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The 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 Survey was prepared in the Economics department by Jens Høj, Gabor Fulop, Ania Thiemann, Rory O'Farrell, Orsolya Fedor, seconded from the Hungarian Ministry of the Finance, and Anna Vindics under the supervision of Patrick Lenain. Statistical research assistance was provided by Klaus Pedersen and editorial assistance was provided by Poeli Bojorquez, Stephanie Henry and Sylvie Ricordeau. The previous Survey *of Hungary was issued in May 2016.*

The Survey was discussed at a meeting of the Economic and Development Review Committee on 6 November 2018 with participation of representatives of the Hungary government and representatives of Denmark and the United Kingdom as lead speakers.

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Basic Statistics of Hungary, 2017

(Numbers in parenthesis refer to the OECD average)*

BASIC STATISTICS OF HUNGARY, 2017

(Numbers in parentheses refer to the OECD average)*

LAND, PEOPLE AND ELECTORAL CYCLE					
Population (million)	9.7		Population density per km²	105.3	(37.2)
Under 15 (%)	14.4	(17.9)	Life expectancy (years, 2016)	76.2	(80.6)
Over 65 (%)	18.7	(17.0)	Men	72.6	(77.8)
Foreign-born (%, 2016)	5.2		Women	79.7	(83.2)
Latest 5-year average growth (%)	-0.4	(0.6)	Latest general election	April	2018
ECONOMY					
Gross domestic product (GDP)			Value added shares (%)		
In current prices (billion USD)	139.8		Primary sector	4.4	(2.5)
In current prices (billion HUF)	38 183		Industry including construction	30.3	(26.9)
Latest 5-year average real growth (%)	3.2	(2.1)	Services	65.3	(70.5)
Per capita (000 USD PPP)	28.8	(44.3)			
GENERAL GOVERNMENT					
Per cent of GDP					
Expenditure	46.9	(41.0)	Gross financial debt	91.9	(110.1)
Revenue	44.7	(38.8)	Net financial debt	63.1	(71.1)
EXTERNAL ACCOUNTS					
Exchange rate (HUF per USD)	273.946		Main exports (% of total merchandise exports)		
PPP exchange rate (USA = 1)	138.885		Machinery and transport equipment	55.9	
In per cent of GDP			Chemicals and related products, n.e.s.	11.6	
Exports of goods and services	88.6	(55.6)	Manufactured goods	10.9	
Imports of goods and services	81.0	(51.2)	Main imports (% of total merchandise imports)		
Current account balance	3.1	(0.4)	Machinery and transport equipment	47.8	
Net international investment position	-56.1		Manufactured goods	14.6	
			Chemicals and related products, n.e.s.	12.1	
LABOUR MARKET, SKILLS AND INNOVATION					
Employment rate for 15-64 year-olds (%)	68.2	(67.7)	Unemployment rate, Labour Force Survey (age 15 and over) (%)	4.2	(5.8)
Men	75.2	(75.4)	Youth (age 15-24, %)	10.7	(11.9)
Women	61.3	(60.1)	Long-term unemployed (1 year and over, %)	1.7	(1.7)
Participation rate for 15-64 year-olds (%)	71.2	(72.1)	Tertiary educational attainment 25-64 year-olds (%)	24.1	(36.9)
Average hours worked per year	1 740	(1 759)	Gross domestic expenditure on R&D (% of GDP, 2016)	1.2	(2.3)
ENVIRONMENT					
Total primary energy supply per capita (toe)	2.7	(4.1)	CO_2 emissions from fuel combustion per capita (tonnes, 2016)	4.5	(9.1)
Renewables (%)	10.9	(10.2)	Water abstractions per capita (1 000 m³, 2012)	0.5	
Exposure to air pollution (more than 10 µg/m³ of PM2.5, % of population, 2015)	100.0	(75.2)	Municipal waste per capita (tonnes, 2016)	0.4	(0.5)
SOCIETY					
Income inequality (Gini coefficient, 2014)	0.288	(0.313)	Education outcomes (PISA score, 2015)		
Relative poverty rate (%, 2014)	10.1	(11.7)	Reading	470	(493)
Median disposable household income (000 USD PPP, 2014)	11.8	(23.1)	Mathematics	477	(490)
Public and private spending (% of GDP)			Science	477	(493)
Health care	7.2	(8.8)	Share of women in parliament (%, 2016)	10.1	(28.7)
Pensions (2015)	9.7	(8.5)	Net official development assistance (% of GNI)	0.11	(0.37)
Education (primary, secondary, post sec. non tertiary, 2015)	2.9	(3.5)			

Better life index: www.oecdbetterlifeindex.org

* 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 29 member countries.

Source: Calculations based on data extracted from the databases of the following organisations: OECD, International Energy Agency, World Bank, International Monetary Fund and Inter-Parliamentary Union.

Executive Summary

- *The economic outlook looks strong …*
- *… but the economy faces risks, including overheating of the labour market*
- *The high stock of inward FDI has bolstered GDP, but leaves unaddressed challenges …*
- *Upskilling, mobility and stronger regional growth are needed for securing equitable growth*
- *Population ageing is creating policy challenges*

The economic outlook remains strong…

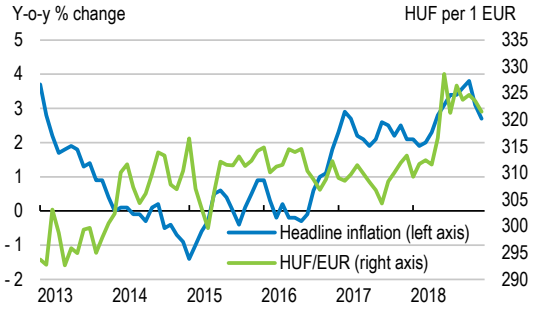
The economy is prospering. Growth is expected to have risen further to 4½ per cent in 2018, following past strong performance. Domestic demand is fuelled by strong private consumption, reflecting high real income gains, and dynamic business and housing investments. The unemployment rate has fallen to a historically low level and labour shortages have emerged. This has been, accompanied by strong and broad-based wage increases, helping to preserve a high level of income equality, and restarting income convergence. Inflation reached 3.8% in the autumn of 2018, partly as the result of higher energy and food prices, before coming down again (Figure A). Productivity growth has accelerated, although it remains well below real wage growth and the rate prevailing in the decade prior to the international financial crisis.

Table A. Strong economic growth is projected to continue

%-change	2018	2019	2020
Gross domestic product	4.6	3.9	3.3
Private consumption	5.6	4.7	4.0
Gross fixed capital formation	15.7	9.5	4.8
Exports	8.3	7.5	5.9
Imports	9.6	8.8	6.3
Unemployment rate	3.6	3.2	3.1
Consumer price index	3.0	4.0	4.0
Current account (% of GDP)	1.7	0.9	0.6

Output growth is projected to lose some momentum in 2019, as capacity constraints bite and demand is increasingly met by imports. Nonetheless, domestic demand will continue to benefit from rising wages and employment. The latter is, together with demography weighing on labour supply, reducing unemployment. Private investment will be bolstered by the continued expansion of production capacity, EU funds and high housing demand. Exports will benefit from new production capacity, but fast-rising imports will put downward pressure on the current account surplus. Inflation is projected by the OECD to continue to rise towards the central bank's upper bound of the 3 % inflation target with a +/-1% tolerance band. Nonetheless, macroeconomic policy is expected to remain expansionary in 2019: the central bank has announced that it is prepared for a gradual and cautious normalisation of monetary policy while maintaining policy rates, and fiscal policy will remain supportive.

Figure A. Inflation is picking up



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…but the economy faces risks, including overheating of the labour market

Risks are both external and domestic. Hungary is vulnerable to the escalation of international trade disputes, which could cause a shock to exports, and particularly to the important vehicle sector, and would undermine investors' confidence. Continued high wage increases could erode cost competitiveness and unhinge inflation expectations, thus requiring an abrupt change in policy stances, exaggerating the boom-bust business cycle pattern. On the other hand, stronger-than-expected productivity gains would bolster the capability to absorb rapid wage gains. Turbulence in international financial market could reduce domestic banks' willingness to lend, reducing growth.

The high stock of inward FDI has bolstered GDP, but leaves unaddressed challenges

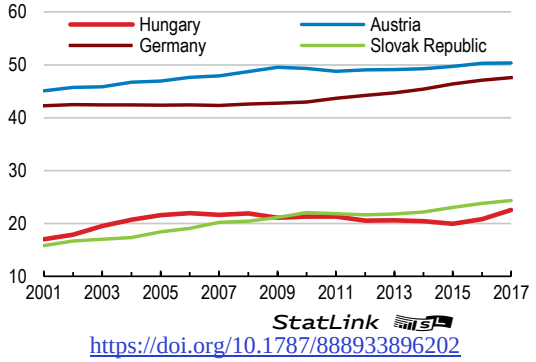
Hungary continues to successfully attract large inflows of FDI, which have expanded production capacity and boosted integration into global supply chains. This has mostly benefited western and central regions of the country, but the model has its limits: other regions have not shared the same benefits, local insourcing has been modest, wages are rising but remain low (Figure B), and the gap between GDP and net

national income is relatively high, as among Hungary's peers, due to profit remittances (Figure C).

Strong agglomeration effects and demand for business services have boosted growth in the capital region. In contrast, many poor rural regions have been left behind as their economic activity focuses on small-scale farming or used to rely on outdated mining and heavy industries, leaving them with little integration into local or national supply chains. Income differences have been further aggravated by the emigration of young skilled workers, leaving behind less skilled and older workers, many of whom have few prospects in the local labour market. The main government intervention to address these problems is public work schemes, which have successfully reduced poverty. However, the schemes have limited impact on employability, with exit rates remaining low.

Figure B. Wages have started to converge

In USD thousand, constant prices, 2017 PPPs



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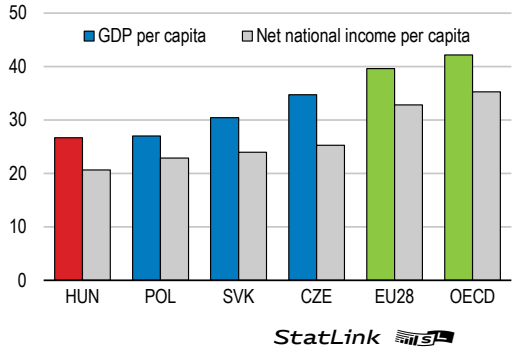
Overall, the pattern of growth has led to higher employment rates for most groups in the labour market, although the rates for low-skilled and older workers and women with small children remain markedly lower.

Recognising the need for revisiting the growth model, in 2017 the government established a National Competitiveness Council to identify structural reform that can accelerate productivity, growth and income convergence. In this respect, a priority should be to encourage greater labour mobility and upskilling so as to bring workers closer to economic centres. Another key goal is the development of local networks to integrate domestic firms into regional and national supply chains.

Figure C. The gap between GDP and net national income is high

In USD thousand, per capita, 2016



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Upskilling, mobility and stronger regional growth are needed for securing equitable growth

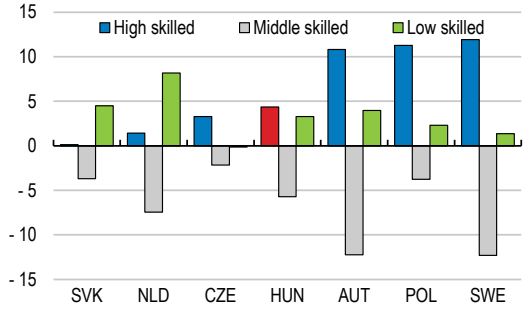
Employment is shifting towards higher-skilled jobs with the tighter integration of manufacturing into global value chains and the expansion of the service sector (Figure D). Integrating low-skilled workers from poor regions into today's labour market requires upskilling in line with skills demanded in the labour market. Many rural students do not fare well in the education system. Few enter tertiary education and most end up in vocational training and suffer from a relatively large drop-out rate, reflecting limited employment prospects upon graduation. Moreover, a rigid housing market and poor quality local road infrastructure mean that mobility in terms of moving and commuting is not sufficient to avoid pockets with high unemployment.

Despite the political autonomy of local governments, the public governance system is highly centralised. This means that policies are based on national and EU priorities with relatively little consideration for local conditions. Financing is mainly by central government or EU funds. There are few attempts to identify local economic advantages and develop local networks to integrate into regional or national supply chains. Both tourism and agriculture have the potential to provide jobs in poor rural areas. However, there are only few measures in place for either sector to integrate

into other sectors or exploit networks to move up the value added chains.

Figure D. Labour market polarisation is increasing

% change in share of total employment 1997-2017



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Population ageing is creating policy challenges

Ageing will weigh on public finances and create challenges for service provisions. Population ageing will accelerate over the coming decades, leading to an old-age dependency ratio that is just above the EU's. EU projections indicate, assuming a full alignment of the effective and statutory retirement ages by 2025, that pension spending as share of GDP should slightly fall until 2030, before rising by nearly 3 percentage points by 2070 (Table B).

These projections include the effects of a pension reform that is gradually increasing the statutory retirement age, with almost no possibilities for early retirement, and with pensions indexed to prices rather than wages.

However, 20% of pensioners receive pension benefits below the poverty line (although some have access to other benefits), reflecting problems for low-wage workers with too short careers to accumulate sufficient pension rights and the fact that the lowest receivable pension can be below one-third of the official poverty line. Moreover, the pension design and parameters, including non-linear accrual rates, make it difficult for workers to predict their future pensions. Particularly, the high volatility of wage growth leads to large differences in pension benefits for pensioners with similar work careers, but retiring at different times.

The centralised health care system has a strong focus on planning to adjust supply to changes in demand. However, it has low efficiency and uneven access, particularly in rural areas. The system is characterised by poor performance as reflected in high mortality from preventable causes, contributing, together with unhealthy lifestyles, to one of the lowest life expectancies in the OECD and the shortest time spent in good health after retirement.

Table B. Ageing is increasing spending pressures

Percentages of GDP	2020	2040	2070
Total public pensions	9.0	9.4	11.2
Health care	5.1	5.6	5.7
Long-term care	0.7	0.9	1.1
Memo: Old-age dependency ratio	31.3	41.8	52.0

Source: European Commission (2018)

Health care spending as a share of GDP is relatively low and is expected to remain so in the long-run, despite a projected 10 year increase in life expectancy and the demand changes arising from population ageing.

Despite the focus on planning, adjustment of the supply side is hampered by the nearly absent use of price signals in the hospital sector. The system of diagnosis related groups has not been fully updated since the 1990s. The hard budget constraint embedded in the hospitals' global budgets has become a soft constraint with the government's repeated reimbursement of hospital debt and the absence of performance related remuneration of hospital management. Moreover, some hospitals have been transformed into long-term care institutions, but many general hospitals remain in place.

Access to health care is uneven, reflecting high out-of-pocket payments and doctor shortages arising from emigration. Moreover, GPs provide many health services that elsewhere are provided by certified nurses and have few incentives for entering group practices. The high workload bolsters hospital referrals, challenging the role of GPs as gatekeepers and care coordinators.

The limited supply of long-term care is divided between social and medical services, and most such care is provided by families. Looking ahead, ongoing urbanisation will make this increasingly difficult.

MAIN FINDINGS	KEY RECOMMENDATIONS
Macroeconomic and financial policies to avoid overheating	
Inflation has breached the central bank's 3% target rate, although it remains within the tolerance band of +/- 1%.	Gradually increase policy interest rates Continue to exit from unconventional monetary policy measures.
Fiscal policy has become pro-cyclical.	Tighten fiscal policy to avoid overheating of the economy.
Tackling the impact of ageing and long run fiscal challenges	
Government revenues continue to rely on social security contributions, the structural deficit has widened and the tax wedge remains high.	Continue to lower the tax wedge while increasing the reliance on consumption taxes. Move towards a single VAT rate. Particularly, phase out the reduced rates for tourism services.
Population ageing is accelerating, boosting ageing related spending pressures.	Complete the ongoing increase of the statutory retirement age to 65 by 2022. Thereafter link it to gains in life expectancy.
Old-age poverty is already an issue for low-skilled workers with short work careers.	Introduce a basic state pension to guarantee a minimum income for all pensioners.
The health care system lacks efficiency and has very uneven access.	Reduce hospital stays by enhancing outpatient care and concentrating inpatient care in fewer, better equipped and more specialised hospitals. Increase hospitals' autonomy and update the DRG tariffs Strengthen the gatekeeper and coordinator roles of GPs by increasing the share of pay-for-performance financing.
Long-term care is underdeveloped and fragmented.	Integrate the various long-term care systems. Improve access to home and institution-based care by introducing cash benefits and vouchers.
Improving employment opportunities	
Labour shortages have become widespread.	Continue to reduce public work schemes and to enhance training of participants and other job seekers in programmes that improve their employability.
Labour allocation could be improved.	Extend duration of unemployment benefits and provide geographical mobility support and activation measures.
Labour force participation for mothers with young children is low, contributing to gender inequality.	Continue to expand the supply of crèches. Enhance incentives for mothers to participate in the labour market in order to reduce the effective length of parental leave, while providing incentives for longer paternity leave.
Sharing the benefits of growth	
Regional growth has been uneven.	Increase the autonomy of local authorities to execute projects, such as in tourism, that develop their local economy and further incentivise local governments to co-operate.
The Roma population is disadvantaged.	Continue to bolster inclusiveness measures for Roma communities, especially by better integrating Roma children in early childhood education and care.
Many local firms are not integrated into national and international supply chains.	Allow vocational education and training schools greater freedom to specialise and adjust courses and curriculums to the needs of the local labour market. Enhance research co-operation incentives between local and foreign-owned firms.
Measures have been introduced to address problems of corruption, but perceptions remain high.	A dedicated anti-corruption agency should be established.
Greening growth	
Small particles emissions are high and increasing.	Increase the reliance on road tolls and car taxes that take vehicles' environmental performance into account. Introduce congestion charges and strengthen public transport. Use fiscal incentives for replacing households' inefficient and high-emission heating system.

Key Policy Insights

- *Recent macroeconomic developments and short-term prospects*
- *Monetary, financial and fiscal policies to promote stability and well-being*
- *Addressing longer-run challenges to well-being*
- *Greening growth requires mitigation of small particles emissions*

Key Policy Insights

The economy has grown strongly over the past five years. In 2017, growth exceeded 4% - a pace that the economy maintained in 2018 (Table 1). Initially, growth was driven by exports and then investments. As employment started to expand, the recovery has broadened to private consumption and housing investment; a development that is being reinforced by double-digit wage growth. Moreover, the economy is increasingly facing capacity constraints, leading to higher imports eroding the current account surplus.

Since the early 1990s, the main growth driver of the Hungarian economy has been foreign direct investments that have helped modernising production and supported the successful integration into global value chains. Nonetheless, income per capita remains low, but convergence towards OECD and EU average incomes has started to resume. Per capita GDP has reached two-thirds of the OECD average and slightly more in comparison with the EU average (Figure 1).

The high reliance on foreign direct investment to drive growth has led to a regionally unbalanced growth pattern. The western and central regions – the main recipients of foreign investment – and Budapest area with its large positive agglomeration effects have grown faster than the rest of the country. The left-behind regions are characterised by low employment, a high number of social transfer recipients and poor integration into regional and national supply chains.

Long-term sustainability of growth requires an environment that creates opportunities for all. Hungary scores well in some aspects of well-being, particularly in work-life balance, but trails most other countries in other aspects, particularly health status (Figure 2). Another strength is that the tax-and-benefit system lowers inequality, although there is a strong regional element in poverty distribution (Figure 3). Looking ahead, enhancing well-being requires measures that improve incomes and health for the population and particularly for retirees and disadvantaged population groups. Higher incomes should come from high-productivity jobs and good wages as well as liveable pensions for all – a particular concern in view of the acceleration in population ageing.

Table 1. Macroeconomic indicators and projections

Annual percentage change, volume (2005 prices).

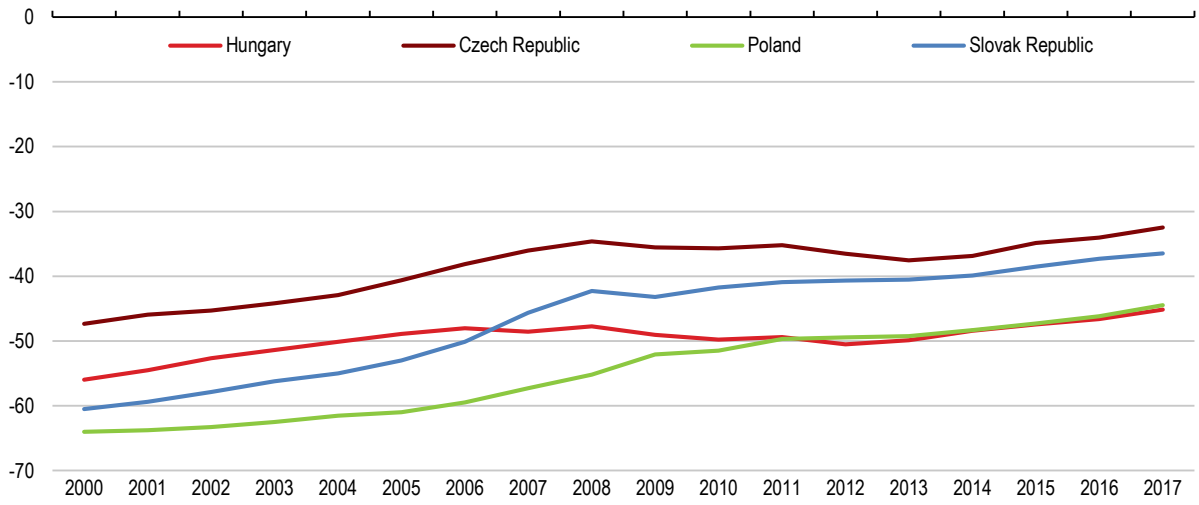
	2015 Current prices (HUF billion)	2016	2017	2018	2019	2020
Gross domestic product (GDP)	**32,592**	2.2	4.4	4.6	3.9	3.3
Private consumption	16,406	4.0	4.8	5.6	4.7	4.0
Government consumption	6,505	0.7	1.3	1.1	1.1	0.8
Gross fixed capital formation	7,223	-11.7	18.2	15.7	9.5	4.8
Housing	631	9.7	16.0	10.3	9.1	3.9
Final domestic demand	30,134	-0.6	7.0	7.0	5.2	3.6
Stockbuilding[1]	377	1.4	-0.2	-1.6	-0.3	0.0
Total domestic demand	30,511	0.8	6.7	5.2	4.9	3.6
Exports of goods and services	28,568	5.1	4.7	8.3	7.5	5.9
Imports of goods and services	26,487	3.9	7.7	9.6	8.8	6.3
Net exports[1]	2,081	1.4	-1.9	-0.4	-0.6	-0.1
Other indicators (growth rates, unless specified)						
Potential GDP	. .	2.0	2.2	2.7	3.1	3.3
Output gap[2]	. .	-1.9	0.3	2.2	2.9	3.0
Employment	. .	3.3	1.6	1.4	1.2	0.7
Unemployment rate	. .	5.1	4.2	3.6	3.2	3.1
GDP deflator	. .	1.0	3.6	4.5	4.9	4.3
Consumer price index	. .	0.4	2.3	2.9	4.0	4.0
Core consumer prices	. .	1.5	1.8	2.1	3.3	3.9
Household saving ratio, net[3]	. .	8.1	7.3	10.8	10.6	10.8
Current account balance[4]	. .	6.2	3.2	1.7	0.9	0.6
General government fiscal balance[4]	. .	-1.6	-2.2	-2.4	-2.0	-2.0
Underlying general government fiscal balance[2]	. .	-1.4	-2.3	-3.4	-3.4	-3.4
Underlying government primary fiscal balance[2]	. .	1.7	0.4	-0.9	-0.9	-0.5
General government gross debt (Maastricht)[4]	. .	75.9	73.3	70.6	67.7	65.7
General government net debt[4]	. .	65.8	62.7	59.7	56.8	54.7
Three-month money market rate, average	. .	0.7	0.0	0.0	2.3	4.6
Ten-year government bond yield, average	. .	3.1	3.0	3.1	4.6	6.5

1. Contribution to changes in real GDP
2. As a percentage of potential GDP.
3. As a percentage of household disposable income.
4. As a percentage of GDP.

Source: OECD (2018), "OECD Economic Outlook No. 104, Volume 2018 Issue 2", *OECD Economic Outlook: Statistics and Projections* (database).

Figure 1. GDP per capita is converging to the OECD average, though slowly

GDP per capita gaps to the upper half of oecd countries. Upper half is weighted by the population.



Source: OECD (2018), Going for Growth.

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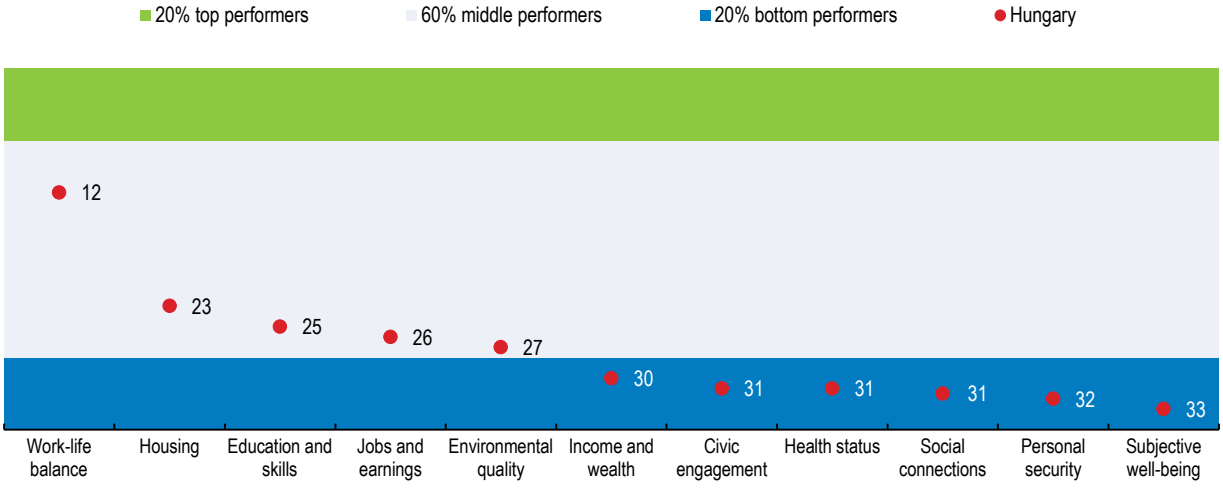
Figure 2. Well-being can be improved

Better Life Index, country rankings from 1 (best) to 35 (worst), 2017[1]



Note: Each well-being dimension is measured by one to four indicators from the OECD Better Life Index set. Normalised indicators are averaged with equal weights.
Source: OECD (2017), OECD Better Life Index, www.oecdbetterlifeindex.org.

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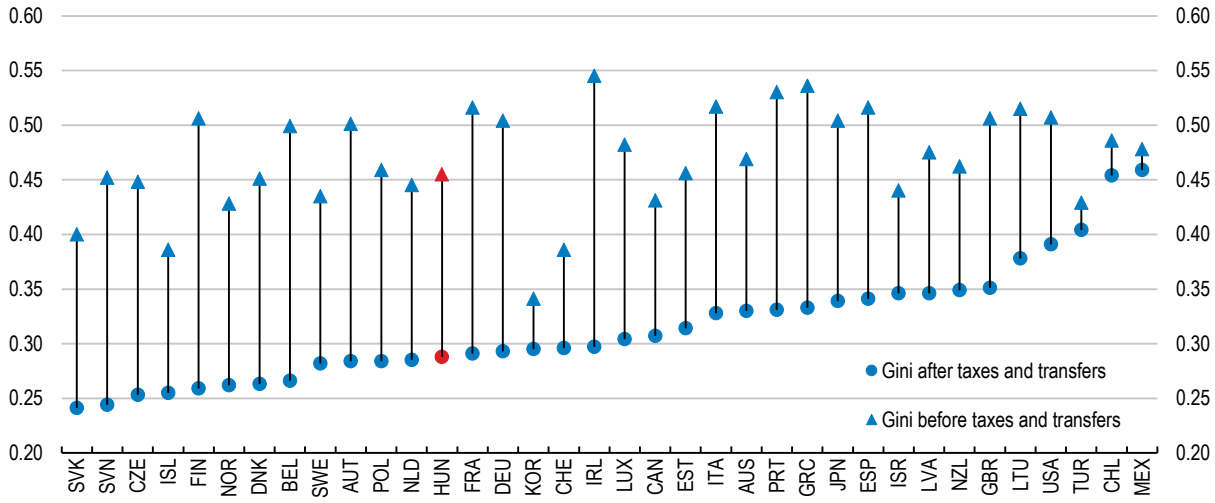
Figure 3. Redistribution reduces inequalities

Changes in the Gini coefficient due to taxation and transfers, 2016[1]



1. 2015 for Chile, Denmark, Germany, Iceland, Ireland, Japan, Korea, Switzerland and Turkey. 2014 for Hungary, New Zealand and Mexico. The Gini coefficient has a range from zero (when everybody has identical incomes) to one (when all income goes to only one person). Increasing values of the Gini coefficient thus indicate higher inequality in the distribution of income.
Source: OECD (2018), OECD Income Distribution Database.

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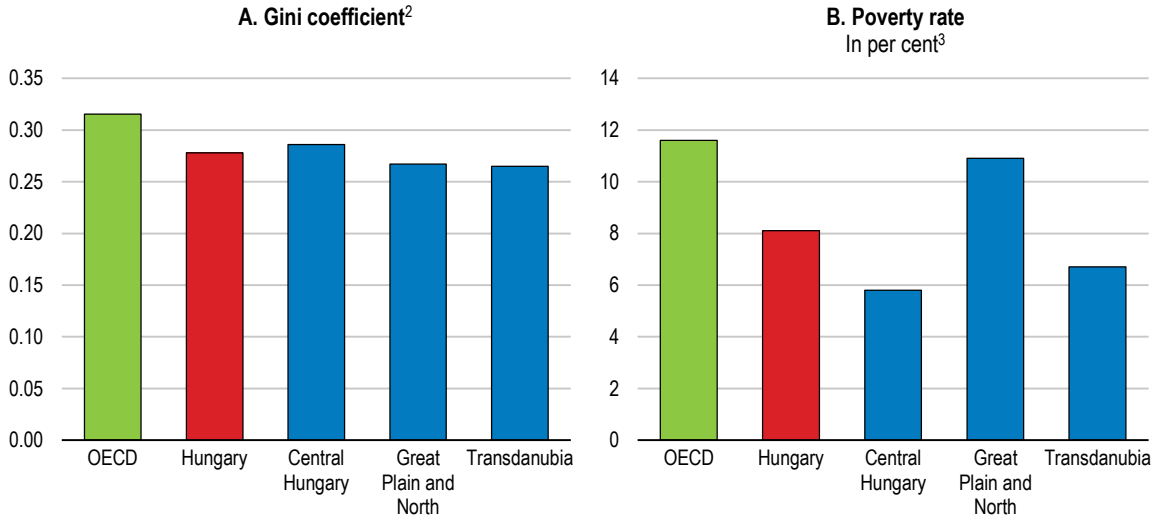
Inequality has remained low, even with the sharp rise in unemployment during the crisis. Poverty is relatively low, but has a strong regional dimension (Figure 4). Poverty rates are higher in the northern and eastern part of the country, reflecting local economies that used to be reliant on out-dated mining and heavy industries. As economic activity disappeared, these regions were left with high shares of public transfer recipients, such as enrolees in public work schemes, disadvantaged groups (e.g. Roma) and low-income pensioners. Inequality is highest in Budapest, reflecting the creation of many high-income jobs in the service sectors. Nonetheless, even low-income earners in Budapest fare better than elsewhere in the country.

Figure 4. Inequality and poverty are relatively low but vary across regions

After taxation and transfers, 2013[1]



1. The OECD aggregate is calculated as an unweighted average of the latest data available for each country.
2. The Gini coefficient has a range from zero (when everybody has identical incomes) to one (when all income goes to only one person). Increasing values of the Gini coefficient thus indicate higher inequality in the distribution of income.
3. The poverty rate shows the share of the population with an income of less than 50% of the respective national median income. Income is adjusted for differences in household size.

Source: OECD (2018), OECD Regional Well-Being Database; and OECD (2018), OECD Income Distribution Database.

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Improving living conditions requires not only that production continues to move up the value chain, but also that local comparative advantages are better exploited and that left-behind regions have better linkages to the rest of the economy, which would add to productivity growth. In addition, improving the skills of the labour force is key to enable growth. Presently, there is a need to respond to emerging and widening labour shortages, which would benefit from higher female labour participation and better integration of job seekers. This is also important for preparing for the impact of an ageing population. The key messages of this Economic Survey are:

- The economy is expanding rapidly, and macroeconomic policies need to be gradually tightened to prevent overheating and stem rising inflation.
- Population ageing will eventually put pressure on public finances, particularly on pension and health spending. Policies should be devised and implemented early to head off these pressures.
- Better mobilising labour and improving skills in poor regions, together with better links with regional and national supply chains, are the key to long-term sustainable growth in living standards.

Recent macroeconomic developments and short-term prospects

The economic recovery is maturing

Growth is increasingly being driven by private consumption, which is underpinned by expanding real incomes, reflecting strong real-wage and employment growth, high

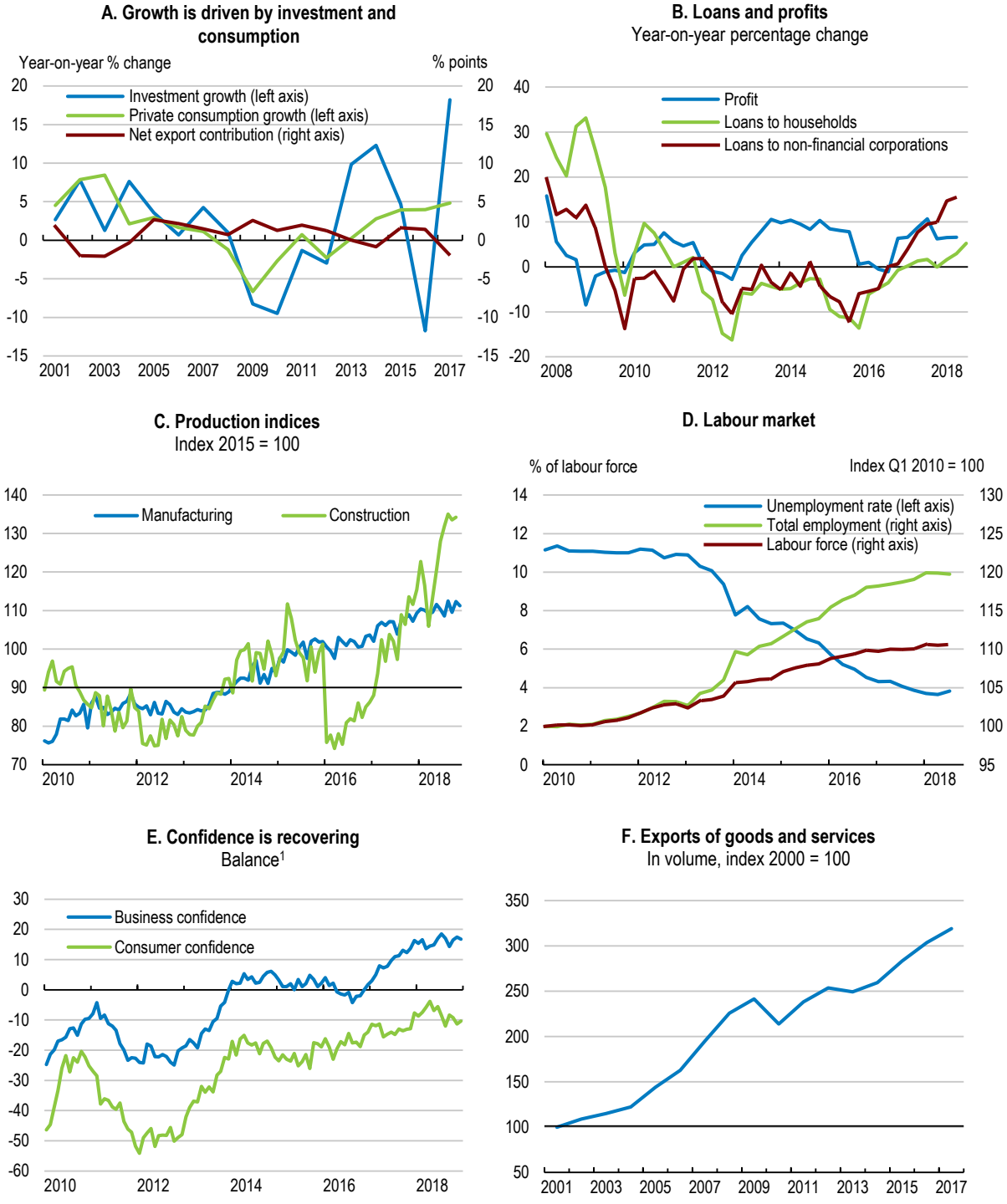
consumer confidence and supportive macroeconomic policy stances (Figure 5). In 2017, investment rebounded strongly, partly reflecting the start of a new funding cycle for EU structural funds. Higher housing investment reflects rising incomes, low interest rates and government subsidies, including for families with three or more children (Ministry for the National Economy, 2018a).

Business investment is supported by favourable monetary conditions and high profits, driven by the ongoing recovery in manufacturing production that requires capacity expansion as well as a higher reliance on capital in production in reaction to the tight labour market (Hungarian Central Bank, 2018) (Figure 5, Panel B and C). Most of the business investment is taking place in large and, increasingly, in foreign-owned export-oriented firms, particularly in the automotive sector (Endresz and Bauer, 2017, p. 14) (Palócz et al., 2016) (OECD, 2017). However, all of manufacturing has benefited from the investment upswing.

Hungarian-owned firms, which are mostly SMEs, seem to have increased their investment less, judging from the relatively slow expansion of bank credit to the corporate sector, though it picked up more recently (see below) (Palócz et al., 2016). The government has a number of investment support programmes in place for SMEs, including the Supplier Development Programme (Ministry for the National Economy, 2018a).

In 2017, exports accelerated as activity in Hungary's trading partners picked up and as new production capacity in export-oriented firms, particularly in the car, and, to a lesser extent, chemical industry, came into operation (Figure 5, Panel F; Figure 6, Panels A and B). This development has further skewed exports towards transport equipment and machinery (56% of exports by value in 2017) and chemical products (12% of exports by value in 2017). Imports rose even faster in 2017, reflecting the high import-content in exports and strong growth in domestic consumption, narrowing the current account surplus.

Figure 5. Economic developments are strong



1. Business confidence is calculated as an unweighted average confidence indicators for manufacturing, construction, retail trade and services excluding retail trade.

Source: OECD (2018), OECD Economic Outlook: Statistics and Projections (database); OECD (2018), OECD Main Economic Indicators (database); and Thomson Reuters.

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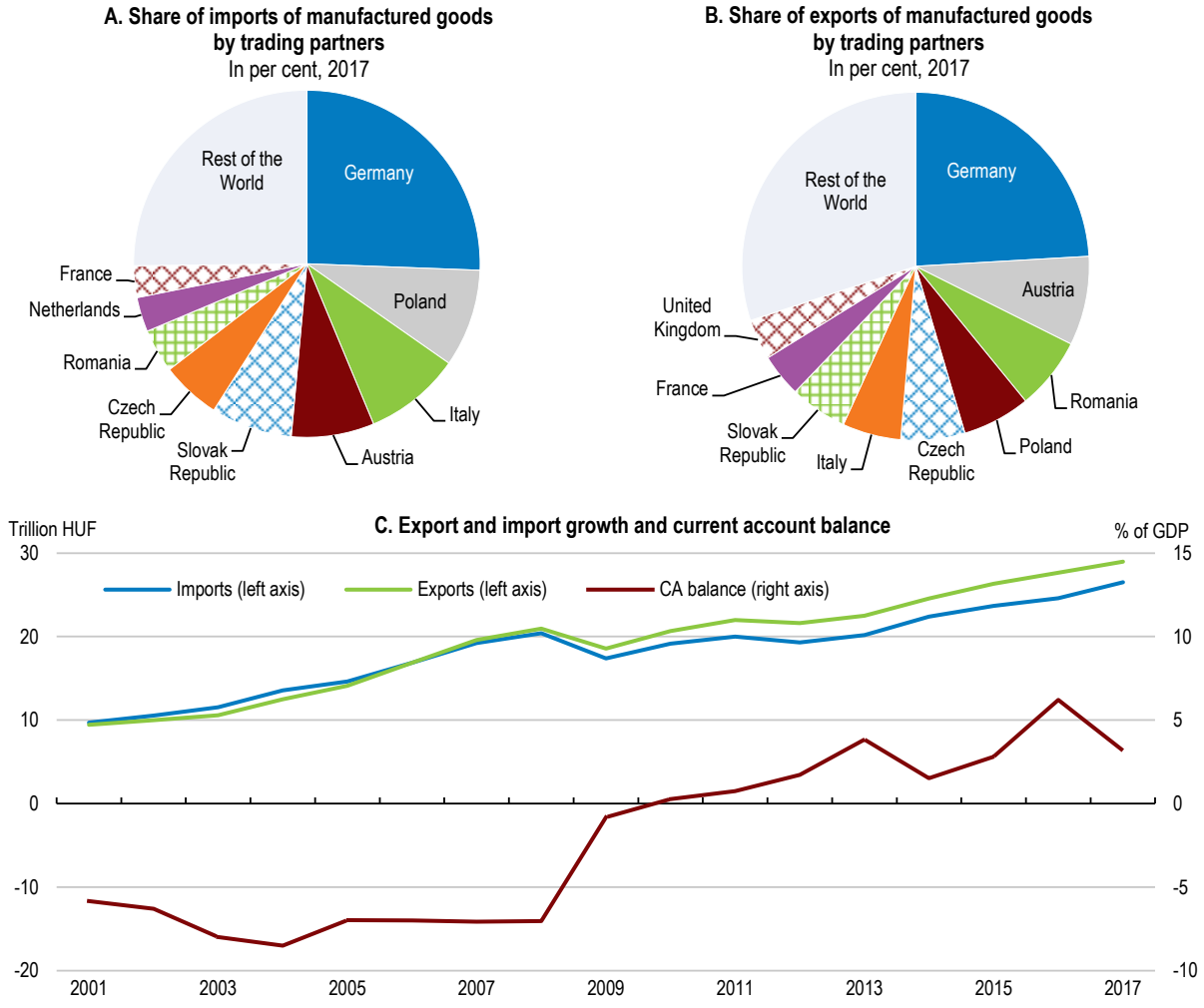
Figure 6. Trade is mainly with Europe



Source: OECD (2018), OECD International Trade by Commodity Statistics (database); OECD (2018), OECD Economic Outlook: Statistics and Projections (database); and OECD (2018), OECD Resilience Database.

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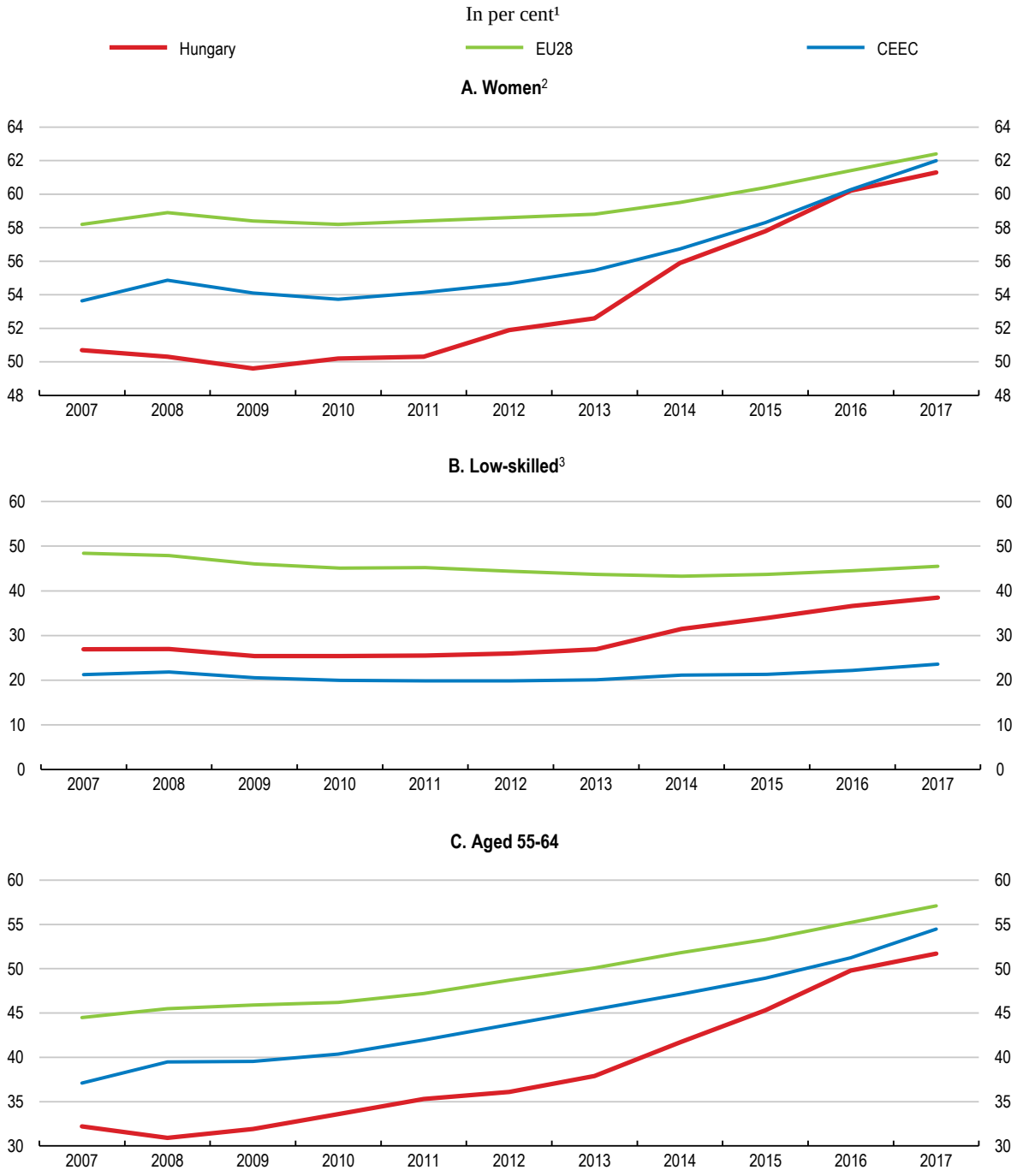
Labour market shortages are emerging and widening

In 2017, total employment creation slowed, reflecting strong private sector employment creation and a decline in public employment Figure 5, Panel D). Moreover, the number of enrolees in public work schemes fell to just below 150 000, aided by increased search incentives for enrolees as the ratio of their (non-indexed) wages to the rising minimum wage was reduced from 77% to 59% between 2012 and 2018. The improved labour market situation has also benefited groups with weak attachments (including females, older and low-skilled workers and long-term job seekers) partly helped by the extensive use of public work schemes, vocational training subsidies and lower social security contributions (Figure 7) (OECD, 2016), (Ministry for the National Economy, 2018). Labour supply has increased as the positive effects of improved labour market prospects offset the ageing-related shrinking of the working-age population (Figure 8).

Figure 7. Employment rates of women, the low-skilled and older workers have risen



1. Central and Eastern European countries (CEEC) include the Czech Republic, Poland and the Slovak Republic.
2. Data refer to the population aged 15-64.
3. Low skilled refer to those with less than primary, primary and lower secondary education (ISCED levels 0-2). Data refer to the population aged 15-64.

Source: Eurostat (2018), "LFS series - detailed annual survey results", Eurostat Database.

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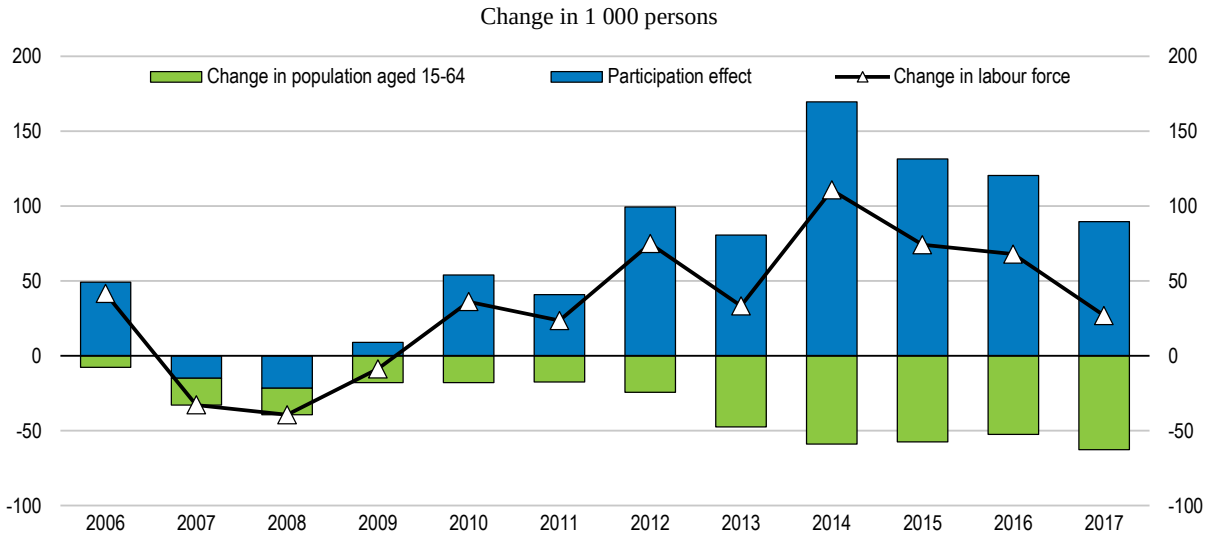
Figure 8. Higher participation is helping to offset the effect of ageing in the labour market



Source: OECD (2018), OECD Employment and Labour Market Statistics (database).

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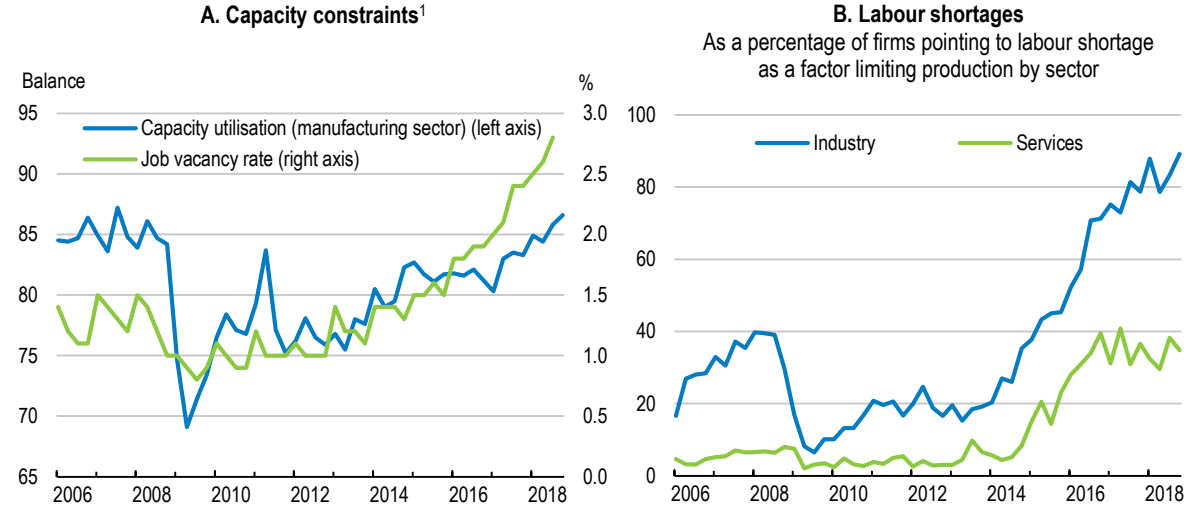
The labour market has been tightening significantly, as indicated by the historically low unemployment rate, the increasing number of firms having problems in hiring qualified workers and the more-than-doubling of the job vacancy rate since 2010 (PwC, 2018). Migration of skilled workers and increasing number of cross-border commuters are contributing to the labour market shortages. In addition, capacity utilisation has been rising since 2012 (Figure 9) (Eurostat, 2018a).

Figure 9. Capacity constraints are increasing



1. Job vacancy rate refers to the sum of the number of occupied posts and the number of job vacancies.
Source: OECD (2018), OECD Main Economic Indicators (database); Eurostat (2018), "Job vacancy rate", Eurostat Database; and Eurostat (2018), "Business and consumer surveys", Eurostat Database.

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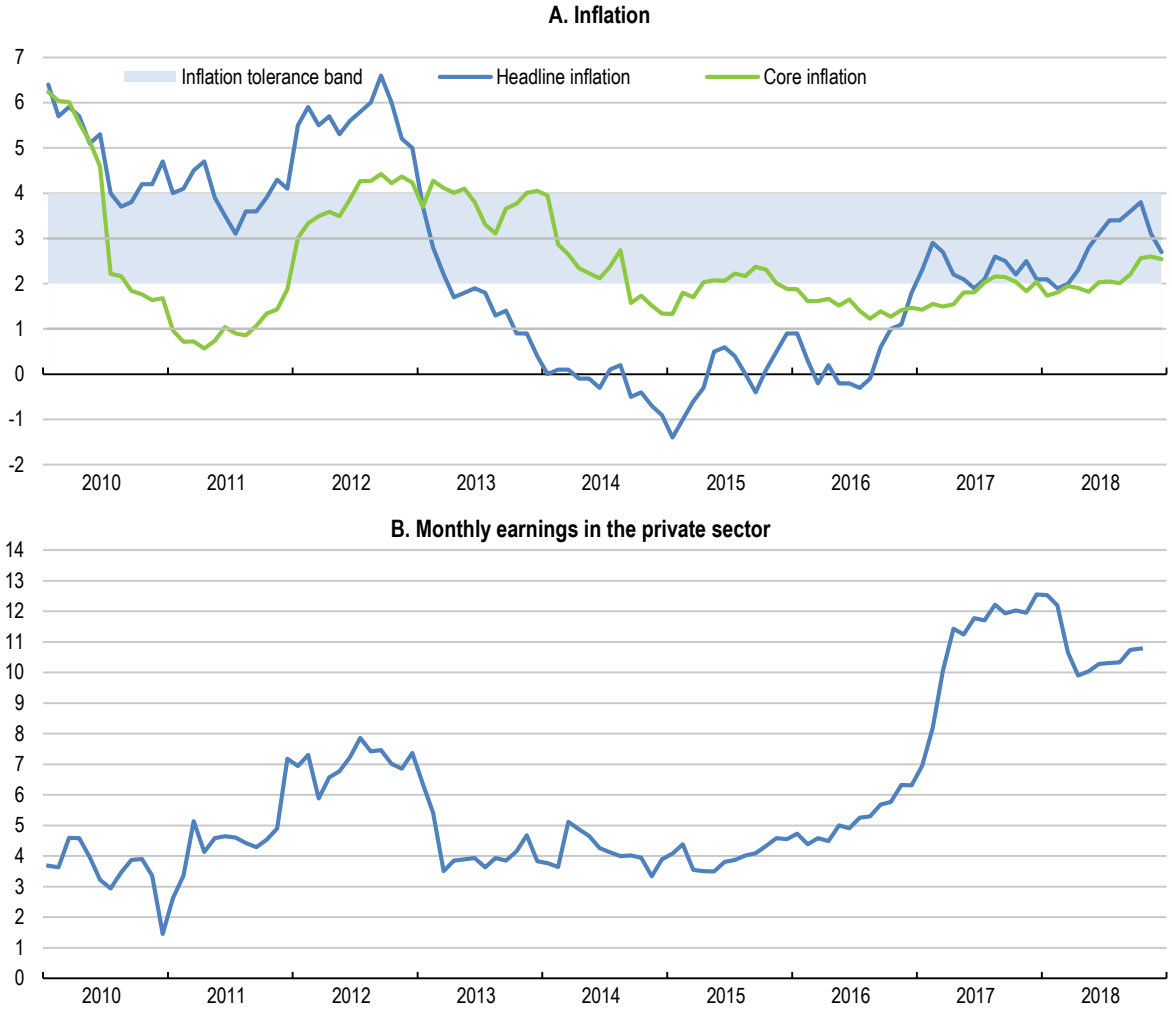
The tightening labour market has led to higher wage growth, which exceeded 10% in both 2017 and 2018 on the back of stronger underlying wage dynamics and higher minimum wages (Figure 10, panel B). A 2016 tripartite 6-year wage-agreement raised minimum wages by 15% and 25% in 2017 and by half as much in 2018. Further increases are planned for 2019-22 subject to annual reviews by the Permanent Consultation Forum of the government and social partners. These reviews should assess whether additional minimum wage increases will harm external competitiveness and employment. Employers were compensated by a cut of more than one-quarter (accumulated over 2016-2018) in their social security contribution rates to19.5% (Figure 11). Further reductions to 11.5% in 2022 are conditioned on continued wage increases, but the 2019 budget contains a 2 percentage points cut to be implemented in July (Ministry for the National Economy, 2018a).

Figure 10. Inflation is picking up

Year-on-year percentage change[1]



1. Core inflation excludes energy and food. Three-month moving average for monthly earnings in the private sector.

Source: OECD (2018), OECD Main Economic Indicators (database).

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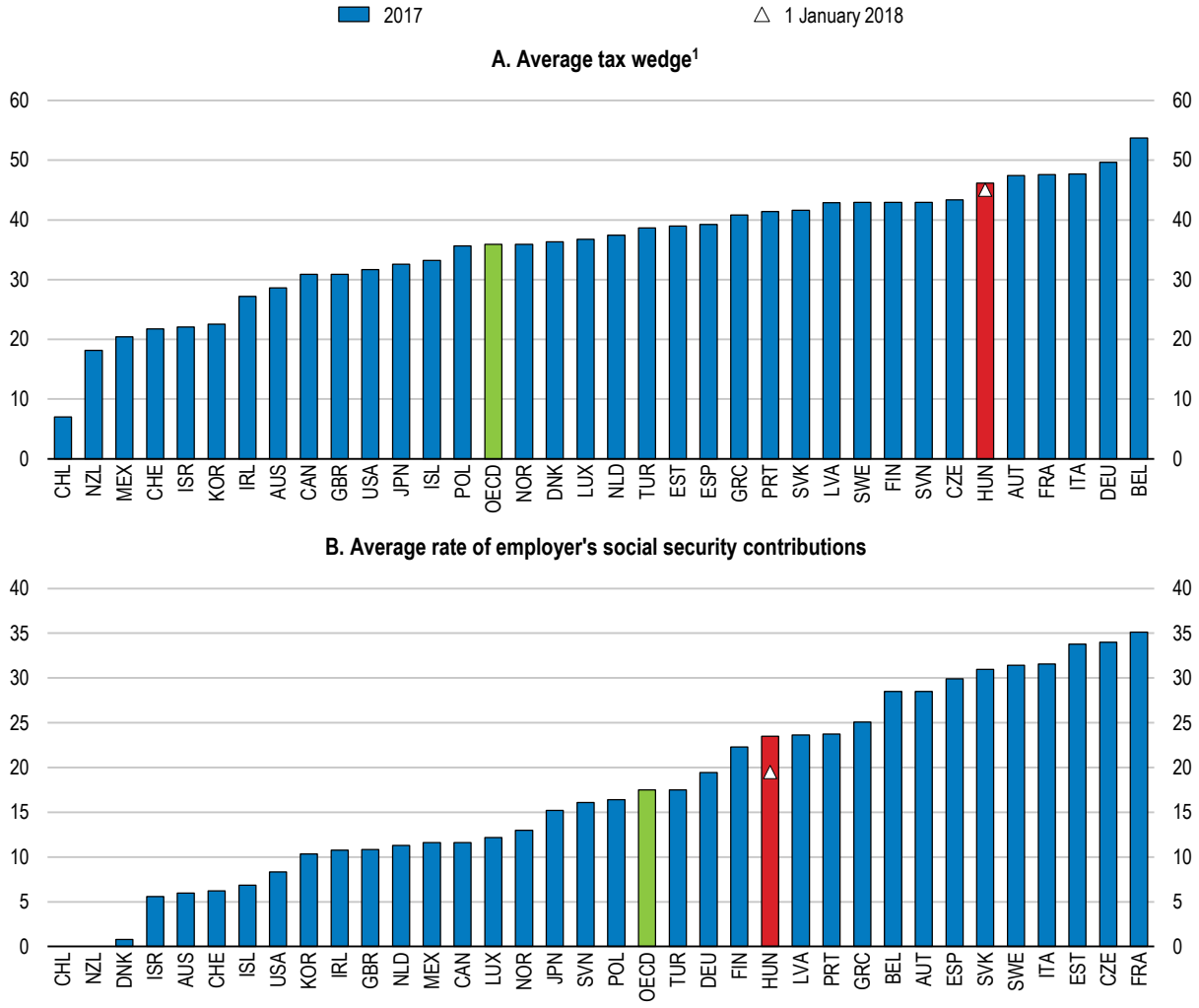
Figure 11. The tax wedge is being reduced

For a single person with average earnings, as a percentage of gross wages



1. 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. The 1 January 2018 observation reflects only Hungarian measures.
Source: OECD (2018), "Taxing Wages: Comparative tables", OECD Tax Statistics (database).

