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Country Report Austria 2019

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COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE EUROPEAN COUNCIL, THE COUNCIL, THE EUROPEAN CENTRAL BANK AND THE EUROGROUP

2019 European Semester: Assessment of progress on structural reforms, prevention and correction of macroeconomic imbalances, and results of in-depth reviews under Regulation (EU) No 1176/2011

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CONTENTS

LIST OF TABLES

LIST OF GRAPHS

LIST OF BOXES

EXECUTIVE SUMMARY

Addressing its remaining structural reforms and investing more to increase productivity would support Austria's long-term growth. ([1]) Economic growth is projected to slow down but it is still expected to remain robust. Austria's fiscal framework provides little incentives for efficient public spending, especially at the subnational level. The projections for pension, health, and long-term care expenditures point to a challenge for fiscal sustainability in the long-term. Austria appears to have considerable scope for shifting the tax burden away from labour to more growth- and inclusiveness-friendly sources of revenue. Certain groups are not participating to their full potential in the labour market. Pupils' basic skills continue to depend strongly on their socio-economic and migrant background. Key levers to improve productivity and generate sustainable long-term growth are to better translate research and development investment into innovation, support innovative businesses and to tackle restrictive regulation.

The Austrian economy has been growing strongly, supported by robust private consumption and investment. GDP is expected to have grown by 2.7 % in 2018. Domestic demand remained the main driver of growth, thanks to rising private consumption due to increasing employment and wages, but also solid investment growth in the business sector and a rebound in construction investment. Export growth remained strong and supported overall growth. The unemployment rate is expected to have fallen further from 5.5 % in 2017 to 4.8 % in 2018. Headline and core inflation remained around 2 % and thus above the euro area average. For 2019 and 2020 GDP is forecast to grow more moderately at 1.6 % in both years.

Public finances have improved. Having declined to 0.8 % of GDP in 2017 on the back of the economic upswing, the government headline deficit is expected to decrease further, turning into a surplus of 0.1 % of GDP in 2020 under the assumption of unchanged policies. This is mainly the result of higher than expected tax revenues and higher employment. Public debt is expected to continue its downward path, decreasing from 78.3 % of GDP in 2017 to 67.8 % of GDP in 2020.

Focussing investment (both public and private) on innovation, digitalisation, sustainability, childcare and skills is important for productivity and growth in Austria. Austria's investment rate is above the EU average, but is expected to moderate. High investment in research and development is not fully translating into innovation outcomes and digital technologies are still not widely used, particularly among small and medium-sized enterprises. Increasing energy efficiency and the share of renewables would strengthen Austria's sustainable growth potential. Investment in skills but also affordable full-time childcare services and all-day schools would help to improve labour market outcomes, in particular for disadvantaged groups and women. Annex D identifies key priorities for support by the European Regional Development Fund and the European Social Fund Plus over 2021-2027, building on the analysis of investment needs and challenges outlined in this report.

Austria has made some progress ([2]) in addressing the 2018 country-specific recommendations

There has been some progress in the following areas:

- While public health expenditure is in line with the legislated ceilings, as a share of GDP, it is still increasing.

- Several measures have been taken to reduce the labour tax wedge for families and low income earners. Labour market outcomes for women improved, mainly due to improved childcare provision. However, their share of part-time employment remains high in comparison and

([1]) This report assesses Austria's economy in light of the European Commission's Annual Growth Survey published on 21 November 2018. In the survey, the Commission calls on EU Member States to implement reforms to make the European economy more productive, resilient and inclusive. In so doing, Member States should focus their efforts on the three elements of the virtuous triangle of economic policy — delivering high-quality investment, focusing reforms efforts on productivity growth, inclusiveness and institutional quality and ensuring macroeconomic stability and sound public finance.

([2]) Information on the level of progress and actions taken to address the policy in each respective subpart of a country specific recommendation is presented in the overview table in the Annex.

provision of childcare differs substantially between the regions (*Länder*).

- Austria has slightly prolonged its key programme for business digitalisation, has established a new digital agency and launched a call for digital innovation hubs.

There has been limited progress in the following areas:

- Action has been taken to increase the effective retirement age, but nothing has been done to increase the statutory retirement age. The sustainability of the pension system remains a challenge**.**

- While measures supporting the de-institutionalisation of long-term care are being implemented, the abolishment of the *'Pflegeregress'* increases the need for additional public spending with negative effects for the long-term sustainability of the system.

- Austria has implemented several initiatives to improve its fiscal framework but its rules remain complex and subnational tax autonomy has not yet been sufficiently increased.

- While recent measures to strengthen early childhood education and care could have long-term positive effects on educational outcomes, the direction of reform measures in general education undermine previous reform efforts and are not in line with EU and OECD best practices.

- Austria advances with its burden reduction efforts but has not addressed restrictions identified by the Commission for key professions nor performed a wider review of service sector regulation.

Regarding progress in reaching the national targets under the Europe 2020 strategy, Austria has already reached its targets on tertiary education attainment and limiting early school leaving. It is on track to meet the employment and the renewable energy targets. However, more effort is needed to reach the ambitious research and development target, cut greenhouse gas emissions, decrease energy consumption and reduce poverty and social exclusion.

- **Austria performs relatively well on the indicators of the Social Scoreboard supporting the European Pillar of Social Rights.** It has robust policies to help people enter the labour market and ensure fair working conditions. Policies to reduce poverty and social exclusion risks are generally effective. However, there have recently been concerns about the proper involvement of the social partners in policy reforms. Insufficient full-time childcare contributes to the high share of part-time employment of women, which hampers the full use of female labour market potential.

Key structural issues analysed in this report, which point to particular challenges for Austria's economy, are the following

- **Austria's fiscal framework provides few incentives for efficient public spending, especially at the subnational level.** The 2017 Intergovernmental Fiscal Relations Act introduced various measures designed to reduce the overall complexity of the system, which are generally advanced in their implementation. However the Act falls short of increasing subnational tax autonomy and a more transparent allocation of competences across levels of government, reforms that remain high on the political agenda. The *Kompetenzbereinigungspaket* is a first step towards a re-allocation of competences, but affects only a limited number of policy areas.

- **Recent reform measures aim to reduce Austria's high tax burden on labour, and more comprehensive reforms are announced**. The Austrian government has expressed its commitment to reduce the tax-to-GDP ratio from currently 42.4 % to 40 % in the coming years. Recent reform measures reduce social security contributions for employers and low-income earners and provide a tax relief for working parents. A comprehensive reform of personal and corporate income tax is announced for 2020. However, there are no plans for a change in the tax mix towards more growth-friendly sources of revenue.

- **The projections for pension, health, and long-term care expenditures point to a challenge for fiscal sustainability in the long-term.** Although the projected increase in public pension expenditure seems moderate, Austria starts from one of the highest pension-to-GDP ratios in the EU. Maintaining the current level of benefits for pensioners would require tapping additional sources of financing, raising the question of inter-generational fairness. The main driver of public health spending - an over-sized hospital sector - is the result of a fragmented financial and organisational structure. Efficiency gains are expected from merging social insurance agencies, but the reform is likely to imply upfront costs. Considering that public spending for long-term care is projected to double by 2070, the removal of the requirement to use personal assets to cover long-term inpatient care will further increase expenditures.

- **Financial sector resilience has further strengthened and the risks to public finances stemming from the asset management companies for impaired assets have been contained.** Banking sector capitalisation has remained flat in the first half of 2018, while profitability in the domestic market has perked up, driven also by the acceleration in lending activity. Foreign-currency loans granted by banks on the local market have further declined, but still warrant close monitoring. The winding-down of the asset management companies set up during the financial crisis to manage impaired assets has advanced better than expected, and risks to public finances are limited.

- **House prices and rents have risen considerably, but the impact on consumption and financial market risks is contained.** Housing prices and rents have been increasing steadily since 2005, mostly driven by developments in Vienna. This can be linked to excess housing demand. Despite increases in mortgage lending, financial market risks are contained for now. The impact on private consumption seems also relatively limited. Rising rents were partly due to an increased share of privately financed housing completion. Despite rising construction and land prices, squeezing the availability of affordable housing, housing assistance expenditure per capita decreased in most regions, especially in Vienna.

- **The Austrian labour market continues to improve, but challenges for specific groups remain.** Employment and activity rates have continually risen since the start of the recovery. At the same time, there are signs of labour shortages in certain sectors and regions. With a high proportion of women in part-time work and a high gender pay gap, female participation in the labour market is below potential. This is partly due to insufficient and uneven provision of childcare for children under three. Although the employment rate of older workers increased, it remains below the EU average. Further challenges include integrating people with a migrant background (including refugees) into the labour market and high unemployment rates among low-skilled.

- **Overall, social transfers are effective in reducing income inequality and protecting people from poverty and social exclusion, but vulnerable groups remain.** The risk of poverty and social exclusion remains stable and below the EU average. Although pensions are generally adequate, the risk of poverty and social exclusion for women over 65 is higher than for men, mainly due to the gender gap in pensions. Income inequality is relatively low, though wealth remains highly concentrated. The tax-benefit system continues to perform well in reducing relatively high market income disparities and protecting people from social exclusion.

- **Despite education reforms, basic skills among disadvantaged students have not improved.** Recent education reforms partly reverse previous reform efforts and are not in line with EU and OECD best practices, for example as regards expansion of all day schooling, which has slowed down. Pupils' basic skills still depend strongly on their socio-economic or migrant background. Austria's tertiary education attainment rate has already reached the national and the Europe 2020 target.

- **Restrictive regulation in Austria's services markets hampers productivity and discourages innovation and investment.** Austria has high access barriers and restrictive rules on practising key trades and professions. Regulatory barriers, notably as regards the daily operation of shops, contribute to the relatively weak development of Austria's retail sector. Regulatory restrictions are limiting investment, job creation and innovation in the services sector itself. They also affect other parts of the economy for which competitive and innovative services are a crucial input.

- **Stagnating productivity requires boosting innovation results and supporting innovative businesses.** Austria is investing heavily in research and innovation but has not yet managed to overcome the stagnation in total factor productivity. Efforts are still needed to strengthen science-business links, support knowledge-intensive sectors, promote eco-innovation and link up regional 'smart specialisation strategies'. Structural challenges remain for starting and scaling-up innovative businesses in Austria. Apart from regulatory barriers, the lack of later-stage funding options play a role, as well as skills shortages in some professions.

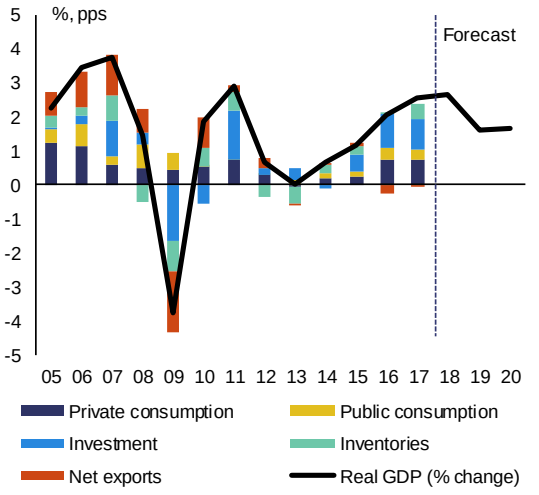
- **Austria faces challenges in the take-up of digital technologies and business models by smaller firms, as well as in broadband coverage.** Austria's information and communication technology sector is comparatively small. Micro-, small- and medium-sized firms are lagging behind in taking-up new technologies. High-speed connectivity in rural areas is lacking, increasing the divide in digitalisation and innovation capacities between regions. Austria's national digitalisation strategy still lacks monitoring and systematic performance review tools. There are also shortcomings in digital skills.

1. ECONOMIC SITUATION AND OUTLOOK

GDP growth

Austria's economy is growing robustly and private consumption has picked up considerably. After increasing by 2.6 % in 2017, real GDP is expected to have expanded at a slightly higher pace in 2018 (2.7 %). It is forecast to slow thereafter (see Graph 1.1). Domestic demand remained the main driver of growth, thanks to rising private consumption. This reflects favourable labour market developments and increasing wages, as well as solid investment growth in the business and construction sector. Despite less dynamic growth in international markets, export growth remained strong in 2018. Domestic demand is expected to remain firm in the coming years but to slow in line with an expected economic slowdown. This will be mainly driven by decreasing external demand, in line with the expected economic slowdown in Austria's main trading partners.

Graph 1.1: **GDP growth and contributions**



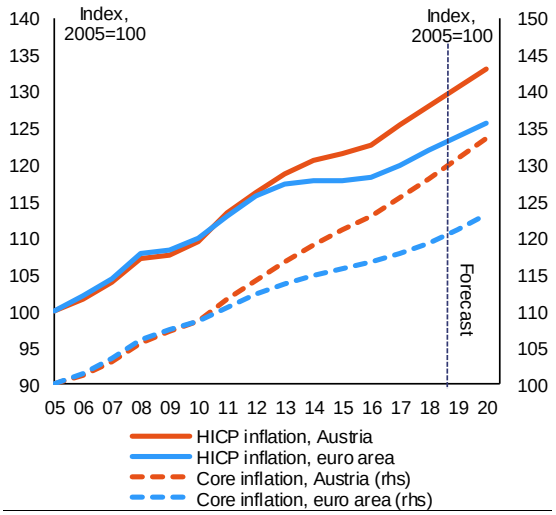
(1) Winter forecast for real GDP growth
Source: European Commission

Investment

Investment is contributing strongly to GDP growth, but is expected to slow down in line with the economic slowdown. In 2017, investment grew by 3.9 %. Capacity expansion needs in response to strong economic growth also led to solid increases in acquisitions of machinery and equipment, which grew by 4.6 %. In addition, after several years of subdued growth, the construction sector rebounded in 2017, growing by 3.5 %, mostly driven by the increase in residential housing. In 2018, total investment is expected to have grown at a slightly slower pace. This reflects the overall moderation in economic growth in the second half of the year, driven mainly by decreasing external demand (European Commission, 2018a). Long-term economic growth will depend on ensuring that sufficient investment will be directed towards productivity-enhancing factors, including digitalisation, skills, research and innovation (see Section 3.4).

Inflation

Graph 1.2: **Headline and core inflation**

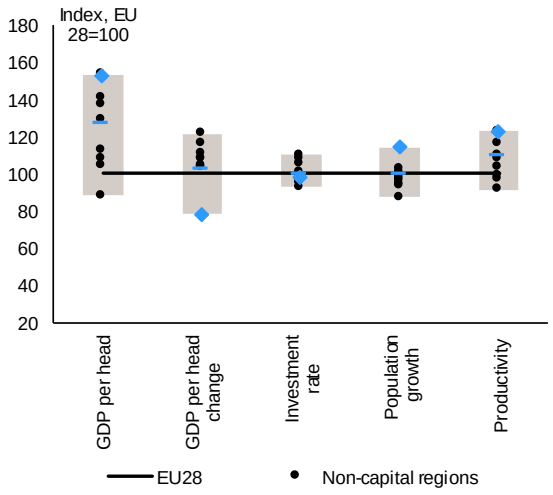


Source: European Commission (WF 2019 for HICP, AF 2018 for core inflation)

Austria's inflation rate is expected to stay around 2 % in the coming years, remaining also above the euro area level. The strengthening of the economy is mirrored by robust headline and core inflation, which stood at 2.1 % and 1.9 % in 2018, respectively. The thriving tourism sector is contributing to rising services prices, especially in hotels and restaurants, but increasing rents also contributed to the overall price increase. Rising wages and strong domestic demand are expected to boost domestic price pressure, mainly in the service and industrial goods sector. With 2.0 %, Austria's headline inflation is expected to remain above the euro area average of 1.4 % for 2019 and 1.5 % for 2020 (see Graph 1.2).

