, at a flat rate, 60% (up from 40% in 2017) of their revenues as costs, up to EUR 20 000 a year. While this flat rate reduces the administrative burden for the self-employed, it lowers taxes and pension contributions compared to employees with similar earnings. In addition, the contribution base for the self-employed is set at 67% of profits, but in order for the contribution base between self-employed and employees to be equal, it must be 74% of profits in Slovakia (based on OECD, 2019a). Second, the self-employed are not required to pay social security contributions if the reported income is less than 50% of the average wage (Figure 2.16). This is a high threshold compared to OECD countries with similar minimum income thresholds (although the exact definition of the income varies across countries).

Figure 2.15. The self-employed contribute little to old-age pensions

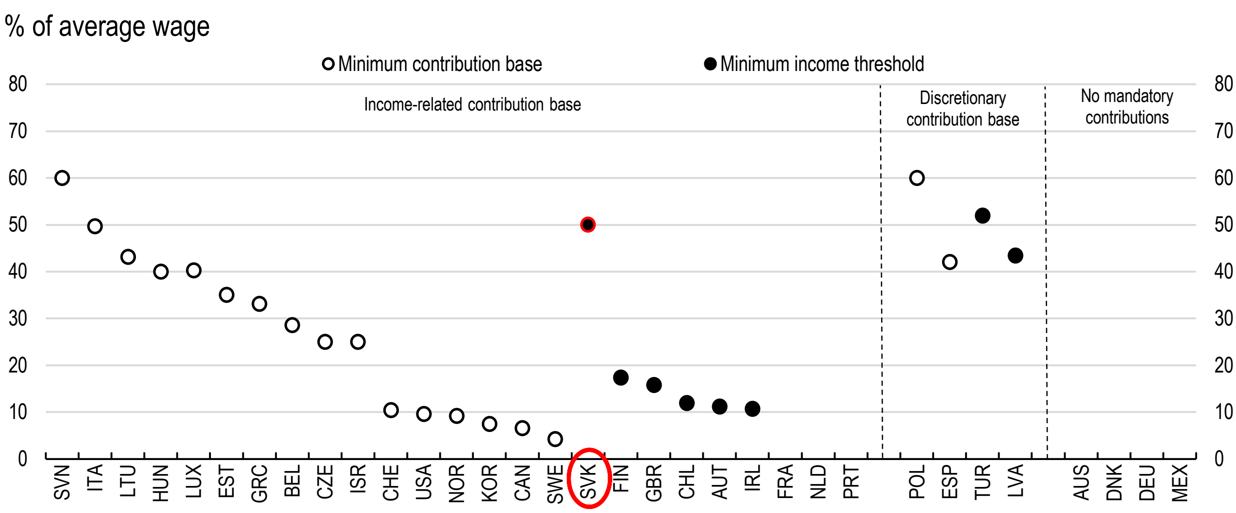


Note: In Panel A, the share of contributions paid by the self-employed includes contributions paid by non-working individuals in some countries, as only this aggregate is available. In Panel B, data excludes those who did not pay social security contributions because they stopped working or because it was their first year of self-employment.

Source: Ministry of Finance of the Slovak Republic; and OECD (2019a), Pensions at a Glance 2019: OECD and G20 Indicators, OECD Publishing, Paris, https://doi.org/10.1787/b6d3dcfc-en.

StatLink https://doi.org/10.1787/888934297047

Figure 2.16. The income threshold for exemption from contributions is high



Source: OECD (2019a), Pensions at a Glance 2019: OECD and G20 Indicators, OECD Publishing, Paris, https://doi.org/10.1787/b6d3dcfc-en.

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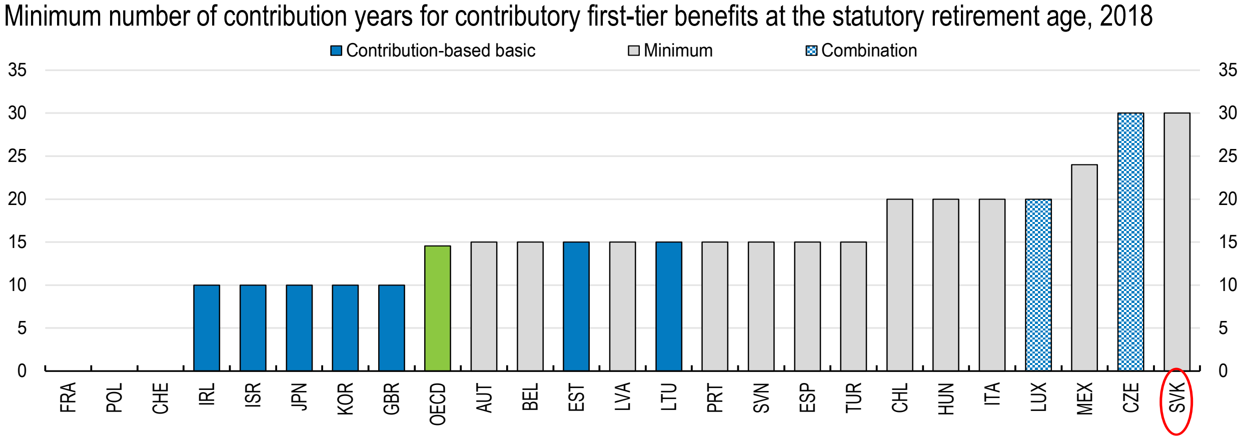
The government should raise the contribution base of the self-employed to better harmonise contributions and entitlements between employees and the self-employed with similar earnings. Due to low contributions, the self-employed may disproportionally benefit from the minimum pension or social assistance benefits, raising fairness and pension sustainability issues. Furthermore, lower pension contributions may create incentives for companies to hire independent workers instead of hiring standard workers (OECD, 2019a). Harmonising contribution bases between self-employed and dependent employees and reducing the flat rate revenue deductions would help reduce false self-employment. This should be accompanied by rigorous inspections (OECD, 2019a). Making employers mandatorily report any change in working hours/working arrangements of its employees through an electronic system, like in Greece, or allowing the tax administration to require platforms to provide information about any individual who has earned more than a certain amount via a platform, like in France, can help improve the monitoring system (EC, 2018a). At the same time, if deemed necessary, support for the self-employed, could be provided by explicitly financing part of their pension contributions through the tax system.

The government should consider broadening access to minimum pensions in the medium term to ensure a minimum pension income for all. The minimum pension was introduced in Slovakia in 2015. The amount of minimum pension is currently 33% of the national average wage in 2018 but will fall relative to average wages in the future, as minimum pensions are frozen at the current level since 2020 (Box 2.1). The Slovak Republic – together with the Czech Republic - stands out among OECD countries with a very long minimum contribution period of 30 years to receive a contribution-based basic or minimum pension at the statutory retirement age, with the OECD average equalling about 14½ years (Figure 2.17). The minimum pension is prorated with contribution years above 30 years of contributions. Below 30 years of contributions, the floor to pension levels is given by social assistance (18% of the average wage) irrespective of the years of contribution. The government could consider expanding access to the prorated minimum pension. For instance, a minimum pension after 15 years of contributions could be introduced at the level of the social assistance and prorated with contribution years, so that 30 years of contribution result in the current level of the minimum pension. Combining the lower threshold with prorated minimum pension would help keep the lowest earners from falling into poverty while rewarding additional years of work.

Figure 2.17. A very long contribution period is required to receive a minimum pension

Minimum number of contribution years for contributory first-tier benefits at the statutory retirement age, 2018



Note: Pension systems in the Czech Republic and Luxembourg combine contribution-based basic pensions with minimum pensions. Australia, Canada, Denmark, Finland, Germany, Greece, Iceland, the Netherlands, New Zealand, Norway, Sweden and the United States do not provide contributory first-tier benefits, and are therefore not included in the OECD average.
Source: OECD (2020), OECD Reviews of Pension Systems: Czech Republic, OECD Reviews of Pension Systems, OECD Publishing, Paris, https://doi.org/10.1787/e6387738-en.

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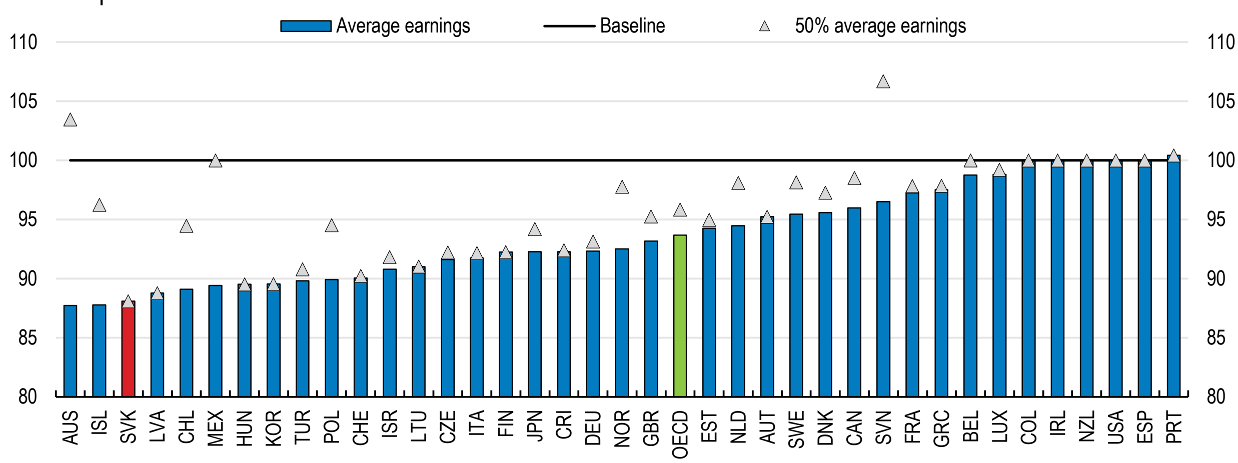
In the medium term, introducing some basic pension credit for initial periods of unemployment spells would reduce the risk of people with interrupted careers falling into poverty at old age. The share of temporary workers, who face more interrupted careers, has increased in Slovakia since the late 2000s. Unemployment spells lead to larger pension reductions than in most OECD countries (Figure 2.18). Unemployment spells are not credited in the pension system. However, the unemployed can make voluntary contributions and it is also possible to pay contributions for this period retroactively. Most OECD countries aim to protect at least the initial periods of absence from the labour market due to unemployment. In these cases, pension credits are usually linked to the receipt of unemployment benefits, and thus subject to time limits and/or other conditionality conditions such as participation in training and activation programmes (Bravo et al., 2020). For instance, in Finland and Belgium, the pension credit is limited to periods of unemployment benefits, and to qualify for the unemployment benefits, he/she needs to participate in training or other active labour market measures.

Figure 2.18. Unemployment spells lead to relatively large pension reductions

Gross pension entitlements of low and average earners with a 5-year unemployment break versus workers with an uninterrupted career



Note: Individuals enter the labour market at age 22 in 2020. The unemployment break starts in 2033. Low earners in Colombia, New Zealand, the Slovak Republic and Slovenia are at 66%, 60%, 53% and 55% of average earnings, respectively, to account for the minimum wage level.
Source: OECD (2021), Pensions at a Glance 2021: OECD and G20 Indicators, OECD Publishing, Paris.

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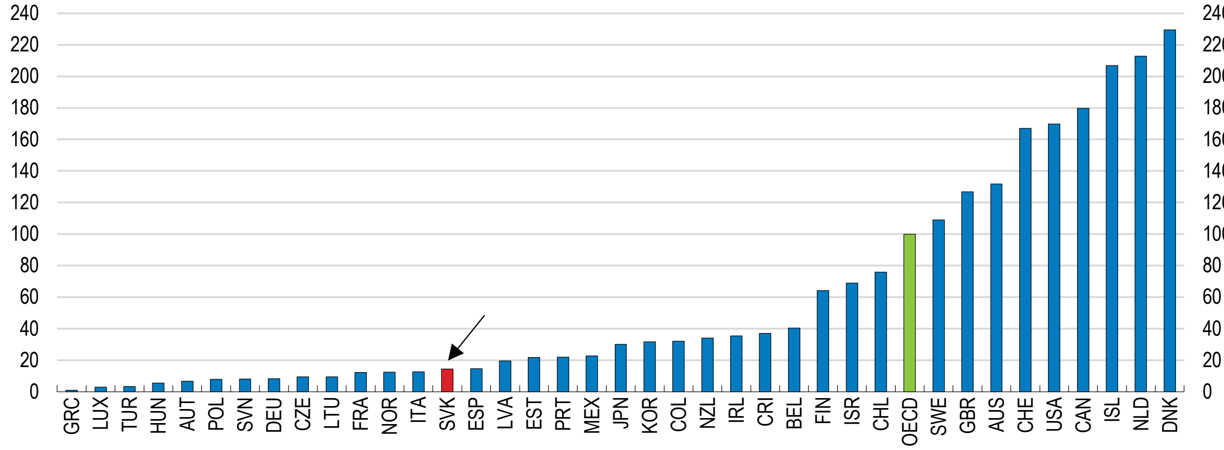
The government should consider financing more redistributive components of the public pension system by general taxes. Many countries finance part of pension spending through general taxation, which reduces the burden to finance pension expenditure via social security contributions only. The minimum pension and the 13th pension are already financed via general taxation. Other redistributive elements (e.g., for career breaks or the solidarized pension point) could also be explicitly financed via general taxation. This could help improve the finances of the pension system and allow the government to lower social security contributions (and hence the labour tax wedge). As discussed in Chapter 1, a tax reform with the aim of shifting the burden from labour to consumption, property and environmentally harmful activities has the potential to reduce distortions to economic growth.

Boosting savings and yields of the private pension scheme

Private pension savings are very low, reflecting the relatively short existence of the system, but also low contribution rates, low participation, and low yields from savings (Figure 2.19). The private fully-funded defined-contribution pension system was established in 2005, with the aim to diversify pension savings. There have been numerous changes to the system including on contribution rates and between mandatory and voluntary enrolment. The contribution rate is currently 5.25%, down from 9% in 2012, but is set to increase again in the future. Since 2013, participation is voluntary. The participation rate of around 41.9 percent of the working age population is relatively high for countries with voluntary schemes but low compared to countries with mandatory private pension schemes (OECD, 2020b). Moreover, Ódor (2019) shows that accumulated savings could be 20-80% higher if the performance of the funds had been similar to international benchmarks. This makes the private pension system ineffective in providing additional pension income.

Figure 2.19. Private pension savings are very low

Total assets in retirement savings plans, % of GDP, 2020 or latest available year

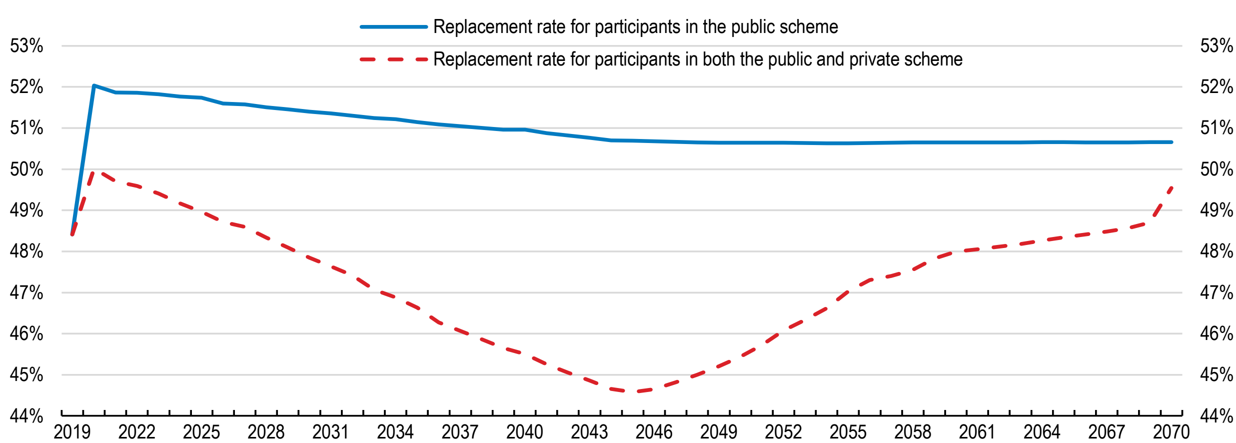


Source: OECD (2021), Pension Markets in Focus 2021, OECD Publishing, Paris, https://www.oecd.org/pensions/pensionmarketsinfocus.htm.

StatLink https://doi.org/10.1787/888934297123

The proposed reform plan to introduce automatic enrolment should be accompanied by a significant improvement in the performance of pension funds. To bolster participation and accumulated savings, the Ministry of Labour proposed to introduce automatic enrolment, with the possibility to opt out. Evidence suggests that the automatic enrolment with the option to opt-out is likely to increase participation compared to the option to opt-in (Madrian, 2013). However, people who have contributed to both the pay-as-you-go and the private scheme are expected to receive significantly lower replacement rates compared to people who have only contributed to the pay-as-you-go scheme (Figure 2.20). In particular, replacement rates are expected to fall gradually for cohorts retiring before 2045 as the funds are invested very conservatively (see below) and the share of contributions invested in the private system increased. For cohorts retiring after 2045, replacement rates are expected to increase because younger cohorts have or are expected to invest a higher share in equity funds.

Figure 2.20. Replacement rates are lower for the mixed pension scheme than public pension scheme



Note: It is assumed that the share invested in bonds and equity remains constant at the current ratio for each cohort over time. Younger cohorts invest a higher share in equity funds. New cohorts entering the private scheme are assumed to invest 50% in equity funds from the age of 25 until retirement. The gross return to equity is assumed to be 8 % over the projection horizon, roughly equal to the historical performance. The return on bonds is expected to increase from 2%, close to the return observed in 2019, to 4% in 2050 and thereafter.
Source: Ministry of Finance of the Slovak Republic, Country fiche on 2021 pension projections of the Slovak Republic.