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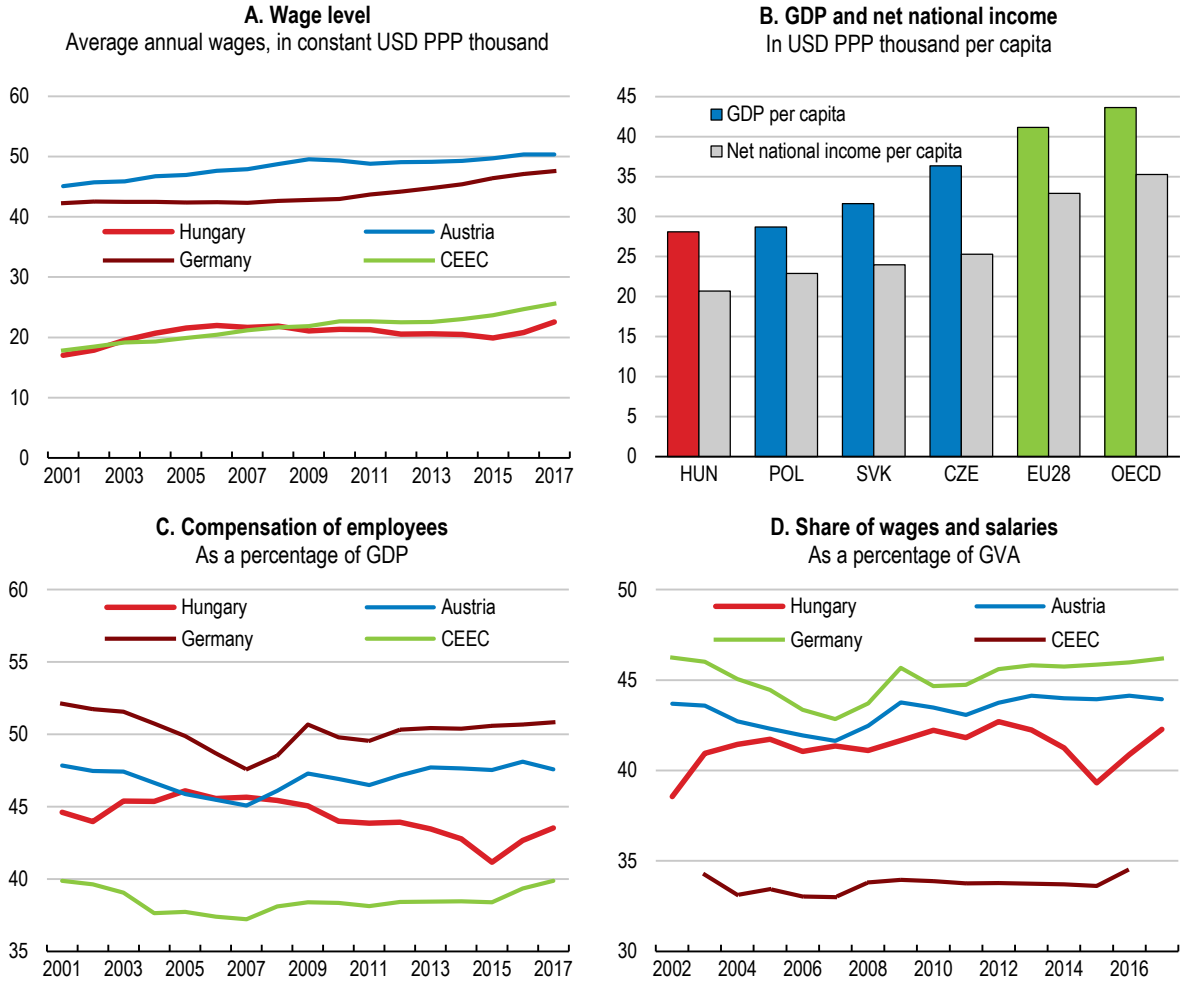
Headline inflation has picked up and passed the central bank's target of 3% (with a tolerance band of +/-1%) by mid-2018 and reached 3.8% in the autumn before coming down below 3% as one-off effects disappeared, reflecting that most of the increase had been driven by higher food and energy prices (Figure 10, panel A). Core inflation (excluding energy and food) has started increasing, before stabilising around 2 ½% in the autumn. Nonetheless, surveys from spring 2018 indicated low inflation expectations at that point in time (Central Bank of Hungary, 2018a). More recent EU surveys confirm this pattern into the summer, before household inflation expectations started to edge up.

Since 2015, labour productivity growth has been well below real wage growth, leading to higher unit labour costs. The associated increase in the wage share has been larger than in

other CEEC countries (Figure 12). The share remains lower than in the 2010s. However, if wage growth continues to outpace productivity growth in the same manner, then the wage share will be higher than at the peak of the previous cycle, while contributing to higher unit labour costs. Wage competitiveness is not yet a risk factor, but continued rising wages could put pressure on external competitiveness in the near future. Such a development could discourage inwards FDI. On the other hand, rising wages are also an integral part of incomes catching up towards richer OECD countries. Moreover, higher wages could stem emigration of high-skilled workers and attract skilled labour. This would support a shift to higher productivity activities, increasing the attractiveness for foreign investors and furthering growth.

Figure 12. Wage levels remain low in Hungary despite recent increases



Note: Central and Eastern European countries (CEEC) include the Czech Republic, Poland and the Slovak Republic.
Source: OECD (2018), OECD Employment and Labour Market Statistics (database); OECD (2018), OECD Economic Outlook: Statistics and Projections (database); and OECD (2018), OECD National Accounts Statistics (database).

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Bolstering productivity growth has to address the dichotomy between the mainly foreign-owned, export-oriented and innovative firms with strong growth and profits, and the domestic SME sector with low productivity growth, little technological spill-over and a low propensity to innovate (European Commission Staff Working Document, 2018). This requires more competition on domestic markets to foster competitive firms, pointing to a need for reduced regulatory barriers and improved regulatory policy formulation as discussed in the previous *Survey* (OECD, 2016a) (Bania et al., 2017). More competitive firms would also have stronger investment incentives, but human capital also needs to be enhanced, especially in skills upgrading and on-the-job training of workers (OECD, 2016a).

Prospects and risks

Economic activity remained strong in 2018 but will moderate in 2019 as capacity constraints tighten further. This means that demand will increasingly be met through imports and inflation will continue to rise. Private consumption will progressively drive growth, as real incomes continue to expand and household savings fall. Public investment is set to gradually slow as the EU funding cycle matures. Business investment will continue to respond to the need for expanding production capacity. Exports will be supported by external demand and new industrial capacity, but rising costs will slow gains in export market shares. The pace of import growth is driven by domestic demand and will continue to exceed that of exports, further reducing the current account surplus.

An escalation of international trade disputes could cut demand for Hungary's exports, and undermine investor confidence. Faster-than-expected wage increases could spill over into prices and unhinge inflation expectations, requiring an abrupt change in policy stances, which would exaggerate the boom-bust business cycle pattern. If productivity growth fails to catch up to the increases in real wages, then external competitiveness would be eroded, reducing export growth and Hungary's attractiveness to inward FDI. On the other hand, stronger-than-expected productivity gains would bolster the capability to absorb rapid wage gains and secure faster income convergence.

Besides these risks, the economy is exposed to some potential vulnerabilities, which have low probabilities but have large impacts on the economy. These include renewed turbulence in international financial market that would reduce banks' willingness to lend, hurting investments and other events (Table 2).

Table 2. Potential vulnerabilities of the Hungarian economy

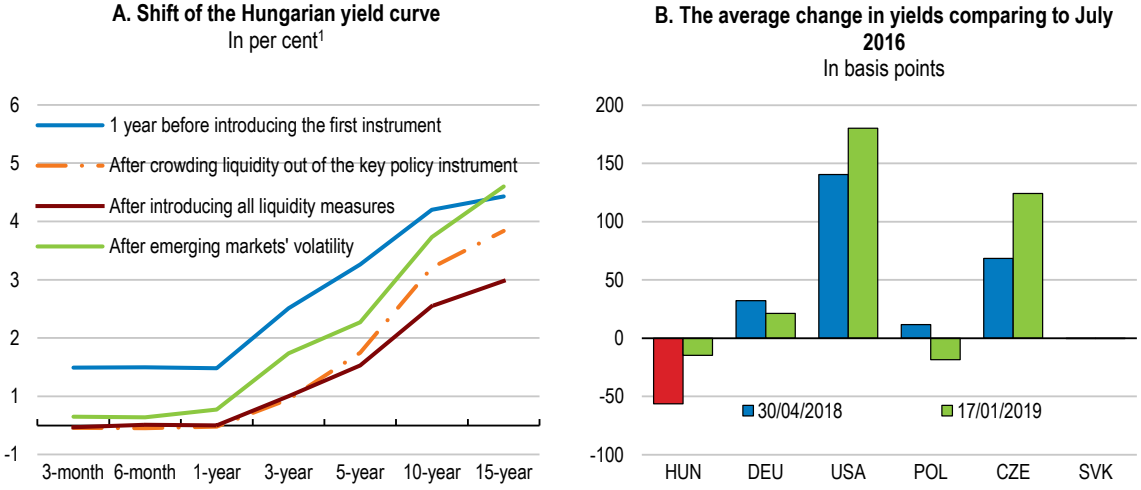
Shock	Possible impact
A sharp increase in geopolitical tensions, particularly in Europe.	Such tensions would lead to investors seeking refuge in safe harbours, potentially precipitating currency outflows from Hungary owing to interest-rate differentials and recent currency fluctuations, with knock-on effects on inward private sector investment.
Emerging market economies turbulence spreading to Hungary	A sharp currency depreciation could force an abrupt and large increase in monetary policy rates, resulting in a confidence crisis that suppress growth
A sharp reduction of EU funding of structural Programmes in the next funding period starting in 2021.	A deterioration in funding would severely hamper implementation of the government's development strategies.

Monetary, financial and fiscal policies to promote stability and well-being

Monetary policy is supportive

Policy interest rates have been unchanged since September 2017 when the overnight central bank deposit rate was cut to -0.15% and the base rate was kept unchanged at 0.9% (Magyar Nemzeti Bank, 2017a). In addition, the central bank used unconventional measures to lower the yield curve, although with limited impact for longer maturities (Figure 13) (Magyar Nemzeti Bank, 2017a) (Virág and Nagy, 2016).

Figure 13. The yield curve has steepened



1. *Exact dates: 1 year before introducing the first instrument: 20-09-2015; After crowding out liquidity of the key policy instrument: 20-09-2017; After introducing all liquidity measures: 18-01-2018; After emerging market's volatility*: 11-06-2018.
Source: Thomson Reuters.

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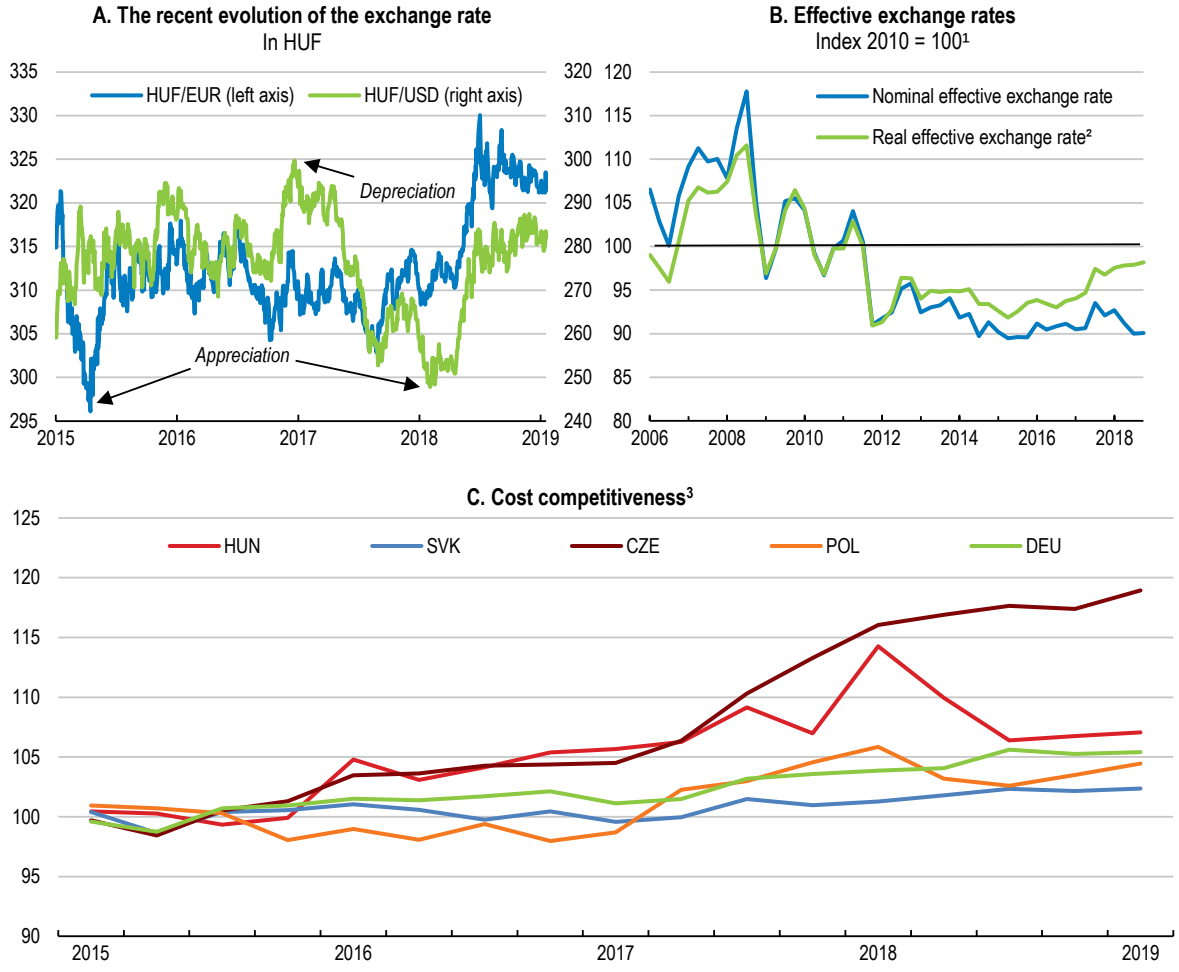
In September 2018, the central bank announced that it is prepared for a gradual and cautious normalisation of monetary policy, while maintaining policy rates. As a first step, some of the unconventional monetary policy tools – including a three-month deposit facility, a mortgage-bond purchase programme and an interest rate swap facility – will be phased out by end-2018. During the phasing out period, a Funding for Growth Scheme Fix will be introduced to encourage commercial banks to provide fixed-term loans to SMEs following similar programmes in the past (Central Bank of Hungary, 2018b) (Central Bank of Hungary, 2018c) (Central Bank of Hungary, 2018d).

The currency has fluctuated. In 2017, the currency appreciated against the euro and the US dollar, despite a widening interest-rate differential. In 2018, increasing volatility in emerging markets led to a sharp depreciation and higher yields more than reversing the previous appreciation (Figure 14, Panel A and B). This development addresses some of the concern that the currency may be somewhat overvalued (IMF, 2018). The currency depreciation also mitigated some of the increases in unit labour costs brought about by strong real-wage growth (Figure 14, Panel C). However, other economies with floating exchange rates have been forced to hike policy rates in response to large depreciations to stem capital outflows, irrespective of the fundamental value of their currency (Figure 15). Moreover, as real interest rates remain negative, in a context of rising global interest rates Hungary may be vulnerable to currency outflows as investors seek better yields.

Figure 14. Emerging market volatility has spilled into the Hungarian markets



1. At constant trade weights.
2. Real effective exchange rates take account of price level differences between trading partners. Movements in real effective exchange rates provide an indication of the evolution of a country's aggregate external price competitiveness.
3. A rise in the indices represents a deterioration in that country's competitiveness. Real exchange rates are a major short-run determinant of any country's capacity to compete. Note that the indices only show changes in the international competitiveness of each country over time.

Source: Thomson Reuters; and OECD (2018), OECD Economic Outlook: Statistics and Projections (database).

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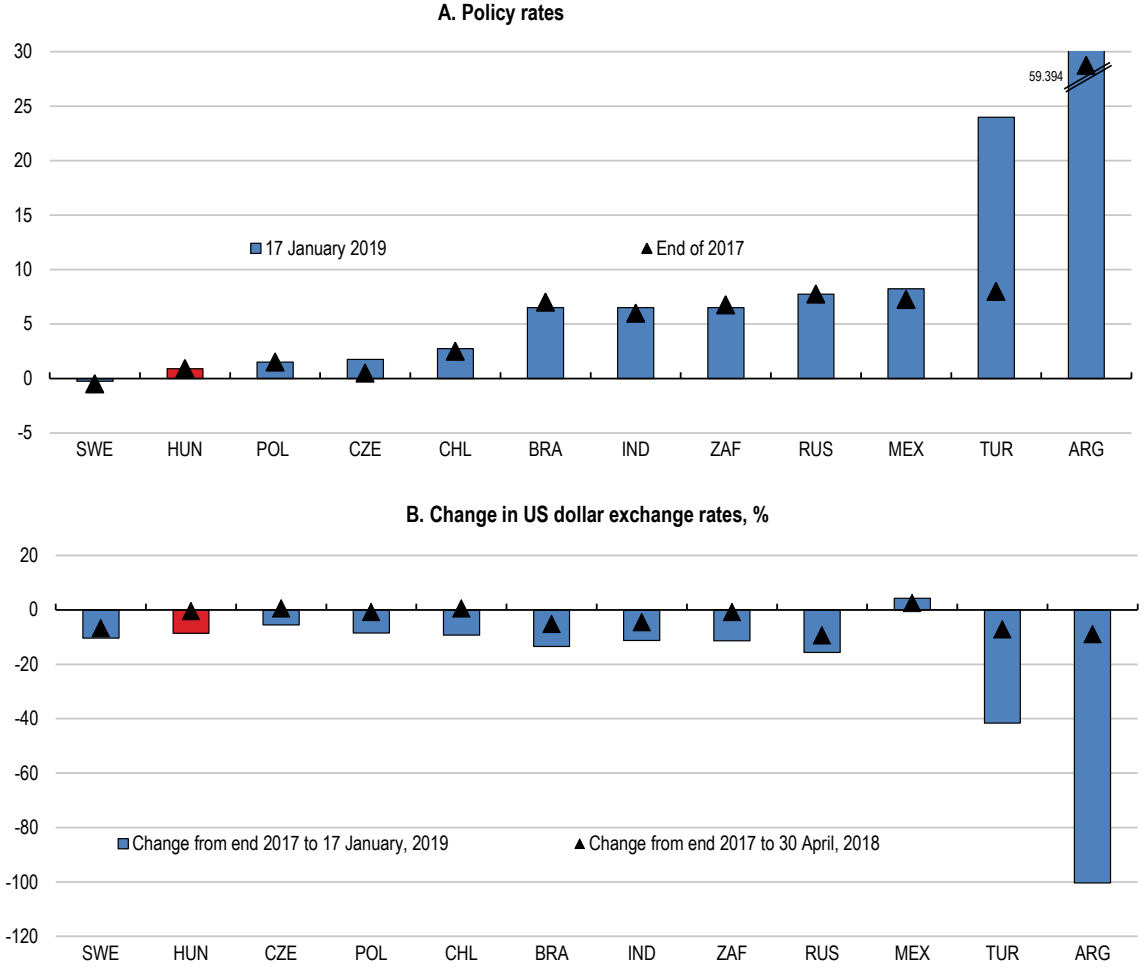
International reserves have declined by one-third between 2014 and 2017, mainly reflecting the conversion of households' foreign currency mortgages to domestic denominations. This also reduced the import cover rate below three months (Figure 16) (IMF, 2018). At present, this in itself does not give rise to concern and the latest IMF Article IV consultation concluded that foreign reserves remain adequate.

The currency depreciation has contributed to higher inflation, though less than other factors such as higher commodity prices and excise duties. The fast wage increases combined with rising inflation are likely to have contributed to the increase in inflation expectations since

mid-2018. This calls for a normalisation of monetary policy to ensure that inflation expectations remains well anchored, including a gradual increase in policy rates and the continued exiting from unconventional monetary policy measures. The authorities may need to resort to earlier and much more substantial tightening if the depreciation continues under the influence of international financial disturbances affecting emerging markets economies, or if there is a faster-than-expected normalisation of international monetary conditions.

Figure 15. Some central banks have been forced to sharply increase policy rates



Source: Thomson Reuters.

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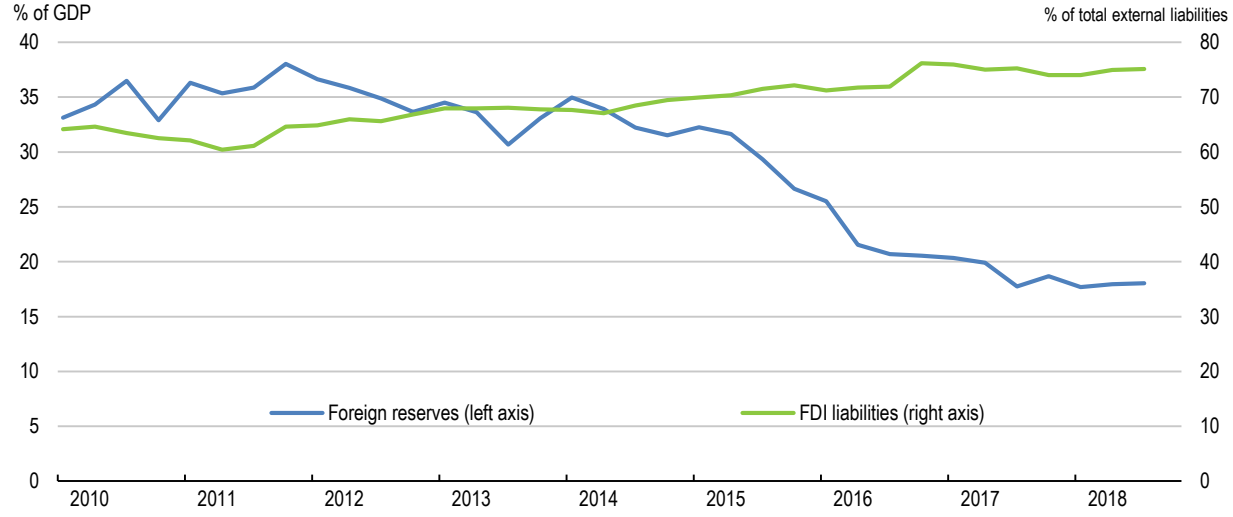
Figure 16. Foreign reserves are declining



Source: OECD Economic Outlook: Statistics and Projections (database).

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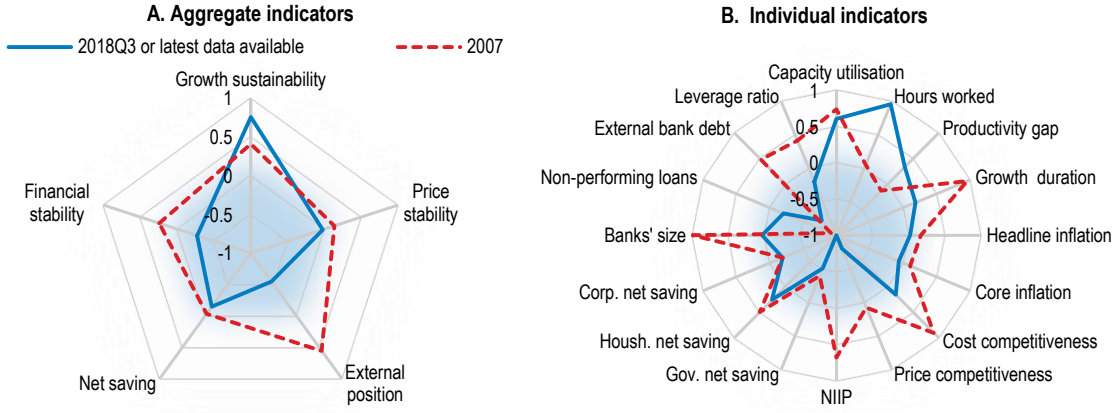
Financial sector vulnerability could be further reduced

Since 2015, the stability of the financial sector has improved markedly (Figure 17). Banks' capital adequacy ratio is around 20% which – while improved – implies lower capital buffers than Hungary's regional peers (IMF, 2018). The banking liquidity coverage ratio is 189%, providing banks with adequate shock absorbing capacity in line with Basel and national regulatory requirements (Magyar Nemzeti Bank, 2018a). Other indicators also point to good health. Return on assets (ROA) and equity (ROE) were around 1.5% and 14% respectively by mid-summer 2018, close to historical highs, reflecting solid profitability on the back of historically high profits; although much of the profitability is concentrated in the largest banking groups (Magyar Nemzeti Bank, 2018a). In addition, banks have continued to reduce their share of non-performing loans (NPLs). However, the level remains relatively high (Figure 18). The main problem resides with the household sector, which accounts for almost three-quarters of NPLs (90 days delinquency), while the share of corporate NPLs is considered to be in line with normal risks for such loans (Magyar Nemzeti Bank, 2018b).

Further reduction in NPLs is facilitated by the strong economy, but may be hampered by a lack of an official trading platform and a framework for selling impaired loans. After fewer than three years of operation, the central bank sold the Hungarian Restructuring and Debt Management Ltd. (MARK), created to absorb bad debts to a private investor in early 2017 (OECD, 2016a) (APS Investment, 2017). MARK had an initial positive effect. Nonetheless, the sale runs somewhat against current European Union reform efforts to develop, among others, a secondary market for NPLs and prevent future NPL build-ups (OECD, 2018a). The central bank has introduced macro-prudential tools (including a Systemic Risk Buffer) to discourage holding NPLs, which may support the secondary market for NPLs. The Systemic Risk Buffer accelerates portfolio cleaning as it levies capital surcharges on banks that keep their non-performing loans beyond a certain duration or threshold as recommended in the last *Survey* (Table 3) (OECD, 2016a).

Figure 17. Macro-financial vulnerabilities have diminished significantly since 2007

Deviations of indicators from their real time long-term averages (0), with +1 representing the greatest vulnerability and -1 (the centre point) the least



Note: Each aggregate macro-financial vulnerability indicator is calculated by aggregating (simple average) normalised individual indicators. Growth sustainability includes: capacity utilisation of the manufacturing sector, total hours worked as a proportion of the working-age population (hours worked), difference between GDP growth and productivity growth (productivity gap), and an indicator combining the length and strength of expansion from the previous trough (growth duration). Price stability includes: headline and core inflation. External position includes: the average of unit labour cost (ULC) based real effective exchange rate (REER), and consumer price (CPI) based REER (cost competitiveness), relative prices of exported goods and services (price competitiveness) and net international investment position (NIIP). Net saving includes: government, household and corporate net saving. Financial stability includes: banks' size as a percentage of GDP, share of more than 1 year overdue loans of households (non-performing loans), external bank debt as percentage of total banks' liabilities, and capital and reserves as a proportion of total liabilities (leverage ratio). Due to data availability data for non-performing loans refer to 2009 instead of 2007 and the deviation from long-term average is not calculated in real time.

Source: OECD calculations based on OECD (2015), OECD Economic Outlook: Statistics and Projections (database) and Datastream.

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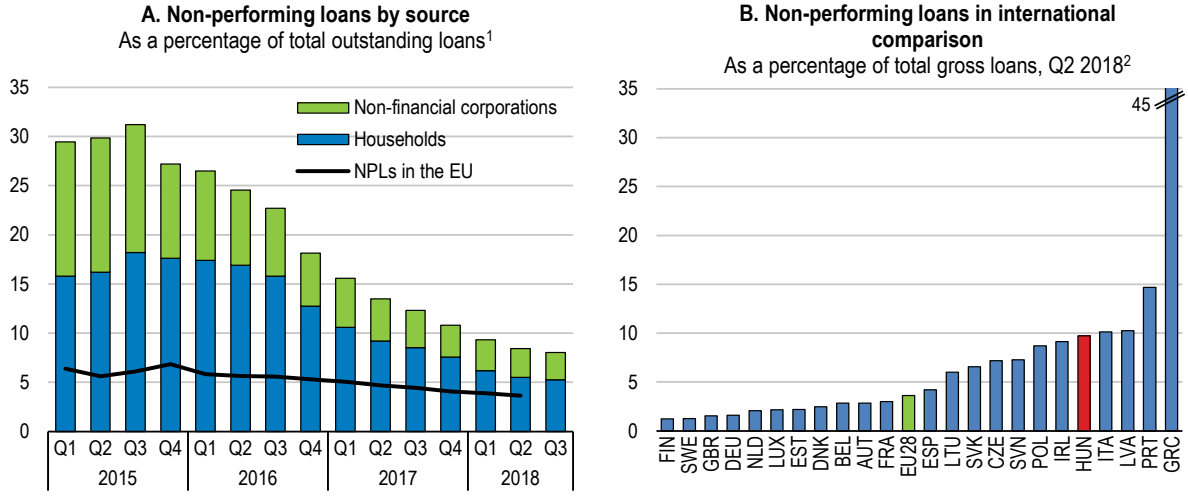
Another part of the European Union's reform efforts is the continued restructuring of the banking sector. A sign of insufficient restructuring is that although the profitability of the banking sector has continued to improve, this has mainly arisen from non-core activities, such as trading, dividend incomes etc. (Figure 19) (Magyar Nemzeti Bank, 2018b). Without profits from non-core activities, a number of credit institutions (with a combined market share of 20%) would be loss-makers. More generally, the sector has the highest operating and staffing costs in the CEEC region, reflecting a combination of high concentration and a low degree of competition (Figure 19, Panel B) (Magyar Nemzeti Bank, 2018a) (IMF, 2018) (Magyar Nemzeti Bank, 2017c). The government could spur competition in the sector through privatisation of the remaining state-owned banks to help foster the financial sector's ability to contribute to growth.

Despite the improved health of banks, they only started extending credit again in 2017, and the volume of total credit remains below pre-crises levels (Figure 20, Panel A). Demand for mortgage loans has been stimulated by government measures (the Family Housing Subsidy Programme) as well as central bank measures, including a consumer-friendly housing loan programme and the promotion of fixed interest loans. Nonetheless, the household credit-to-GDP level remains lower than in peer countries (Magyar Nemzeti Bank, 2018a). Some of the unconventional monetary policy measures are aimed at

supporting credit extension to the corporate sector and particularly SMEs (Magyar Nemzeti Bank, 2018c) (Magyar Nemzeti Bank, 2017d). In June 2018, the overall loan volume to the corporate sector was 12% higher y-o-y. Nonetheless, corporate loans as a share of GDP has remained basically unchanged (Figure 20, Panel C).

Figure 18. The ratio of non-performing loans has fallen



1. Non-performing loans refer to loans with more than 90 days delinquency.
2. Data refer to domestic banking groups and stand-alone banks.
Source: MNB (2018), "XI. Money and capital markets", Statistics, Magyar Nemzeti Bank; and ECB (2018), "Consolidated Banking data", Statistical Data Warehouse, European Central Bank.

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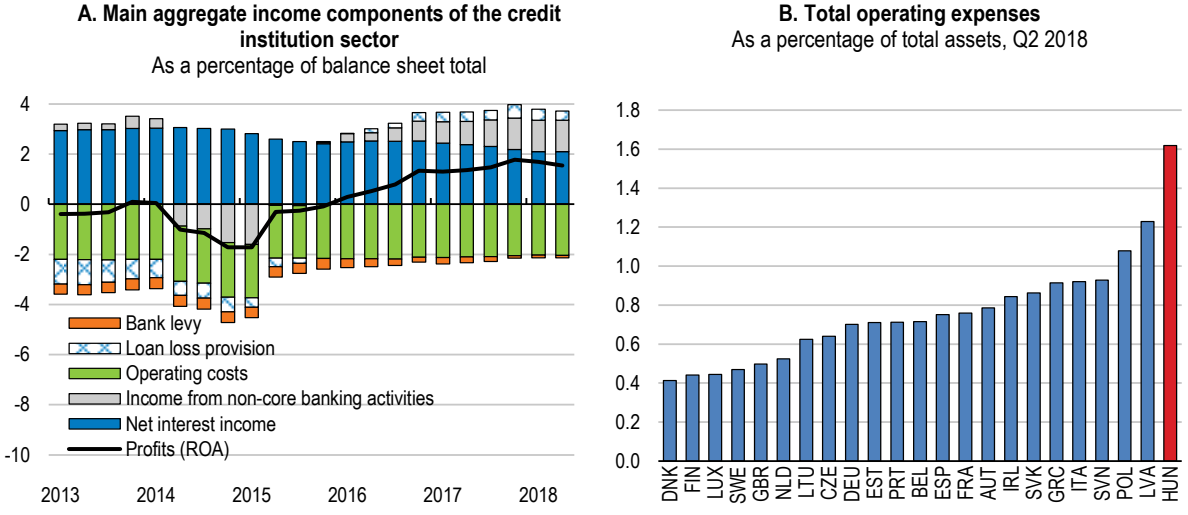
Figure 19. Low banking sector efficiency is a concern



Source: MNB (2018), "Financial Stability Report", Magyar Nemzeti Bank, May; and ECB (2019), "Consolidated Banking data", Statistical Data Warehouse, European Central Bank.

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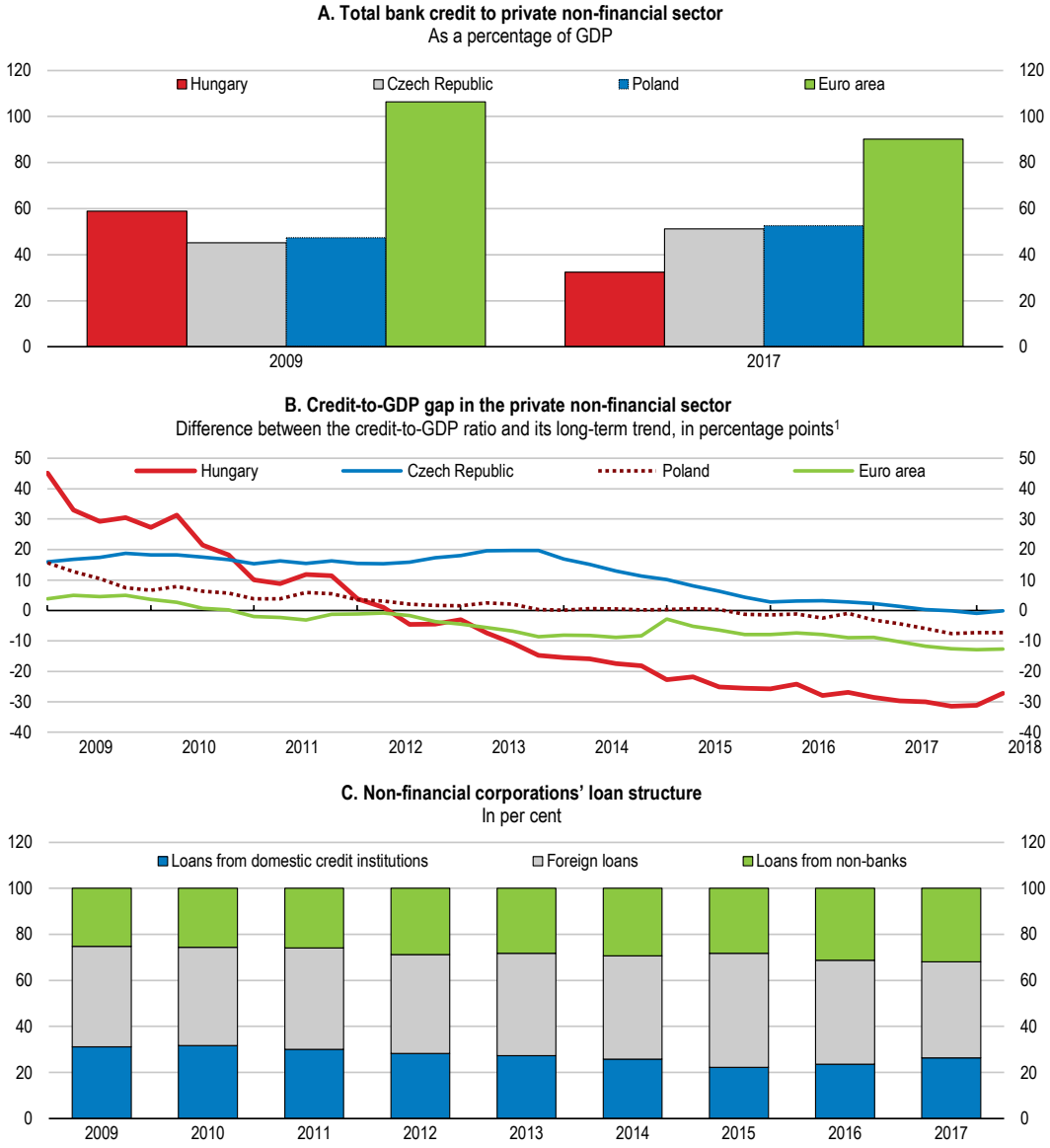
Arguably, the banking sector could extend credit further. Deposits have grown faster than credits and lending is lagging economic growth, suggesting a nearly neutral impact on growth (Magyar Nemzeti Bank, 2018a) (Magyar Nemzeti Bank, 2018c). Moreover, the gap between the credit-to-GDP ratio and its long-run trend indicates room for stronger credit expansion Figure 20, Panel B). This suggests that the withdrawal of all unconventional monetary policy measures together with a more competitive and risk-bearing banking sector would allow the sector to resume its traditional credit role.

Figure 20. The stock of credit is relatively low



1. Credit-to-GDP gap is based on total credit to the private non-financial sector as a percentage of GDP.
Source: BIS (2018), "Credit to the non-financial sector", BIS Statistics Explorer, Bank of International Settlements; and MNB (2018), "XII. Financial accounts (financial assets and liabilities of institutional sectors)", Magyar Nemzeti Bank.

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Table 3. Past recommendations on monetary policy and financial sector

Recommendations in previous *Surveys*	Action taken
Reduce tax burdens of banks and improve tax design.	In January 2017, the levy on larger banks has been reduced from 0.24% to 0.21% of assets, although the tax on small banks, of 0.15% of assets, remained unchanged. Since 2017, banks are eligible for transaction duty reduction if their number of clients from financial services increases.
Consider moving towards to a more neutral policy stance.	In September 2017, the central bank has lowered the overnight central bank deposit rate from -0.05 to -0.15% and kept the base rate unchanged at 0.9%.
Expand capital surcharges on nonperforming loans detained by banks beyond a certain period.	Since 2017, banks have to comply with enhanced capital requirements, if their stock of impaired project financing loans exceeds 30% of domestic Pillar 1 capital requirement.
Implement a strategy for the asset management company to step-up offloading of non-performing assets.	In early 2017 the Hungarian Restructuring and Debt Management Ltd. (MARK Zrt.) was sold to a private investor, removing an official trading platform for impaired loans.
The ownership of the stock exchange should return to private ownership over the medium-term.	No action taken.

Fiscal policy should be more forward looking

Fiscal policy is being loosened. On the revenue side, employers' social security contribution rate was lowered in 2017 and again it 2018 to 19.5% (from 27%), as recommended in the previous *Survey*. The corporate income tax rate was also lowered to 9% in 2017. The total revenue reductions are 1.8% of GDP in 2017 and 0.7% of GDP in 2018, constituting a permanent reduction in the revenue-to-GDP share, (European Commission, 2018a) (Ministry for the National Economy, 2018). Additional minor revenue losses, amounting to 0.2% of GDP in 2017 and 0.1% in 2018, came from the lowering of the VAT rate on selected products (European Commission, 2018a). The government's main objective for this lowering was to combat VAT fraud. By contrast, the previous *Survey* recommended increasing the reliance on consumption taxes (Table 6). Moreover, these changes have added to a complex and administratively costly VAT system. This contributes to a persistent, albeit narrowing, VAT gap (the difference between expected and collected VAT receipts) which stood at 13% in 2016, the most recent figure available (European Union, 2018). Other smaller tax measures had an estimated budgetary cost of 0.1% of GDP in both 2017 and 2018 (European Commission, 2018a). The 2019 budget contains additional tax reductions for families with at least two children; another 2 percentage point reduction in employers' social contribution rate, and tax relief for small businesses, subtracting another 0.4% of GDP from revenue.

Public spending has been expanding since 2017, reflecting renewed disbursements from EU structural funds and an increase in housing subsidies (with a budget cost of 0.1% of GDP) (European Commission, 2018a). Moreover, in 2018 public wages were increased by between 5% and 18% as part of the agreed 30% cumulated public wage increases for the years 2017 to 2019, adding 0.4% of GDP to the public wage bill (Ministry for the National Economy, 2018b) (European Commission, 2018a). On the other hand, the lower social security contributions reduced the wage bill by an estimated 0.2% of GDP. The 2019 budget contains higher spending on security, education, unemployment benefits, and on transport and telecommunications infrastructure and services. Nationally funded investment projects will add 0.7% of GDP to spending in 2019 (European Commission, 2018a).

Overall, the general government budget deficit will have widened to an estimated 2.4% of GDP in 2018 before slightly narrowing in 2019, reflecting the fact that the budgetary effect

of a looser fiscal stance is broadly offset by strong economic growth, leaving the revenue and spending broadly stable as a share of GDP (Table 4). The implied deterioration in the structural deficit mainly reflects the tax reductions (Figure 21). These have mostly focused on reducing taxation on labour and corporate income with positive employment and growth effects in the medium term, while the short-term implication is a continuation of a pro-cyclical fiscal stance (OECD, 2011). Given the risks of an overheating economy, the government should tighten the fiscal stance for cyclical reasons to avoid overheating and thus prolong the economic upswing. Fiscal policy should avoid excessive pro-cyclicality in order to build up sufficient buffers to meet medium-term challenges.

Table 4. Fiscal indicators

As a percentage of GDP.

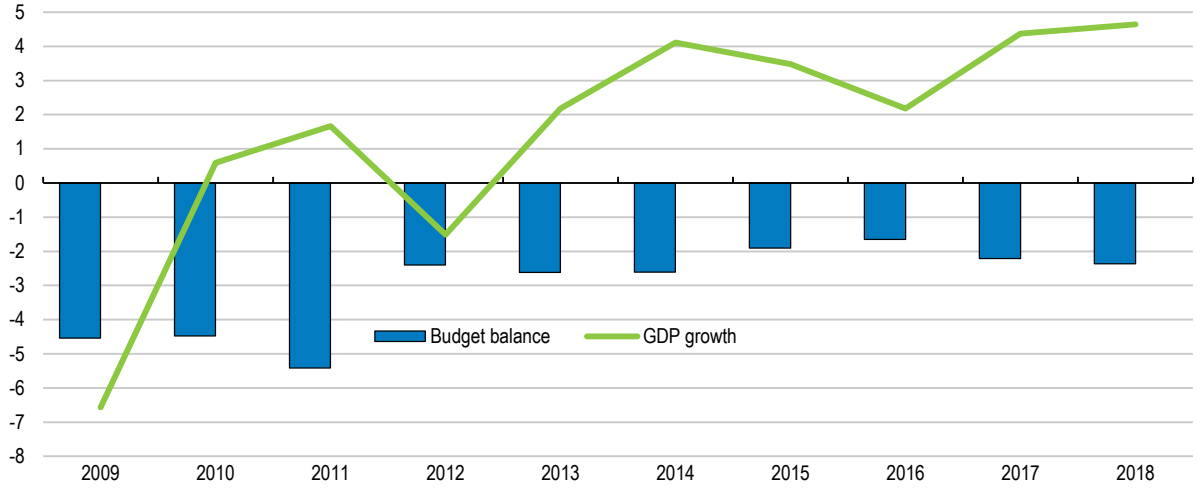
	2016	2017	2018	2019 [1]	2020 [1]
Spending and revenue					
Total revenue	45.1	44.7	44.3	44.3	44.2
Total expenditure	46.8	46.9	46.6	46.5	46.3
Net interest payments	3.1	2.7	2.4	2.5	2.8
Budget balance					
Fiscal balance	-1.6	-2.2	-2.4	-2.2	-2.2
Cyclically adjusted fiscal balance[2]	-0.7	-2.3	-3.4	-3.6	-3.5
Underlying fiscal balance[2]	-1.4	-2.3	-3.4	-3.6	-3.5
Underlying primary fiscal balance[2]	1.7	0.4	-0.9	-1.1	-0.6
Public debt					
Gross debt	97.3	91.9	89.5	86.6	84.8
Gross debt (Maastricht definition)	73.8	71.3	68.9	66.0	64.1
Net debt	65.8	62.7	59.7	57.0	55.1

1. Contribution to changes in real GDP
2. As a percentage of potential GDP

Source: OECD (2018), OECD Economic Outlook: Statistics and Projections (database).

Figure 21. The size of the budget deficit is hidden by the strong economy

As a percentage of GDP[1]



1. Figures for 2018 are projections.

Source: OECD (2018), OECD Economic Outlook: Statistics and Projections (database).

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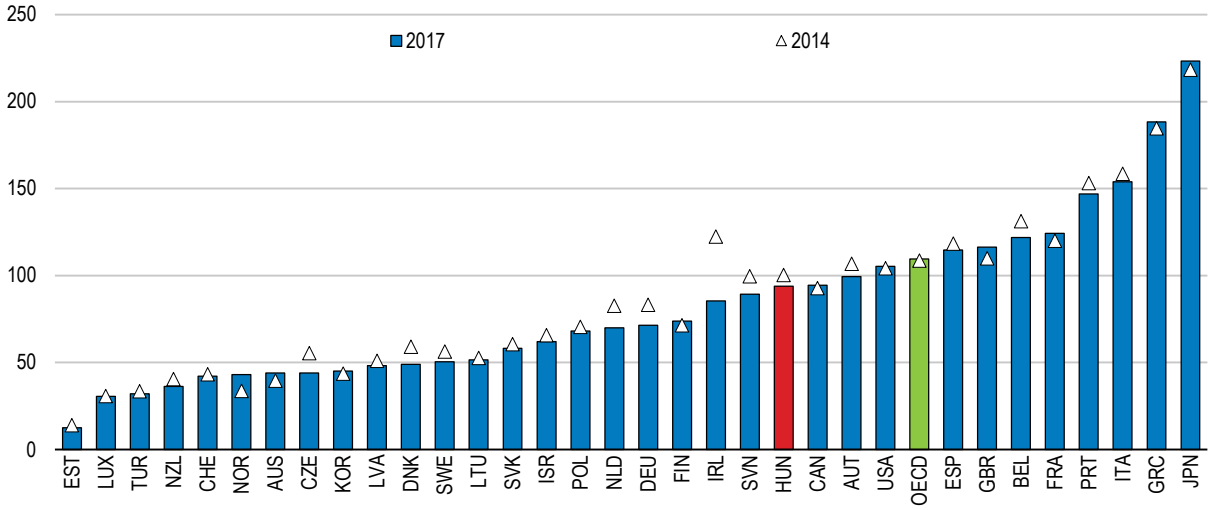
The public debt-to-GDP ratio has declined since its peak in 2014, bringing it just below the OECD average (OECD, 2016a) (Figure 22. General government contingent liabilities remain at nearly one-quarter of GDP. Almost 40% of these are related to government ownership in the financial sector. In addition, one-fifth arises from government controlled entities in non-financial sector, such as the potential cost of the state-owned energy company keeping energy prices at internationally low levels, as raised in the previous *Survey* (OECD, 2016a) (OECD, 2018b) (Eurostat, 2018b). In line with the constitutional obligation to reduce the public debt-to-GDP ratio to less than 50%, the incoming government has reiterated its commitment to continue a gradual debt reduction. However, the OECD's estimate is that with the current fiscal policy stance the debt-to-GDP ratio will start to increase again after 2019 (Figure 23, Table 5, baseline scenario). Debt would increase markedly faster if the projected increases in age-related spending are not offset by savings in other areas (Not offsetting increase in age-related costs scenario). Similar effects arise if long-term growth fails to materialise as expected, for example if structural reforms fails to raise productivity growth (Lower GDP growth scenario) (European Commission, 2018a). Only fiscal tightening in line with Hungary's Convergence Programme would keep the public-debt-to-GDP ratio on a downwards trajectory (Consolidation effort scenario) (Ministry for the National Economy, 2018b) (European Commission, 2018a).

Figure 22. General government gross debt

As a percentage of GDP[1]



1. 2016 instead of 2017 for Japan, Korea, Turkey and the OECD aggregate.
Source: OECD (2018), OECD Economic Outlook: Statistics and Projections (database).

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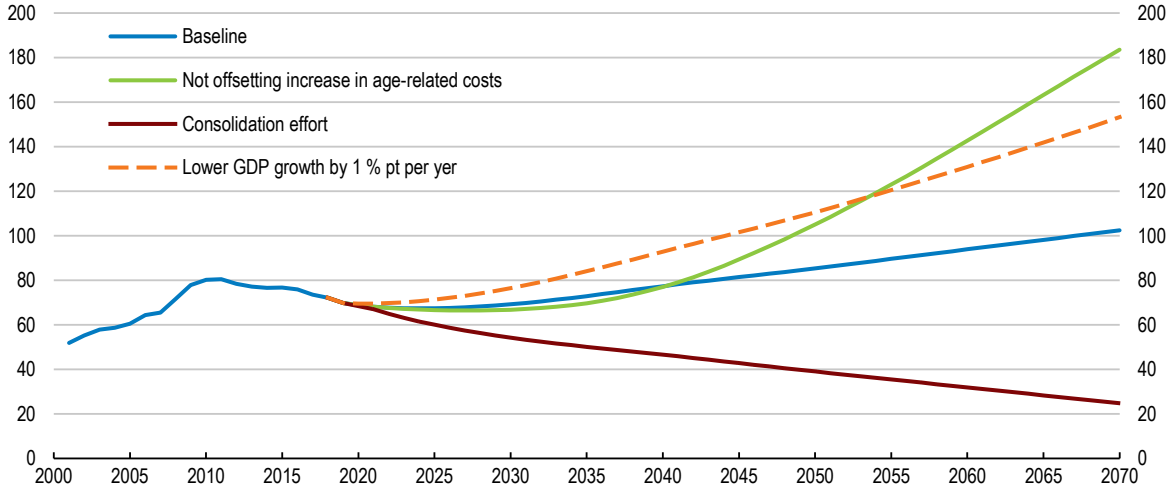
Improving the resilience of small open economies, such as the Hungarian one, depends on achieving low debt levels (Fall and Fournier, 2015). In this sense, the current debt level, of which one-fifth is held in foreign currencies, is a potential source of fiscal fragility for Hungary with its floating exchange rate, particularly in a context of increasing financial instability for emerging market economies. In addition, a continuous lowering of public debt could form part of a pre-financing strategy to deal with the fiscal consequences of population ageing as discussed below. The government has already taken some measures to reduce the debt burden since the last *Survey*. The main fiscal and structural

recommendations in this survey can substantially support the realisation of the government's debt objective (Table 6 and Table 7).

Figure 23. More fiscal consolidation effort is needed to reduce public debt

General government debt, Maastricht definition, as a percentage of GDP[1]



1. The baseline scenario assumes a continuation of the policy stance of 2019 with a primary deficit of 0.9% of GDP, and inflation around 3%, and real GDP growth initially increases then averages 1.5% in line with assumed productivity growth, as projected under assumed convergence with the European Union (European Commission, 2018). The "Not offsetting rising age-related costs" scenario assumes that increased spending on health and pensions will add an additional 3.2% point of GDP to annual government spending by 2070, in line with European Commission (2018). The "Consolidation effort" scenario assumes, in line with the government's medium-term fiscal objective, budget consolidation of 1.6% of GDP until 2022 and thereafter a primary budget surplus of 0.7% of GDP. The "lower GDP growth" scenario assumes that real GDP growth is 1 percentage points lower than currently projected in the EU convergence scenario for the entire simulation period.
Source: Calculations based on *OECD (2018), OECD Economic Outlook: Statistics and Projections (database); Guillemette, Y. and D. Turner (2018), "The Long View*: Scenarios for the World Economy to 2060", OECD Economic Policy Paper No. 22., OECD Publishing, Paris; and European Commission (2018), "The 2018 Ageing Report - Economic and budgetary projections for the 28 EU Member States (2016-2070)" Directorate-General for Economic and Financial Affairs.

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Table 5. Debt scenarios

Scenario	Assumptions
Baseline.	A continuation of the policy stance of 2019 with a primary deficit of 0.9% of GDP Main macroeconomic variables are inflation around 3%, and real GDP growth initially increases then averages 1.5% in line with assumed productivity growth, as projected under assumed convergence with the European Union (European Commission, 2018)
Not offsetting increase in age-related costs.	Increasing spending on health and pensions will add an additional 3.2% point of GDP to annual government spending by 2070, in line with European Commission (2018).
Lower GDP growth.	Real GDP growth is 1 percentage points lower than currently projected in the EU convergence scenario for the entire simulation period.
Consolidation effort.	In line with the government's medium-term fiscal objectives as stated in the Convergence Programme 2018-2022, budget consolidation of 1.6% of GDP until 2022 and thereafter a budget surplus of 0.7% of GDP.

Source: European Commission (2018), "The 2018 Ageing Report - Economic and budgetary projections for the 28 EU Member States (2016-2070)" Directorate-General for Economic and Financial Affairs.

Table 6. Past recommendations on fiscal policy

Recommendations in previous *Surveys*	Action taken
Continue reducing public debt in accordance with the fiscal rule.	Since 2016, total debt-to-GDP ratio has declined further to 73.3%.
Reduce government expenditures to further lower the structural deficit.	No action taken.
Continue the fight against VAT fraud.	Since 2017, the compulsory use of online cash registers has been expanded to particular service sectors and from 2018, the use of the online invoice system became obligatory. In 2018, the VAT rate has been reduced further on selected products.
Rely more on non-distortive consumption taxes.	In 2016-2019, the excise duty rate on tobacco products will have been increased gradually, and the excise duty rate on petrol, petroleum and diesel has been linked partially to the world price of Brent crude oil.
Sell stakes in state-owned banks.	In 2016 and 2017 public stakes in MKB and in Gránit Bank have been sold, leaving Budapest Bank (8th largest) fully state-owned, Erste bank (5th largest) with a 15% and FHB bank (11th largest) with a 7.3% share.

Table 7. Potential fiscal consequences of key recommendations

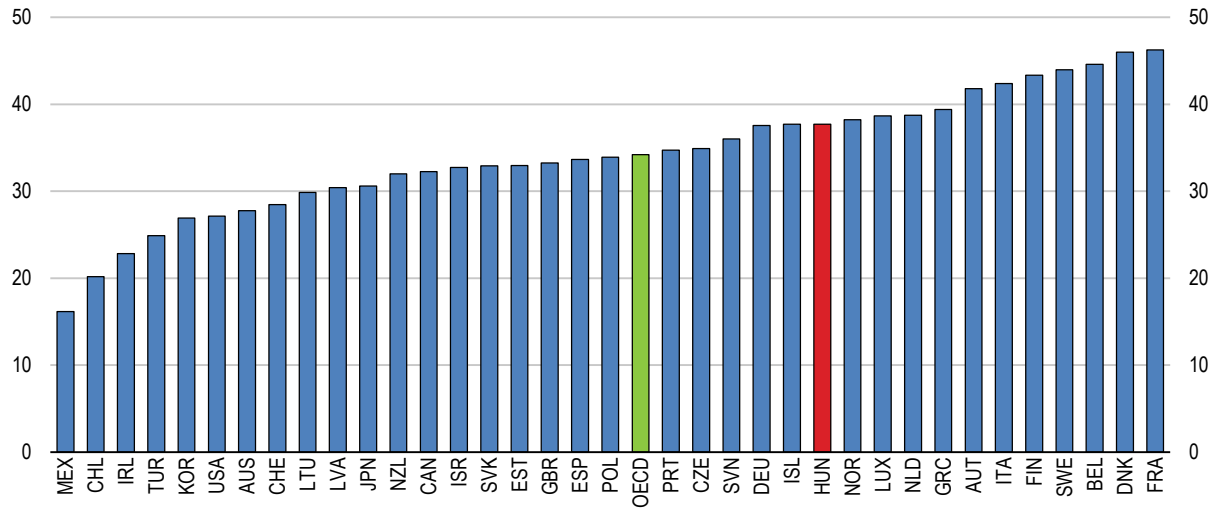
Recommendations with potential fiscal impact	Impacts on fiscal balance
Revenue raising measures:	
Make up for revenue shortfalls from recent lowering of social security contributions and simplify the VAT regime by introducing a single VAT rate.	A uniform VAT rate of 22% would be revenue neutral. Raising the VAT rate by an additional 5 percentage points would cover the 2.6% of GDP revenue shortfall.
Link the retirement age to life expectancy.	Increasing the statutory retirement age to 70 years in steps from 2029 will fully cover the projected long-term pension spending increase to 2.7% of GDP.
Combat old-age poverty by introducing a basic state pension at twice the current minimum pension.	Less than +0.1% of GDP. Capping pensions at 150% of average wages would fully cover the fiscal cost.
Spending increasing measures:	
Improving the efficiency of health care provision.	Restructuring health care provision is revenue neutral if savings from closing hospitals are spent on outpatient care. Establishing country-wide group practices would cost +0.1% of GDP. Other costs are negligible.
Enhance the capacities and efficiency of long-term care.	Full coverage of cash benefits and vouchers costs +1.2% of GDP.
Expand crèche coverage to 80%.	+0.2% of GDP
Double duration of unemployment benefit to six months.	+0.3% of GDP.

Towards a more growth-friendly and equitable tax system

As discussed below, ageing-related spending pressures are rising with population ageing. Reforms may contain some of these spending pressures, but not all. In the absence of offsetting savings elsewhere, such spending would have to be financed through increases in the already high tax-to-GDP ratio (Figure 24). As an illustration, OECD calculations suggest that an increase of 10 percentage points in the social security contribution rates is needed in the long run. However, such an outcome would hurt growth. Insofar as it is necessary to raise additional revenues, this should be done in the least growth distortionary manner possible.

Figure 24. Tax revenues are already high as a share of GDP

As a percentage of GDP, 2017[1]



1. 2016 for Australia and Japan.
Source: OECD (2018), OECD Revenue Statistics (database).

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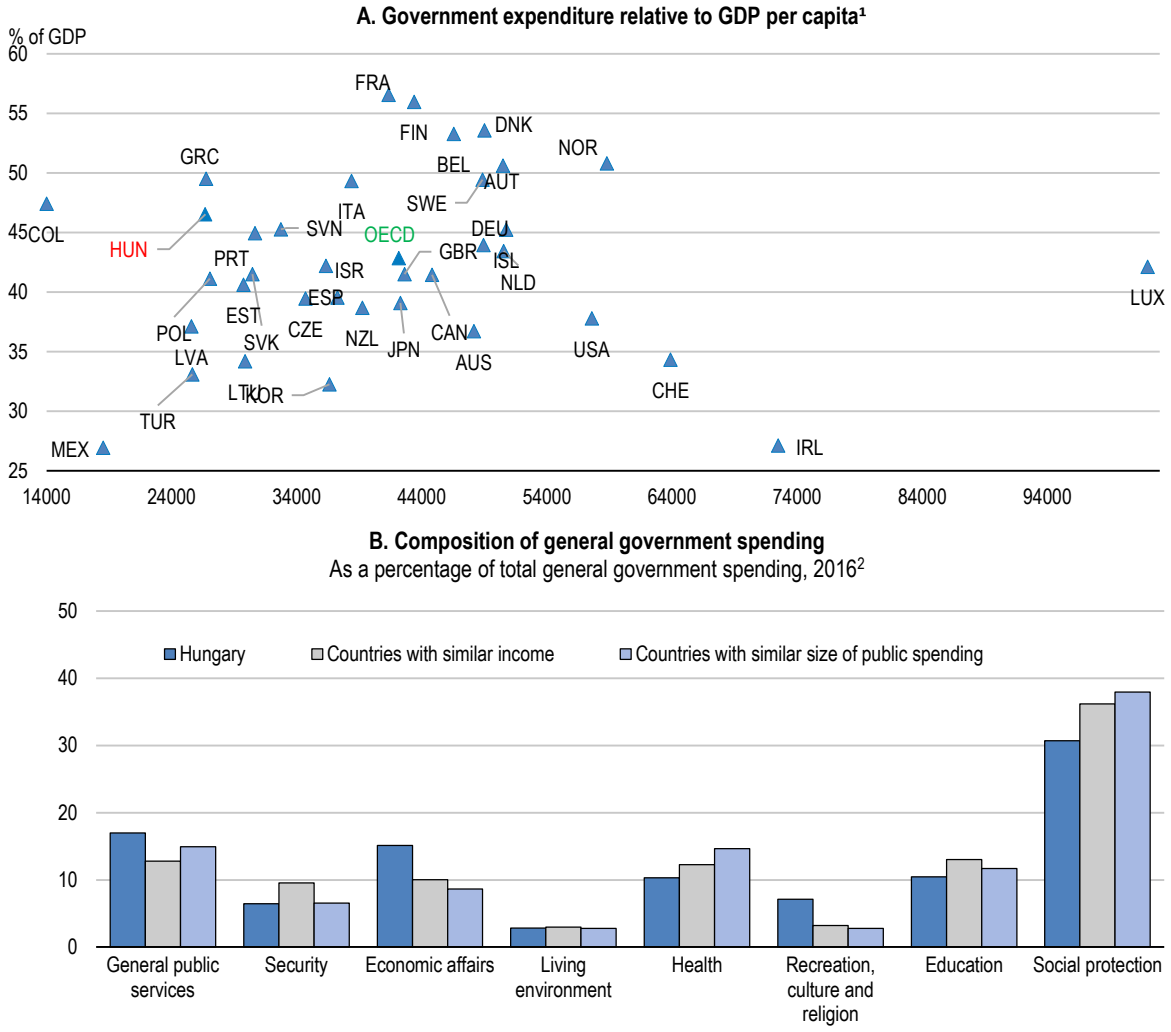
Property taxation, the least distortive type of tax, plays a relative small role in Hungary (Johansson, 2016). Immovable property taxes are optional and levied by municipalities (OECD, 2012a) (OECD, 2010). Raising recurrent taxes on immovable property could involve giving municipalities incentives to have a minimum local property tax or introduce a national property tax. Such measures would make the tax system more neutral vis-a-vis other types of investment and thus improve resource allocation (OECD, 2010).