Regional disparities

Graph 1.3: **Regional disparities**



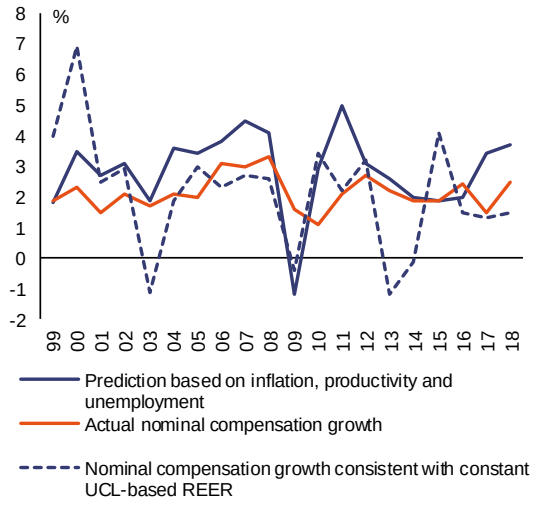
GDP per head in PPS (2016); change in GDP per head (2011-2016); Investment as % of GDP (average 2010-2015); population growth (2010-2016); Productivity as GVA per person employed (2016).
Source: Eurostat

Economic growth and labour market developments differ between the West of Austria as compared to the East and South, with Vienna taking a special position. The Western *Bundesländer* show high current GDP per capita values and high GDP growth over the last years (e.g Tirol had a GDP per capita in percentage of the EU average of 129 % in 2010 and 138 % in 2016). They also have lower unemployment rates, and, in Tirol and Vorarlberg, higher population growth. GDP per capita in Vienna decreased from 164% of the EU average in 2010 to 153% in 2016, which is probably related to a strong increase of the population. The capital also has the highest unemployment rate (10.1 % of people aged 20 to 64 years in 2017, compared to 2.9 % in Salzburg). Disparities of labour productivity are less pronounced across the *Bundesländer* than for GDP per capita (see Graph 1.3). Disparities with regard to the investment rate are even more limited, with values to the EU average.

Labour market

The Austrian labour market continues to improve. Employment is forecast to have grown at 1.5 % in 2018, driven mainly by services, industry and public sector. This pushed the unemployment rate down to a level of 4.9 % in the third quarter of 2018, reaching its structural level. In an environment of increasing demand for labour and falling unemployment, there are signs of labour shortages.

Graph 1.4: **Benchmark for nominal compensation growth, Austria**



Source: European Commission

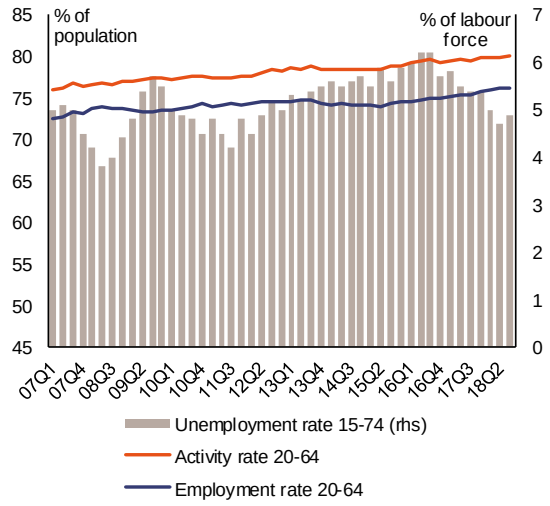
Wage growth is edging up reflecting the performance of the labour market. Nominal compensation per employee is expected to increase by 2.5 % in 2018 and continue doing so in 2019, after a temporary slowdown in 2017. This wage growth is however slower than what could be expected based on the historical relationship with inflation, productivity and unemployment, but higher than the rate which would be consistent with a stable evolution of cost competitiveness. (see Graph 1.4) At the same time, it implies a slight appreciation of the real effective exchange rate (an indicator of external cost competitiveness). ([3]) As inflation slightly eased, real wage growth improved, from 0.2 % in 2017 to 0.8 % in 2018.

Despite increased labour market participation by older workers and women, labour underutilisation remains a challenge. Employment and activity rates have been continually rising since the start of the recovery

([3]) This is a benchmark for wage growth consistent with internal and external labour market conditions. Calculation: the wage growth predicted on the basis of changes in labour productivity, prices, the unemployment rate, and wage growth consistent with constant unit labour cost based on the real effective exchange rate (European Commission, 2018b).

reaching 76.2 % and 80 % respectively in the second quarter of 2018 (see Graph 1.5). This is mainly driven by increased participation of older workers and women, but at the same time hours worked per worker have declined. With an employment rate for women of 71.4 % in 2017, Austria has the second highest part-time employment rate in the EU, at 47.9 % after the Netherlands. This is accompanied by a very wide gender pay gap. The employment rate for non-EU nationals slightly increased in 2017 to 60.9 %, but it is still significantly below the employment rate of Austrian nationals (16.9 pps lower).

Graph 1.5: **Activity, employment and unemployment rates (quarterly)**



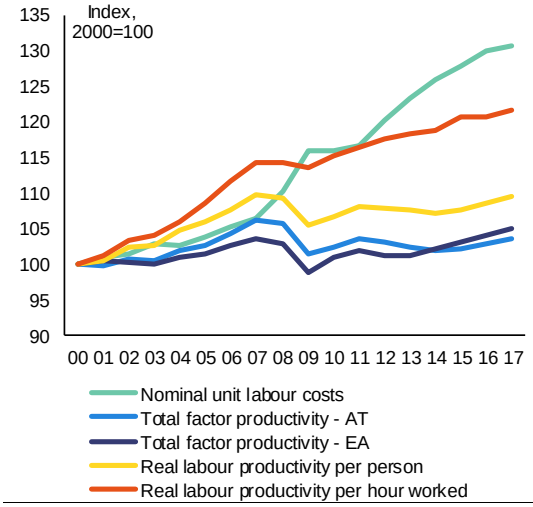
(1) Unemployment rate (% of labour force), total, ages 15-74, seasonally adjusted
(2) Activity and employment rates (% of population), total, ages 20-64, seasonally adjusted
Source: Eurostat

Social developments

While income inequality is relatively low, wealth remains highly concentrated. In 2017, the richest 20 % of households had a disposable income 4.3 times that of the poorest 20 %. While this ratio has slightly increased with respect to 2016, it is still well below the EU-wide average of 5.1. The tax-benefit system continues to perform well in reducing relatively high market income disparities and protecting people from social exclusion. The risk of poverty and social exclusion remains stable and below the EU average and pre-crisis levels. However, unlike household disposable income, Austria ranks high in terms of inequality based on net wealth, mainly the result of low house ownership rates at the bottom of the wealth distribution (European Commission, 2018c).

Productivity

Graph 1.6: **Labour productivity**



Source: Eurostat and European Commission

Labour productivity in Austria has been recently growing at a slower pace, as total factor productivity increases only slightly. Real labour productivity per person employed dropped heavily during the crisis and only started to increase again in 2015. The overall amount of hours worked per capita has decreased in the past decade, due to an increased share of part-time work. Therefore, labour productivity per hour worked is the preferred indicator when assessing labour productivity developments in Austria. Nevertheless, since the crisis, labour productivity has been growing at a slower pace. Total factor productivity is still struggling to achieve pre-crisis levels and remains below the euro area level. While it has been increasing again weakly since 2015, this might primarily be driven by cyclical components (see Section 3.4.). While nominal unit labour costs stagnated in 2017, increasing only by 0.6 % compared to 2016, they are expected to have increased again in 2018, in line with developments in labour productivity growth and inflation (see Graph 1.6).

External position

The current account surplus remained stable at a moderate level in 2017, with a slightly positive net international investment position. In 2017, the current account surplus stood at 2.0 % of GDP, a slight decline compared to 2016. For many years Austria has had a positive trade balance, aided particularly by its tourism industry. Business services for companies are also contributing increasingly to service exports. In 2017, exports grew by 4.7 % compared to 2016. Export growth is expected to remain roughly stable in 2018 and decrease thereafter. The 5-year percentage change of Austria's export market share, turned positive in 2017 (+2.3 %), due to a base effect ([4]) as well as world trade developments, and is expected to remain positive in 2018. Austria's net international investment position has been positive since 2013 and is expected to further improve in 2018.

Housing

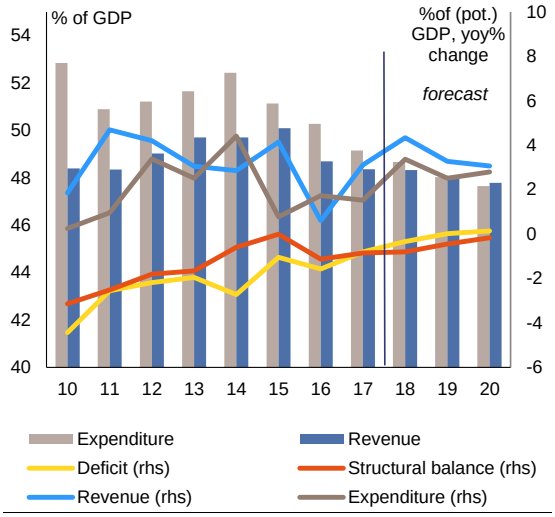
House prices and rents have grown considerably in the past decade, but the impact on private consumption and financial market risks seem to be contained. Housing prices and rents have been increasing steadily since 2005. The increases seem to be mostly driven by the developments in Vienna. Despite increases in mortgage credit growth, financial market risks seem to be contained for now. Also the impact on private consumption is relatively limited, which is due to a low homeownership rate coupled with a large share of social housing (see Section 3.2). The increase in house prices can be linked to excess demand, which peaked in 2016. Since then, signs of a relaxation are apparent as house price growth has slowed and housing supply is increasing, while demand is set to decline. The increasing share of privately financed housing together with decreasing public financing in this sector, might have contributed to rising rents (see Section 3.4).

Private sector debt

In 2017, private sector debt continued to decline to 122.5 % of GDP. The share of private sector debt as percentage of GDP declined steadily from 2010 to 2017, on the back of rising nominal GDP. Nevertheless, private sector credit flow increased again in 2017, reaching 4.3 % of GDP (well below the macroeconomic scoreboard threshold). After several years of continued deleveraging, credit flows for non-financial corporations accelerated somewhat in the past three years. However, this is in line with economic growth, as the indebtedness of non-financial corporations continues to fall, reaching 72.1 % of GDP in 2017. Meanwhile, household debt decreased to 50.4 % in 2017 (see Section 3.2) (European Commission, 2018c).

Public finances and fiscal sustainability

Graph 1.7: **Key public finance developments**



Source: European Commission

Public finances have improved. Having improved to 0.8% of GDP in 2017 on the back of the economic upswing, the government headline deficit is expected to further narrow in 2018 and 2019, turning to a surplus of 0.1 % of GDP in 2020 under the assumption of unchanged policies. The improvement is due to higher-than-expected revenues from personal and corporate income taxes, due in turn to better employment and demand conditions. The structural balance is projected to improve accordingly, reaching -0.2% of GDP in 2020, above the medium-term objective of -0.5 % of GDP. Public debt is expected to decrease from 78.3% of GDP in 2017 to 67.8% of GDP in 2020. This debt reduction reflects the favourable development of the primary balance, debt-decreasing stock-flow adjustments, and a reverse snowball effect since nominal GDP is

([4]) The MIP scoreboard indicator is the percentage change of export market shares (goods and services) over five years. Base effect: that one of the very good or bad performing years is no longer included in the observed period.

growing faster than interest payments on government debt.

Despite positive budgetary developments, Austria remains at medium fiscal sustainability risk in the long term. Long-term risks are rooted in the projected increase for long-term care, health care and pensions (see Section 3.1).

Table 1.1: **Key economic and financial indicators — Austria**

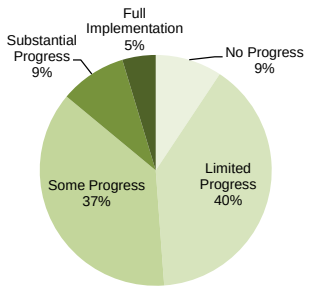
						forecast		
	2004-07	2008-12	2013-15	2016	2017	2018	2019	2020
Real GDP (y-o-y)	3.0	0.6	0.6	2.0	2.6	2.7	1.6	1.6
Potential growth (y-o-y)	2.1	1.0	1.1	1.4	1.8	2.0	2.0	2.1
Private consumption (y-o-y)	1.9	0.9	0.2	1.4	1.4	.	.	.
Public consumption (y-o-y)	2.1	1.2	0.8	1.8	1.5	.	.	.
Gross fixed capital formation (y-o-y)	1.7	-0.2	1.1	4.3	3.9	.	.	.
Exports of goods and services (y-o-y)	7.6	1.2	2.4	2.7	4.7	.	.	.
Imports of goods and services (y-o-y)	6.2	1.3	2.4	3.4	5.1	.	.	.
Contribution to GDP growth:								
Domestic demand (y-o-y)	1.9	0.7	0.5	2.1	2.0	.	.	.
Inventories (y-o-y)	0.4	-0.1	0.0	0.0	0.5	.	.	.
Net exports (y-o-y)	0.9	0.0	0.0	-0.2	-0.1	.	.	.
Contribution to potential GDP growth:								
Total Labour (hours) (y-o-y)	0.3	0.0	0.3	0.5	0.8	0.9	0.7	0.7
Capital accumulation (y-o-y)	0.7	0.5	0.5	0.5	0.6	0.6	0.6	0.6
Total factor productivity (y-o-y)	1.2	0.5	0.3	0.3	0.4	0.5	0.6	0.7
Output gap	0.3	-0.4	-1.1	-0.7	0.1	0.8	0.8	0.5
Unemployment rate	5.3	4.7	5.6	6.0	5.5	4.8	4.6	4.4
GDP deflator (y-o-y)	2.1	1.7	2.0	1.4	1.3	1.6	1.9	1.8
Harmonised index of consumer prices (HICP, y-o-y)	2.0	2.3	1.5	1.0	2.2	2.1	2.0	2.0
Nominal compensation per employee (y-o-y)	2.5	2.2	2.0	2.4	1.5	2.5	2.6	2.4
Labour productivity (real, person employed, y-o-y)	1.7	-0.4	0.0	0.7	0.8	.	.	.
Unit labour costs (ULC, whole economy, y-o-y)	0.9	2.5	2.0	1.6	0.6	1.6	1.7	1.4
Real unit labour costs (y-o-y)	-1.2	0.8	0.0	0.2	-0.6	0.0	-0.2	-0.5
Real effective exchange rate (ULC, y-o-y)	0.1	-0.1	1.0	0.9	0.2	0.8	-0.8	-0.7
Real effective exchange rate (HICP, y-o-y)	-0.3	-0.7	0.5	1.7	1.0	2.2	-0.7	-0.2
Savings rate of households (net saving as percentage of net disposable income)	11.2	10.0	7.1	7.8	6.8	.	.	.
Private credit flow, consolidated (% of GDP)	5.9	2.2	1.3	3.4	4.3	.	.	.
Private sector debt, consolidated (% of GDP)	123.1	129.7	125.4	124.1	122.5	.	.	.
of which household debt, consolidated (% of GDP)	50.9	53.1	51.0	51.4	50.4	.	.	.
of which non-financial corporate debt, consolidated (% of GDP)	72.2	76.6	74.3	72.8	72.1	.	.	.
Gross non-performing debt (% of total debt instruments and total loans and advances) (2)	.	3.4	5.3	4.2	3.0	.	.	.
Corporations, net lending (+) or net borrowing (-) (% of GDP)	0.0	1.9	1.5	1.4	1.0	0.5	0.4	0.5
Corporations, gross operating surplus (% of GDP)	26.9	25.3	24.0	24.2	24.6	24.7	24.9	25.2
Households, net lending (+) or net borrowing (-) (% of GDP)	5.2	4.0	2.2	2.6	1.8	1.6	1.6	1.7
Deflated house price index (y-o-y)	0.7	2.9	2.6	7.0	3.5	.	.	.
Residential investment (% of GDP)	4.4	4.3	4.3	4.3	4.4	.	.	.
Current account balance (% of GDP), balance of payments	2.9	2.6	2.0	2.5	2.0	2.0	2.2	2.4
Trade balance (% of GDP), balance of payments	3.8	3.2	3.2	3.6	3.0	.	.	.
Terms of trade of goods and services (y-o-y)	-0.7	-0.7	0.7	0.6	-0.9	-0.7	-0.1	-0.1
Capital account balance (% of GDP)	-0.1	-0.1	-0.3	-0.1	-0.1	.	.	.
Net international investment position (% of GDP)	-12.8	-5.1	2.3	3.7	3.7	.	.	.
NIIP excluding non-defaultable instruments (% of GDP) (1)	-9.8	-11.3	-11.4	-9.6	-4.1	.	.	.
IIP liabilities excluding non-defaultable instruments (% of GDP) (1)	175.9	193.7	175.0	158.8	148.0	.	.	.
Export performance vs. advanced countries (% change over 5 years)	14.7	-2.8	-10.3	-6.7	-2.3	.	.	.
Export market share, goods and services (y-o-y)	.	.	-0.2	3.8	-0.9	.	.	.
Net FDI flows (% of GDP)	1.4	2.8	1.1	0.5	0.0	.	.	.
General government balance (% of GDP)	-2.8	-3.2	-1.9	-1.6	-0.8	-0.3	0.0	0.1
Structural budget balance (% of GDP)	.	.	-0.8	-1.1	-0.8	-0.8	-0.4	-0.2
General government gross debt (% of GDP)	66.5	79.1	83.4	83.0	78.3	74.5	71.0	67.8
Tax-to-GDP ratio (%) (3)	42.2	42.2	43.6	42.6	42.4	42.4	42.1	41.9
Tax rate for a single person earning the average wage (%)	33.2	33.3	34.7	31.9	.	.	.	.
Tax rate for a single person earning 50% of the average wage (%)	21.3	21.5	23.1	20.9	.	.	.	.