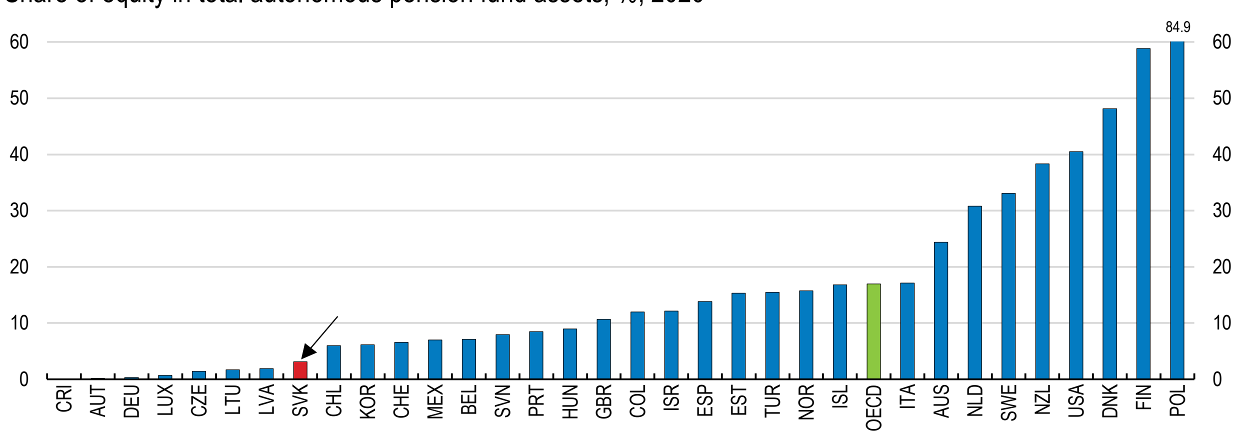
StatLink https://doi.org/10.1787/888934297142

Minimum return guarantees should be abolished to improve the performance of the pension funds. The low performance of private pension funds can be largely attributed to minimum return guarantees, which incentivize pension management companies to follow overly conservative investment strategies, together with a low level of financial literacy (Ódor, 2019). In 2009, the government introduced a regulation that pension funds had to guarantee minimum returns over a 6-months period. This incentivized pension funds to invest in low-yielding short-term bonds. In 2013, all the savers from equity funds were moved into the bond funds by default, and only opt-out was possible (IFP, 2019). While the regulations have been changed and equity funds without return guarantees exist, participants still invest largely in bond funds with minimum guaranteed returns (over a ten-year period). In 2017, savings in guaranteed bond funds accounted for around 80 percent of total pension fund investments (IFP, 2019). Currently, only 2.6% of assets in private pension plans are *directly* invested in equities (Figure 2.21), although the overall share of equity in total pension funds is higher as a significant amount of assets is allocated in collective investment schemes (CIS), which partly invest in equities. Instead of minimum return guarantees for bond funds, the pension funds could be required to meet some international benchmarks (Ódor, 2019).

Introducing some default life-cycle based investment strategies for pension funds with substantially higher allocation into global stock funds and better regulating fees can help improve performance. The government considers introducing some default investment strategies with high initial allocations to equities for young participants (i.e., life-cycle investment strategies). Reducing and regulating the choice of investment possibilities can help people make difficult investment decisions, especially if financial literacy is low. Higher default allocations to equities or global stock funds can increase the return in private pension funds (IFP, 2019). Fees of pension funds should also be better regulated. For example, pension funds often charge the same fees for active and passively managed funds, and fees appear somewhat higher than in peer countries (Ódor, 2019).

Figure 2.21. The investment strategy is very conservative

Share of equity in total autonomous pension fund assets, %, 2020



Source: OECD Pensions database.

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Reducing possibilities for effective lump-sum payments will help better manage retirement income. As pay-out options upon retirement, an individual can choose between life annuities, a fixed-term annuity and programmed withdrawals. As there are few restrictions to the programmed withdrawal, many people withdraw the total pension amount after a month, making it effectively a lump-sum payment option. However, this limits the income-supplementary aspect as many people have difficulties turning stock of wealth into a suitable flow of income. Therefore, it may be beneficial to restrict effective lump-sum withdrawals, for instance, by introducing a cap as in Lithuania or the United Kingdom for example. Moreover, if pay-out options were decided when signing up, pension funds could optimise investment strategies, likely resulting in higher returns.

The personal voluntary supplementary pension scheme (3rd pillar) also has low savings. This primarily reflects low returns with a large part of savings allocated in low-yield bond funds, together with relatively high fees and low participation. The Ministry of Labour recently proposed several reforms to the 3rd pillar. This includes increasing competition among pension funds by opening the market to new providers, enhancing tax incentives, and exempting contributions from public health insurance contributions. In addition, pension providers are to offer pensioners an investment strategy based on a life-cycle strategy as one of the investment options.

The cost-effectiveness of proposed fiscal incentives should be carefully assessed. The existing tax advantages are already relatively high in international comparison (OECD, 2020g). For an average earner between 20 and 65 years old contributing 5% of wages, the overall tax advantage represents around 36% of the present value of contributions, ten percentage points higher than the OECD average. A number of empirical studies suggest that fiscal incentives have been an expensive means to promote savings in the supplementary pension scheme in some countries (e.g., Anton et al., 2014; Attanasio et al., 2004). In particular, low and middle-income earners are found to be less sensitive to tax incentives, partly due to their low financial literacy. Any policies to increase participation should be accompanied by a substantial improvement in the performance of the supplementary private pension funds. Making the life-cycle-based investment strategy a default option with higher allocation into global stock funds should be considered, as recommended for the 2nd pillar private pension funds.

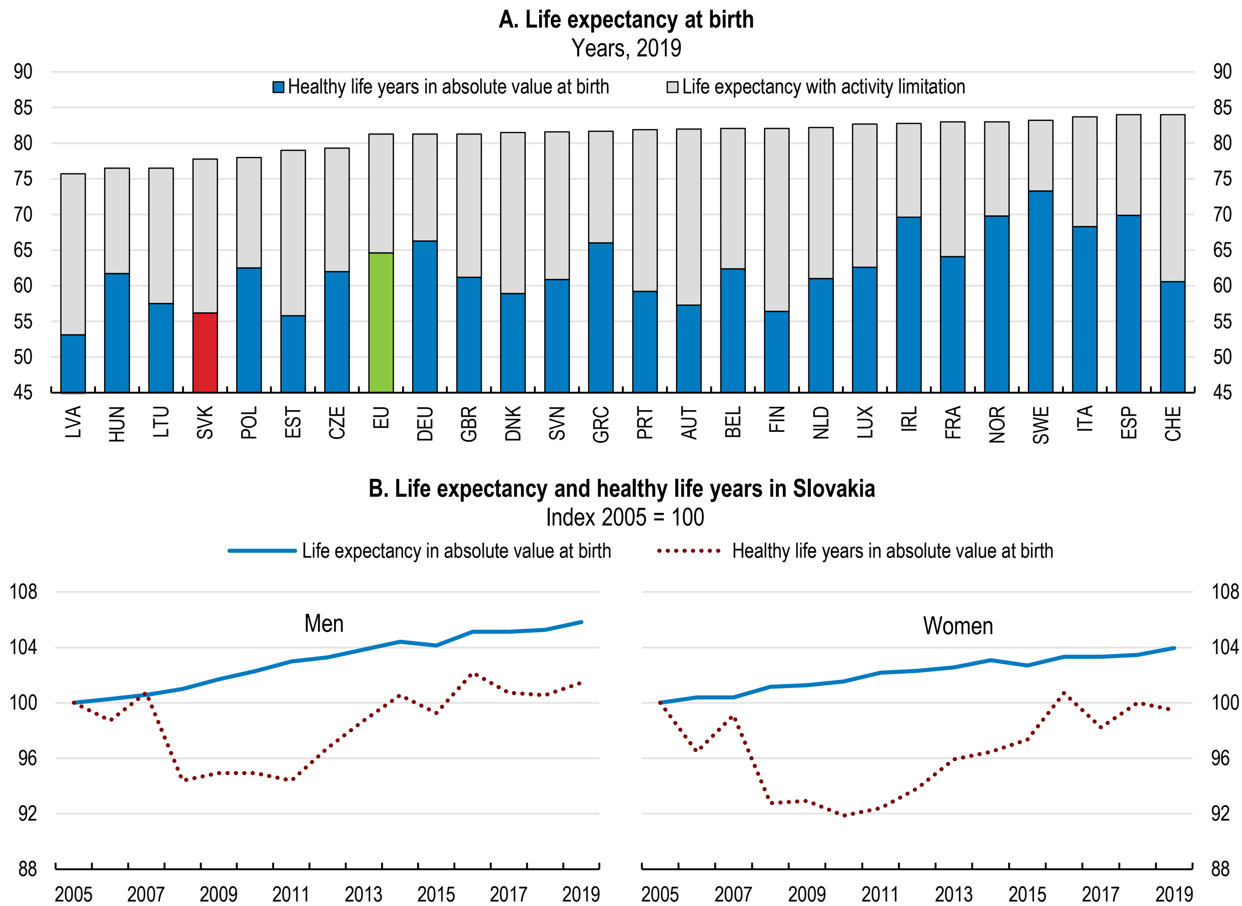
Strengthening health and long-term care systems to efficiently promote healthy ageing

Slovakia's health outcomes are poor compared to most other OECD countries. Life expectancy is among the lowest in the OECD, and it fell by around one year in 2020 due to the COVID-19 crisis (OECD, 2021d). Infant mortality is among the highest in the OECD. Substantial disparities across ethnic and socioeconomic groups in health outcomes persist, with one of the largest gaps in life expectancy by education level in the EU. Life expectancy has increased over the past decade, but this was not accompanied by a proportionate increase in the number of years in good health (Figure 2.22). If the trend continues, Slovakia's older people will spend more years in need of medical care and assistance than now.

Poor health outcomes coupled with ageing will weigh on public finances. Healthcare and long-term care spending per capita is lower than the OECD or EU average, but it is expected to increase faster in the long run, partly reflecting faster population ageing and worse health outcomes. According to the EC's long-term projections, public healthcare and long-term care spending as a share of GDP is expected to increase by more than a half (from 6.5 percent of GDP to 10) until 2050, compared to an average increase of a fifth (from 8.4 percent of GDP to 10.2) for the EU. This result is caused mainly by the growing need for healthcare in old age (MoF, 2019).

Keeping people healthy throughout their lives would improve well-being, reduce demand for health and long-term care services, and prevent people from leaving the workforce prematurely due to poor health (Blundell et al., 2021; Leijten et al., 2015). A crucial challenge is thus to ensure that gains in life expectancy lead to similar gains in healthy life years and to control additional spending pressures on health and long-term care from ageing.

Figure 2.22. Life expectancy is low and gains have not fully translated into healthy life years



Note: In Panel A, life expectancy with activity limitation refers to the difference between life expectancy and healthy life years at birth. Data for GBR are for 2018.

Source: Eurostat Health Statistics database; and OECD calculations.

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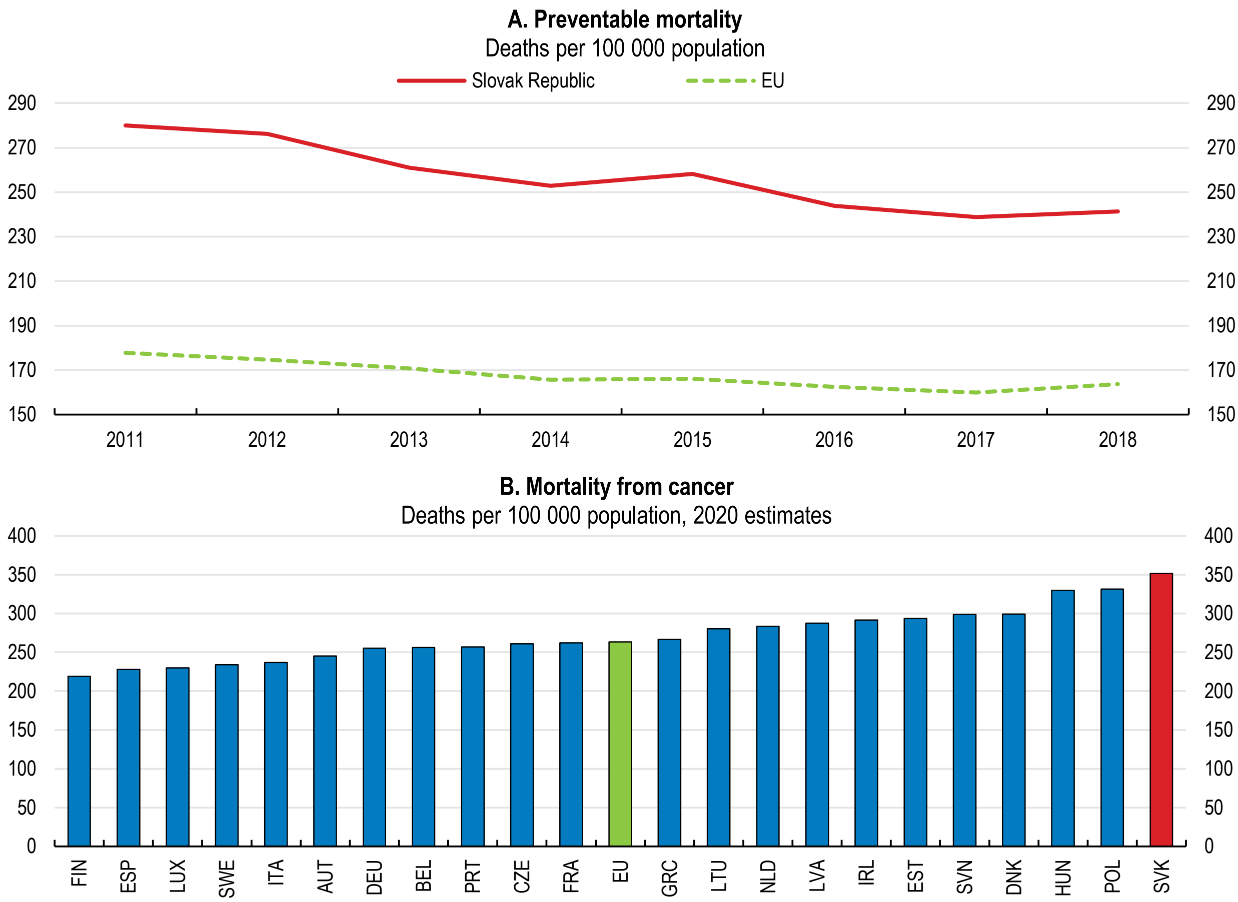
Strengthening equity and resilience to improve health outcomes

Reducing preventable mortality to improve health outcomes

The poorer health outcomes in Slovakia can partly be attributed to higher preventable and treatable mortality in international comparison (Figure 2.23, Panel A). Ischemic heart disease is the leading cause of death, accounting for one in four deaths, and mortality from strokes is the second main cause of death (OECD, 2019b). Mortality from cancer is the highest in the OECD in 2020 (Panel B). Slovakia also has the highest number of hospitalisations of people with high blood pressure and diabetes (INESS, 2020). In addition, many people die due to influenza and pneumonia, around 40% higher than the OECD average (OECD, 2021a).

Figure 2.23. Preventable mortality is high



Note: In both Panels, data for the EU are weighted averages. In Panel A, the EU does not include France in 2018.
Source: OECD calculations based on the Eurostat Health Statistics database; and Joint Research Centre, ECIS – European Cancer Information System database.

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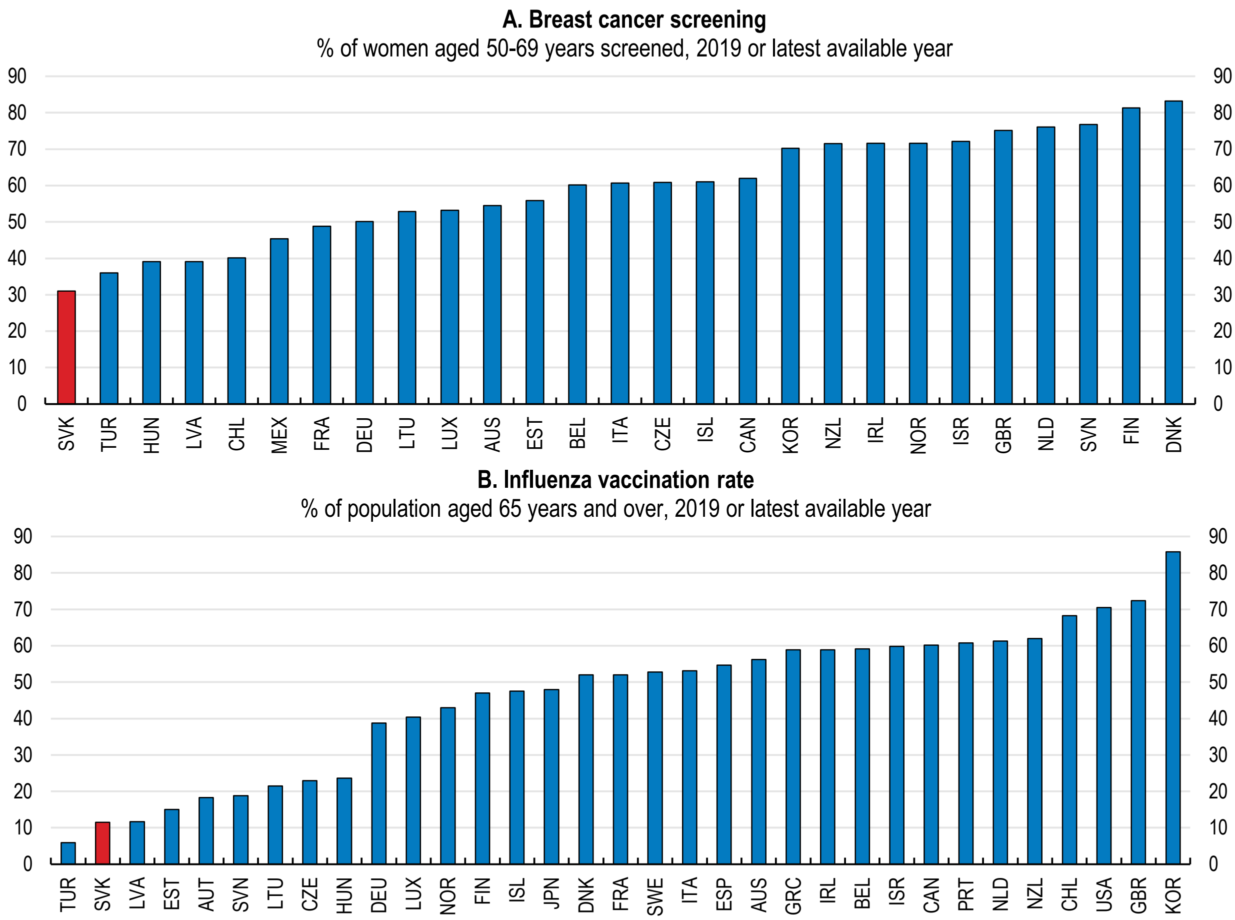
High preventable mortality reflects behavioural risk factors, low vaccination coverage for certain groups, and low cancer screening rates. Behavioural risks, including alcohol consumption and dietary risks, account for half of all deaths in Slovakia, well above the EU average of 29% (OECD, 2019b). In 2016, more than half of all adults had heavy episodic drinking in the past 30 days. This proportion was larger than in most other EU countries (OECD/EU, 2020). The share of 15-year-olds who reported consumption of sugared soft drinks was 25% in 2018, also significantly higher than the EU average of 16% (OECD, 2019b). The overall obesity rate is about the OECD average, and relatively high among children from low-income families (OECD/EU, 2020). The breast cancer screening rate among women is the lowest among OECD countries (Figure 2.24, Panel A), so is the influenza vaccination rate for older people, who are at increased risk of serious complications and death from influenza (Panel B; and OECD, 2021d). The pneumonia vaccination rate for older people is also relatively low in international comparisons (Root-Bernstein, 2021).