The VAT system is complicated with a range of reduced rates on selected items. However, reductions implemented in 2006-2009 have not really benefited low-income groups (Cseres-Gergely, 2017). Thus, moving towards a single VAT rate would be less distortive. A single VAT rate could be some 5 percentage points lower than the current standard rate without revenue losses. This could be combined with better targeted social transfers to help low-income households (OECD, 2014a) (Cseres-Gergely, 2017) (Arnold, 2011) (OECD, 2012a). Moreover, tax allowances for families or owner-occupied housing are costly in terms of foregone revenues without favouring equity, and should be replaced by better targeted means-tested transfers (Rawdanowicz, Wurzel and Christensen, 2013). Expenditure in connection with family support is estimated at 4.8% of GDP in 2018 (Ministry for National Economy, 2017).

Savings in non-ageing related spending could, at least partly, avoid the need for increases in taxation. Indeed, the ratio of public spending-to-GDP is relatively high, particularly compared with other countries with similar income levels (Figure 25, Panel A) (OECD, 2016a). Moreover, spending is tilted towards general public services and general economic affairs compared with countries with similar income levels or size of public spending (Figure 25, Panel B). This reflects high interest payments on public debt and the relatively high share of the labour force employed by the public sector (including public work schemes enrolees). The public wage bill could be reduced through faster adaptation of

e-government measures and public administration reform that focuses on securing a competitive public wages and improving the quality of public service provision (IMF, 2018).

Figure 25. The tax structure is tilted towards consumption and labour taxes



1. 2015 for Turkey.
Source: OECD (2018), OECD National Accounts Statistics (database).

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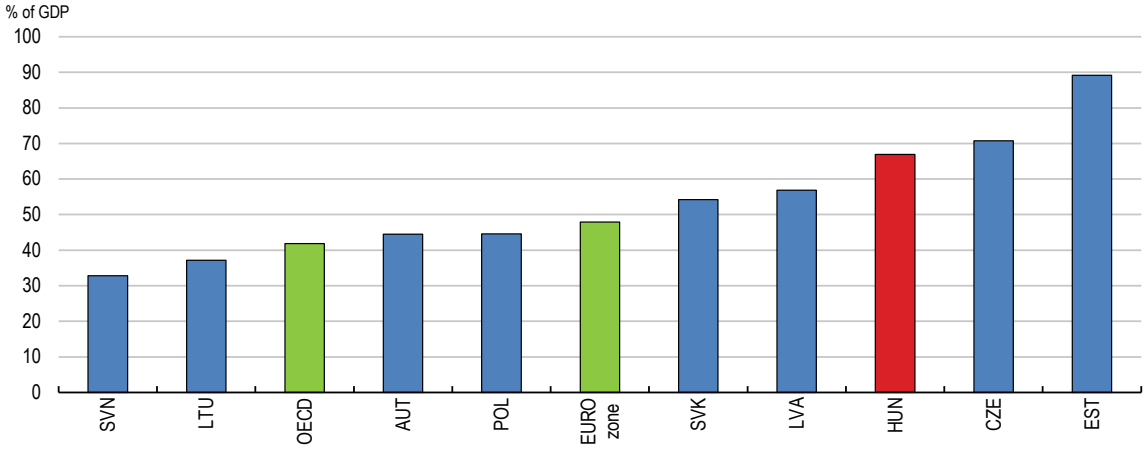
Addressing longer-run challenges to well-being

Broadening growth

During the crisis, the income convergence process halted and only started again in 2013 (Figure 1). The large reliance of inwards FDI to support the convergence process by building up a modern capital stock and linking production to global value chains has also resulted in relatively large capital outflows, reflecting the remuneration of invested capital FDI (Figure 26) (Jirasavetakul and Rahman, 2018). This is also reflected in a relatively

large wedge between GDP per capita and net national income per capita and in a relatively low wage share compared with more advanced economies. Thus, achieving faster income convergence does not only rely on achieving faster growth, but also on going beyond the reliance on inward FDI and developing domestic growth drivers.

Figure 26. Hungary is benefitting from a relatively high stock of inward FDI



Source: UNCTAD (2018), OECD Economic Outlook: Statistics and Projections (database).

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In 2017, the government established a National Competitiveness Council to further productivity growth and income convergence. The Council consists of leaders from government, private and public sectors as well as representatives from academia, and relies on inputs from ministries and the Central Bank to identify relevant structural reform. The Central Bank has suggested 180 measures in areas covering labour market, health care, education, research and development, regulation, and SME support (Palotai and Virag, 2016) (Magyar Nemzeti Bank, 2018d). Many of these have been discussed in previous *Surveys*, and this *Survey* focusses on widening the growth process to include less developed regions, improved human capital formation and better utilisation of available labour resources, including measures to improve health and pension systems. Implementing the key structural reform recommendation in this *survey* would already have a large impact on incomes (Box 1.).

Box 1. Simulations of the potential impact of structural reforms

The impact of the key structural reform recommendations in this Survey is simulated by using historical relationships between reforms and growth in OECD countries. The presented estimates assume swift and full implementation of reforms of reduced the effective maternity leave to 1 year, gradually increase the legal retirement age by 5 years and improved health outcomes. The transmission mechanisms are mainly through the associated increase in the labour supply.

Table 8. Potential impact of structural reforms on GDP per capita after 10 years

Structural policy	Policy change		Total effect on GDP per capita
	Before reform	After reform	
Health policy			
A. Improved health outcomes that reduces the disability rate from 7.7% to 6% of the labour force			1.8%
Labour market policies[1]			
B. Increase the legal retirement age by 5 years	65 years	70 years	5.1%
C. Reduce effective maternity leave to 1 year	3 years	1 year	1.4%
Total A+B+C:			8.3%

Source: OECD calculations based on Balázs and Gal (2016), "The quantification of structural reforms in OECD countries: A new framework", OECD Journal: Economic Studies, Vol. 2016/1 and Balázs (2017), "The quantification of structural reforms: taking stock of the results for OECD and non-OECD countries", OECD Economics Department Working Papers, forthcoming.

The large inflows of FDI have, in many respects, contributed to the emergence of a dual economy. Inward FDI is driven by multinational companies moving their production destined for their international markets to Hungary. The recent reduction in the corporate tax rate would support business investment, including from abroad, which according to OECD estimates could bolster GDP growth by 0.2 percentage point after 10 years (Égert, 2018). However, the intermediate inputs into their production are imported or come from foreign-owned sub-contractors in Hungary. Indeed, available evidence indicates that Hungarian-owned firms, particularly SMEs, do not benefit from inward FDI in terms of higher sales, employment or productivity (Bisztray, 2016). As a result, the benefits to the domestic economy of the integration into global value chains in the form of domestic value added in final foreign demand has been low (Box 2). The other important growth area is the capital region that has benefitted from strong agglomeration effects and increasing demand for business services.

Fostering the development of local SMEs is a complex process, since the ability for local firms to exploit their comparative advantage depends on how well they are integrated into local and national networks. These include physical infrastructure (transport, communication, etc.), knowledge networks (local education and research centres) and links with other business and policy makers to identify local advantages and to provide framework conditions. However, the high degree of centralisation of government responsibilities is likely to hamper this process.

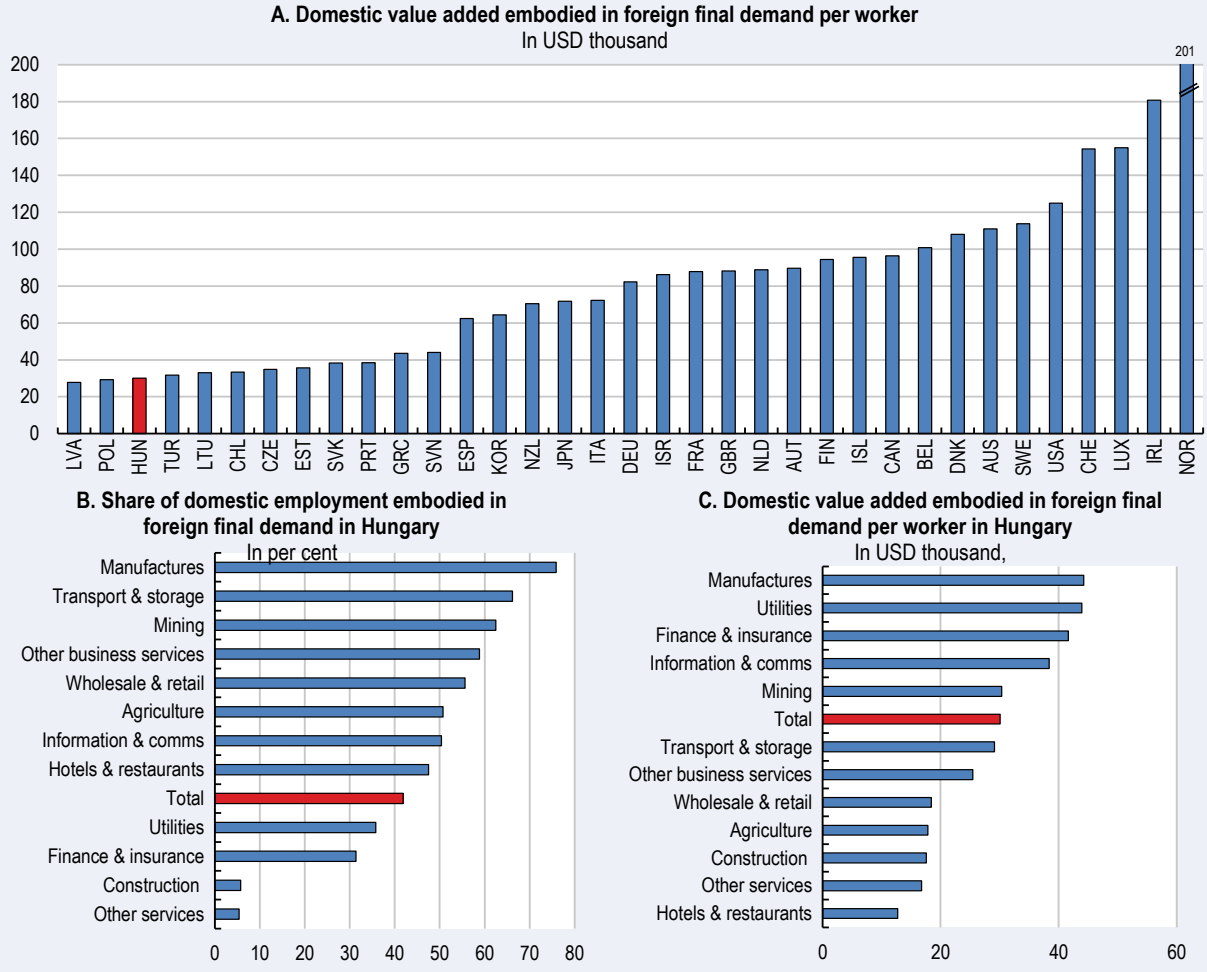
Box 2. Economic upgrading through integration in the Global Value Chains (GVCs)

Geographic proximity to Western European markets, significantly lower labour costs, well-developed transport infrastructures and increasing agglomeration economies have contributed to high integration in GVCs over the last two decades (Pavlínek, 2015). Nonetheless, domestic value added in exports is among the lowest in the OECD (Figure 27, Panel A). This reflects that although more than 40% of all jobs are generated through participation in GVCs and nearly 80% of manufacturing jobs. However, many of

these jobs are in less knowledge intensive activities, such as assembly in the automotive industry (Figure 27, Panel B and C).

Figure 27. Benefits from participating in GVCs are moderate

2015[1]



1. Domestic value added embodied in foreign final demand per worker refers to domestic employment embodied in foreign final demand. Business activities also include real estate and rental services.
Source: OECD (2018), OECD STAN (database); and OECD (2018), Trade in Value Added (TiVa) (database).

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Raising the value added from GVC participation requires either traditional process and product upgrading or better integration through functional and chain upgrading, i.e. entering existing or new higher value added GVCs, respectively (Humphrey and Schmitz, 2002) (OECD, 2013]). In all cases, policy measures to pursue such upgrades need to focus on promoting human and physical capital formation as well as the exploitation of local comparative advantages.

Sources: Based on OECD (2017), Employment Outlook 2017; OECD (2017) Skills Outlook 2017: Skills and Global Value Chains.

Hungary has gone from being possibly the most decentralised to the most centrally organised country in the OECD (Hoffman, 2014). Development policies are determined and financed at the centre. This leads to a situation where local development hinges on national priorities and where local authorities focus on centrally-financed projects, including EU funds (Kovacs, 2015). At the same time, there are few attempts to identify local economic advantages and develop local networks to integrate into regional or national supply chains (Hajnal and Ugrosdy, 2015).

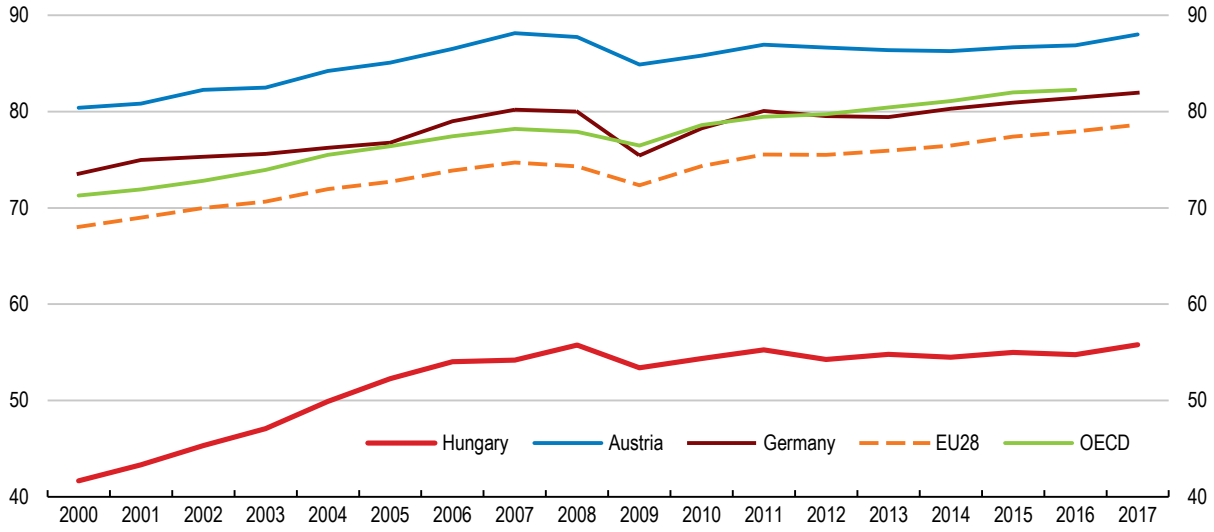
To better adapt policies to local conditions, local authorities should be given more responsibility for identifying and implementing relevant projects to develop their local economies. OECD work finds that in an increasingly interconnected world local governments are well placed to provide support for local firms, while central governments are best placed to address inequality issues (Broadway and Dougherty, 2018). Project selection could be improved through greater co-financing, which would give local authorities a direct economic stake in selecting the best projects. Not all local authorities have the capacity for identifying and selecting projects, as they are very small or very poor. In such cases, local authorities could enter horizontal cooperation to generate the sufficient administrative capacity. Alternatively, they could be provided with administrative and technical support from higher levels of government (Bartolini, Stossberg and Blöchliger, 2016). In addition, such devolution of power would have to be accompanied by greater revenue raising powers for local authorities. This would allow the central government to withdraw from detailed policy analysis and implementation to concentrate on more traditional supervision of local governments to secure that the devolution of powers lead to improved outcomes (Phillips, 2018) (OECD, 2017b).

Regional growth can emerge by promoting agglomeration effects between cities and with their surrounding area through better functioning housing and transport infrastructures to promote geographical mobility and allow better integration into local and national networks (see below) (Ahrend et al., 2017). In poor rural areas, employment can be fostered by developing tourism and agriculture. However, there are only few measures in place for either sector to integrate into other sectors or exploit networks to move up the value added chains This often requires measures at the local level and could include branding and the creation of high-value added tourism experiences, for example through culinary services based on local produce (OECD, 2014). Social media could be used to reach new visitors and promotion of new tourist services to supplement traditional heritage- and culture-based experiences. Such initiatives have to be complemented with the development of a modern international tourism promotion strategy.

Faster regional growth and convergence will lift the low level of aggregate labour productivity part of the way towards advanced economies (Figure 28). This can be supported at the local level by lifting up the skills of workers, which would enable local firms to benefit from knowledge diffusion and technological adaptation to move production from low-skilled activities to higher-skilled and higher-value activities (OECD, 2017c; Morrison, Pietrobelli and Rabellotti, 2008; OECD, 2015a). To better support local SMEs, vocational schools should have greater freedom to adjust courses and curriculums to reflect the needs of the local labour market. In addition, the schools should specialise more to exploit economies of scale and scope, for example to better invest in modern machinery and equipment. This needs to be combined with stronger mobility incentives, both for students to pursue their preferred courses and for graduates to relocate to areas with job opportunities that match their acquired skills. These efforts should be supported by measures to promote life-long learning, for example individual learning accounts as recommended in the last *Survey* (OECD, 2016a).

Figure 28. Productivity has failed to catch up

Real GDP per persons employed, in USD thousand, constant prices, 2010 PPPs[1]



1. PPPs: purchasing power parities.
Source: OECD (2018), OECD Productivity Database.

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Addressing labour market challenges

The labour market is shifting towards higher-skilled employment (Figure 29). This reflects that over the past decades, the service sector has expanded and industry has moved from mining and heavy industries to higher value-added production that links into global value chains. This has led to an increase in medium and high technological intensive manufacturing, although manufacturing accounts for a smaller part of overall employment (OECD, 2016a). Moreover, agriculture is characterised by very small farms, indicating considerable scope for growth-enhancing restructuring that would further reduce employment in that sector. These changes are taking place as firms increasingly search for skilled workers. Thus, to sustain growth it is becoming increasingly important to adjust and enhance skills, improve allocation of labour and mobilise all underutilised labour resources.

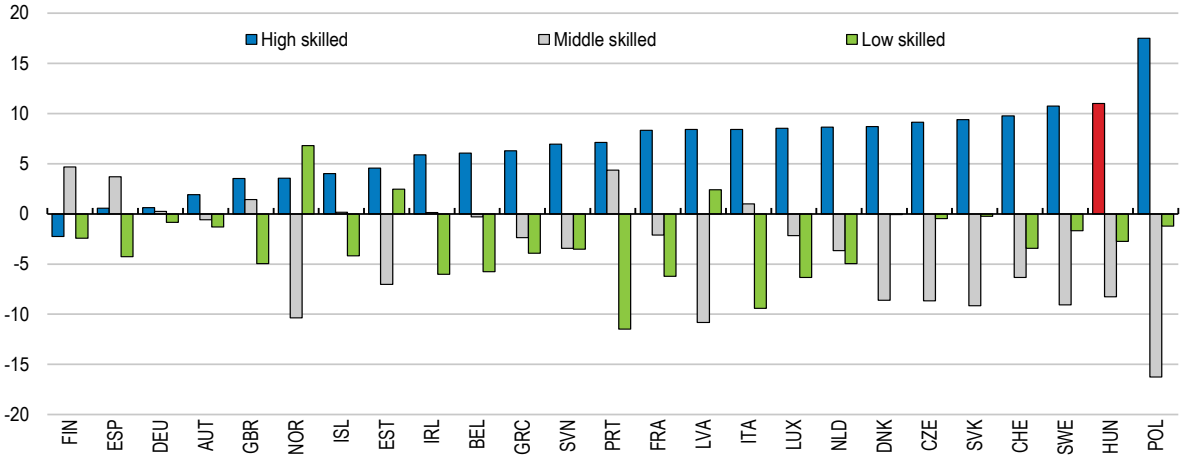
One of the main active labour market policy instrument is public work schemes administered by the Ministry of the Interior and provided by municipalities. These are being scaled down at a moderate pace. The schemes pay wages that are above social transfer and have been successful anti-poverty measures, but less so as an active labour market measure (ALMP) as until recently only 10%-12% of enrolees have subsequently found employment in the primary labour market. Since early 2017, the share has increased to 19%, partly reflecting increased job opportunities. The government should use the favourable labour market situation to scale down faster the schemes and to concentrate their use in poor rural areas as a poverty reduction measure.

The schemes could become effective as an active labour market measure by moving the responsibility for the schemes to the ministry responsible for labour affairs to better link them to other ALMP schemes and labour market institutions. In addition, the provision could involve the private sector to strengthen activities that links better to the requirements in primary labour market. Also, the training content could be enhanced further and better

linked to skill requirements in the primary labour market. Combining this with mobility measures would further improve transition into the primary labour market as many of the low-skilled enrolees live in rural areas with limited economic activity.

Figure 29. The shift towards high skilled employment is expected to continue

Change in share of total employment between 2015 and 2025, in percentage points[1]



1. High-skill occupations include jobs classified under the ISCO-88 major groups 1, 2, and 3. That is legislators, senior officials, and managers (group 1), professionals (group 2), and technicians and associate professionals (group 3). Middle-skill occupations include jobs classified under the ISCO-88 major groups 4, 7, and 8. That is, clerks (group 4), craft and related trades workers (group 7), and plant and machine operators and assemblers (group 8). Low-skill occupations include jobs classified under the ISCO-88 major groups 5 and 9. That is, service workers and shop and market sales workers (group 5), and elementary occupations (group 9). The ISCO-88 major group 6 for skilled agricultural, forestry and fishery workers is excluded.
Source: CEDEFOP (2017), "Forecasting skill demand and supply", European Centre for the Development of Vocational Training, http://www.cedefop.europa.eu/en/events-and-projects/projects/forecasting-skill-demand-and-supply/.

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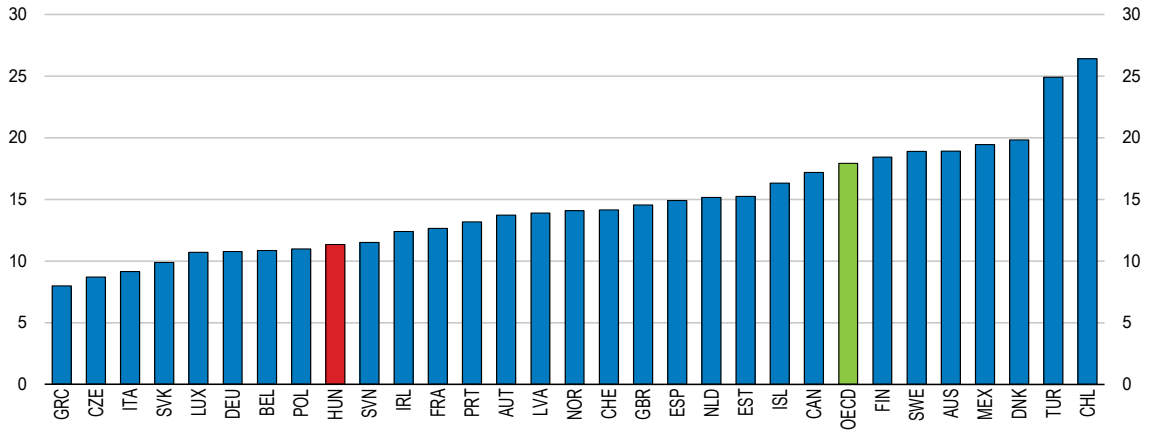
The increasing labour scarcity and the continued restructuring of the economy mean that improved labour resource allocation is becoming more important to sustain growth. The turnover on the labour market is relatively low despite flexible labour market institutions (Figure 30). On the other hand, the allocation process is hampered by a lack of geographical mobility. This is related to a rigid housing market (only 7% of households moved within a two-year period – less than a third of the rate in the Nordic countries) dominated by owner-occupation and poor quality secondary and tertiary road infrastructure that add to commuting costs (McGowan, 2015). The rental segment of the housing market is very small (and increasingly targeting higher income tenants) and the government should ensure that taxation of investments in private rental and owner-occupation is neutral.

The short 3-months duration of unemployment benefits bolster participation incentives. On the other hand, the short duration also reduces job search and matching incentives, contributing to labour market mismatches (Figure 31). Part of the mismatch problem is cyclical, reflecting that employers have increasing problems of finding qualified workers. On the other hand, the very short duration of unemployment benefits gives unemployed insufficient time to find employment that matches their skills. Extending duration, to for example 6 months, would address this issue. Furthermore, search incentives could be enhanced by reducing benefits over time while providing mobility support for interviews and first phase of employment.

Figure 30. Labour market turnover is relatively low

Job separation rate, in per cent, 2016[1]



1. 2015 for Australia and Denmark. Data refer to the difference between the hiring rate and the net employment change.
Source: OECD (2018) OECD Employment and Labour Market Statistics (database).

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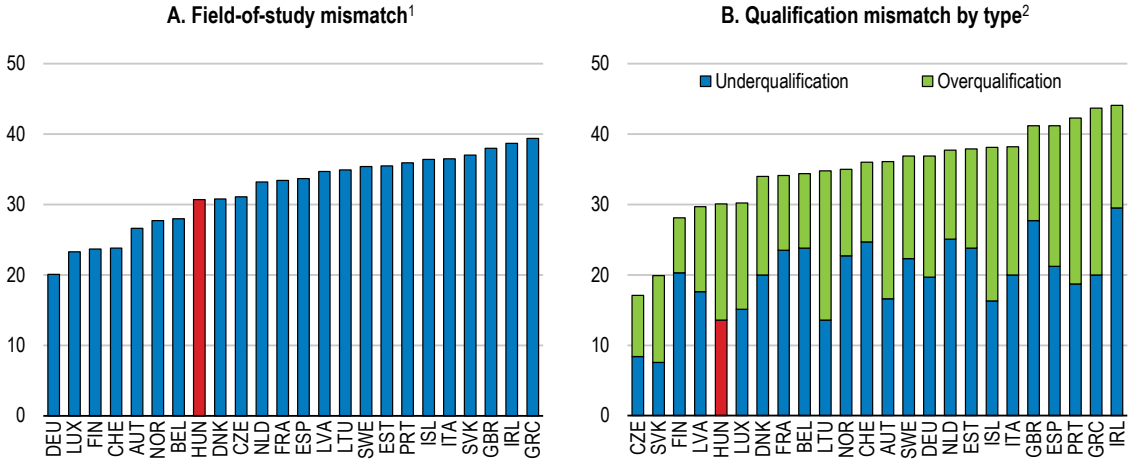
Figure 31. Skills mismatches could be further reduced

As a percentage of all workers, 2016



1. Field-of-study mismatch arises when workers are employed in a different field from what they have specialised in.
2. Qualification mismatch arises when workers have an educational attainment that is higher or lower than that required by their job. If their education level is higher than that required by their job, workers are classified as over-qualified; if the opposite is true, they are classified as underqualified.
Source: OECD (2018), OECD Employment and Labour Market Statistics (database).

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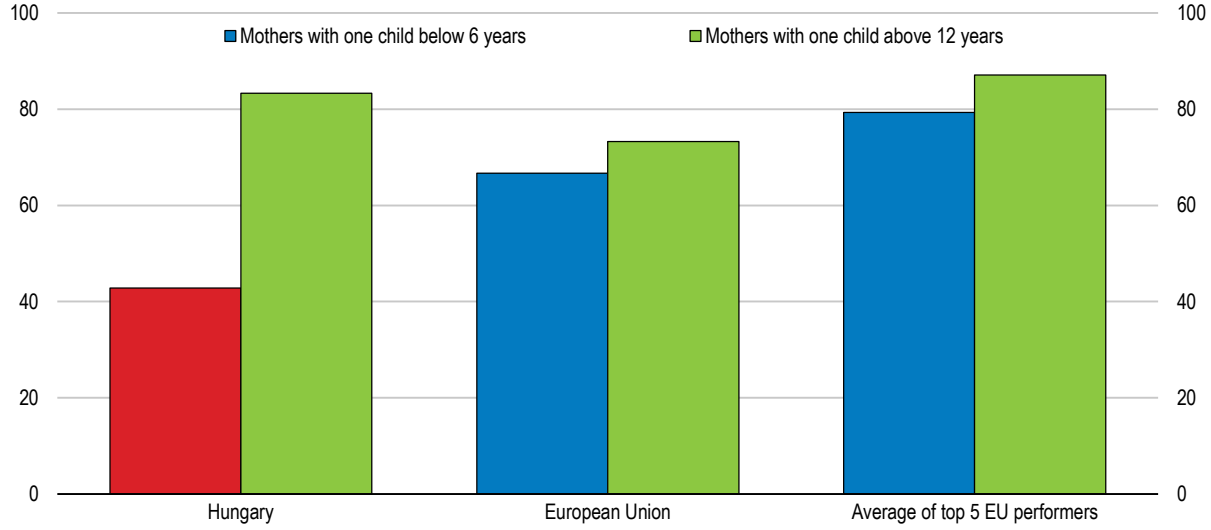
The female labour market situation has improved significantly, in many ways restoring the pre-transition situation of high female labour force participation and gender equality in education (Avlijas, 2016) (United Nations Development Fund for Women, 2006) (Czibere,

2014). By 2016, the female employment rate had reached a new high of around 60%, which is similar to the EU average, but more than 10 percentage points below best performers. The exception, however, is mothers with young children (below 6), who have much lower employment rates (Figure 32) (OECD, 2018c). This reflects leave that can last up to three years (consisting of six months maternity leave, 18 months parental leave and an additional year on lower benefits). The crèche system is being expanded in line with recommendations in the previous *Survey* (Table 9). The current enrolment rate of 17.5% is higher than in Hungary's regional peers, but is still less than half the OECD average, often leading mothers to take the full leave period (Gábos, 2017) (Századvég, 2016). In addition, kindergartens have become mandatory from the age of 3 (boosting enrolment to 95.7% and thus surpassing the EU benchmark of 95%), but often have rigid opening hours (legislative requirements are 8 hours and usually kindergartens close early) which complicate achieving good work-life balances (Hermann, Bobkov and Csoba, 2014).

Figure 32. Mothers with young children have relatively low employment rates

As a percentage of working-age female population, 2017[1]



1. Data refer to population aged 15-64.
Source: Eurostat (2018), "Gender equality", Eurostat Database.

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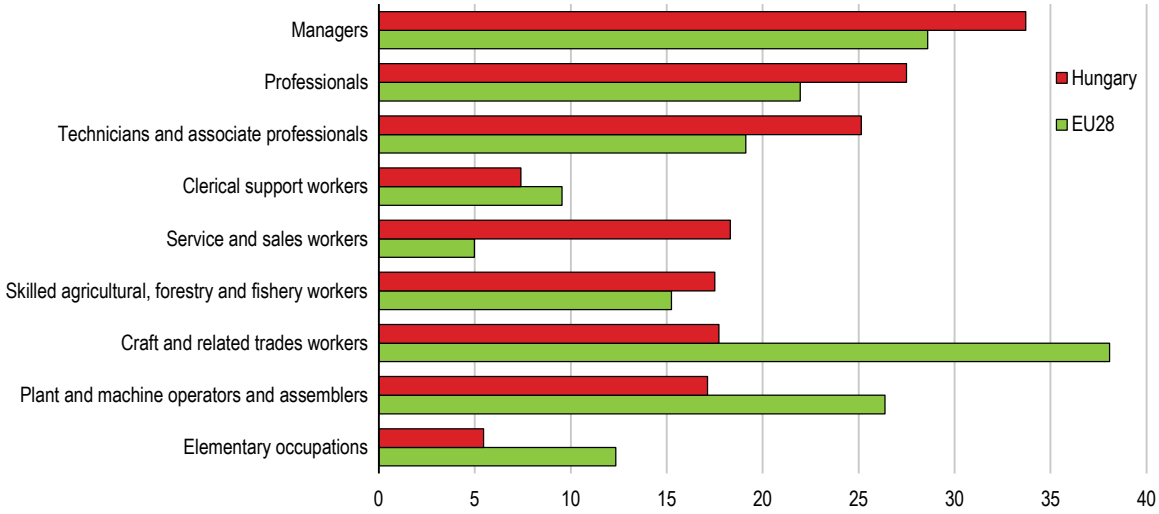
The overall gender pay gap is 9% – 5 percentage points below the EU average. However, the combined long leave periods for maternity reasons reduce the incentive to hire young females and hurt their career prospects, which leads to a widening gender wage gap as education and skills requirements increase (Figure 33). The newly established Family and Career point programme supports returning mothers through training, coaching, and mentoring programmes. This is also reflected a relatively wide gap in the top income quintile with a 34% difference in pay between male and female managers – the largest in the EU (Sik, Csaba and Hann, 2013) (Szabó, 2017). Indeed, one-third of companies are headed by a female director, but rarely in highly paid executive jobs for large companies (Bisnote, 2017).

Table 9. Past recommendations on labour market

Recommendations in previous *Surveys*	Action taken
Further reduce tax wedge on low salaries and better target existing cuts in social security contributions.	Tax wedge has been reduced by decreasing employers' social contributions by 7.5 percentage points. In 2018, the family tax base allowance for families with two children has been increased by 17%.
Avoid increasing the minimum wage by more than warranted by inflation and productivity developments, and consider even freezing it for some time.	The 2016 tripartite 6-year wage-agreement raised the minimum wage and the guaranteed wage minimum for skilled workers by 15% and 25% in 2017, respectively, and by 8% and 12% in 2018. In parallel, employers' social security contributions were cut.
Improve reintegration of public works participants.	Since 2018, NGOs cooperating with PES provide: a) counselling and mentoring services; and b) financial benefits for disadvantaged jobseekers to foster their re-entry into the labour market. The 2017 "From the public work to the primary labour market" programme encourages public workers to find a job in the primary labour market by providing them benefits.
Improve the evaluation of the efficiency of existing training programmes to better match different categories of participants to specific training programmes.	Since 2016, PES has created individual action plans for all registered job seekers based on client profiling.
Tighten the conditions for public work schemes by efficient implementation of a profiling system.	In 2016, a new client profiling system was implemented to improve targeting of the public work schemes.
Facilitate visa requirements to attract high-skilled immigrants in potential skill shortage domains.	No action taken.
Expand early childhood care.	From January 2017, all local governments are required to organise crèche services where such services are demanded.
Reduce the effective length of parental leave and provide incentives for paternity leave	No action taken.

Figure 33. Gender pay gaps are increasing with education and skills requirements unlike in the EU

As a percentage of mean hourly earnings of men, 2014[1]



1. Gender pay gap is calculated as the difference in mean hourly earnings of men and women divided by mean hourly earnings of men. Data refer to industry, construction and services (except public administration, defence, compulsory social security).
Source: Eurostat (2018), "Gender equality", Eurostat Database.

StatLink https://doi.org/10.1787/888933896867

Bolstering the employment rate of young women with children would support growth, preserve human capital, enhance available labour resources and expand female lifetime income, and particularly their pensions (OECD, 2012b) (Kinloch, 2015). The three-year leave period for maternity reasons is internationally long. For example, the Nordic countries have paid leave periods of one year or less, and they have some of the lowest gender gaps in the OECD. The government should enhance incentives for mothers to participate in the labour market. This should reduce the effective length of parental leave. This should be combined with greater possibilities for transforming part of it into paternity leave as recommended in the last *Survey* (OECD, 2016a). This would have to be accompanied by a large expansion of childcare facilities. The latter could be accelerated by incentivising the private sector through tax breaks to provide company based care, as in France. With a corporate tax rate of 9% the value of such breaks would be relatively low and may need to be complimented with more direct subsidies in addition to the financial support for workplace crèches (Brosses, 2012) (Varga, 2016) (OECD, 2016a) (European Commission Staff Working Document, 2018).

Working mothers also need more flexible working arrangements to secure an acceptable work-life balance. The government has already lowered social security contribution for employers hiring mothers with young children, allowed working mothers to receive maternity benefits after the child's first birthday and obliged employers to allow mothers to return on a part-time basis. The last, however, could potentially discourage firms from hiring young women, particularly in SMEs, or channel women into different and lower ("mommy track") career paths.

A better approach would be more flexible working arrangements with respect to daily working hours, teleworking, etc. that serve the needs of both employers and employees. The Labour Code allows for some flexible employment opportunities, such as the right for part-time employment for parents. Moreover, European Union co-financed programmes promote flexible employment in SMEs. Nonetheless, only a fraction of workers has such entitlements. In other countries (i.e. UK, Belgium, Germany) employees have the right to request flexible work schedule. The public sector could also lead by example by creating a flexible and inclusive working environment (OECD, 2016b).

Work-life balance could be improved further with more equal division of caring responsibilities, such as in Germany where the second parent's leave is added to overall leave period (Unterhofer and Wrohlich, 2017). The literature has pointed to other problems, such as a lack of role models (ILO, 2016) and gender stereotyping in the education system (United Nations, 2016). Career counselling or board representation rules could counter such problems (Wade et al., 2010) (Thomas, 2016). The complexities of achieving the proper work-life balance in the context of a dynamic Hungarian economic development point to a need for further research in this area.

The population is ageing

Population ageing will double the old-age dependency ratio over the next fifty years, reflecting an increasing number of longer-lived pensioners (life expectancy is projected to increase by 10 years). This development puts upwards pressure on public spending (Table 10) (European Commission, 2018b). In the medium-term, pension spending is actually projected to decline as a share of GDP, reflecting that price indexation leads to slower growth of pension expenditures than nominal GDP. OECD work, however, suggests that ageing-related cost increases may be even higher if additional cost pressures are included. These are related to a tendency for service sector wages to increase faster than

productivity growth and the implementation of more costly technology, among others, in the health sector. This could lead to increases in ageing-related spending that is more than twice the EU projections and more than average increases in the OECD (Figure 34; Table 10) (Guillemette and Turner, 2018). Moreover, EU's projections are dependent on assumed developments in key variables. For example, if the fertility rate fails to increase as assumed, expenditures could be 1.9% of GDP higher in 2070. Likewise, if life expectancy increases by two years more than assumed, then the increase in public expenditure could be 0.6% of GDP higher in 2070.

Table 10. Ageing-related expenditure are projected to increase

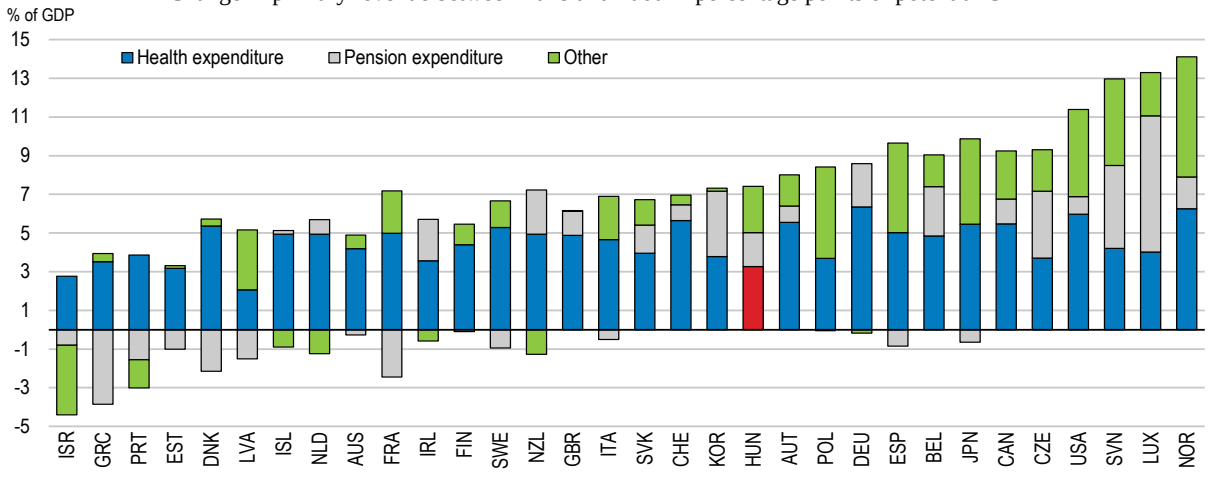
As a percentage of GDP

	2020	2030	2040	2050	2060	2070
Total public pensions	9.0	8.4	9.4	10.6	11.1	11.2
of which :						
Old-age and early pensions	7.4	7.0	8.2	9.5	10.1	10.2
Disability pensions	0.7	0.7	0.7	0.6	0.5	0.6
Survivors pensions	0.8	0.6	0.5	0.4	0.4	0.4
Other	0.1	0.1	0.1	0.1	0.1	0.1
Projected spending on health care[1]	5.1	5.4	5.6	5.8	5.8	5.7
Long-term care spending as % of GDP[1]	0.7	0.8	0.9	1.0	1.1	1.1
Total ageing related spending	14.8	14.6	15.9	17.4	18.0	18.0
Old-age dependency ratio (15-64)	31.3	35.2	41.8	49.1	53.2	52.0

1. AWG reference scenario
Source: European Commission (2018), "The 2018 Ageing Report - Economic & Budgetary Projections for the 28 EU Member States (2016-2070)", Directorate-General for Economic and Financial Affairs, Institutional Paper 079, Luxembourg.

Figure 34. Old-age spending pressures under less optimistic assumptions

Change in primary revenue between 2018 and 2060 in percentage points of potential GDP[1]



1. The "other primary expenditure" category mostly captures the impact of changes to the employment-to-population ratio. The "other factors" category mostly captures the initial gap between primary revenue and the level that would stabilise the debt-to-GDP ratio, but also changes in GDP growth rates over the projection period.
Source: 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.

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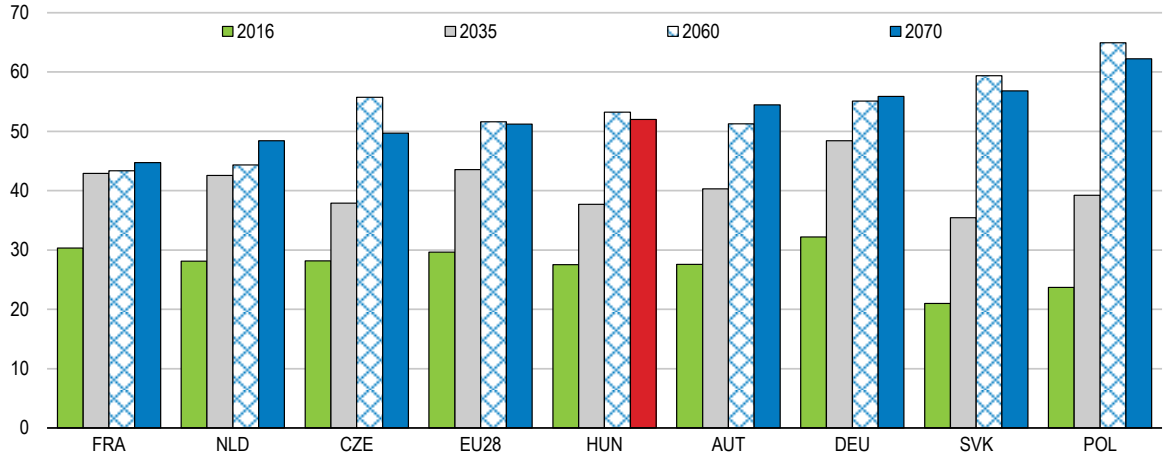
Ageing comes in two waves with the first large post-war generation currently entering retirement and another wave starting after 2030, accelerating the increase in the old-age dependency ratio with a peak of 53% in 2060 – two-thirds higher than today (Figure 35). The associated expected increase in ageing-related spending is comparable with the average in the European Union (AWG, 2018).

Figure 35. The old-age dependency ratio is projected to peak around 2060

Ratio of population aged 65+ per 100 population aged 15-64



Source: European Commission (2018), "The 2018 Ageing Report - Economic & Budgetary Projections for the 28 EU Member States (2016-2070)", Directorate-General for Economic and Financial Affairs, Institutional Paper 079, Luxembourg.

StatLink https://doi.org/10.1787/888933896905

The pension system is centred on an earnings-related mandatory defined benefit pay-as-you-go public scheme. For workers with full careers, the system provides relatively good pension benefits with pre-tax replacement rates of nearly 60% for workers with average earnings (OECD, 2017d). For others, there is a risk of old-age poverty. Indeed, a worker paid the minimum wage will after 20 years only receive around EUR 150 per month, reflecting that the impact of career breaks on pension entitlements is larger than elsewhere in the OECD (OECD, 2017e). Moreover, pensions are indexed to consumer prices, which means that benefits will fall relative to wages over time, leading to a high risk of increasing income inequality between pensioners and wage earners. Already today about 20% of all pensioners receive pension benefits that are below the poverty line (defined as half the median income) and another 20% that have pension benefits that are less than 25% above the poverty line.

Addressing old-age poverty problems have to tackle initial low pensions and declining benefit ratios, as also raised in previous *Surveys* (Table 11). Currently, pensioners that have not accrued sufficient rights in the public PAYG system will receive social benefits that amount to around EUR 80 per month – one-quarter of the poverty line (OECD, 2017c). These pensioners qualify for monetary and in-kind benefits, although the combined value would tend to be less than one quarter of their benefit income. Furthermore, a number of pensioners (mostly with careers disrupted by the transition to the market economy) receive a minimum pension that is twice the social benefits, but this minimum pension will play no role in the future other than as a benchmark for regulating social benefits.

Table 11. Past recommendations on pension reform

Recommendations in previous *Surveys*	Action taken
Take steps to secure an increasing effective retirement age.	No action taken.
Continue to ensure that the indexation of pensions does not lead to old-age poverty problems.	Pension premiums were granted in 2017 and 2018.
Consider options for diversifying income sources for pensioners.	From 2019, working retirees and their employers became exempt from social security contributions.
Bring forward the increases in the statutory retirement age.	Retirement age increases have been capped at 65 years of age for both men and women.

The initial low pensions could be addressed by introducing a basic state pension available to all irrespective of contributions. The budgetary costs of such a measure would be negligible if such a pension is set equal to the minimum pension (currently about EUR 90 per month). A state pension twice as high would costs less than 0.1% of GDP and could be fully financed within the pension system by introducing a pension ceiling equal to 150% of average wages. Setting the state pension at the poverty level, would cost less than 0.2% of GDP. However, in that case workers on the minimum wage would only have accrued such pensions after 42 years of contributions, eroding labour market participation incentives. The problem of relative old-age poverty associated with price indexation could be removed by changing to wage indexation. However, the associated cost would amount to 3% of GDP by 2070.

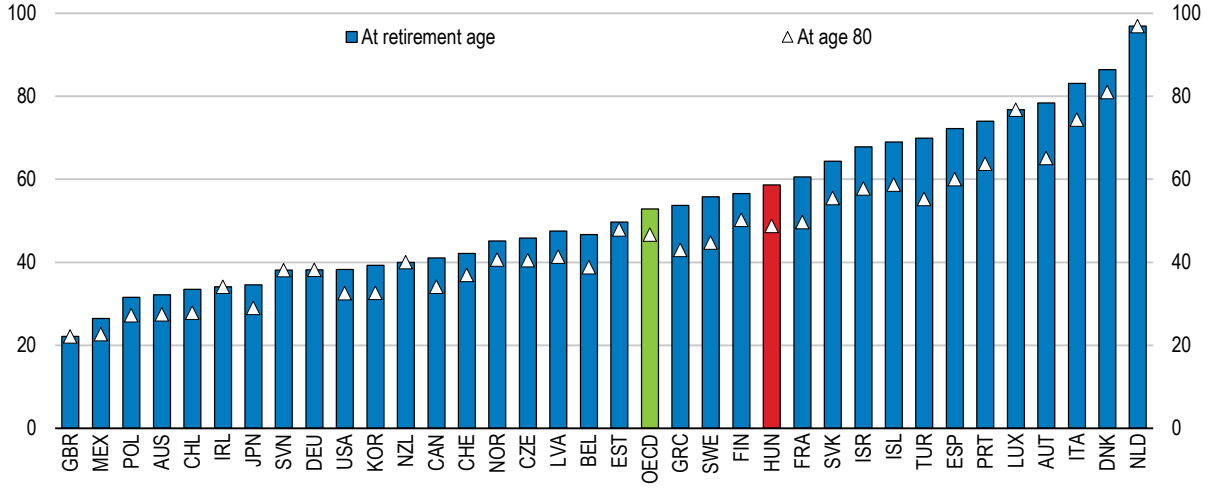
Looking ahead, the ageing related increase in pension spending can be addressed within the pension system by lowering pension benefits, increasing contributions or raising the statutory (and effective) retirement age. The average replacement rate for a full-career average earner is slightly above the OECD average, but would have to be lowered by 8 percentage points (through reduced accrual rights) to cover the financing gap between projected spending and contributions (Figure 36). This would increase the risk of old-age poverty rather than solve it. Increasing social security contribution rates by 9 percentage points (roughly equivalent to the recent reductions) would cover the projected increase in pension costs, but the increase in tax on labour would have a negative impact on growth. On the other hand, increasing the pension age in steps to 70 would keep pension expenditure constant at just below 10% of GDP until 2070 (European Commission, 2018b).

A recent pension reform is gradually increasing the statutory pension age to 65 years by 2022 and has abolished most early retirement schemes. Linking the statutory retirement age directly to gains in life expectancy after 2022 would stem the expenditure increase even if life expectancy increases more than projected. To achieve the full effect, the rule that public employees have to leave their service at the statutory retirement age should be abolished.

The only early retirement scheme left allows women to retire after 40 years of contributions (including periods of maternity leave) without deductions. So far, take-up has been up to 80% of those entitled every year. If this trend continues, contributions to the PAYG system would be lowered by nearly 1% of GDP by 2070. The scheme is not actuarially neutral as there is no pension deductions for retiring early to reflect the fewer years of paying contributions or the more years spent in retirement. This can be achieved by abolishing the special exemption for females and making the current system of encouraging continued work symmetric. This would imply complementing the pension increment (bonus) of 0.5% of the wage for each month worked after the statutory retirement age with a similar sized decrement (malus) for retiring early.

Figure 36. Gross pension replacement rates

Pension benefits as a percentage of average earnings[1]



1. Pension benefits in retirement from mandatory public and private pension schemes.
Source: OECD (2017), Pensions at a Glance 2017: OECD and G20 Indicators, OECD Publishing, Paris.

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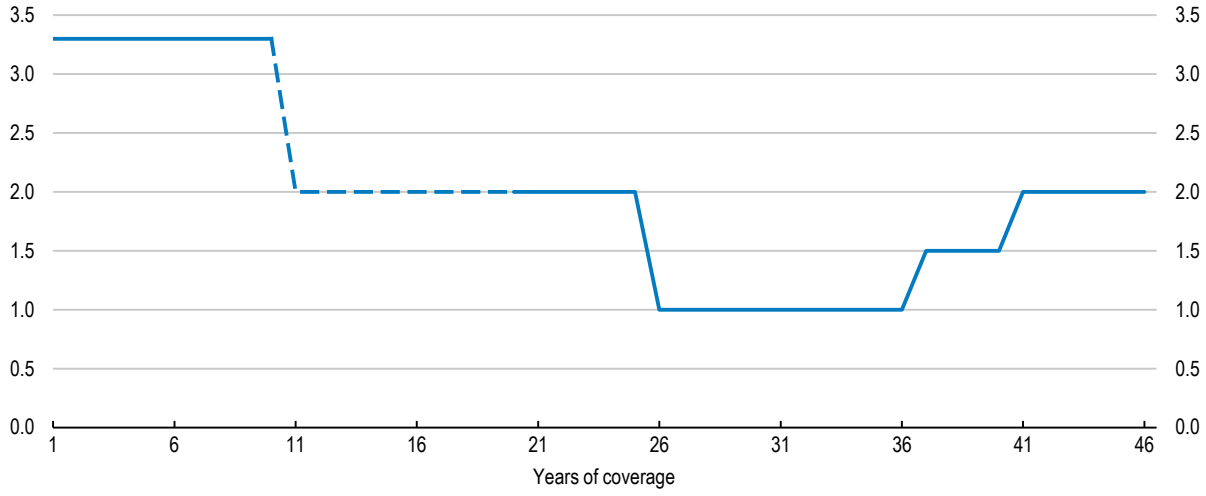
From 2019, working retirees and their employers are exempt from all social security contributions. Nonetheless, additional measures are needed to encourage continued work. For example, public sector employees should be allowed to benefit from the pension increment. Another problem is that it is nearly impossible for workers to calculate future pension benefits. The accrual of pension rights is not linear, with high accrual rates early and late in the working career and low in mid-career (Figure 37). A linear system of accrual right based on the current average rate would be a more transparent system and provide better labour participation incentives. An additional problem is that the valorisation of previous earnings is based on highly cyclical wage developments, which translates into a large variation in pension benefits for workers with similar contribution careers, but retiring at different points in time. Wage indexation of pensions would remove this issue. A partial and less costly solution would be to base valorisation on a moving average of recent years' wage increases.

Outside the PAYG pension system, another financing option could be to introduce a mandatory (second-pillar type) funded pension scheme. However, a similar scheme was abolished in 2010 due to high operating costs among other factors. Furthermore, this option would require very high contribution rates. OECD calculations based on a set of conservative assumptions indicate that contribution rates in such a system would have to be as high as 9%-11% of wages to cover the pension funding gap in 2070, eroding wage-cost competitiveness. Moreover, from an intergenerational perspective, the introduction of a second pillar system would imply that the current generation of workers would have to finance the current generation of pensioners as well as (part of) their own pension. Alternatively, increased economic incentives, particularly for employers, in the third pillar of voluntary pension savings could encourage private pre-funding, supplementing public prefunding strategies. Such measures could for example include flat-rate subsidies and matching contributions (Italy, New Zealand, the United Kingdom and Turkey) (OECD, 2016c). Such measures often carry substantial fiscal costs, but the scale of the pension

challenges is such that early policy action across many different policy measures is required.

Figure 37. Pension benefit accrual rate by years of coverage

As a percentage of earnings[1]



1. The earnings-related pension is calculated as 33% of average earnings for the first ten years of coverage. Each additional year of coverage adds 2% from year 11 to 25, 1% from year 26 to 36, 1.5% from year 37 to year 40 and 2% thereafter. 20 years of service is required for both the earnings-related pension and the minimum pension.

Source: OECD (2017), Pensions at a Glance 2017: Country Profiles - Hungary, OECD Publishing, Paris.

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Future ageing related spending pressure is likely to be higher in health and long-term care if the projected increase in life expectancy of 10 years, leading to EU convergence, is going to materialise. In other European countries, the gains in life expectancy are much smaller, but projected spending on average health care and long-term care is 3.6 percentage points higher than for Hungary.

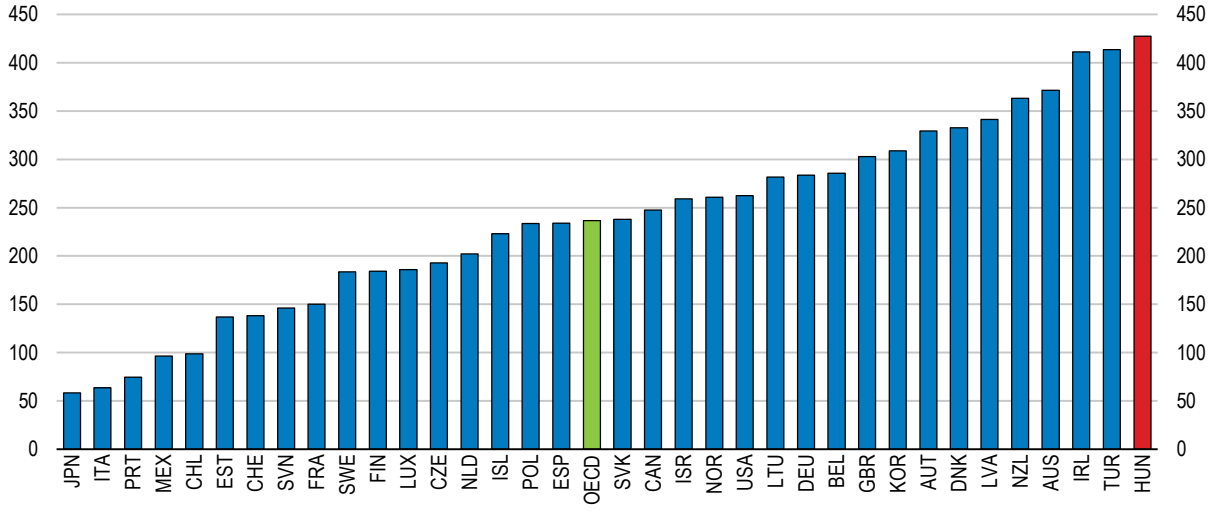
The organisation of the health care system is highly centralised and reliant on planning with little reliance on price signals. The DRGs have not been regularly revised to reflect cost developments since their introduction in the mid-1990s, rendering them ineffective as a steering instrument. Instead, the Ministry of Human Capacities imposes global budget constraints, but as the ministry also routinely cover hospitals' debt, this has become a soft budget constraint. An additional problem in this respect is that hospital management is not rewarded for efficiency improvements, making them reluctant to impose strict cost control.

Only some hospitals have been converted into long-term care institutions, leaving Hungary's health care provision highly hospital centred. Moreover, average length of hospital stays has increased in contrast with developments in other countries and the rate of avoidable hospital admissions is one of the highest among OECD countries (Figure 38), pointing to a relatively inefficient hospital sector. Furthermore, emigration of health personnel has led to shortages, leading to uneven access, inducing the government to increase doctors' remuneration as recommended in earlier Surveys (Table 12). GPs are performing many tasks that in other countries are left to qualified nurses. The high work burden of GPs leads to a high number of referrals to specialists, but without a proper system

of patient guidance, resulting in GPs having modest roles as gatekeepers and care coordinators, leading to inefficient use of specialists.

Figure 38. Number of avoidable hospital admissions is high

Age-sex standardised rates per 100 000 population, 2015 or nearest year available[1]



1. 2012 for Hungary. Data refer to the number of hospital admissions with a primary diagnosis of asthma or chronic obstructive pulmonary disease (COPD) among people aged 15 years and over per 100 000 population. Rates are age-sex standardised to the 2010 OECD population aged 15 and over. For both asthma and COPD, the evidence base for effective treatment is well established and much of it can be delivered at a primary care level.

Source: OECD (2017), *Health at a Glance 2017: OECD Indicators*, OECD Publishing, Paris.

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Table 12. Past recommendations on health care

Recommendations in previous *Surveys*	Action taken
Increase wages of doctors and health care employees	Since 2016, wages of employees in healthcare and the social field has been increased by more than 50%.
Improve working conditions and replace outdated medical equipment by increasing health care investment spending.	In 2018 a project funded by the EU (EUR 25 million) aims to improve the institutions' medical equipment.

Looking ahead, the health care system needs to become more efficient and better at adapting to change in the demand for health services, requiring fewer, but more specialised and better equipped hospitals. To achieve this, price signals must play a much more important role in the allocation of resources. DRGs create incentives for more efficient use of hospital resources (OECD, 2016f). However, DRGs need to be updated on a regular basis to reflect evolving cost of patient treatment. In parallel, the autonomy of hospitals, in terms of determining their supply and investment needs, also must be increased. At the same time, outpatient care, including day care, should be enhanced. In addition, GPs should have stronger incentives to function as gatekeepers by increasing the share of pay-for-performance financing (OECD/European Observatory on Health Systems and Policies, 2017) (OECD, 2016f). The efficiency of primary care could also be improved by further promoting group practices for GPs (OECD/EU, 2016). These measures will enhance efficiency, but will not be sufficient to finance the increase in life expectancy. Access

should be improved by updating and clearly defining a basic benefit health package that does not require informal out-of-pocket payments.

The organisation of long-term care for the elderly is fragmented between the health and social care systems with a strong division into providing either health care or assistance with daily activities with parallel financing and eligibility rules. Moreover, most institutional long-term care is provided by the central government and NGOs, while local governments provide the majority of home-based care. However, this organisation does not sufficiently take into account overlapping functions, leading to inefficiencies and reduced access, which should be resolved by creating an integrated long-term care system (Czibere and Gal, 2010). The government is introducing a new type of institution that provides more integrated care. Access to the, in many cases, more efficient home-based care is limited by labour shortages in home-based nursing care and by stricter eligibility criteria and reduced financing in home-based domestic care. As a result, provision is pushed towards informal care and more expensive long-term care institutions. The supply of long-term care options can be bolstered by introducing a (income-tested) cash benefit scheme and the supply of quality residential care homes by introducing a voucher system, allowing recipients to choose from competing institutions.

Greening growth requires mitigation of small particles emission

Over the past couple of decades, CO2 emissions have been reduced considerably, resulting in a relatively low CO2 intensity of production (Figure 39, Panel A). Most of the reduction comes from the restructuring of the economy, particularly the scaling down of heavy industries. Another factor is the expansion of renewable energy (mostly biomass), reaching 11% of primary energy supply in 2015 (Figure 39, Panel B). However, the potential for biomass use is reaching its limits, requiring a focus on other renewable sources such as solar, geothermal or wind technologies. In 2017, a new renewable energy support scheme (METÁR) replaced the previous feed-in tariff system with a combination of feed-in tariffs, feed-in premiums and competitive bidding depending on the capacity of the new plants, as recommended in the previous Survey (Table 13) (OECD, 2018d). Investments in renewable energy generation could be further stimulated by removing existing non-financial barriers, such as strict technical requirements or by better integrating renewable generation to the electricity network.