(1) Net international investment position, excluding direct investment and portfolio equity shares
(2) Domestic banking groups and stand-alone banks, EU and non-EU foreign-controlled subsidiaries and EU and non-EU foreign-controlled branches.
(3) The tax-to-GDP indicator includes imputed social contributions and hence differs from the tax-to-GDP indicator used in the section on taxation
Source: Eurostat and ECB as of 31-1-2019, where available; European Commission for forecast figures (Winter forecast 2019 for real GDP and HICP, Autumn forecast 2018 otherwise)

2. PROGRESS WITH COUNTRY-SPECIFIC RECOMMENDATIONS

Since the start of the European Semester in 2011, 51 % of all country-specific recommendations addressed to Austria have recorded at least 'some progress'([5]) (see Graph 2.1). Substantial progress has been achieved in consolidating public finances and stabilising the financial sector, while full implementation has been achieved in transposing the Service Directive.

Graph 2.1: **Overall multiannual implementation of 2011-2018 CSRs to date**



* The overall assessment of the country-specific recommendations related to fiscal policy excludes compliance with the Stability and Growth Pact
** 2011-2012 annual assessment: Different CSR assessment categories
*** The multiannual CSR assessment looks at the implementation until 2019 Country Report since the CSRs were first adopted.
Source: European Commission

Austria has implemented several initiatives to improve the fiscal framework but subnational tax autonomy has not yet been sufficiently increased. The Intergovernmental Fiscal Relations Act 2017 contributed to simplifying financial relations among the different layers of government, reducing the number of intergovernmental transfers and marginally increasing the amount of revenues that federal states can raise through autonomous taxes. Nevertheless, the fiscal framework remains overly complex, and the misalignment between spending powers and revenue-raising responsibilities is still substantial. The agreement between the different layers of government underlying the Act contains ambitious initiatives that still need to be implemented. Recent initiatives for a more transparent allocation of competences across levels of government are a step in the right direction but concern only a limited number of policy areas so far.

Several implemented measures have helped reduce the labour tax wedge. The tax burden was reduced for low-income earners, families with working parents and employers. However, the overall tax structure remains unchanged, there is still scope for shifting the tax burden to more growth-friendly sources of revenue. Also, the tax bracket creep still needs to be addressed.

Since 2014, action has been taken to increase the effective retirement age, but the sustainability of the pension system remains a challenge. Since access to early retirement and invalidity pensions was restricted, the effective retirement age has increased. However, the statutory retirement age has not changed and fiscal sustainability remains a challenge.

Austria has made positive steps towards increasing efficiency in the healthcare sector but underlying challenges remain. While public health expenditure is in line with the legislated ceilings, public expenditure as a share of GDP is still increasing. The 2017 Intergovernmental Fiscal Relations Act set tighter ceilings up to 2021, discouraged inpatient care, and strengthened outpatient multidisciplinary primary care with the aim of shifting services away from the costly hospital sector. The announced reform of social insurance organisation may increase efficiency but is likely to cause upfront costs. The general overlap of competencies in the healthcare sector remains to be addressed.

Austria has partially improved labour market outcomes for women. While female employment has increased since 2011, most of the increase has been in part-time employment. While Austria is addressing the low take-up of childcare for children below 3 years by implementing the Agreement of the Government with the provinces (in accordance to Art 15a of the Federal Constitution Act), which led to an expansion of childcare and full-day schools, the Barcelona target of 33 % coverage is not reached yet. Uneven coverage between the Länder remains.

([5]) For the assessment of other past reforms see in particular Section 3.

Table 2.1: **Summary table on 2018 CSR assessment**

Austria	**Overall assessment of progress with 2018 CSRs: Some progress***
CSR 1: *Ensure the sustainability of the health and long-term care and the pension systems, including by increasing the statutory retirement age and by restricting early retirement. Make public services more efficient, including through aligning financing and spending responsibilities.*	**Limited progress** • Some progress in ensuring sustainability of health • Limited progess in ensuring sustainability of long-term care • Limited progress in ensuring sustainability of the pension system • Limited progress in making public services more efficient
CSR 2: *Reduce the tax wedge, especially for low-income earners, by shifting the tax burden to sources of revenue less detrimental to growth. Improve labour market outcomes of women. Improve basic skills for disadvantaged young people and people with a migrant background. Support productivity growth by stimulating digitalisation of businesses and company growth and by reducing regulatory barriers in the service sector.*	**Some progress** • Some progress in reducing the tax wedge, especially for low-income earners. • Some progress in improving labour market outcomes of women • Limited progress in improving basic skills • Some progress in supporting productivity growth by stimulating digitalisation of businesses • Limited progress in stimulating company growth and by reducing regulatory barriers

(1) This overall assessment of CSR1 does not include an assessment of compliance with the Stability and Growth Pact.
Source: European Commission

Austria has taken some steps to improve basic skills for disadvantaged young people and people with migrant backgrounds. While recent measures to strengthen early childhood education and care could have long-term positive effects on educational outcomes, the direction of reform measures in general education are less promising. They partly reverse previous reform efforts and are not in line with EU and OECD best practices. The expansion of all day schools has slowed down.

Austria has made efforts to stimulate investment and productivity through burden reduction and support for company growth, but service sector regulation remains high. Austria has reduced regulatory compliance costs through administrative burden reduction and e-government solutions. It has also implemented a revision of its regulation on trades (*Gewerbeordnung*) and has opened its stock market for listings of small and medium-sized companies, though venture capital remains an issue. Austria has not yet addressed the restrictions identified by the Commission for key professions nor performed a wider review of service sector regulation.

Overall, Austria has made some ([6]) progress in addressing the 2018 country-specific recommendations (CSRs). Limited progress was made on CSR1 addressing the sustainability of the pension, health and long-term care system together with the alignment of financing and spending responsibilities. Overall, some progress was made on CSR2. Some progress was made in improving labour market outcomes for women, while limited progress was made in improving the educational achievements of disadvantaged young people. Some progress was made in stimulating business digitalisation, while limited progress was made in supporting company growth and reducing regulatory barriers in the service sector.

([6]) Information on the level of progress and actions taken to address the policy advice in each respective subpart of a CSR is presented in the Overview Table in the Annex. This overall assessment does not include an assessment of compliance with the Stability and Growth Pact.

Box 2.1: EU funds and programmes contributed to addressing structural challenges and to fostering growth and competitiveness in Austria

EU solidarity continues to support structural change in Austria. The financial allocation from European Structural and Investment Funds (ESI Funds) aimed to support Austria in facing development challenges, amounts to EUR 4.9 billion in the current Multiannual Financial Framework, equivalent to around 0.2 % of the GDP annually or around 6.6 % of all public investment per year on average. As of the end of 2018, some EUR 2.8 billion (around 57 % of the total) was already allocated to specific projects, excluding the programmes for European Territorial Cooperation. In addition to the ESI funds, the Connecting Europe Facility had allocated EUR 854 million to projects on strategic transport networks benefiting Austria in 2014-17. Furthermore, numerous Austrian research institutions, innovative firms and individual researchers have benefited from other EU funding instruments, notably Horizon 2020 which has provided EUR 989 million to improve innovation and research in Austria.

EU funding has helped to address policy challenges identified in the 2018 CSRs. The European Social Fund (ESF) contributed to improving skills and employment outcomes for disadvantaged groups, supporting by the end of 2017 over 77,900 participants, including more than 56,700 from migrant and minority backgrounds. Overall more than 9,600 people have gained a qualification. EU Funds supported closer collaboration between business and research institutions, and R&D investments in the private sector. The ESI Fund support which will be granted to the enterprises selected for support by the end of 2017, will trigger EUR 621 million of private investment, and will result in an employment increase of 1,211 full time equivalents. Horizon 2020 supported 1,687 research projects covering a broad thematic spectrum.

In addition, the Commission can provide tailor-made technical support upon a Member State's request via the Structural Reform Support Programme to help Member States implement growth-sustaining reforms to address challenges identified in the European Semester process or other national reforms. Austria, for example, is receiving support to improve the functioning of the Federal Austrian Competition Authority in the field of competition law and data analytics; and to develop and enhance the tax compliance by applying EU best practices in the field of predictive analytics. The Commission is also assisting the authorities in their efforts to implement comprehensive policies to enhance the integration of young refugees and migrants. In addition, work has started to support a successful setting-up of multidisciplinary primary care units to secure long-term sustainability of Austria's social security system.

EU funding contributes to the mobilisation of private investment through financial instruments. In addition to a risk capital fund co-financed with ESIF, the European Fund for Strategic Investments (EFSI) provides total financing of EUR 1.3 billion in Austria and is supporting EUR 4.4 billion in private and public investments. Austria ranks 23rd as to the overall volume of approved operations as a share of GDP. Under the Infrastructure and Innovation window, 15 projects([1]) were approved and financed by the EIB with EFSI backing, for approximately EUR 1.2 billion in total financing set to trigger EUR 3.7 billion in total investment. Under the small and medium-sized enterprises component, the 5 approved agreements with intermediary banks financed by the EIF with EFSI backing amount to EUR 164 million, expected to trigger approximately EUR 651 million in investments with some 1,152 small and medium-sized enterprises and mid-cap companies expected to benefit from improved access to finance. An example of EFSI-backed project in Austria is "Bauer", a small and medium-sized enterprise which manufactures irrigation systems for large agricultural land. The company secured an Investment Plan-backed loan from UniCredit Bank Austria to renovate its production sites to make them more energy-efficient.

More information: https://cohesiondata.ec.europa.eu/countries/AT

([1]) Among which 3 are multi-country projects.

3. REFORM PRIORITIES

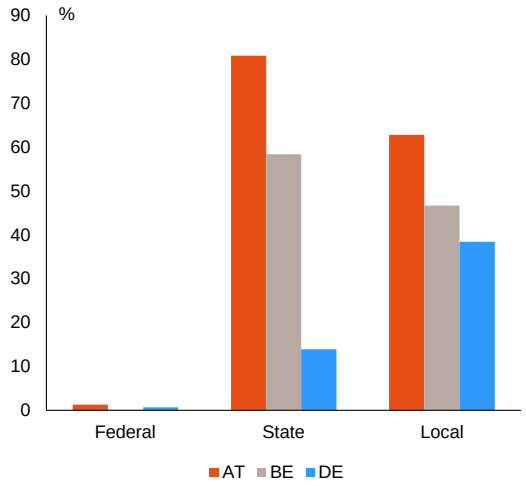
3.1. PUBLIC FINANCES AND TAXATION

Fiscal framework

Austria's fiscal federalism favours the perception of soft budget constraints at the subnational level, providing few incentives for efficient public spending. The Intergovernmental Fiscal Relations Act is at the core of Austria's fiscal framework. ([7]) It regulates the allocation of revenues from taxes and levies across the different levels of government to finance tasks assigned to them by the federal constitution. The subnational level has important expenditure-incurring tasks: in 2016, about 16.5 % and 15.1 % of total public expenditure was spent at *Länder* and local level with health care and social protection being the biggest items. Only a very minor share of that expenditure is financed via own sources of revenue, leading to a significant mismatch between revenue raising power and expenditure responsibilities, compared to other federal systems e.g., Belgium and Germany (Graph 3.1.1).

Instead of tax autonomy, subnational budgets are fed by a complex system of tax sharing, intergovernmental transfers and cost bearing, especially at the level of the *Länder*. As a result, the link between tax burden and expenditure is largely blurred, making it difficult for citizens to hold their subnational government accountable. Moreover, potential efficiency gains through tax competition are precluded from the beginning. Besides the lack of fiscal transparency, political bargaining in the run-up to the Intergovernmental Fiscal Relations Acts has further efficiency-reducing effects. (Matzinger, 2015a, b). While the Intergovernmental Fiscal Relations is enacted by the Federal Parliament with simple majority, it is actually based on a unanimously negotiated pact involving representatives of all levels of government. As a result, subnational representatives can use their political leverage to negotiate higher financing in advance, leaving them with broadly softened budget constraints (Matzinger, 2015a, b).