Figure 2.24. Screening and influenza vaccination are low among particular groups at risk



Source: OECD Health Statistics database.

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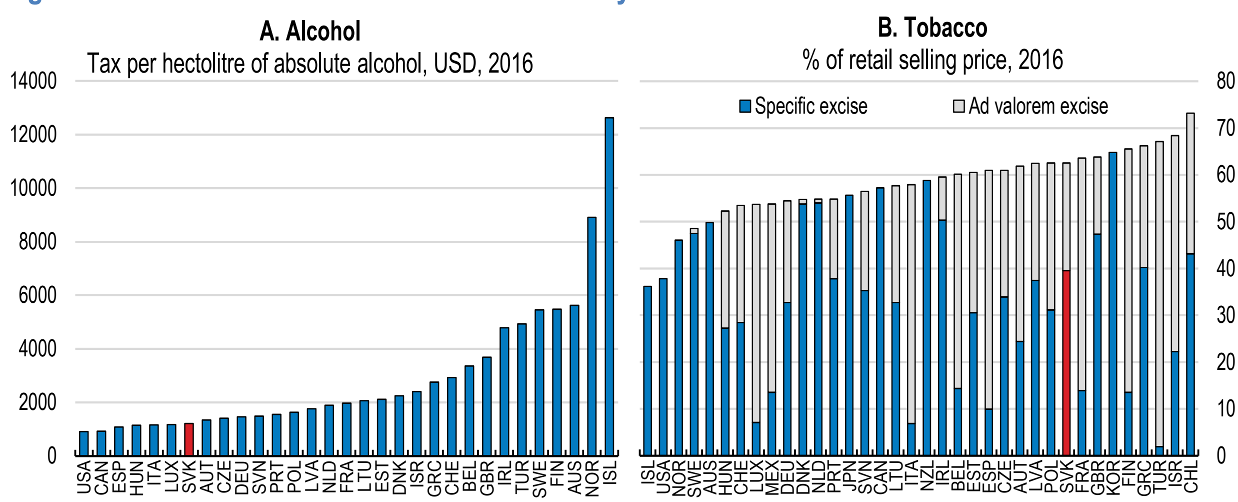
Developing a national strategy to reduce preventable mortality and targeted approaches are warranted to reduce preventable deaths. The government has made some efforts to reduce preventable deaths. The national cancer plan was adopted in 2018, and employers' contributions to employees' preventative medical examinations (e.g., oncological examinations) are tax-exempt from 2020. The government also plans to enhance public health education and awareness, although concrete measures have not yet been announced. In addition to this, developing a national preventive health strategy should be considered, expanding the current cancer plan to other preventable diseases, to build a sustainable prevention system and early intervention programs. Furthermore, more targeted measures are needed to improve the effectiveness of these reforms. For instance, tailored vaccination campaigns for older people, such as mobile vaccination units visiting seniors in their village, may help increase their vaccination rates. Moreover, the fact that more than half of Slovaks older than 65 do not use the internet at all should also be taken into account when running the public awareness campaign planned by the government. Indeed, many of the older people who tried to get the COVID-19 vaccine were unable to do so because the registration was done mostly online, which may have contributed to lower rates of COVID-19 vaccination compared to the OECD and EU averages. The government should also consider increasing its expenditure on preventive care, which is currently less than 1% of total health expenditure in 2019, around a third of the EU average (2.9%) (OECD, 2021d).

Policies to encourage healthy eating habits among children from low-income households should also be promoted. A survey suggests that eating habits of low-income households, notably the population living in Roma settlements, differ from those of the majority population in Slovakia, with lower consumption of fruits and vegetables (Emilia et al, 2014). Nutrition is fundamental for child and adolescent development, and preventing many serious health problems such as obesity (OECD/EU, 2020). The active involvement of health care professionals who regularly consult children, parents, and families from low-income families is important (Park, J. et al., 2020; and Hanna, H. et al., 2012). Health education and promotion in schools, together with increasing the fruit and vegetable content in the food served in schools, can also be promoted (OECD/EU, 2020). A targeted voucher program can also help improve eating habits. For instance, in the United Kingdom, the “Healthy Start” scheme gives vouchers that can only be spent on specific healthy foods (e.g., fruit, vegetables, and milk) to low-income families with young children. Griffith et al., (2018) suggest that the scheme has been more effective than an unconditional cash benefit, improving the nutrient composition of the household’s shopping baskets.

As for alcohol, excise duties on beer, wine, and other alcoholic beverages are relatively low in Slovakia (Figure 2.25, Panel A), while excise duties on tobacco are relatively high (Panel B). International empirical evidence suggests that lower alcohol prices are associated with higher alcohol consumption, cancer cases, and other alcohol-derived problems, notably traffic fatalities (Rovira et al., 2020; Chang, Wu and Ying, 2012). Raising the low excise duties could help reduce excessive alcohol consumption as well as preventable mortality. As for excise duties on sodas, the government initiated a discussion on the possibility of introducing new taxes, but it was abandoned in 2019. Introducing excise duties on sodas can also be reconsidered as in some OECD countries including Norway, Finland, and France. Increasing prices of sugary and high-caloric food items through appropriate tax levies could promote healthier diets, as the consumption of these products seems to have a high price elasticity (Sassi, 2016; Sassi et al., 2013).

Figure 2.25. Excise duties on alcohol are relatively low



Source: OECD (2020), “Consumption Tax Trends 2020: VAT/GST and Excise Rates, Trends and Policy Issues”.

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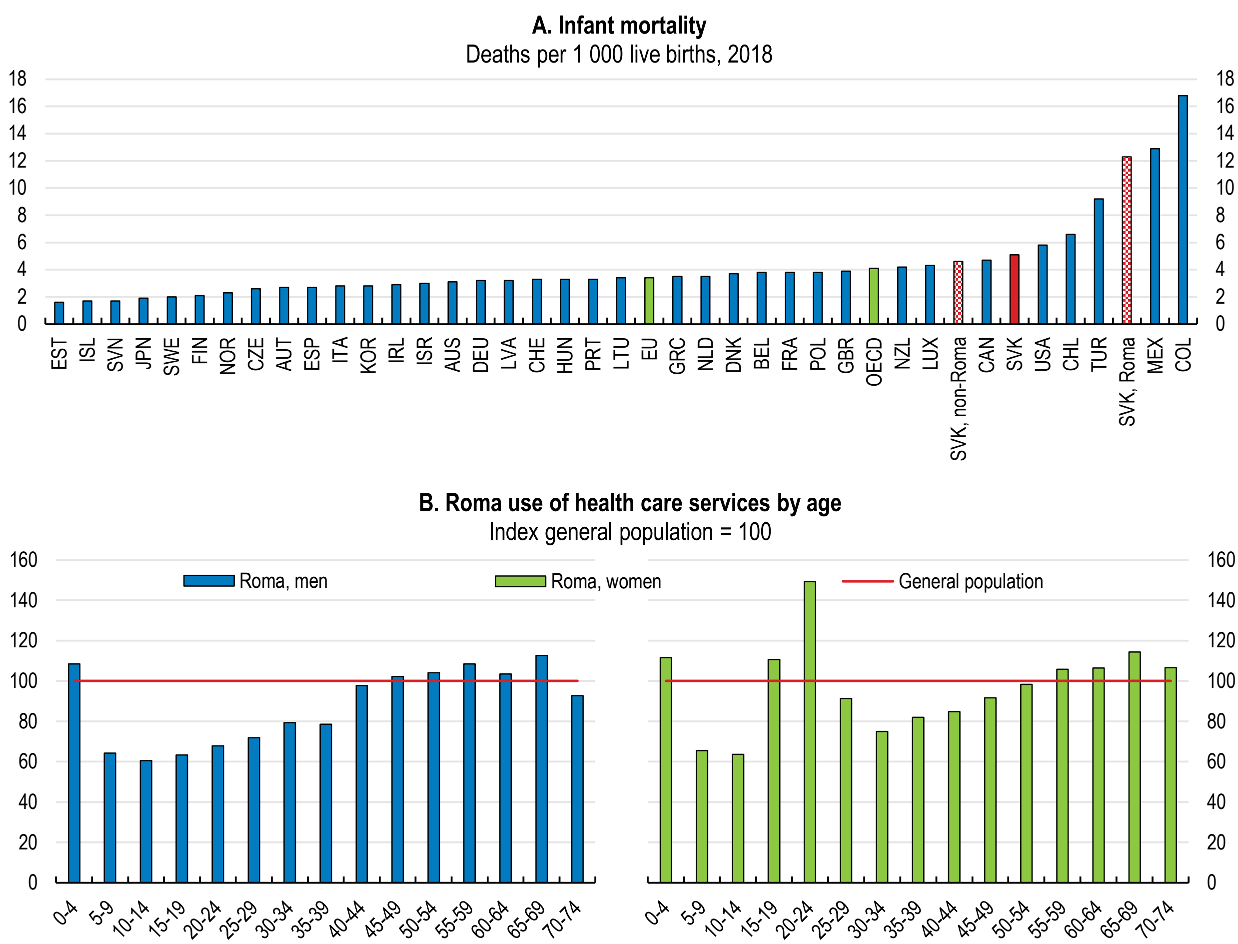
Better mental health care is needed. Mental disorders were the third most frequent cause of entitlement to disability pensions (MoF, 2019). Brazinova et al. (2019) suggest that nearly two-thirds of depression cases and 80 percent of people with anxiety are not treated in Slovakia. Untreated mental health issues have detrimental effects on the labour force and lead to substantial indirect costs in healthcare and the social system. The total cost of mental illness is estimated at around 2.3% of GDP in Slovakia (OECD, 2018a). The mental health care sector in Slovakia is underfunded (MoF, 2020). Mental health care accounts for only 2% of the total healthcare expenditure, well below the OECD average (6.7%). Mental health care is also poorly accessible, with a shortage of psychiatrists and outdated or inadequate facilities (MoF, 2019). To improve mental health care, a new government-level working group has been established, a new edition of the National mental healthcare plan is being prepared, and investments in mental health have been included in the recovery plan. The reform should be implemented without delay, given that previous efforts have been postponed several times. To increase the effectiveness of the reform, a targeted approach is needed for the population groups most vulnerable to mental illness, taking into account their different mental health service needs. For instance, Ireland developed specific mental health initiatives for the Traveller community, an Irish minority ethnic group, and Canada for the 12 to 17-year-olds with comprehensive health and social rehabilitation supports (OECD, 2021).

Inequalities in health outcomes need to be reduced

Weak health outcomes partly reflect the significantly poorer health of the marginalised Roma community. Slovakia has one of the largest Roma communities in Europe, at 8% of the total population. The estimated life expectancy is 6 years lower than that of the rest of the population (OECD, 2019c). The major cause of death is a preventable disease, notably cardiovascular and respiratory diseases (Šprocha et al., 2021). Roma also have a higher infant mortality rate (Figure 2.26, Panel A). Despite higher needs, the Roma use health care services less often (Panel B). Utilisation of healthcare services is particularly low for Roma children, which can have negative health impacts later in life. The Roma very rarely use preventative care and get vaccines, leading to the heavier use of acute hospital services. Many factors may explain this low use of health services, notably lack of information, language barriers, discrimination, and transport and care affordability (OECD, 2019c).

Figure 2.26. The Roma use health care services less often despite greater health needs



Source: OECD Health Statistics database; Ministry of Finance (2018), “Spending Review on Groups at Risk of Poverty and Social Exclusion”, Expenditure reviews; and Geva, A., S. Hidas and G. Machlica (2018), “The benefits of social inclusion of Roma in the Slovak Republic”, Technical background paper.

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The government's Roma health mediators programme aims to overcome information barriers and strengthen the link between the health services and the Roma population. For instance, during the first wave of the COVID-19 pandemic, the roles of health promotion assistants were expanded including to provide assistance with testing and tracing, to liaise with health care workers and promote appropriate hygiene measures in Roma communities (OECD, 2021d). However, the programme is currently financed through EU funds, and its future is therefore uncertain. Furthermore, the mediators often have no job security and low salaries (OECD, 2019c). It is important to continue the health mediator programme. Therefore, the government should either re-apply for EU funds or ensure sufficient funding from the Ministry of Health budget. Publishing medical information (e.g., COVID-19 advice) in minority languages, as in Sweden, Austria, and Norway, is also important (OECD/EU, 2020). This is especially important during pandemics such as COVID-19, when personal contact is hampered.

Additional financial support and health services are needed to improve access to health services, as recommended in the previous Survey. Despite universal health coverage and relatively short distance to medical facilities, transport and medical costs are barriers to access healthcare services. The current exemption of surcharges for medicines (i.e., the amount exceeding a cap on out-of-pocket payments) for pensioners and the disabled should also apply to socioeconomically disadvantaged groups (OECD, 2019c). In addition, expanding mobile health clinics to vulnerable regions would help reach vulnerable populations. This can be a cost-effective way to increase access to preventive care treatment especially during pandemics such as COVID-19 where patients have limited mobility (OECD/EU, 2020).

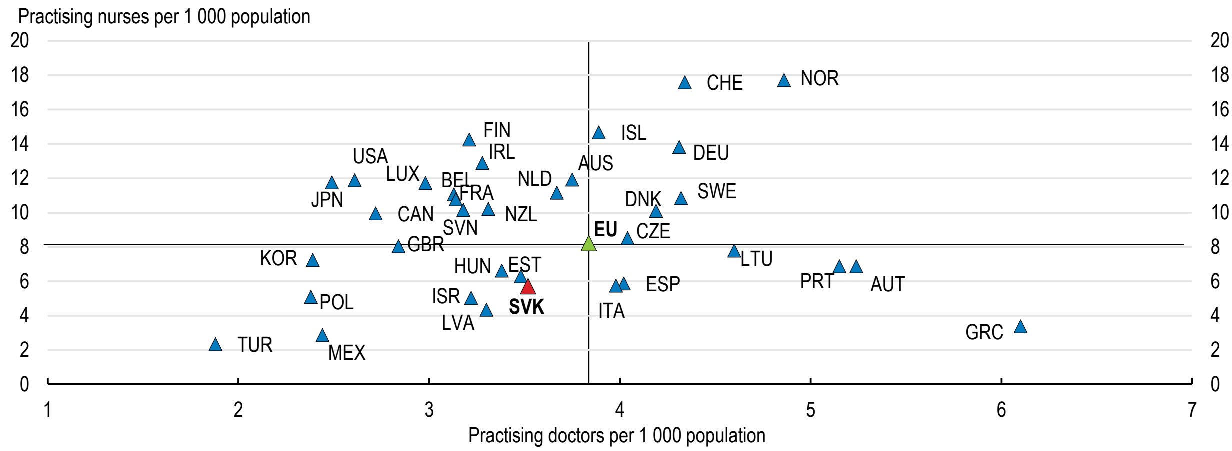
Retaining more healthcare workers to strengthen resilience

Slovakia has relatively few medical staff, notably nurses (Figure 2.27). The number of practicing nurses is around 30% lower than the EU average. This reflects a relatively low number of nursing graduates and migration to neighbouring countries due to more attractive salaries and better working conditions. Regional disparities in nurse density also persist. In Bratislava, the number of nurses and doctors relative to the population is nearly twice as large compared to the national average, while many rural areas suffer from shortages (OECD, 2017b). Attracting more nurses is crucial to make the sector more resilient to future demands. To address the growing shortages of nurses, the government has increased the salaries of nurses to levels comparable to peer countries and plans to increase them further. In 2018, the government introduced a scholarship for nursing students of EUR 6 000, on the condition that they remain in the country for at least five years after graduation. The government also plans to delegate some responsibilities of general practitioners to nurses. Together with the effort to increase the attractiveness of the profession, encouraging their longer careers by offering more flexible working conditions and training opportunities to meet the needs especially of older nurses can also help address the shortage of nurses, particularly in remote areas where recruiting new full-time, young, and recently qualified nurses is particularly difficult (Voit and Carson, 2012).

Slovakia also has relatively few doctors, particularly general practitioners. The COVID-19 pandemic showed that for health systems to be resilient to health shocks, strong primary and community health care is essential. It can reduce the pressure on health systems while maintaining care continuity (OECD/EU, 2020). Stronger financial and non-financial incentives are needed to address the shortage of general practitioners as discussed in detail in the next section.

Figure 2.27. Slovakia has a low number of nurses and doctors

2019 or latest available year



Note: Data refer to professionally active doctors for SVK and TUR; to professionally active nurses for FRA, IRL, PRT, SVK, TUR and USA; and to doctors licensed to practice for GRC and PRT.
Source: OECD Health Statistics database; Eurostat Database.