Table 13. Past recommendations on green growth

Recommendations in previous *Surveys*	Action taken
Increase reliance on feed-in tariffs and use competitive auctions for renewable energy projects.	The new renewable energy support scheme (METÁR) in 2017 has been introduced with a combination of feed-in tariffs, feed-in premiums and competitive bidding procedure.
Increase energy use taxation, step up efforts at individual metering and consumption control and the provision of consumer information about the benefits of energy saving investments.	Since 2017, energy suppliers are eligible for a tax allowance in case of an installation of electric recharging stations.

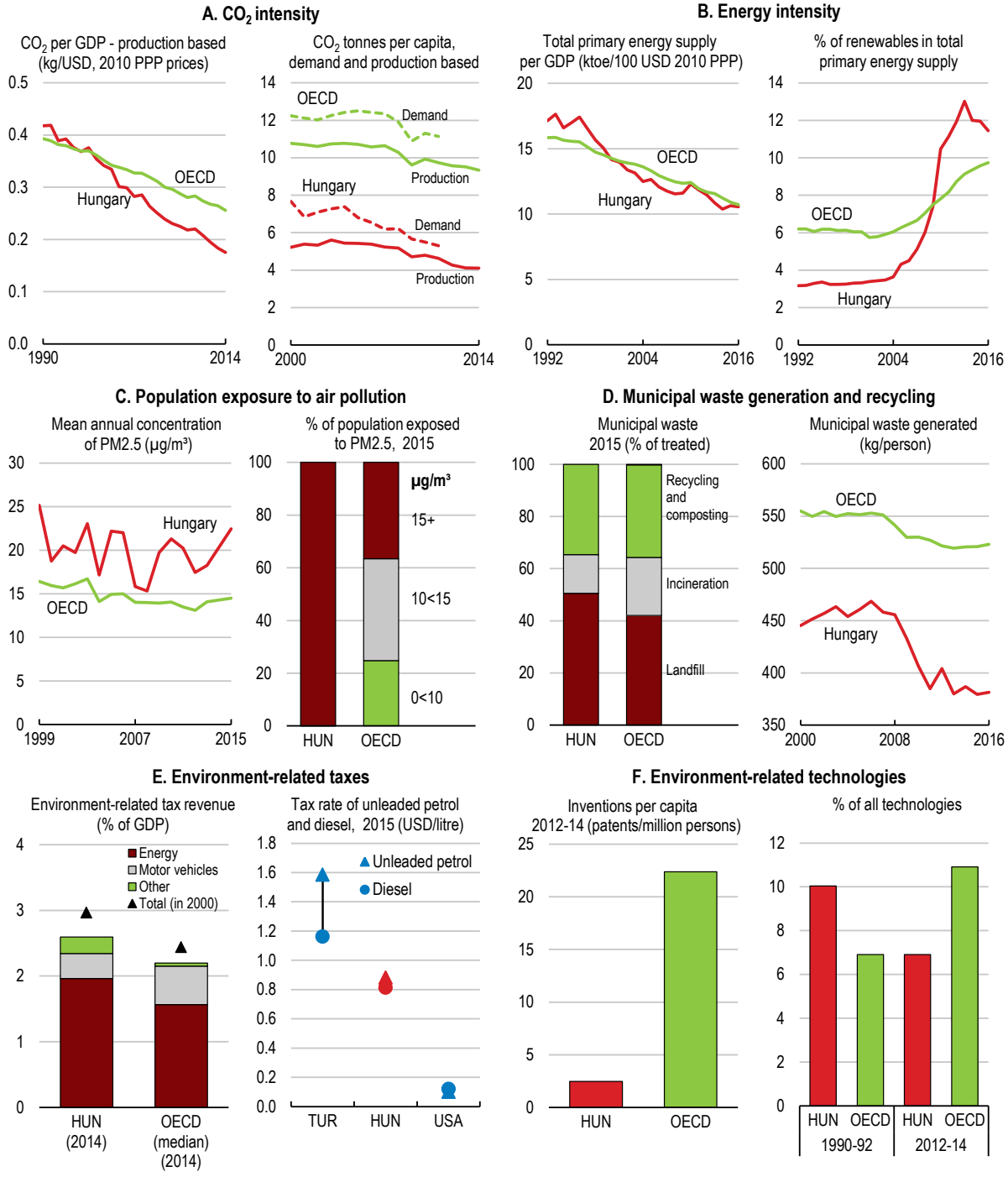
A worrying development is high and increasing small particles emissions, resulting in adverse health impacts (Figure 39, Panel C). Indeed, Hungary's mortality rate due to air pollution exposure is among the highest in the OECD with about 9000 estimated premature deaths per year owing to outdoor air pollution, raising health care spending (OECD, 2018)

(OECD, 2014d). Other negative effects of outdoor air pollution include lower labour productivity and reduced yields in agriculture (OECD, 2016e).

The higher small particle emissions reflect an expanding fleet of old vehicles (the average vehicle age is almost 15 years) as most new purchases are imported used cars and increasing road freight transportation. The 2015 E-mobility Programme fosters the use of electric vehicles, but it mostly benefits relatively high-income households. To support the renewal of the fleet, the programme should be supplemented with road tolls and taxes that take vehicles' environmental performance into account. Policies to reduce traffic congestion in urban centres, including congestion charges, as well as more steps to strengthen public transport and encourage soft transport modes, would reduce air pollution and boost productivity (OECD, 2015b).

Another risk factor in terms of particles emissions is obsolete heating systems in about 80% of the building stock (OECD, 2018d). Moreover, many – especially poor – households illegally use household waste for heating and cooking with an estimated one third of household waste used for such purposes (OECD, 2018d) (Ministry of Human Resources, 2017) (Mihalicz, 2016). The government should implement targeted measures to significantly reduce particulate emissions from residential heating. This could be achieved by accelerating and extending the replacement of inefficient and high-emission heating system of households with subsidies to poor households.

Figure 39. Green growth indicators: Hungary



Source: OECD (2018), Green Growth Indicators (database). For detailed metadata, see http://stats.oecd.org/wbos/fileview2.aspx?IDFile=7ad102dd-e16d-4da0-a20c-624582b9984e.

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Annex. Progress in main structural reforms

The objective of this Annex is to review action taken since the previous Survey's main recommendations

Recommendations in previous Survey	Action taken since May 2016
A. Recommendations on macroeconomic policies	
Reduce government expenditures to further lower the structural deficit.	No action taken.
Implement a strategy for the asset management company to step-up offloading of non-performing assets.	In early 2017 the Hungarian Restructuring and Debt Management Ltd. (MARK Zrt.) has been acquired by a private investor, resulting in a lack of official trading platform for selling impaired loans.
Expand capital surcharges on nonperforming loans detained by banks beyond a certain period.	Since 2017 banks have to comply with enhanced capital requirements, if their stock of impaired project financing loans exceeds 30% of domestic Pillar 1 capital requirement.
Continue the fight against VAT fraud.	Since 2017, the compulsory use of online cash registers has been expanded to particular service sectors and from 2018, the use of the online invoice system became obligatory. In 2018, VAT rate has been reduced further on selected products.
Rely more on non-distortive consumption taxes.	In 2016-2017, the excise duty rate on tobacco products has been increased, and the excise duty rate on petrol, petroleum and diesel has been linked to the world price of Brent crude oil.
Sell stakes in state-owned banks.	In 2016 and 2017 public stakes in MKB and in Gránit Bank have been sold, leaving Budapest Bank (8th largest) fully state-owned, Erste bank (5th largest) with a 15% and FHB bank (11th largest) with a 7.3% share.
B. Recommendations to bolster private investment and the business environment	
Improve transparency, stability and formulation of regulatory policies and continue efforts to cut red tape.	Since 2017, large state registers and systems have been connected to each other resulting in faster procedures and easier supplies of data. In 2017, the Cutting Red Tape Programme has been continued as part of the State Reform II. Programme to improve the efficiency of the public administration and the competitiveness of the enterprises.
Remove sector exemptions and review mergers that might reduce competition.	No action taken.
Introduce market-based energy pricing and open market segments to competition.	No action taken.
Facilitate new entry in the retail sector.	No action taken.
Stimulate investment in telecommunication.	No action taken.
Increase reliance on feed-in tariffs and use competitive auctions for renewable energy projects.	The new renewable energy support scheme (METÁR) in 2017 has been introduced with a combination of feed-in tariffs, feed-in premiums and competitive bidding procedure.
Promote a regional stock exchange to foster capital markets in the region.	The Budapest Stock Exchange (BÉT) has continued to organize joint roadshows to London, Paris, Warsaw and Zagreb.
Facilitate the introduction and adoption of new financial technologies.	In March 2018, the central bank has launched its Innovation Hub to identify actually arising legal obstacles.
Apply RIA to all significant policy initiatives, and introduce mandatory public consultations.	All legislative actions are subjected to regulatory impact assessment and ex post evaluation since the end of 2016.
Establish a regulatory impact assessment (RIA) commission.	No action taken.
Strengthen public procurement through a more effective e-procurement system.	Since April 2018, the use of a newly established central electronic public procurement system (EKR) is a compulsory.
Establish a dedicated anti-corruption agency.	No action taken.
C. Recommendations on enhancing skills to boost growth	
Improve reintegration of public works' participants.	Since early 2018, NGOs cooperating with PES provide counselling and mentoring services as well as financial benefits for disadvantaged jobseekers to foster their re-entering to the labour market.
Tighten the conditions for public work schemes by efficient implementation of a profiling system.	A new client profiling system implemented in 2016 contributes to the better targeting of the public work schemes.
Improve the evaluation of the efficiency of existing training programmes to better match different categories of participants to specific training programmes.	PES has been creating individual action plans (IAP) with all the registered job seekers since 2016 based on the profiling category of the client.
Create a toolset to promote lifelong learning.	No action taken.
Continue integrating the vocational training programmes into secondary vocational schools.	No action taken.

Enhance education outcomes and reduce inequalities by better targeting more resources to disadvantaged schools.	Since 2016, several programmes and EU-funded projects support disadvantaged students by providing them tutoring classes, free schoolbooks, scholarship and subsidies for the tuition fee. New testing procedures have been developed for disadvantaged students and the number of special education teachers has been increased.
Continue to strengthen career counselling to improve responsiveness of tertiary education to labour market needs.	Since 2017, a career-orientation day has been organised in schools, fully focusing on the choice of career and higher education.
Improve teacher's working conditions by further increasing their wages and reducing unnecessary administrative burdens.	In 2017-2018 almost 5% wage increase has been achieved in the tertiary education. Administrative burdens are mitigated by a new online administration system called 'KRÉTA' implemented in 2016.
Postpone tracking and extend the period of compulsory grammar school to enhance general skills.	No action taken.
Expand early childhood care.	From January 2017, all local governments are required to organise nursery services where such services are demanded.
Reduce the effective length of parental leave and provide incentives for paternity leave	No action taken.

D. Past recommendations on education	
Recommendations in previous Surveys	**Action taken**
Improve general skills of pupils and their future adaptability to change jobs.	No action taken.
Enhance education outcomes and reduce inequalities by better targeting more resources to disadvantaged schools.	Since 2016, several programmes and EU-funded projects support disadvantaged students by providing them tutoring classes, free schoolbooks, scholarship and subsidies for the tuition fee. New testing procedures have been developed for disadvantaged students and the number of special education teachers has been increased.
Improve teacher's working conditions by further increasing their wages and reducing unnecessary administrative burdens.	In 2017-2018 almost 5% wage increase has been achieved in the tertiary education. Administrative burdens are mitigated by a new online administration system called 'KRÉTA' implemented in 2016.
Continue to strengthen career counselling to improve responsiveness of tertiary education to labour market needs.	Since 2017, a career-orientation day has been organised in schools, fully focusing on the choice of career and higher education.
Create a toolset to promote lifelong learning.	No action taken.

Thematic chapters

Chapter 1.
The challenges of sustaining Hungary's pension and health systems

Population ageing is leading to rising financing pressures in the pension, health care and long-term care systems. Official projections suggest that ageing-related spending could increase by 3.2% of GDP by 2070. Less optimistic assumptions about demographic developments and labour market outcomes could add several percentage points to pension spending. Moreover, the risk of old-age poverty is relatively high in the earnings-related pay-as-you-go pension system, and expected pension benefits are difficult to calculate. Measures to correct these issues could double the projected increase in public pension spending in the long run. In addition, the centralised health care system has relatively little use of price signals, contributing to reduced access and outcomes that are worse than elsewhere. Structural reform could improve efficiency, but securing a projected increase in life expectancy of 10 years, aligning it with the EU average, is likely to require additional public resources. This, together with the cost of new technologies and improving quality and coverage, could increase spending by as much as 50% by 2070. The fragmented long-term care system is putting a relatively large responsibility for such care on family members, implying that public spending in this area will increase, particularly as economic structural changes affects the geographical distribution of the population.

Introduction

The Hungarian population is ageing and shrinking, increasing pressures on ageing-related spending and the contribution base (European Commission, 2018a). In 2016, there were 2.5 million old-age pensioners, roughly one-quarter of the population (Ministry for National Economy, 2017). Total public expenditure on pensions was 9.7% of GDP in 2016, while public expenditure on health and long-term care was 5.6% of GDP (European Commission, 2017). Over the longer term, the number of old-age pensioners is set to rise while the overall population will shrink from 9.8 million to 8.9 million nearly doubling the old-age dependency ratio (European Commission, 2017). The resulting decline in the old-age support ratio is particularly challenging for pay-as-you-go pension schemes such as Hungary's as pension spending is financed by contributions of current workers (Fall and Bloch, 2014).

One of the main problems that the pension system will face is therefore that spending on pension benefits will increase faster than contributions. If no offsetting measures are taken, general government debt (Maastricht definition) could exceed 180% of GDP by 2070 (see Key Policy Insights). In addition, the design of the current system involves a high risk of old-age poverty, as well as large variations in pension benefits between workers with similar careers but retiring at different time. Moreover, it is difficult for people in the labour market to predict their future pension benefits. The health system, meanwhile, is based on central planning with little use of price signals, hampering its ability to adjust health-care supply to the demographic changes. An additional challenge is to enhance the sector's low efficiency as life expectancy is presumed to increase by a decade to converge with the European average – a development that is likely to raise health spending towards European levels. The first part of this chapter will analyse the challenges related to the structure of the current pension system, the second part of the chapter will focus on health policy.

The public pay-as-you-go pension system runs a deficit

Well-functioning pension systems are both actuarially fair (people receive pensions in proportion to their contributions) and actuarially neutral (early or late retirement leads to decrements or increments to their pension benefits to correct for missing contributions or over-contributions) (Fall and Bloch, 2014) (Queisser and Whitehouse, 2006). To be actuarially fair, people should receive in retirement the same as what they paid in when working, together with the investment returns on the accumulated assets before retirement (Fall and Bloch, 2014).

The Hungarian pension system is a pay-as-you-go (PAYG) single pillar, earnings-related scheme with defined benefits (DB) (OECD, 2017a). It is not fully actuarially fair owing to the non-linearity of pension accruals and the valorisation of earnings, and there is a lack of actuarially neutral adjustment for early retirement rules for women who can retire without penalties. These are discussed below.

At least 15 years of work is required to receive some pension benefits, and 20 years are required for a full pension. There is no basic (universal) state pension. Those with fewer than 15 years' accrual are not entitled to a pension, but can receive social assistance, worth around 8.3% of average gross earnings, or roughly 12%-19% of net earnings (with in-kind benefits worth around 25% of the value of benefits) (OECD, 2017a). Only Turkey, Mexico and Korea provide lower safety-nets within the OECD (OECD, 2015a).

There is a minimum monthly pension of HUF 28 500 (EUR 90) for workers with at least 20 years' accrual. It is mainly relevant for low-wage income earners who lost income during the transition to a market economy in the early 1990s, and currently few pensioners rely on it (OECD, 2017a) (Ministry for National Economy, 2017). However, the cohorts born between 1960 and the 1980s, who were the most affected by the economic transition, will have had more difficulty earning a full pension, and as many as 4% of a cohort may have to rely on the minimum pension, or the social safety net (Augusztinovics et al., 2009).The amount of the minimum pension is 40% below of the poverty level (defined as half the median wage). It has been unchanged in nominal terms since 2008 and is used to benchmark other social benefits. Safety-net incomes ought to be indexed to prices to maintain purchasing power.

The PAYG system includes all workers, including the self-employed, and provides survivors' pensions. Nearly all other schemes or special regimes have been abolished or are being phased out (Ministry for National Economy, 2017). Workers and employers pay social security contributions of 10% and 19.5% of gross earnings, respectively (Ministry of the National Economy, 2018). In 2018, 79.5% of the total social contributions went to the Pension Insurance Fund while the rest was directed to the Health Insurance Fund (Ministry for National Economy, 2017). In addition, the 2018 Budget Act allocates additional subsidies of 0.2% of GDP, to cover pension payments.

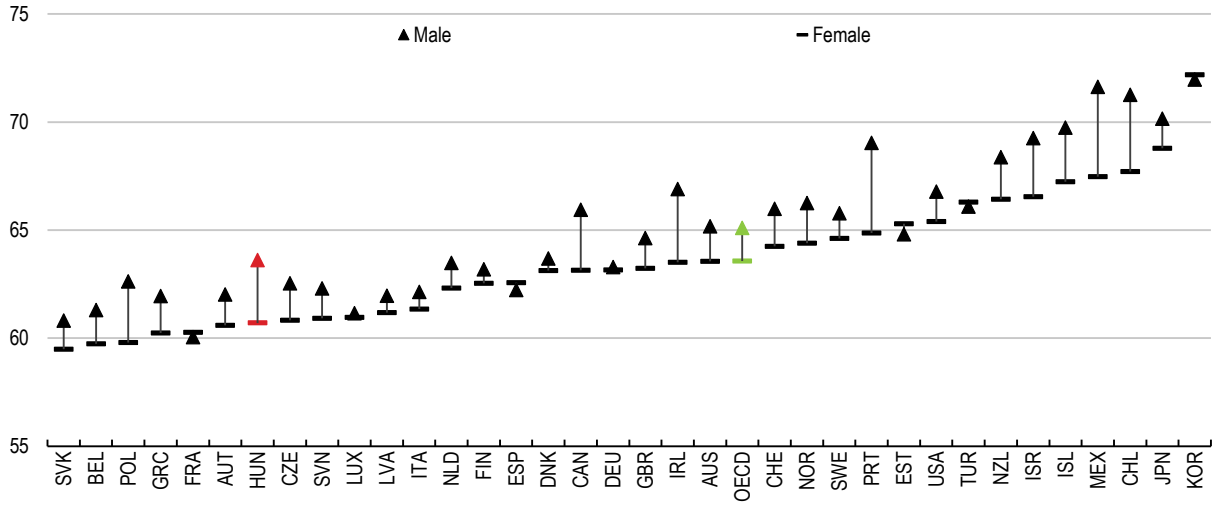
A second pillar of a mandatory private defined contributions (DC) scheme to supplement the PAYG system was dissolved in 2010 and the funds transferred back to the state to repay public debt (OECD, 2012) (Freudenberg, Berki and Reiff, 2016). In doing so, an important funding source for future pensions was removed (Box 1.1). In the third pillar, various voluntary pension insurance and savings schemes have around 1.3 million members.

The statutory retirement age is gradually being increased to 65 years by 2022 for men and women (Box 1.1). It was 63.5 at the beginning of 2018. The retirement age is lower than in most other OECD countries, and will remain below the OECD average even after 2022 (European Commission, 2018b) (OECD, 2017a). The government has sought to increase the effective retirement age by raising the official pension age while abolishing most forms of early retirement (OECD, 2017a) (OECD, 2018a). Curbing early retirement combined with the increase in the statutory retirement age has increased the effective retirement age by just over one year to 62 years for men and women combined since 2012 (European Commission, 2018a). However, the effective retirement age remains well below the OECD average, especially for women (Figure 1.1).

In 2017, the pre-tax pension replacement rate (the ratio of initial pensions to last earnings) for Hungary was 58.7% (OECD, 2018b), above the OECD average of 52.9% (OECD, 2017a). Since January 2012, pension benefits have been indexed to prices, based on the projected consumer price index (CPI) in the annual budget. A retroactive upwards correction takes place by end-year in case the full-year CPI overshoots projections (OECD, 2017a).

A pension premium is paid to existing pensioners at end-year if annual GDP growth exceeds 3.5%, and provided the budget is evolving according to projections. The premium is calculated by subtracting 3.5 from the year's GDP growth in percentage points and multiplying it with 25% of the monthly pension payment, with a ceiling of EUR 250. In 2017, the majority of pensioners received an additional pay-out of around EUR 37, but some only received the minimum of EUR 20. To ensure that pensioners benefit from periods of economic upswing, a less arbitrary solution would be a rules-based system, such as wage (or part-wage) indexation.

Figure 1.1. The effective retirement age remains below the OECD average, especially for women



Source: OECD 2017, Pensions at a Glance 2017.

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Box 1.1. Recent pension reforms

The 2009 reform

The statutory retirement rage was raised from 62 years to 65 years, increasing by 0.5 years every year for cohorts born after 1952, to be fully implemented by 2022.

Indexation of pension benefits in retirement was switched in steps from a 50% price-50% wage index (so-called "Swiss indexation") to pure price indexation linked to the national CPI which was implemented from 2012 (Domonkos and Simonovits, 2016).

The 2010 reform (the "switchback reform")

The government reversed the three-pillar system introduced by the 1997 Pension Law:

• The second mandatory defined contributions pillar was de facto eliminated. Roughly 90% of the capital (around 11% of GDP) accumulated between 1998 and 2010 by the mandatory private pension funds was transferred into the general government budget, leaving a sizeable budget surplus in 2011 (OECD, 2012) (Freudenberg et al, 2016). All payments out from the pillar were suspended, and all previous mandatory payments (employer and employee contributions) were diverted into the PAYG scheme (Freudenberg, Berki and Reiff, 2016).

• From 2011, new labour market entrants are automatically enrolled in the PAYG system.

• Before the reversal more than 70% of the labour force were members of a labour market pension fund. After the reversal only 102 000 scheme members stayed in the defined-contribution scheme; essentially young people and high-income earners. According to the current rules, remaining members accrue pensions in the first pillar, but they can only make additional payments to the second pillar on a voluntary basis, and there

is no annuity upon retirement but a lump sum payment. Today some 57 000 members remain in the scheme (Casey, 2012) (Freudenberg, Berki and Reiff, 2016).

The 2011 reform: abolishing early retirement and 2011 income-tax reform

• From 2011, all forms of early retirement were abolished (with exception of women with 40 years' service, the "Women 40" scheme). Prior to 2011 more than 30% of pension beneficiaries were below the statutory retirement age, mainly owing to early retirement or disability (OECD, 2010). Disability pensions were separated from the old-age pension system and transformed into a special disability provision, as was rehabilitation.

• Special service pension benefits for the armed forces where abolished, with the exception of recipients having reached the age of 57 before December 2011 (OECD, 2018a).

• The special treatment of workers in arduous/hazardous work was eliminated. Replaced by a "benefit prior to retirement age", where benefits are not means-tested, financed by taxes paid to the general budget. Some 2 000 people receive these benefits every year (OECD, 2018a).

• The flat-rate income tax reform of 2011 led to an increase of post-tax net earnings. It also simultaneously removed the tax-free bottom income threshold (Kosa, 2012). As a result, wage-earners who retired post-2011 will have earned higher pensions for the same contribution rates than previous retirement cohorts. High-income groups have befitted disproportionately as low-income groups no longer have a tax-free threshold and therefore have a lower take-home pay on which pension entitlements are calculated (Czeglédi et al., 2016).

Calculation of pension benefits

Pension entitlements are calculated from monthly average earnings net of income tax and social contributions. An accrual rate is attributed for each year worked. At retirement, the total accrual is converted into pension benefits by multiplying the accumulated accrual rate with average lifetime earnings. Earnings are adjusted annually by the previous year's national average-wage increase (known as valorisation) to reflect rising economy-wide welfare during the service time (OECD, 2017a) (Czegledi et al., 2017) (Ministry for National Economy, 2017) (Freudenberg, Berki and Reiff, 2016) (OECD, 2018a). Above HUF 372 000 (EUR 1 200) a gradual reduction to earnings is applied for the benefit calculation (see footnote in Table 1.1), but there is no upper earnings ceiling for pension accrual (Ministry for National Economy, 2017). For an individual earning HUF 500 000, this means that the pensionable income is HUF 479 300 (Table 1.1).

The large fluctuations in wage growth is translated into hard-to-predict variations in the monetary value of initial pension benefits as past wage developments are used to calculate the present-day value of earnings, whereas pension benefits received in retirement are indexed to prices, meaning that they do not follow wage developments. As a result, initial pension benefits vary for workers with similar wage careers but with different retirement years. Because real wages have risen by around 20% since 2016, someone who retires in 2018 will have a 20% higher initial pension than a 2016 retiree with a similar wage career. To increase predictability, authorities could benchmark against a moving average of real-wage developments, such as a ten-year moving average of wage growth, to take account of the business cycle, which would almost remove the fluctuations and ensure better predictability of future pension entitlements (Figure 1.2). To ensure transparency, the calculated average, whether using 10 years or another number, would need to be made public every year.

Table 1.1. Benefit calculations

% of average net earnings, unless otherwise stated[1]

	Earnings-related	Minimum pension	Non-eligible for minimum <15 years' service	Early retirement (before 65 years)
First 10 years of coverage	33%	No pension entitlement if < 15 years coverage, but an old-age allowance may be received (see next column).	For a couple: allowance is 85% of minimum pension Single person < 75 years: 100% of minimum Singe person > 75 years: 135%	nil
11-25 years of coverage	Add 2% per year worked	After 20 years of service: HUF 28 500/month (unchanged since 2008)		nil
26-36 years of coverage	Add 1% per year worked			nil
37-40 years of coverage	Add 1.5% per year worked			Available for women with at least 40 years' eligibility
41 and above	2% per year worked			n/a
Late retirement (working past statutory retirement age)	0.5% per month worked after statutory retirement age			n/a

1. Earnings are valorised with economy-wide average earnings to the year preceding retirement. Pension benefits are adjusted to changes in the consumer price index. For higher levels of the accordingly calculated average valorised net wages (above a pre-set level – HUF 372,000 (around EUR 1,200) there is a progressive reduction to be applied. (Only 90% of the incomes between HUF 372,000 and 421,000 (around EUR 1,350), and 80% of the monthly incomes above 421,000 have to be taken into account). For instance, if the average monthly income is HUF 500,000, the pensionable average income is HUF 479,300. (372.000*100%+((421,000-372,000)*90%+(500,000-421,000)*80%).

Source: OECD (2017a), Pensions at a glance 2017: Country Profiles – Hungary; Freudenbert et al, "A Long-Term Evaluation of Recent Hungarian Pension Reforms", MNB working papers, 2016.

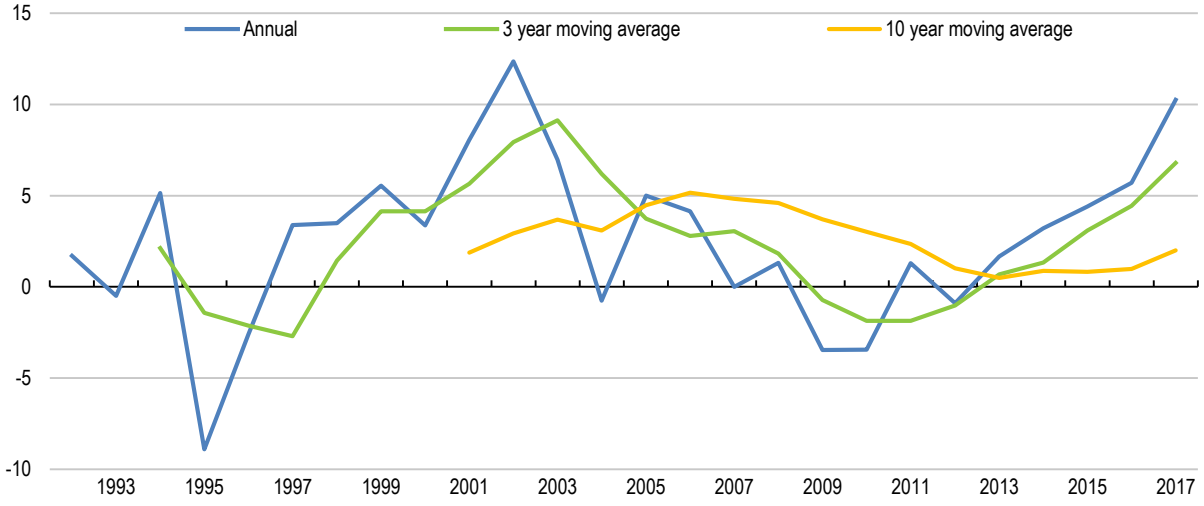
The accruals system is non-linear and rates vary with the length of the contribution period. The accrued rights are front-loaded the first 10 years, before gradually falling the next 26 years, where after they rise again until retirement (Figure 1.3). For workers earning the average salary throughout their career, the accruals system leads to a replacement rate (the ratio of initial pensions to last earnings) of 92% of the last salary after a career of 46 years.

The front-loading of accrued rights aims to reward workers with shorter careers, typically low-income groups. However, the non-linearity of the rates makes it difficult for individuals to fully assess the optimal time to retire (Fall and Bloch, 2014) (Blöndal and Scarpetta, 1999). A constant accruals rate of around 2% would enable workers to better calculate their accrued replacement rate, and is likely to keep budget expenditures unchanged while leading to similar pension outcomes for full-career workers. Across the OECD, only Hungary, Greece, Spain and Luxembourg have accrual rates that vary with service time. In addition, a Pension Monitor system would enable individuals to keep track of their expected pensions. A pension monitor enables employees to calculate their expected pension by entering details about salary, length of service and expected year of

retirement; it may also offer additional services to help individuals manage their future pensions. For instance, in the United Kingdom, the Pensions Regulator hosts a website where employers, employees, pension insurers and pension providers can obtain advice, including about voluntary pension schemes (The Pensions Regulator, 2018).

Figure 1.2. Using a moving average for valorisation would smooth fluctuations

Year-on-year percentage change in real wages



Source: Hungarian Central Statistical Office.

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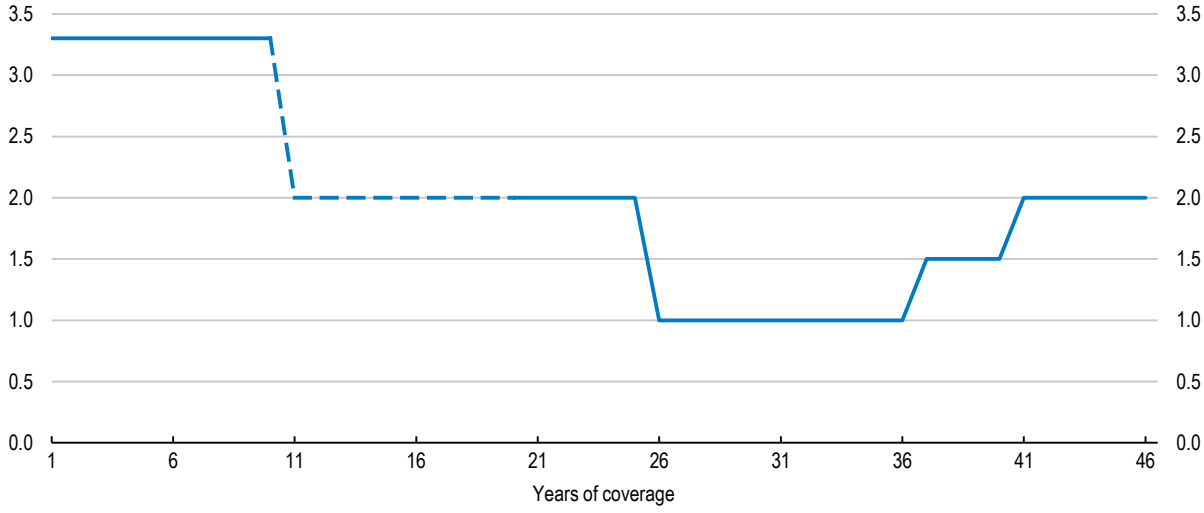
Figure 1.3. Non-linear benefit accrual rates lead to less predictable pension outcomes

As a percentage of earnings[1]



1. The earnings-related pension is calculated as 33% of average earnings for the first ten years of coverage. Each additional year of coverage adds 2% from year 11 to 25, 1% from year 26 to 36, 1.5% from year 37 to year 40 and 2% thereafter. 20 years of service is required for both the earnings-related pension and the minimum pension.

Source: OECD (2017), Pensions at a Glance 2017: Country Profiles - Hungary.

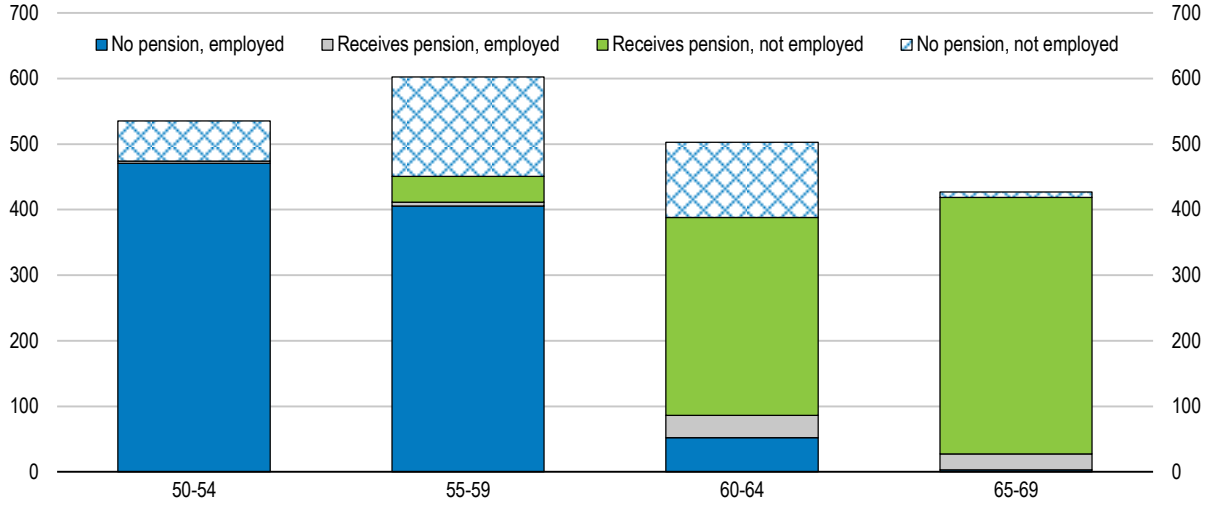
StatLink https://doi.org/10.1787/888933896943

The increase in the accrual rates after 36 years aims to encourage workers to remain in the labour market. Moreover, there is a bonus pension increment of 0.5% for every month worked past the statutory retirement age without claiming the pension. After a year, the pension will therefore be increased by 6%, which is close to actuarial neutrality (OECD, 2017a) (Queisser and Whitehouse, 2006). This kind of pension bonus system is used elsewhere in the OECD (OECD, 2017a). However, public sector employees are not allowed to work beyond the statutory retirement age, for no clearly stated reasons. The rules should be applied evenly in the public and private sector although ending mandatory retirement altogether is not without controversy (OECD, 2017a). Employers in particular often argue that their businesses could not run as efficiently without it. Mandatory retirement is also a convenient mechanism for parting with unproductive workers. Ultimately, though, there is no reason why someone who still performs well be forcibly retired just because of age (OECD, 2017a). There are no data available on the number of people who defer pensions after retirement age (OECD, 2018a).

Other policy instruments are needed to flank the pension system in order to raise the effective retirement age, which is one of the fundamental requirement to ensure the long-term sustainability of the PAYG system, along with increasing the retirement age (Fall and Bloch, 2014). Increasing the employment rate of the above-55 also underpins the long-term projections in the EU's Ageing Report, discussed below (Figure 1.4) (European Commission, 2017). The employment rate of workers aged 55-64 in Hungary is 52.7%, below the OECD average of 60.8%, although it rose by a third between 2011 and 2018 (OECD, 2018c).

Figure 1.4. Pensioners generally do not work after 65

In thousand persons, 2012[1]



Note: Data refer to those persons who live in private households and who are either a) working at the time of the survey or b) not working at time of the survey but who did work after the age of 50.
Source: Eurostat (2018), "Transition from work to retirement", Eurostat Database.

StatLink https://doi.org/10.1787/888933897038

Policies should focus on encouraging older workers to remain in the labour market until the pensionable age, and providing incentives to keep working beyond the pensionable age by deploying measures that promote the employment of older people, such as upgrading skills, providing appropriate help in finding jobs if unemployed, and encouraging employers to provide better suited working conditions and working-time arrangements (OECD , 2006), (OECD, 2016a) (OECD, 2018a). A recent survey shows that one-fifth of Hungarian pensioners would be willing to take a job provided employers offered flexible working conditions. More than half of those willing to work would take a part-time job, one quarter would work flexible hours, 10% would telework and only 10 % would take a full-time job (GKI, 2018). Current tax-incentives for employers who hire the long-term unemployed, women and older people could also be extended to the over-65s, especially in the SME sector (Zoltán, 2014) (OECD, 2016b) (Ministry of the National Economy, 2018) (Svraka, Szabó and Hudecz, 2014). From 2019, old-age pensioners who work will no longer pay social contribution taxes, only the personal income tax of 15%.

Other measures, such as phased retirement, with a partial withdrawal of pensions, might be beneficial for older workers as a way to smooth income and consumption. Some countries allow phased retirement, such as France (Box 1.2), but this is currently not possible in Hungary (OECD, 2016a) (OECD, 2018a). Past the statutory retirement age, it should also be possible to better combine pensions and work income. This is uncommon in the private sector, and in the public sector pension payments are suspended for people who continue to work past retirement age (OECD, 2017a).

Box 1.2. Flexible retirement schemes

An increasing number of workers surveyed in the EU would prefer to combine work and partial pension than to fully retire (Eurofound, 2016). Eleven countries currently allow this within the OECD: Austria, Belgium, Canada, the Czech Republic, Finland, France, Germany, Greece, Japan, Norway and the United States. If people make pension contributions for work while receiving an early-retirement benefit, pensions are either recalculated each year to reflect these new contributions, or once the pension is eventually claimed.

Limitations and eligibility criteria for combining work and receiving early pension vary widely across countries. In France, for instance, there are two different schemes allowing to combine work and retirement:

Progressive retirement (Retraite progressive), pre-retirement: Wage and pension can be combined starting from the legal age of retirement (62 for the generation born in 1955) or the age of 60 for those who have contributed at least 150 quarters. The insured reduces the number of working hours (40% to 80% of effective work) and receives the corresponding share of wage combined with a share of old-age pension. The insured keeps contributing and pensions are recalculated to reflect these new contributions.

Accumulating work and pension (Cumul emploi-retraite), post-retirement: Someone who has retired can work and combine wage and pension without limit if the full-rate retirement conditions are fulfilled (legal retirement age + number of years of contribution; or legal age without penalties). Wage and pension can be combined up to a certain limit if the insured does not meet those conditions. In either case, working retirees do not earn additional pension entitlements.

The French programme, introduced in 2003 and reformed in 2009 to improve access, has been successful. In 2016, 478 000 people, 3.4% of French pensioners, were working whilst receiving some pension benefits. It has also helped boost the employment rate of those aged 60-64 which nearly doubled to 29.2% between 2007 and 2017.

Source: (OECD, 2013) (OECD, 2017a) (Musiedlak and Senghor, 2017) (INSEE, 2018).

Most forms of early retirement have been abolished

Early retirement for men, regardless of occupation, is no longer possible. Retiring because of disability is now subject to strict assessment, and benefits are no longer classified as pension (OECD, 2017a) (OECD, 2018a). However, early retirement remains possible for women with at least 40 years' of eligibility, including periods in paid work or in receipt of maternity benefits, known as Women 40 (OECD, 2017a) (OECD, 2018a). The scheme has been popular, with early data indicating that as many as 80% of entitled women have chosen to retire (Freudenberg, Berki and Reiff, 2016). The system is not actuarially fair, particularly as women live longer than men (Queisser and Whitehouse, 2006).

The retirement age should be the same for men and women, with the possibility of taking early retirement with pension decrements, provided the system remains actuarially neutral (OECD, 2017a). Indeed, closing down the option of retiring early might involve an excessive degree of compulsion (Blöndal and Scarpetta, 1999), although a minimum retirement age needs to be established to avoid misuse of the system. The actuarially neutral decrement would subtract around 6% of pension entitlements for each year prior to the statutory retirement age; keeping the current increments of 6% for retirees who keep working, including in the public sector.

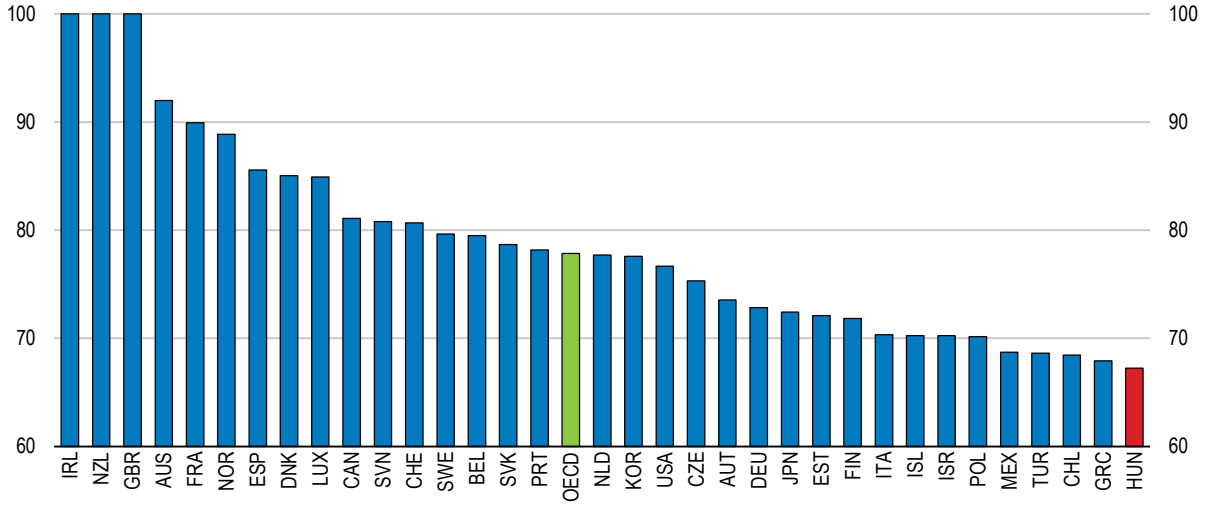
Truncated careers reduce pension entitlements

The design of the Hungarian pension system means that those with reduced lifetime earnings, such as the unemployed, late entrants into the labour market and, to a lesser extent, women who take maternity leaves, have smaller pensions (Fall and Bloch, 2014) (OECD, 2017b). (Czeglédi et al., 2016) (Domonkos and Simonovits, 2016). The unemployed accrue pension rights from the unemployment benefits, but the unemployment benefit period is limited to 90 days, the shortest in the European Union (European Commission Staff Working Document, 2018) (Kosa, 2012). Thereafter, the unemployed may receive the so-called job-seeker aid if they are less than five years away from retirement, but it does not accrue pension rights (OECD, 2017a). Younger unemployed may receive means-tested benefits, but they do not accrue pension rights.

The negative impact of career breaks on pension entitlements is particularly strong in Hungary because of no other offsetting measures (OECD, 2017a) (OECD, 2017b). In a recent OECD-wide simulation of interrupted careers (late labour market entry and periods of unemployment lasting ten years), Hungary has the lowest pension outcome for individuals with career interruptions who face a shortfall of roughly 32% in pension benefits compared to the pay-out with a full career (Figure 1.5) (OECD, 2017b).

Figure 1.5. Workers with career interruptions have low pensions in Hungary[1]

Gross pension entitlements as a percentage of full-career entitlements, mandatory pensions only[2]



1. Pension entitlements are calculated for male average earners who enter the labour market at 25 years old (rather than the standard 20) and spend ten years unemployed between the ages of 35 and 45. What they would receive is measured against the OECD baseline pension, corresponding to a full career from the age of 20.
2. In Luxembourg and Slovenia labour-market latecomers with career gaps must work 5 years more than workers with unbroken careers to qualify for a full pension. The same figure is 4 years for France and 2 years for Germany and Spain.
Source: OECD (2017), Preventing Ageing Unequally, OECD Publishing, Paris.

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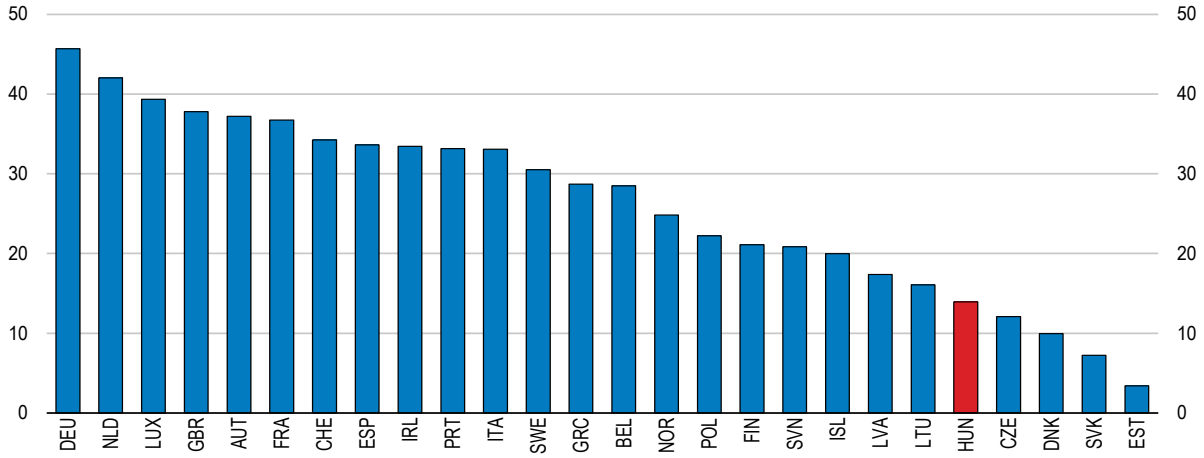
Working women also face career interruptions if they have children. The gender gap in pensions has been comparatively low as women had similar participation rates as men prior to transition away from Communism (Figure 1.6). At present, the labour market participation rate (15-64 years) is 63.5% for women and 77% for men (European Commission, 2017). On average, men's benefits are around 15% higher than that of women (including widows' survivor pensions), and women face a higher risk of old-age poverty (European Commission, 2017) (Freudenberg, Berki and Reiff, 2016) (OECD, 2017a) (OECD, 2017c). Some of this may be caused by long maternity leaves, which can last up to three years per child (OECD, 2016b). Pension entitlements are accrued from maternity benefits, which in the third year falls to EUR 90 a month (OECD, 2017a).

Although women are allowed to work while receiving maternity benefits after six months, the lack of adequate childcare facilities means that many choose to stay at home (OECD, 2016b). This leads to lower accrued pension benefits over time (Ministry of the National Economy, 2018) (OECD, 2017c). However, new family tax allowance rules in place since January 2018 increase post-tax earnings of women after maternity, leading to better pension outcomes relative to men with the same initial wage career, provided the tax-benefit is used by the woman (for a couple, either spouse may use the deduction). To avoid eroding the tax base and to remain more actuarially fair, family allowances should be wholly cash-based.

Figure 1.6. Gender gap in pensions is relatively low

In per cent, 65+ year-olds, 2014 or latest available[1]



1. 2013 for Austria, Denmark, Greece, Finland, Hungary, Iceland, Latvia, the Netherlands, Norway, Slovenia and Spain. The gender gap in pensions is defined as: (1 - (women's average pension/men's average pension)) *100). 'Pensions' include public pensions, private pensions, survivor's benefits and disability benefits. The gender gap in pensions is calculated for people aged 65 and older.
Source: OECD (2017), The Pursuit of Gender Equality: An Uphill Battle, OECD Publishing, Paris.

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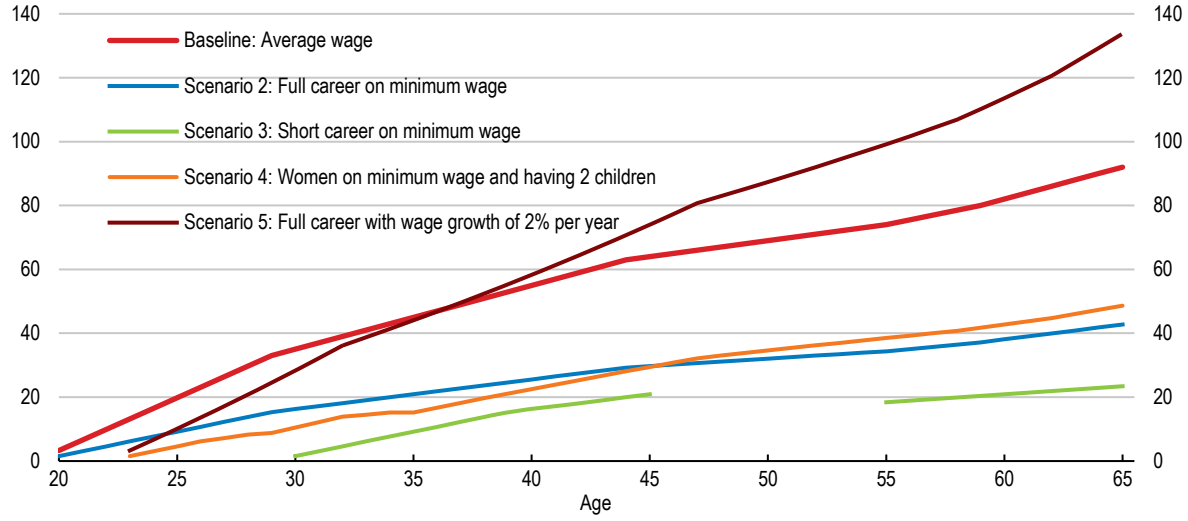
Despite the family allowance, long maternity absences combined with the Women 40 scheme that also shortens the contributory career may eventually lead to a widening of the gender gap in pensions unless corrective action is taken. Measures should be taken to shorten the maternity leave to durations seen in other European countries (around 12 months), while taking steps to improve the work-life balance for women, such as offering adequate childcare pre-kindergarten (OECD, 2016b) (OECD, 2017c).

The earnings related pension system implies that truncated careers and low wages lead to relatively low pensions. OECD calculations show that the accrued pension, as a share of average incomes, for low-income earners and those with career interruptions are very low. For both groups, pensions are below 50% of average earnings by the time they reach retirement (Figure 1.7). A single mother with two children earning the minimum wage will benefit from the new income tax allowance, but even so her accrued pension will still be low compared to average earnings. An additional concern is that in retirement these low-income earners rapidly fall into old-age poverty (see below). On the other hand, the system implies that those with a wage career may earn pensions well in excess of average wages by the time they retire.

Figure 1.7. Theoretical accrued monthly pension benefits

As a percentage of average monthly net salary[1]



1. Average net monthly earnings of full-time employees was HUF 197 516 in 2017. The baseline scenario assumes average wage for a career of 46 years from age 20. Scenario 2 assumes minimum wage for a career of 46 years. Scenario 3 assumes earning the minimum wage for a short career of 27 years, with a late entry to the labour market and ten years spent in unemployment. Scenario 4 assumes women having 2 children (with 3 years absence from the labour market after each birth) and earning the minimum wage for a career of 37 years. Scenario 5 assumes a full career with wage growth of 2% per year for 43 years, starting from average wage level, with later entry into the labour market, reflecting time spent in education.
Source: OECD calculations based on data from Hungarian Central Statistical Office.

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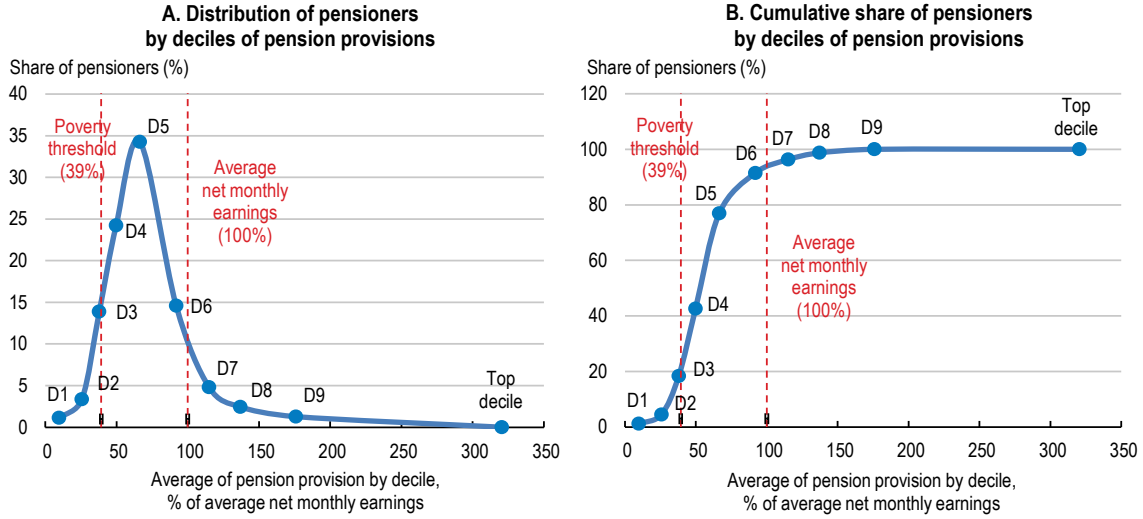
Old-age poverty is a concern

Currently, roughly 20% of pensioners receive pension benefits that are below the relative poverty threshold of HUF 77 500 a month (EUR 240; defined as half of the median wage). Even with additional in-kind benefits, 16.8% of the over-65s live in poverty or social exclusion (Hungarian Central Statistical Office, 2016). This is above the OECD average of 12.6% of all individuals over 65 who live in relative income poverty (Figure 1.8, Panels A and B) (Ministry of the National Economy, 2018) (OECD, 2015a). It results from several factors: many current pensioners retired with career interruptions caused by to the economic transition in the 1990s and subsequent economic crises, leading to low pension entitlements. In addition, workers with late labour market entry due to university studies or difficulty in finding a first job, and workers with career breaks accumulate lower pensions (OECD, 2017d). As a result, public expenditure on pensions is relatively low in comparison with countries with similar systems (Figure 1.9, Panels A and B). The average pension is HUF 129 637 (EUR 400). Approximately 66 000 old-age pensioners are not entitled to a pension. Moreover, 6 958 pensioners received social benefits because their income fell below the required minima in 2016. Low-income pensioners also have shorter life expectancies (Czeglédi et al., 2016).

Figure 1.8. The majority of pensioners receive pensions below average net wages

January 2018[1]



1. Average net monthly earnings of full-time employees was HUF 197 516 in 2017. Panel A shows the distribution which indicates that just over 60% of all pensioners receive pensions that are below average net monthly earnings, with the largest share receiving around 75% of average earnings. Panel B sums the deciles.
Source: OECD calculations.

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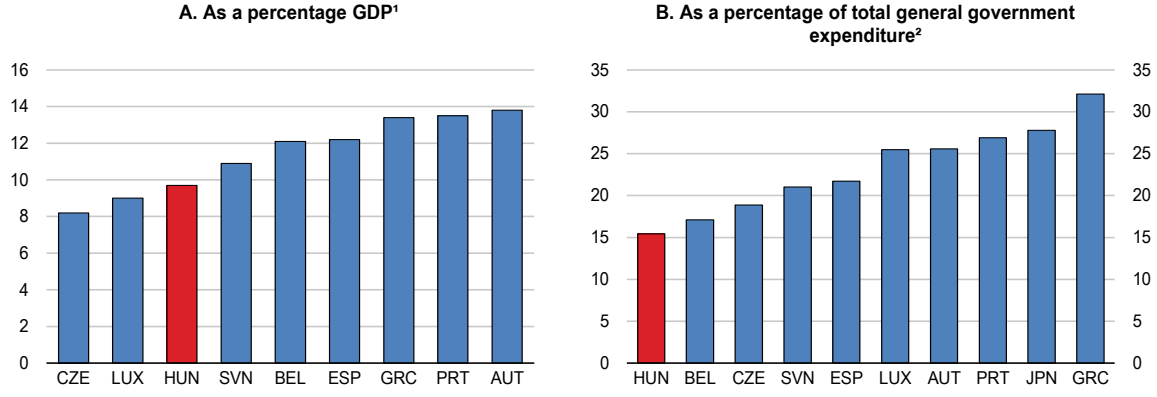
Figure 1.9. Public spending on pensions is relatively low

2016



1. The depicted countries all have mainly or solely a public defined benefit pension system.
2. Excludes early retirement benefits.
Source: European Commission (2018) 2018 Aging Report; OECD (2018), OECD National Accounts Statistics (database).

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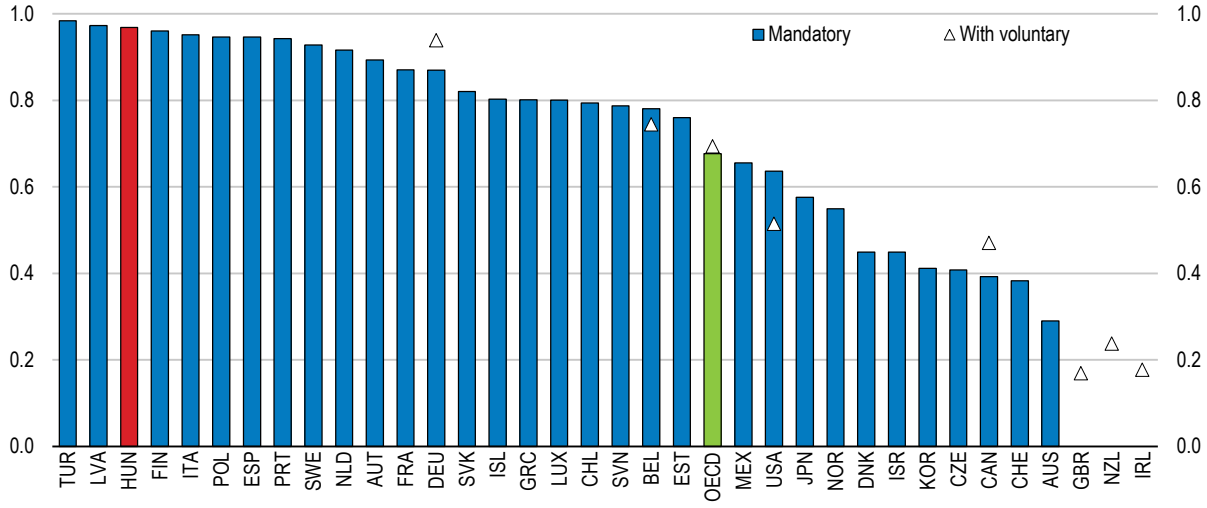
The current pension design replicates wage inequalities

Because there is no universal or basic state pension, contrary to most public pension systems in the European Union, the pass-through of wage inequality in Hungary is higher than on average in the OECD (OECD, 2017b) (European Commission, 2018b). The average relative position of new pensioners in the overall pension income distribution is thus maintained after retirement. More than 85% of an increase in wage inequality is passed through into pensions, because of the low social safety net and absence of basic state pension (Figure 1.10) (European Commission, 2018b) (OECD, 2017b). This also translates into regional disparities in pension incomes, reflecting lifetime incomes (Figure 1.11) (see also Chapter 2).

Figure 1.10. Wage inequality leads to pension inequality

Percentage point change in the Gini index of pensions for a 1 percentage point increase in the Gini index of wages, full career case[1]



1. Data refer to gross (i.e. pre-tax) wages and pension benefits.
Source: OECD (2017), Preventing Ageing Unequally, OECD Publishing, Paris.

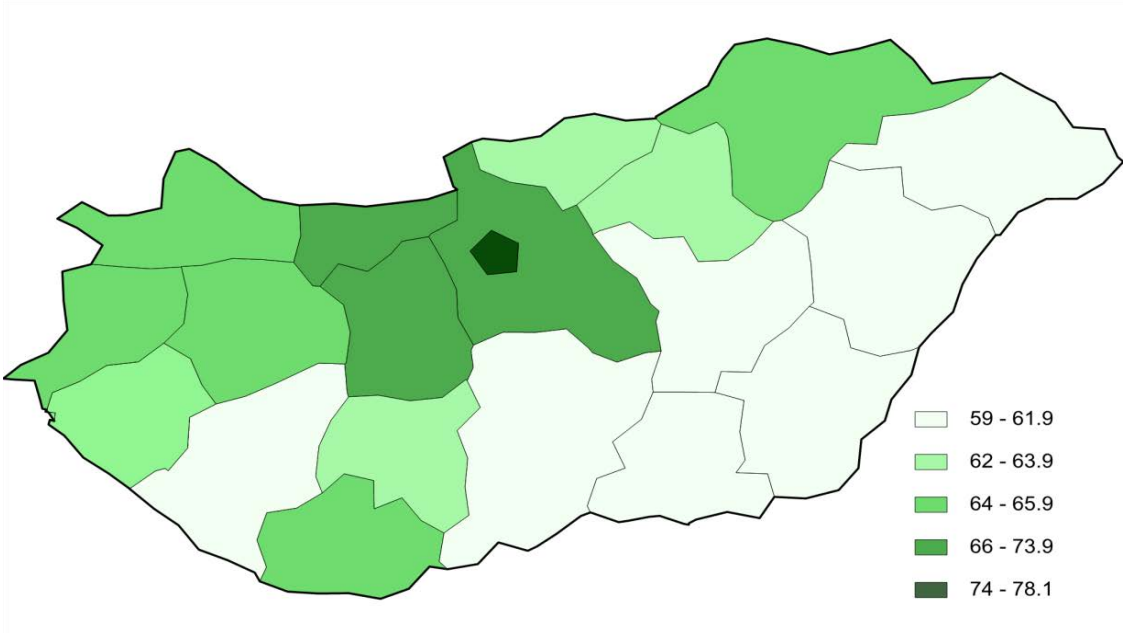
StatLink https://doi.org/10.1787/888933897152

Price indexation contributes to old-age poverty

Other factors contributing to old-age poverty include the price-indexation rule which entails that the value of benefits will decline relative to wages over time (OECD, 2015a). The problem materialises quite fast owing to the low initial pensions for many wage earners. For instance, pensioners retiring at 65 after earning the minimum wage all their life will have an initial pension of less than 50% of average wages, and will fall into relative poverty before the age of 70, while a working mother with two children will fall into poverty ten years into retirement (Figure 1.12). To stay out of relative poverty, a worker needs to have had a full career without interruptions, and with wages close to the national average, in order to have accumulated a sufficiently large initial pension by the time they reach the statutory retirement age.