Graph 3.1.1: **Intergovernmental transfers as a percentage of total revenue by level of government (2016)**



Source: OECD

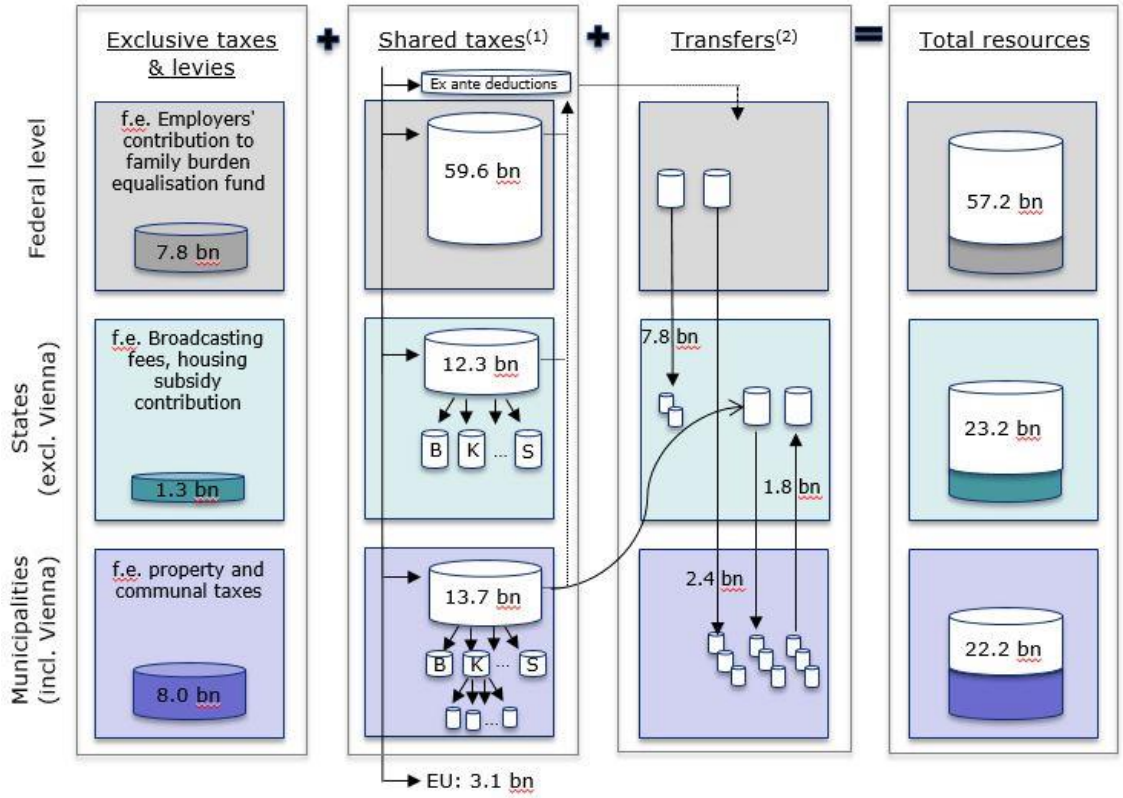
To ensure fiscal equity, Austria's fiscal framework involves significant re-distribution across levels of government. Graph 3.1.2 illustrates the complexity of the current system of fiscal relations. ([8]) In 2018, some 83 % of total tax revenue was shared across different levels of government (vertical equalisation) and across entities of the same level (horizontal equalisation). ([9]) At each distributional level, a variety of allocation formulas is applied, the most important being fixed percentages of historical revenue shares and weighted population shares. Prior to the vertical allocation, deductions are made to finance health, long-term care, and the family equalisation fund. In addition, part of the local share is re-allocated to the *Länder*, to support economically lagging municipalities. The system

([7]) While the Constitutional Charter (*Bundes-Verfassungsgesetz*) assigns legislative and executive competences to the federal, state and local level, basic fiscal principles are defined in the 1948 Fiscal Constitutional Law (*Finanzverfassungsgesetz*), which in turn provides for the Intergovernmental Fiscal Relations Act (*Finanzausgleichsgesetz*) to regulate the intergovernmental fiscal relations. The IFRA is usually adopted for a period of four to six years. The latest IFRA was adopted in 2017 for the period 2017-2021. The Ministry of Finance provides an overview: https://english.bmf.gv.at/budget-economic-policy/Fiscal-Federalism.html.

([8]) In what follows refers to the main financial flows and patterns only. Data are compiled by the Ministry of Finance. For more detailed analyses see Mitterer, Biwald and Haindl (2017), Chamber of Labour of Lower Austria (2016), and Ministry of Finance (2018).

([9]) According to estimations for 2018 provided by the Ministry of Finance.

Graph 3.1.2: **Austria's fiscal framework**



(1) Shared taxes comprise value-added tax, personal and corporate income tax, among others.
(2) Transfers include earmarked grants (hospitals) and transfers, cost bearing (teachers).
Source: Illustration based on Bröthaler, Bauer, Schönbäck (2006a, b) and Bröthaler et al. (2012). Data refer to 2018 and are compiled by the Ministry of Finance.

of transfers comprises unconditional block grants, special need transfers and earmarked grants as well as cost compensation mainly from the federal to the subnational level but also between the *Länder* and municipalities. Taken together, fiscal equalisation favours the *Länder* level. The initially allocated amount of EUR 12.3 bn grows to EUR 23.2 bn thanks to transfers from both the federal and the local level.

The 2017 Intergovernmental Fiscal Relations Act has introduced many changes but cannot be considered a major step towards increased tax autonomy or a more transparent distribution of competences. Table 3.1.1 outlines the main elements introduced by the 2017 Intergovernmental Fiscal Relations Act and the current state of play in their implementation. Interestingly, the *Länder* have not yet used their new leeway to raise additional revenues by increasing the rates for the housing subsidy contribution.

Comprehensive constitutional reform is high on the political agenda, but vested interests hamper its political feasibility. In December 2018, a constitutional law was passed for a more transparent distribution of competences across levels of government (*Kompetenzbereinigungspaket*).In essence, the law re-allocates shared policy areas to either the federal or the *Länder* level exclusively. However, only a few policy areas are affected (e.g., maternity, child, and youth care is assigned to the *Länder*; demographic policy to the federal level).

Taxation

Austria appears to have considerable scope for shifting the tax burden away from labour to revenue sources that favour more growth and inclusiveness. Standing at 55.3 % in 2017, Austria ranks third in the share of labour taxes over total tax revenue among EU Member States (EU average: 49.7 %). In 2017, the tax wedge for a

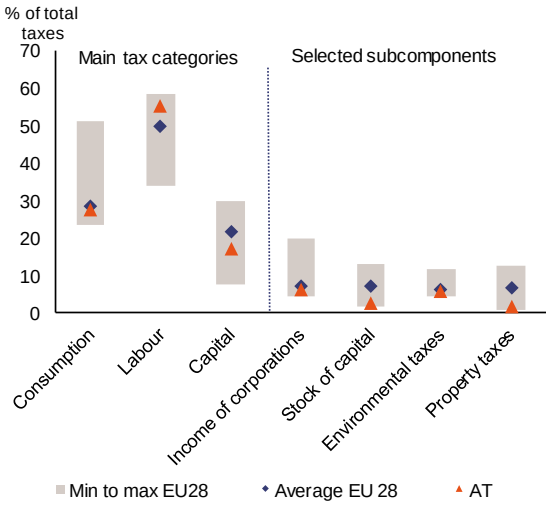
Table 3.1.1: **New features introduced by the 2017 IFR Act**

Area	Measure	State of play
Task-oriented financing	Allocation of shared taxes to municipalities in the fields of elementary and compulsory education according to fulfilled quality.	Postponed to the next IFR Act
Tax autonomy	Set up of working groups "tax autonomy" and "property tax" to strenghen subnational sources own revenue.	Work in progress
	Housing subsidy contribution becomes exclusive levy of the Länder, who can freely set rates.	Implemented
Spending reviews	Spending reviews in the fields of school health and water supply aim at evaluating the efficiency of public spending.	Reports expected for early 2019
Benchmarking	Comparative assessment of efficiency across level of government in the field of security administration.	Work in progress
Fiscal sustainability	Intergovernmental agreement on restrictive expenditure paths for health and long-term care.	Expenditure limits projected to be respected
	Lump-sum transfer of EUR 300 million to Länder and municipalities.	Implemented
	Lump-sum transfer of EUR 125 million to Länder and municipalities for increased expenditures due to migration.	Implemented
Primary fiscal equalisation	Streamlining of ex-ante deductions, simplified allocation rules for local tax shares, decreased use of fixed allocation formula based on historical revenues	Implemented
Secondary fiscal equalistion	Fiscal equalisation between municipalities becomes competence of Länder.	Implemented
	Broadening of scope of transfers from Länder to municipalities to include intercommunal cooperation, etc..	Implemented
Constitutional reform	Intergovernmental agreement on a state reform for a more transparent attribution of legislative and executive competences across levels of government by 2018.	Constitutional law is expected to enter into force in 2020.

(1)The status of implementation is based on information provided by the Austrian Federal Ministry of Finance.
Source: Illustration based on Mitterer, Biwald, and Haindl (2017)

single earner with the average wage (a rough indicator of work attractiveness) was at 47.4 %, and among the highest in the EU. ([10]) Also, low-wage and secondary earners, who are considered particularly responsive to changes in after-tax wages, face comparatively high tax burdens. ([11]) The largest component of the labour tax wedge is social contributions (European Commission, 2018c). At the same time, more growth-friendly sources of revenue appear underutilised from a cross-country perspective (Graph 3.1.3). Corporate income and capital taxes but also environmental and wealth-related taxes only generate minor shares of total tax revenue and fall well below the respective EU averages. Especially given Austria's striking wealth inequality, the absence of taxes on inheritance and gifts or net wealth, and the low recurrent property tax, provide scope for tax shifts to relieve the burden on labour. ([12]) Simulations put the potential revenue from a general tax on net wealth at between EUR 2.7 and 6.3 billion, depending how the tax schedule is designed and how much tax avoidance is assumed (Ferschli et al., 2017). Also, taxing pollution and resource use could facilitate a shift in consumers' choices towards products and resources that are socially and environmentally beneficial. Moreover, the preferential tax treatment of diesel fuel is questionable as its emissions are higher than those of petrol and cause excessive pollution in seven air quality zones.

Graph 3.1.3: **Comparison of selected tax revenues, 2017**



Source: European Commission

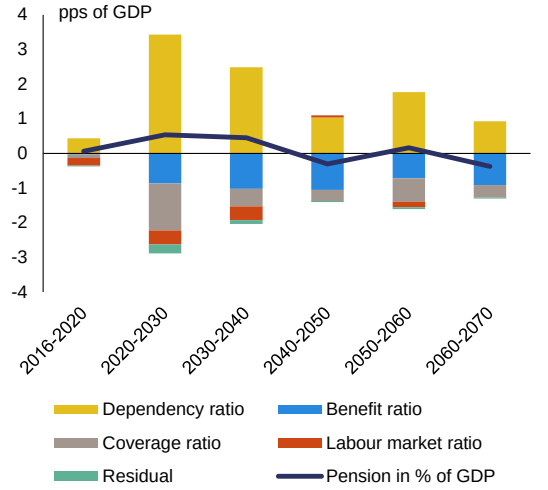
Austria's projected pension expenditure poses a medium risk to fiscal sustainability in the long term. In 2016, Austria's public spending on pensions stood at 13.8 % of GDP and is expected to increase by 0.5 pps by 2070. While this increase seems moderate, Austria starts from one of the highest pension-to-GDP ratios in the EU. In particular between 2016 and 2040, pension expenditure is projected to increase by 1.1 pps of GDP, when the post-war baby-boomer generation will have retired.

([10]) The tax wedge on labour is defined as the sum of personal income taxes and employee and employer social security contributions net of family allowances divided by the total labour cost (gross wages plus employer's SSC). It is calculated for specific types of tax payers in terms of household composition and income level expressed as a percentage of average wages. Data are taken from the OECD Taxing Wages Database.

([11]) While the female participation rate is relatively high and the inactivity trap indicator is below EU-average, the disincentives to increase hours of work are relatively high.

([12]) See European Commission (2018c) for a microsimulation study on the budgetary, distributional and growth effects of a shift from labour to recurrent property taxes in Austria.

Graph 3.1.4: **Drivers of change in public pension expenditure**



Source: European Commission

Demographic change is the main driver of pension expenditure, leading to a continuous narrowing of the contribution base relative to the number of beneficiaries. Graph 3.1.4 presents the breakdown of the pension-to-GDP ratio into four underlying components (Ageing Report 2018). The dependency ratio (i.e., the ratio of old-age people to working-age people) is what drives expenditure upward due to the retiring of the baby-boomer generation and the more structural feature of increasing life expectancy. If this were not counteracted by the other three components, pension expenditure would increase by 10.1 pps (compared to 6.5 pps for the EU-28) until 2070. However, the effective exit age from the labour market is projected to increase and this helps mitigate the expenditure increase as captured by the coverage ratio (i.e., the ratio of pensioners to elderly people). Besides past reforms to restrict early retirement, it is mainly the change in the statutory retirement age for women, which has caused the coverage ratio to fall. The average pension benefit (i.e. the ratio of average pension to average wage) is projected to decline due to a decrease in the replacement rate, itself in turn mainly driven by increasing female part-time employment. A slight dampening effect is also exerted by the labour market as the projected increase in the employment rate supports economic growth and broadens the contribution base.

Sensitivity analyses for net migration show a significant impact on projected pension expenditure. ([13]) Based on the assumption that migrants tend to join the labour force ([14]), pension expenditure would increase by around a extra 1.1 pp, assuming net migration at 33 % lower than expected under the baseline. The opposite scenario of net migration being 33 % higher than in the baseline would result in a decrease in pension expenditure by 1.3 pps of GDP for Austria, compared to the baseline scenario (see Graph 3.1.5). Introducing an automatic link between the statutory retirement age and changes in life expectancy would have a substantial downward impact on pension expenditure. Such a link would reduce public pension spending by 2.4 pps of GDP by 2070 compared to the baseline.

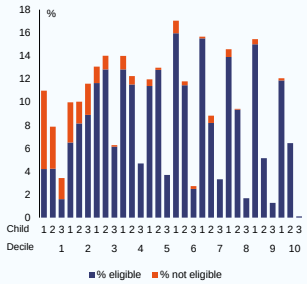
([13]) Sensitivity scenarios in are included in the 2018 Ageing Report to quantify the responsiveness of pension expenditure to changes in the key underlying assumptions. This is necessary as the pension projection exercise is carried out on the basis of commonly-agreed demographic and macroeconomic assumptions, as well as a no-policy change scenario. As the assumptions used for these types of long-run projection are surrounded by considerable uncertainty, the sensitivity tests allow us to quantify the responsiveness of pension expenditure to changes in key underlying assumptions (European Comission, 2018c).

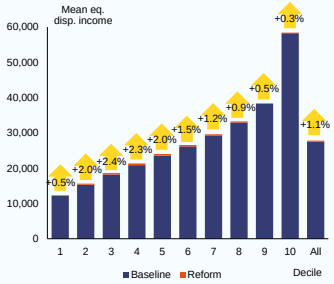
([14]) This assumption depends significantly on whether migrants are successfully integrated into the labour market. See Section 3.3 for more detailed analyses of integration policy and related labour market outcomes.

Box 3.1.1: **Effects of the new Family Bonus plus**

In recognition of the high tax-to-GDP-ratio, the new Family Bonus plus constitutes the first important reform measure of the current government with the expressed aim to reduce the tax burden of working parents. As of January 2019, it foresees a non-refundable tax credit of up to EUR 1,500 per child and year.([1]) As the tax credit reduces the income tax liability at most to zero, parents who pay little or no income tax may not benefit from the full amount. As this may especially concern single earner families and working lone parents, a child supplement (*Kindermehrbetrag*) of EUR 250 per child and year is granted in those cases in the form of a negative tax.([2]) In return for the new measures, the child allowance and the deductibility of child care costs are abolished. The overall budgetary effect of the reform is estimated at EUR 1.5 billion.([3]) In what follows analyses the distributional, equity and labour market effects of the two tax relief measures. Simulations of the effects of the reform have been conducted by the European Commission Joint Research Centre, based on the EUROMOD model using 2016 EU-SILC data. Growth effects are assessed with QUEST.([4])

Graph 1: **The distributional and equity effects of the Family Bonus plus and the child supplement**





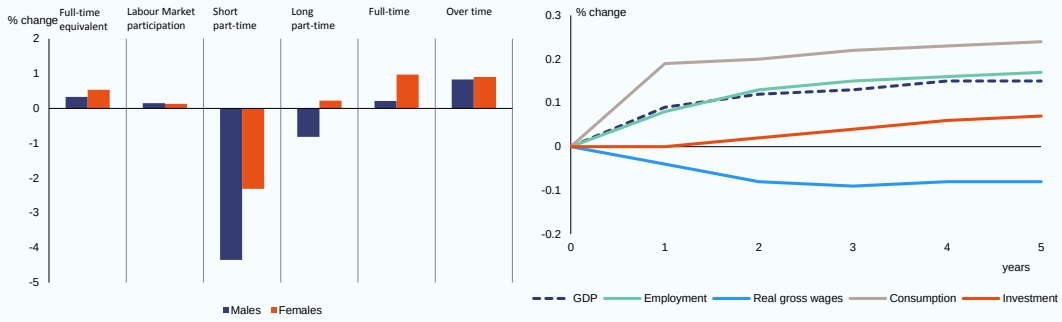
Household type	At-risk-of-poverty rate		
	Baseline	Family bonus	Child supplement
Total	13.1	12.5	12.5
Two adults with children	11.9	10.3	10.3

(1) Poverty line is EUR 14,887.66 (60% of median equivalised annual disposable income).
Source: European Commission based on the EUROMOD model.