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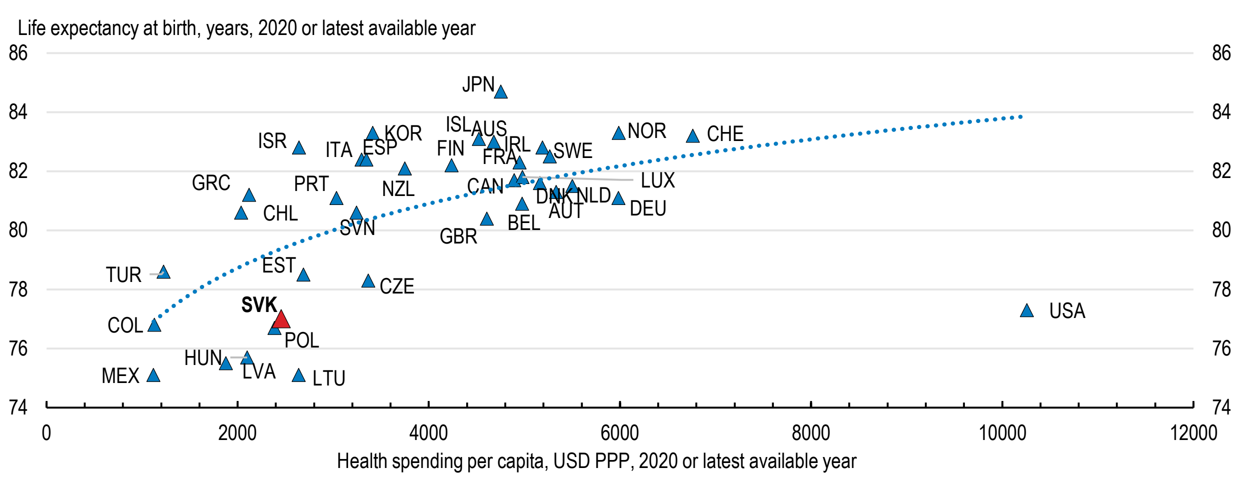
Improving cost efficiency in the health care sector

There is significant room for improving cost efficiency in the health care sector. Slovakia's public healthcare spending per capita is around the average of neighbouring countries, but its results are lagging behind (Figure 2.28). INESS's 2020 Health for Money Index, which estimates the value for money in the healthcare sector, shows Slovakia ranked 21st out of 25 European countries in 2020 (INESS, 2020). Similarly, the European Commission's estimates also suggest that Slovakia is among the worst-performing countries in the relative efficiency of health systems, with much poorer health outcomes than its EU peers given its level of healthcare expenditure (Medeiros and Schwierz, 2015; and Maceli, 2014). Thanks to spending reviews, Slovakia managed to save 115 million euros per year without a negative impact on citizens' health, for instance by reducing overconsumption of pharmaceuticals. However, the 2019 spending review estimates that 542 million euros can be further saved per year, for instance by better organizing outpatient care and broadening central procurement in pharmaceuticals (MoF, 2019).

Figure 2.28.There is room for increasing health care efficiency



Source: OECD Health Statistics database.

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Strengthening primary care can reduce healthcare overutilisation

Cost-efficiency in healthcare is partly hindered by overreliance on hospital care and specialists, as evidenced by a relatively high number of doctor consultations and avoidable admissions to hospitals (Figure 2.29). According to national estimates, reducing over-referral rates to specialist and hospital admissions to the average level for other Visegrád countries could save around 30 million euros per year (MoF, 2019).

Over-referral to specialist and hospital admissions is to a large extent due to weak primary care. Primary care providers, usually general practitioners (GPs), should act as gatekeepers to authorise the patient's referrals and hospitalisation. However, their role is hampered by several reasons. One is an insufficient number of GPs: Slovakia has a relatively low share of generalists compared to the OECD or CEEC (Figure 2.30, Panel A). This shortage is likely to become more acute in the near future with many GPs near retirement (Panel B). Other reasons include a narrow set of GP responsibilities and competencies and a payment mechanism that offers weak incentives to provide more comprehensive care, together with allowing patients to bypass GPs without a penalty.

In an effort to address the shortage of GPs, the Residential Programme has been implemented since 2014, which is designed to increase motivation to specialize in general medicine, for instance through financial incentives. According to the Supreme Audit Office of the Slovak Republic, with the program, 135 medical students became new young GPs until 2019, which changed the long-lasting downward trend of the total number of GPs. In addition, the government plans to simplify the establishment of new practices for GPs. It will also delegate some responsibilities of specialists to GPs, while shifting some responsibilities of GPs to nurses. Under the Recovery and Resilience Plan, the government also plans to subsidise establishment of around 170 new GP practices. In October 2020, the government also announced the allocation of EUR 20 million from the European Regional Development Fund for the construction of integrated health care services, to provide generalist and specialist care in one location and improve access to affordable care in the less developed regions.

Training more GPs and strengthening their competencies can be achieved through changes to medical studies and continuing education. Currently, medical schools in Slovakia do not have primary care departments (World Bank, 2018). Moreover, the minimum number of teaching hours for general medicine is relatively low and not mandated as in other central and eastern European countries. Establishing departments of primary care and increasing the part of medical curricula dedicated to general practice are important steps towards raising the competences of future GPs. At the same time, this can help attract more GPs by increasing the profile of GPs to medical students. There is ample evidence that earlier exposure to general practice increases the likelihood to choose general practice (McDonald et al., 2016; and Marchand and Peckham, 2017). In addition, measures should be put in place to allow continuous professional development, given that older physicians form the majority of general practitioners. In some OECD countries with strong primary care systems, notably the UK and the Netherlands, GPs must complete continuous professional development to maintain competencies and stay up to date, and have to renew their license to practice every five years. This can also be considered in Slovakia.

Changing payment schemes can also increase the attractiveness of the GP profession. Compared to specialists who are paid per service, general practitioners are paid per capitation, which is financially less attractive (OECD/EU, 2016). Also, the capitation payment scheme does not create incentives to provide comprehensive care but instead incentivises referral of patients to more costly specialist care (Iversen and Lurås, 2000; and Sarma et al., 2018). The current trend among OECD countries is towards introducing multiple payment methods for primary care to achieve the multiple objectives of access, quality, and efficiency as well as to counterbalance some shortcomings of different payment methods (OECD/EU, 2016). In Slovakia, introducing pay-for-performance schemes, as in the Netherlands, Portugal, and the United Kingdom, could improve care quality while making the GP profession financially more attractive by giving bonus payments to physicians who achieve pre-defined targets (e.g., lower obesity rate, smoking cessation, chronic disease management) (OECD/EU, 2016). This can help secure the supply or improve retention of GPs as well as reduce over-referral to specialists. For instance, studies suggest that the introduction of the pay-for-performance scheme in the United Kingdom is associated with higher retention of GPs, improved primary care quality, and increased job satisfaction (Box 2.3). To increase the effectiveness of the pay-for-performance system, it is important to have reliable information on the quality of care and outcomes. The United Kingdom or Portugal, for instance, developed a rich information infrastructure to underpin quality monitoring, together with a large number of outcome indicators around the prevention and management of chronic diseases (OECD/EU, 2016; and Box 2.3). Denmark and Israel also took steps to better measure quality and outcomes in primary care (OECD, 2017d).

Box 2.3. The pay-for-performance scheme in the United Kingdom

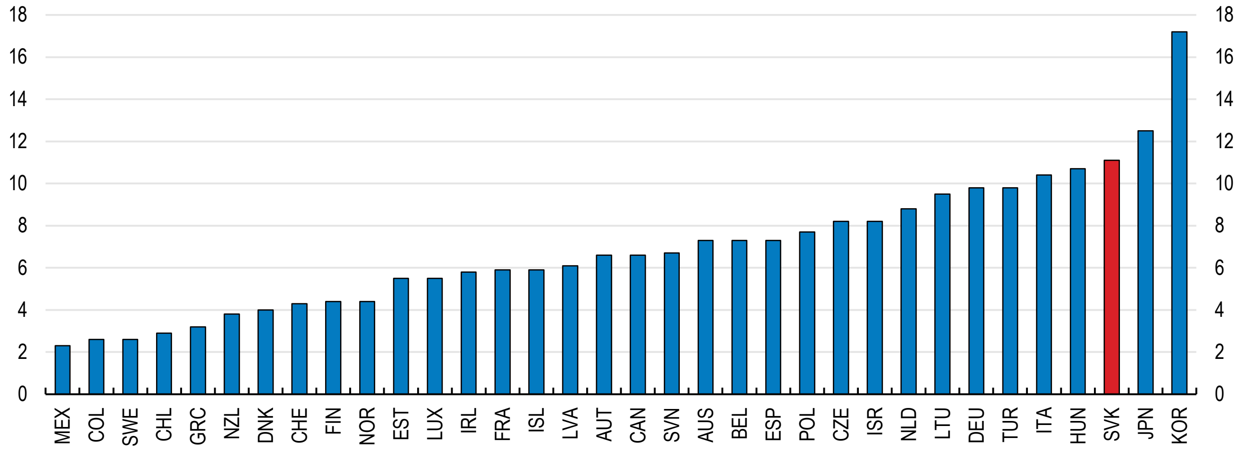
The Quality and Outcomes Framework (QOF) is a UK-wide pay-for-performance initiative to incentivise and standardise the provision of evidence-based, high-quality care in general practice, and improve attractiveness and retention of the GP profession. QOF is an incentive scheme that provides additional reward to general practitioners (GPs) for how well they care for patients based on performance against more than 80 indicators. The indicators are categorised into four domains: clinical (e.g. stroke; coronary heart disease); organisational (e.g. information for patients; education and training); patient care experience (e.g. length of consultations, access); and additional services (e.g. child health surveillance). Performance against each indicator attracts points that are used for payment. Although participation in the QOF scheme is voluntary, take up across the United Kingdom has been very high. Beyond QOF, the country collects several patient experience measures with general practice. About 2.4 million patients registered with a GP practice are surveyed twice a year around access, making appointments, quality of care, satisfaction with opening hours, and experience with out-of-hours services. The United Kingdom has other rich data sources on the quality of mental health care, prevention measures, or around the use of hospital care by GPs. Some evaluations suggest that QOF delivered higher quality of care, lower mortality rates, and increased income to GPs (Sonsale, 2020; Fichera et al., 2017; Review Body, 2008; and Whalley et al., 2008).

Source: OECD (2017d); and OECD (2016c)

Promoting telemedicine could improve access to primary care. Since spring 2020, when a legal change was made to allow telemedicine, it has quickly emerged as the primary method of providing primary and outpatient care in many regions with social distancing policies in Slovakia during the COVID pandemic. More than half of the total population (64.8%) received these services, compared to 52.7% in EU countries during the first 12 months of the pandemic (Eurofound, 2021). This has helped to maintain access to care during the second wave of the pandemic (OECD, 2021d). Even after COVID-19, telemedicine will help strengthen access to primary care by addressing persistent obstacles, notably the shortage of GPs especially in remote areas. In addition, telemedicine has the potential to improve cost efficiency by reducing transportation costs, time in the waiting room, and increasing patient satisfaction (Atmojo et al., 2020). The government should consider taking steps to ensure that good access to primary care continues after the pandemic, for instance by making permanent some temporary regulatory changes that allowed telemedicine.

Figure 2.29.Overreliance on hospital care and specialists hinders system efficiency

Doctor consultations per capita, 2019 or latest available year



Source: OECD Health Statistics database; and Eurostat EU-SILC database.

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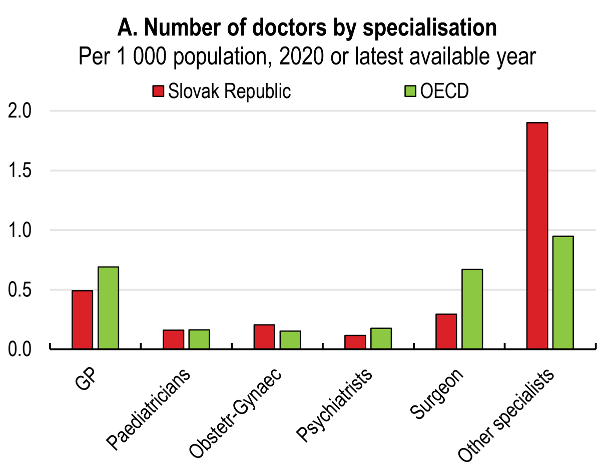
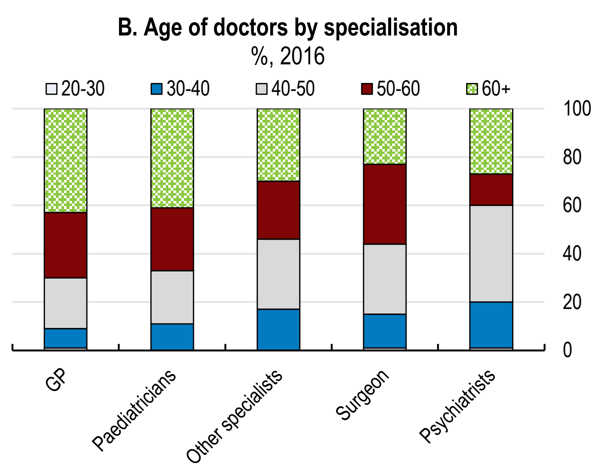
Figure 2.30.Slovakia has a small and ageing general practitioners workforce





Note: Data for the Slovak Republic have been sourced from the National Health Information Centre (NHIC) and derived from the table "Overview of the health care network - types and professional focus of departments in health care facilities in 2019" (available on the NHIC website), more specifically using data in the worksheets T2 and T3.
[http://data.nczisk.sk/statisticke_vystupy/Rocne_statisticke_zistovania/vystup_S01_2019_T2.xlsx].
Source: OECD Health Statistics database; Slovak NHIC; Slovak Medical Chamber; and OECD calculations.

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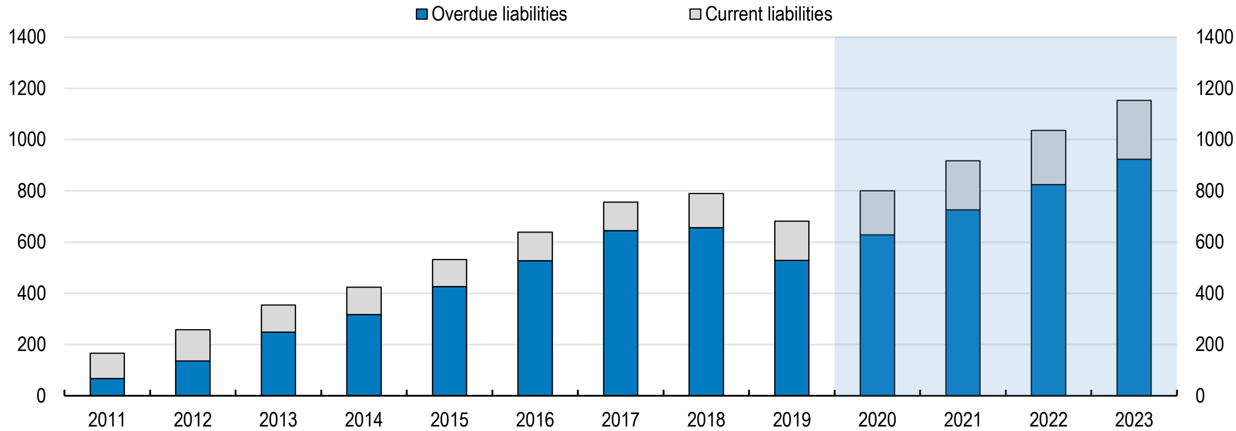
Reforms of inpatient care are needed to improve efficiency and financial sustainability

Long-standing problems of the management, operation and financing of hospitals are reflected in an accumulation of hospital debt. The *overdue* liabilities slightly fell in 2019, partly thanks to one-time debt relief. However, *current* liabilities by the 13 state-run hospitals continued to increase (Figure 2.31). According to national estimates**,** if this trend continues, the total amount of hospital debt could increase by around 70% between 2019 and 2023 despite debt relief measures (MoF, 2019). The recurrent hospital debt accumulation reflects a) overlapping tasks across many hospitals; and b) unharmonised reimbursement mechanisms across insurance companies.

Figure 2.31. Hospital debt has increased and the trend is projected to continue

Liabilities of 13 state-run hospitals, million EUR, situation as of 31/12/2019



Note: The shaded area represents forecasts.
Source: Ministry of Finance of the Slovak Republic, National Reform Programme of the Slovak Republic 2020.

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Many hospitals offer a wide range of overlapping tasks, leading to inefficiencies in the use of resources. This is because many hospitals are not specialised and there is a lack of collaboration across hospitals. Declining bed occupancy rates despite a decrease in the number of hospital beds suggest a persistent surplus of beds. There are also many hospitals with a small number of patients (MoF, 2019). This may lead to suboptimal performance, as the quality of healthcare services is highly associated with the number of patients or procedures (MoF, 2019; and Ross et al., 2010; Halm, Lee and Chassin, 2002). This may be because large-volume hospitals enjoy economies of scale or have the financial capacity, for instance to employ clinical teams whose sole responsibility is to manage commonly treated conditions that can improve outcomes (Ross et al., 2010).

The government's plan to optimise the hospital network should be implemented. Plans to improve the network of hospitals had been delayed several times but in December 2021, the parliament passed the reform. According to the plans, new local, regional and national hospitals are to be established with a greater specialisation and referral system between them. Specialised care is to be centralised in fewer hospitals. The hospitals will also be authorised to provide specialties only if a certain minimum volume of procedures is achieved. According to the Ministry of Finance's spending review, streamlining hospitals through merging or closing can reduce the number of unused beds by approximately 5 600 along with a higher bed occupancy rate (on a pre-pandemic basis). This is also expected to lead to a higher volume of patients or procedures per hospital, leading to better efficiency and quality of services.

The network reform should be accompanied by improving the measurement of quality. The specialities of the hospitals in the new network will be chosen based on quality assessments, but there is no nation-wide central assessment system. Currently, measuring quality is delegated to health insurance companies, but data from the three health insurance companies are not combined (Smatana et al., 2016). Combining the information or having a nation-wide centralised system for hospital quality assessments, together with the more systematic monitoring and evaluation, will be needed. This will help make informed choices, such as which hospitals should be closed, merged, or change functions.

The reimbursement system of hospitals has contributed to inefficiencies. Until 2017, hospital funding by the insurance companies was based on prices for medical procedures, which can differ widely from their effective cost, since they rely on self-assessment of therapies by the hospitals according to a broad classification. As a result, resources have been misallocated as hospitals attempt to find patients with "profitable" diseases, even if they could be treated on an outpatient basis, such as with cataracts, as previous *Surveys* suggested (OECD, 2019c; and OECD, 2017c).