Figure 1.11. Regional distribution of pensions reflects regional income disparities

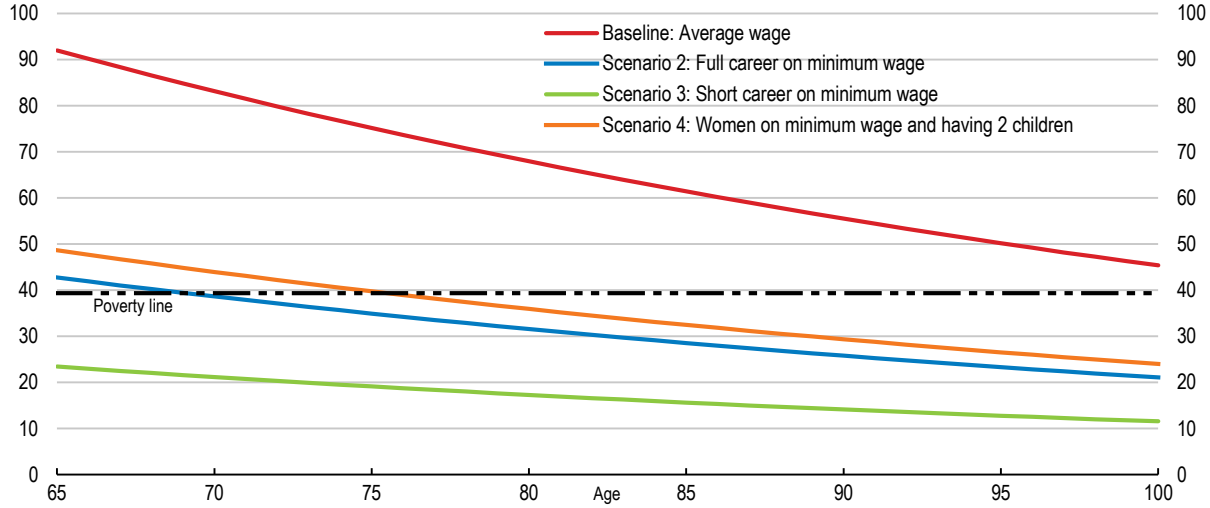
Average of full pension provision by county, as a percentage of net monthly earnings, January 2018[1]



1. Average net monthly earnings of full-time employees was HUF 197 516 in 2017.
Source: Ministry of Human Capacities.

Figure 1.12. Low-wage earners fall into poverty within 5-10 years of retiring

As a percentage of average monthly net salary[1]



1. Average net monthly earnings of full-time employees was HUF 197 516 in 2017. The baseline scenario assumes average wage for a career of 46 years from age 20. Scenario 2 assumes minimum wage for a career of 46 years. Scenario 3 assumes minimum wage for a short career of 27 years. Scenario 4 assumes women having 2 children (with 3 years absence from the labour market after each birth) and earning minimum wage for a career of 37 years.
Source: OECD calculations based on data from Hungarian Central Statistical Office.

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Old-age poverty can be mitigated with a basic state pension

To alleviate old-age poverty and mitigate the pass-through effects from the earnings-related system, a basic state pension could be implemented for everyone who reaches retirement age. This would also include current recipients of the social safety-net benefits, as is the case for instance in the Nordic countries (OECD, 2015a). Countries with a basic state pension have fewer poor old-age pensioners (OECD, 2017d).

To assess the potential cost of a basic pension, OECD analysed three scenarios:

- Extending the current minimum pension of HUF 28 500 to all current pensioners, regardless of accrued entitlements. The cost is negligible (at 0.01% of GDP), affecting roughly 18 500 people.
- Doubling the minimum pension amount to HUF 57 000 for all current recipients who receive below this amount. This would cost 0.04% of GDP, affecting 67 300 people.
- Providing a basic pension equivalent to the current relative poverty level of HUF 77 500, helping 218 500 people and costing around 0.15% of GDP, compared to total public expenditure on pensions which stands at 9.7% of GDP (European Commission, 2018c).

A basic pension could potentially be financed through a ceiling on pension benefits. For example, based on data on the distribution of current pension benefits, a ceiling on today's pensions equivalent to 150% of average economy-wide net earnings (roughly EUR 910) would fully fund proposal (2), a basic state pension of HUF 57 000. However, the same ceiling would only fund one-third of the cost of a higher state pension set at the relative poverty line. Currently 19 OECD countries impose a cap on pension benefits, with an average ceiling at 184% of average economy-wide earnings (OECD, 2015a). Voluntary pension schemes allow for topping up pensions (see last section). A cap on the highest pensions could be matched by a cap on contributions for actuarial fairness, as is the case in several OECD countries such as Slovakia or Canada for instance (OECD, 2017a), but the present calculations do not include this aspect.

Offering a state pension may adversely affect the labour market by eroding incentives to work and contribute, given how long it would take to accrue the same amount of pension from working. In the current system, to earn equivalent pension entitlements as in proposal (2) (HUF 57 000), a worker on the minimum wage would have to work for 25 years. Nonetheless, the mandatory pension scheme would still allow them to accrue at least one-third more in benefits by working a full career under current rules. To be fully poverty-alleviating, the basic state pension may be additional to the normal pension accrual, in which case the labour market distortions would be less important while the fiscal costs would be considerably higher.

Demographic trends will put pressure on public spending on pensions

The population is ageing and shrinking

Demographic developments will put pressure on the PAYG system. The population is ageing and shrinking, eroding the contribution base, while life expectancy is presumed to increase by 10 years by 2070 (Table 1.2) (European Commission, 2018b). There are two waves of ageing with the first large post-war generation currently entering retirement and another wave starting after 2030, leading to a doubling of the old-age dependency ratio to

52% over the next 50 years, partly caused by a drop in the working-age population of 11.1% (Figure 1.13, Panel A and Panel B) (Figure 1.14) (European Commission, 2018b).

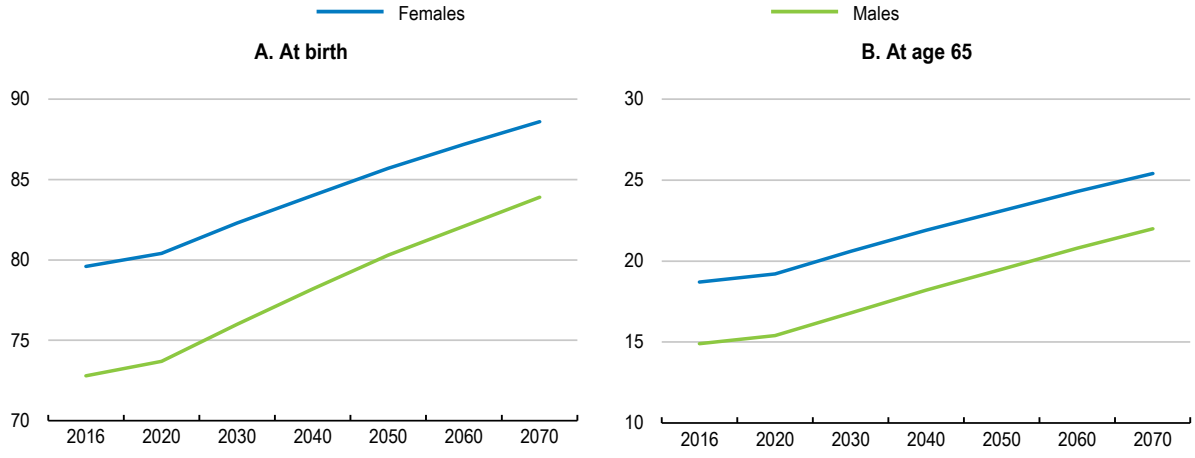
Table 1.2. Main underlying assumptions for the long-term pension projections

	2016	2030	2050	2070
Demographic projections				
Population (million)	9.8	9.7	9.3	8.9
Prime age population (25-54) as % of total	41.9	38.8	34.1	34.0
Elderly population (65 and over) as % of total	18.5	22.2	28.2	29.1
Old-age dependency ratio (20-64)[1]	29.8	38.2	53.7	57.3
Macroeconomic assumptions				
Potential GDP (growth rate)	1.9	2.1	1.5	1.3
Employment (growth rate)	1.7	-0.2	-0.5	-0.2
TFP (growth rate)	0.7	1.5	1.3	1.0
Labour force assumptions				
Labour force (20-64) (thousands)	4 587	4 677	4 053	3 760
Participation rate females (20-64)	68.0	78.5	78.5	78.6
Average effective exit age (total)[2]	61.7	65.1	65.1	65.1
Employment rate (20-64)	71.6	79.3	79.3	79.4

1. Old-age dependency ratio=Population aged 65 and over as % of the population aged 15-64 or 20-64.
2. Based on EC calculations of the average probability of labour force entry and exit observed. The table reports the value for 2017.
Source: European Commission (2017), *The 2018 Ageing Report, Underlying Assumptions and Projection Methodologies*, Institutional Paper 065, November 2017.

Figure 1.13. Life expectancy is rising, including for pensioners

In years



Source: European Commission (2018), "The 2018 Ageing Report - Economic & Budgetary Projections for the 28 EU Member States (2016-2070)", Directorate-General for Economic and Financial Affairs, Institutional Paper 079, May, Luxembourg.

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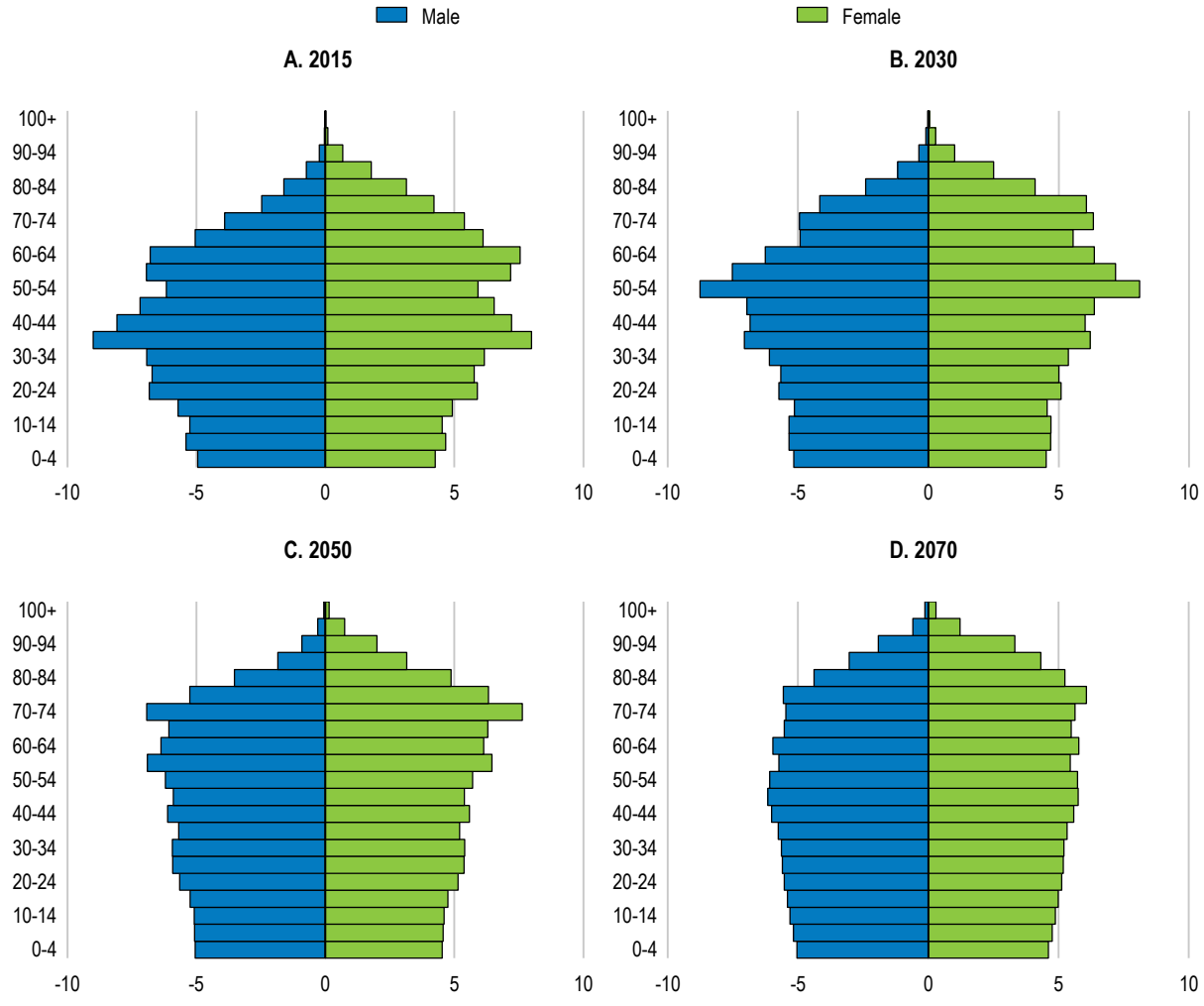
Ageing-related spending is estimated by the EU commission to decrease by 1.3 percentage points of GDP until 2030, and then to increase by 2.8 percentage points of GDP between

2030 and 2070 (Table 1.3) (European Commission, 2018b). The initial decline in pension spending hinges on a somewhat optimistic assumption that the effective and statutory retirement ages will become fully aligned by 2025 (Figure 1.15). If this fails to materialise, ageing-related cost-increases may be even higher. Other factors which may increase spending would include changing the indexation of benefits to mitigate old-age poverty, provided this is implemented, and the cost of the Women 40 scheme. Pension contributions, meanwhile, are projected to fall over time, leading to a deterioration in the balance between projected spending on pensions and projected contributions of 2.7% of GDP by 2070 (Table 1.3).

Figure 1.14. The active population will be shrinking, while the share of pensioners will increase

As a percentage of total population by gender[1]



1. Data refer to baseline projections.
Source: Eurostat (2017), "Population on 1st January by age, sex and type of projection", Eurostat Database.

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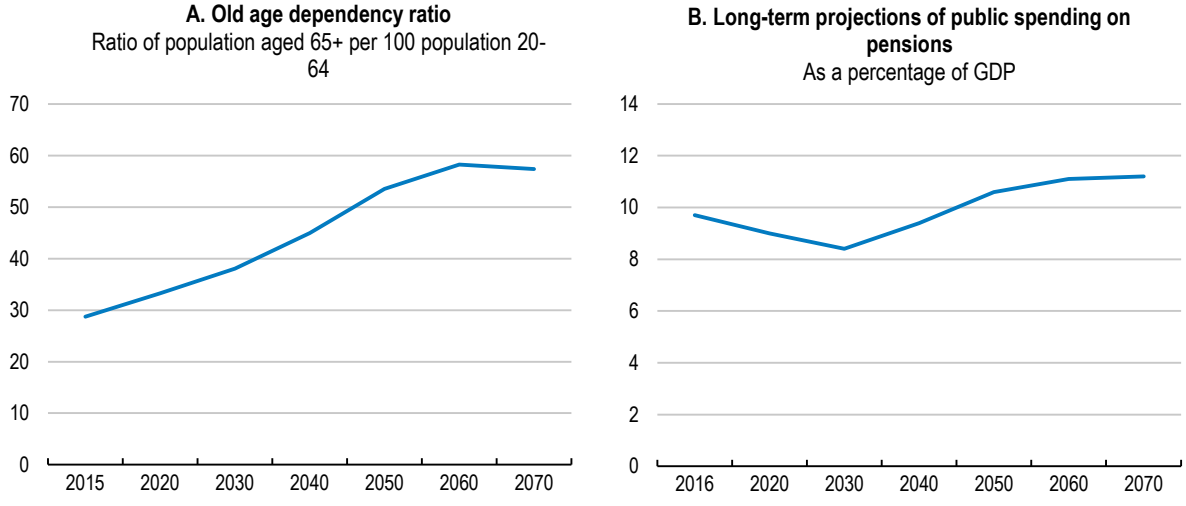
Table 1.3. Main policy scenarios and projections

% of GDP unless otherwise indicated.

	Avg ch 16-70	2016	2020	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
Potential Real GDP (growth rate)	1.6	1.9	1.9	2.4	2.1	1.6	1.2	1.3	1.5	1.3	1.3	1.4	1.3
Average effective exit age (Total)	3.3	61.7	62.8	65.1	65.1	65.1	65.1	65.1	65.1	65.1	65.1	65.1	65.1
Average effective exit age (Women)	3.8	61.0	62.4	64.8	64.8	64.8	64.8	64.8	64.8	64.8	64.8	64.8	64.8
Public pensions, gross as % of GDP	1.5	9.7	9.0	8.7	8.4	8.6	9.4	10.3	10.6	10.8	11.1	11.2	11.2
Public pensions, contributions as % of GDP	-1.0	9.4	8.3	8.5	8.5	8.5	8.5	8.5	8.4	8.4	8.4	8.4	8.5
Gross replacement rate at retirement % (Old-age earnings-related pensions)	3.7	45.5	46.1	46.0	47.6	48.3	49.3	48.4	48.9	48.7	48.6	49.2	49.2
Benefit ratio	-7.7	40.4	37.1	34.8	32.8	31.8	32.0	32.6	32.3	32.0	32.0	32.3	32.7
Average contributory period, years (new pensions, earnings-related)	4.7	32.8	34.5	35.0	37.2	37.6	37.8	37.1	37.4	37.4	37.6	37.9	37.5
Scenarios that differ from the baseline (evolution of public pensions, gross as % of GDP)													
High life expectancy (+2 years) unchanged retirement age	2.1	9.7	9.0	8.7	8.5	8.7	9.6	10.6	10.9	11.2	11.6	11.7	11.8
Lower fertility (-20%)	3.4	9.7	9.0	8.7	8.4	8.6	9.5	10.6	11.1	11.6	12.2	12.7	13.1
Higher TFP growth (+0.4 p.p.)	0.6	9.7	9.0	8.7	8.4	8.5	9.1	9.9	10.0	10.1	10.3	10.3	10.3
Lower TFP growth (-0.4 p.p.)	2.6	9.7	9.0	8.7	8.4	8.7	9.7	10.8	11.3	11.7	12.1	12.3	12.3
Policy scenario linking retirement age to increases in life expectancy	-0.1	9.7	9.0	8.7	8.2	8.4	8.7	9.4	9.8	9.7	9.7	9.6	9.6

Source: European Union, *Ageing Report 2018*, cross-country tables, AWG data base.

Figure 1.15. The old-age dependency ratio is rising and will peak in 2060[1]



1. Data are based on the technical assumptions by the EU AWG, i.e. convergence towards the EU mean.
Source: Eurostat (2017), "Population on 1st January by age, sex and type of projection", *Eurostat Database*; and Ministry for National Economy (2018), "*Magyarország konvergencia programja* 2018-2022".

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Benefit ratios will keep falling, increasing the risk of poverty

Benefit ratios (pension benefits as a share of wages) are projected to decrease by 7.7 percentage points to 32.7% (Table 1.4), because of the spread between wage growth and consumer price inflation, although the drop is less steep than in Poland or in Slovakia. Falling benefit ratios increase the risk of older pensioners lacking sufficient incomes relative to wage earners, which will be exacerbated in periods of higher wage growth (Simonovits, 2014). Moreover, the *EU's Ageing Report's* main underlying assumption is income convergence towards the European mean. However, increased productivity growth, which is a pre-requisite for income convergence, would in fact widen the wedge between replacement rates and benefit ratios (European Commission, 2017).

Table 1.4. Benefit ratios and replacement rates in Europe

Public pensions: earnings-related

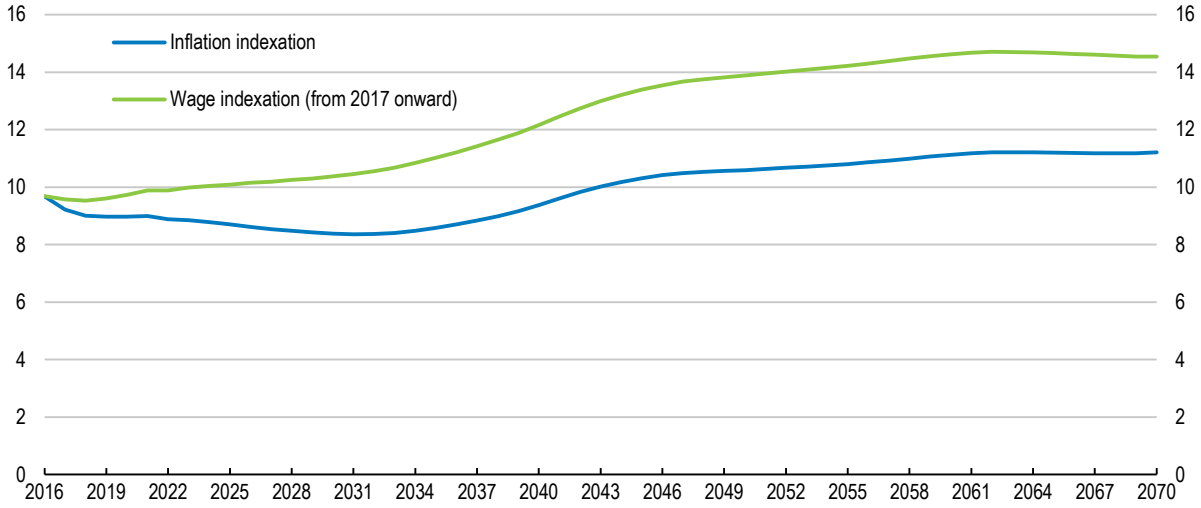
	Benefit ratios		Replacement rates	
	2016	2070	2016	2070
Czech Republic	39.9	37.6	43.1	41.1
Hungary	40.5	32.7	45.5	49.2
Poland	52.3	21.6	61.4	23.0
Slovenia	34.1	33.3	34.7	35.7
Slovakia	44.8	33.5	49.0	50.2
EU27[3]	45.2	33.2	46.3	38.1
EA[3]	48.5	35.8	49.9	41.2

1. The 'Benefit ratio' is the average benefit of pensions as a share of the economy-wide average wage.
2. Baseline scenario. The 'Replacement rate' is calculated as the average first pension as a share of the average wage at retirement; to allow comparisons, the figure reported here includes only earnings-related public pensions.
3. EU, EEA: Unweighted average, EU 27 excludes the United Kingdom.
Source: European Commission (2018), The Ageing Report 2018, Economic and budgetary projections for the 27 EU Member States (2016-2070), 6/2018, Brussels.

A number of OECD countries maintain benefit ratios by linking pensions to wage-growth, or to a weighted index between wages and prices, rather than to CPI. OECD calculations indicate that full wage-indexation would add 3 percentage points of GDP to public pension spending to the projected increase in the Ageing Report (Figure 1.16) (European Commission, 2018b) (Ministry of the National Economy, 2018). To reduce the budgetary cost, the indexation could use an even share of price and wage developments which would slow the erosion of the benefit ratio, but would nonetheless increase public spending on pensions.

Figure 1.16. Difference in cost between indexing pension benefits to wages and to inflation

Public pension expenditure, as a percentage of GDP



Source: OECD calculations based on European Commission (2018), "The 2018 Ageing Report - Economic & Budgetary Projections for the 28 EU Member States (2016-2070)", Directorate-General for Economic and Financial Affairs, *Institutional Paper 079*, Luxembourg.

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The Women 40 scheme will widen the financing gap

The Women 40 scheme will further increase pressure on the PAYG scheme. The longer retirement period for women and the absence of any pension deduction increase expenditures without a concomitant reduction in benefits (Freudenberg, Berki and Reiff, 2016). Moreover, the average age of female retirees is still below that of males, while the assumptions in the *EU Ageing Report* are based on a projected exit age of 65.1 for both men and women (Table 1.4) (European Commission, 2017). However, if 80% of women continue to retire after 40 years of working, the amount of social contributions could be reduced by around 0.6% of GDP, according to OECD calculations, widening the funding gap more than currently assumed. As such, the Women 40 scheme should be abolished in favour of having the same retirement age for men and women, boosting the contribution base and improve actuarial fairness.

Table 1.5. The effective retirement age is going up, but remains lower for women

Average age at awarding of the benefit.

	Old-age pension		Women with 40 years' service
Year of retirement	male	female	female
2012	62.7	59.2	57.8
2013	62.3	59.6	58.0
2014	62.9	59.6	58.3
2015	62.8	60.0	58.7
2016	63.1	61.0	59.0

Source: Central Administration of National Pension Insurance: *Statistical yearbook 2015, 2014* and *Statistical pocketbook 2016*.

Financing the spending increases

Altogether, the pension funding gap may be higher than currently assumed by almost 4% of GDP, if measures to mitigate poverty and the effect of the Women 40 are included. Other deviations from the baseline will also increase spending above current projections, including lower fertility, or lower growth than currently assumed (Table 1.6). Within the existing pension system, three parameters can be activated to finance some of the projected increases in pension spending without any other offsetting measures: increasing the pension age; lowering pension benefits through a lowering of accrual rights, or through pre-funding in the form of a buffer fund.

Table 1.6. Risks to projected public pension expenditure

Increases in public pension expenditure above baseline scenario in 2070, % of GDP, unless stated otherwise

Changes to the baseline scenario	Avg change 16-70[1]	2070[2]
Higher life expectancy than projected (+2 years), unchanged retirement age	2.	10.6
Lower fertility by -20%	3.4	1.9
Lower TFP growth (-0.4 p.p.)	2.6	1
Indexing pension benefits to inflation	4.5	3.0
Women 40 (reduction in contributions)	-	0.6-0.8

1. Total estimated change in public expenditure from 2016 to 2070, in % of GDP. 2. Increase in public expenditure above the baseline.
Source: European Union, *Ageing Report 2018*.

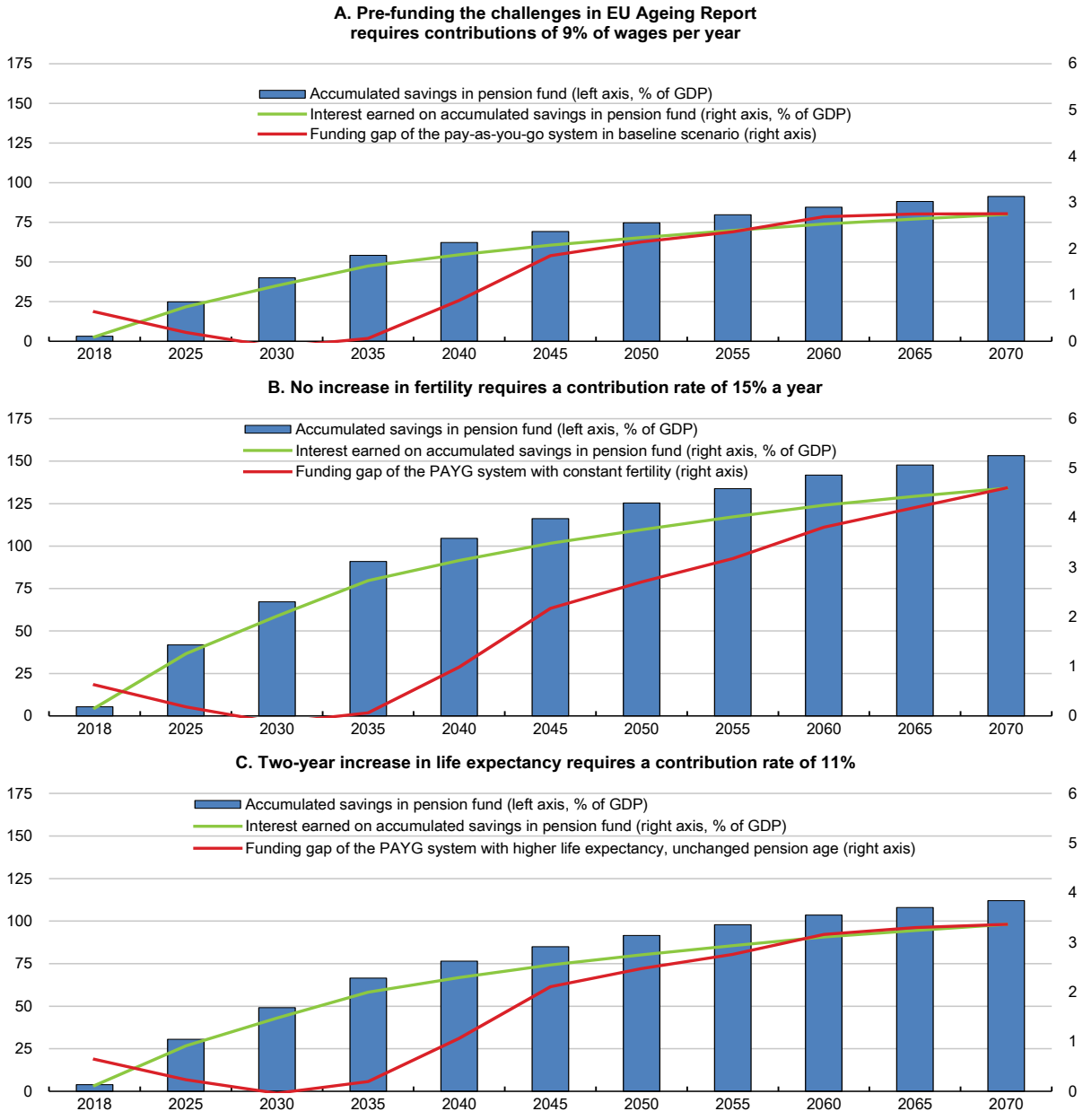
Raising the statutory pension age by linking it to life expectancy once the current pension reform (which raises the retirement age to 65 by 2022) has been completed, would keep spending broadly constant as a share of GDP over time, compared with the baseline scenario, but would still leave a funding gap (Table 1.5) (European Commission, 2017). An additional effect of longer work lives would be to increase contributions. For example, OECD calculations find that raising the number of contributory years by five years would increase total contributions by 1.1% of GDP, sufficient to cover the remaining funding gap (Table 1.17).

Funding the increase in projected spending can also be achieved by lowering replacement rates. To cover the financing gap, the average replacement rate would have to be lowered (through reductions in accrual rights) by some 8 percentage points. However, this would further exacerbate the risk of old-age poverty.

Pre-funding of pensions is also an option. OECD calculations based on the assumptions of having to plug a funding gap of 2.7% of GDP by 2070 (from the EU Ageing Report projections) show that the creation of a pension savings or "buffer" fund with a mandatory contribution rate of 9% of wages and salaries would fully cover the projected gap between pension spending and contributions by 2070. This would raise the current contribution rate by 30%, more or less matching reductions in the social security contributions since 2016 (Figure 1.17 and 1.18, baseline scenario). More optimistic demographic assumptions, such as a gradual two-year increase in life expectancy, leads to a higher contribution rate if there is no adjustment in the pension system's parameters, as people remain in retirement for longer. On the other hand, if the expected increase in fertility fails to materialise then pre-funding could require an almost doubling of the contribution rate to make up for a smaller contribution base (Figure 1.17, Panels B and C).

Figure 1.17. Pre-funding future pension spending requires higher contributions

Calculations showing required savings to meet projected pension spending needs in 2070



Note: The figure shows a model calculating how much would need to be saved into a savings-fund to be able to pre-fund the gap between contributions and pension spending by 2070. The model aims to demonstrate the required magnitude of contributions in order for the interest earned on the accumulated savings to be sufficient to pay the cost of future pensions. Scenarios are taken from the *EU Ageing Report 2018*. The calculations are based on the following assumptions: contributions into the savings fund start in 2018; the accumulated savings are multiplied with the interest rate of 3.5% every year; an annual pay-out to pensioners of 3% of the accumulated savings is applied from 2035 onwards. The funding gap refers to the projected shortfall in pension contributions relative to pension spending in 2070 in the PAYG system, as per EU Ageing Report Projections.
Source: OECD calculations based on European Commission (2018), "The 2018 Ageing Report - Economic & Budgetary Projections for the 28 EU Member States (2016-2070)", Directorate-General for Economic and Financial Affairs, *Institutional Paper 079*, Luxembourg.

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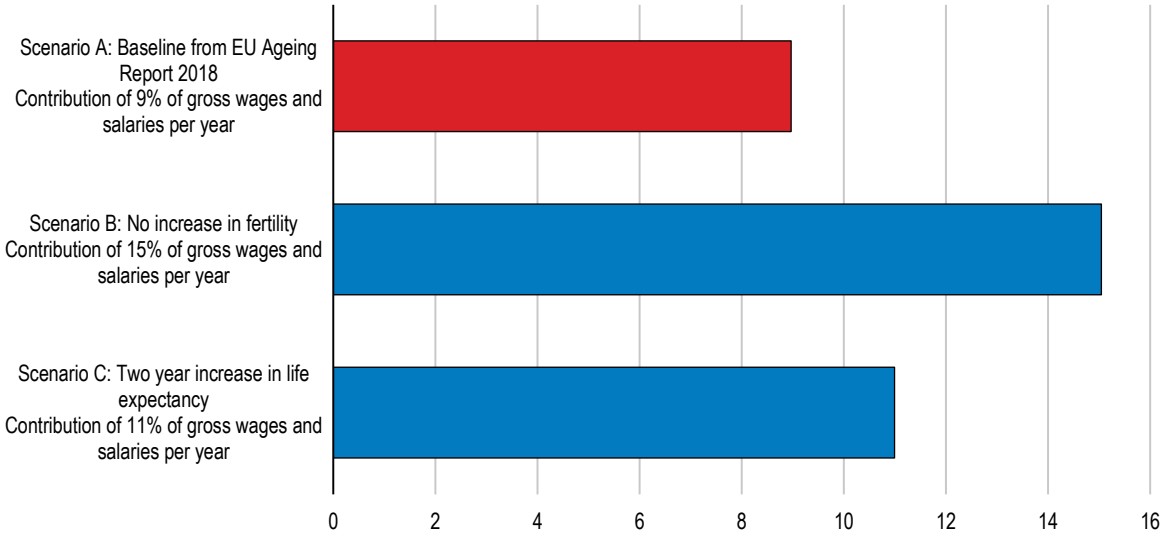
Figure 1.18. Potential pension contributions to a pre-funded buffer fund match recent reductions

As a percentage of gross wages and salaries[1]



Source: OECD calculations based on from European Commission (2018), "The 2018 Ageing Report - Economic & Budgetary Projections for the 28 EU Member States (2016-2070)", Directorate-General for Economic and Financial Affairs, *Institutional Paper 079*, Luxembourg.

StatLink https://doi.org/10.1787/888933897285

With full mandatory enrolment, the first option with additional contributions of 9% of gross wages, would effectively slightly more than reverse the recent reductions in social security contributions (European Commission, 2018a) (Ministry of the National Economy, 2018). Opting instead for auto-enrolment typically sees 60-80% coverage, based on the experience in countries such as the UK. Creating a pension buffer fund to pre-fund future pension liabilities will benefit future retirees, but at the expense of current workers who will pay more tax. Creating a pension fund would finance new entitlements and ensure that the PAYG system remains sustainable in the long term. However, a pension buffer fund cannot finance past entitlements. Moreover, it would erode wage competitiveness by raising current contributions.

Voluntary savings can boost pension benefits

Overall pension benefit adequacy can be supported by an effective voluntary or mandatory private savings scheme to increase old-age income. For instance, Australia, Denmark, Iceland and Norway have highly targeted programmes, using mandatory private pension provisions to top up public pensions, while Belgium, Canada, Germany, Ireland, New Zealand, the United Kingdom and the United States have the best pension coverage provided by voluntary schemes (OECD, 2017a).

The third pillar of voluntary pension savings has a comparatively low take-up. Assets in all retirement vehicles represent 5.9% of GDP, and 4.3% of GDP for the state-backed pension fund, the lowest share in the OECD (OECD, 2018d). At present, the third pillar system provides three options for savings: a state-backed voluntary pension fund; a pre-pension savings scheme entirely invested in securities; or pension insurance (portfolio investment, which pays out an annuity upon retirement, typically indexed to life expectancy). In total,

some 1.7 million Hungarians have some form of voluntary pension savings, with the state-backed voluntary scheme taking the lion's share with 1.1 million accounts in 2017.

The schemes used to be attractive as the employer's contributions to their employees' voluntary savings were tax exempt. Since 2009, ever-changing rules have made the schemes less attractive, and at present, the total tax burden on contributions is 40.71%, which is payable by the employer. This has substantially reduced employers' contributions.

All three schemes qualify for tax-benefits for employees, equivalent to a 20% refund of income tax paid into the pension account up to a limit. The tax refund ceiling is HUF 130,000/year (EUR 420) for those retiring before 2020, otherwise it is HUF 100 000 for individual retirement accounts; HUF 150 000 for voluntary private pension funds and HUF 130 000 for pension insurance schemes (OECD, 2015b). Individuals may combine several accounts but the total tax refund cannot exceed HUF 280 000 a year. There does not seem to be any meaningful reason for the various rates, and the tax incentives should be aligned and equalised for all schemes. Subsidies should be limited, with voluntary pensions being instead subject to the standard taxation of savings instruments (OECD, 2014a).

To be a useful complement to PAYG pensions, two main issues need to be addressed: low financial literacy and enrolment. Unless enrolment is automatic (with the possibility of opting out), as in the United Kingdom for instance, the take-up of voluntary pension schemes tends to be low. Due to higher savings capacity and financial literacy among advantaged socio-economic groups, voluntary pension coverage is heavily biased in favour of workers with high earnings (OECD, 2017b). Voluntary pensions might therefore magnify the tax exemptions for the better-off, and as a result tend to increase old-age inequality. When coverage is low as in Hungary, then in the special case of low-income earners incentives such as targeted matching contributions or a flat introductory bonus contribution should be used to encourage their participation of low-income earners within well-designed auto-enrolment schemes (OECD, 2014a) (OECD, 2017b).

Flat-rate subsidies and matching contributions have been used in for example Italy, New Zealand, the United Kingdom and Turkey. Incentives could also target financial assistance towards lower income individuals (OECD, 2016a) (OECD, 2017b). Irrespective of targeting, such measures often carry substantial fiscal costs, and should always be only temporary. However, the scale of the pension challenges means that policy action across many different policy measures is required and that policy actions are needed as early as possible.

Table 1.7. Fiscal cost and funding of key recommendations on pensions

Recommendations with potential fiscal impact	Impacts on fiscal balance
Link the retirement age to life expectancy	Pension spending is projected to increase by 2.7%. Linking the statutory retirement age to gains in life expectancy after 2022 would fully cover the projected long-term increase. An increase of 5 contributory years would add 1.1pp of GDP in pension contributions.
Combat old-age poverty by introducing a basic state pension at HUF 57000 (twice the current minimum pension).	+0.04% of GDP. Expense would be fully covered by capping maximum pensions at 150% of average wages.

Source: OECD.

Box 1.3. Main recommendations on pensions

Key recommendations are bolded

Ensuring sustainability of the pension system

- **Complete the ongoing increase of the statutory retirement age to 65 by 2022. Thereafter link it to gains in life expectancy.**
- Abolish the Women 40 scheme.

Taking steps to alleviate old-age poverty

- **Introduce a basic state pension to guarantee a minimum income for all pensioners.**

Improving the design of the current system

- Impose a single flat accruals rate of around 2%.
- Implement flexible retirement, with a symmetrical system of actuarially neutral pension increments and decrements of around 6% a year, including for public employees.
- Provide incentives for participation in third pillar voluntary pension funds through targeted temporary matching contributions or a flat introductory bonus contribution.

The health sector is facing multiple challenges

Hungary's health-care sector is facing multiple challenges, including the generally poor health status of the population, unequal access to health services (particularly in rural areas) and rising health needs from an ageing population, including more treatment for chronic conditions. Moreover, health-care costs are rising and will continue doing so as new and expensive technologies is introduced. Ageing will also increase demand for long-term care (LTC). So far, health-care reforms have been modest. There has been limited restructuring of the hospital sector despite the ongoing urbanisation process (Chapter 2). Moreover, only recently have measures been taken to address a shortage of health care professionals, reflecting the emigration of health care workers. Earlier decentralisation reforms have subsequently been reversed (Box 1.4). More generally, the public health care system has been underfunded and is therefore characterised by persistent hospital debts and an increase in the market share of private health care providers. Total health care expenditure has stagnated since the mid-2000s while public spending on health care has fallen relative to GDP (Figure 1.19).

Box 1.4. The organisation and governance of the health care sector

The widening gap in health status between Hungary and Western European countries by the early 1990s led the first government after the transition to begin reform of the health care system. The ownership and administration of service providers, such as hospitals, were devolved from the central to local governments. The financing was based on a

single insurance model (Gaál, 2004). However, the combination of strong focus on cost-containment since the mid-1990s and a lack of coherent long-term strategy have hampered further reforms.

Due to unfavourable macroeconomic condition and ever increasing pharmaceutical spending, the focus of health policy shifted towards cost-containment in the mid-1990s (Gaál, 2004). Health care spending has been unstable ever since with short spending sprees and extended periods of cost-containment and budget cuts (Gaál et al., 2011). The economic crisis in the second half of 2000s reinforced the austerity measures in the health sector.

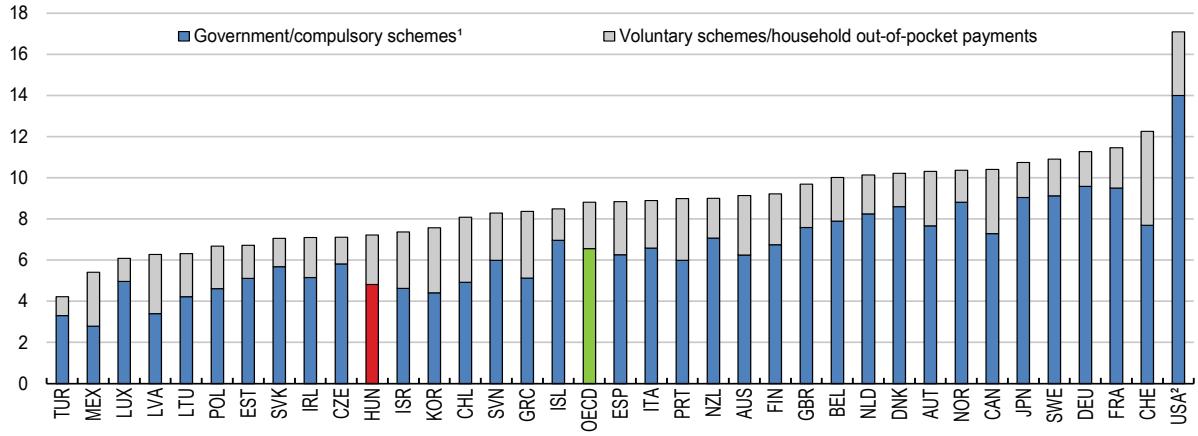
In the second half of the 2000s, the role of the private sector was increased to enhance the efficiency and funding of the health care system. However, reform initiatives to introduce managed competition of multiple health insurers as well as outsource the provision of health services to private companies failed due to political and public objection (Gaál et al., 2011).

In recent years, the direction of health policies turned towards re-centralisation. To address chronic inefficiencies and regional inequities in health care provision, the central government's role in terms of governance has been strengthened since 2012. Currently, policy formulation, rule enforcement and all financial and budgetary decisions are controlled by the central government (OECD/European Observatory on Health Systems and Policies, 2017). Health care is administered by the State Secretariat for Healthcare within the Ministry of Human Capacities. The leading health care agency within the Ministry is the National Healthcare Services Centre (NHSC), which is an umbrella organisation of other (formerly independent) agencies and it is responsible for hospital planning and care coordination, among others (OECD/European Observatory on Health Systems and Policies, 2017).

The ownership structure of the health care system has also been centralised. The provision of inpatient and outpatient specialised care and the ownership of hospitals have been transferred back to central government (OECD/European Observatory on Health Systems and Policies, 2017). After having lost its self-governance status in 1998, the National Health Insurance Fund Administration (NHIFA) was dissolved into the Ministry of Human Capacities altogether in early 2017 (OECD/European Observatory on Health Systems and Policies, 2017). As a result, the NHIFA lost its autonomy and only kept its administrative functions, while its traditional role of hospital supervision became the responsibility of NHSC. The financing structure of the health care system has changed considerably since the mid-2000s. The decrease in employers' health insurance contribution to the Health Insurance Fund (HIF) has been accompanied by an increase in budgetary contributions. Since 2012, employers' contributions have been replaced with a non-earmarked social contribution tax. The current model is a hybrid between a financing structure where insurance rights are acquired through social security contributions and a general taxation based model where all citizens are entitled to health care that is financed from the budget.

Figure 1.19. Health care spending has been relatively low

As a percentage of GDP, 2017



1. Public health spending refers to health spending by government schemes and compulsory health insurance. In the case of Germany, the Netherlands and Switzerland, spending by private health insurers for compulsory insurance is also included in public health spending. The OECD average is an unweighted average of all 36 member countries.
2. Data for USA are for 2016.

Source: OECD (2018), "Health Expenditure and Financing", OECD Health Statistics (database).

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Health outcomes are characterised by low health status and large disparities

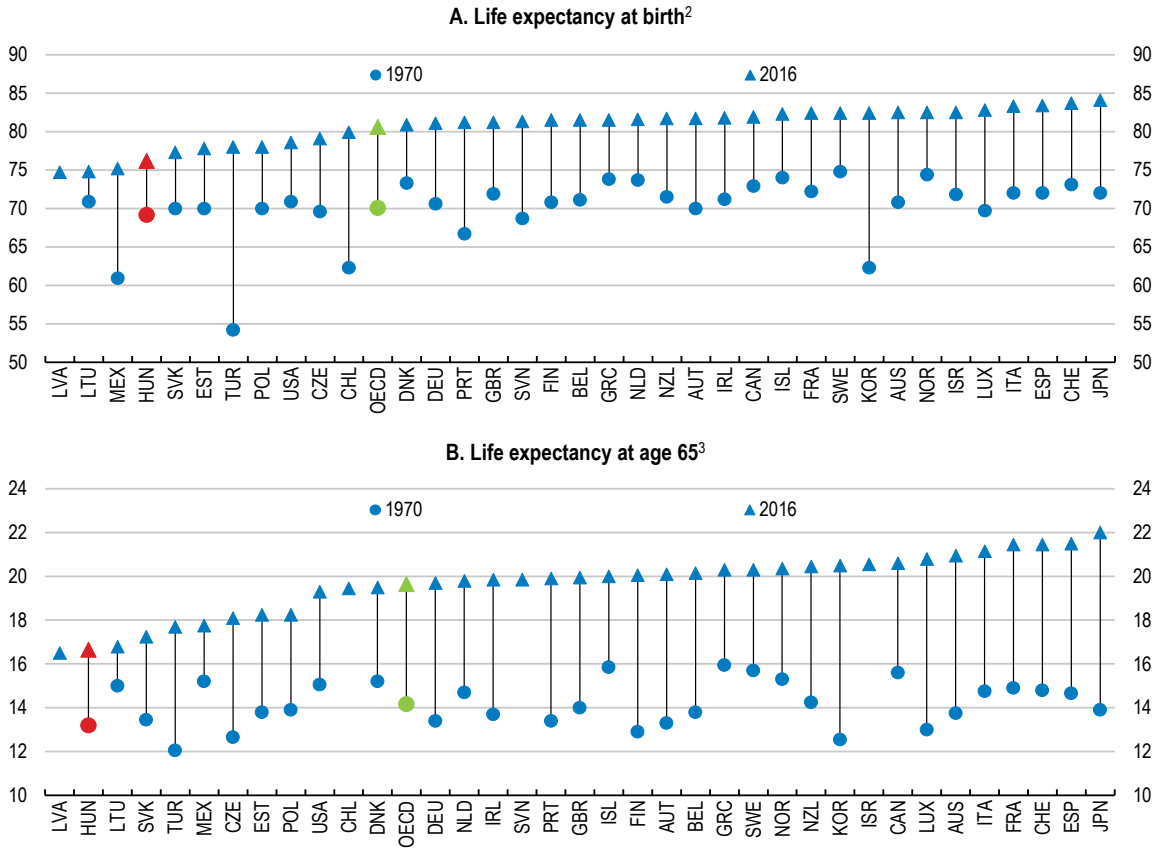
Notable strengths of the health-care system include near universal health-care coverage and high vaccination rates for communicable diseases. Nonetheless, health outcomes are unsatisfactory. The share of avoidable deaths in the light of current medical knowledge and technology among the population below 75 at 41% is almost 10% above the European Union (EU) average. Indeed, according to the latest poll by Ipsos among 28 countries surveyed Hungarians are by far the most worried about the state of the health care system with 71% of the adult population responding that health care is the most worrying topic (Ipsos, 2018).

The level of health spending partly explains this poor situation; indeed, according to some estimates, if health expenditure were increased to the Austrian level (from 8% to 10% of GDP), then male mortality is estimated to fall by about 13% (Lackó, 2015). However, inefficient care provision is also an important driver of unsatisfactory health outcomes.

Life expectancy at birth is the fourth lowest among OECD countries (Figure 1.20, Panel A). Similarly, remaining life expectancy at age 65 is internationally low despite recent improvements (Figure 1.20, Panel B). This reflects one of the highest mortality rates in the OECD, which is mainly driven by death from diseases of the circulatory system and cancer. Furthermore, disparities in life expectancy is larger than elsewhere with 30-year old male tertiary-education graduates expected to live 11 years longer than similarly-aged males with below-upper secondary education – a gap that is 4 years higher than on average among OECD countries. In addition, regional differences in health outcomes have been increasing since the mid-1990s, leading to a 3-year gap in life expectancy at birth between the richest region, Central Hungary, and the relatively poor Northern Hungary (Orosz and Kollányi, 2016; Uzzoli, 2016) (ÁEEK, 2016).

Figure 1.20. Health status of the population is poor in international comparison

In years[1]



1. The OECD aggregate is calculated as an unweighted average of the data shown.
2. 2015 instead of 2016 for Canada, Chile and France. 1971 instead of 1970 for Canada, Israel, Italy and Luxembourg.
3. 2015 instead of 2016 for Canada, Chile and France. 1971 instead of 1970 for Canada, Finland, Italy and Luxembourg. Life expectancy at age 65 is calculated as the unweighted average of the life expectancy at age 65 of women and men.
Source: OECD (2018), "Health Status", *OECD Health Statistics* (database).

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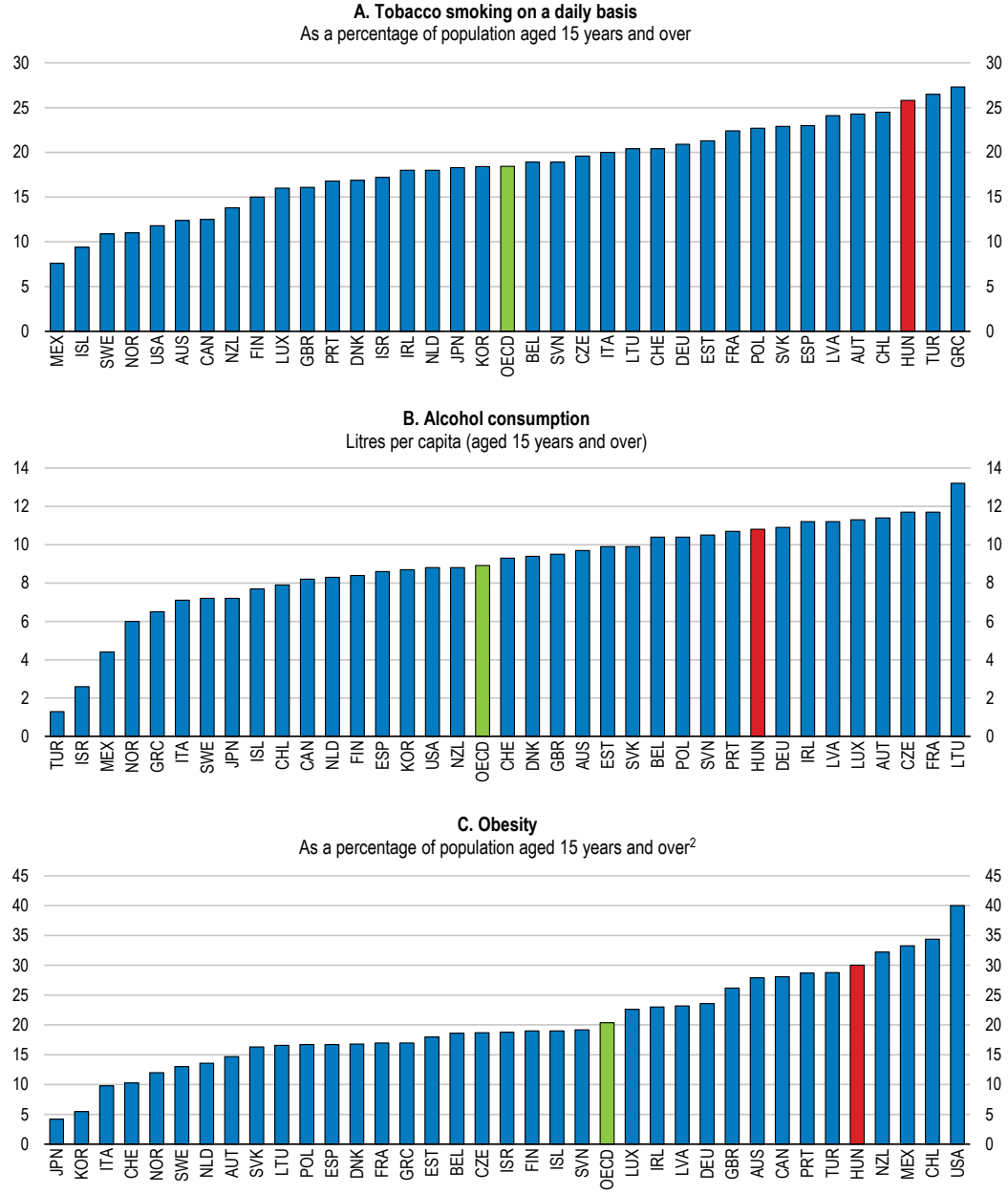
Lifestyle factors have a greater negative impact on life expectancy than elsewhere in the OECD. Almost 40% of overall life years lost due to diseases and disabilities is linked to unhealthy lifestyles (OECD/European Observatory on Health Systems and Policies, 2017). This is the fourth highest share in the EU. Hungarians are among the heaviest smokers in the OECD and alcohol consumption is nearly a quarter higher than the OECD average (Figure 1.21, Panels A and B). In addition, the 30% obesity rate is one of the highest among OECD countries (Figure 1.21, Panel C). Unhealthy lifestyles are partly a reflection of little focus on preventive care. Spending per capita on preventive care, including public health promotion programmes, has fallen by nearly 40% in real terms since the mid-2000s. In the past, ambitious public health programmes have often been watered down at the implementation phase (OECD/European Observatory on Health Systems and Policies, 2017).

Figure 1.21. Lifestyle related health risks are high

2017 or nearest year available[1]



1. Data for tobacco smoking and obesity for Hungary refer to 2014. Data for alcohol consumption for Hungary refer to 2015. The OECD aggregate is calculated as an unweighted average of the data shown.
2. Self-reported data for Austria, the Czech Republic, Denmark, Finland, Greece, Iceland, Italy, Lithuania, the Netherlands, Norway, Poland, the Slovak Republic, Slovenia, Spain, Sweden and Switzerland. Measured estimates derived from health examinations are generally higher and more reliable than estimates derived from population-based health interview surveys.
Source: OECD (2018), "Non-Medical Determinants of Health", *OECD Health Statistics*.

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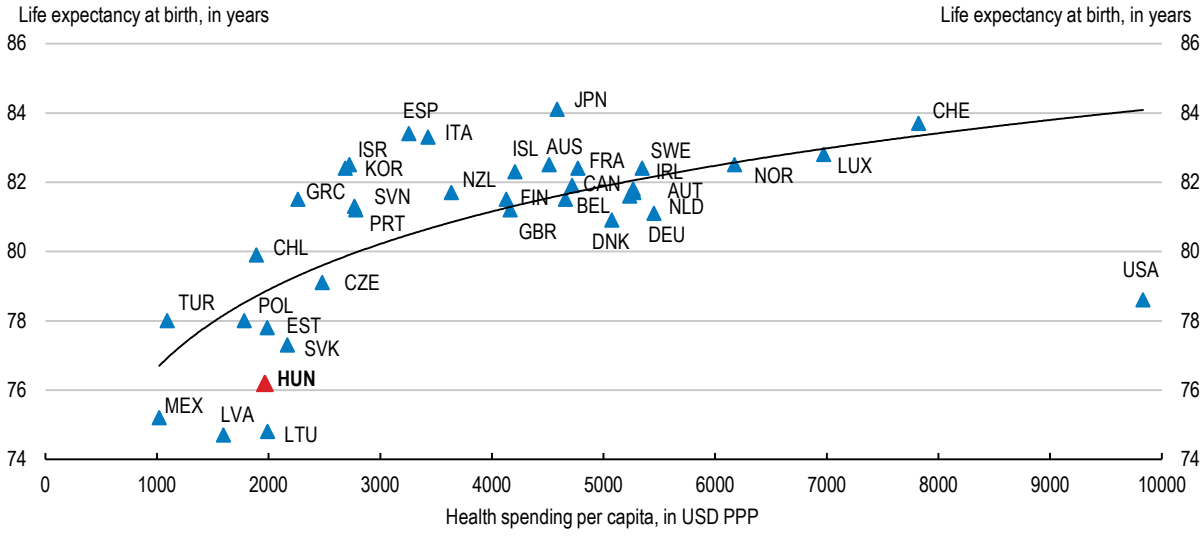
The resources invested in health care are not used efficiently

If the efficiency of resource utilisation was raised to the level observed in other OECD countries with similar health spending per capita, life expectancy could be raised by around 3 years (Figure 1.22). Moreover, if spending efficiency was aligned to the most efficient health care system in the OECD, it is estimated that amenable mortality could be reduced by more than 60%, boosting life expectancy by 5 years (Medeiros and Schwierz, 2015; Dutu and Sicari, 2016). The health care system is also underperforming relative to countries with similar health policies and institutions (Joumard, André and Nicq, 2010).

Figure 1.22. Better resource utilisation could boost life expectancy significantly

2016 or nearest year available[1]



1. 2015 for life expectancy at birth for Canada, Chile and France. PPP: purchasing power parity.
Source: OECD (2018), "Health Expenditure and Financing", *OECD Health Statistics* (database), July; and OECD (2018), "Health Status", *OECD Health Statistics* (database).

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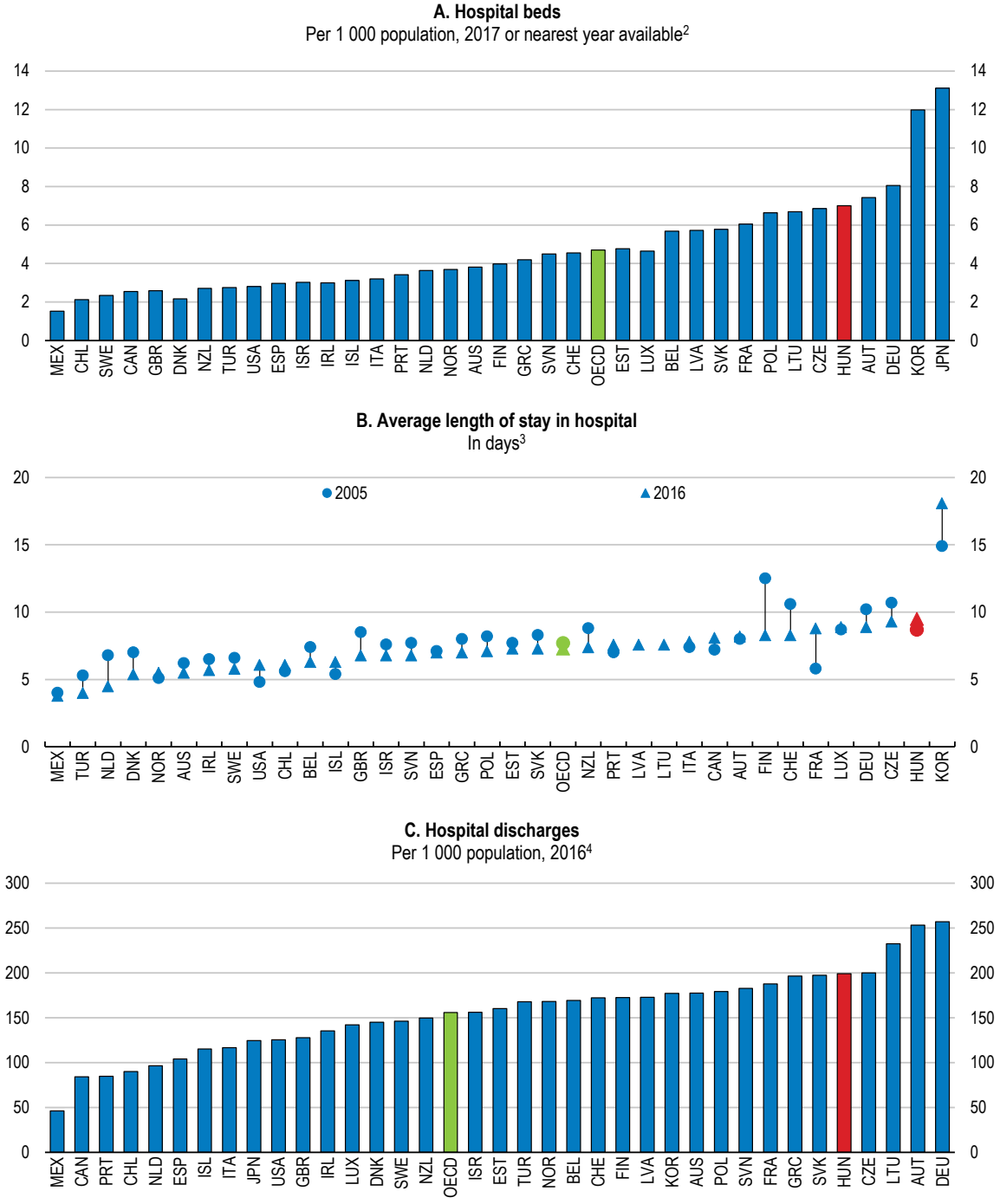
Reorganising health care provision would improve efficiency

Health-care provision remains highly hospital-centred, despite a 30% decrease in the number of acute care hospital beds since 2000 (OECD/European Observatory on Health Systems and Policies, 2017). However, the reduction in acute care beds has been mainly achieved by transforming acute care units into chronic care departments. Indeed, closing under-performing hospitals has proven to be politically difficult (Gaál et al., 2011). Since 2006, only a few hospitals have been closed down while some have been transformed into long-term care institutions (Krenyácz, Kiss and Révész, 2017). As a result, the number of hospital beds remains above the OECD average and the average length of hospital stay has increased to 9.5 days (Figure 1.23, Panels A and B). High hospital-discharge rates (a measure of overall hospital activities through the number of patients who leave a hospital after staying at least one night) also indicate an overuse of hospital-based inpatient care (Figure 1.23, Panel C).