Overall, the reform leads to an increase in equivalised disposable income all deciles but the strength of the effect hinges on the distribution of children and the eligibility of their parents across deciles. A substantial part of households in the lower deciles is not eligible for the bonus or the supplement because those households do not pay income tax or because they are no single earner or single parent households. The more pronounced income increase in the second and third decile is driven by the household composition: there are many households with more than one child of which the majority is also eligible for either the family bonus or the child supplement.

The family bonus has significant effects on income inequality and the at-risk-of-poverty rate. Overall, the reform reduces the Gini coefficient of equivalised disposable income from 0.251 to 0.248 but this effect stems almost solely from the family bonus. The at-risk-of-poverty rate decreases significantly from 13.1 percent to 12.5 percent. However, when looking at individual household types, the risk of being poor is reduced significantly only for families with two adults and children. While the reduction of the poverty rate among single parent households is almost entirely due to the child supplement, the effect is statistically not significant.

Graph 2: **Labour supply (left) and growth effects (right)**



(1) Average values are calculated for all households subject to behavioural changes. Short part time and long part time denote participation in market jobs within weekly hour intervals of [1-15] and [16-32]. Full time and over time denote labour market participation with weekly hour intervals of [33-42] and [43-60], respectively.
Source: European Commission based on the EUROMOD model (left) and QUEST model simulation (right)

The reform has positive effects on male and female labour supply in terms of both the number of hours worked as well as labour market participation. Full-time equivalent labour market participation increases by 0.53 percent for women and by 0.33 percent of men. The effect is visible on both the extensive and the intensive margin. The participation rate increases by 0.13 percent for women and 0.15 percent by men. In terms of labour intensity, the introduction of the tax credit provides strong incentives to switch from part-time to full or over time, with the effect being particularly pronounced for women.

Over the medium term, the tax relief provided by the family bonus and the child supplement is expected to increase employment, consumption and investment. By reducing the average and marginal tax rates faced by employees, the reform stimulates labour supply on both the intensive as well as the extensive margin, leading to a new equilibrium with higher employment and lower real gross wages. Net wages increase because the relief provided by the tax credit over-compensates the decrease in gross wages. The employment effect is larger for low-skilled and medium-skilled workers, mainly because their labour supply elasticity is higher than that of high-skilled workers. Due to the increase in net wages, households will also increase consumption and from the second year on, there will be a positive effect on investment. The overall effect of the reform on GDP is positive. Real GDP is estimated to be 0.15 percent higher after 5 years.

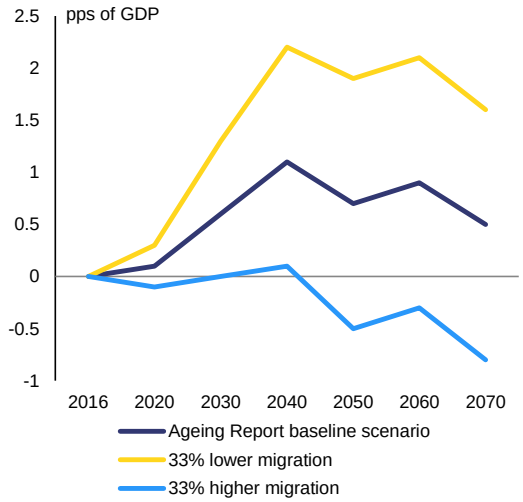
([1]) The non-refundable tax credit amounts to EUR 1,500 (EUR 500) for each child below (above) the age of 18 who are eligible for the family allowance (Familienbeihilfe). For each child, the bonus may be halved between the spouses or claimed by one spouse only.

([2]) For children that live outside Austria but in the European Union or Switzerland, the family bonus and the child supplement will be indexed to the living costs of the respective country (see Section 3.3 on the indexation of cash social benefits).

([3]) The estimated savings from the abolishment of the child allowance and the deductibility of child care costs are EUR 240 million and EUR 110 million, respectively. The Ministry of Finance expects a net budgetary effect of the reform of EUR 1.2 billion. The different estimates are mainly due to different assumptions regarding the take-up rate of the family bonus. In line with Fink and Rocha-Akis (2018) and the Budgetary Office (2018), the present study assumes a full take-up of the bonus. A slight over-estimation of the budgetary cost may also be due to the fact that the indexation of taxes and social benefits to living costs abroad is not simulatable due to data limitations.

([4]) See Ratto et al (2009) for an introduction to QUEST and Varga and in 't Veld (2014) for a recent application. See Barrios et al. (2017) on the dynamic scoring of tax reforms linking EUROMOD and QUEST.

Graph 3.1.5: **Pension expenditure - long-term projections**



Source: European Commission

Pensions in Austria are considered rather adequate compared to the EU average, but income inequality in working life is reproduced in retirement. Pension adequacy depends on income maintenance, pension duration and poverty protection. Overall, the 2018 Pension Adequacy Report shows that the Austrian pension system produces comparatively high aggregate replacement ratios and median relative income ratios for people aged 65+. By international standards, the Austrian system shows rather long pension payment and retirement duration. However, while the poverty risk for elderly men is significantly lower than the EU-27 average (EU-27: 12.3 %, Austria: 9.1 % in 2017), this is not the case for elderly women (EU-27: 16.6 %, Austria: 15.8 % in 2017). The main driver of this outcome is a substantial gender gap in pension income (EU-27: 37.2 %, Austria: 40.6 % in 2016), largely the result of gender-specific income inequalities generated during working life (see Section 3.3).

A public debate on pension reform needs to address changing labour market conditions. The ability of pension systems to cover people with different types of occupations and economic activities will have a significant bearing on the future adequacy of old-age incomes. Extending pension coverage to people in non-standard or self-employment and adapting accrual conditions to diverse work patterns is necessary, if people are to build up adequate pension rights in future (European Commission 2018e). This would allow pension reforms to be separated from social policy. Risks related to pension adequacy for low-income earners are often related to health problems, disability or interrupted careers, which should be addressed by targeted policies to prevent old-age poverty.

Health care

Public spending on healthcare in Austria is comparable to the EU average, but ageing-related cost pressures threaten the country's long-term fiscal sustainability. While total health-care expenditure (including long-term care) was above the EU average in 2015 (11.1 % versus 10.2 % of GDP), public health expenditure in the same year stood at the EU average (8% of GDP). With 72.4 % in 2015, the public share of total expenditure on health was lower than the EU average of 78 % – but when measured in per capita terms, Austria is well above the EU average, both in terms of total (EUR 4 031 versus an EU average of EUR 3 305) and, to a lesser extent, of public spending (EUR 2 965 versus an EU average of EUR 2 609). Public health-care spending (excluding long-term care) in Austria is projected to increase above the EU average of 0.9 by 1.3 pps until 2070 (2018 Ageing Report baseline scenario), mainly due to projected demographic changes, paired with a moderately positive assumption on health developments. Taking into account the impact of non-demographic factors on future spending growth (2018 Ageing Report risk scenario), public health care expenditure (excluding long-term care) is expected to increase by 2.1 pps of GDP by 2070, substantially above the EU average of 1.6 pps. Current public health expenditure without long-term care is in line with the legislated ceilings but public expenditure as a share of actual GDP is still on an upward trend.

The coverage provided by the Austrian healthcare system is high. The share of the population facing unmet needs for a medical examination or treatment due to financial reasons, waiting time or long travel distances is (together with the Netherlands), the lowest in the EU and varies very little across gender, age group, activity status and income quintiles. However, although 'physician density' ([15]) is high compared to other

([15]) Number of physicians per 1,000 inhabitants.

EU health systems, there are growing disparities in their geographical distribution.

The announced reform of social insurance organisation may increase efficiency, but is likely to cause upfront costs. The level of spending on administration is at the EU average, but to achieve greater efficiency and cost savings, the government has adopted the 'Social Security organisation Act', which plans to reduce the 21 current social insurance agencies to just 5. According to the government's budget impact assessment, the reform is expected to carry a large saving potential of about EUR 1 billion and is one of the potential options to increase efficiency (London School of Economics, 2017). However, in its assessment of the draft law, the Austrian Court of Accounts concluded that the budget impact was still unclear, as savings may only materialise in the medium-to-long-term. Other reform options indicated by the study conducted by the London School of Economics – such as an improved risk adjustment mechanism across existing funds – could have mimicked the results of a merger at lower costs. The reform also falls short of delivering the full potential improvement, as it keeps some categories in separate insurance funds, thereby still leaving some room for risk adjustment.

T**he Austrian health system is still subject to inefficient use of resources in secondary care.** Empirical data suggest overutilisation of hospital care in Austria. The number of available acute care beds (566 per 100 000 inhabitants in 2015), although somewhat lower than a decade before (643 per 100 000 in 2005) is over 40 % higher than the average number in the EU (402). At the same time, the number of inpatient discharges per 100 inhabitants (26) is one of the highest in the EU, more than 60 % higher than the EU average of 16 and the inpatient average length of stay of 8.5 days is above the EU average for 2015 (7.6). Similarly, the share of day-cases out of total discharges was lower than the EU average (21.3 % versus 32.3 %). Sectoral fragmentation, which also contributes to the bias towards hospital care, is a long-standing weakness of the Austrian healthcare system.

The Primary Healthcare reform can help shift the weight from hospital care. With the aim of rationalising the excessive reliance on in-patient care, Austria is currently pursuing a primary healthcare reform, following the legal and organisational framework set out in the Primary Health Care Act and the Austrian Structural Plan for Healthcare 2017. While the implementation of multidisciplinary primary healthcare units is ongoing, the the reform is opposed by the Chamber of Doctors. The reform received support by the European Commission and a cooperation with the European Investment Bank was initiated to secure additional investment necessary for implementation.

The on-going modernisation of the Austrian health sector will reduce health system costs. Austria continues to roll out its Electronic Health Record system in all Länder by the end of 2019. The forecast cost savings amount to EUR 129 million in the first year, although operating costs are expected to be EUR 18 million a year. In parallel, work is ongoing to increase the usability and accessibility of Electronic Health Record documents, and adapt its infrastructure for use in future services e.g. related to primary care and extension of e-card services.

Austria's health sector makes insufficient use of EU-wide tendering, procurement aggregation and non-price award criteria. Hospitals and care centres in Austria face demographic change, increasingly complex products and higher market concentration for some inputs. The high share of single bids in Austria illustrates problems linked to its small market size. For example, in 2017, 50 % of medical imaging equipment tenders and 60 % of medicinal products received only one bid. Public procurement practices designed to overcome small market size are particularly relevant in this respect. For example, EU-wide tendering remains under-utilised, with only 0.23 % of GDP, compared to an EU average of 0.62 %. The 2018 public procurement reform and the new fine of EUR 50 000 for unjustified awards without a public tender are expected to lead to more EU-wide tendering. Tender aggregation is used at regional level, while cross-regional and cross-border joint procurement projects are increasing but still more limited. A further move away from price as the sole award criterion could raise quality and promote innovation, notably where it is still used widely, such as in tendering for medical devices (50 % in Austria in 2017).

Long-term care

Austria's system of long-term care is characterised by a relatively high share of informal care, and home care has recently declined. ([16]) The Austrian system of long-term care has a twofold design, consisting of cash benefits and publicly organised long-term care services in-kind. Non means-tested cash benefits vary in size, according to different levels of individual care requirements. In-kind elements include institutional inpatient (stationary), semi-inpatient (day-care) and mobile/outpatient (i.e. at-home) care services, which are under the responsibility of the *Länder*. No detailed quantification is available concerning the distribution of institutional versus home-based care, nor for the share of informal provision, but available figures indicate that the prevalence of home-based care has declined since 2013 and there has been simultaneous growth in inpatient and outpatient (mobile) services, as well as 24-hour care at home. Furthermore the availability of long-term care services differs between the *Länder*, and the Austrian long-term care system is characterised by a rather large informal care sector. Measures to support family carers would need to focus on the compatibility of caring responsibilities and work. ([17]) As far as expenditure is concerned, based on available figures, the focus on in-kind services seems slightly above the EU average. As these typically have lower unit costs, this suggests that shifting more resources to cash allowances, where appropriate, may increase cost-efficiency.

Public expenditure for long-term care is projected to pose long-term fiscal sustainability concerns. Based on the 2018 Ageing Report, total public expenditure on long-term care (health and social part) ([18]) is at 1.9 % of GDP in 2015, above the EU average in the same year (1.6 %). However, due to demographic changes and increasing life expectancy, long-term care spending as a percentage of GDP is projected to increase steadily. In the 2018 Ageing Report reference scenario, public long-term expenditure is mainly driven by the combination of changes in the population structure and a moderately positive evolution of health (non-disability) status. The joint impact of those factors is a projected increase in spending of about 1.9 pps of GDP by 2070 (from 1.9 % to 3.8 %), an increase of 100 %, which is well above the average EU increase of 73 %. The 2018 Ageing Report risk scenario captures the impact of additional cost drivers to demography and health status i.e., the possible effect of a cost and coverage convergence, and projects an increase in spending of 3.4 pps of GDP by 2070, an increase of almost 180 % and slightly higher than the EU average of 170 %.

Recent policy measures exert additional pressure on the public budget. Reforms enacted in recent years did not make any substantial changes to how the system is organised. Assigning competences for cash social benefits to the federal level may increase efficiency and transparency, and the institution of the Long-term Care Fund (extended to 2021) targets short/medium-term viability of the system. Despite the need to adopt measures to improve the fiscal sustainability of the system, in 2017 the Austrian Parliament passed a constitutional provision prohibiting the recourse to assets belonging to people in inpatient long-term care (or those of their relatives, heirs or gift-recipients), to cover the cost of their long-term care (so-called *Pflegeregress*). ([19]) To cover the losses of revenue due to this measure, it was initially legislated that the federal government would transfer a total of EUR 100 million per year to the *Länder*, but this allocation has already increased to EUR 340 million, and is likely to

([16]) For further information on the situation of caring relatives, please see the study "Family care in Austria - Insights into the situation of caregiving relatives and into the development of informal care networks".

([17]) Measures to support family carers include among others carer's leave and part-time working arrangements, entitlement to leave allowance; financial contributions to the cost of substitute care in case of unavailability of the primary caregiver; social insurance for caregiving relatives; quality assurance in home care, dialogue between trained psychologists and caregiving relatives, financial support of 24-hour-care; etc.

([18]) Long-term care benefits can be disaggregated into health related long-term care (including both nursing care and personal care services) and social long-term care (mainly assistance with tasks required for daily living).

([19]) In Austria, up to now it has in theory been the person in need of long-term care who was responsible for financing their stay in a residential or nursing home. Personal income used for this purpose typically consisted of a retirement pension plus 'long-term care cash benefit' (*Pflegegeld*). Patients also had to use their personal assets (such as savings or property) to finance such care before their social assistance (*Sozialhilfe*) would step in to bear any cost they could not cover. This use of assets to finance long-term care was then subject to specific regulations in the *Länder*, which are responsible for both long-term care services and social assistance.

increase over time. ([20]) Indeed, the budget impact of this measure hinges on whether the financial relief awarded to long-term care dependents will increase demand for formal inpatient care, which already represents the main form of long-term care provision in Austria, as well as being more expensive than home care or cash benefits. Without some changes to this situation, increased use of institutional care is likely to exacerbate, rather than mitigate, fiscal sustainability risks.

Debt sustainability analysis and fiscal risks

No significant risks of fiscal stress are anticipated for Austria in the short term, i.e. within one year. The value of the S0 indicator, the Commission's early-detection indicator of fiscal stress, is below its critical threshold, for both the fiscal and financial competitiveness sub-indices (see Annex B). ([21]) The low spreads on sovereign yields and credit-default swaps point to a favourable financial market perception.