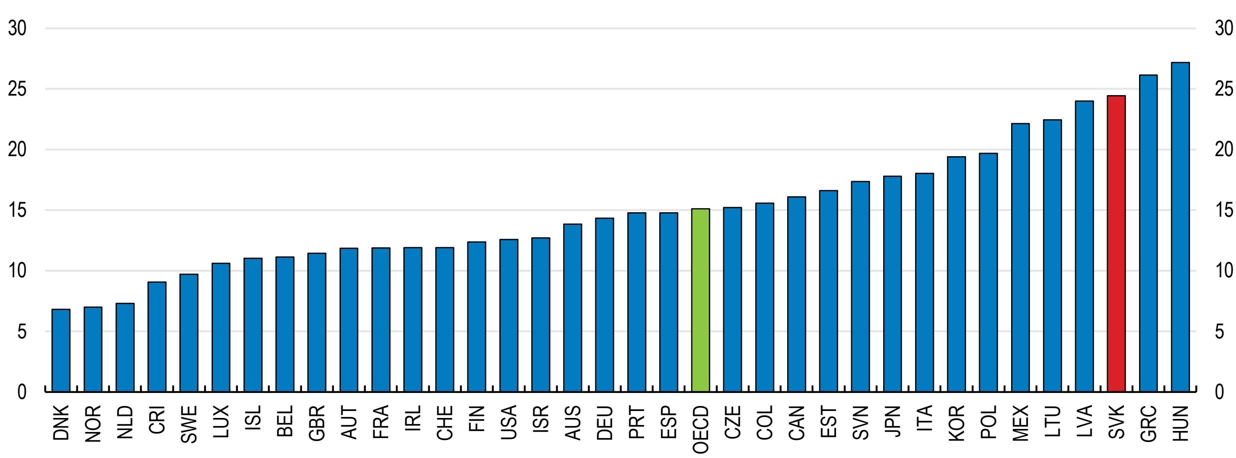
To address this issue, a diagnostic-related group-linked payment mechanism (DRG) started to be gradually implemented from 2017, but progress towards a single national system is slow. A DRG payment system classifies hospital cases into groups that are clinically similar and applies a fixed price to each group, which forms the base rate of reimbursement to healthcare providers. This is expected to increase the transparency of spending, incentivise cost-management, and better align hospital resource allocation with their actual service costs Currently, the DRG system is used mainly for reporting treatments and services, and it does not administer payments to hospitals so far (MoF, 2020). Therefore, there are still different levels of payments by health insurances to hospitals for almost the same treatment. It is important to ensure that DRGs are regularly updated and data quality is carefully monitored in order for the cost to properly reflect the value of the actual service.

Expanding central procurement will reduce pharmaceutical spending further

Despite progress over the past decade, pharmaceutical spending remains high (Figure 2.32). To increase efficiency, centralised procurement for expensive pharmaceuticals in hospitals was introduced in 2016 but currently only covers 13% of total expenditure on pharmaceuticals compared to, for example, around 25% in Denmark (MoF, 2019). Prices for outpatient pharmaceuticals are regulated with an external price referencing mechanism, which sets the maximum price of a pharmaceutical product at the average price of the lowest three countries in the EU. This has already led to significant reductions in prices to one of the lowest level in the EU. Further savings could be generated by expanding central procurement and further reducing expenses on medicines that do not fulfil cost-effectiveness evaluations as well as establishing cost-effectiveness rules for pharmaceuticals for rare diseases that are currently fully reimbursed from public resources regardless of their value for money. In addition, further progress on e-health could lead to efficiency gains. In Slovakia, only 10% of GPs use electronic networks to exchange medical data with other healthcare providers and professionals, compared to 43% on average in the EU (EC, 2019). Digitising medical records and making greater use of electronic prescriptions to pharmacists can help prevent the duplication of prescriptions through better coordination. According to national estimates, the implementation of e-health could help save EUR 30 million (MoF, 2019).

Figure 2.32.Spending on pharmaceuticals is high

Total pharmaceutical, % of current health expenditure, 2019 or latest year available



Source: OECD Health database.

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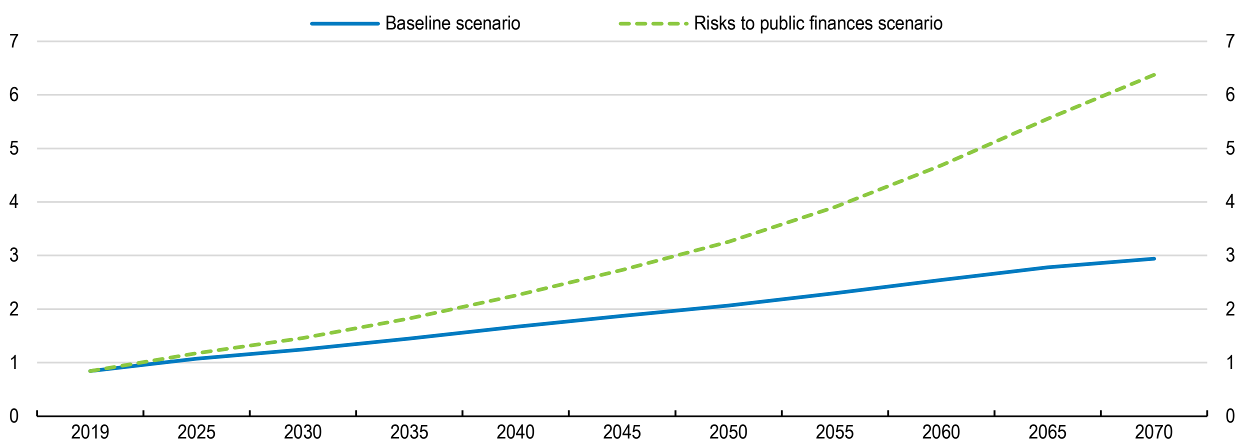
Improving the quality and financing system of long-term care to cope with demand surges

The long-term care sector (LTC) in Slovakia is underfunded. While public expenditures (0.8% of GDP) are only around half of the OECD average (1.7%), the proportion of the over-65s benefiting from long-term care is similar to the OECD average. This suggests that a considerable part of current LTC needs is not covered by public means. According to the Ministry of Finance, in 2019, the majority of services (around 53 %) were delivered through informal home care, generally by the beneficiary's family who receives a financial allowance of Euro 508, 44 per month as compensation. Among the formal LTC provided by professional carers, the majority was delivered through institutions - institutional care and formal home care services accounted for 74% and 26%, respectively.

The acceleration of population ageing will increase the demand for LTC. The population share of the age cohorts above 80 is projected to soar from 3.4% in 2019 to 14.7% by 2070, one of the fastest increases in the EU (EC, 2020a). Under the existing set-up, expenditure on long-term care is expected to increase by 65% to reach around 2.9% of GDP in 2070 (Figure 2.33). Furthermore, a cost shock, including development of new drugs and treatments, could lead to nearly more than two times higher increases in public LTC spending (Figure 2.33).

Figure 2.33.Public long-term care spending is set to increase rapidly

Public long-term care expenditures, as a percentage of GDP



Note: The "Baseline scenario" assumes that half of the future gains in life expectancy are spent in good health and trends in health spending slightly exceed the growth rate of national income. The "Risks to public finances scenario" assumes upwards convergence to the EU average of the relative cost profiles and coverage of publicly financed formal long-term care provision.
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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Box 2.4. Overview of the long-term care system in Slovakia

The organisation and financing of Slovakia's long-term care system is fragmented between the social and health care sector, as well as between different levels of government: central, regional, and municipal.

Responsibilities of LTC provision are divided between the social care and healthcare systems:

- The social care system (Ministry of Labour Social Affairs and Family) provides long-term care in institutional care, daycare, and home-based care, and cash benefits. These services are mainly organised by local governments and financed primarily through municipal budgets with some earmarked budget contributions from the Ministry of Labour, Social Affairs and Family.
- The health care system mainly provides geriatric care in specialised hospital departments, financed through the mandatory health insurance.

Informal carers can receive care allowances, financed directly by the central budget, or nursing benefits, financed from the Social Insurance Agency. The nursing benefit can be provided for 14 days or a maximum of 90 days if the cared-for person is terminally ill. The average amount of care allowance was Euro 363 per month in 2020 (around 1/3 of the average wage), which is around the OECD average but lower compared to Denmark (around 2/3 of the average wage) and Finland (around 1/3 of the average wage), where home care is well organised. The allowance is means-tested by reference to the care recipient's income and property. The amount of care allowance is increased by Euro 100 per month if the cared-for person is a child with a disability. A personal assistant allowance can be provided under certain conditions, but cannot be combined with the care allowance. Recipients of the care allowances can combine long-term care with work under the condition that earnings from their job must not exceed two times the subsistence minimum for an adult person. Since 2009, informal carers are entitled to take time off for a maximum of 30 days per calendar year. During the informal carer's respite period, municipal social services provide substitutive social services according to the care recipients' own choice, such as formal home care services (theoretically also 24 hours per day) or temporary residential care. However, a qualitative study showed that the majority of interviewed persons underlined barriers to taking up respite care (e.g., low trust in professional care, no tradition to combine intensive family care with formal care services).

Source: World Bank (2020); EC (2020); EC(2018),Thematic report on challenges in long-term care; and the Ministry of Labour, Social Affairs and Family of the Slovak Republic.

Improving access and quality of care

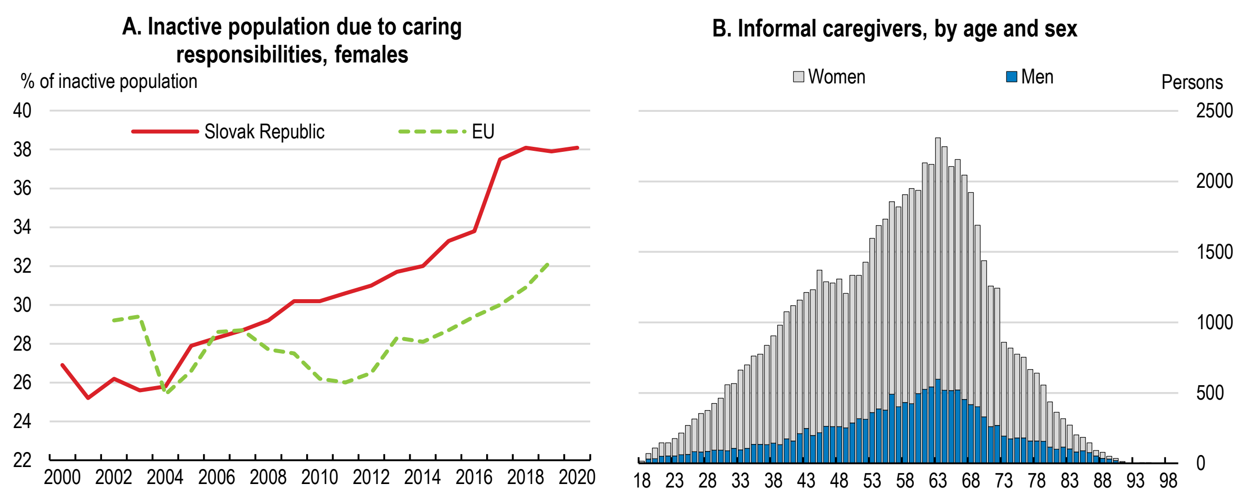
There is a lack of accessible and affordable quality LTC services at home. Encouraging independent living at home for as long as possible better meets demand by older people. Surveys show that as many as 90% of people prefer to have health and social care provided within their own home settings in Slovakia (Lezovic, Taragelova and Beresova, 2011). Meanwhile, formal homecare is widely perceived as sub-standard and expensive (OECD, 2017c), although its hourly costs are relatively low compared to the OECD average (Tiago C. et al.,2020). Against this background, Slovakia set a long-term goal to increase the provision of formal home/community-based care services and decrease the number of institutional service users (i.e., National Action Plan for the Transition from Institutional to Community-Based Care in the Social Sees System 2016-2020).

The lack of quality formal in-home care capacity reflects insufficient human and financial resources. Low wages, unappealing working conditions and poor career prospects discourage young people from a career in the profession and induce existing LTC workers to migrate to other professions and/or to work abroad (EC, 2018b). In 2019, the average gross monthly salaries for a carer amounted to EUR 615, slightly higher than the national minimum wage (EUR 520) (EC, 2020b). In 2019-2021, the government increased financial contributions to providers of social service facilities. An association of caregivers has also been established to promote the return of caregivers and health care assistants from abroad (EC, 2018b). In addition to continuous efforts to increase the financial resources and retain workers, opening the market to migrant workers can be considered. This would require recognising the professional qualifications of these workers (OECD, 2017c).

More systematic support for families and other informal carers would help improve the quality of the care provided. Given the growing demand for LTC and the acute challenge of having sufficient LTC workers, informal care provided by family members is likely to play an important role, at least in the short term in Slovakia. However, a number of issues weaken the position of informal carers, notably their low labour market participation, which also affects future pension and other benefit entitlements and a low amount of the means-tested compensation (Box 2.4).

An increasing share of women is inactive due to caring responsibilities in Slovakia (Figure 2.34 Panel A) and many informal caregivers are older people (Panel B). In addition to holding back labour participation, informal care can also have detrimental health and psychological effects on carers, increasing the risk of becoming patients themselves (Willemse et al., 2016; and Casado-Marín, 2011). The amount of means-tested allowance provided as compensation had been low, increasing their poverty risk (EC, 2018). To address this issue, the government has increased the amount of allowance from the subsistence minimum to the net minimum wage level from 2018 to 2021. Furthermore, with effect from 2021, the duration of the short-term nursing benefit will be extended from 10 to 14 calendar days and a new long-term nursing benefit will be instituted (MoF, 2020).

Figure 2.34.An increasing share of women is inactive due to caring responsibilities



Source: Eurostat; and Ministry of Finance of the Slovak Republic.

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In addition to increasing the financial benefits, measures should also be put in place to address barriers that hinder labour force participation of informal carers. These include more flexible working time arrangements for informal carers so that they can provide care without giving up jobs (WHO, 2019). Alternatively, granting leaves of absence from work for carers (and/or pension credits) can also be considered as in Finland, given that there is no paid nor unpaid leave for carers. Currently, labour participation of caregivers is hampered by a legal constraint that labour earnings of caregivers who receive a care allowance (see Box 2.4) cannot exceed twice the subsistence minimum. The legal constraint should be abolished to improve work incentives and income. This should be accompanied by enhanced supervision of provided care to prevent abuse of care allowance.

Furthermore, improving the skills of informal caregivers can improve the quality and efficiency of care. For this reason, many OECD countries introduced measures to treat informal caregivers as important care partners. Some countries, including Finland and Germany, give official recognition of the role of carers through legislation and provide a wide range of interventions, i.e., information, counselling, training, and formalised assessment of carers' needs (WHO, 2019). In the Netherlands, an employment contract between the carer and the municipality is possible so that carers can receive training, salary, and social protection like the staff of formal care services. These interventions can contribute to enhancing the capacity of informal caregivers and reducing unnecessary rehospitalisation or institutional care.

Another systemic weakness is a fragmentation of LTC services between different government levels (central government and local government) and sectors (health and social) (see Box 2.4). The multiple channels for aid, managed by different bodies, make the system opaque and difficult for users to navigate, as previous *Surveys* suggest (OECD, 2019c; and OECD, 2017c). In principle, the healthcare system provides medical services, whereas the social system provides care services that go beyond acute medical needs to include social services and personal support. However, it has proven difficult for the system to distinguish between the two needs. As a result, excessive or even redundant use and provision of services may arise due to the current disconnection between the two systems (Joshua, L., 2017). Furthermore, the fragmentation of long-term care financing can limit the ability to control expenditure growth, because spending reductions in one type of care may have spill-over effects elsewhere in the system (Kattenberg and Bakx, 2020; Colombo and Mercier, 2012). The fragmentation of care also often results in discontinuity of care that can undermine the quality of care provided (Robben et al., 2012). Because municipalities have a wide degree of flexibility to determine the extent of services provided and how eligibility is determined, access to (or outcome from) social LTC services is not equal across the country. As a first step, a common and nationally standardised assessment to reveal quality or outcomes, together with harmonised eligibility criteria, should be established.

As previous *Surveys* (OECD, 2017c; and OECD, 2019c) recommended, constructing an integrated long-term care model can bring significant efficiency and quality gains. The experience of several European countries, including Sweden and the United Kingdom, shows that there is considerable scope for improving care outcomes and quality by managing the interactions between health and social sectors more effectively (EC, 2018c). Some possible reform options would include creating regional one-stop shops to coordinate and simplify access to long-term care services. Making joint clinical and care guidelines, together with regular contact between medical professionals and social care providers, will also help to coordinate care and reduce redundant or excessive provision in both medical and social care. Creating a single integrated information system to track beneficiaries can also be considered.

There is also a need to strengthen follow-up care of the elderly. Slovakia has a high number of readmissions of elderly patients to acute wards (MoF, 2019). This is partly due to insufficient follow-up care in hospitals for the elderly. To address this issue, the government approved a reform plan to double the current number of hospital beds (3,200) in follow-up inpatient care by 2030. This is welcome, but follow-up out-patient care for the elderly should also be strengthened. Several studies suggest that physician follow-up visits after discharge are associated with better health outcomes, reduced readmissions, and lower expenditures (Wiest et al., 2019; Jackson et al., 2015; Lin, Barnato and Degenholtz, 2011). Research from the United States also shows that nurses' follow-up visits improved acutely ill older adults' experiences of care, quality of life, patient safety and health outcomes (OECD, 2020c; Occelli et al., 2016; and Zhang et al., 2017).

Securing financing for an expanding long-term care system

The financing system is not well prepared to cope with the increasing demand for long-term care services. Local governments provide the majority of services, but their capacity to fund and provide services is challenged by limited municipal budgets, which depend mainly on their tax revenues. To address the shortfall of funding, there have been several funding injections from the central government budget, including one-off subsidies in 2009 and 2010. In 2019, the central government increased financial contributions to providers of social service facilities, which are increasing every year. In 2020 approximately 90 million euros were allocated from the Ministry´s budget to co-finance non-public social services providers. The existing arrangements do not ensure sufficient and sustainable financing of care, threatening the adequacy of LTC provision, leading to underfinancing and spill-over effects to other social spending areas (e.g., redirecting social spending in other areas to LTC) (EC, 2018a).

Slovakia should explore new financing options for LTC. The government is committed to reforming the financing system by 2025. The new LTC financing system should ensure a reliable and predictable source of revenue streams. One option is to introduce a mandatory long-term care insurance system, as in Germany, Japan, and the Netherlands. Germany, for instance, introduced mandatory LTC insurance in the 1980s to address the increasing costs of LTC while ensuring access to long-term care services (Box 2.5). A drawback to an insurance system is that contributions to the system would further increase the tax wedge, which is already high, unless health insurance premia could be reduced at the same time. Another option is to assign a budget for long-term care embedded in a multi-year fiscal framework financed by general taxation.