Figure 1.23. Health care provision is highly hospital-centred[1]



1. The OECD aggregate is calculated as an unweighted average of the data shown.
2. 2016 for Hungary.
3. 2015 for Australia, New Zealand, Norway and Portugal. 2014 for the United States. 2012 for Greece.
4. 2015 for Australia, New Zealand, Norway and Portugal. 2014 for Japan. 2012 for Greece. 2010 for the United States.

Source: OECD (2018), "Health Care Resources", *OECD Health Statistics* (database); and OECD (2018), "Health Care Utilisation", *OECD Health Statistics* (database).

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The hospital sector should be restructured, like in other OECD countries, by having fewer but better equipped hospitals that focus on complex cases, requiring high levels of specialised and technical care, and leave all other services to less resource intensive care settings (OECD, 2017d). Some progress in this direction is planned with the implementation of the Healthy Budapest Programme over the coming years. More generally, closing under-performing hospitals would release financial resources that could be invested in replacing obsolete medical equipment. Indeed, the number of high technology medical equipment, such as magnetic resonance imaging (MRI) units and computed tomography (CT) scanners, per capita is one of the lowest among OECD countries.

This would have to be combined with enhancing outpatient care including day care to generate efficiency gains by shortening the length of hospital stay and reducing waiting times (OECD, 2017e). Lengthy hospital stays are not only inefficient in terms of costs, but also pose health risks through hospital-acquired infections. Currently, the use of one-day surgery is still underutilised. For example, the 54% share of cataract surgeries carried out on a same-day basis is well below the OECD average of 87% (OECD, 2017d; OECD, 2017e). Overall, outpatient care, including day care, accounts for only 20% of all hospital expenditure, nearly 50% less than the OECD average (OECD, 2017e). It is promising that the budget cap on reimbursing same-day surgery has been abolished and the level of reimbursement for one-day interventions has been set 10% above the amount refunded in an inpatient care setting. As a result, the number of ambulatory surgeries increased by around two and a half times between 2010 and 2017.

Stronger price signals could reduce inefficiencies in the hospital sector

There are few economic incentives in place for the efficient provision of hospital services. The systems of payments per services provided (*fee-for-service*) in outpatient care and on per-diem basis in chronic care encourage the increase of service provision, but account for a relatively small share of activities as measured by expenditure (OECD, 2016c).

The payment per case based on diagnosis-related groups (DRGs), which increases efficiency by encouraging health service providers to reduce their productions costs per case – i.e. a performance-based financing mechanism – was already introduced in inpatient acute care in 1993 (Gaál, 2004). However, the DRG system has not been regularly updated and it does not account for amortisation costs. As a result DRG tariffs do not reflect the true costs of health services, reducing markedly their usefulness. Therefore, strengthening price signals in the system requires DRG tariffs to be updated on a regular basis. Moreover, to fully exploit the potential of the DRG system, hospitals need to be able to adjust their supply of health services continuously. This requires enhancing their responsibilities and decision making, including their investment needs, which are currently centralised. Furthermore, reinstating the National Health Insurance Fund Administration's autonomy and its traditional role of enforcing efficiency in hospitals should be also considered.

The government introduced an additional volume-based measure in 2004 with the system of limiting output volumes to put downward pressure on hospital spending (Endrei et al., 2014). However, limiting output volumes is a blunt tool with adverse side effects. Hospitals do not have incentives to improve efficiency once they reach the predetermined budget ceiling, since they do not benefit from further reduction of production costs. Furthermore, care co-ordination is distorted as hospitals that already reached their output volume limit tend to send patients to other institutions. This mostly results in smaller institutes referring patients to university medical schools and national institutes (Gaál et al., 2011; Endrei et al., 2014). Thus, the system of limiting output volumes should be gradually phased out.

In the presence of weak price signals, costs are contained by applying general budgets for each hospital. However, the government routinely absorbs hospital debts, partly because budgets are set at artificially low levels to ensure cost-containment, which turns the global budgets into soft budget constraints. Particularly in the absence of performance-related pay for hospital managers, giving them few incentives for improving efficiency and reducing wasteful spending. Instead, hospital managers tend to focus on monitoring liquidity and lobbying for bailout while the control of other aspects of care delivery, such as quality, is often neglected (Krenyácz, 2017). Moreover, there is evidence that budget constraints got softer after the ownership of hospitals was transferred to the central government (Krenyácz, Kiss and Révész, 2017). Once price signals are strengthened and hospitals' financial resources are more stable, hospital management should be more accountable for keeping budget constraints and other measures of care quality. Introducing performance-related bonuses as part of hospital managers' salaries could provide the right incentives for hospital managers. Increased accountability should lead to more autonomy with respect to investment decisions.

The gatekeeper role of primary care needs to be strengthened

The restructuring of care delivery has been limited by a lack of investment in other modes of service provision. Effective primary care, which is mainly provided by general practitioners (GPs), is indispensable to improve the quality and efficiency of health care provision, particularly as first point of contact and as gatekeepers, referring patients to best appropriate treatment, and in providing patient guidance (OECD, 2017e). However, the rate of unnecessary hospital admissions is one of the highest among OECD countries, which indicates that GPs are not effective in their gatekeeper role (OECD, 2017e). This reflects a lack of proper incentives as GPs' remuneration is mainly based on global budgets and on the number of registered patients (*capitation*) (OECD/European Observatory on Health Systems and Policies, 2017). Thus, they have the incentive to reduce the number of services provided for each patient by referring patients to hospitals or other specialist care settings (OECD, 2016c). Moreover, the pay-for-performance (*P4P*) financing that aims at incentivising GPs to provide better care quality constitutes only 3%-4% of their income. Increasing the share of P4P payments would enhance GPs' gatekeeper role, particularly if such payments include quality and efficiency targets (OECD, 2016c).

The efficiency of primary care could be improved by promoting group practices for GPs to exploit economies of scale and scope. When primary care is organised in group practices, care co-ordination can be improved and they facilitate investment in human and infrastructure capital that is necessary to implement new and more efficient care models (OECD/EU, 2016). However, solo practice remains predominant. The impact assessment of a five-year pilot programme of establishing group practices in disadvantaged rural areas has been promising with improved health in the target population, which enjoyed better access to health services, and increased cost effectiveness (Swiss-Hungarian Cooperation Programme, 2017). According to the assessment, the country-wide implementation of the programme, including the wages of a full-time public health expert and physiotherapist as well as a half-time dietician and health psychologist per group practice, would cost around 25% of the annual sub-budget of primary care (HUF 37 billion). However, considering the positive evaluation the authorities should consider a more general roll-out of programmes to support group practices. This would also support the government's policy of strengthening the role of primary care.

Primary care has an important role in improving efficiency through better care co-ordination, particularly in terms of patient guidance. Poor organisation of the care process

leads to wasteful use of resources through an increase in inpatient care, more specialist consultations and longer hospital stays (OECD, 2017d). Since GPs are the main entry point to the health care system, they are best placed to be responsible for care co-ordination (OECD, 2017d). Recent efforts to enhance information infrastructure and the exchange of health data between different providers are encouraging as the implementation of eHealth is expected to support care coordination (OECD/European Observatory on Health Systems and Policies, 2017). However, the capacities of GPs to co-ordinate care remains underdeveloped (OECD/European Observatory on Health Systems and Policies, 2017). GPs' should have more competencies in referring patients to certain examination. Improving and standardising patient pathways for chronic diseases would also support care co-ordination (OECD/European Observatory on Health Systems and Policies, 2017).

The effectiveness of preventive care has to be improved to address lifestyle risks

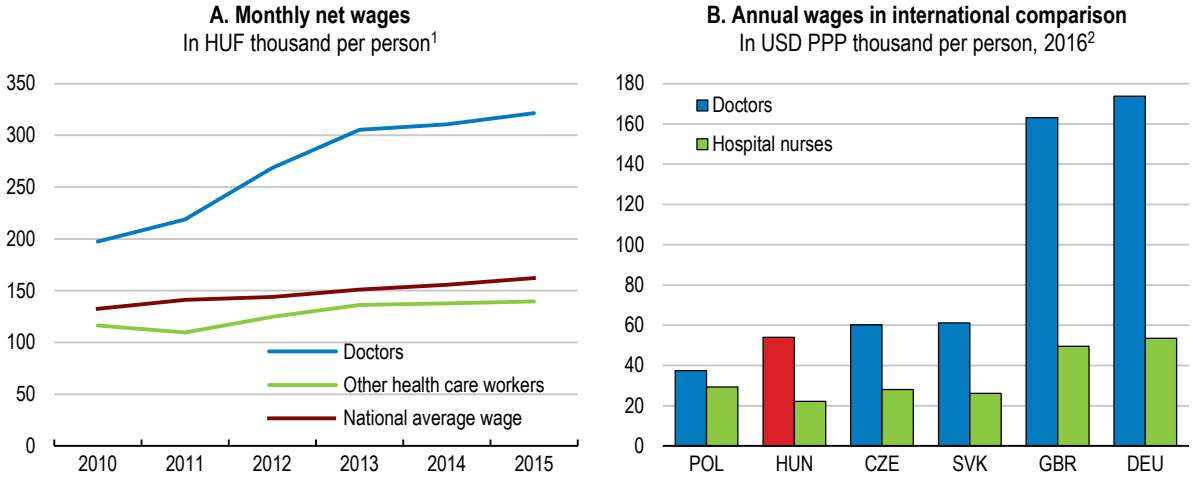
In recent years, public health promotion policies is becoming more important with the launch of a comprehensive set of public health promotion measures that includes a tax on selected manufactured foods with high sugar, salt or caffeine content, regulation on restricting trans-fatty acid intake, the introduction of daily physical exercise in schools and healthier school canteens. In addition, national cancer screening programmes are mostly in place, although screening rates remain relatively low, especially among disadvantaged groups (OECD/European Observatory on Health Systems and Policies, 2017). Moreover, the comprehensive monitoring and evaluation of these screening programmes is lacking.

Due to high mortality from preventable causes, increasing investment in health promotion and disease prevention measures would be cost-efficient. Moreover, there is potential for introducing preventive measures that would increase revenues. For instance, an increase in relatively low taxes on alcohol and tobacco products could be considered. In particular, the use of taxes to raise alcohol prices in the cheaper segment of the market, together with regulating alcohol promotion, is effective in tackling harmful drinking (Sassi, 2015). The recent increase in the excise duty rates on tobacco products as well as the further increases envisaged for 2019 are welcome. Hungary's tax on unhealthy foods has been successful in reducing consumption as well as generating extra revenues (OECD, 2016d).

A shortage of health workers hampers access to health services

Overall almost 5 500 doctors (around 15% of all active physicians) left the country to work abroad between 2010 and 2016. The rate of emigration of other health care professionals, including nurses, has remained at around 600 persons per year since 2013 (ENKK, 2016). To stem the emigration of doctors, their net wages have been increased by more than 60% since 2010, which has contributed to a 50% fall in the number of doctors who requested to have their diplomas recognised abroad (Figure 1.24, Panel A). Nonetheless, the average salary of doctors remains low in international comparison (Figure 1.24, Panel B). Wages of other health care workers, such as nurses, have also been raised since 2016. However, their earning is low compared to neighbouring countries and also relative to the national average wage (Figure 1.24). This has been complemented with scholarship programmes targeting young medical graduates, bolstering the number of medical and nursing graduates in the last few years.

Figure 1.24. Remuneration of health workers has been increasing, but remains relatively low



1. In nominal terms. Other health care workers include nurses among others.
2. Data for doctors refer to remuneration of specialists. Data for hospital nurses for Germany refer to 2014. PPP: purchasing power parity.
Source: ENKK (2016), "Beszámoló az Egészségügyi Ágazati Humánerőforrás 2015. Évi Helyzetéről", Health Registration and Training Centre (*ENKK, Egészségügyi Nyilvántartási és Képzési Központ*); and OECD (2018), "Health Care Resources", *OECD Health Statistics* (database).

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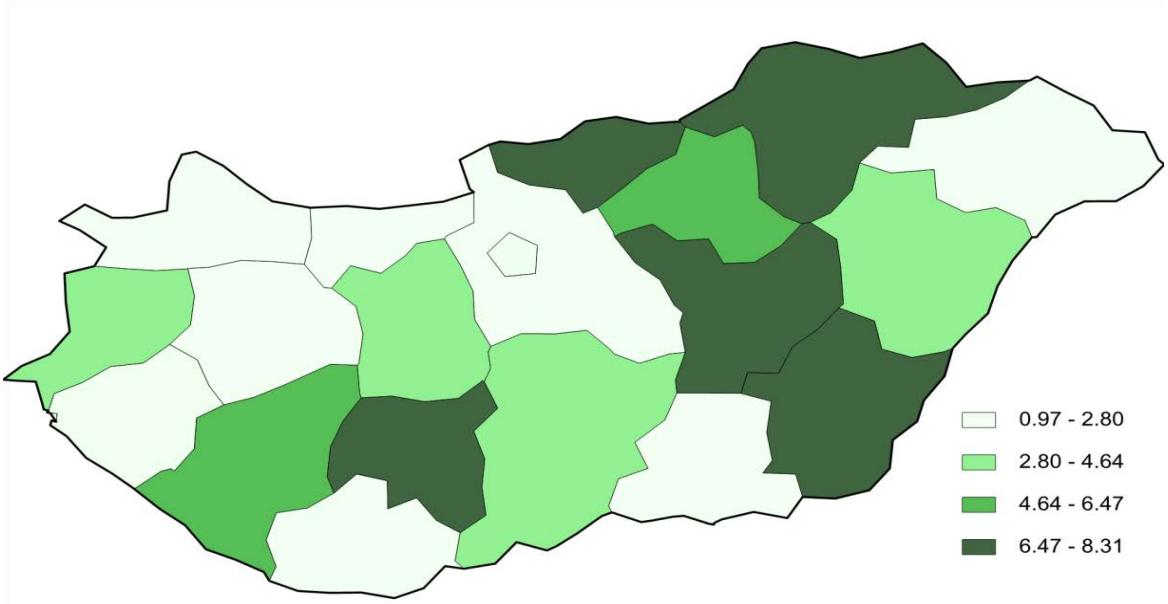
These measures, however, have been insufficient to stem the effects of emigration of health workers and the ageing of the health-care workforce, pointing to continued shortages. Between 2000 and 2015 the share of doctors aged over 55 years increased from around 25% to 37%. The ageing problem is most severe among GPs with one-third of them already above the retirement age (Ministry of Human Capacities, 2014). Moreover, shortages are concentrated in rural areas. There are almost twice as many doctors per inhabitant in Central Hungary as in Northern Hungary. Similarly, the more than twofold difference in doctor density between urban and rural areas is 50% higher than the average gap observed among OECD countries. Despite government efforts to address regional disparities in access to primary care and to fill vacant GP positions, the number of permanently unfilled GP practices is concentrated in poorer counties (Figure 1.25).

Remuneration levels need to be raised further to retain and attract health professionals. Salary increases of other health care workers, such as nurses, should be prioritised. In late 2018, the government announced steps in this direction. The shortage of doctors could also be improved by optimising the use of human resources in the health sector. Doctors allocate substantial part of their time on administrative tasks and basic health examination that could be delegated to mid-level health care providers, such as nurse practitioners or pharmacists. The scope of practice for non-physicians, have already been expanded in about half of OECD countries (Ono, Schoenstein and Buchan, 2014; OECD, 2017d). As a step in the right direction, the Advanced Practice Nurse (APN) tertiary education programme was launched in 2017 with the aim of facilitating the delegation of certain tasks to nurses. Addressing geographical disparities through the wage system could be done in the form of financial incentives, such as income guarantees or bonus payments, for doctors practising in an underserved area (Ono, Schoenstein and Buchan, 2014).

Figure 1.25. The shortages of health workers is especially severe in poor rural areas

Number of permanently unfilled GP practices per 100 000 people, 1st of April 2018[1]



1. Data refer to total unfilled GP practices including practices for children only, adults only and also mixed practices.
Source: Állami Egészségügyi Ellátó Központ (ÁEEK), Alapellátási Osztály, http://www.oali.hu/

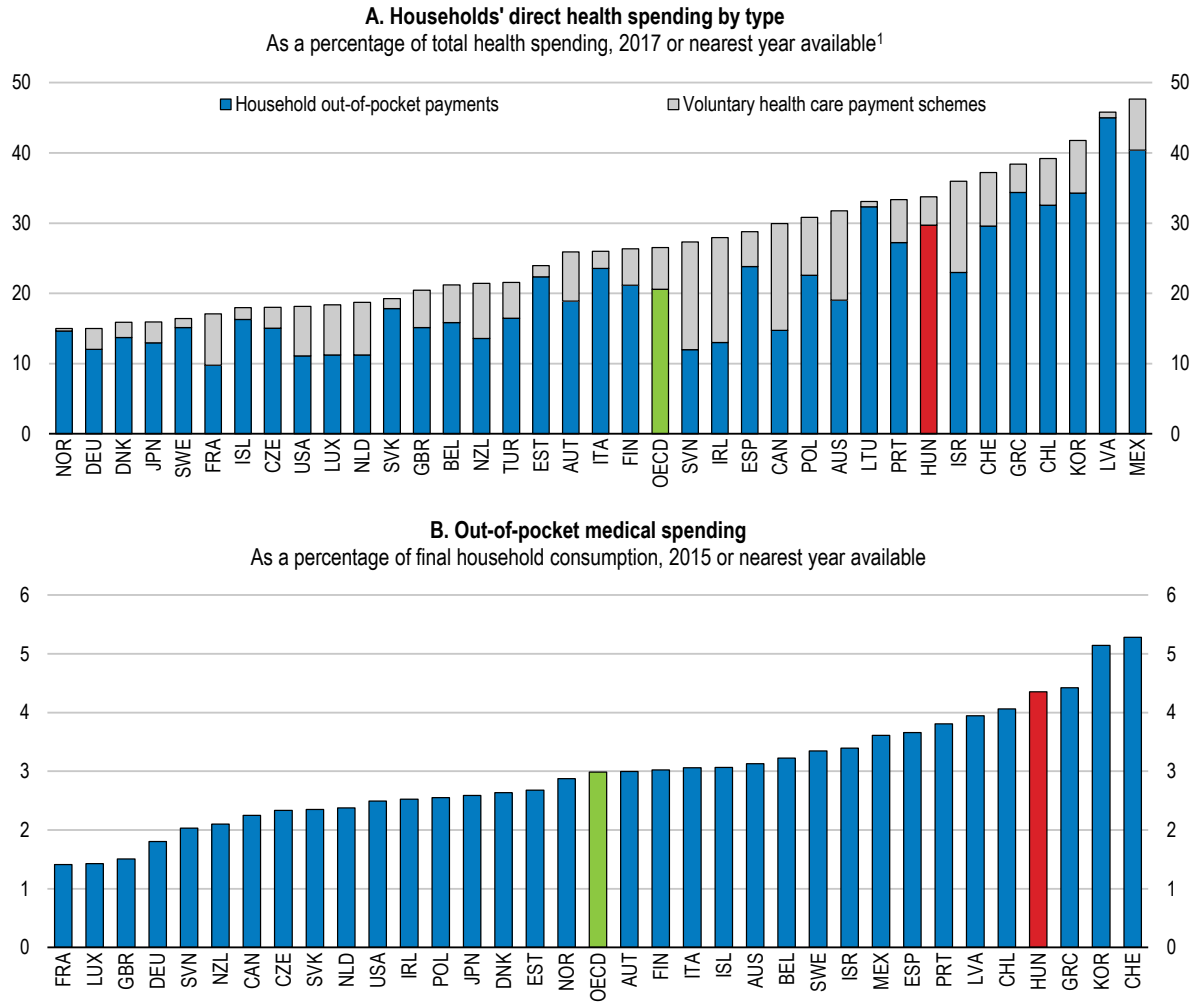
High out-of-pocket payments create a barrier to health care access for low-income earners

High pharmaceutical co-payments and informal payments as well as the increasing reliance on private health-service providers lead to high out-of-pocket payments, One-third of overall health spending is financed directly by households (Figure 1.26, Panel A). Moreover, out-of-pocket health spending as a share of final household consumption is the fourth highest among OECD countries (Figure 1.26, Panel B). This creates a relatively high barrier to health-care access for low-income earners. In 2014, almost 22% of the population with low educational attainment reported that they had to forgo medical care for financial reasons, which was three times higher than for tertiary educated. In 2014, 7.5% of households faced catastrophic out-of-pocket payments, defined as out-of-pocket medical spending exceeding 40% of total household expenditure (OECD/European Observatory on Health Systems and Policies, 2017). This share increases to more than 25% for low-income households (OECD/European Observatory on Health Systems and Policies, 2017).

Almost half of total out-of-pocket payments is linked to pharmaceutical spending, the fifth-highest among OECD countries, although since 2011 increased price competition and use of generics has reduced overall pharmaceutical spending as a share of total health expenditure. The 40% share of generics in sales value of pharmaceuticals was above the EU average in 2015 (EFPIA, 2017). However, the recent decrease in overall pharmaceutical spending has been achieved by reducing only public spending while households' private expenditure on medicines remained constant.

The reduction in reimbursement for pharmaceuticals from the HIF has increased out-of-pocket payments (ÁEEK, 2016). Continued efforts to exploit the use of generics and improvements in public procurement practices for pharmaceutical products could help contain overall spending on pharmaceuticals (OECD/European Observatory on Health Systems and Policies, 2017). An additional private cost is informal payments for gaining priority access and free choice of specialists – a deeply rooted practice – which are estimated to make up at least 2% of total health expenditure (OECD/European Observatory on Health Systems and Policies, 2017). Such payments reduce access to health services for low-income earners. Sufficient salary increases of health workers are necessary to reduce the role of informal payments.

Figure 1.26. Out-of-pocket medical spending is high



1. 2016 for Hungary. The OECD aggregate is calculated as an unweighted average of the data shown.
Source: OECD (2018), "Health Expenditure and Financing", *OECD Health Statistics* (database); and OECD (2017), *Health at a Glance 2017: OECD Indicators*, OECD Publishing, Paris.

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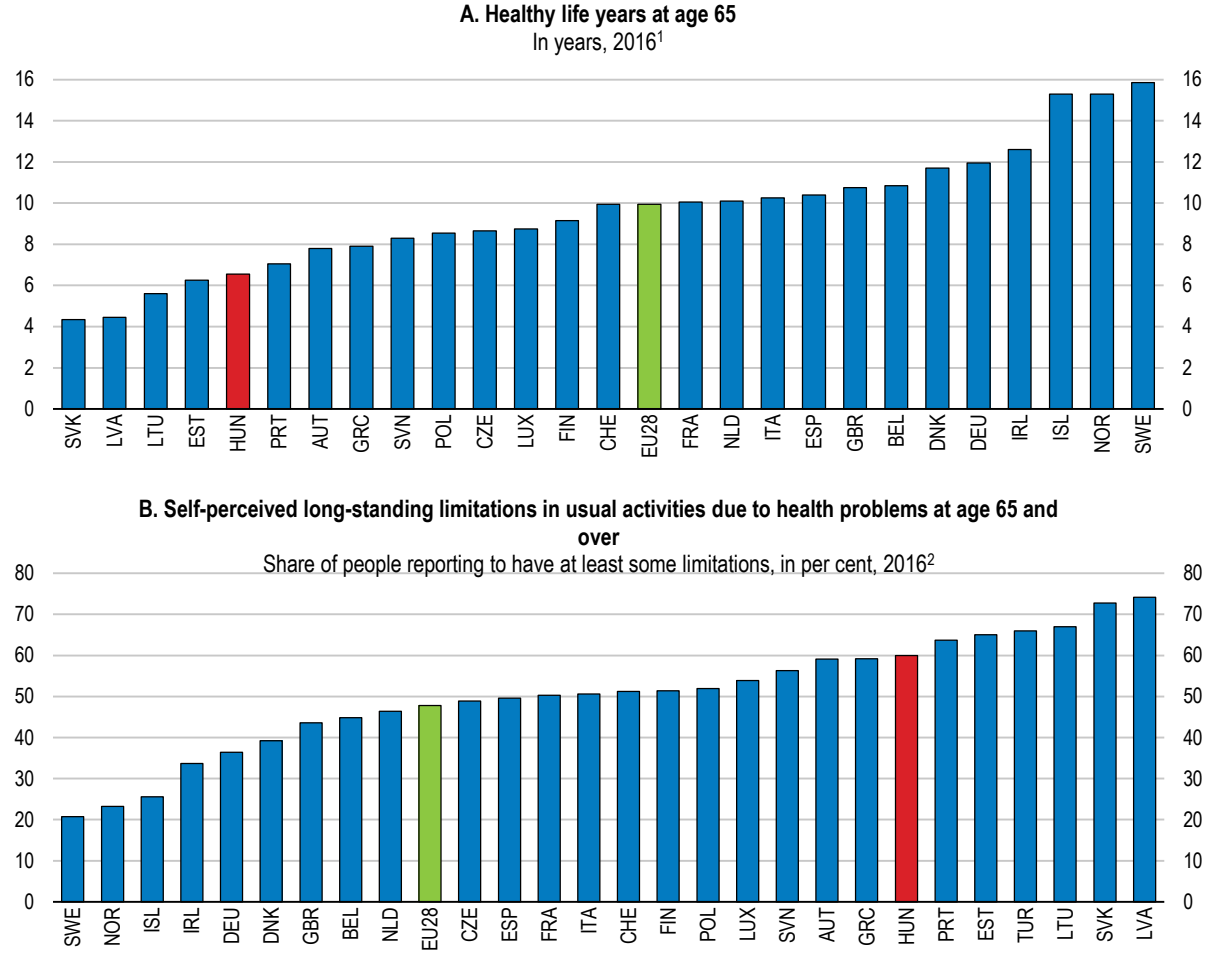
The health benefit package funded by the Health Insurance Fund (HIF) is relatively broad and in principle ensures equal access to health care regardless of socio-economic background. However, the strain on public health care means that people who can afford it either turn to private service providers for faster service, greater convenience and choice of specialists, or else acquire better public services through informal payments. These out-of-pocket payments are often spent on services that are in principle covered by the HIF. The publicly funded health benefit package should be updated and clearly defined in order to limit informal out-of-pocket payments. This would also increase revenues for public health care providers.

Self-reliance in terms of health-care costs is an important feature of the current system. Almost half of total expenditure on outpatient care is financed by out-of-pocket payments leading to a private health market that is worth around 1% of GDP (Ministry of Human Capacities, 2014). Nevertheless, the share of voluntary health insurance in total private spending is only around 10% (Figure 1.26, Panel A). As opposed to out-of-pocket payments, voluntary health insurance has the advantage of managing financial risks related to ill health. Establishing a voluntary health insurance market, which would supplement the publicly funded health benefit package, would not only improve the situation of those patients who could afford such a health insurance, but it could also generate extra resources for the public provision of all essential and cost-effective care.

Long-term care is faced with the challenge of population ageing

Demand for long-term care (LTC) will increase with an ageing population. Although elderly people are not the only target group, demand for LTC is highly age-related (Colombo et al., 2011). According to the indicator for disability-free life expectancy at the age of 65, only six and a half of the remaining years are spent in good health as compared with an EU average of 10 years (Figure 1.27, Panel A). Because of relatively bad health status at old age, high share of older people need assistance due to health-related limitations in daily activities (Figure 1.27, Panel B).

Figure 1.27. Relatively high share of old-age people need assistance due to health problems



1. 2015 for Iceland. Healthy life years are defined as the number of years spent free of activity limitation and they are calculated as the unweighted average of healthy life years at age 65 of women and men.
2. 2015 for Iceland and Turkey.
Source: Eurostat (2018), "Healthy life years", Eurostat Database; and Eurostat (2018), "Functional and activity limitations", Eurostat Database.

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The organisation of long-term care for the elderly is fragmented

LTC services are administrated in both the health care system and the social care system with separate and distinct legislation, financing mechanisms, institutional networks and minimal cooperation (Czibere and Gál, 2010). The LTC services provided by the health care system focus on improving health conditions, and include institutionalised care in hospitals' nursing departments and home-based nursing care. The LTC services provided by the social care system are tailored to provide elderly people with assistance in daily activities and include home–based domestic care (including emergency alarm system and meal provision services), institution-based day care, temporary care homes and residential care homes (Czibere and Gál, 2010; Hajdú and Lajkó, 2018). Residential care homes are LTC institutions, which provide accommodation and long-term care and are managed by

the social care system. Since 2012 institutionalised LTC (both within the health and social care systems) has been managed by the central government, while the administration of home-based care has remained at the local level (European Commissiont, 2016).

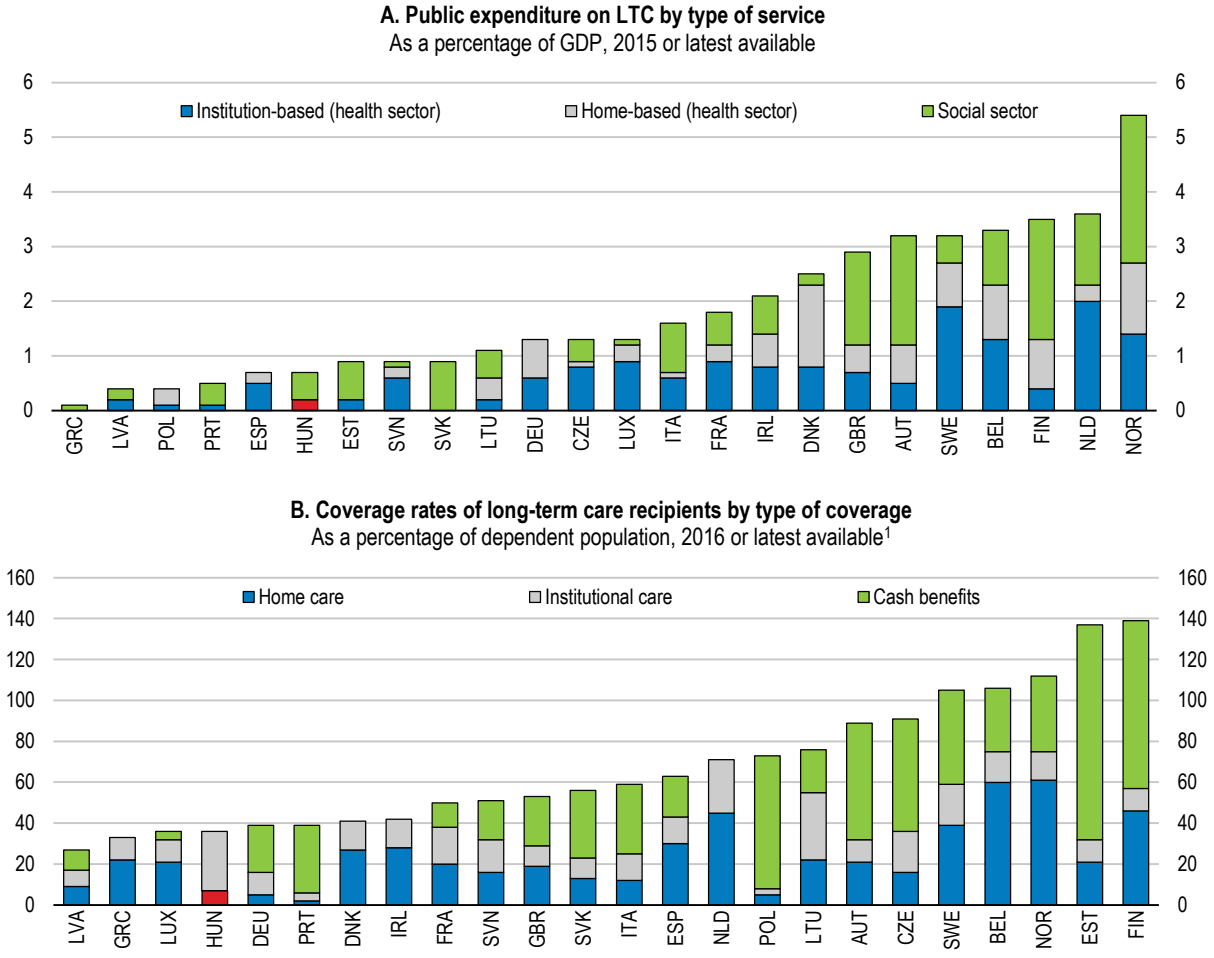
In terms of eligibility rules, access to long-term health care services is linked to health insurance rights and doctors' assessment. The eligibility criteria for home-based domestic care and residential care homes are based on a complex assessment process. Care needs are assessed based on several physical abilities, social circumstances and financial background (Czibere and Gál, 2010). People who need between 2 and 4 hours of care per day are eligible for home-based domestic care while those with needs of more than 4 hours of care per day are eligible for residential care homes (Czibere and Gál, 2010).

The dual nature of the LTC system with parallel financing of overlapping functions reduces efficiency (Czibere and Gál, 2010). Recognising the need for more integrated LTC services, the government plans to establish a new type of institution called professional care centre, where health and social care services are combined, effectively creating a third LTC type of institution. However, additional measures are needed to improve the integration of LTC services to create a unified approach. Therefore, the governance of health and social LTC services within the Ministry of Human Capacities should be more aligned with stronger coordination between the two areas. Moreover, the separation of institutionalised and home-based care in terms of the responsibilities of different levels of government could be reconsidered.

Low capacities of long-term care lead to a burden on informal care

Despite the increasing demand for LTC services, public expenditure on LTC remains low in international comparison (Figure 1.28, Panel A). As a result, less than 40% of the population who are potentially dependent on LTC have access to formal care (Figure 1.28, Panel B). Another indication of low LTC capacities is that the number of formal LTC workers relative to the population aged over 65 years is only 2%, one of the lowest ratios among OECD countries and which is mainly driven by relatively low wages. This has let the bulk of elderly care to be provided informally by unpaid family members and informal carers (Széman, 2015). The government wants to increase the role of the family in providing care for the elderly. The 2011 Constitution even makes this a family obligation. On the other hand, the number of family carers receiving the nursing allowance (between EUR 90 and 160 per month depending on the condition of the patient) has been decreasing (Széman, 2015).

Figure 1.28. Low capacities of long-term care leads to unmet demand for elderly care



1. Coverage rate is estimated as a ratio between long-term care recipients and potentially dependent population. Potentially dependent population is calculated based on 2011-2015 average of EU-SILC data on "self-perceived longstanding limitation in activities because of health problems [for at least the last 6 months]". Coverage rate may be above 100%, as some recipients may receive cash benefits and in-kind benefits at the same time. It should be noted that the coverage for institutional care for Luxembourg is likely to be underestimated due to incomplete data. LTC: long-term care.

Source: European Commission (2018), "The 2018 Ageing Report - Economic & Budgetary Projections for the 28 EU Member States (2016-2070)", Directorate-General for Economic and Financial Affairs, Institutional Paper 079, Luxembourg.

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Boosting home-based care would lead to efficiency gains

Home-based care is more efficient than institutionalised care in most cases where LTC needs are not severe and it boosts recipients' satisfaction and quality of life (Colombo et al., 2011). However, access to home-based care is limited. Home-based nursing care, which can be ordered by a GP, is available for a maximum of 56 visits per year. Moreover, profit-based private service providers are the main providers of home-based nursing care as the supply from the public health-care system is restricted by the shortage of health workers. The capacities are even more limited in rural areas, leading to regional disparities in access to home-based nursing care. Access to home-based domestic care has been worsening since

the end of the 2000s due to stricter eligibility criteria and decreasing financing (Széman, 2015). Capacities of home-based domestic care vary a lot depending on the financial resources of local authorities. Hence, an increase in public funding of in-kind home-based care is necessary to boost access.

The lack of home-based care capacities increases the care burden on families and LTC institutions leading to inefficiencies. Paying for home-based care provided by specialised carers is more efficient than relying on family and friends whose opportunity cost is not covered. The take-up of home-based nursing care could be increased if the nursing allowance, which is only paid to family carers, was replaced with an income-tested cash benefit scheme, allowing eligible LTC recipients to choose their home-based care provider freely. A cash benefit scheme could also be applied to home-based domestic care. In the latter, user fees are already means-tested, taking into account both income and real estate assets of the recipient and are capped at 20% of personal income (Czibere and Gál, 2010). Moreover, it would be also important to increase the number of formal LTC workers through more competitive wages, clear career path and better recruitment methods (Colombo et al., 2011).

The capacities and efficiency of residential care homes need to be improved

The number of LTC beds in hospitals is relatively high compared with the number of places in residential care homes in other countries, pointing to low capacities of residential LTC facilities that are operated by social care (OECD, 2017e). As a result, elderly people who are eligible for residential care homes but do not need special health care services often end up in hospitals' resource intensive nursing departments due to the lack of places in residential LTC institutions. This leads to inefficient service provision and worse outcomes for LTC recipients. User fees in residential care homes are capped at 80% of the recipient's income. However, separate information on hotel and care costs are not available, hindering the calculation of user fees that could be used for monitoring providers' efficiency. The capacities and efficiency of residential LTC institutions could be enhanced through increasing public funds for in-kind home-based LTC or by introducing a voucher system to enable LTC recipients to choose among competing residential care homes. It would be also worthwhile to explore the potential for private LTC insurance as a supplementary financing tool to enable people to face large and uncertain LTC costs (Muir, 2017).

Higher public spending on health is needed to achieve better outcomes

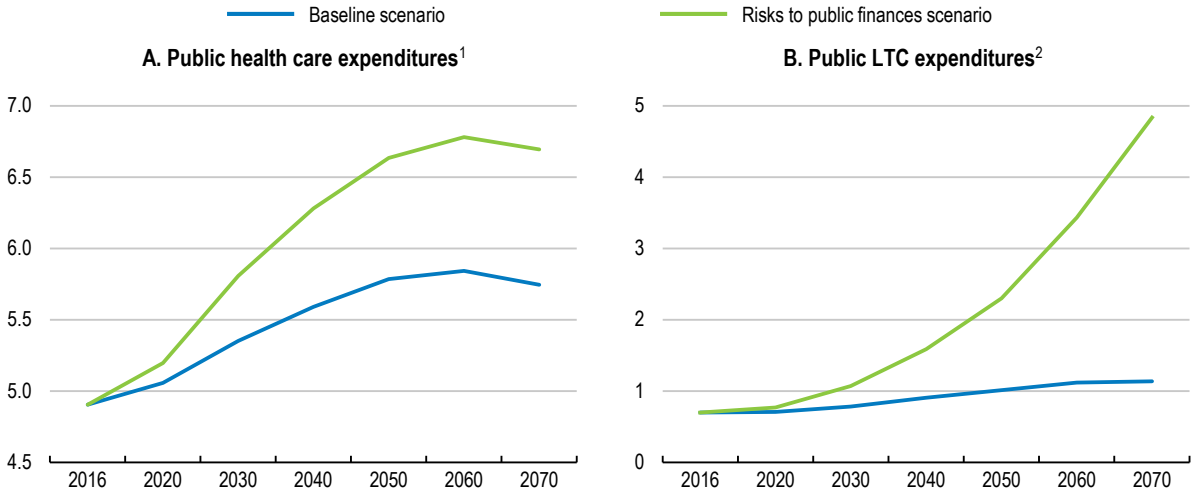
Looking ahead, the share of elderly (over 65) in the population will increase from 17% to almost 30% by 2070. This will increase the demand for health and long-term care, which is going to put upward pressure on public spending. According to the EU Ageing Report Hungary's life expectancy will increase by 10 years by 2070, while public health and LTC spending are projected to increase only by 0.8% and 0.4% of GDP, respectively (Figure 1.29, Panels A and B).

The projections are surrounded by large uncertainties. For example, taking into account the costs associated with improving the quality and coverage of health care as well as the cost of taking up new medical technologies, public health spending could increase by almost 2% of GDP by 2070 (Figure 1.29, Panel A). Moreover, a 10-year increase in life expectancy is likely to require more resources. Currently, average EU public health expenditures are 6.8% of GDP – well above the projected 5.7% of GDP for Hungary in 2070. Moreover, the implementation of efficiency improving measures, such as

restructuring the hospital sector or strengthening primary and preventive care, would require additional resources at least in the short-term.

Figure 1.29. EU Ageing Report: Long-term projections of public health and long-term care expenditures

As a percentage of GDP



1. In the "Baseline scenario" health care expenditures are driven by the assumption that half of the future gains in life expectancy are spent in good health and trends in health spending slightly exceeds the growth rate of national income (i.e. income elasticity of health care spending is converging linearly from 1.1 in 2016 to unity in 2070). In the "Risks to public finances scenario" (called "Average risk scenario" in the EU Ageing Report) half of the future gains in life expectancy are spent in good health but the cost impact of improving the quality and coverage of health care as well as the cost of development of medical technologies which have stimulated expenditure growth in recent decades are taken into account.
2. In the "Baseline scenario" it is assumed that half of the projected gains in life expectancy are spent without disability (i.e. demanding care). In the "Risks to public finances scenario" (called "Average risk scenario" in the EU Ageing Report) half of the future gains in life expectancy are spent with no care-demanding disability and upwards convergence to the EU average of the relative cost profiles and coverage of publicly financed formal long-term care provision is assumed.
Source: European Commission (2018), "The 2018 Ageing Report - Economic & Budgetary Projections for the 28 EU Member States (2016-2070)", Directorate-General for Economic and Financial Affairs, Institutional Paper 079, Luxembourg.

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The limited projected increase in LTC spending (reaching 1.1% of GDP) reflects partly the increase in years spent in good health, but will nonetheless still be 60% less than the EU average in 2070. However, if costs and coverage of publicly financed formal long-term care provision converge to the EU average, then public spending could reach almost 5% of GDP by 2070 according to the EU Ageing Report (Figure 1.29, Panel B). Boosting formal LTC capacities seems unavoidable as changing social preferences, evolving family models and urbanisation are likely to lead to a decrease in the supply of family carers.

Box 1.5. Recommendations to improve health-care provision and long-term care

Key recommendations are bolded.

Improving the efficiency of health care provision

- **Reduce hospital strays by enhancing outpatient care and concentrate inpatient care in fewer, better equipped and more specialised hospitals.**
- **Strengthen price signals in health care provision by regularly updating the DRG tariffs.**
- Phase out the use of output volume limits.
- **Increase hospitals' autonomy** by enhancing the role of hospital managers through performance-related bonuses and greater autonomy in investment decisions.
- **Strengthen the gatekeeper and coordinator roles GPs by increasing the share of pay-for-performance financing.**
- Promote group practices among general practitioners.
- Increase taxes on alcohol and tobacco products.

Reducing disparities in access to health services

- Continue to raise remuneration levels in order to retain and attract health professionals.
- Update and clearly define the publicly funded health benefit package as part of an approach to limiting informal out-of-pocket payments.
- Establish a voluntary health insurance market that can supplement the publicly funded health benefit package.

Enhancing the capacities and efficiency of long-term care

- **Integrate the various long-term care systems** with the governance of health and social LTC services within the Ministry of Human Capacities more aligned and coordinated.
- **Improve access to home and institution-based care by introducing cash benefits and vouchers** in home-based care and residential care homes, respectively.
- Increase public funds to in-kind home-based care.

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Chapter 2.
Fostering regional growth and inclusiveness

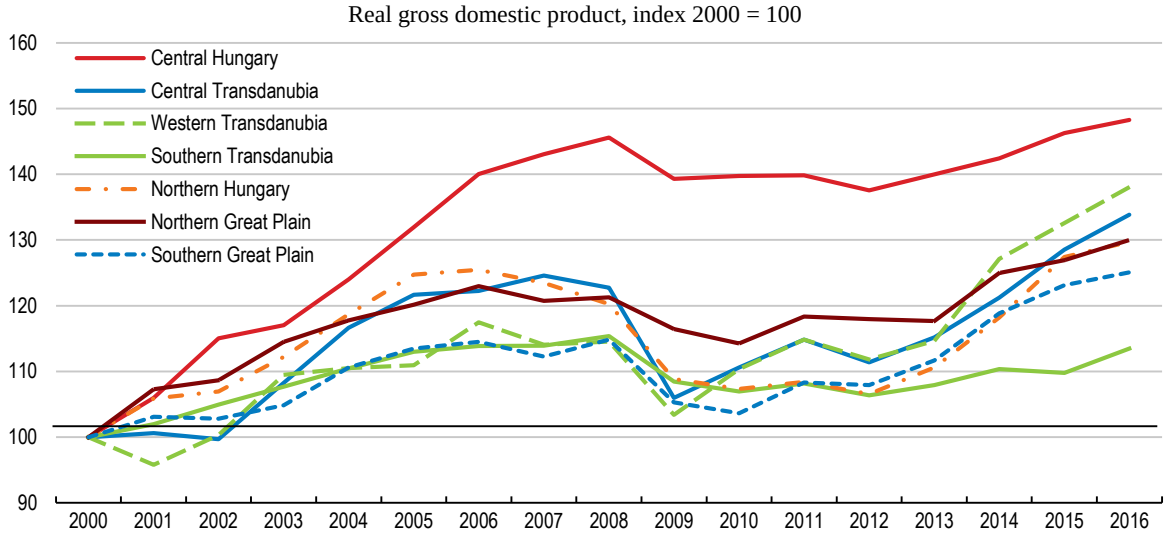
Regional growth has been uneven in Hungary, leading to a wide dispersion in employment and income outcomes. The divergent growth pattern reflects that the greater Budapest area has benefitted from positive agglomeration effects and the benefits from inward FDI in western and northern regions that has provided important technology transfers as well as links to international supply chains. By contrast, other poorer and rural regions have few linkages with national and international supply chains, holding back growth. Boosting growth in a manner that benefits most people will require further exploitation of positive agglomeration effects as well as the development of local networks that enable poorer areas to make use of their own comparative advantages and join national and global supply chains.

Urban regions have had the fastest growth

Uneven regional growth leads to income divergence, at times even to pockets of poverty. Moreover, the associated underutilisation of labour resources and local growth opportunities constrain productivity developments and holds back aggregate growth. In many countries, such concerns have increased since the onset of the international financial crisis, motivating similar chapters in other Surveys, such as those for Iceland, Italy, Slovakia, Spain, the United Kingdom and the United States. Perhaps more than in other countries, the Hungarian regional problems are multidimensional, ranging from rural poverty to misallocated labour resources over missing links to regional and national supply chains to mention a few issues. Consequently, policy responses are required across many different policy areas. However, two important themes are emerging: a) how to deal with large geographical mismatches on the labour market; and b) how to improve lagging regions' attractiveness to capital to bolster economic activity.

Economic growth varies across Hungary. Since 2000, the capital region (Central Hungary) has enjoyed faster growth than the rest of the country (Figure 2.1). Since 2012, the Western regions of Central and Western Transdanubia have grown strongly. As a result, the three most developed regions – Central Hungary, Central and Western Transdanubia – account for two-thirds of GDP and more than 80% of inward FDI (Figure 2.2) (Salamin, 2015). The rest of the country lags behind, reflecting economies that used to be dominated by now outdated mining and heavy industries and relatively large shares of Roma, a disadvantaged community concentrated in North Hungary and Southern Transdanubia, and there is a need to continue to bolster inclusiveness measures for Roma communities, especially by better integrating Roma children in early childhood education and care (Box 2.1) (Hardi, 2017; OECD, 2016a; OECD 2016b). Indeed, Hungary is the third most rural country in the OECD with almost half of its population living in predominantly rural regions, which are among the poorest in the European Union (OECD, 2016a; European Commission, 2017a).

Figure 2.1. The capital has been leading growth



Source: OECD (2018), "Regional Economy", OECD Regional Statistics (database).

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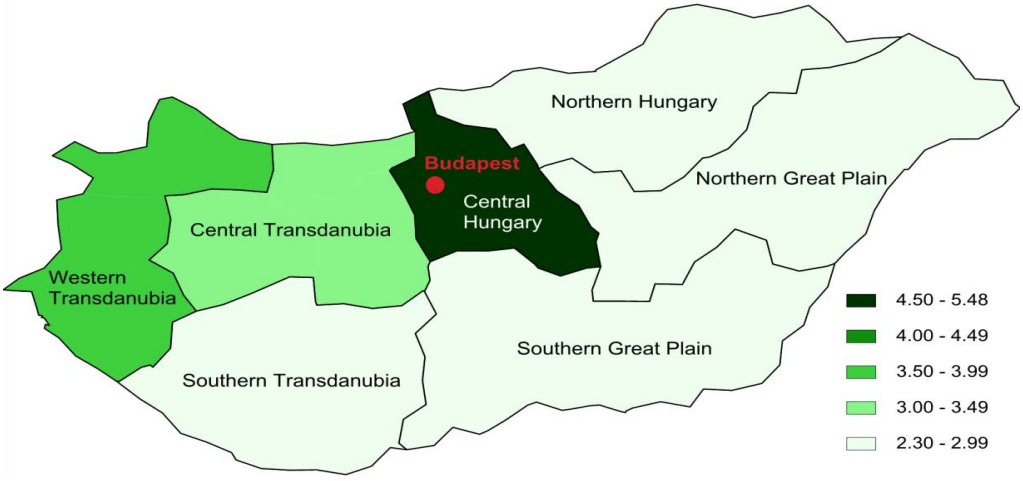
Figure 2.2. Income per capita varies across regions

Gross domestic product per capita in HUF million, 2016

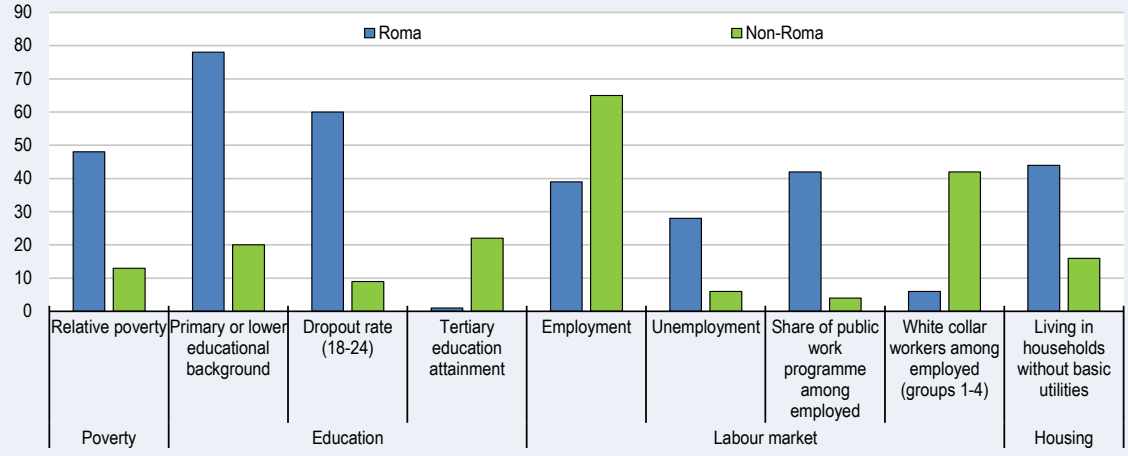


Source: Hungarian Central Statistical Office (2018), "6.3.1.2. Gross domestic product per capita", Tables (STADAT).

Box 2.1. The Roma in Hungary

Roma make up 3-7.5% of the Hungarian population with the vast majority belonging to the Romungo group who arrived in 15th century. Later arrivals include the Vlách (Oláh) and the Boyash (Beás) groups. Historically Roma worked as day labourers in the rural economy. After WWII, many of them were settled in cities with the majority working in mining and heavy industries (Lukács, 2016). Even Roma musicians became part of the nationalised music industry (Hooker, 2015). The collapse of these industries led to mass unemployment and worsening social problems (Figure 2.3) (Bernáth, 2016).

Figure 2.3. Roma are lagging behind in all dimensions of well-being



Note: Data are for 2015 apart from relative poverty (2016) and housing (2011). A household without basic utilities is defined as without at least one of the following basic amenities: indoor kitchen, toilet or shower, electricity.

Source: Poverty, Education and Labour Market data from KSH databases and KSH (2015).

StatLink https://doi.org/10.1787/888933897513

Today, nearly two-thirds live in Roma settlements or neighbourhoods with Roma children increasingly being taught in segregated schools or 'special' classes (OECD, 2008). The system is highly unequal both in terms of ability of the children and the qualifications of teachers, resulting in low overall educational attainment for Roma pupils (Kovács, 2015). This is reflected in their labour market situation, which is characterised by low rates of employment in mainly low-skilled jobs with low wages.

The government has no specific Roma policies, but relies on general anti-poverty programmes, focusing on early childhood education and labour market entry via public work programmes. The National Inclusion Strategy also tackles poverty issues among Roma through measures focussed on education, employment and housing. Early childhood investment is a strategy with high returns. The main element is the Sure Start Programme to help cognitive developments in cooperation with their parents; however only around 4% of the target group is reached, while the most disadvantaged children are missed (Balás et al., 2016). The rollout of crèches and compulsory kindergarten is also lagging the most in these Roma communities. On the other hand, the national Roma children participation in crèches is 91% as compared with a national average of 95% (Századvég, 2016).

Labour market integration via public works schemes has not been successful (KSH, 2016). This also means that Roma do not benefit from other government employment programmes, such as the Job Defence Action Plan that cuts social security contributions for disadvantaged groups. Another difficult to battle obstacle is that 52% of Roma have experienced negative discrimination in the labour market (KSH, 2016).

International best practices to foster Roma integration include anti-discrimination bodies (Sweden, Germany) and providing anti-bias training for public servants (Romania, Spain) (Carrera, Rostas and Vosyliute, 2017). Other countries have resorted to Roma-specific programmes, such as the Spanish "Acceder" programme that has bolstered Roma employment through VET training tailored to the needs of companies. The programme includes pre-training of Roma enrolees, and is combined with anti-bias awareness campaigns. Other successful policies discussed in the 2018 *OECD Economic Survey of Slovakia* include trust-building measures to improve Roma's access to public services, while the 2018 *OECD Economic Survey of Australia* points to the importance of community-led developments (OECD, 2018e and 2018f).

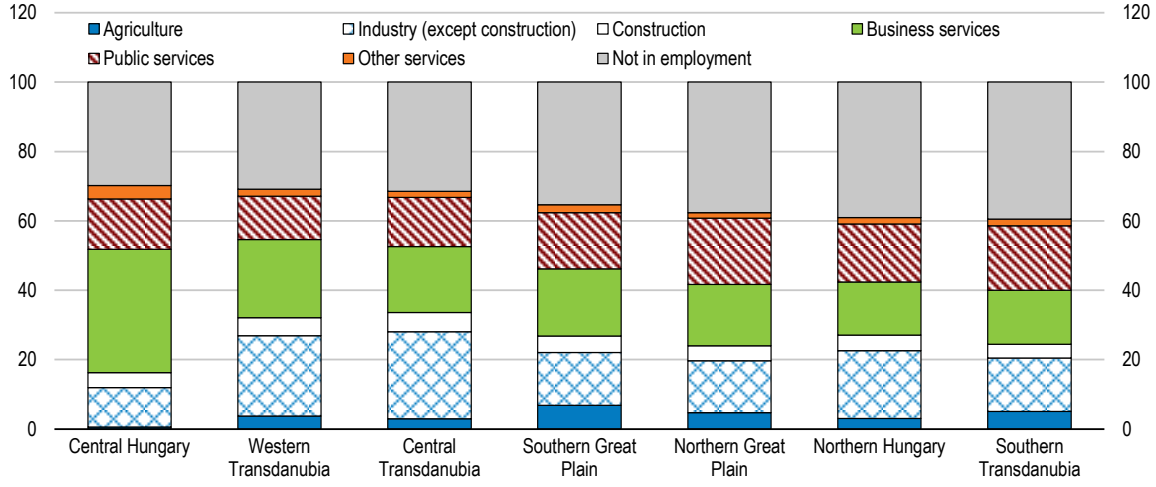
Western part of Hungary has benefited from inward FDI

Growth in the western part of Hungary has benefited from inward FDI, particularly in export capacity. Combined with its proximity to Austria and Germany, this has allowed these regions to integrate into global value chains (particularly in automobile manufacturing). However, there has been little development of production that links into local or national networks (Lux, 2018a). The attraction for foreign investors is the possibility to locate in pre-transition machine production hubs with amenable sites, plenty of skilled labour, developed business networks and good education institutions (Lux, 2018b). As discussed in the previous *Survey*, other CEE countries have also benefitted strongly from inward FDI and often for similar reasons, pointing to the increasing importance of favourable local factors, including the integration of local networks into national and international networks (OECD, 2016d). As a result, these regions have a relatively high share of employment in industry and business services (Figure 2.4). More recently, FDI has started to flow into other parts of Hungary, taking advantage of improved road infrastructure, less labour market pressures, and higher public support.

In some instances, cities and their surroundings have become highly dependent on the performance of a single foreign company, such as Audi in Győr in the North West of Hungary, and foreign sub-contractors (Salamin, 2015).On the other hand, Hungarian-owned companies have problems in becoming sub-contractors and thus to integrate in global value chains (Bisztray, 2016). As a result, a dual economy has emerged with a productive and competitive foreign-owned (including sub-contractors) export-oriented sector mostly based in the west of Hungary and a rump of capital-poor non-competitive domestically-owned firms with weak employment and productivity growth elsewhere (Veres, 2018). This also reflects that Hungarian-owned firms are unable to compete for scarce high-productivity workers and in markets for high-value added components (Lux and Faragó, 2018; Csafordi et al., 2016).

Figure 2.4. Employment by sector varies by region

As a percentage of working-age population by region, 2017[1]



1. Regions are ranked in ascending order by the share of those who are not employed. Business services refer to sectors from NACE Rev. 2 G to N. Public services NACE Rev. 2 O to Q.
Source: Eurostat (2018), "Regional Employment", Eurostat Database.

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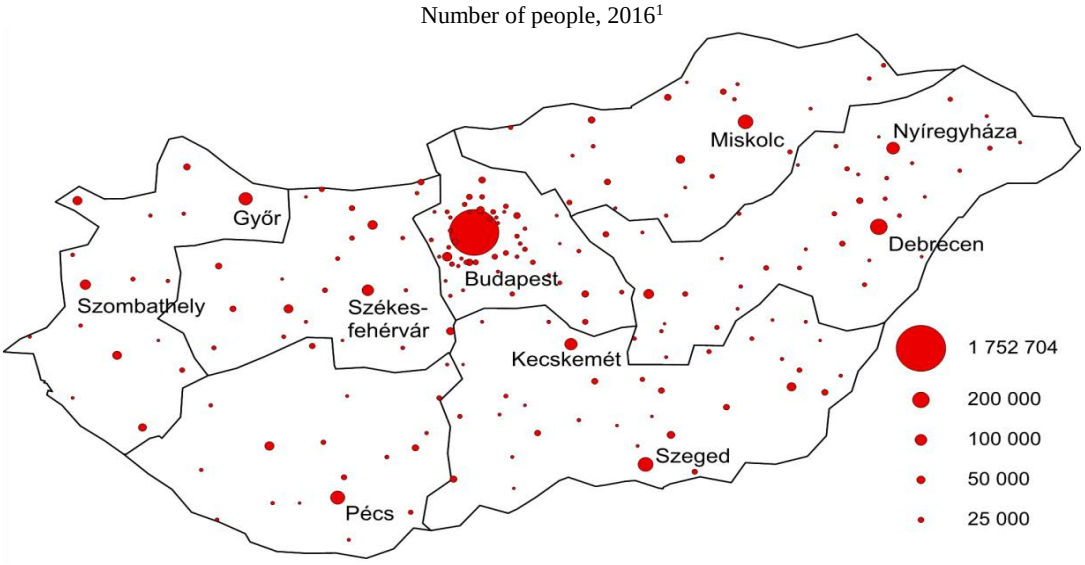
The capital region has benefited from agglomeration effects

Growth in the central capital region has benefited from positive agglomeration effects on growth. The economic and political capital, Budapest, is almost ten times larger than the second largest city, Debrecen, and includes almost a fifth of the population and accounts fo more than one third of all economic activity (Figure 2.5; OECD, 2016b; Kocsis, 2015). Urban agglomerations allow for higher productivity through greater specialisation, deeper labour markets and strong network effects – OECD research shows that doubling the size of a city can increase productivity by 2%-5%, depending on the quality of governance structures (Ahrend et al., 2017). This is also reflected in the Central Hungary region having a much higher labour productivity than in lagging regions (Figure 2.6).