Medium-term fiscal sustainability risks also appear to be contained, both according to the S1 sustainability gap indicator and the debt sustainability analysis. With a value of -0.8 pps of GDP, the medium-term sustainability gap indicator S1 points to a low risk and indicates that, at current policies, no additional fiscal effort would be required over the next five years to stay below the 60 % of GDP debt reference value in 2033. This favourable result is driven by the considerable primary surplus, which compensates for the government debt level and ageing costs (see Annex B). The debt sustainability analysis confirms the S1 signal. Under normal economic conditions and a no-policy-change assumption after the end of the Commission forecast in 2020, government debt would continue to decrease steadily. It is expected to decrease from 74.5 % of GDP in 2018 to 51.2 % in 2029, on the back of continuing primary budget surpluses and a debt-reducing snowball effect. Sensitivity to possible macro-fiscal shocks is low.

In the long term, Austria is considered to have a medium fiscal sustainability risk, according to the S2 sustainability gap indicator. This indicator shows that, relative to the baseline no-policy-change scenario, an improvement of 2.6 pps of GDP in the structural primary balance would be needed to prevent the debt-to-GDP ratio from increasing continuously over the long term. The S2 value is driven by the projected rise in age-related government expenditure, in particular long-term care (contribution of 1.4 pps of GDP to the S2 value), healthcare (1 pp) and pensions (0.6 pp) (see Annex B). Under a more adverse scenario in the healthcare and long-term care areas (with non-demographic drivers pushing up costs), the S2 indicator rises to 4.1 pps of GDP. The signal from the S2 indicator prevails over the more benign debt sustainability analysis discussed above.

([20]) The special subsidy law (*Zweckzuschussgesetz*) creates a legal basis for the federal government to provide the Länder with additional EUR 240 million in 2018 as compensation for the effects of abolishing the *Pflegeregress*.

([21]) The S0 indicator is designed based on past crises to highlight short-term fiscal risks stemming from the financial-competitiveness or the fiscal side of the economy.

3.2. FINANCIAL SECTOR

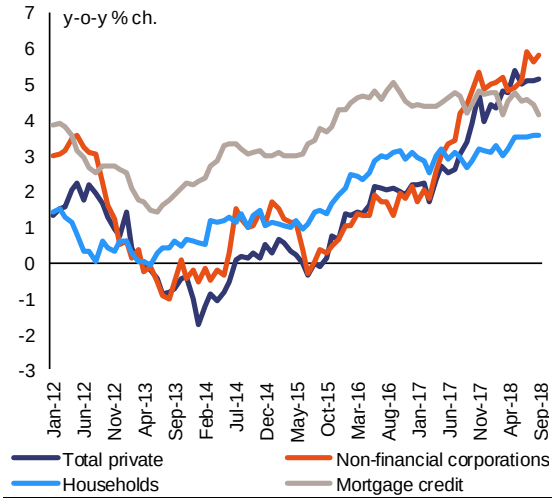
Banking and insurance sectors

Banking sector resilience has continued to improve, albeit at slower pace than in previous years. Capital adequacy (including the capitalisation of subsidiaries in Central, Eastern and South-eastern Europe – CESEE) remained flat in the first half of 2018, compared to the end of 2016. The implementation of International Financial Reporting Standard 9, which has increased loan-loss provisioning needs, has had a limited impact on the capital position of banks. The Austrian banks included in the 2018 EU-wide stress test performed better than in the previous exercise, but their results compared to peers underscore the need to continue the capital strengthening process. Asset quality has also improved supported by benign macroeconomic conditions, with the non-performing loans ratio declining to 2.9% at the end of the second quarter 2018 (according to European Central Bank data). Banks' liquidity position has remained comfortable, supported by increases in deposits. Meanwhile, the dependence on market funding has declined.

The profit generation capacity and efficiency of Austrian banks have continued to improve, but further efforts are warranted. Profitability of Austrian banks on the local market improved further in 2017 and in the first half of 2018, supported by the acceleration in credit activity and the reduction in the cost of risk. Most of the significant credit institutions have also registered an increase in fees and commission income, but their net interest margin has slightly shrunk. On the back of the reduction in operating expenses and the stabilisation of revenues, the cost-to-income ratio improved substantially in 2017, as it declined to roughly 65 %, down from 74 % in 2016. However, Austrian banks continue to be less efficient than their European peers, which highlights the need to maintain the efforts to adjust their business models and tackle structural cost issues. Banks have increasingly focused on exploring opportunities brought by digitalisation, whereas the further rationalisation of bank branches has proceeded at slower pace than in previous years.

The share of variable rate loans and foreign currency loans in total loans has also notably decreased. Overall private credit growth has increased since 2015, mainly driven by the expansion of lending to non-financial corporations (see Graph 3.2.1). Albeit on a declining trend, the share of loans with variable interest rates and foreign currency denominated loans, which are particularly high for mortgage loans, still remains above international standards (European Commission, 2018c). On the back of the prudential measures adopted by the Austrian supervisors since 2008, the share of foreign currency loans (mainly Swiss franc loans) as percentage of total domestic loans to Austrian households declined from 30.6 % in 2008 to 10.5 % in 2017. Consequently, the exposure of households to interest rate and currency risks has declined.

Graph 3.2.1: **Credit growth y-o-y % change**



Source: ECB[22]

Austrian banks continue to be among the largest players in Central, Eastern and South-eastern Europe. In 2017, the total exposure of Austrian banks with international activities to the CESEE region stood at EUR 211 billion, up from EUR 193 billion in 2016. The most important host markets for Austrian banks continue to be the Czech Republic, Slovakia, Romania and Croatia. Asset quality has further strengthened in most

([22]) The ECB computes annual growth rates as the differences in outstanding amounts adjusted for all non-transaction related issues, i.e. revaluations, reclassifications, and exchange rate adjustments. The ECB's computation might lead to results that differ from the growth rates published by NCBs. Moreover, the published growth rates exclude securitised loans that have been removed from the balance sheet and thus they might differ substantially from the growth rate of lending received by the counterparty sector.

markets in the CESEE region, supported by the expansion in credit activity, as well as the decline of legacy assets and loan-loss provisioning needs. The non-performing loans ratio of the CESEE subsidiaries declined from 4.5 % in 2017 to just below 4 % in June 2018. Foreign currency loans to clients in the CESEE region decreased to roughly EUR 31 billion in 2017, down from EUR 84.6 billion in 2010. Profitability has also remained robust, with all major markets including Russia recording positive results, whereas cost efficiency has remained above that of the operations in Austria. Intra-group liquidity transfers to CESEE subsidiaries have significantly declined since 2011. The CESEE subsidiaries have continued to expand their financing on local markets and improved their loan-to-deposit ratios. However, the issuance of debt instruments eligible to fulfil the Minimum Requirement for Own Funds and Eligible Liabilities targets may pose challenges for some of the subsidiaries of Austrian banking groups, which operate in the CESEE countries with less developed capital markets.

The insurance sector has continued its adjustment to challenges posed by the operating environment. In spite of the efforts to adapt business models and products to current market conditions and several mergers to increase operational efficiency, the insurance sector continues to be impacted by the prolonged low yield environment. Total earned premiums by Austrian insurance companies remained roughly flat in 2017, while the earned premiums of life insurance companies declined by 5.1 % in 2017 compared to 2016. Life insurance companies have shifted their business towards products linked to market performance and health insurance products to offset the declining attractiveness of traditional life insurance. Notwithstanding the challenges they have faced, investment returns of life insurance companies have remained above the average guaranteed interest rate on the stock. The Austrian insurance sector has continued to be a major player in the CESEE region, which underscores the need to closely monitor developments in these countries. The gross premiums earned outside Austria by insurance undertakings with international activities declined by some 5 % in 2017, mainly due to the divestment of activities in Italy.

Nationalised banks

The risks to public finances stemming from the three public vehicles for impaired assets have further declined. The winding-down of the assets of the financial defeasance vehicles (HETA Asset Resolution, KA Finanz and Immigon set up in the aftermath of the financial crisis) proceeded further in 2017 and the first part of 2018. Also, the risks to public finances linked to these vehicles continue to be limited. The winding-down of HETA's assets has advanced faster than planned, with 80 % of assets being disposed of in 2017. By the end of 2018, HETA aims to dispose of roughly 91 % of its assets and complete the entire winding-down process in 2020. Due to the high cash reserves obtained from these disposals of impaired assets, HETA had a second distribution of proceeds (amounting to EUR 2.4 billion) to satisfy creditors before completing the resolution process ([23]). The winding-down of KA Finanz (planned to be completed by 2026) has been supported by its transformation into an asset management company, following the withdrawal of its banking licence in 2017. The winding-down of Immigon has also advanced, albeit with delays compared to the initial plans. The completion of the winding-down was postponed from mid-2018 to 2019, when Immigon plans to open liquidation proceedings.

Housing market and real estate financing

House prices in Austria have been increasing for the past decade, but recent data point to a deceleration. Since 2005, nominal house prices in Austria increased by more than 80 %, surpassing those of most euro area 11 ([24]) countries (European Commission, 2018c). More recent data points to a relaxation of the situation, as house prices have been growing more moderately, increasing by 5.3 % in 2017 and with nominal year on year growth declining to 4.9 % in Q3-2018.

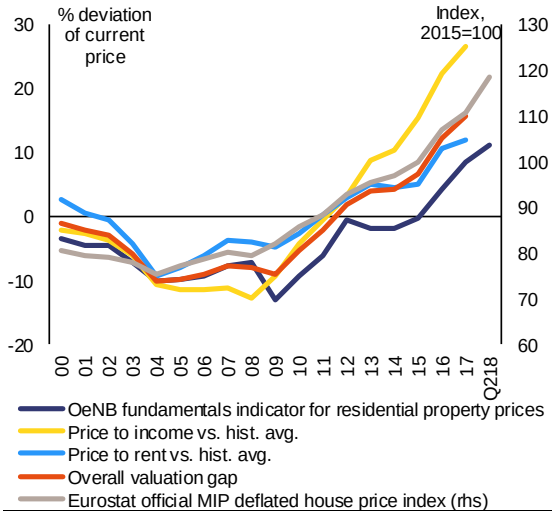
Indicators point to a possible overvaluation of house prices. In 2017, house prices were overvalued by 13.8 %. This is somewhat above the

([23]) Following the second distribution of proceeds of EUR 2.4 billion, total payments to creditors made by HETA amounted to EUR 8.2 billion. In 2017, HETA distributed EUR 5.8 billion to its creditors (European Commission, 2018c).

([24]) Euro area 11: Austria, Belgium, Finland, France, Germany, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain.

Austrian National Bank (OeNB) estimate of 11.1 % in Q2-2018 (see Graph 3.2.2). These developments mask large regional differences (see Section 3.4.3). The price to income ratio and price to rent ratio have also been above long-term average since 2012, pointing to the decreasing affordability of homeownership (see Section 3.4.3). House prices have increased considerably faster than incomes, though from a low pre-crisis level. In 2017, a 100 m² dwelling cost 10.6 times the annual household income on average ([25]), somewhat above that of most euro area countries.

Graph 3.2.2: **Price developments and valuation gaps**



(1) Overvaluation gap estimated as an average of the price/income, price/rent and fundamental model valuation gaps.
Source: European Commission, OeNB

While house prices and rents have been increasing, the impact on households' private consumption has been limited. With 55 %, Austria has the second lowest homeownership rate of the EU, with a decreasing trend. Out of the 45 % of the population living in rentals, approximately 20 % live in public housing apartments and 40 % in homes of limited-profit organisations with strict rental regulation. Overall, 18 % of the population is directly affected by the increasing rents ([26]). Despite the substantial increases in prices and rents, the share of housing costs in aggregate disposable income has been relatively stable since 2008, declining to 17.9 % in 2017, after peaking in 2013 at 19.2 %. It is also below the average of 18.9 % in euro area 11 countries in the same year. The share of actual rents in final consumption expenditure increased by 0.9 percentage points between 2005 and 2017 to 3.8 % and by 1.2 pps for imputed rents ([27]), both remaining below the average in euro area 11 countries.

Risks to financial stability appear limited, as no signs of excessive credit growth can be observed. Rising house prices coupled with an increase in mortgage credit growth warrants close oversight and led to a warning by the European Systemic Risk Board in 2016 (ESRB, 2016). Since 2005, mortgage loans ([28]) grew on average by 6.4 % annually, with some acceleration since 2015. Furthermore, the share of mortgage loans in banks' total assets continued to increase and reached 14.7 % in Q2-2018 ([29]), making them more vulnerable to a potential decrease in real estate prices. Nevertheless, the share of mortgage loans stood at 27.1 % of GDP in 2018, still below the euro area average of 36.5 % for 2017, also due to the low homeownership rate in Austria. Meanwhile, household debt has been constantly decreasing after peaking in 2010, reaching 49.8% of GDP in Q3-2018, well below the euro area average of 57.7 %. Debt as percentage of gross disposable income has been relatively stable, reaching 85 % in 2017, which corresponds to the average since 2005. The increases in house prices have only led to limited debt and credit growth. Overall, risk to the financial sector appears contained, but leaving it more vulnerable to an economic downturn.

Several measures have been taken to better mitigate risks from real estate financing. At the moment, the Austrian Financial Market Stability Board has assessed that the activation of macro-prudential tools to limit systemic risks in connection with residential property financing is not needed. However, supervisors have already stepped up reporting requirements on residential real estate. Authorities indicated in autumn 2018, that an upgraded reporting framework for real estate exposures will be most probably introduced in 2019. In 2018, a communication was issued

([25]) European Commission calculations (for methodology, see European Commission, 2016)
([26]) Mikrozensus 2017, STATISTIK AUSTRIA.
([27]) The equivalent costs associated with homeownership.
([28]) calculated as the year-on-year increase in the stock of lending for house purchase, ECB data, European Commission calculations.
([29]) OeNB, Real Estate Data for Austria – November 2018.

against the relaxation of credit standards, and a structured dialogue was introduced with banks on sustainable real estate lending. Moreover, in September 2018 the Financial Market Stability Board issued a communication and quantitative guidance on sustainable real estate lending ([30]).

SME's access to finance

While funding conditions remain satisfactory overall for small and medium-sized enterprises, low availability of venture capital remains a concern. Highly innovative firms typically rely on venture capital investments in the seed, start-up and scale-up stages due to the 'high-risk' of their products and business models. However, the availability of venture capital in Austria, compared to other *Strong Innovators* and *Innovation Leaders* ([31]) ([32]), remains low. Funding sources for venture capital funds are also less diverse than in *Innovation Leaders* (Graph 3.4.4). The main contributor to venture capital funds is the government ([33]), while the contribution of capital markets is very low.

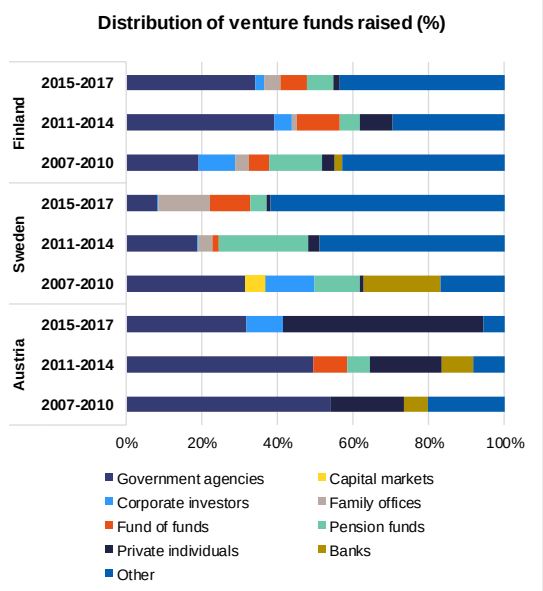
([30]) The Board made the following recommendations: *i)* down-payment by borrowers for real estate loans should not fall below a benchmark of 20%; *ii)* the maturity of newly originated mortgage loans should exceed 35 years only in exceptional cases; *iii)* debt service should not exceed 30% to 40% of the net income of borrowers; *iv)* assessment of the creditworthiness of borrowers should be comprehensive and take into account all available information.