Moving away from the current public LTC financing mainly allocated to the providers or facilities (e.g., beds in institutions) to voucher schemes can increase LTC financing efficiency. The government plans to introduce voucher schemes for long-term care, the personal budget given directly to LTC dependents. This is welcome, because these generally enable users to choose the provider that best meets their needs, leading to higher user satisfaction, improvements in quality, and cost-effectiveness (WHO, 2016). Vouchers are currently used in Nordic countries, and studies have shown that satisfaction is high among users, and they usually avoid more expensive care (Colombo, 2011). To make the personal budgets effective and prevent fraud, it is important to supervise the use of vouchers, for instance by allowing vouchers to be used only for accredited providers as in France and Belgium (OECD, 2011a).

Box 2.5. Compulsory long-term care insurance in Germany

Germany provides long-term care through a compulsory long-term care insurance. Its most notable feature is its universality: not just seniors but all citizens are covered. The German government addressed the need for a solution that would cover the high costs of long-term care back in the 1980s, as most individuals were unable to pay the high costs of ongoing long-term care and it would become a financial burden on the public system. The result is a mandatory social insurance system in which the entire population pays affordable premiums, which helps to provide the necessary coverage on a cost-sharing basis. The long-term care insurance comprises two independent parts, the social (public, non-profit) and the private long-term care insurance. Both are designed as compulsory insurance with identical benefits. There is no revenue sharing between these two compulsory insurance branches, but a statutory stipulated financial equalisation in each of these two systems. Enrolment follows the compulsory enrolment in health care insurance. Access to benefits is based on an individual assessment of the need of care. Germany's long-term care insurance provides benefits for care at home and for care homes. For care at home, the long-term care scheme offers a wide range of benefits: cash benefits for informal care and benefits in kind for various nursing and personal assistance services. Beneficiaries are generally free to choose between benefits in kind or in cash or to combine both types of benefits. As a consequence, beneficiaries may also choose how to use benefits in cash (e.g. for a carer in the family). If they opt for benefits in kind, they may choose between various professional service providers. In this case, the long-term care insurance also helps: with the organisation of care by providing information on services, quality and costs; in choosing the appropriate services and providers; and by supporting case management.

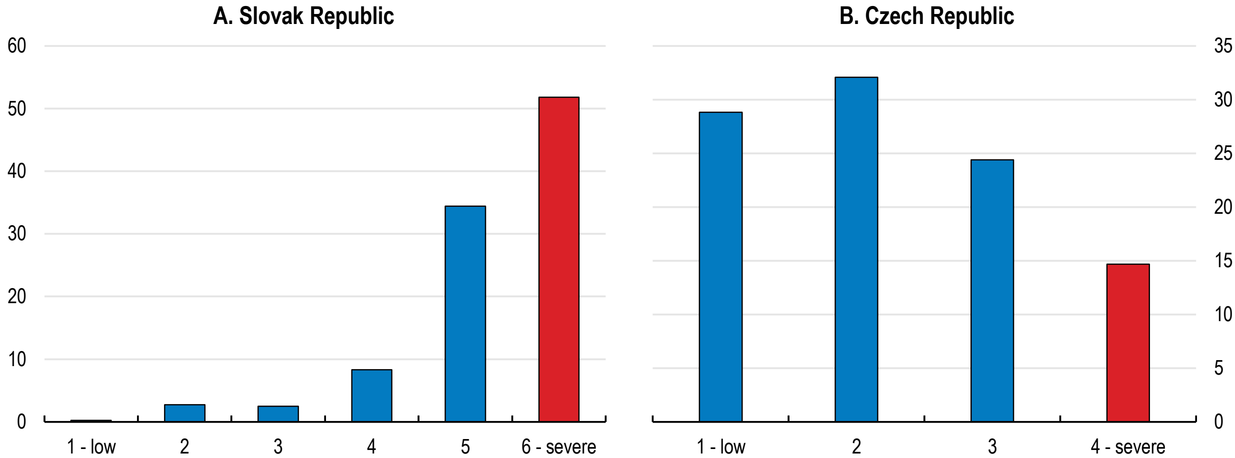
The compulsory long-term care insurance has achieved many of its original goals: ensuring access to long-term care services and reducing reliance on the locally-funded safety-net social assistance program, which can be used to cover nursing home costs (Nadash et al., 2018). Importantly, since 1997 the long-term care insurance has recorded revenue surpluses. In 2016, the difference between income from contributions and total expenditure was 3.13% (EC, 2018a).

Source: OECD (2021), Public and Private Sector Relationships in Long-term Care and Healthcare Insurance; and EC (2018), Peer Review on "Germany's latest reforms of the long-term care system".

At the same time, the assessment for eligibility to in-kind and cash benefits for LTC should be reviewed. The assessed dependency level plays an important role in defining eligibility to LTC benefits and services, in particular institutions. The share of people assessed as severely dependent in Slovakia is significantly higher than in the Czech Republic (Figure 2.35). This may be partly due to the poorer health outcomes and higher long-term care needs in Slovakia compared to the Czech Republic, but it may also be a problem of the assessment methodology. Currently, the assessment system is fragmented across municipalities without a unified assessment criterion as mentioned above. Under the fragmented system, each municipality is likely to overestimate dependency levels to secure more resources from the central government. There is also a shortage of trained assessors. The government should consider integrating the fragmented systems across municipalities into self-governing regions and establishing an expert group to assess dependency levels. This will help improve the current assessment system and ensure that scarce resources are allocated to the people most in need and safeguard the sustainability of the LTC system.

Figure 2.35. The share of elderly people with a severe dependency assessment is high

Share of people by assessed dependency level, %



Source: Ministry of Labour and Social Affairs, Statistical Office and Ministry of Finance of the Slovak Republic; and Ministry of Labour and Social Affairs of the Czech Republic.

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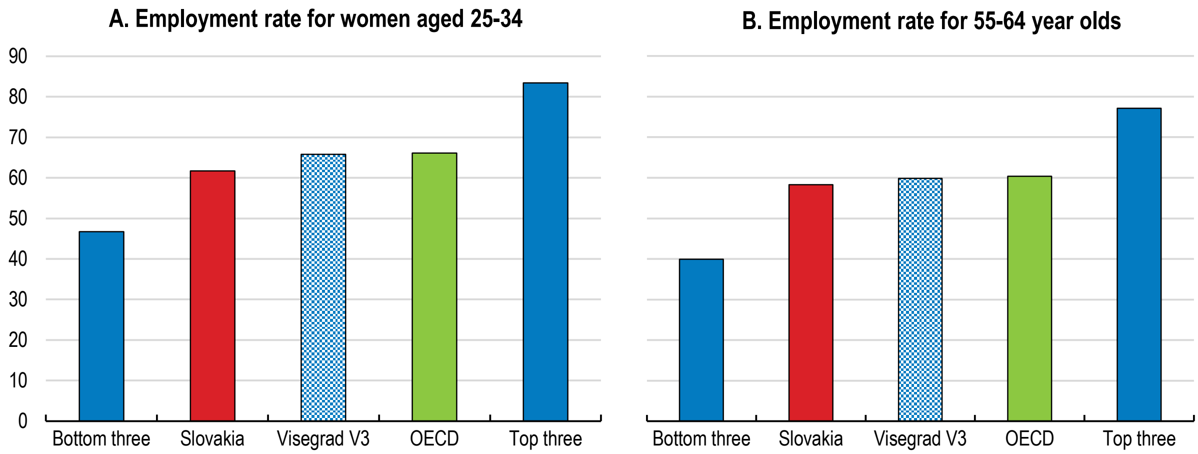
Mobilising underutilised labour resources to prepare for a smaller and ageing workforce

The employment rate of persons aged 15-64 in Slovakia was 68.4% in 2019, just below the 68.8% average in OECD countries but well below the average of neighbouring countries (i.e., other Visegrad countries, 71.1%). This largely reflects lower employment rates for older workers and women at childbearing age (Figure 2.36). The employment rate of mothers with at least one child aged 0-2 is particularly low, while the employment rate of non-mothers is relatively high (Figure 2.37). A smaller and ageing workforce will exacerbate labour market pressures in the long run (Chapter 1). To prevent labour and skills from hindering the long-term growth potential, it is crucial to mobilise these underutilised labour resources.

Policies to stem the brain drain and well-managed immigration policies can mitigate the negative effects of ageing on economic growth and public finances, while helping address skills shortages in areas such as health and long-term care. As discussed in *Chapter 1,* net emigration from Slovakia has stopped in recent years, but immigration remains very low and the country is still losing some of its most skilled workforce. The government has continued to streamline the immigration process, which is welcome. In addition, the authorities should consider introducing a one-stop-shop portal with employment opportunities for foreign workers and should strengthen integration services, for example through the recognition of qualifications (as in Austria), counselling (as in Germany), civic integration (as in Belgium) and language training (as in Portugal). To attract Slovak workers from abroad, the government could develop and implement a diaspora engagement strategy.

Figure 2.36. Older people and women at childbearing age are under-utilised in the labour market

2020



Note: Visegrad V3 includes Czech Republic, Hungary and Poland.
Source: OECD Labour Force Statistics database.

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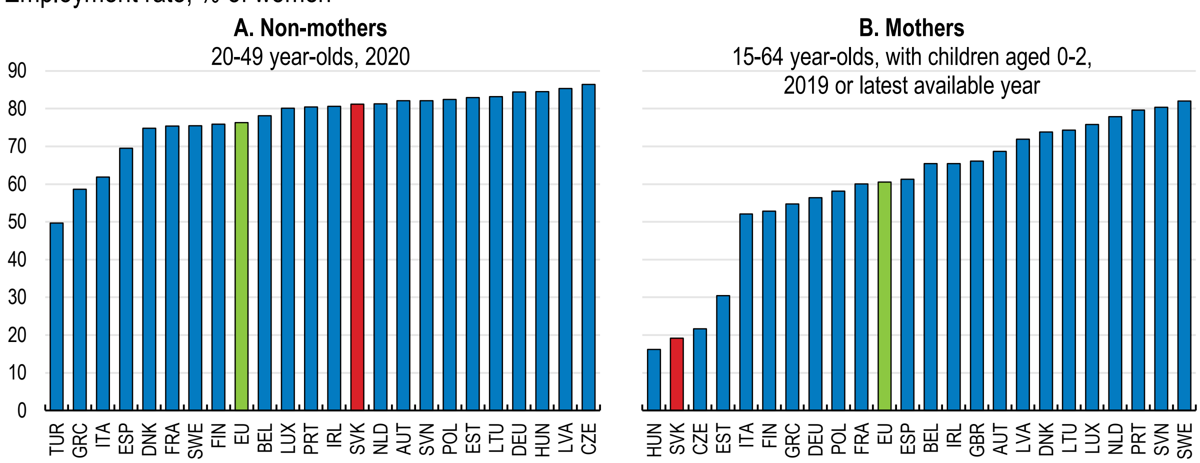
Figure 2.37. The employment rate of mothers with young children is low

Employment rate, % of women



Source: Eurostat; and European Union Labour Force Survey.

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Increasing the employment rate of older workers

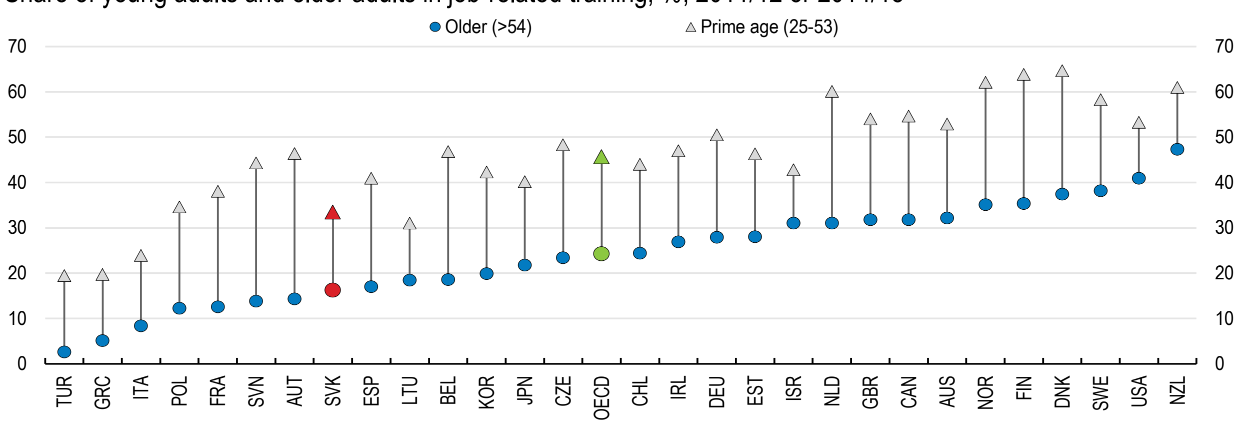
The relatively low employment rate of older people reflects a range of labour market barriers, in addition to their health status and the pension system discussed in previous sections. These include limited training opportunities, poor working conditions, and a lack of flexible working arrangements.

Older workers benefit less from training opportunities in Slovakia. Only around 20% of older people participate in training compared to 40% of the younger people, placing Slovakia close to the bottom of the OECD distribution (Figure 2.38). There are several barriers to training participation. The analysis of the Survey of Adult Skills (PIAAC) suggests that around 90% of adults did not want to participate in adult learning activities, the third-highest share in the OECD (OECD, 2021b). Even those adults who are willing to train face several obstacles to participation, including the cost of training, lack of employer's support, and being too busy at work (OECD, 2021b).

The high risk of job automation, together with rapid population ageing, means that it is particularly important for older people to continue learning. The risk of job automation in Slovakia is estimated to be higher than in any other OECD countries, reflecting the large manufacturing sector (Figure 2.39). Automation will change the nature of many jobs, and people will increasingly need to upgrade their skills to perform new tasks in their existing jobs or acquire new skills for new jobs (OECD, 2020d). A recent empirical study suggests that higher automation risk is associated with earlier retirement, as older workers generally have difficulties in keeping pace with rapidly changing conditions (Yashiro et al., 2020). In this context, fostering greater participation of older workers in adult learning is crucial in extending working lives in Slovakia. Dujava, Vitáloš and Žúdel (forthcoming) suggest that the impact of automation on task contents are different depending on the type of automation and skills level of occupations in Slovakia (Box 2.6). These diverse learning needs should be taken into account to increase the effectiveness of adult learning policies.

Figure 2.38. Older workers benefit less from training opportunities

Share of young adults and older adults in job-related training, %, 2011/12 or 2014/15



Note: Belgium refers to Flanders only, United Kingdom to England and Northern Ireland; formal and non-formal job-related education and training. OECD is an unweighted average of the countries in the chart.
Source: OECD Dashboard on priorities for adult learning database.

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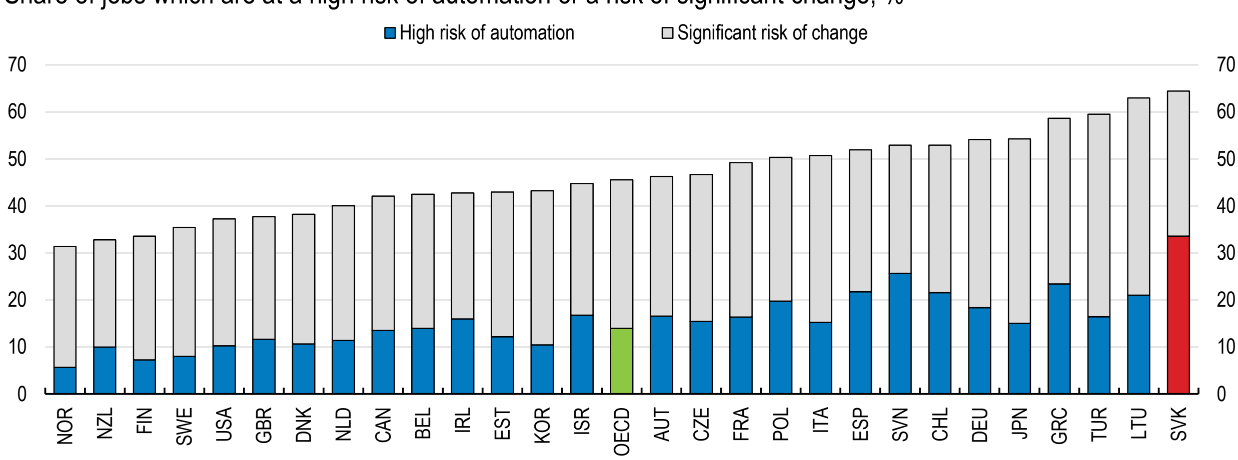
Figure 2.39. Automation risk is high

Share of jobs which are at a high risk of automation or a risk of significant change, %



Note: Jobs are at high risk of automation if the likelihood of them being automated is at least 70%. Jobs at risk of significant change are those with the likelihood of being automated estimated at between 50 and 70%. Data for Belgium correspond to Flanders and data for the United Kingdom to England and Northern Ireland.
Source: OECD (2019), OECD Employment Outlook 2019: The Future of Work, OECD Publishing, Paris, https://doi.org/10.1787/9ee00155-en.