The strong agglomeration effects reflect Budapest's deep networks of cultural institutions, transport infrastructure, and economic and business services, including being the main location for conference facilities (Urban Land Institute, 2013; Keller et al., 2016; Gál and Kovács, 2018). The agglomeration effects have also led to an average Budapest wage premium of 12% and as much as 22% for highly educated workers (Czaller and Major, 2015).

Figure 2.5. The city of Budapest dominates all other urban areas

Number of people, 2016[1]



1. The cities that are labelled are the top 10 cities by population size.
Source: Hungarian Central Statistical Office (2017), "Regional Statistics: Annual statistical data - Settlements in Hungary (2000 - 2016)", *Dissemination Database*.

An emerging concern is that the positive growth effects pertaining to Budapest have been slowing. A rarely seen development in the OECD is that the capital's population is declining, partly reflecting inhabitants moving to the suburbs (United Nations, 2016). Moreover, the capital region is creating fewer firms than what could be expected based on its share of firms (OECD, 2018b). Part of this disappointing development can be explained by political and administrative fragmentation with an associated lack of long-term planning vision (Urban Land Institute, 2013).

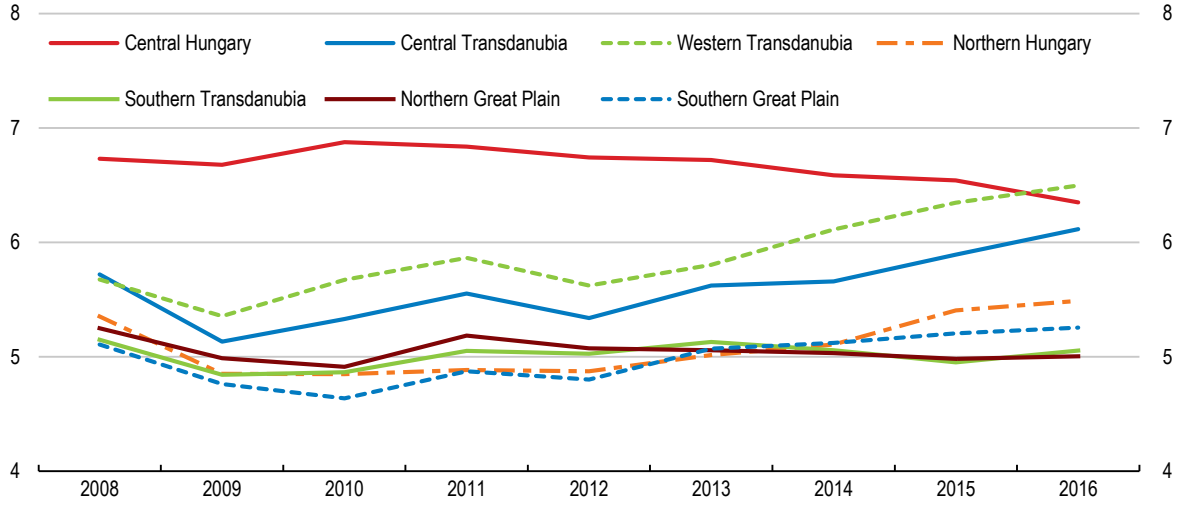
Planning is being hampered by political and administrative fragmentation. This arises from the lack of a formal hierarchy between the city of Budapest and its 23 districts, each having their own spending responsibilities, funding sources and property portfolios (Ratz et al., 2008). This has led to numerous problems. In public transport, there are poor links between trains and buses, obsolete ticket technologies preventing the introduction of new ticket types and a lack of integrated timetables and fare systems. There is a fragmented public parking management system with a lack of enforceable regulation to counter rush-hour congestion. Other issues comprise slow upgrading and maintenance of shared infrastructure, loss of greenfield sites and difficulties in re-using the city's many brownfield sites (Urban Land Institute, 2013; Kocsis, 2015; Ratz et al., 2008; Municipality of Budapest, 2014b). All of these problems would point to lower productivity growth than otherwise. Indeed, OECD research shows that fragmentation of cities' governance has a negative impact on the economic performance of cities (Ahrend et al., 2017).

To address these problems a common planning framework for economic development for the Budapest agglomeration was introduced in 2015. The ambitious framework embodies urban development and transport plans that incorporate visions from five strategy papers and more than a dozen policy papers from various levels of government (Municipality of Budapest, 2014a and 2014b). The framework is based on partnership policymaking between the municipalities in Budapest, the surrounding counties, the central government and civic partners (business associations, universities, etc.). The accompanying programme

has a complex objective structure with four long-term goals and seven mid-term goals and contains more than 70 measures. The partnership ensures that all participants are represented, but does not resolve underlying conflicting objectives nor constitute a formal hierarchy for policy implementation. Looking ahead, the complexity of the tasks would call for stronger prioritisation and internal coordination, requiring the establishment of a governing board with full responsibility for all aspects of land, property, planning, investment and project management.

Figure 2.6. Labour productivity is highest in the capital

Real gross value added per worker, in HUF million[1]



1. In 2010 constant prices.
Source: OECD (2018), "Regional Economy", OECD Regional Statistics (database).

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Agglomeration effects can also be found outside the capital

Agglomeration effects can also be found in localities with strong FDI inflows and around the larger cities (Radics and Molnar, 2015). This reflects that smaller cities can obtain agglomeration effects by connecting to their hinterland to secure wider and denser networks (Lux, 2015). Case studies show that the size of these effects depends on how well local firms participate in policy formulation to secure a good business environment and strong links to education and research institutions. Achieving this requires local governments that are engaging with the business sector to enable a gradual restructuring that preserves local technical and institutional know-how.

Overall, business regulation, as measured by the World Bank's Doing Business indicator, has improved since the mid-2000s. Nonetheless, with a ranking below the EU average, there remains considerable scope for catching up to best practice (World Bank, 2017). Local governments can affect the quality of business regulation, notably in terms of time required for starting a business, getting construction permits and access to electricity, registering property and enforcing contracts through local courts. Compared with larger cities in neighbouring countries (Bulgaria and Romania), it is generally more complicated and costly to start a business in Hungary and particularly so in Budapest. The capital is also the slowest in issuing construction permits and weakest in enforcing contracts. In other

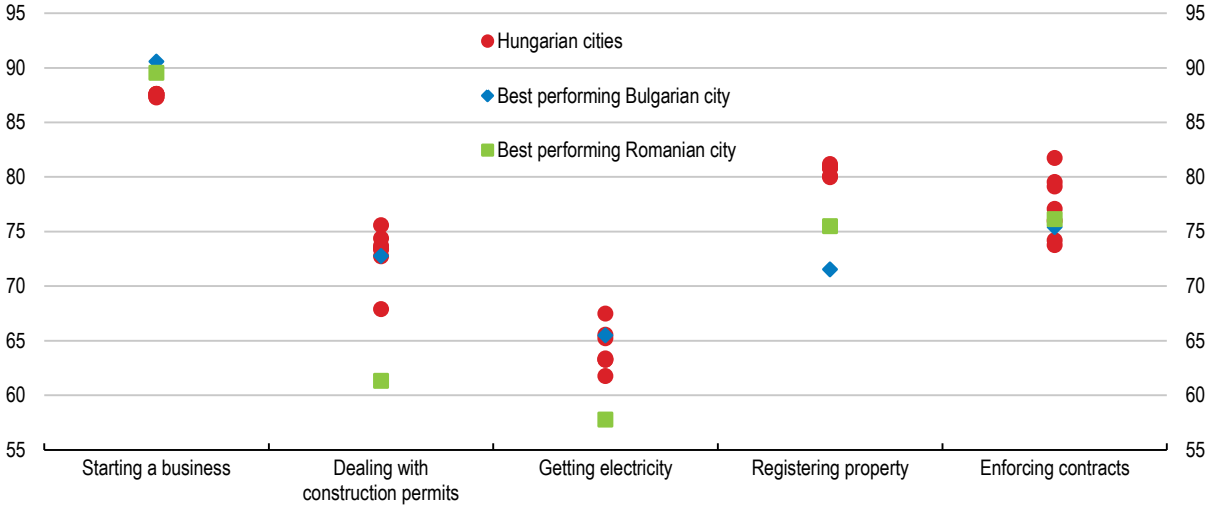
areas, Hungarian cities generally perform better, although with some variation. This shows that cities can learn from abroad as well as from each other (Figure 2.7).

Reforming the local business environment should focus on securing and streamlining administrative capacity and reducing the number of procedures to move closer to an effective one-stop shop for interaction between business and local public services. For example, business registration could include registering with social security and introducing a single business identification number to limit the need to submit information multiple times, Moreover, some services, such as the fire protection, the public health and building inspections, could be moved into a single function to minimise reporting and number of inspections.

The government aims at promoting agglomeration effects through the 2016 "Modern Cities Program". The focus of the programme is on enhancing transport, education and cultural infrastructure as well as industrial parks, encompassing some 300 projects (Lux and Faragó, 2018). The accumulated financial resources over the programme period 2016-18 amount to half a per cent of 2017 GDP from both central government and EU structural funds. Cities identify which projects are best for them, while a central government committee deciding on the allocation of funding. This process lacks economic incentives for optimal project selection. Projects should be subject to standardised cost-benefit analysis to select those with the highest rate of return to secure a cost-efficient and effective local development of relevant networks. Moreover, the information advantage that cities enjoy could come into play by having a higher degree of co-financing, which would require enhancement of their revenue-raising powers (see below).

Figure 2.7. Learning from better performing cities could improve the ease of doing business at the local level

Distance to frontier score, 0 to 100 (the higher the score, the better), 2017



Note: The distance to frontier (DTF) score shows how far a location is from the best performance achieved by any economy on each Doing Business indicator. The score is normalised to range from 0 to 100, with 100 representing the frontier of best practices (the higher the score, the better).
Source: World Bank (2017), *Doing Business in the European Union 2017: Bulgaria, Hungary and Romania*, Washington DC.

StatLink https://doi.org/10.1787/888933897570

Rural areas lag behind

In 2011, Hungary went from being among the most decentralised countries in Europe to being among the most centralised, as the government addressed problems of spatial fragmentation by centralising services and decision making (Balázs and Hoffman, 2017). This has left a fractured system of weak and often very small municipalities (three-quarters having fewer than 2 000 residents). Pooling resources is not common, despite existing structures for inter-municipal cooperation (including an obligation to participate in inter-municipal associations). As a result, many smaller localities have low levels of efficiency and quality in administration (Kovacs, 2015; Hoffman et al., 2016).

Centralisation also turned counties into agencies of central government with their role reduced to disbursing centrally provided (mainly EU) funds. Moreover, central government agencies took over decision making in areas of rural and regional development and planning, among others (Hoffman, 2014; Balázs and Hoffman, 2017, Hajnal and Rosta, 2016; OECD, 2017b). This, combined with the system of managing EU funds where local authorities apply for funds for projects that correspond with the centrally determined priority areas, lead to weak planning capacity at lower government levels (Buzogány and Korkut, 2013; Kovacs, 2015). In the EU funded Territorial and Urban Development Operational Programme for 2014-2020, county level authorities have an increased role in planning, implementation and project selection of their own territorial development programmes with technical assistance and funding from the centre.

The centralisation means that policies affecting regional development are determined with few inputs from lower levels of government as politicians pursue national and EU structural funds' priorities rather than focusing on developing local networks and competencies. This also means that there are few attempts to identify local economic advantages or how local businesses are best integrated into regional and national supply chains. The centralisation also contrasts with OECD work that finds that in an increasingly interconnected world local governments are well placed to provide support for local firms' competitiveness – a step in this direction is that municipalities from 2019 onwards can stimulate local business investment by granting tax exemptions or allowances in the local business tax – while central governments are best place to address inequality issues (Broadway and Dougherty, 2018).

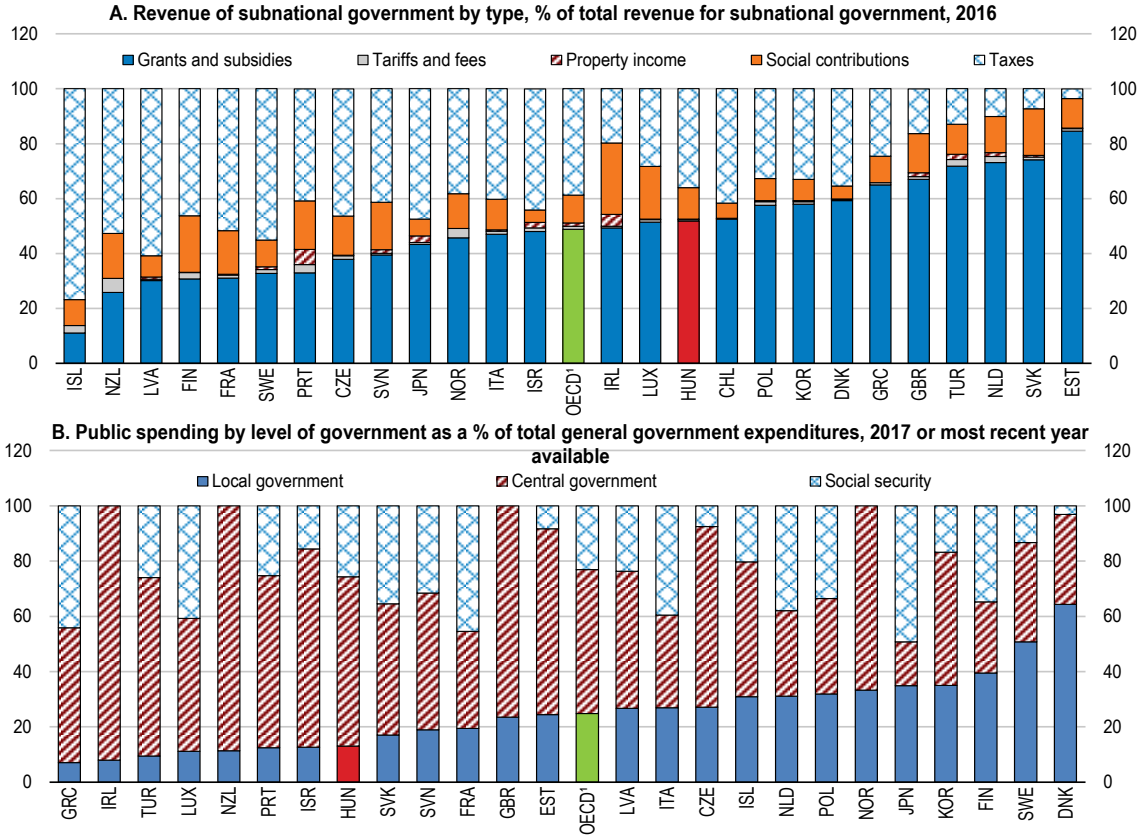
To promote local economic development more efficiently, local authorities should have greater autonomy to execute projects, such as in tourism, that develop their local economies. Not all local authorities have the capacity for identifying and selecting projects, as they are very small or very poor. In such cases, local authorities should be further incentivised to co-operate. This could be horizontal cooperation to generate the sufficient administrative capacity. Alternatively, they could be provided with administrative and technical support from higher levels of government (Bartolini et al., 2016).

Municipalities' taxing powers lie mostly in levying local business taxes, property taxes and tourism taxes, although they are capped (National Tax and Customs Administration of Hungary, 2017d). As a result, sub-national governments are reliant on income from earmarked grants and subsidies, leaving them with little discretion in the allocation of spending (Figure 2.8, Panel A; Hajnal and Rosta, 2016). Local governments are responsible for a relatively small share of public spending (Figure 2.8, Panel B). Their spending discretion is further limited by a ban on debt financing (Hajnal and Rosta, 2016; Balázs and Hoffman, 2017). As a result, municipalities adapt to central government priorities to attract funds. However, they lack incentives to raise funds for local development projects, preventing the formulation of local long-term strategies (Hajnal and Ugrósdy, 2015).

Co-financing local expenditures by using own tax revenues (or block grants from the central government) would create spending efficiency incentives, including pooling of municipal resources (Bartolini et al., 2016). Local authorities should be encouraged to further use their existing tax powers. This could be combined with greater tax autonomy to give local municipalities stronger incentives to promote local development in the form of extra tax revenues and improve project selection. If combined with territorial reforms, this could promote both regional convergence and boost GDP by as much as 3% (OECD, 2017c). Concerns about greater inequality between regions could be offset by using block grants for poorer regions. Moreover, restoring the responsibility for regional planning to counties, combined with revenue-raising powers, would give them the tools and incentives to promote regional development (Hoffman, 2014). County-level planning could also help overcome coordination failures among municipalities. This would allow the central government to withdraw from detailed policy analysis and implementation to concentrate more on more traditional supervision of local governments to secure that the devolution of powers lead to improved outcomes s (Phillips, 2018).

Figure 2.8. Revenue of subnational government by type

As a percentage of total revenue of subnational government, 2015[1]



1. The OECD aggregate only covers the 26 unitary countries that are shown on the chart, except for Chile in Panel B as no breakdown is available for Chile.

Source: OECD (2018), "Subnational government structure and finance", OECD Regional Statistics (database); OECD (2017), Government at a Glance.

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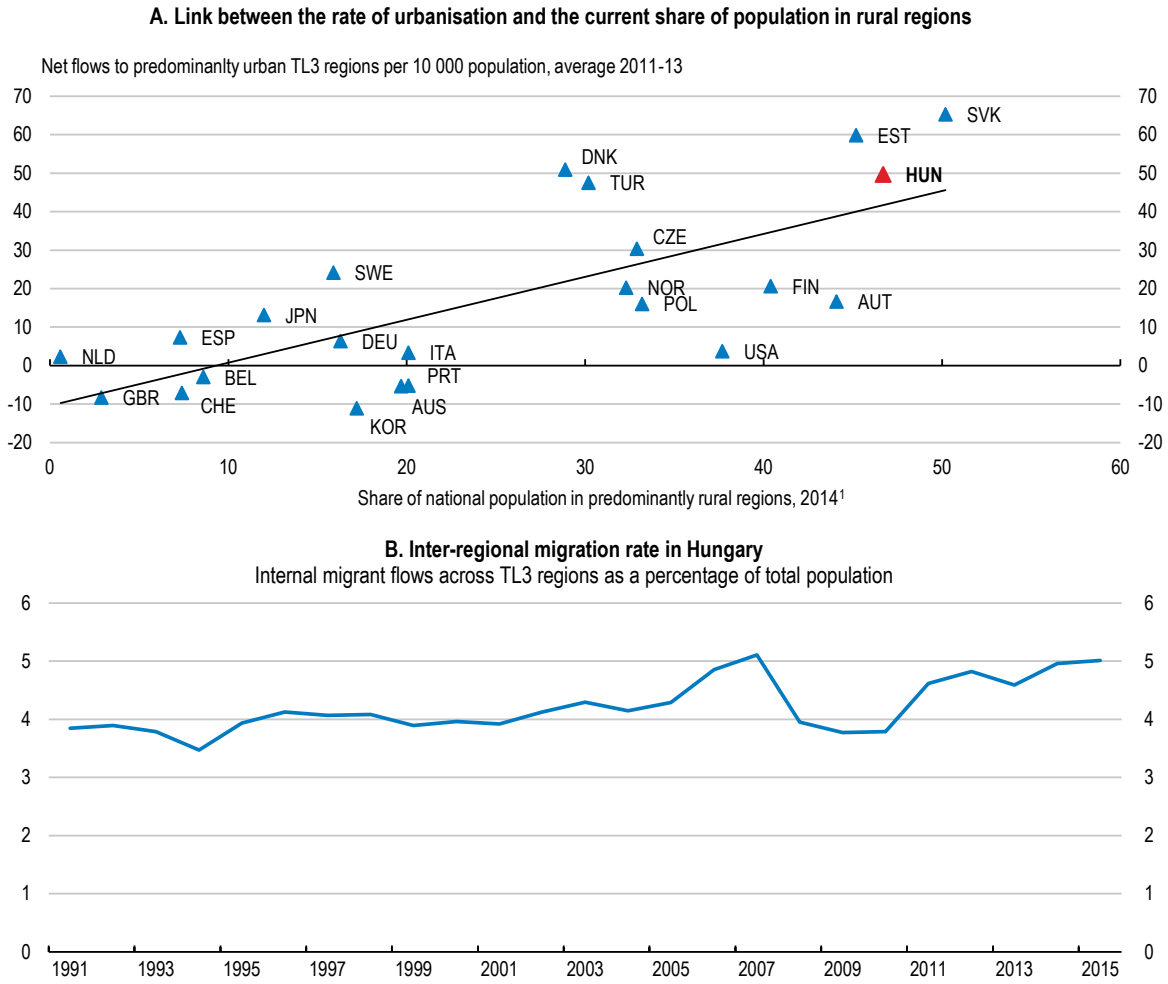
Hungary has a similar rate of urbanisation (migration from rural to urban areas) as in other rural countries (Figure 2.9; OECD, 2016c). The bulk of the internal migration has been to the Central Hungary region and to a lesser degree to the regions with high inward FDI, while people have been leaving the south, east, and north-eastern part of the country. Particularly rural areas have seen outward migration, reflecting the disappearance of job opportunities with the ongoing modernisation of agriculture, leading to an increase in the inactive part of the rural population and a relatively high share of poorly educated low-skilled workers and a high risk of poverty (Figure 2.10 and Figure 2.11; Karpati and Francia, 2010).

Figure 2.9. Rural countries have a higher rate of internal migration



1. Predominantly rural regions include both those that are close to cities and those that are remote.
Source: OECD (2016), *Regions at a Glance 2016*; and OECD (2018), "Regional demography", *OECD Regional Statistics* (database).

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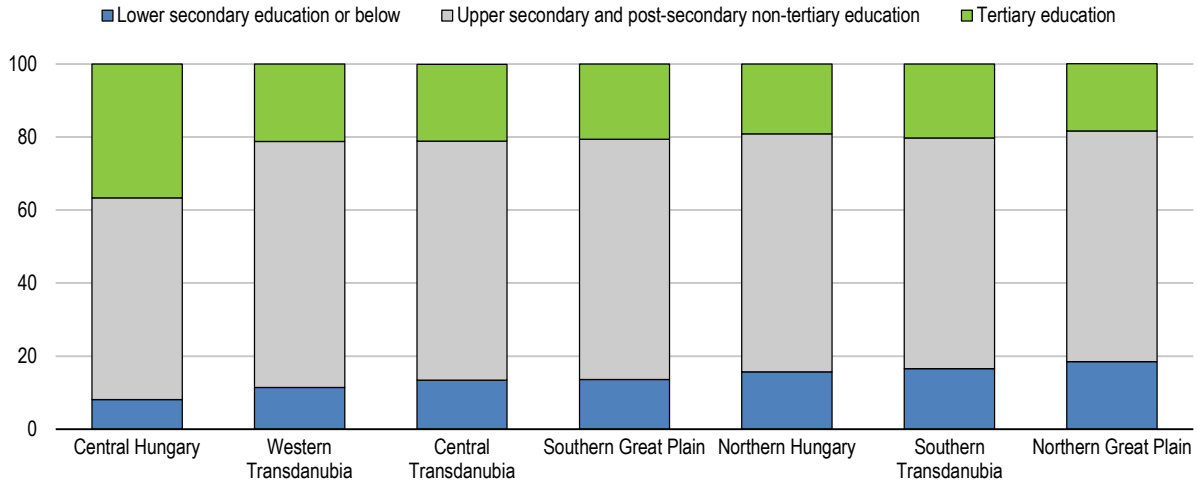
Low-skilled workers in poorer areas have a low employment rate, reflecting insufficient local demand for their skills. Moreover, the advanced technological production in more prosperous regions makes it difficult for the unemployed low-skilled workers to find work outside their region. Despite rising employment rates across Hungary regional differences remain, particularly when taking into account that employment in lagging regions has been boosted by the extensive use of public-works schemes. Almost 3% of the working-age

population is employed in such schemes. However, the share ranges from less than 1% in the Central Hungary to nearly 10% in Northern Hungary and the Northern Plains, while the shares are 5% and 7% in Southern Great Plain and Southern Transdanubia, respectively (Scharle, 2017; Eurostat, 2018a). Removing the effect of such schemes leads to employment in the primary labour market that is as low as half of the working-age population in some regions (Figure 2.12).

Figure 2.10. Lagging regions have a high share of people without upper-secondary education

As a percentage of working-age population by region, 2017[1]



1. Regions are ranked in ascending order by the share of population aged 25-64 with the lowest educational attainment level. Working-age population refers to those aged 25-64.
Source: Eurostat (2018), "Regional education statistics", Eurostat Database.

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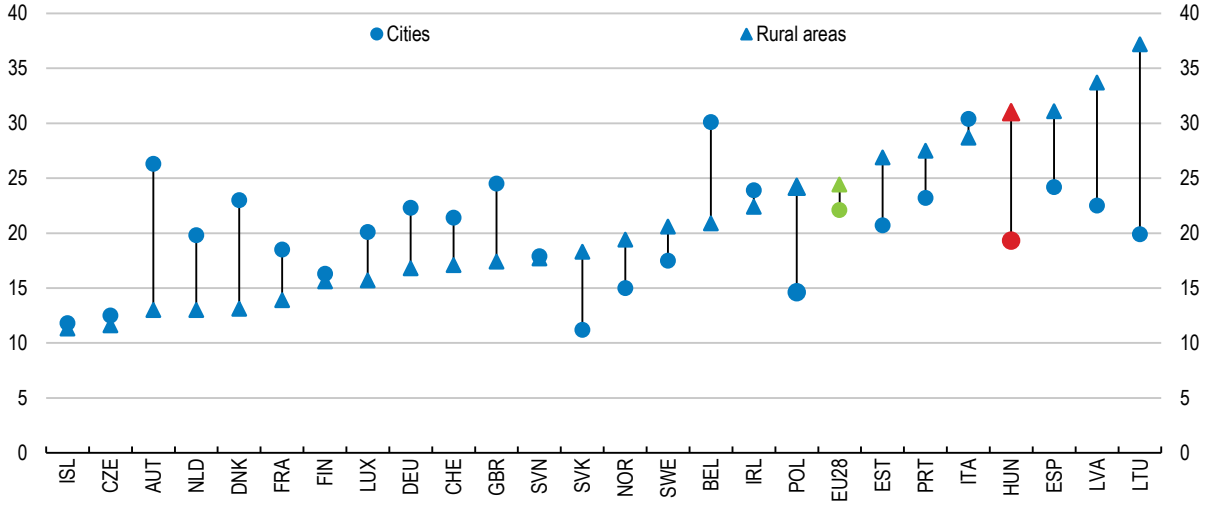
Figure 2.11. People at risk of poverty or social exclusion by degree of urbanisation

As a percentage of population, 2017[1]



1. 2016 for Iceland, Ireland, Luxembourg, Switzerland and United Kingdom.
Source: Eurostat (2018), "Living conditions and welfare", Eurostat Database.

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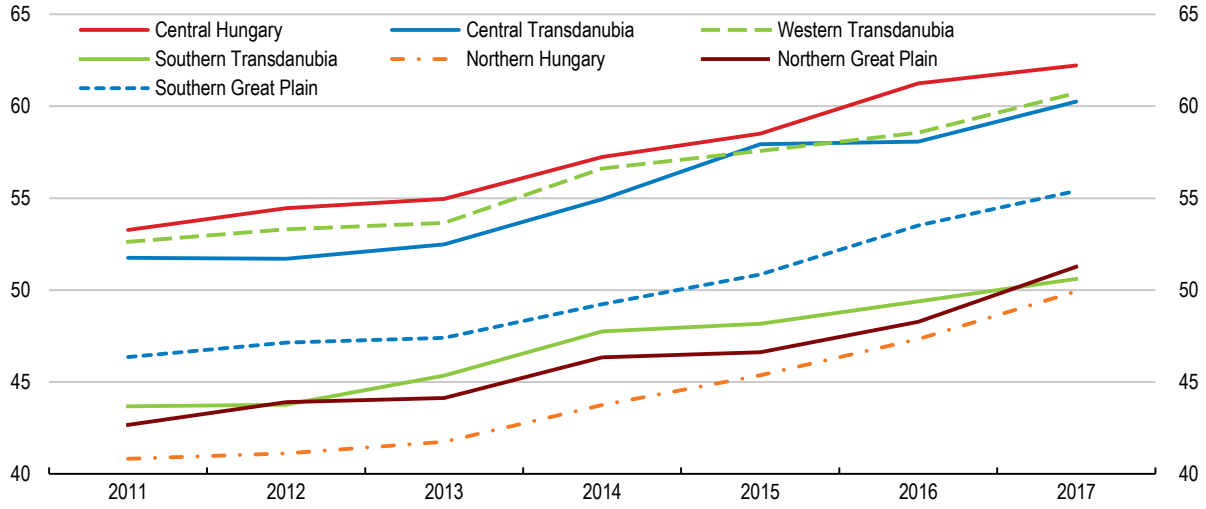
Figure 2.12. Employment rates in poorer regions lag behind

Employed persons excluding participants in the Public Works Schemes as a percentage of the population[1]



1. Data refer to the population aged 15-74.
Source: OECD calculations based on Hungarian Central Statistical Office (2018), "6.2.1.1. Economic activity of population aged 15–74" and "6.2.1.3. Number of employed persons", *Tables (STADAT)*; and Ministry of Interior.

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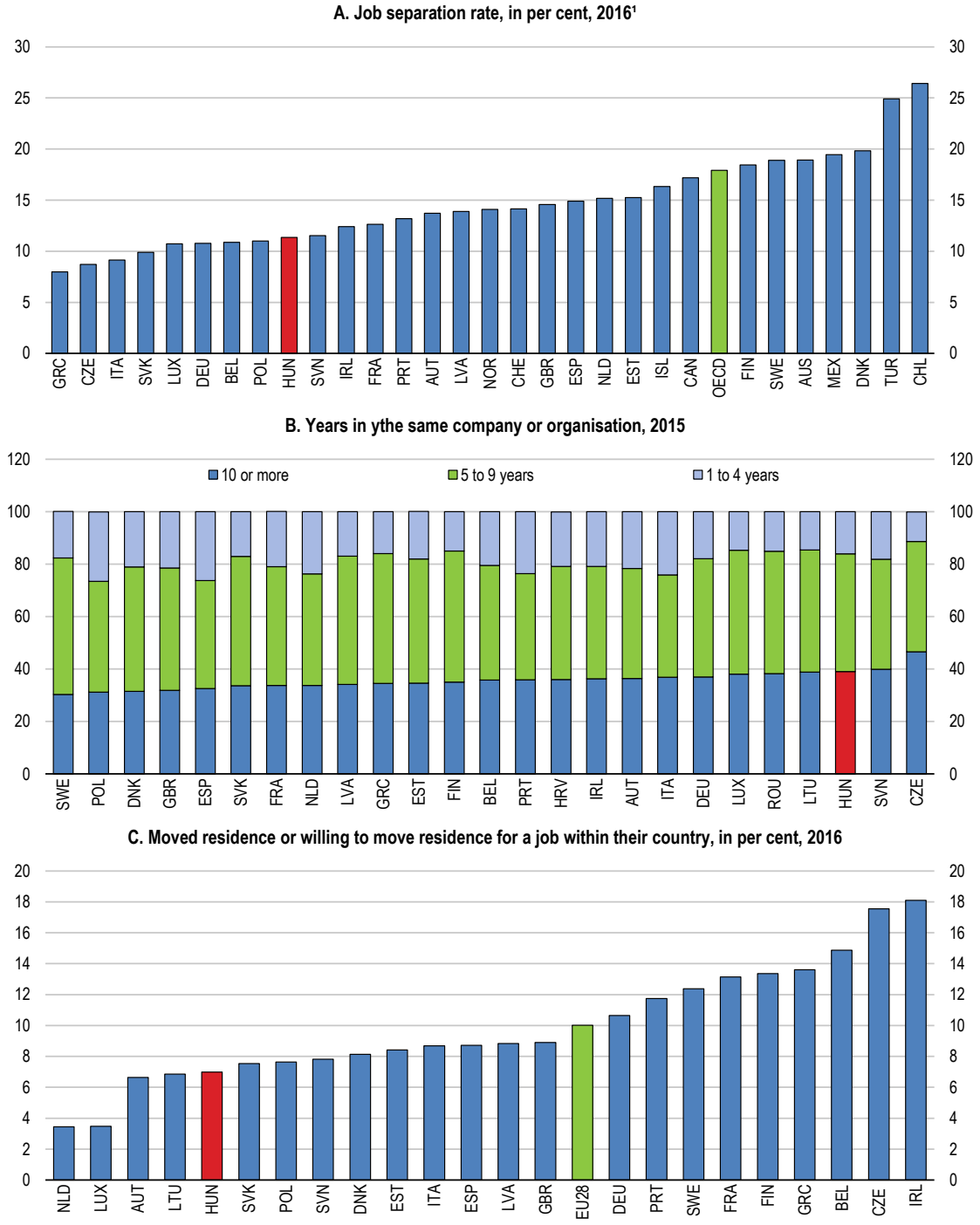
Greater mobility could promote regional development

Increasing the relatively low worker mobility can foster growth in regional urban agglomerations and ease labour shortages in more prosperous regions (Figure 2.13). Workers in poorer regions have strong incentives to relocate to regions with better wage and employment prospects (Figure 2.14). The capital region is particularly attractive for higher skilled workers (Figure 2.4 and Figure 2.6, above). For blue-collar workers the western (and the capital) regions offer a large wage premium, reflecting the presence of foreign manufacturing firms and the need to compete with higher wages in Austria. A similar picture holds for employment rates of workers with upper secondary education (Figure 2.15). The generally high employment of tertiary graduates reflects both a structural change in the economy and their relatively small share of the population (OECD, 2016d).

Figure 2.13. Labour market turnover is relatively low



1. 2015 for Australia and Denmark. Data refer to the difference between the hiring rate and the net employment change.

Source: European Working Conditions Survey, *https*://www.eurofound.europa.eu/data/european-working-conditions-survey; Eurostat (lfso_16move4j and demo_pop); OECD (2018) OECD Employment and Labour Market Statistics (database), January.

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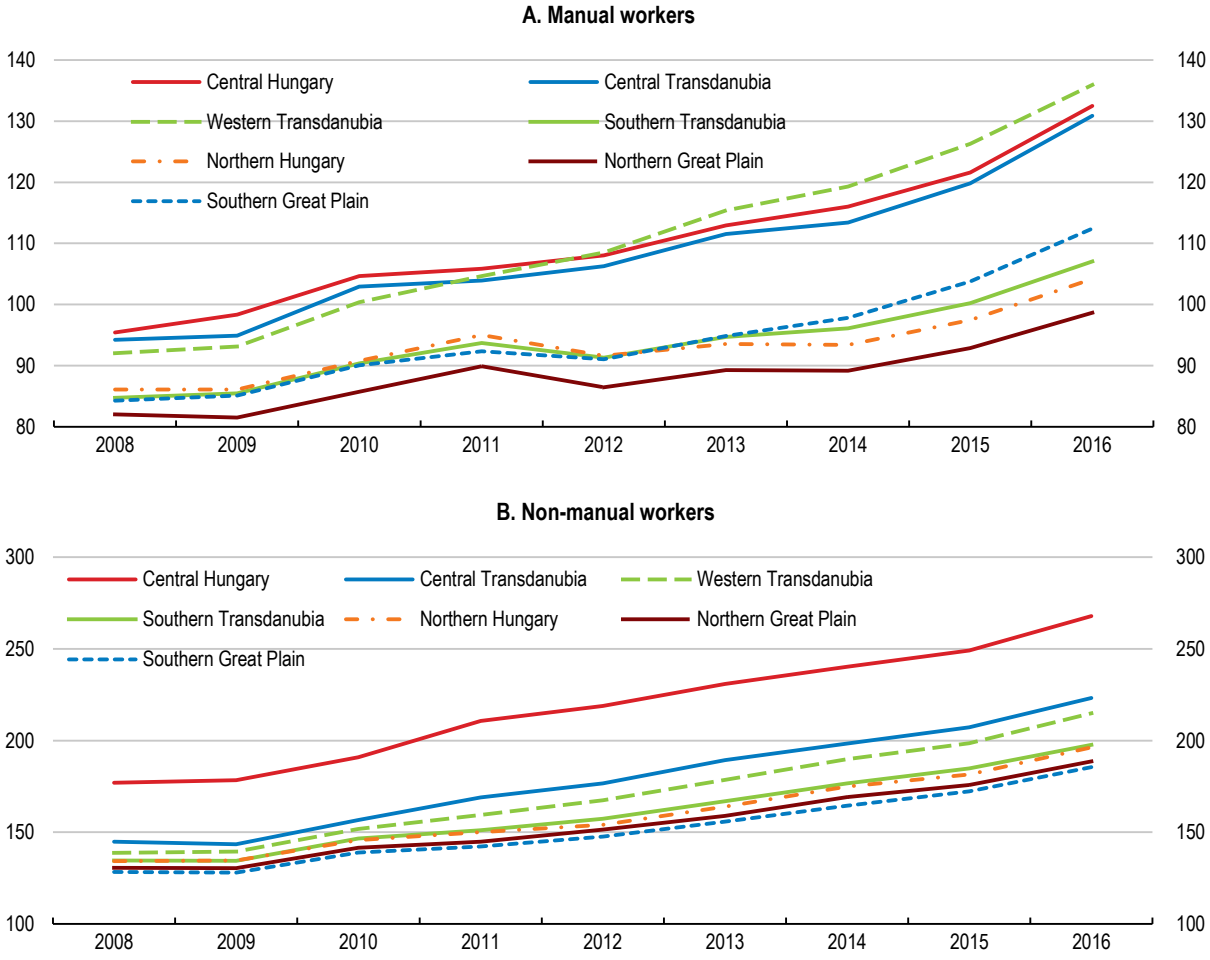
Figure 2.14. Wages are higher in leading regions

Average monthly net earnings of workers by region, in HUF thousands[1]



1. Earnings in nominal terms.

Source: Hungarian Central Statistical Office (2017), "Labour market: Employees, earnings - Main data of labour of national economy", *Dissemination Database*.

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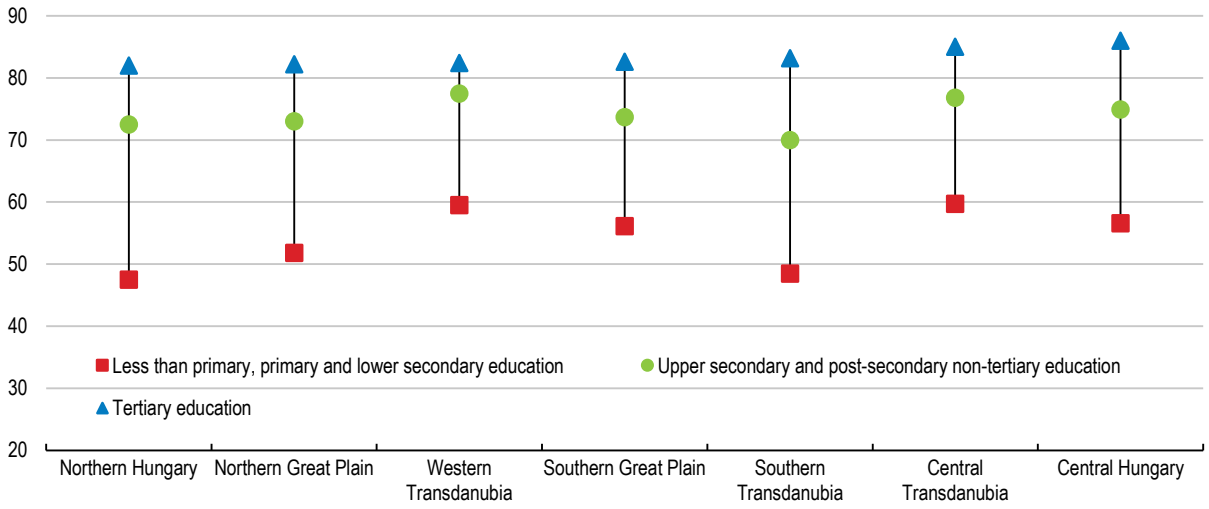
Insufficient mobility and the preponderance of low-skilled workers have led lagging regions to have a surplus of such workers, while in more prosperous regions there is an unfilled demand for skilled workers. In some south-western counties, this has induced their excess skilled workers to commute to regions where skills are in high demand. However, most of the lagging regions suffer from a low-skill trap with a large share of low-skilled workers for which there are few employment opportunities (Figure 2.16). The only counties in lagging regions with high employment of high skilled workers are those with sizable cities (Szeged and Debrecen). Although improved mobility can reduce skills mismatches, greater educational attainment is needed to lift lagging regions out of their low-skills traps.

Figure 2.15. Employment of those with upper-secondary education is highest in western regions

As a percentage of working-age population by region, 2017[1]

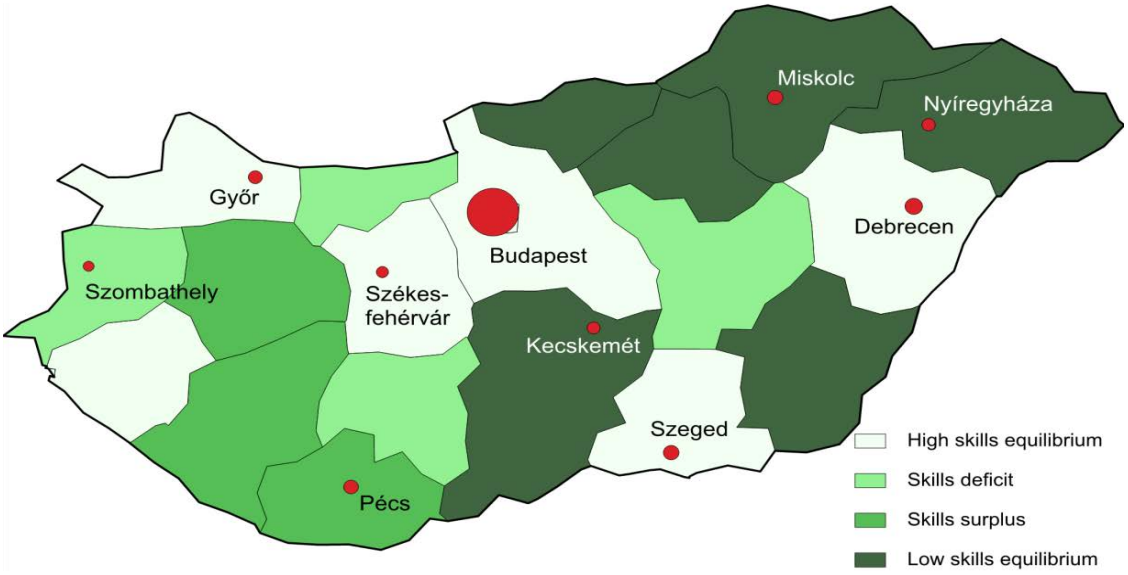


1. Regions are ranked in descending order by the employment rates of the population aged 20-64 with tertiary education. Working-age population refers to those aged 20-64.
Source: Eurostat (2018), "Regional employment", Eurostat Database.

StatLink https://doi.org/10.1787/888933897703

Figure 2.16. Lagging regions have low-skills job opportunities and a low-skilled labour force

2013[1]

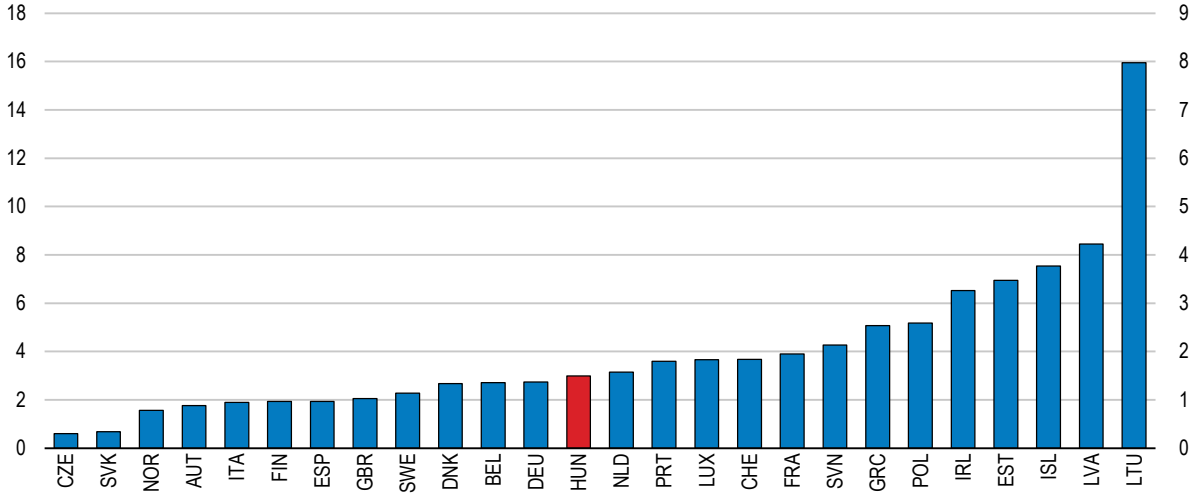


1. The level of skills supply is measured by the percentage of people with post-secondary education. The level of skills demand is measured by the percentage of medium- and high-skilled occupations and GVA per worker. High skills equilibrium: both the demand for and supply of skills are relatively high. Skills deficit: relatively high demand for skills is met by a low supply of skills. Skills surplus: the demand for skills is relatively low and the supply of skills is high. Low skills equilibrium: both the demand and the supply of skills are low. The supply and demand indices are standardised by the inter-decile range method: (Xi – Xmed) / (X9th – X1st).
Source: OECD (2016), Job Creation and Local Economic Development 2016, OECD Publishing, Paris.

As noted above, the skills shortages in western regions are exacerbated by the need to compete with better paid jobs in Austria, reflected in the third highest level of cross-border commuting (mostly to Austria) in the European Union (Eurostat, 2018b). This allows commuters to increase their earnings and improve their human capital by gaining foreign work experience, but necessitates that they are replaced with skilled workers from the rest of Hungary. Further exacerbating the skills mismatch problem is the already sizeable emigration, which has increased since the onset of the international crisis (Figure 2.17). To maintain growth in the prosperous regions a comprehensive upskilling strategy is needed.

Figure 2.17. Emigration from Hungary is moderate

Emigration of reporting country citizens per 1 000 population, 2016



Source : Eurostat (2018), "Emigration", Eurostat Database.

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A more responsive education system could alleviate local labour shortages

Vocational schools have limited ability to adapt to local needs after the centralisation of their responsibilities for providing education and training, hiring staff, salaries and determining curriculum (Eurofound, 2016a; Eurydice, 2016). Local firms can influence programmes in VET schools by providing (reimbursed) training to reflect their own needs. However, some firms exist mainly to provide in-work training, with over 70% of their staff being students, implying that students are learning skills that are not necessarily demanded by the primary labour market (CEDEFOP, 2014). A better alignment of training incentives with the demand for skills could be achieved by linking the reimbursement of training costs with subsequent employment outcomes.

Another problem is that the number of VET places is determined narrowly to suit the needs in the immediate local area served by the 44 Training Centres (Szakképzési Centrum) with which each VET school is affiliated. Each centre decides VET priorities and coordinates the efficient running of their (3 to 18) affiliated VET schools (Eurofound, 2016a; Eurydice, 2016). Notably, the centres, in consultation with local chambers of commerce, determine the number of training positions within each trade. As a result, the training centres are not taking into account skills shortages in neighbouring areas, even if they can offer higher quality training than elsewhere. Training centres should take a broader geographical view of skills-needs to enhance their ability to respond to labour market needs. Recent measures

to improve skills acquisition in VET schools include the establishment of Sectoral Skills Councils and a VET Innovation Council (particularly for preparing skills formation for Industry 4.0).

In general, VET schools perform well in view of the fact that the employment rates of their graduates are above the EU average, partly reflecting the manufacturing sector's larger share of the economy. Notwithstanding, there is a significant urban-rural divide, reinforcing the strong links between a student's socio-economic background and educational outcomes present in the education system (OECD, 2016d). As most attendees of three-year vocational schools are from poor rural areas, they face the longest travel times, limiting student choice as to which trade they wish to train for (European Commission, 2017b; Eurydice, 2016). In addition, dropout rates for those in vocational secondary schools are particularly high (accounting for half the dropouts in the school system), with the Northern Hungary region having a particularly high rate (almost 20%) (European Commission, 2017b; Czabán, 2015).

The quality of teaching in VET schools suffers from a lack of specialisation of knowledge and machinery, as they tend to offer a wide range of courses. This hinders their ability to respond to more specialised needs from local companies. Despite the coordinating role of Training Centres, overlap of similar courses can exist between the associated schools (National Office for Vocational Training and Adult Education, 2018). In addition, Hungarian schools are small by international standards (with schools in rural areas being particularly small) (OECD, 2016e). Greater course specialisation in the VET schools would concentrate knowledge and create scope for investment in modern machinery, leading to better trained students with improved employment prospects as their skills correspond more closely to the needs of local firms. Thus, vocational education and training schools should be allowed greater freedom to specialise and adjust courses and curriculums to the needs of the local labour market.

Student choice could be enhanced through mobility programmes. Student dormitories are available, but demand for them is declining due to high costs (Eurydice, 2016). Reducing dormitory fees for students from remote areas could increase their attractiveness. In addition, an internal 'Erasmus' type programme could help overcome some of the difficulties faced by rural students by allowing them to choose a specialisation not available in their school for their final year of study.

Tertiary education institutions can also play a larger role in rural development. In general, there has been an increase in their innovation and entrepreneurship activities, and some cooperate with multinational firms (OECD/EU, 2017). However, cooperation with domestic firms is rare and campus business incubators for domestic firms are seldom in place. This could be improved by establishing consultative and collaborative forums with businesses at local and regional levels and the appointment within tertiary education institutions of a senior manager with responsibility for entrepreneurship and innovation dissipation (OECD/EU, 2017).

The gains from tertiary education could be shared better. Access for students from rural areas is hampered by their far higher grade repetition. Moreover, Hungary has the OECD's second largest gap between urban and rural children in expectations of completing university: 2.8% for rural children as compared to 43.8% for urban children (OECD, 2016e). As a result, a relatively small share of young people in lagging regions having completed, or are enrolled in, tertiary education (OECD, 2017a). Although 21% of students receive a needs-based scholarship (and must also meet the academic criteria to be eligible for being exempt from paying tuition fees), rebalancing scholarship offers toward students

from disadvantaged areas could help boost inclusiveness and also regional development (European Commission/EACEA/Eurydice, 2017). This would supplement the new scholarship programme (Road to Higher Education) that support students in risk of dropping out from higher education.

Public work schemes reduce regional employment differences

The main active labour market policy is the Public Works Schemes (PWS). Enrolment in the schemes is being reduced, so by 2020 the level should be a quarter lower than compared with four years earlier. The schemes have limited success in promoting mobility or skills development, as the exit rate to the primary labour market has hovered around 10%-12% (Albert, 2017). The current good employment prospects may boost exit rates, but could also leave the schemes with more difficult-to-employ workers. The former effect seems to dominate as the exit rate has recently risen to 19%.

Rules for public works programmes require that they are non-commercial and of public benefit. Moreover, enrolees receive a wage that is between social benefits and the minimum wage, leading to incomes between EUR 270/month for low-skilled workers and EUR 355/month for high-skilled workers with managerial responsibilities (ETUI, 2016; Kiss, 2015; Ministry of the Interior, 2017). The central-government-financed schemes are mainly project-based and include some targeting of poor rural areas. The schemes are organised and governed by the Ministry of the Interior, while their provision is the responsibility of local authorities, leading to a large regional divergence in outcomes and exit rates (Keller et al, 2016). Similar British and German schemes are designed by special agencies with the involvement of social partners and with private-sector provision (such as SMEs, larger companies, or NGOs) to strengthen the connection between programmes and the primary labour market (Keller et al., 2016).

Local authorities use the schemes to provide services in their area. Particularly in poor rural areas, the schemes reach poor, low-skilled, long-term unemployed workers, many of whom are Roma. This gives the PWS a clear anti-poverty role, mitigating the economic and social consequences of weak local labour markets that leave nearly 1 out of 3 people with severe material deprivation rate (i.e. problems in affording basic needs) (Keller et al., 2016; Social Europe, 2013). The schemes complement the short duration (three months) of unemployment benefits and social welfare benefits that are capped at EUR 70 per month. However, there is a risk that the intensive use of the schemes in poor areas may lead them to become a permanent anti-poverty measure.

The government has tightened criteria for participation in PWS (Box 2.2) and introduced two programmes to increase exit rates. The ‘Pathway to the Labour Market’ programme combines public works with other activation measures (such as hiring subsidies, counselling and job trials) for about 26 000 participants annually. The ‘Training for low-skilled and public works participants’ programme is similar in scale and is targeted at less developed regions with a prioritisation of Roma and disabled workers (Scharle, 2017). However, in 2017 only 15% (28 600) of enrolees in PWS took part in training.

The government should continue to reduce public work schemes and to enhance training of participants and other job seekers in programmes that improve their employability. This could be pursued by enhancing the scope of PWS by widening access to schemes outside a worker's municipality or region in order to promote mobility and on-the-job training opportunities. The latter could also be pursued through wage subsidies to work with NGOs or private firms to enhance links to the primary labour market (OECD, 2016d). Likewise, private-sector involvement in the provision of PWS could secure more relevant labour

market experience. To further increase the focus on labour market training and better link the PWS to other ALMP schemes and labour market institutions the responsibility for the PWS programmes could be moved from the Ministry of Interior to ministry responsible for labour affairs. The anti-poverty aspect could remain with the Interior Ministry, helping to focus such efforts on the poorest localities. Exit rates could be bolstered by ensuring that all job vacancies in the national database are published, i.e. removing the right of employers to decide whether their vacant position appears on the Public Employment Service (PES) website. This should be combined with the provision of transport allowances (and other mobility measures) for job seekers finding employment outside their region as is done in several OECD countries (e.g. New Zealand).

Box 2.2. Criteria for participation in Public Works Schemes have been tightened

Criteria for participation in Public Works Schemes have become more targeted, and those deemed more employable (because, for example, of higher qualifications) may now participate only if it is shown they cannot find a job despite sufficient efforts. In addition, those under 25 can now only participate if no other options under the 'Youth Guarantee Scheme' are available. From June 2018 workers can participate only for one year in three, unless they cannot find another job through no fault of their own. In addition, the government will also cover transport costs for long-distance job search (Albert, 2017).

Within the PWS programmes, poor municipalities can apply for investment funding from the central government. Such projects must centre on creating profitable business activities that are adapted to market conditions and integrated into local supply chains to serve local consumer needs without creating competition problems. Moreover, the projects should be based on local traditions or existing agriculture production to develop labour-intensive processing capacities, such as small-scale meat-processing factories or agriculture production (fruits and vegetables, or animal husbandry). In total, more than 100 different activities are supported. Once the investment support ends, the municipalities are obliged to provide market-based employment, for example by creating a business organisation or social co-operative to continue the activity. In early 2018, there were about 300 social co-operatives. A drawback is that the most competent workers tend to gain repeated employment in these projects, creating a lock-in effect of the enrolees with the highest chances of exiting to the primary labour market (Keller et al., 2016).

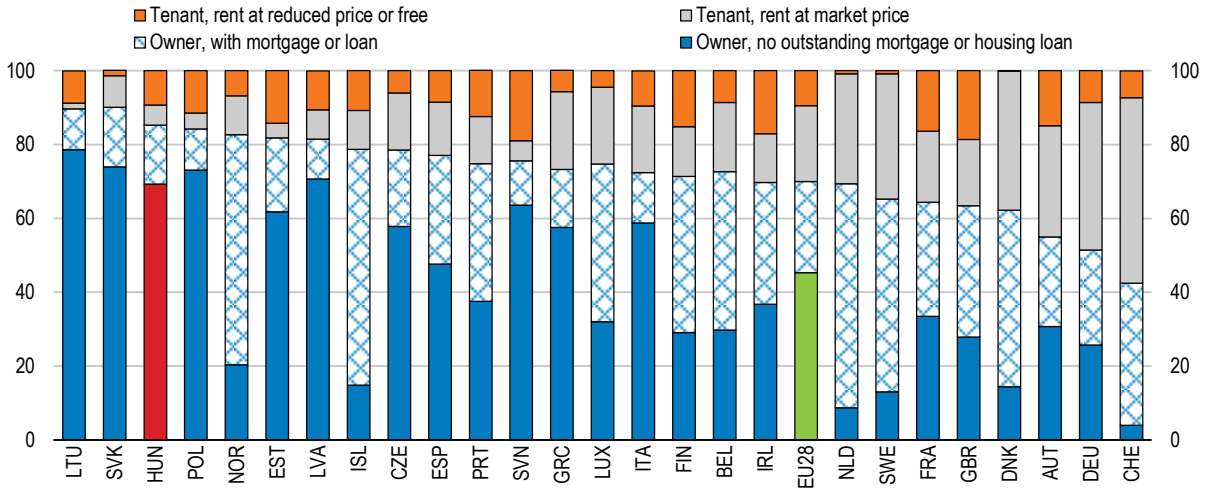
The long-term viability of many of these small-scale projects is limited, as they lack the capacity to scale up production to integrate into local and national distribution and supply chains or to secure sufficiently low cost to have competitive prices (Keller et al., 2016). Another issue is the lack of strategic planning to secure the economic viability of projects or to move production up the value chain, for example by using Hungarian breeds in meat processing to link into higher value production, such as experience-based gastronomic tourism (see below). Strengthening project viability requires local municipalities to have better project selection incentives through co-financing.

Mobility is reduced by a rigid housing market and poor local roads

A surprisingly rigid housing market is hindering labour mobility. Home ownership is among the highest in Europe, the outcome of privatising public housing in early 1990s and policies to promote home ownership (Figure 2.18; Box 2.3). The latter includes the "Family Housing Allowance" (CSOK) scheme that subsidises the purchase of newly built homes and home refurbishment. Entitlement to this scheme depends on family size, and as it excludes the unemployed and those on public works schemes, the measure does not help the unemployed to move to where job opportunities are better (Scharle, 2017). Ownership is particularly high outside Budapest, limiting the options for those wishing to move to regional urban centres (Hegedüs, 2017; Figure 2.19).

Figure 2.18. Hungary has a small rental market

As a percentage of total population, 2017[1]



1. Countries are ranked in descending order by the share of owners.
Source: Eurostat (2018), "Housing conditions", Eurostat Database.

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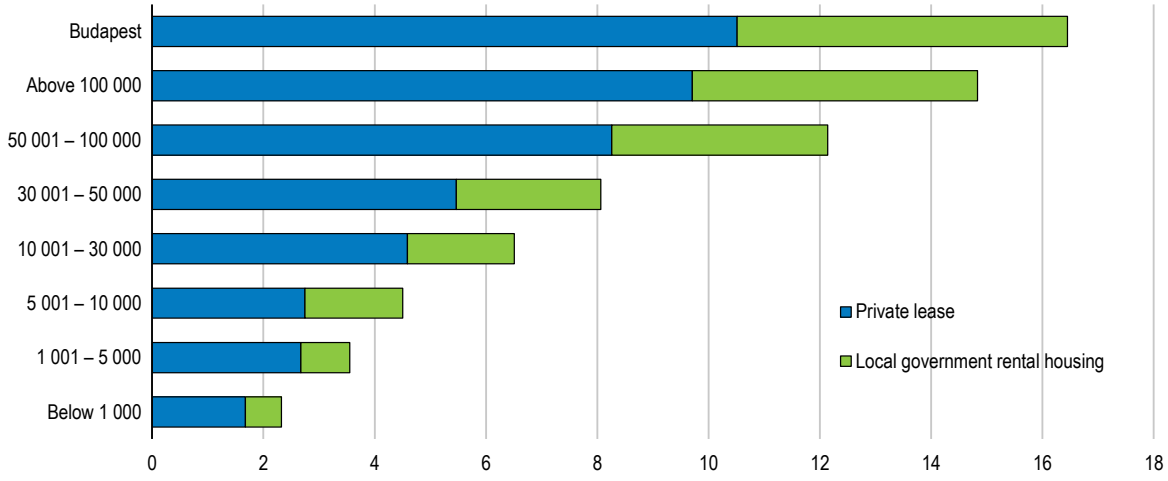
Box 2.3. The transformation of Budapest housing

Housing in Budapest has changed profoundly over the past three decades. In 1990, the share of municipal rental apartments was 50% (Urban Land Institute, 2013). Today, most housing units are owner-occupied, with 6.4% privately rented apartments and 5.6% municipal rental apartments (Budapest Municipality, 2014). This development reflects that local municipalities have sold their rental apartments to generate income and reduce social problems (Feher et al., 2017). The associated gentrification has led to widespread urban renewal of buildings in the inner city, which together with a cultural regeneration have bolstered foreign tourism demand from Western Europe and America (Kocsis, 2015). Nonetheless, a third of the population lives in less attractive large post-war prefabricated housing estates with a price discount of nearly 40% (Benkö, 2015).

Figure 2.19. The share of rental accommodation is smaller outside Budapest

As a percentage of all housing by settlements' population size, 2015



Source: KSH (2016), "Miben élünk? A 2015. évi lakásfelmérés főbb eredményei" (*In what are we living? The main results of the 2015 Housing Survey*), Hungarian Central Statistical Office.