([31]) As defined by the European Innovation Scoreboard 2018 – *Innovation leader*: SE, DK, FI, NL, UK, LU *Strong innovator*: DE, BE, IE, AT, FR, SI.

([32]) On the volume of venture capital as a share of GDP, Austria ranked 12th in the EU in 2017.

([33]) The Seed Financing Programme of the Austrian Federal Promotional Bank (AWS) supports the creation and growth of innovative firms in high tech sectors by offering seed money specifically tailored to their needs.

Graph 3.2.3: **Distribution of venture funds raised (%)**



Source: Invest Europe, European Commission

Austria has further improved the regulatory framework for other forms of equity funding. Austria amended its stock corporation law (*Aktiengesetz*) to remove obstacles to small and medium-sized enterprises listings on the Viennese Stock Exchange. The lack of a specific segment dedicated to small and medium-sized enterprises at the Vienna Stock Exchange was a marked contrast to other countries. The new segment is expected to be launched in early 2019 and may include up to 20 small and medium-sized enterprises, which signalled early on interest in a listing. Furthermore, the 2015 framework for alternative financing has positively influenced the availability of crowdfunding. Funding volumes further increased in 2017 with a growing focus on real estate related projects.

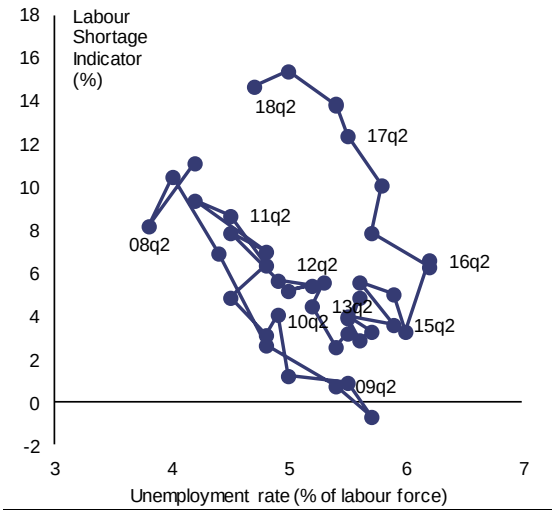
3.3. LABOUR MARKET, EDUCATION AND SOCIAL POLICIES

3.3.1. LABOUR MARKET

With stable economic growth and increasing employment, the labour market is continuously improving performance. Labour demand and job creation together with increased participation by older workers and women are the main drivers of rising employment and activity rates, reaching 76.2 % and 80 % respectively in the third quarter of 2018. The unemployment rate fell to 4.9 % in the third quarter of 2018 from 5.5 % the year before.

In light of the favourable labour market development the number of long-term unemployed started decreasing moderately in 2018. Compared to other EU countries Austria has a lower share of long-term unemployed (32 % in 2017 vs an EU average of 44.9 %). However, the long-term unemployment rate increased from 1.2 % in 2012 to 1.9 % in 2016 (vs EU average of 4.0 %) but after stabilising in 2017 at 1.9 % it started decreasing except in Lower Austria and Salzburg. This phenomenon also varies by region showing an increase in long-term unemployment in Upper Austria alongside a decline in Vorarlberg (Arbeit plus – Soziale Unternehmen Österreich (Hg.), 2017.)

Graph 3.3.1: **Beveridge curve Austria**



Source: European Commission

In an environment of increasing demand for labour and lower unemployment, there are signs of labour shortages. Following the expansionary phase of the business cycle, there is an overhang of unfilled positions (Graph3.3.1) ([34]). In 2018, the number of vacancies continued to rise, reaching 3.0 % in the third quarter. Skills shortages are pronounced in the tourism sector, skilled trade, information and consulting (Dornmayr H., Winkler B., 2018). However, aggregate national data hide considerable regional variation. According to the Public Employment Service, the highest job vacancy rate was registered in Tirol (3.1 %), Vorarlberg (2.5 %) and Salzburg (2.2 %). To counteract this development, the list of occupational shortages (*Mangelberufliste*) was expanded from 11 occupations in 2017 to 27 in 2018 and has been extended to 45 professions in 2019 in addition to providing regional information. To improve the migration of skilled workers, the government is currently modernising and simplifying the red-white-red card. ([35])

Regional disparities are pronounced though moderate, compared to other EU countries. There is a strong east-west divide in the increase of unemployment rates over recent years. In 2017 the highest unemployment rate was registered in the Vienna region, at 10.1 %, as compared to 2.9 % in the Salzburg region. Whereas the unemployment rate for people aged 15-74 years, amounted to 9.3 % in 2017 in cities and to 4.9 % in towns and suburbs, it was the lowest in rural areas, with only 2.9 %. Vienna is particularly affected by long-term unemployment (4.1 % in 2017) and has the highest youth unemployment rate, which is considerably higher than the national average (16.7 % versus 9.8 % in 2017).

Some groups do not participate up to their full potential in the labour market, a challenge that may severely affect Austria's growth potential. Women (in terms of full-time), older workers, low-skilled people and workers with a migrant background have low labour market participation rates. With demographic ageing, the underutilisation of 'these groups' labour market potential may affect growth potential.

([34]) The Beveridge curve shows the relationship between the unemployment and job vacancy rate, the number of unfilled jobs expressed as a proportion of the labour force. It is the standard tool for assessing whether the process of matching vacant posts with unemployed people reflects cyclical changes or structural shifts.

([35]) Non-EU nationals who can prove they have completed vocational training in one of the listed occupations and who have a binding job offer in Austria can apply for a red-white-red card and thus receive a residence permit.

Box 3.3.1: **Monitoring performance in the light of the European Pillar of Social Rights**

The European Pillar of Social Rights is designed as a compass for a renewed process of upward convergence towards better working and living conditions in the European Union. It sets out twenty essential principles and rights in the areas of equal opportunities and access to the labour market; fair working conditions; and social protection and inclusion.([1])

SOCIAL SCOREBOARD FOR AUSTRIA		
Equal opportunities and access to the labour market	Early leavers from education and training (% of population aged 18-24)	Better than average
	Gender employment gap	On average
	Income quintile ratio (S80/S20)	Good but to monitor
	At risk of poverty or social exclusion (in %)	Good but to monitor
	Youth NEET (% of total population aged 15-24)	Best performers
Dynamic labour markets and fair working conditions	Employment rate (% population aged 20-64)	Better than average
	Unemployment rate (% population aged 15-74)	Better than average
	Long-term unemployment (% population aged 15-74)	Better than average
	GDHI per capita growth	To watch
	Net earnings of a full-time single worker earning AW	Best performers
Social protection and inclusion	Impact of social transfers (other than pensions) on poverty reduction	Good but to monitor
	Children aged less than 3 years in formal childcare	To watch
	Self-reported unmet need for medical care	Better than average
	Individuals' level of digital skills	Better than average

Members States are classified according to a statistical methodology agreed with the EMCO and SPC Committees. The methodology looks jointly at levels and changes of the indicators in comparison with the respective EU averages and classifies Member States in seven categories (from "best performers" to "critical situation"). For instance, a country can be flagged as "better than average" if the level of the indicator is close to EU average, but it is improving fast. For methodological details, please consult the draft Joint Employment Report 2019, COM (2018)761 final.
NEET: neither in employment nor in education and training;
GDHI: gross disposable household income.

Austria performs relatively well on most indicators of the Social Scoreboard supporting the European Pillar of Social Rights. Austria has robust policies to facilitate labour market access and to ensure fair working conditions. Austria has a system of social dialogue and industrial relations with a proven capacity to contribute to balanced socio-economic development. However, recent government actions are likely to reduce this capacity. Positive developments have been noted with regard to the unemployment rate and share of youth not in employment, education or training.

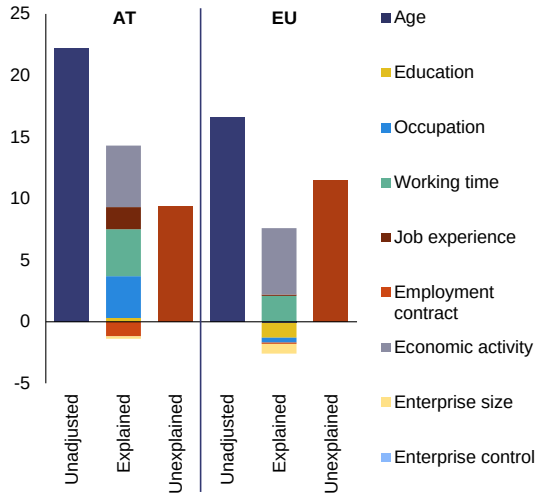
A high share of part-time employment of women coincides with a fairly large pay gap. There is a strong gender segmentation of the labour market and gender related part-time employment, among the highest in the EU, hampers the full use of female labour market potential in the context of an ageing population. One of the key reasons for women's weaker labour market participation is insufficient full-time childcare provision for children below 3 years.

In 2017, Austria recorded a clear improvement with regard to the share of young people not in employment, education or training (NEETs). With just 6.5 % of population affected, the country is well below the EU average, and the decrease by 1.5 pp since 2016 was also among the most significant. This development reflects an improved labour market situation, and can be credited to the employment-oriented educational system.

(1) The European Pillar of Social Rights was proclaimed on 17 November 2017 by the European Parliament, the Council and the European Commission. https://ec.europa.eu/commission/priorities/deeper-and-fairer-economic-and-monetary-union/european-pillar-social-rights/european-pillar-social-rights-20-principles_en

The gender pay gap remains visibly above EU average (20.1 % versus 16.3 % in 2016). Graph 3.3.2 shows the components of the unadjusted gender pay gap for Austria. ([36]) The over-representation of women in low-paying sectors is the main contributing factor to the wage gap, followed by part-time work. Female part-time employment is especially pronounced in Austria (47.9 % versus 31.1 % EU average in 2017) and often due to care responsibilities for children or relatives. It is associated with lower hourly earnings, weakened career prospects, and lower social protection in terms of unemployment benefits or pensions (see Section 3.1 on the pension gap) (European Commission, 2018f). The unused labour potential is significant and has important budgetary, distributional and equity effects (see Box 3.3.2). ([37]) Another driver of the wage gap is the type of occupation held for example, management versus service-related positions. Additionally, the tax system may discourage female labour market participation and longer working hours, especially in the case of secondary earners (see Section 3.1). The Austrian income tax system contains only a few tax incentives for increasing female labour market participation or hours worked, while the majority of provisions has opposing effects of encouraging employment take-up but disincentivising an increase in hours worked (Schratzenstaller, M., Dellinger, F., 2017).

Graph 3.3.2: **Gender pay gap and components**



Source: Eurostat

The current design of childcare services provision and family-related leave do not sufficiently contribute to equal opportunities for men and women. The proportion of children aged below 3 attending formal childcare stood at 20.6 % in 2016, still considerably below the Barcelona target of 33 %. The share of full-time enrolment (i.e. 30h or more per week) is well below EU average. ([38]) There are substantial regional differences in the provision of and demand for childcare due to different fees. Progress in the provision of child care is hampered by the institutional set-up as the entitlement to early childhood education and care starts only from the age of five and for only 16 hours per week. Fathers of children born after 1 March 2017, who want to take a full-time leave are entitled to the 'family-time bonus' (*Familienzeitbonus*), a monetary bonus. Further investment in childcare services and all day schools could help to better use the labour market potential of women.

Despite the positive development of the labour market, Austria has a comparatively low activity rate of older workers. Although the employment of older workers increased from 38.8 % in 2008 only 53.6 % of people aged 55- 64 were on the labour market in 2017, while the EU-28 average was 60.6 %. The employment rate for

([36]) The unadjusted gender pay gap is defined as the difference between average gross hourly earnings of male and female paid employees as a percentage of average gross hourly earnings of male paid employees (https://ec.europa.eu/eurostat/web/products-datasets/-/SDG_05_20).

([37]) EUROMOD simulates individuals' and households' benefit entitlements and tax liabilities (including social security contributions) according to the rules in place in each Member State. Simulations are based on representative survey data from the European Statistics on Income and Living Conditions (EU-SILC).

([38]) For children under three 5.6 % vs 17.9 % in the EU) and for older children (from 3 up to compulsory school age), at 26 %, the rate is far below the European average of 51.8 % in 2017.

women (44.8 % in the third quarter of 2018) among older workers, remains much below that of men (63.6 %.) The relatively high figures for long-term unemployment and the longer average duration of unemployment (132 days for those over 50, compared with a general average of 104 days, and 72 days for people under the age of 25) show the vulnerability of and insufficient opportunities for this group of workers. This points towards further investment needs in elderly-friendly working environments

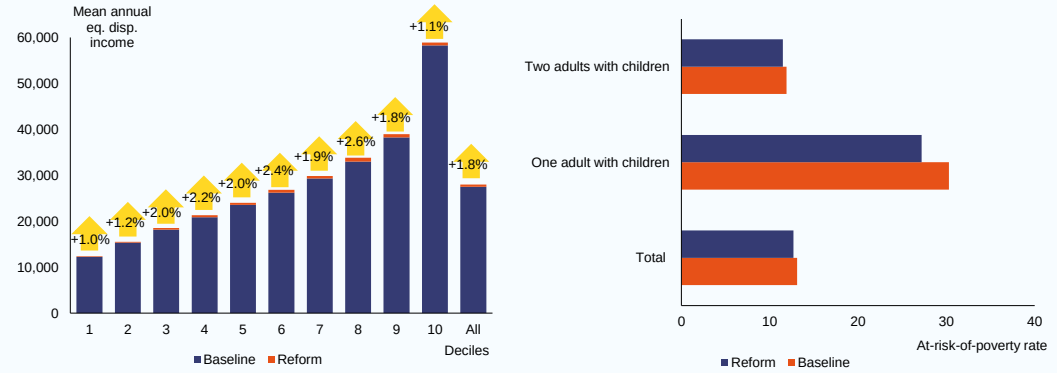
High unemployment rates among the low skilled point to underused labour market potential. Unemployment among low skilled workers has been rising since 2015 and reached 13.6 % in 2017. Low qualified (having completed only basic schooling, up to lower secondary school '*Pflichtschule*') represent a share of more than 44 % of all unemployed. This remains the group most severely hit by unemployment. Active labour market policies remain crucial for upskilling theselow-skilled workers. Investing in adult learning could help increase the employability of older workers and the low skilled.

Box 3.3.2: From part-time to full-time: the budgetary and distributional potential of increasing female work intensity

Standing at 71.5% in 2018Q2, female labour market participation in Austria is well above the EU average of 67.4 %. However, when considering full-time equivalent employment, the rate drops sharply to 54.0%. The reason for this is Austria's high female part-time employment rate (47.1 % versus 31.9 % in the EU in 2016), which is especially high for women in childbearing age 25-49 (49.1 % versus 29.2 % in the EU). ([1]) Additionally, female part-time work varies strongly across the *Länder*, which may also reflect regional disparities in the provision of child care services. Female part-time employment constitutes a main contributing factor to Austria's pronounced gender pay and pension gap.

The following illustrates the budgetary, distributional and equity effects of shifting female part-time employment to full-time work in order to reach the EU average of part-time employment of 31.9 % (Labour Force Survey 2016). ([2]) Simulations of the effects of the reform have been conducted by the European Commission Joint Research Centre, based on the EUROMOD model using 2016 EU-SILC data.

Graph 1: **Distributional and equity effects of increased female full-time employment**



(1) Poverty line is EUR 14,887.66 (60% of median equivalised annual disposable income).
Source: European Commission based on the EUROMOD model.

Overall, the shift would lead to an increase in revenues from personal income taxes and social contributions in the order of roughly EUR 3 bn, taking into account slightly reduced expenditures for means-tested benefits. On average, the reform increases mean equivalised disposable income by EUR 497 with households in the lower and the middle part of the income distribution experiencing higher gains. Poverty is affected significantly. Overall, the shift decreases the poverty risk by 0.5 pps from 13.1 % to 12.7 %. The At-risk-of-poverty rate is reduced especially for households with one adult and children (i.e., single mothers with children).