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Box 2.6. Changes in task contents of jobs due to automation in Slovakia

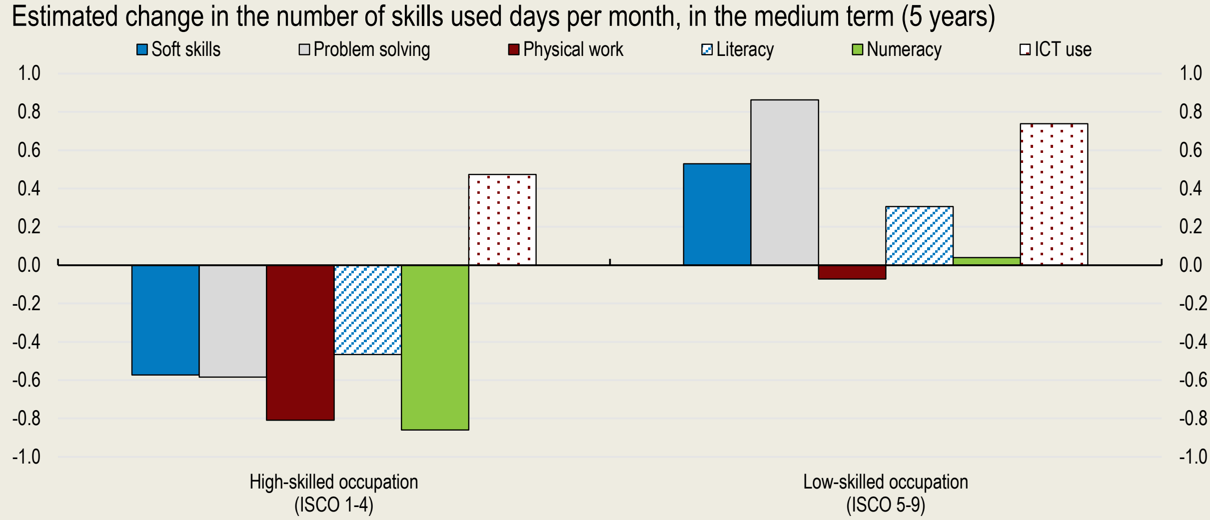
Dujava, Vitáloš and Žúdel (forthcoming) explore the impact of automation on workers depending on the type of automation and skills level of occupations. The empirical analysis is based on two rounds of PIAAC surveys conducted in the US in 2012 and 2017 (the US is the only country with multiple rounds of PIAAC available). Trends in the use of 6 skill sets in the US were estimated and applied to Slovakia taking into consideration differences between the two labour markets in terms of relative weights of different industries, occupations and education levels.

The main findings are:

- Reskilling needs are different depending on skills level of workers (Figure 2.40). For low-skilled occupations, automation tends to require soft, problem-solving, and ICT skills more, while high-skilled occupations chiefly require more ICT skills. This implies that the low-skilled workers will need to learn more diverse skills to adapt to the new tasks.
- Reskilling needs are different depending on the type of automation (Figure 2.41). Workers exposed to robots tend to increase mainly their use of soft skills and problem-solving skills, whereas those exposed to Artificial Intelligence (AI) use more ICT, literacy and numeracy skills.
- Low-skilled jobs are twice as much exposed to robots than high-skilled occupations, while there are less exposed to AI in Slovakia. This implies that policy should distinguish between robot-based automation and software/AI-based automation, when improving or changing workers' skills.
- Impacts differ by gender. Men are more exposed to robots as they tend be more widely employed in manufacturing. Men are also more exposed to AI compared to women. Hence, men are more likely to have to learn new skills, different task contents and/or to switch to a completely different occupation/industry.

Figure 2.40. Reskilling needs by automation are different depending on skills level of workers

Estimated change in the number of skills used days per month, in the medium term (5 years)



Source: Dujava, Vitáloš and Žúdel (forthcoming).

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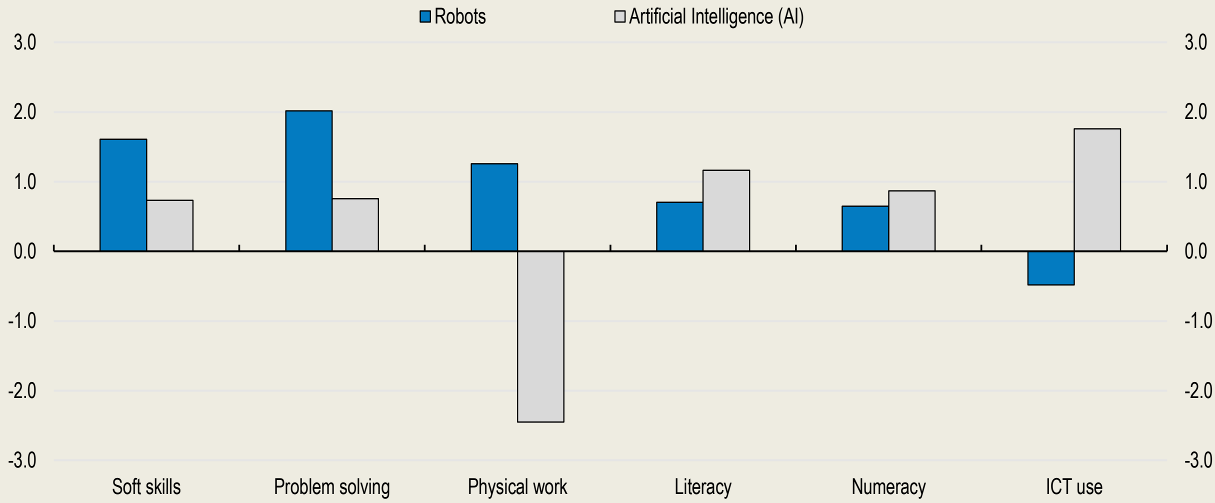
Figure 2.41. Reskilling needs are different depending on the type of automation

Change in the number of skill use days per month between the occupations least exposed and most exposed to technology, in the medium term (between 2012 and 2017)



Source: Dujava, Vitáloš and Žúdel (forthcoming).

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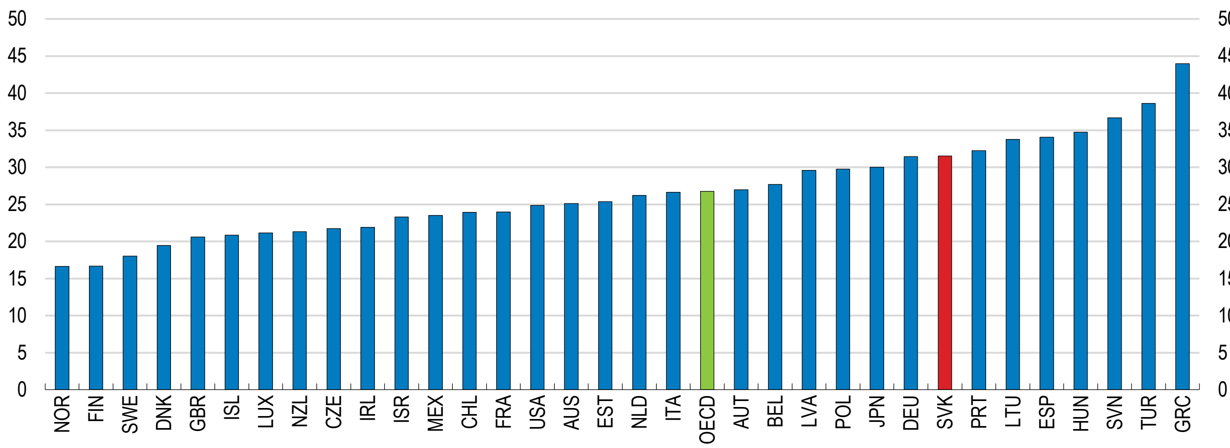
An adult learning strategy should be implemented with a targeted approach including for older workers. The government plans to adopt a national lifelong learning strategy and introduce pilot individual learning accounts in 2021, which is welcome (Chapter 1). To support learning among older workers, the Netherlands for instance has training vouchers available to individuals above 55; and Canada has a subsidy program targeting older workers aged 45-64 (i.e., Targeted Initiative for Older Workers) (OECD, 2020d). It was found that these targeted financial incentives were effective in increasing the labour market attachment or probability to re-enter employment of older workers (De Groot and Van der Klaauw, 2017; and Van Hoof and Van den Hee, 2017). In addition to individual guidance and skills assessment to orient them towards good quality training opportunities, skills certifications can also be introduced to increase workers' motivation to participate. These complementary support measures are particularly important for older workers who are less willing to participate and less likely to seek learning opportunities (OECD, 2019d).

Many workers are faced with poor working conditions. Around 32% of older workers experience job strain, 5 percentage points higher the OECD average (Figure 2.42). Along with health risk factors, an inflexible working arrangement was reported as a main contributory factor (OECD, 2021c). Inflexible working arrangements, such as insufficient part-time work, can limit employment opportunities for older workers. In addition, they may cause work-related health problems thus higher recourse to disability benefits. Indeed, recent empirical evidence suggests an association between job strain and early retirement in Slovakia (Fodor et al., 2022). Facilitating access to part-time jobs and developing flexible work arrangements are ways to give older workers greater choice and lengthen working lives. In light of the pandemic, Slovakia's employment law is moving towards increased flexibility, with a government's proposal to enable employers and their employees to agree on teleworking hours. In the long run, promoting the use of voluntary part-time work or flexible work schedules for older workers should also be promoted. Finland, for example, has implemented flexible working hour schemes for older workers. In Sweden, job rotation schemes have been developed, to tailor tasks to the personal situation of older workers. Alongside these flexible working arrangements, it is important for employers to promote well-being programs on health, notably vocational rehabilitation or emotional health programs to reduce early retirement. For instance, Lujatalo, a business in Finland, adopted an early intervention model for those with reduced workability, such as vocational rehabilitation and some measures to support mental health. As a result, lost-time injuries fell by around 90% (from 116 to 13.9 per million working hours) between 2005 and 2015 (OECD, 2020a).

Figure 2.42.The working environment is strenuous for many

Incidence of job strain, workers aged 50-64, %, 2015



Note: Job strain is defined as jobs where workers report facing more job demands than the number of resources they have at their disposal.
Source: OECD Job Quality database.

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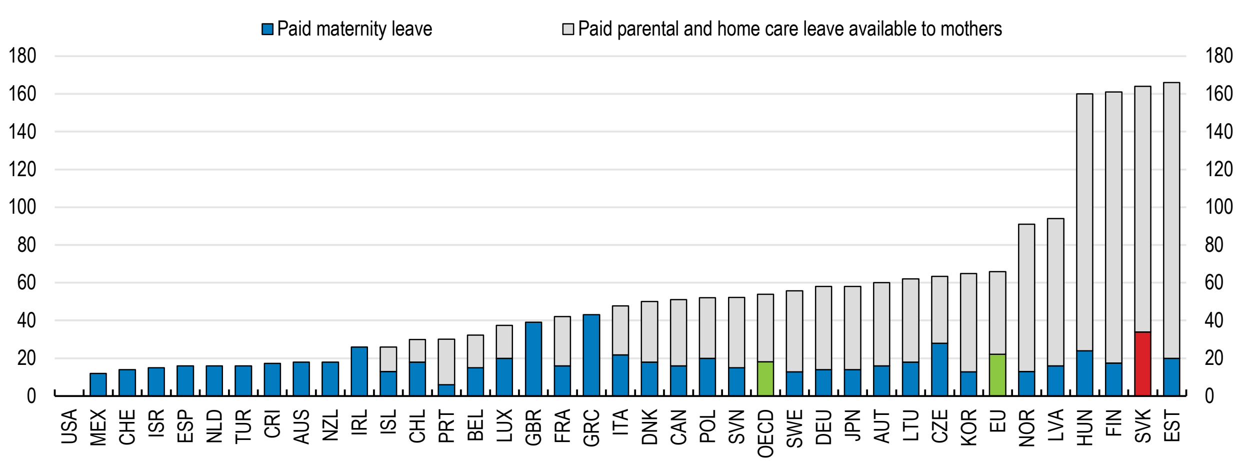
Raising the employment rate of mothers with young children

The low employment rate for mothers with small children primarily reflects long paid parental leave, together with low work incentives and lack of flexible working arrangements. Parental leave, which follows maternity or paternity leave, is 130 weeks (i.e., 2.5 years), one of the longest in the OECD and more than three times longer than the OECD average (Figure 2.43). During this period, parents can receive parental allowances, whether they actually take parental leave or not. Despite the rising number of fathers on parental leave, 96% of beneficiaries in 2020 were mothers according to the Ministry of Labour. Only 13% of parental allowance beneficiaries worked according to administrative data of the Central Labour Office and Social Insurance Agency in July 2021.

Figure 2.43. Paid leave for mothers is longer than elsewhere

Number of weeks, 2018



Source: OECD Social Expenditure database.

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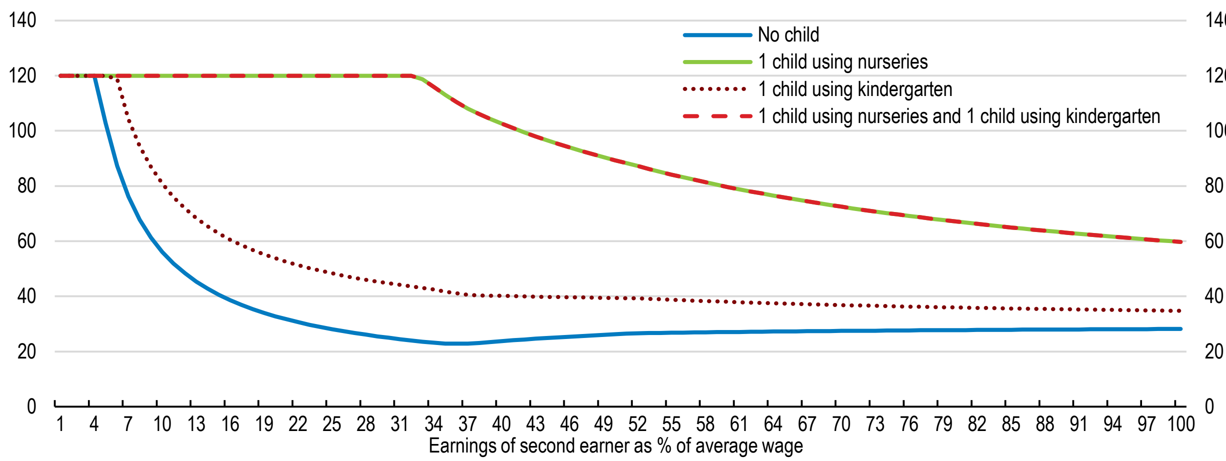
Mothers can combine parental allowance and work in principle. However, they have low incentives to do so because they get only a little net gain from working, especially when their potential income is low. For instance, a mother of a child dependent on a public nursery would face an 80% participation tax rate when taking up work at 60% of the national average wage (Figure 2.44). This means that 80% of gains from working are taken away due to taxes and childcare fees, and benefit losses. This is nearly three times higher than the participation tax rates of a second earner in the same situation but without children, and two times higher than those with a child in kindergarten. The situation is even worse for lower-income mothers. For instance, mothers with potential earnings less than 40% of the average wage would lose out compared to inactivity. Indeed, low-income mothers tend to find a job or return to their previous employer later than higher-income mothers in Slovakia (IFP, 2018).

Figure 2.44. Mothers with young children have lower work incentives

Participation tax rates, %



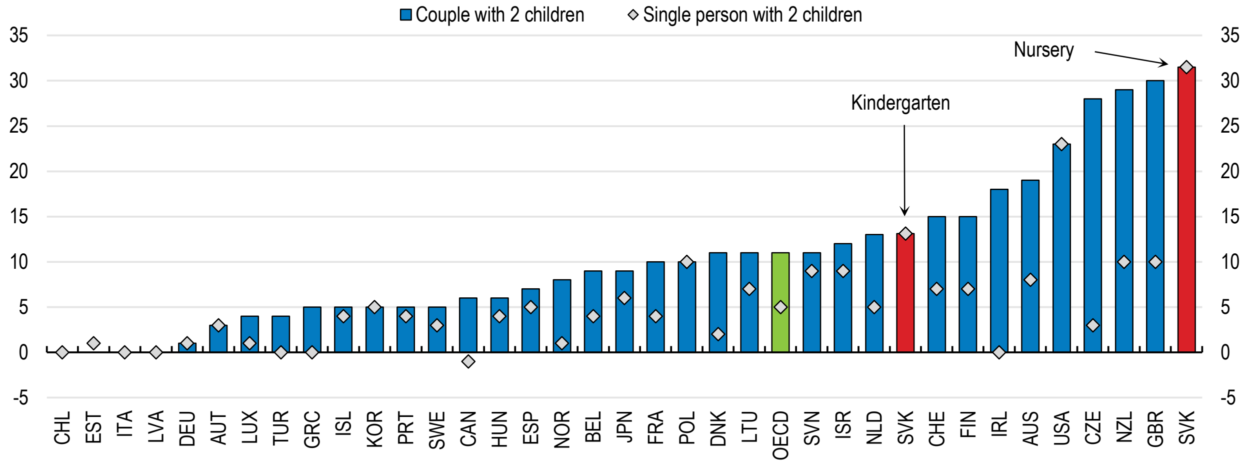
Note: Participation tax rates refer to the fraction of income which is taxed away by the combined effect of taxes and benefit withdrawals when entering or returning to work. For a person not entitled to unemployment insurance. First earner is assumed to work with hourly earnings of 67% of the national average wage. Children are assumed to be aged under three. Extreme positive rates have been capped at 120%.
Source: Calculations based on the OECD TaxBen model. http://oe.cd/TaxBEN.

StatLink https://doi.org/10.1787/888934297598

The high participation tax rate for mothers with young children is mainly due to high childcare costs and interactions between parental and childcare allowances that lead to the (de facto) absence of a childcare allowance. The usual nursery fee is around 30% of the national average wage, almost five times higher than the kindergarten fee. Until the child turns 3 years old, mothers can choose between parental allowance and childcare allowance (i.e., subsidy for the childcare fee). Parental allowance is a fixed amount, but childcare allowance depends on the number of children, type of childcare and actual childcare fees. If childcare costs are low, mothers mostly opt for parental allowance. If childcare fees are high (e.g. in nurseries), childcare allowance is more beneficial. Nevertheless, the childcare allowance still does not cover the costs of nurseries fully. Once a mother opts for childcare allowance, she is not entitled to the parental allowance, which will add an implicit cost on top of the childcare fees. This leads to high net childcare costs in Slovakia, especially for nurseries (Figure 2.45).