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The rigidities in the housing market include potentially high transaction costs for homeowners. Procedures for registering a property transaction are straightforward, and transaction taxes (at 4%) are moderate compared to other OECD countries. However, a person selling a house (within five years of purchasing it) to buy another must pay capital gains tax (the same rate as for income tax), if a new house is not purchased within one year, although the tax base is reduced over time (National Tax and Customs Administration of Hungary, 2017a and 2017b; Caldera Sanchez and Andrews, 2011). This can add substantially to the cost of relocating, contributing to a low rate of people moving homes each year (Eurostat, 2015). Extending the period for completion of transactions to, for example, two years would reduce uncertainty for homeowners planning to move.

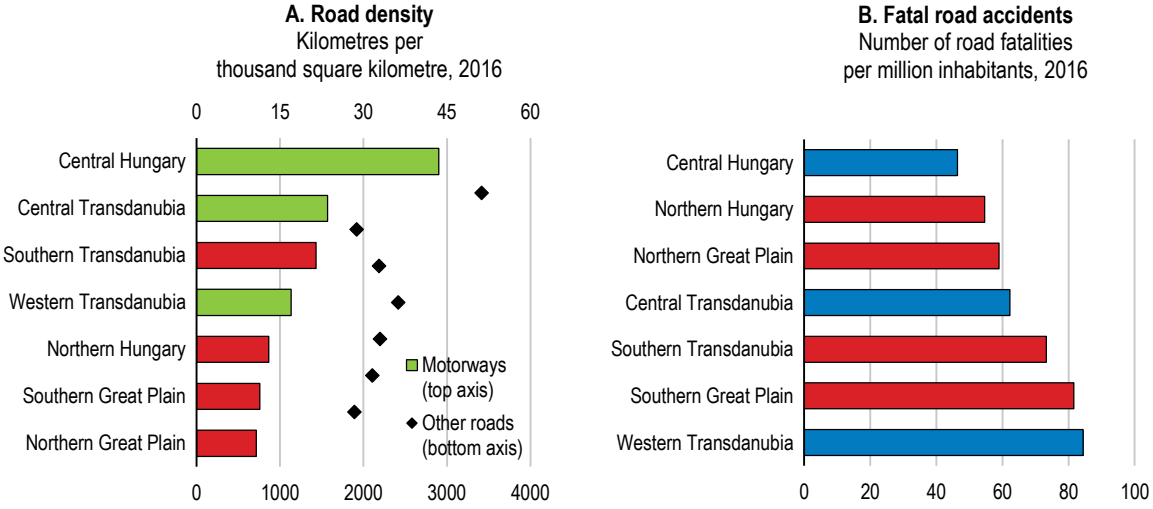
The development of a rental market is inhibited by a tax regime that favours home ownership. From private investors' point of view the rental of residential property is exempt from VAT, although personal income tax (at 15%) or corporation tax (at 9%) must be paid on rental income, compared to only 5% VAT for the purchase of newly built homes until the end of 2019, where after the standard VAT rate will be applied (Ministry for National Economy, 2016; National Tax and Customs Administration of Hungary, 2017c). In comparison, owner-occupied housing is lightly if at all taxed. Property taxation is low (as discussed in the KPI) and imputed income is not taxed under the income tax, while the return on other savings is taxed at 15%.

In 2017, the government introduced a tax-exempt housing allowance to aid mobility. Employers can now give employees tax-free rental subsidies up to a limit of 60% of the minimum wage in the first year (and decreasing in subsequent years) if: a) their residence is more than 60 km away from the workplace; b) or the worker would face a daily public transport commute of more than three hours. In addition, the government gives tax incentives for ‘workers hostels’, but it is unclear how attractive such hostels are for long-term relocation purposes.

Municipalities have few incentives to expand the limited social housing stock as political risks makes it difficult to evict tenants, and 20-25% of tenants default on rent. In addition, rents cover only approximately 30% of the costs of municipal social housing. Some municipalities explicitly exclude poorer tenants by introducing minimum-income levels as an eligibility criterion (Hegedüs, 2017). This can make it difficult for less skilled workers from lagging regions to find housing and employment in more prosperous regions. Rebalancing housing support towards the provision of social housing for those willing to relocate could increase mobility of Hungarian workers.

The effects of the rigid housing market have not been offset by a higher share of workers that commute outside their region of residence as compared with the EU average (Eurofound, 2016b). A factor contributing to this is that despite a modern (largely EU funded) motorway network, the secondary and tertiary road networks are relatively underdeveloped, increasing travel costs and leaving regional population centres poorly connected (Figure 2.20; Eurostat, 2017; OECD, 2016d). As a result, Hungary is not benefitting from potential agglomeration effects, arising from reduced travel time for commuters and goods (Ahrend et al., 2017).

Figure 2.20. There are large regional disparities in Hungary's infrastructure



Note: The four lagging regions (i.e. Northern Hungary, Northern Great Plain, Southern Great Plain and Southern Transdanubia) are highlighted with red.
Source: Eurostat (2018), "Regional transport statistics", Eurostat Database, December; and Eurostat (2018), "Regional digital economy and society statistics", Eurostat Database.

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Road maintenance is highly centralised, with a state company responsible for state-operated highways and other main roads, secondary roads and tertiary roads (Magyar Közút, 2017; European Union Road Federation, 2017; National Transport Authority Central Office, 2017). In the current EU funding cycle, road and infrastructure building and maintenance are priorities. Increasing funding for inter-city secondary roads would improve connections, particularly by using cost-benefit analysis for determining priorities. In

addition, assigning responsibility for local roads to the county level could help overcome coordination problems in improving the road network.

Regions have received large inflows of EU structural funds

EU structural funds are substantial, amounting in the 2014-2020 funding period to nearly a quarter of 2014 GDP. The large inflows of EU structural funds have bolstered infrastructure backbones, such as motorways, to improve regional interconnectivity. They have also been used to bolster social investments and other infrastructures (for example benefiting tourism). Nonetheless, poorer regions have not attained the same growth performance as the faster growing regions, despite earmarking for poor regions (43% of funds come from the European Regional Development Fund) (OECD, 2018c; EU Commission, 2015). For example, the construction of highway links to poorer regions has not been complemented by investment in secondary and tertiary road networks, a prerequisite for stronger regional growth (Salamin, 2015). On the other hand, the EU funds are likely to have prevented further economic divergence. A more general problem is that EU funded investment have had little impact on firm level productivity (Bania et al., 2017). The EU commission itself recognise a risk that the high reliance on EU support creates a culture of dependency, and that funds are not used on productivity increasing investment (European Commission Staff Working Document, 2018).

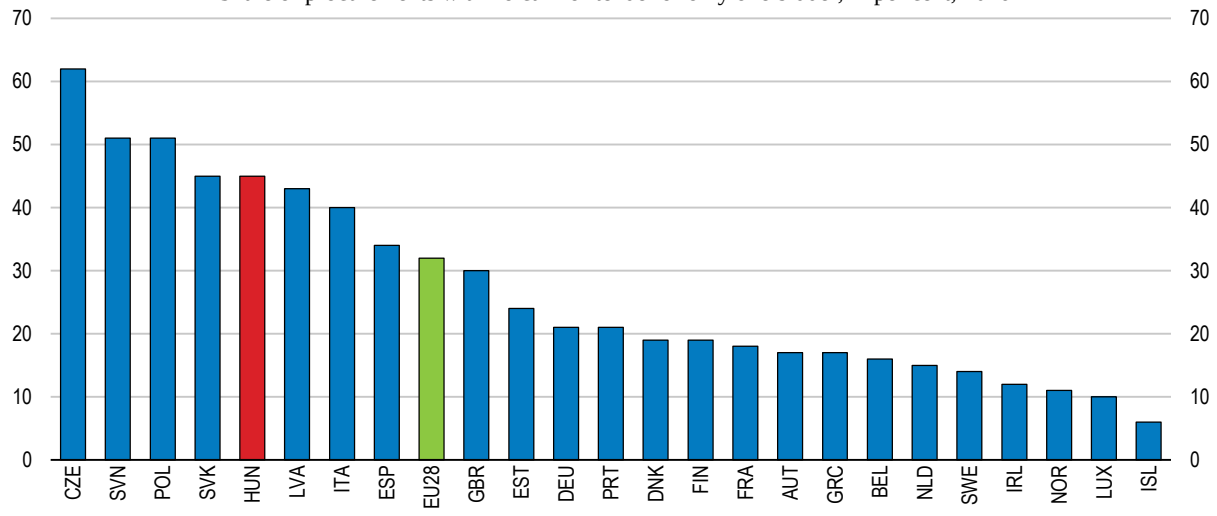
The EU funds are channelled through seven operational programmes (Government, 2015). Each has a managing authority that is subordinated to the ministries responsible for the relevant development expertise. The authorities are responsible for issuing the specific tenders for which SMEs, local governments, governmental bodies and NGOs can bid. One problem is the lack of competitive tendering which hampers project selection and cost efficiency (Figure 2.21). To strengthen public procurements, the government has introduced (in line with the EU Public Procurement Directive) a central electronic public procurement system with simplified procedures and lower administrative burdens.

Investment projects have been finance-driven rather than by the need to promote local economic development. In addition, corruption reduces economic efficiency. As reported in the last *Survey*, the European Commission estimates a relatively high risk of corruption in public procurement involving EU structural funds (OECD, 2016d). Moreover, perception of corruption is higher than in most other OECD countries (Figure 2.22). Anti-corruption measures include the 2015 adoption of the National Anti-Corruption Programme. As recommended in the last Survey, this should be complemented with the establishment of a dedicated anti-corruption agency.

The reliance on earmarked EU funding means that communities adapt to the externally set objectives of EU regional policy, rather than setting their own long-term objectives (Hajnal and Kovacs, 2013; Varró and Faragó, 2016). As a result, planning is not based on specific local conditions or at intensifying spatial connections (Radics et al., 2015). Looking ahead, the scope of EU structural funds is likely to be reduced, implying a need for better use of increasingly scarce financial resources. This can be achieved by better integration of projects into local economic development, requiring better planning and cost-benefit tools at the local level. The counties seem well placed for undertaking such strategic planning, particularly if it is combined with co-financing measures.

Figure 2.21. Competition in public procurement is weak

Share of procurements with no call for tender or only one bidder, in per cent, 2016



Source: Digital Economy and Society Index 2017, available at https://ec.europa.eu/digital-single-market/digital-economy-and-society-index-desi.

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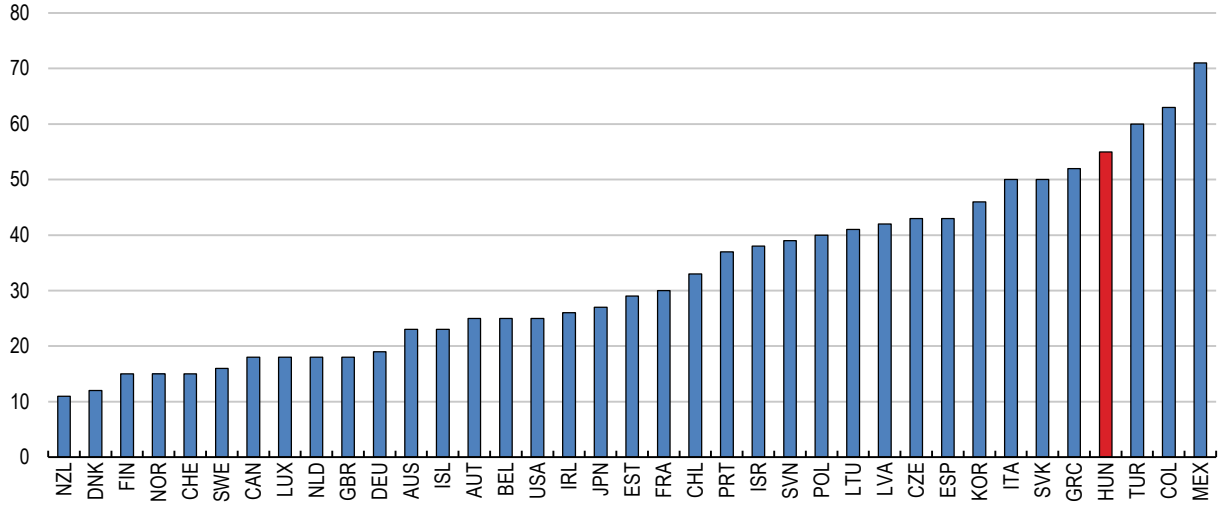
Figure 2.22. Perception of corruption is high in Hungary

Corruption Perceptions Index 2017 on a scale from 0 (very clean) to 100 (highly corrupt)[1]



1. The scores in the graph are the global scores subtracted from 100.
Source: Transparency International.

StatLink https://doi.org/10.1787/888933897817

Promoting regional growth

Bringing jobs to less developed areas requires integration with the rest of the country in terms of infrastructure, such as transport, education and links to other economic sectors, to integrate into national and international supply chains (Lux, 2018a). The problems are complex. For example, poor local road networks hinder local accumulation of human and physical capital with a negative impact on the formation of new and well-capitalised local

enterprises. As a result, local job opportunities are not created. This leads to emigration of skilled workers, reinforcing the problems of new firm creation (Lux and Fragó, 2018).

The main problem for many of the poorer areas is that their economies used to be based on centrally planned industrialisation with little concern for regional, country-wide or international integration (Lux, 2018b). As their main economic activity disappeared, they were left with a legacy of difficult-to-employ workers, little integration into other economic activities and no apparent comparative advantage (Lux, 2018a). Problems that were further compounded by a retail downsizing, leaving many villages with limited shopping possibilities further reducing their economic viability (Nagy et al., 2016).

This lacklustre performance is somewhat surprising, as regional firm creation and destruction rates are comparatively high, implying a dynamic business environment capable of reallocating resources efficiently (OECD, 2018b). However, new firms grow very slowly, if at all, suggesting a lack of innovation and structural barriers, such as sufficient risk capital. Moreover, relatively few firms are created in rural areas (Salamin, 2015). Since the onset of the international financial crisis, the situation has been made worse by the outmigration of younger and skilled workers, leaving the poorer regions with a relatively older and dependent population. Public policies have tried to address these problems, but the centralised development policies tend to promote selected economic activities or broad infrastructures rather than local and regional linkages, thus not addressing the underlying cause of economic underdevelopment (Lux, 2018b).

For poorer rural areas to overcome these challenges, more effective institutional solutions are needed, either as loose coalitions focussing on specific development tasks (as found around Lake Balaton – a main tourist area) or a more formal structure to develop and implement broader long-term economic growth strategies. Such strategies need to be multi-dimensional, including better training and education, promotion of entrepreneurship, network developments and fostering interlinkages between economic activities – and geared towards the promotion of local economic activities that can be used to integrate into national and international supply chains (Lux and Faragó, 2018). Especially, research co-operation incentives between local and foreign-owned firms should be enhanced.

Tourism as a regional growth driver

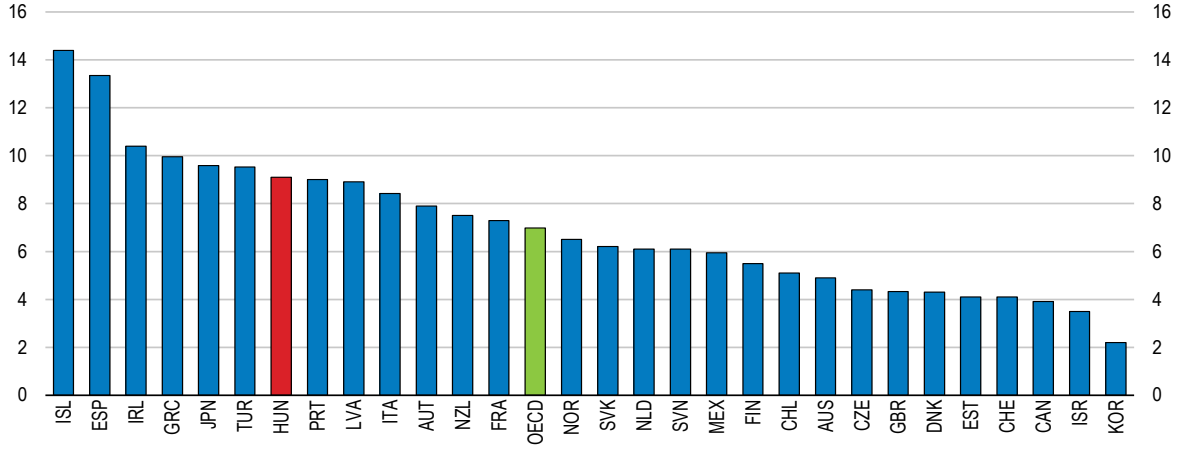
Tourism is an economic activity that has scope for bolstering regional development and employment (Nagy et al., 2016). It accounts directly for around 6½ % of GDP and 10% of the workforce, a relatively high share by OECD standards (Figure 2.23). Including indirect contributions, these shares are two-thirds and one-third, respectively, higher (OECD, 2018b). The composition of tourism has changed since the financial crisis, as domestic demand has declined and shifted towards international destinations, while foreign demand has increased from mostly from lower income countries (Figure 2.24) (Statistics Hungary, 2017a). The industry remains concentrated on a relatively few destinations and reliant on traditional forms of tourism, making it difficult to attract new high-valued added visitors.

Compared with other countries, the tourism sector is characterised by a relatively larger share (two-thirds) of small firms (Stacey, 2015). It employs a relatively large share of women and younger workers. Employment in the sector is not particularly flexible: the share of temporary jobs is just above half of the EU average and the share of part-time workers is relatively low (Figure 2.25). Indeed, work tenures are relatively long. Moreover, the sector offers fewer job opportunities for low skilled workers than elsewhere, as their share is only a third of the EU average. This organisation of tourism employment hampers the ability of the sector to adjust supply to seasonal changes in demand. Moreover, labour

shortages are an emerging problem. In the summer of 2016, service providers around the popular Lake Balaton had to close down because of insufficient staff levels, reflecting the better working conditions in Austria and Slovakia (Hungarianfreepress, 2016).

Figure 2.23. Employment in tourism

As a percentage of total employment, 2016 or latest available[1]



1. 2013 for Hungary. The OECD aggregate is calculated as an unweighted average.
Source: OECD (2017), *OECD Tourism Database*.

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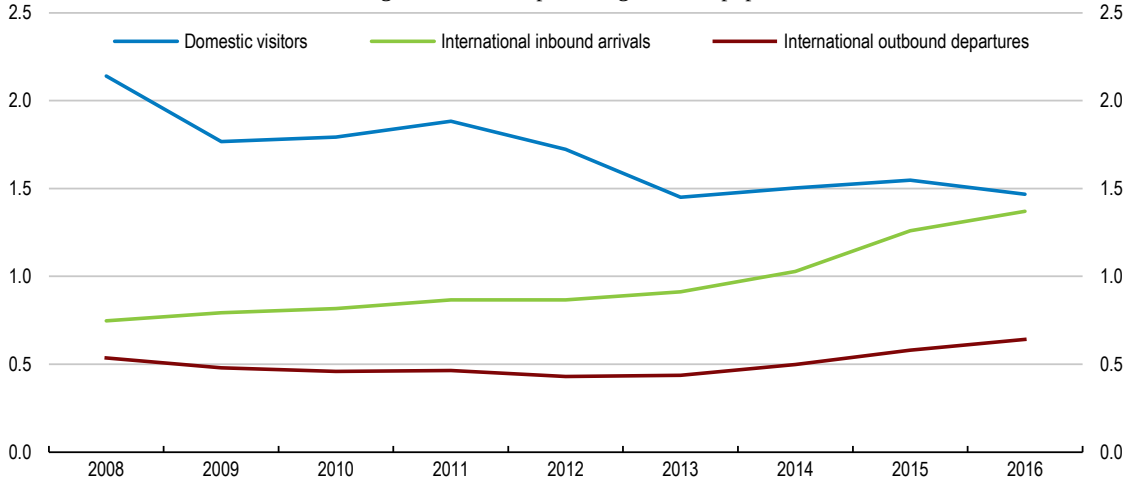
Figure 2.24. Tourism trends

Overnight visitors as a percentage of total population



Source: OECD (2017), OECD *Tourism Database*.

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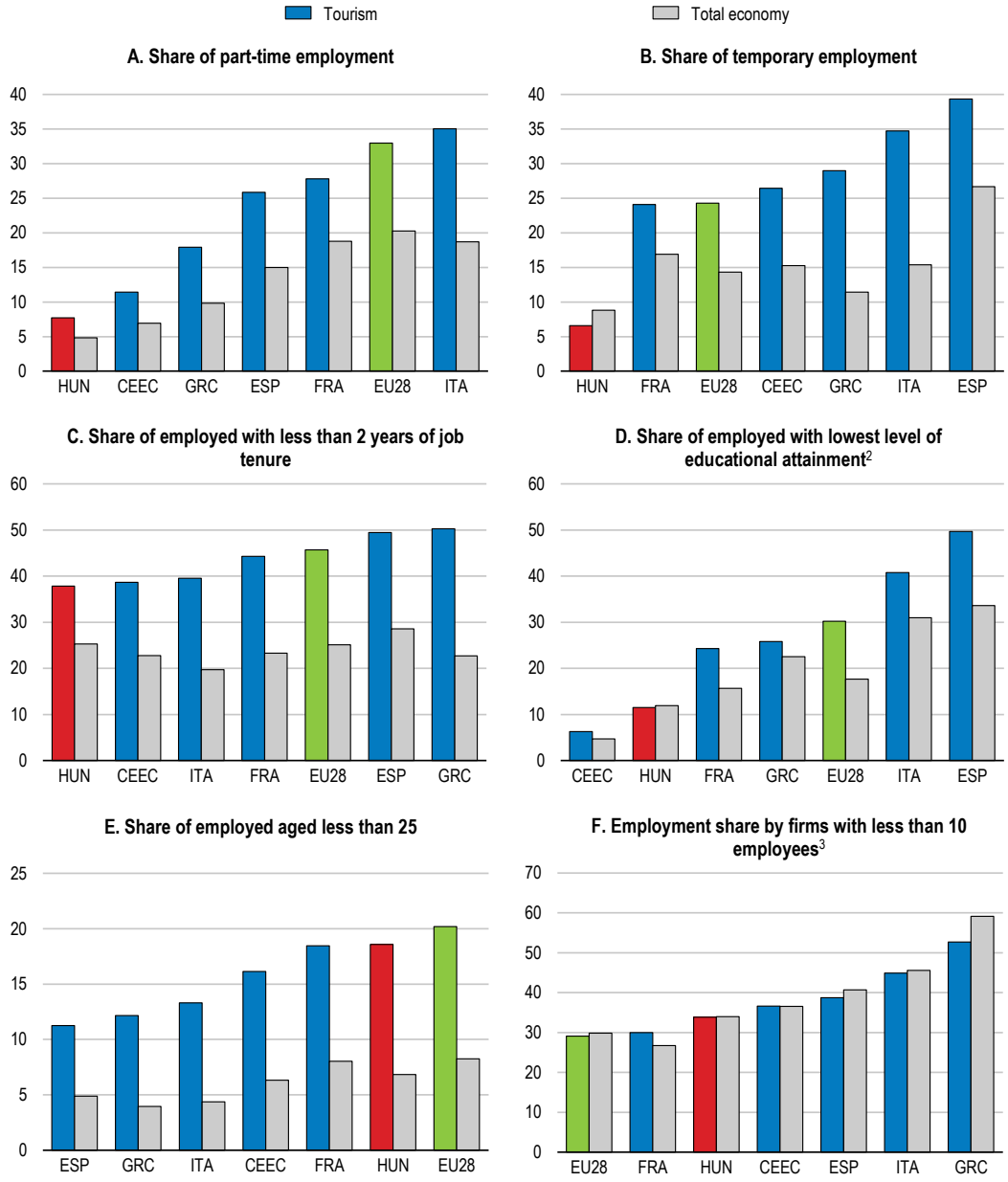
Figure 2.25. Tourism overview

As a percentage of total employment by sector, 2017[1]



1. The aggregate for other Central and Eastern European countries (CEEC) includes the Czech Republic, Poland and the Slovak Republic and it is calculated as an unweighted average.
2. Lowest level of education refers to less than primary, primary and lower secondary education (levels 0-2).
3. Data refer to 2016 or latest available. Data for total economy refer to the total business economy, except financial and insurance activities.

Source: Eurostat (2018), "Annual data on tourism industries", Eurostat Database; and Eurostat (2018), "Structural business statistics", Eurostat Database.

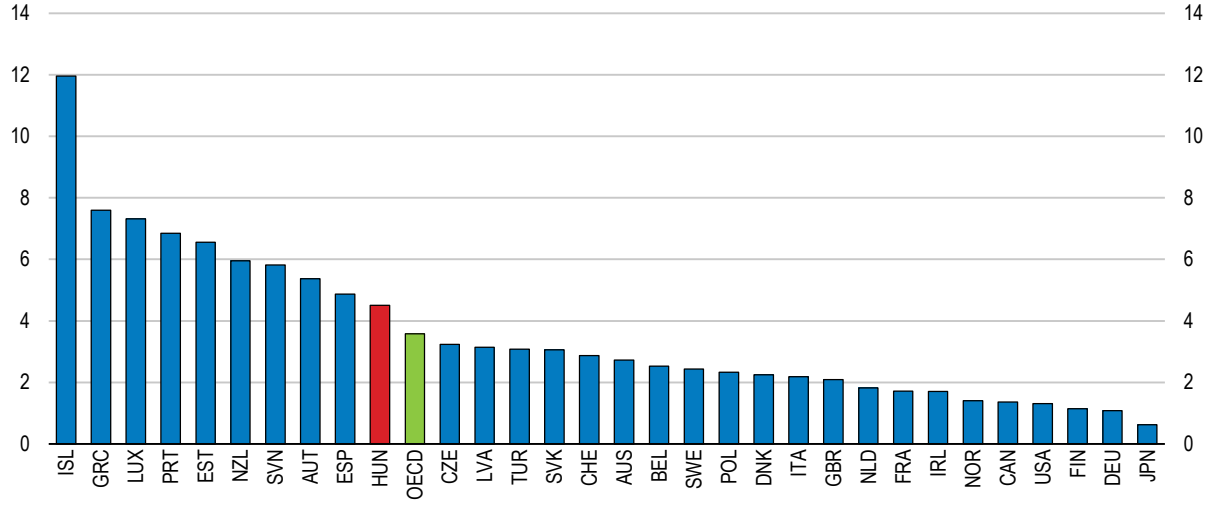
StatLink https://doi.org/10.1787/888933897874

The sector is increasingly serving visitors from the region

Inbound tourism spending is relatively high and has been growing in importance, but mainly from lower income Eastern European countries, allowing this region to replace higher income western countries (like Germany and Austria) as the most important tourist sources (Figure 2.26). Hungary has had relatively little success in attracting visitors from emerging often high value-added inbound markets, such as China, when measured as shares of inbound tourism. Growth in tourism from these markets is relatively strong, but reflects low bases. These emerging inbound markets are one of the megatrends driving international tourism over the coming decades (OECD, 2018c). So, although foreigners account for half of all overnight stays and nearly 60% of travel spending, the tourism sector has become relatively more dependent on visitors from lower income inbound markets (World Travel and Tourism Council, 2015).

Figure 2.26. Inbound tourism spending is relatively high

As a percentage of GDP, 2016[1]



1. The OECD aggregate is calculated as an unweighted average.
Source: OECD (2017), *OECD Tourism Database*.

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Tourism is concentrated in Budapest, which generates more than two-thirds of Hungary's international tourism revenue (Table 2.1) (Ratz et al., 2008). The second most important tourism destination is the Lake Balaton (Box 2.4). This distribution reflects the traditional pattern of Hungarian tourism, where activity is concentrated in the highest income areas (Bártfai and Bátfai, 2015; Virag, 2017). So far, tourism's contribution to the development of rural areas has been minor, catering mostly for domestic visitors. Indeed, foreigners account for about 10% of rural tourism, an insufficient number to stem the decline in overnight stays by Hungarians since 2006 (Nagy et al., 2016).

Table 2.1. Tourism is concentrated in traditional destinations

Rank	Tourist region	Number of overnight stays (2016)	Share of overnight stays (2016)
1	Budapest and Central Hungary	11461543	38.5%
2	Lake Balaton	5759700	19.3%
3	Western Transdanubia	3226739	10.8%
4	Northern Hungary	2445776	8.2%
5	Northern Great Plain	2161001	7.3%
6	Southern Great Plain	1913482	6.4%
7	Central Transdanubia	1311959	4.4%
8	Southern Transdanubia	1121227	3.8%
9	Lake Tisza	367343	1.2%

Source: Hungary Statistics.

Box 2.4. The main tourist destinations

The Balaton lake was the first tourist resort developed in Hungary, combining the attractions of the lake's natural scenery with spa activities. Originally, tourists were serviced by a cottage industry, which in the 1930s developed into mass tourism as demand surged with improved transport connections. Tourism started on the northern shore of the lake that benefitted from thermal activities and wine production. The south shore was developed afterwards with the construction of a new resort with large hotels and landscape gardening. Today, foreigners account for about 37% of all overnight stays (Bártfai and Bátfai, 2015).

Budapest has always attracted the most visitors for business purposes or to enjoy the city's strong cultural heritage. While there is consensus among local authorities on promoting tourism in the city, a similar consensus regarding direction and methods of development is lacking. Frequent shifting of development responsibilities between different governmental bodies has hampered the implementation of tourism development strategies (Ratz et al., 2008). Private-sector initiatives have been more successful with the emergence of "ruin" bars in early 2000s in dilapidated buildings and empty plots and guided tours based on urban experiences (Lugosi et al., 2010; Ratz, 2016). This has led to conflicts with the municipalities' wishes to close the bars to create space for urban regeneration (Kocsis, 2015; Ratz et al., 2008). At the same time, state support has mostly been directed towards accommodation rather than developing new tourism experiences.

The supply of tourism services remains centred on traditional offerings

The tourism sector remains centred on providing traditional tourism services based on cultural heritage, lakeside activities and thermal services. The number of health tourists have increased, benefiting from thermal services and other health services (such as dental and other medical services), accounting for 13.3% of all foreign visitors. There has been little expansion of (often higher value-added) eco- and agro-tourism. Only Budapest has seen the emergence of more modern experience-based tourism services, such as "ruin" bars and guided tours based on the urban environment, which has complemented the city's

traditional cultural heritage based attractions. The character of tourism has changed over time, with average stays falling to 2½ nights per guest – among the lowest in Europe (Hungary Statistics, 2017b). These developments have done little to counter the problem of a high degree of seasonality, entailing low average utilisation of tourist infrastructure (Aubert and Csapó, 2006).

The limited development of new tourism services is somewhat surprising, as existing tourism resources and attractions have the potential to develop different and often overlapping aspects of tourism (Káposzta et al., 2016). For example, eco- and active outdoor tourism could exploit the diversified landscape and natural endowment, providing the basis for water- and land-based activities. However, infrastructure for active tourism needs further development: for example, the number of golf courses is similar to Hungary's smaller neighbour Slovenia, but less than 10% of the number found in Austria (Kiss, 2014). Likewise, combining cultural tourism with gastronomy, where notable strengths are a long-established wine industry and four restaurants with Michelin stars in Budapest, could further expand experience-based tourism. Unlocking this potential would enable the tourism sector to become competitive in attracting high-value visitors by offering complex experienced-based tourism services, often combining new and traditional offerings.

Another issue is that the international competitiveness of Hungarian tourism has been declining. Since 2013 Hungary's ranking has dropped 10 places to 49th out of 141 countries in the World Economic Forum's ranking (WEF, 2017). Strengths are competitive prices, international openness, health and hygiene, and environmental sustainability. Weaknesses are in areas where domestic policies have a direct impact, such as tourist service infrastructure, ICT readiness, human resources and the business environment. Also, endowments that favour tourism, such as natural and cultural resources, have relatively low perceived attractiveness (ranked 88th and 45th, respectively) (WEF, 2017). Altering such perceptions is difficult and requires a coherent and comprehensive approach to tourism promotion (see below).

Tourism policies are focussed on expanding tourism infrastructures

Programmes to bolster tourism focus on investing in tourism infrastructure. EU funds will support these programmes. During the EU structural funding period 2007-2013, a tourism programme with seven sub-programmes formed part of the National Tourism Development Strategy for 2005-13. The new 2017 National Tourism Development Concept for 2014-2024 has the very ambitious aim of making Hungary the most popular tourism destination in Europe by developing heritage, cultural, congress, religious, gastronomic, agro/village, eco and active tourism. By 2024, the expected results are that the sector nearly double its share of GDP to 10%, accompanied by a 50% increase in employment and foreign visitors (Kaposzta et al., 2016). The strategy also shifts support from individual attractions to tourism regions with a focus on ensuring high-quality experiences for visitors (Hungarian Tourism Agency, 2017).

The strategy has 12 pillars, including nearly EUR 1 billion in funding for upgrading and developing accommodation outside Budapest, targeting 30 000 rooms in 2 000 hotels. Other financial support includes low-interest loans (up to 30% of the project value) from the Hungarian Development Bank. Other pillars include branding, enhanced professionalism, transparent and reliable regulation, and the development of family-friendly tourism in local communities using digital technologies. The cumulative available financial resources up to 2030 amount to nearly EUR 3 billion, of which two-thirds come from the national budget.

The responsibilities for the formulation and implementation of tourism strategy and policies are spread across government departments. In 2018, the Cabinet Office of the Prime Minister took over from the Ministry for the National Economy the responsibility for tourism policies, including preparing and implementing the development strategies for tourism. The crosscutting aspects of tourism policies requires co-operation with the Ministry of Human Resources for cultural and health aspects; the Ministry of Agriculture for rural tourism and eco-tourism; and the Ministry of Foreign Affairs for visa issues. The National Tourist Office is responsible for promoting tourism domestically and internationally, supported by 85 local destination management organisations (DMO) (OECD, 2016f). The DMOs work with local tourism stakeholders on planning, product development, information management, booking systems, research and marketing, human resource developments and stakeholder co-ordination. In addition, there are nine touristic regions, which do not match any other regional structure or public administration units, each with its own tourism development strategy (Káposzta et al., 2016; Virag, 2017).

The high number of government bodies complicate the coordination and effective implementation of tourism strategies and policies. Moreover, the top-down approach is not effective in identifying local opportunities for tourism developments. A more streamlined approach, i.e. involving fewer bodies, and more adherences to the subsidiarity principle of moving decision making to the lowest possible level would address such concerns.

An important pillar is to develop regional tourism, with two special programmes in place for Lake Balaton and the (wine-growing) Tokay region in the relatively depressed north-east. The focus for developing regional tourism is on tourism infrastructure investments, pursuing a destination-based tourism model. A challenge for developing regional tourism, particularly in poor areas, is that it requires a range of policies, including providing adequate communication infrastructure and upgrading human skills, which necessitates a large degree of coordination across policies and government levels. A problem in this context is that at the local level there is often a lack of cooperation and of a broader regional approach to developing modern experience-based tourism. Moreover, local tourism outfits may often not know or may underestimate local resources, potential attractions or the scope for creating new tourism services, such as using sustainable agriculture to promote eco- and gastronomic tourism (Nagyné, 2013; OECD, 2013).

Tourism promotion plays a relatively small role

In contrast with other countries international tourism promotion plays a relatively small role in Hungary, rendering the success of the tourism strategy dependent on supply-side measures. Even the well-organised Balaton Lake area is lacking in terms of co-ordinated developments, marketing and packaging, integrated and up-to-date information data and appropriate human resources (Bártfai and Bátfai, 2015).

Internationally, many countries, including Austria, France, Japan and Korea, have active international tourism promotion strategies to attract high-spending visitors. These often use social media and creative industries to promote central elements of national tourism strategies, such as culture, lifestyle, ecological and local agriculture produce (Box 2.5.; Lee, 2012; Scheuch, 2012; Murayama, 2012; Fouassier, 2012; OECD, 2014; Richards, 2012; OECD, 2012). Social media is being used to link people, places, knowledge and resources to create and promote tourism experiences. Tourism promotion is complemented by the greater use of digital platforms for the shared economy, such as AirBnB and taxi services. By contrast, public tourism platforms in Hungary remain centred on cultural heritage and destinations, without, for example, exploiting the potential of downloadable apps.

Box 2.5. International branding, promotion strategies and creative industries

International branding strategies are increasingly focussed on creating new tourism experiences:

- In Austria a government agency distributes content from the contemporary urban scenes, using traditional and social media as well as international events reach global cultural opinion leaders (OECD, 2014).
- In Japan the "islands of art" branding strategy links the Setouchi Islands to creativity to increase attractiveness for visitors and creative workers.
- Berlin uses its creative image to attract visitors, including its "soft infrastructure" for creativity (restaurants, bars, street-life, etc.) and with policy actions focussed on using existing creative resources and networks (such as the electronic music scene) (OECD, 2014).

Experience-based tourism can be driven by linking creative industries to places, such as festivals, or more general branding strategies, such as the Cool Britannia and Japan programmes, or national and international networks, such as Creative Tourism New Zealand and the international Creative Tourism Network (OECD, 2014). Another approach to create new experiences is to combine culture with heritage, such as Hamlet performances by English actors at the Danish Castle of Elsinore and the use of the cultural legacy of the Dutch painter Hieronymus Bosch to promote contemporary art in his town of birth – 's-Hertogenbosch.

Promotion often uses new media, such as the Parisian tourist web sites for workshops/courses in creative activities and the use of public spaces for creative activities. Another approach is location-based apps for visitors to use on their smartphones and tablets to access contextual information during visits to complement the rapid growth in peer-to-peer reviews and shared-usage web platforms (OECD, 2017e). Promotion is also increasingly being tailored to market segments that have been identified as potentially attracted to creative tourism experiences through social media or other direct marketing (Richards, 2012). This is the case when major events interact with creative industries to create post-event momentum (OECD, 2017f). A notable example of social media campaigns is Tourism Queensland's "The Best Job in the World" advertising for working in their national park. In addition, tourism promotion is increasingly based on a narrative to link experiences and places, such as in the Nordic countries, where gastronomic experiences are connecting locality and origins of food with the history of the people preparing the food (Ljunggren, 2012).

The common approach in these strategies is that they focus on linking tourism and the creative industries to provided creative tourist experiences through talent development with a focus on clusters and networks. Moreover public intervention aims at engaging creative industries as well as recognising consumers' co-creation role in creative experiences, while connecting branding of new products to destinations using new technologies (OECD, 2014).

These approaches have in common that successful tourism promotion and policies focus on integrating sectors and spatial development rather than targeting individual sectors or areas (Nagy et al., 2016; Haxton, 2015; OECD, 2009).

Important aspects for strategies to promote creative tourism experiences are that the offered services create uniqueness (Kaposzta et al., 2016). This requires linking authenticity with the local environment, while securing quality and consistency through measures like labelling. At the same time, tourist generators (such as restaurants and food producers) need to be repositioned as creative industries to build up locations' vibrancy and attractiveness, supported by linkages (often using social media) between natural endowment, creative industries, cultural heritage, etc. (Richards, 2012).

The shift in demand for tourism services has an impact on the organisation of tourism promotion policies. In countries, such as Australia, Sweden, the United Kingdom and the United States, funding is increasingly based on matching to direct money towards the most promising promotion projects. Another approach is to have funding (partly) based on a fee on tourism activity, such as hotel room taxes, airport or immigration fees (OECD, 2017e). In addition, effective promotion requires cooperation between local destination marketing and national tourism organisations. This calls for strengthening (international) tourist promotion with better targeting of key source markets. An additional avenue could be to further the use of the Visegrad Group Co-operation to promote the region through strategies targeting inbound markets or specific themes, following the example of the Baltic countries (OECD, 2017d).

Attracting high-spending visitors in search of experience-based tourism involves the integration of the many SMEs in the sector. That requires investment in the upskilling of tourism workers, particularly in terms of languages, but also in ICT knowledge to enable the SMEs to link to new information platforms (OECD, 2013; Káposzta et al., 2016). Such investments are particularly important for SMEs in rural areas to link local agriculture, food production and accommodation with broader aspects such as branding and creative industries (OECD, 2014).

Tax policies are used to stimulate tourism demand

The tax system supports tourism demand. The VAT rate on most tourist services is 18% – 9 percentage points lower than the standard VAT rate – and5% for restaurant services. The change in relative prices between tourist services and other goods and services creates an uneven playing field between companies in different sectors, diverting resources from their most efficient use. Another growth concern is that the co-existence of several VAT rates increases both private and public administration costs. Thus, the current VAT tax break for tourism-related activities should be removed by taxing them at the standard VAT rate.

Demand for tourist services is further stimulated by the granting of tax reductions for employers that provide their staff with tourism-related fringe benefits through the so-called Szechenyi Recreation Card. Employers receive a tax discount for each card up to EUR 1 500 per year. The card is an electronic voucher, which stimulates accommodation, catering and, to a lesser extent, leisure services. The card was introduced in 2011. In early 2018, more than 24 000 companies had issued 1 ½ million cards with an accumulated value of nearly EUR 310 million (OECD, 2016f). The card has similar negative effects as the preferential VAT rate and should be phased out.

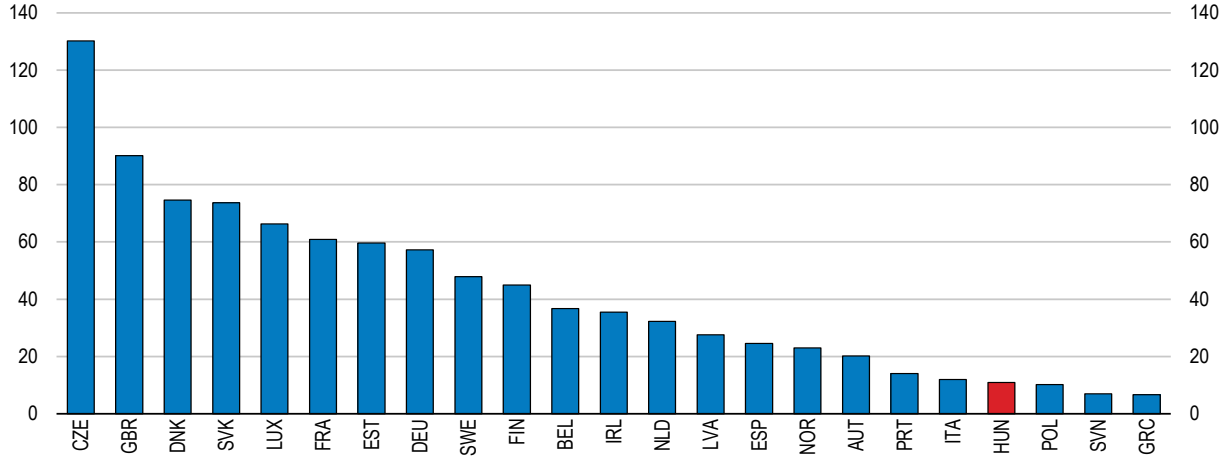
Agriculture as a regional growth driver

Hungary's agriculture sector is restructuring, which has increased average farm size by more than 50% since 2005, as the reliance on crops has increased (supported by the European Common Agriculture Policy) at the expense of more labour-intensive and complex meat production (Póla, 2018). Nonetheless, the average size of farms remains

among the smallest in Europe (Figure 2.27). Moreover, most farms have little commercial viability: two-thirds of them consume more than half of their own production. In addition, about 80 per cent of all farms have livestock, reinforcing the picture of an agriculture sector that lacks specialisation and economies of scale. Thus, the agriculture sector's growth potential remains large and the associated restructuring will further reduce the sector's high employment share (Figure 2.28) (Póla, 2018).

Figure 2.27. Average farm size is amongst the smallest in Europe

Hectare, 2016[1]

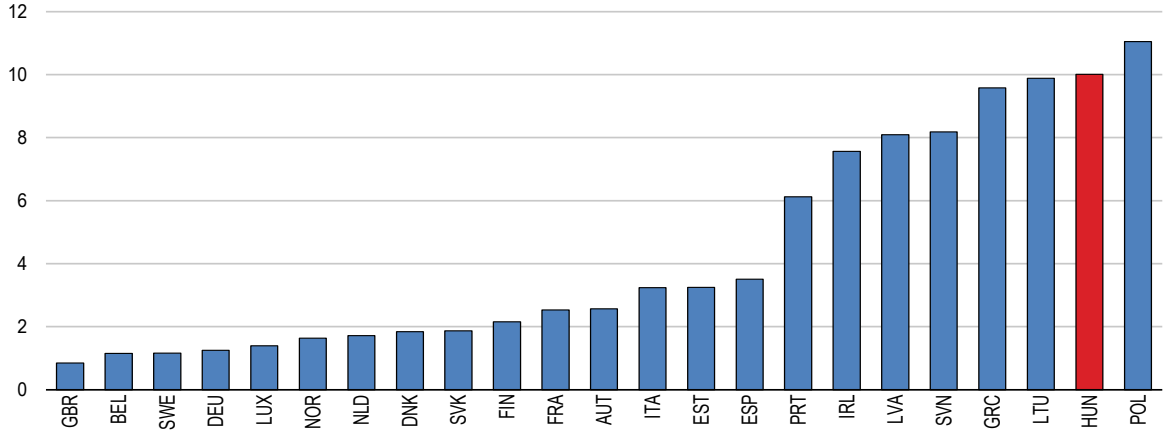


1. 2013 for Italy and Norway. Data refer to utilised agricultural area per farm.
Source: Eurostat (2018), "Main farm indicators by NUTS 2 regions", *Eurostat Database*.

StatLink https://doi.org/10.1787/888933897912

Figure 2.28. Agriculture labour force constitute a relatively large share of the labour force

As a percentage of total labour force, 2013[1]



1. Data refer to regular farm labour force including family and regular non-family labour measured in full-time equivalents.
Source: Eurostat (2018), "Farm structure", Eurostat Database.

StatLink https://doi.org/10.1787/888933897931

A number of policies are hampering the restructuring process. Foreign investors are banned from purchasing agricultural land, slowing the transfer of external expertise and the consolidation into larger production units. Other Eastern European countries have benefitted from inward FDI into their agriculture sectors (Kuijpers and Swinnen, 2016). For example, Danish and Dutch investors in the Polish pork industry has been instrumental in raising the sector's productivity and export performance (Swinnen, Van Herck and Vranken, 2009). Smaller producers are further protected from domestic competitive forces by a special sectoral exemption in the competition law that allows producer cartels if they lead to "reasonable and justifiable income", which potentially leads to inefficient production (OECD, 2016d). SMEs, including those in the agriculture sector, receive extra protection through a recent "second chance" provision in the competition law whereby a warning is issued rather than imposing a fine for a first-time infringement.

Looking ahead, agricultural employment can be supported by developing more labour-intensive activities or alternative income streams. A common requirement for both paths to become successful is integration into national supply chains, or direct access to markets in larger cities (Póla, 2018). The expansion of labour-intensive forms of agriculture, such as fruits, vegetables and animal husbandry has helped to sustain employment over the past decade. Organic farming is a developing niche, although the sector remains small, involving 3.5% of total agricultural land and some 1 200 farms (Benedek and Balazs, 2015).

Local agricultural production can be further supported through developing short supply chains between producers and consumers by cutting out intermediates, creating direct access. This often requires additional value added activities at the farm level to produce final products. Public investments have backed the development of traditional short supply chains (farmers' markets, market halls, farm shops, etc.) (Benedek and Balazs, 2015). Nonetheless, the development of the local food-production sector remains in an early stage, particularly outside the Budapest region (Benedek and Balazs, 2015).

The slow development of local food production reflects a basic problem of linking rural producers to population centres. Poor rural road infrastructure increases transportation costs. Moreover, small-scale farmers do not fully exploit digitalisation as they typically do not use online and social media to reach their customers (Banedek and Balazs, 2015). Modern internet-based short supply chains, such as internet based shops, box schemes (i.e. subscription to a regular delivery of a box with foodstuff) and buying groups, have emerged in urban areas but cannot be described as established supply chains (Balazs, 2012). Further developing modern short supply chains requires greater use of the possibilities offered by digitalisation (see below).

Developing alternative income streams for farmers is to a large extent linked to rural tourism in the form of agro-tourism. However, rural tourism is only slowly being developed, with about 4 000 hosts providing relatively short stays for just over 100 000 visitors (of which 90% are Hungarians) (Kulcsar, 2012; Nagy et al, 2016). Currently, rural tourism is mostly focussed on accommodation and rarely offers extra local services that link to other local rural activities. Rural tourists have access to few thematic experience packages despite surveys revealing such a demand (Kulcsár, 2015).

Developing more experience-based tourism in rural areas would link activities based on rural traditions (farm stays, gastronomic specialities, connecting with local communities) with nature-based activities (trekking, sledging, animal observation, etc.) as well as traditional tourist services. In addition, high income visitors would also expect access to non-tourist services, such as pharmacies, quality shopping opportunities, well-developed

internet services, and transport services. The latter is held back by poor road infrastructure and public transport that are rarely devoted to servicing tourists (Virag, 2017). An additional issue for foreign visitors is a general lack of language skills among hosts in rural areas (Nagy et al., 2016).

Quality agriculture products and traditions can be used to develop rural tourism by creating experiences that combine authenticity, environmental and culture heritage with gastronomic services (Richards, 2012). Such products and traditions are promoted through a government-run programme named Hungarikum (Hungarikum, 2018). However, this effort is not similar to building networks to secure complex value creation as part of domestic and external tourism promotion of traditional products, such as Hungarian long-horned Grey cattle, Mangalica woolly coated pigs and Racka sheep with unusual spiral-shaped horns.

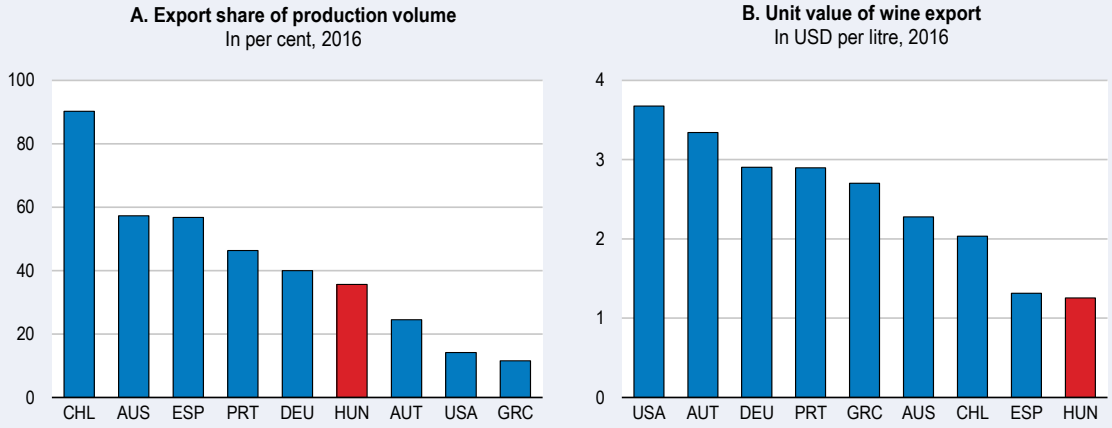
Other countries have used local produce and labelling to create new culinary experiences, including ham from Italy and Spain and beef from Japan and Scotland. Similarly, it is difficult to promote Hungarian wine internationally in the absence of recognised and unified quality labelling, as used in many other European wine-producing countries (Box 2.6). Wine tourism remains centred on traditional winery experiences (visits and tasting) in the cities. In contrast, wine tourism in other countries is increasingly providing additional services, such as using wineries for museums, art galleries, event venues, estate destinations for families or firms, retail outlets, education institutions, and as part of the heritage experience or linking to tourism services outside the region (Virag, 2017; Nagy et al., 2016; Richards, 2012).

Box 2.6. Hungarian Wine

Wine production was introduce by the Romans. The organisation of Hungarian viticulture into the main wine regions dates back to at least the 14th century. The six wine producing regions are divided into 22 sub-regions, which offer the whole palette of wines, including the internationally renowned sweet wine *Tokaji aszú*. Traditionally, the main production was red wines, including the *kadarka* grape (part of the blend in the well-known Bikavér – Bull's Blood). Today, production has reverted to be mainly white grape-based, including *olaszrizling, cserszegi fűszeres and furmint* and for one third still based on indigenous grapes (Hegyközségek Nemzeti Tanácsa, 2016a).

Most winemakers are small producers with an average production size of less than 10,000 hl per year, making for a fragmented wine industry (agrárszektor.hu, 2017). The diversity of wine production has complicated collaboration between producers. For example, there are no common brands for international promotion purposes, nor a recognised wine labelling system apart for Tokaj wines. Moreover, the industry's National Wine Strategy is focusing general long-term objectives without clear guidelines or action plans for each wine region (Hegyközségek Nemzeti Tanácsa, 2016b). Indeed, spending on marketing and promotion is too low to create a global reputation (Hegyközségek Nemzeti Tanácsa, 2016b). Consequently, wine export as a share of total production is low and the lack of international recognition is also reflected in very low export prices (Figure 2.29).

Figure 2.29. The export share of wine is relatively low



Source: Anderson, K. and V. Pinilla (2017), "Annual Database of Global Wine Markets, 1835 to 2016", Wine Economics Research Centre, University of Adelaide.

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An OECD survey of main Hungarian winemakers indicates that a main problem is the favouring of quantity over quality in production, slowing a move up the value added chain. This reflects that domestic wine production covers domestic demand. Hence, additional production would have to be exported. In addition, many of the small producers often rely on older and more traditional production techniques as they lack the financial resources to invest in new technology. Poor international presence is also reflected in the low participation rate of Hungarian wine producers in international wine competitions.

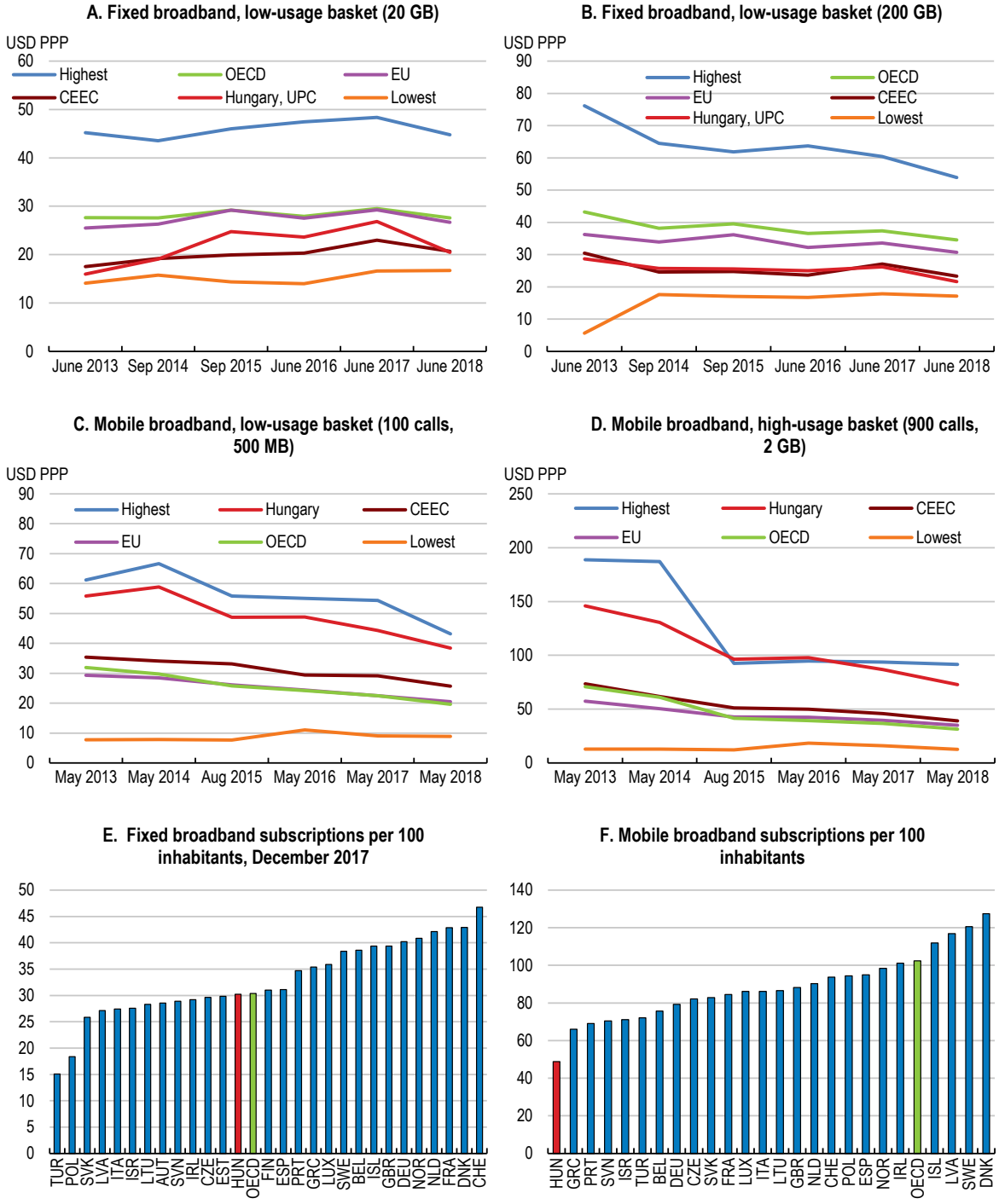
Digitalisation as a promoter of regional growth

Digitalisation can contribute to regional growth if the right framework conditions are in place to allow cheap access to high capacity networks. This would include efficient, reliable and widely accessible broadband communication networks and services, data, software and hardware (OECD, 2017d). The lacking use of the possibilities offered by digitalisation in tourism and agriculture reflects insufficient skill levels. That said, digitalisation is also being held back by low fixed and mobile broadband penetration. For mobile broadband this can be explained by relatively high prices (Figure 2.30).

The telecommunications market, however, is becoming more dynamic. Providers are offering higher speeds on fixed broadband. In addition, after several delays a fourth mobile network operator is entering the market. In other countries, such as Australia, Italy, Japan and France, this has disrupted the market *status quo*, leading to more intense price competition. If this disruption does not appear, competition could be promoted by securing non-discriminatory access for MVNOs (Mobile Virtual Network Operators – resellers of bulk purchases from the network operators) to networks, either through regulation or through the competition law's provisions against abuse of dominant position as recommended in the last Survey (OECD, 2016d). An additional measure could be to shorten or abolish (as in Finland) the minimum length of mobile phone contracts from the current 24 months for subscriptions that come with a device.

The relatively low use of digitalisation is a general problem for the domestic economy. The shares of the value added and employment from the ICT sectors in the total economy are higher than the OECD average, but this reflects investments by multinationals (OECD, 2017d). In contrast, a relatively large share of companies has no broadband connection or website. Moreover, their use of planning software and cloud computing services is also lower than elsewhere. Households have higher internet usage than companies, but still less than the OECD average. For example, online purchases are much less popular than in most other OECD countries. In addition, relatively few use the Internet to interact with public authorities. The government could stimulate digitalisation by increasing its use of the Internet and expand the relatively low share of ICT graduates, as more than half of all companies report hard-to-fill vacancies in this area, and their share of total employment is lower than the OECD average.

Figure 2.30. Telecommunication prices remain relatively high.



Note: CEEC excludes Latvia and Lithuania; EU only includes OECD EU coutries (except for Latvia and Lithuania which are excluded); Highest and Lowest are for the average of the 3 countries with the higest or lowest prices.

Source: OECD Broadband Statistics (database); Strategy Analytics Ltc. Teligen Tariff & Benchmarking Market data using the OECD Methodology, https://www.strategyanalytics.com

StatLink https://doi.org/10.1787/888933897969

Box 2.7. Main recommendations for promoting regional growth

Key recommendations are bolded

Improving local governance

- **Increase the autonomy of local authorities to execute projects, such as in tourism that develop their local economies and further incentivise local governments to co-operate.**
- Introduce co-financing and expand revenue raising powers for local authorities. This should be combined with block grants for poorer municipalities.
- Establish a governing board with the full responsibility for economic development of the Budapest agglomeration.
- Introduce a single business ID number for interactions with authorities. Minimise interactions with businesses by streamlining local services.
- **Establish a dedicated anti-corruption agency.**
- **Continue to bolster inclusiveness measures for Roma communities, especially by better integrating Roma children in early childhood education and care.**

Boosting regional growth by boosting skills

- **Allow vocational education and training schools greater freedom to specialise and adjust courses and curriculums to the needs of the local labour market.**
- Vocational training centres should consider the demand for skills more widely when setting numbers of training places.
- Introduce an internal 'Erasmus' type programme to enable rural students' access upper secondary education outside their region. Increase scholarships for students from disadvantaged areas.
- **Continue to reduce public work schemes and to enhance training of participants and other job seekers in programmes that improve their employability.**
- Enhance the geographical reach of public work schemes. Expand private-sector involvement in provision and the use of wage subsidies. Link the reimbursement of firm's training costs with employment outcomes.
- **Enhance research co-operation incentives between local and foreign-owned firms.**

Developing agglomerations by boosting mobility

- Extend the period for completion of housing transactions to two years, and rebalance social housing support towards those willing to relocate

- Assign responsibility for local roads to counties and use cost-benefit analysis for determining investment priorities.

Promoting regional growth

- Streamline planning and implementation of tourism strategies to reduce the number of official bodies involved.
- Develop a modern international tourism promotion strategy based on branding and on innovative tourism experiences.
- Remove tax incentives to stimulate tourism demand, including the preferential VAT rate for tourism services
- Enhance knowledge transfer by allowing foreign entry in agriculture.
- Support development of short-supply chains by promoting (through labelling) the production of quality agriculture products.

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