Figure 2.45. Net childcare costs are high

Net childcare costs, % of average wage, 2020 or latest available

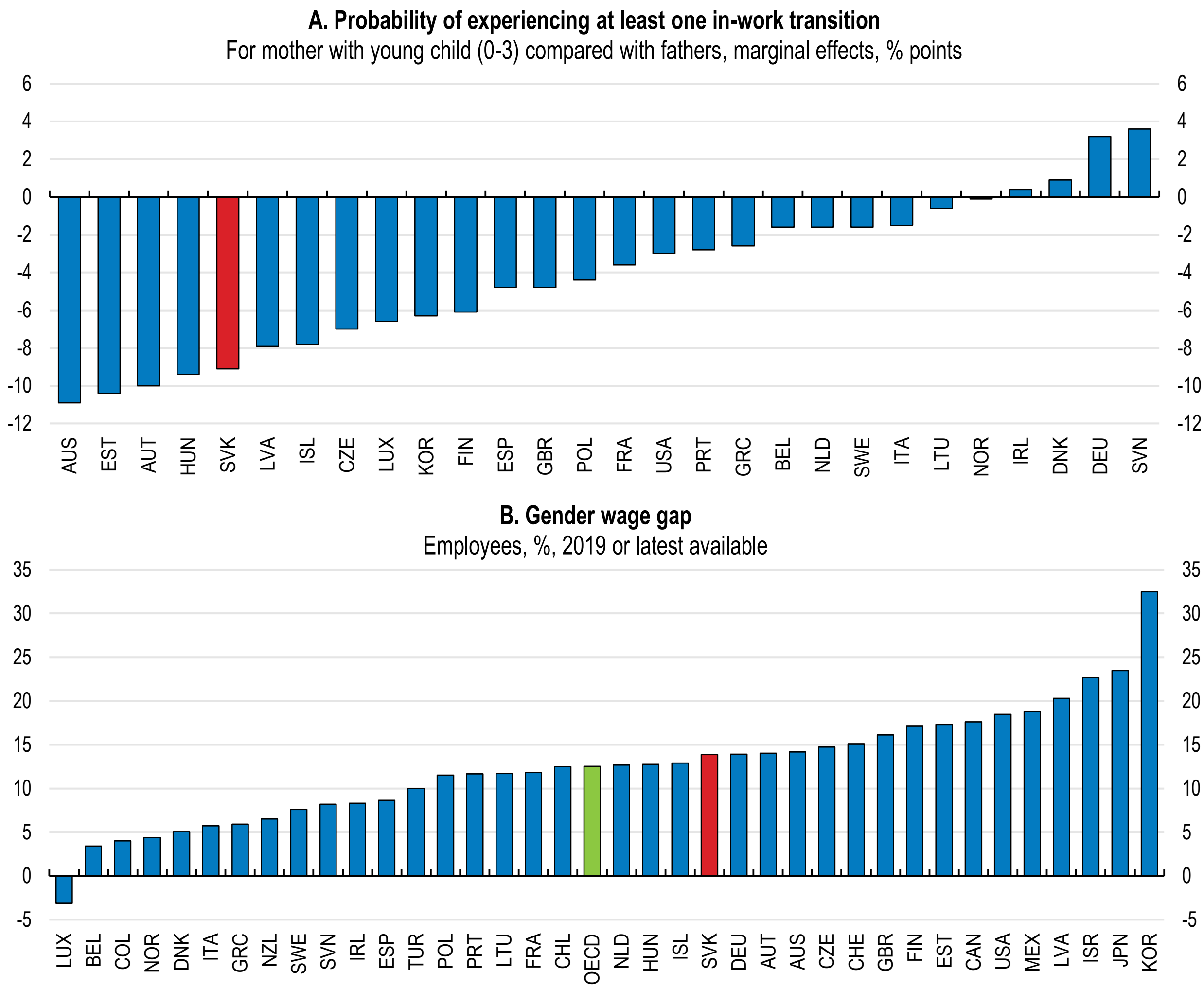


Note: This indicator measures the net childcare costs for parents using full-time centre-based childcare, after any benefits designed to reduce the gross childcare fees. Net childcare costs are calculated for both couples and lone parents assuming two children aged 2 and 3. For Slovakia, estimates are for two different scenarios: a) the youngest child attends nursery and b) the youngest child attends kindergarten. For couples, two parents earn 67% of the average wage, respectively.
Source: OECD (2021), Net childcare costs (indicator). https://doi.org/10.1787/e328a9ee-en.

StatLink https://doi.org/10.1787/888934297617

Gradually shortening the duration of paid parental leave or introducing flexible paid parental leave schemes can improve maternal labour market outcomes. Empirical evidence suggests that after around 20 weeks of leave women face worse chances of re-entering the labour market (Hegewisch and Gornick, 2011; Rossin-Slater, 2017; Ferragina, 2019). Mothers with young children can choose when to return to work during the duration of parental leave. In 2019, about half of the mothers took the maximum duration of parental leave. Together with more intensive involvement of fathers in parental care (Chapter 1), shorter parental leave could encourage mothers to enter the labour market or return sooner and help reduce the gender gap. Introducing flexible pay of parental leave that for example allows parents to receive a higher parental allowance over shorter period, such as in Austria and the Czech Republic, can also be considered. In this case, however, mothers, especially those with low income, can still opt for the longer parental leave. This can be especially true in Slovakia given the high nursery cost. The long leave leads to severe negative consequences for career progression as well as earnings mobility over the life course, increasing the gender gap in earnings and pension entitlements. This is partly because mothers miss crucial in-work transitions occurring in the early stages of careers, which promote stronger career advancement and income growth (OECD, 2018b). Indeed, the probability of experiencing in-work transition for mothers with young children aged 0-3 is one of the lowest in the OECD countries (Figure 2.46, Panel A) and the gender pay gap is one of the highest in the OECD (Panel B).

Figure 2.46. The gender pay gap is high



Note: In Panel A, the probability of experiencing at least one in-work transition (change of employer job or contract type) during the current year, conditional on having worked the year before, for mothers with young child (0-3), compared to corresponding fathers.
In Panel B, the gender wage gap is defined as the difference between median earnings of men and women relative to median earnings of men. Data refer to full-time employees.
Source: OECD (2018), OECD Employment Outlook 2018, OECD Publishing, Paris; and OECD Earnings database.

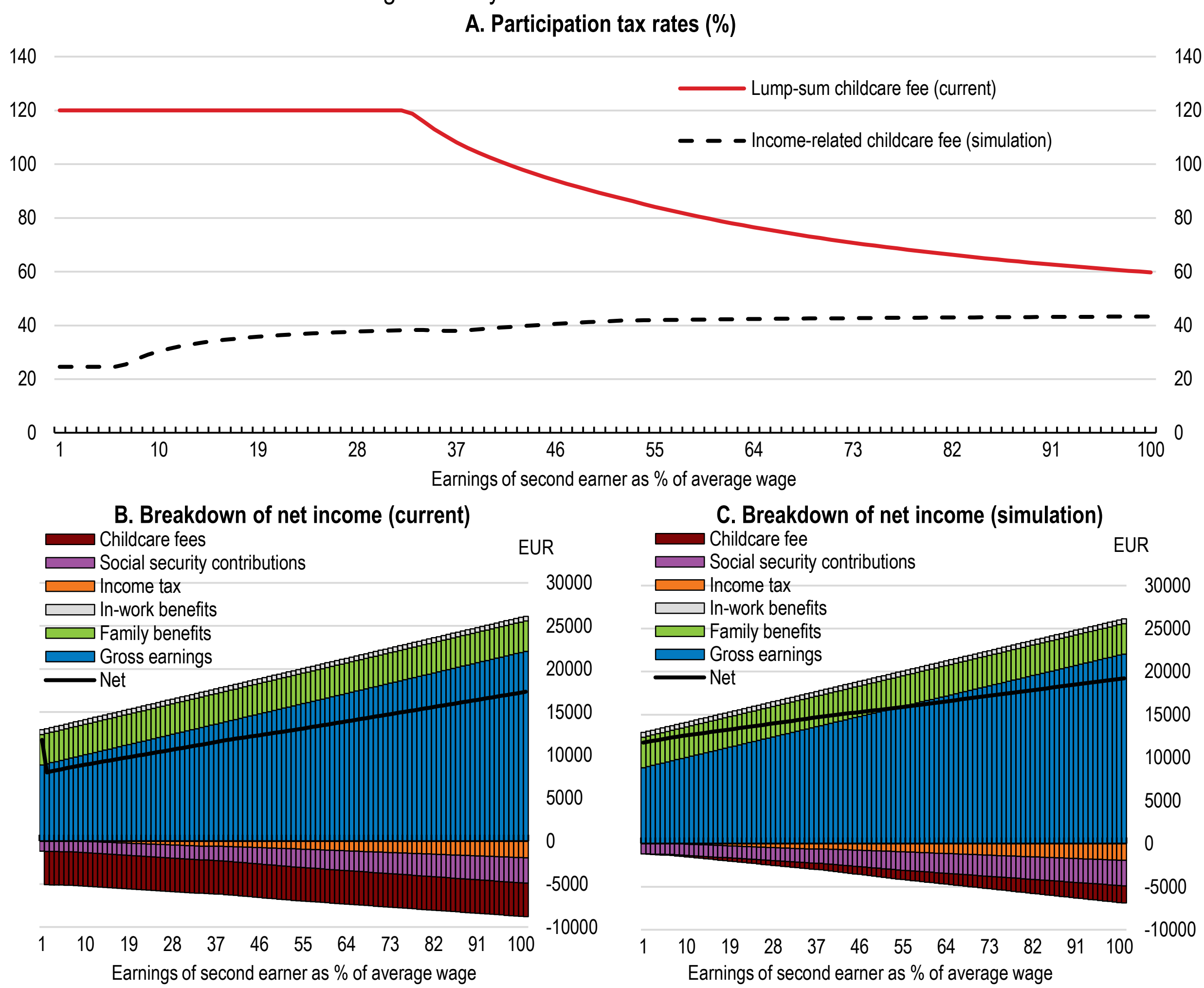
StatLink https://doi.org/10.1787/888934297636

At the same time, reducing the net childcare costs should be considered to improve the low work incentives. One way could be to make the childcare fee dependent on household income. Currently, the childcare fee is a lump-sum, which significantly reduces gains to second earners entering work especially when their potential earning is low (Figure 2.47, Panel A and B). Simulations show that calculating the childcare fee on the basis of the household's income will significantly cut the participation tax rates for second-earner parents with young children, profoundly improving their financial work incentives (Panel C and D). This can be done by providing income-related childcare subsidies directly to childcare providers as in Australia and New Zealand. In this case, the current childcare allowance can be abolished. Another way could be to keep the current childcare allowance system but increase the amount relative to the parental allowance especially for low-income mothers. For instance, in France, income-related childcare allowances are provided to parents who use nurseries. According to a survey, a relatively large share of Slovak parents responded that they do not use childcare facilities because of high fees (OECD, 2020e). In addition to the government's plan to expand childcare facilities (see below), the income-related childcare fee would help mothers take up or return to work sooner. This would be especially the case for the low-income second earners whose employment decisions are particularly responsive to childcare fees and financial work incentives (Immervoll et al., 2006). The European Social Fund project, which finances childcare allowances, will end in 2022. The government should consider shifting national funding from parental allowance to childcare allowances.

The relationship between parental leave duration and fertility is uncertain. In fact, several evaluations suggest that helping women combine career and family has a greater positive effect on childbirth than financial subsidies. For instance, OECD (2011b) found that the provision of good quality ECEC services appears to be the most effective in encouraging families to have children and women to remain in the workforce, rather than financial support trying directly to boost birth rates.

Figure 2.47. Reducing the net childcare fee will significantly increase working incentives of mothers

A second earner with a child attending a nursery



Note: Participation tax rates refer to the fraction of income which is taxed away by the combined effect of taxes and benefit withdrawals when entering or returning to work. First earner is assumed to work with hourly earnings of 67% of the national average wage. The child is assumed to be aged two and dependent on nurseries. Extreme positive rates have been capped at 120%. The simulation assumes that childcare costs gradually increase to 1/3 of the maximum childcare fee (i.e., 10% of the national average wage) when the second earner's earning is 67% of the national average wage.

Source: Calculations based on the OECD Tax-Benefit model.

StatLink https://doi.org/10.1787/888934297655

Shortening parental leave and reducing the childcare fee should be accompanied by an increased supply of high-quality early childhood education and care (ECEC). The participation rate of children in ECEC is currently one of the lowest in OECD countries. Only 1.6% of all children under the age of three were in public ECEC in 2019, according Eurostat. According to national administrative data, the rate was higher at 6.7% in 2019, but still well below the EU average (16%). High-quality ECEC has a strong positive impact on the development of children from vulnerable groups such as the marginalised Roma (Drange and Havnes 2019; Felfe and Lalive 2018; Kottelenberg and Lehrer 2017; Vandekerckhove et al., 2019). However, for children from affluent families, the impact of the ECEC participation depends on the quality of the childcare (Baker et al. 2019; Kottelenberg and Lehrer, 2014; Kuehnle and Oberfichtner, 2020). According to a survey, around 20 percent of Slovak parents of children aged 0-5 have reported that ECEC services were not sufficient to meet their needs, which is relatively high in international comparison (OECD, 2020f). The main reasons were not only the costs but also a lack of available places and inconvenient locations. The government plans to expand pre-school and child-care facilities, which is welcome (Chapter 1). It will be particularly important to build facilities in underserved regions.

Increasing the flexibility of working arrangements can help mothers (re)enter the labour market. Flexible working arrangements and access to part-time work can help mothers maintain their labour market attachment and help employers reduce absenteeism and turnover rates (OECD, 2016b).The total part-time employment rate is one of the lowest in the OECD at 4.5%, compared to the OECD average at 16.7% in 2020. Working time arrangements are also relatively inflexible – daily start and finish times are set entirely by employers for about three-fourths of employees in Slovakia, the fourth highest share in the EU (EC, 2020b). Empirical evidence suggest that flexible working arrangements have positive impacts on labour participation of mothers with young children (e.g., Chung et al., 2018; Lott, 2018; and Fuller et al., 2019) because they can help working parents reconcile their work-schedule with childcare centre and/or school hours and care needs. Some countries provide mothers with a right to request flexible working hours. In Sweden, for instance, mothers can split the parental leave period of 18 months in a number of shorter spells and use them to shorten working hours until their children reach the age of eight. They also have the right to shorten working hours up to 25% of the normal hours even if the parental leave days are used up in this period.

Main findings and recommendations for the pension, health, and labour market systems

MAIN FINDINGS	RECOMMENDATIONS
Preparing the pension system for ageing	
Pension expenditure is projected to increase faster than elsewhere in the EU, significantly deteriorating the sustainability of the pension system. The effective retirement age is low.	**Link the future statutory retirement age and the minimum number of years of contributions required for retirement to life expectancy**. Ensure that early retirement options do not harm the sustainability of the system by applying rules of actuarial neutrality. **Phase out the early retirement option for mothers.** **Reconsider the planned introduction of the parental bonus.**
Many older workers use disability as a pathway to early retirement.	Update eligibility assessment criteria for disability pensions. Develop work rehabilitation further. Make rehabilitation mandatory for receiving partial disability pensions.
The self-employed contribute significantly less to the pension system than dependent workers.	Align the pension contribution base between employees and self-employed workers with similar earnings.
Private pension savings are low, largely due to overly conservative investment strategies resulting in low yields from savings and voluntary enrolment	Introduce automatic enrolment into the private (2nd pillar) pension as planned, together with a default life-cycle based investment strategy. Remove return guarantees for bond funds and reduce the possibilities for effective lump-sum withdrawals of pension savings.
Strengthening health and long-term care systems to efficiently promote healthy ageing	
Health care	
The gatekeeper role of primary care is hampered by an insufficient number of general practitioners, a narrow set of GP competencies, and the remuneration arrangements.	**Introduce pay-for-performance payment schemes to increase the attractiveness of the GP profession.**
The poorer health outcomes in Slovakia are largely attributed to higher preventable mortality. Excise duties on tobacco are relatively high.	Implement more targeted vaccination and health promotion programmes and consider increasing the share of resources towards prevention.
The mediators in the government's Roma health mediators programme often have no job security and low salaries.	Promote Roma access to health-care by increasing support for trained Roma mediator programmes.
Slovakia has relatively few nurses, reflecting the low number of graduates and ongoing migration.	Offer more flexible working conditions and training opportunities to nurses, notably to meet the needs of older nurses.
There are many small hospitals, which lead to inefficiencies, recurrent over-indebtedness, and suboptimal performance. The implementation of the hospital network reform has been delayed several times.	**Implement the hospital network reform and create a nation-wide centralised system for hospital quality assessments, monitoring and evaluation.**
Pharmaceutical spending remains high.	Expand central procurement of pharmaceuticals. Establish cost-effectiveness rules for pharmaceutical products for rare diseases. Further advance digitalisation of the health system.
Long-term care	
Home and community based long-term care is underdeveloped, reflecting low financial and human resources.	**Improve funding for and quality of home and community based care.** **Introduce voucher schemes for long-term care.** **Provide training to informal caregivers.**
An increasing share of women is inactive due to caring responsibilities in Slovakia.	Remove legal constraints on the labour earnings of caregivers.
The capacity to fund long-term care services is challenged by limited municipal budgets, which depend mainly on their tax revenues.	Ensure dedicated funding for long-term care, including for example via a mandatory insurance system.
The provision of LTC services is fragmented between the health and social care sectors, as well as between different government levels, creating inefficiencies and reduced access.	Construct an integrated long-term care model, including by creating regional one-stop shops, establishing joint clinical and care guidelines, and designing common and nationally standardized quality assessments.

Mobilising underutilised labour resources to prepare for a smaller and ageing workforce	
Older workers benefit less from training opportunities.	Strengthen lifelong training targeted at older workers, by providing financial incentives to individuals and employers and introducing skills certification together with individual guidance.
Paid parental leave is longer than elsewhere, negatively affecting the career prospects of mothers and gender wage equalities. There is a lack of childcare facilities, especially in some regions. Participation taxes for second earners are high, notably for low-income households, reflecting the high net nursery fee. Flexible working arrangements are scarce.	**Reduce the maximum duration of parental leave and make part of it conditional on the father's participation.** Make the payout of parental allowances more flexible. **Expand the supply of high-quality childcare facilities, especially in underserved regions.** Improve affordability of nurseries for low-income households, by reducing net childcare costs and making the childcare allowance more attractive for parents. Expand flexible working arrangements.

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SLOVAK REPUBLIC

After a deep recession in 2020, economic activity has rebounded. However, supply disruptions and a low vaccination rate are making the future pace of the recovery more uncertain. An ambitious recovery plan and substantial inflows of EU funds provide a unique opportunity to strengthen the economy, but effective and timely implementation will require continued efforts to improve public procurement and public investment management. In the medium-term, rapid population ageing will exacerbate fiscal challenges and weigh on long-term growth. To prepare for an ageing society, pension, health and long-term care, and labour market reforms are needed to extend working lives, improve the health of the ageing population, and enhance the efficiency of public spending. At the same time, population ageing reinforces the need to boost productivity. To reinvigorate the economic convergence process and make growth more inclusive and sustainable, policies to promote adequate skills, foster domestic innovation capacity, and better price environmentally harmful activities are needed.

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