([1]) Of the approximately 1.88 million gainfully employed women, almost 500,000 have children under the age of 15. The majority of these working women with caring responsibilities work part time (77.1 % in 2016) and only 22.9 % work full time (Mayrhuber, C., 2017). Data for 2016 are presented in order to match the year of the EUROMOD input data (EU-SILC).

([2]) The simulation involves shifting a randomly selected set of women who worked part-time (i.e., between 10 and 35 hours per week) in 2016 and report to have worked part-time for the entire year 2015. As a result, approximately 70 % of the women in the sample are selected to change from part- to full-time in order to reach the EU average part-time employment rate of 31.9 %. The distribution of selected women across deciles of equivalised disposable income shows that eligible women are concentrated in the middle and the upper part of the income distribution.

People with a migrant background continue to struggle to get into employment even when attaining a high level of education. The employment rate gap of non-EU born persons vs native-born was 16.9 pps ([39]) (employment rate at 60.9 %) in 2017 remaining particularly high for non-EU born women (21.8 pps) and for those with high level of education (18 pps). The employment rates for highly skilled migrants – below the EU average – together with the high over-qualification rate (44 % non-EUnationals compared to an EU average of 41.7 %) point to difficulties for (non-EU) migrants to realise their full potential on the labour market. In addition, in 2017, the employment rate for native-born persons (aged 15-34) with two foreign born parents was at around 76 %, 14.6 pps lower than among native-born people with a native background (90.5 %) (OECD, EU, 2018).

Despite increasing employment levels the labour market integration of refugees remains an issue. The labour market integration of refugees remains a challenge with high unemployment rates (in 2017: nationals from Syria 61.8 %; Iraq: 46.4 %; Afghanistan: 34 %). In the first year since the '*Integrationsgesetz*' entered into force in 2017 there was a significant increase in the counselling provided in the integration centres (+70 %) (Österreichischer Integrationsfonds, 2018). Increasing investment in apprenticeships and skills upgrades for refugees combined with other integration measures may significantly shorten the time needed for their labour market integration.

Despite the commitment to reducing unemployment, the government's active employment strategy is mixed. The restrictive expenditure path underlying the government's budgetary strategy severely reduced targeted support for some vulnerable groups. In particular financial support for the public employment service was cut and several programmes were discontinued, which included measures facilitating the labour market integration of people entitled to asylum and subsidiary protection (Integrationsjahr) and measures supporting activation for long-term unemployed (Aktion 20,000) and elderly. With the aim of making work pay, the government introduced or announced recently several tax measures, including reducing unemployment insurance contributions for low-wage earners (see Section 3.1). The special fund for integration of apprentices, which is a minor part of the overall company-based assistance for apprenticeships will be increased from EUR 10 million to EUR 20 million. In order to increase the flexibility of workers and replying to business needs the government increased the maximum allowed daily working time to 12 hours. A reform of the unemployment assistance is announced for 2019. Support for programs assisting mobility of recognised refugees like "b.mobile" is continued. Social partners play an important role in recognising skills needs and in the design of training programmes and the apprenticeship system. (European Commission, 2018h). Since the government has taken office in December 2017, the established system of social dialogue and involving social partners in the decision making process have been challenged. Recent government actions are likely to reduce their proven capacity to contribute to balanced socio-economic development.

3.3.2. SOCIAL POLICIES

Social transfers are effective in reducing income inequality and protecting people from poverty and social exclusion but vulnerable groups remain. Spending on social protection is among the highest in the EU. At 42.2 %, the poverty reducing impact of social transfers also remained high in 2017, reflecting the high adequacy of minimum income. Austria has one of the lowest share of population at risk of poverty or social exclusion (AROPE) in the EU (18.1 % versus an EU average of 22.5 % in 2017). However, the risk is higher and increasing for vulnerable groups such as single parent households (47.9 % versus an EU average of 47 % in 2017) as well as population living in (quasi-) jobless households whose at risk of poverty (AROP) rate increased from 50.2 % in 2011 to 61 % in 2017. Inequality of opportunity for children is high. The AROPE rate for the children of low-skilled parents was 57.7 pps higher than for the children of high-skilled parents in 2017, a gap that is greater than the EU average. Appropriate investment in the employability and social inclusion of these vulnerable groups could alleviate this risk.

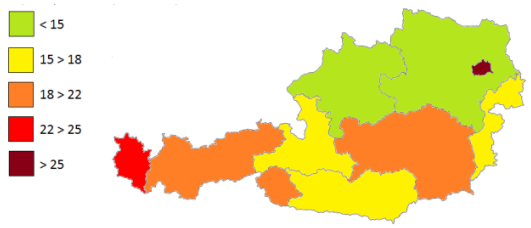
([39]) Eurostat 2017. The gap was of 17.1 pps in 2016. Average gap in the EU28 is of 10 pps.

Major differences exist in the social situation between regions. The national AROPE rate masks considerable variation across the nine federal states (*Länder*), with Vienna (26 %) and Vorarlberg (23.2 %) having the highest AROPE rates, and Lower and Upper Austria having the lowest (13 % and 14.3 %, respectively).

Bigger cities, especially inner city areas within them, are facing a number of social challenges. People living in cities are more at risk of poverty or social exclusion (26.3 % of the city-based population in 2017) compared to towns and suburbs (16.4 %) and rural areas (13.0 %). Vienna for example shows both a high risk of poverty rate (26 % in 2016), as well as slower economic growth than the other Austrian regions (GDP per capita in Vienna decreased from 164 % of the EU average in 2010 to 153 % in 2016).

In-work poverty among foreign-born workers is much higher than for native-born Austrians. The gap between the poverty risk for migrant workers and the native born was 11.9 pps, one of the widest in the EU-28. This gap also reflects a regional disparity, as a high percentage of the population with a migrant background resides in bigger cities, in particular in Vienna. In Vienna, 24.2 % of the population were foreign nationals in 2016 (14 % Non-EU, 10.2 % EU), whilst nationally this figure stands at 14.6 % (7.1 % EU, 7.4 % non-EU).

Graph 3.3.3: **Percentage of the population at risk of poverty or social exclusion by NUTS 2 region (Bundesland) 2016**



Source: Eurostat

Uniform nationwide rules for the minimum income benefit could help mitigate poverty risks for vulnerable groups. However, a reduction of the benefit (*Bedarfsorientierte Mindestsicherung*) for persons granted temporary asylum has been declared incompatible with EU law (2018/C123/11). Doubts about compatibility also arise from the planned indexation of family allowances and benefits to the price level of their country of origin for people working in Austria whose children live abroad. As part of its cost-saving measures the government agreed to index the family bonus and child allowances for children living outside Austria as from January 2019. The distributional effects of the family bonus plus are analysed in Section 3.1.

Social protection for employees and the self-employed performs relatively well. Austria has one of the highest coverage rates of unemployment benefits for the short term unemployed. However, marginally employed people (*geringfügig Beschäftigte*), a majority of who are women, are not covered by unemployment insurance. They can opt for other strands of social insurance, i.e. sickness, maternity, pensions and invalidity schemes. The number of this group of marginally employed, alike those self-employmed and in atypical work, is continuously increasing.

Overall, Austria's pension, health, and long-term care systems offer adequate benefits and high quality services. However, vulnerable groups, inefficiencies, and sustainability risks remain, which are addressed in Section 3.1.

3.3.3. EDUCATION

While early school leaving is below the EU average, social and regional disparities persist. Austria's early school-leaving rate saw a continuous decrease between 2007 and 2016, but increased again in 2017 to 7.4 %, in particular in towns and suburbs. It varies between 4.5 % in Styria (*Steiermark)* and 9.6 % in Vienna *(Wien)*. In rural areas it amounts to 4.9 % compared to 9.5 % in towns and suburbs, and 8.4 % in cities. Foreign-born pupils are still more than three times more likely to leave school early than native-born pupils (18.4 % vs 5.3 %), and this after having already reduced the gap (European Commission, 2018f).

Educational outcomes are disproportionately influenced by the socio-economic and/or migrant background and basic skills remain below the EU average. 15.9 % of the variation in PISA 2015 science scores is explained by the parental background of 15 year olds (2015). Education outcomes of first generation immigrants

in PISA tests are almost 3 school years behind native born pupils – the highest gap in the EU. This major gap is also confirmed by national testing (European Commission, 2018c). Recent international testing (PIRLS) showed even a widening gap in reading for those with weak socio-economic or migrant background (Wallner-Paschon et al., 2017). Recent studies show that children of immigrants are more likely to join the non-academic stream and that educational segregation within the population as early as at the age of ten is very difficult to overcome later, unless addressed with effective preventive measures at an early stage. (OECD, 2018a) Investments to address unequal education outcomes due to socioeconomic or migrant background are thus needed.

Austria's spending on education remains relatively stable but outcomes do not yet match the spending levels. The share of general government expenditure stood at 9.7 % in 2013 and 9.8 % in 2016. Based on Purchasing Power Parity, Austria significantly outspends both the EU and the OECD average (OECD, 2018b) Despite the high spending in education Austria achieves only moderate education outcomes when comparing basic skills internationally (European Commission, 2017a). Urban schools, often facing difficult socio economic environments, appear to be at a disadvantage in funding, as their specificities seem not adequately addressed in the current structure of funding (OECD, 2016).

The current government has a comprehensive new reform agenda, which partially reverses the direction of previous reforms. A pedagogical package was presented in spring 2018, with limited additional financial resources. First measures in the area of primary and new secondary schools were adopted by the parliament in December 2018. The package reintroduces a 5 scale grading scheme jointly with grade retention at an earlier stage and increased possibilities for streaming and differentiation measures in new secondary schools. Further steps will revise criteria to enter primary school, introduce individual competence and potential checks in 3rd and 7th grade and updates and simplify the curricula. Some of these actions in particular reinforcing streaming and tracking combined with actions under the government programme override earlier reforms. Schools and school heads will receive more autonomy but without extra resources.

All-day schooling is increasing slowly. The proportion of pupils in all-day schooling improved on an annual basis by 1.3 pps to 24.4 % in 2017/2018 and to 25,5 % in 2018/19. However, the more comprehensive type, called *'verschränkte Form'*, ([40]) stalls at about 11 % of all day schools . Doubling the implementation period for the recent additional funding of EUR 750 million, from2019/20 until 2032/33, slows the expansion process.

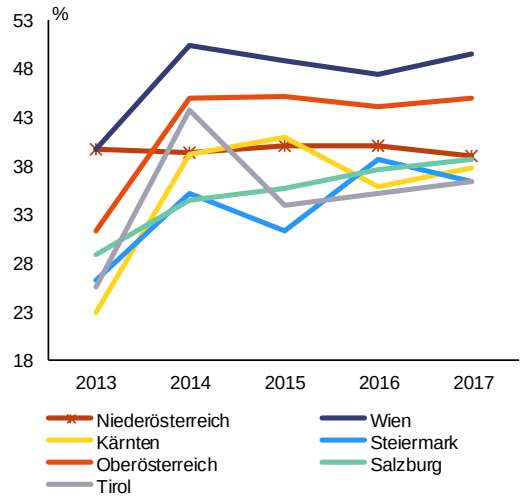
Participation in early childhood education and care has increased but the quality does not sufficiently match the challenges. Early childhood education and care is administered at local level, but the provinces and the federal government also have responsibilities. Young people with low socio-economic and/or migrant background, generally participate less often, which therefore cannot sufficiently offset disadvantages suffered at an early age. The government programme has announced several measures to improve both participation and its quality. A recent four year agreement between the government and the regions (15a) guarantees financing of EUR 180 million per annum between 2018/19 and 2021/22. The regions will contribute EUR 38 million of this. The agreement foresees the extension of facilities, skills and linguistic support are to be improved. It aims to improve qualifications of staff and improve pupil-teacher ratios, but partly on a voluntary basis. The agreement falls short of a long-term development perspective.

Austria performs relatively well in tertiary education though regional differences persist. Austria has met the tertiary education target with 40.8 % of 30-34 year olds in 2017**.** Results in Austria's provinces have converged between 2012 and 2017, with *Steiermark* doubling its graduates (Figure 3.3.4). However, it remains difficult for children from parents with medium and low education levels to access higher education. (European Commission, EACE, Eurydice, 2018)

([40]) Verschränkte Form' means that instruction is spread over the whole school day, and is not only concentrated in the morning.

The human resources base in science and technology has expanded overall but shortages in engineering and computing specialists persist. Austria increased the share of researchers in the labour force between 2007 and 2015, ranking seventh in the EU. Almost 2/3 were employed in the business sector. New graduates in science and engineering per thousand of population aged 25-34 have also increased significantly over the last decade. Graduates in computing saw less expansion. Academic jobs in science, technology, engineering and mathematics are forecast to increase twice as much (25 %) between 2013 and 2025 compared to the EU average (CEDEFOP, 2018). Companies report already in 2018 that they cannot fill one sixth of their open positions in these fields (Industriellenvereinigung, 2018). The Austrian Research and Technology Report identifies a particular need to have more technical and engineering graduates with a focus on IT (BMBWF, BMDW, BMVIT, 2018) Both the Austrian University Development Plan 2019-2024 and the performance based funding agreements 2019-2022, aim to address these issues.

Graph 3.3.4: **Tertiary attainment by NUTS 2 region in per cent**



(1) Burgenland and Vorarlberg have been excluded since no figures are available for 2012 and 2013
Source: Eurostat

Digital skills in Austria have continuously improved and are above the EU average, though clearly behind the four leading countries. Digital skills among the adult population remain average (European Commission, 2018c). While Austria registered slight improvements of basic skills of internet users compared to 2017, the country is behind the top performing countries (European Commission, 2018i). 43 % of Austrian companies lack IT staff and 74 % fear that the situation might deriorate further (Österreichische Industriellenvereinigung, 2018). An infrastructure review by the Ministry of Education in 2016 showed that 35 % of schools lacked WLAN in at least 50 % of their premises with significant differences between different school types(BMB, 2016).

3.3.4. INVESTMENT NEEDS

Increased investment in affordable childcare services, education, and training and the socio-economic integration of migrants are important for improving productivity and long-term inclusive growth. Insufficient provision of quality full-time childcare services contributes to the high share of female part-time employment and divergent education outcomes. Shortages of skilled labour point to the need to invest more in general education and training, lifelong learning as well as in elderly-friendly work environments to better use the labour potential of older workers, workers with a migrant background and the low-skilled. Using the country's full labour potential also requires more investment in the socio-economic integration of non-EU nationals.

3.4. COMPETITIVENESS REFORMS AND INVESTMENT

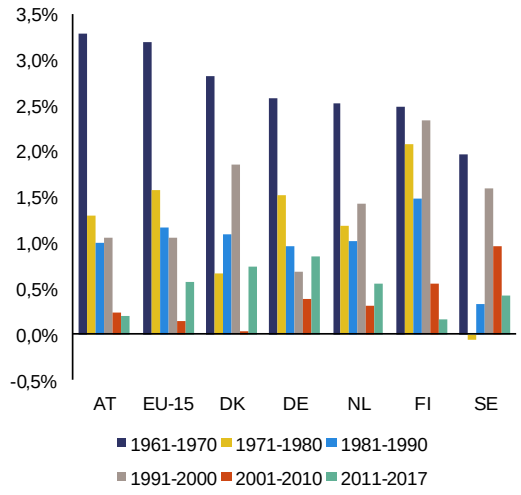
3.4.1. PRODUCTIVITY GROWTH AND INVESTMENT NEEDS

Productivity growth

Contrary to other countries, Austria's total factor productivity growth has stagnated since the crisis and decreased in particular in information and communication technology and professional services. In growth accounting, economic growth can be broken down into a labour and a capital component, as well as total factor productivity (OECD, 2018c). In the light of a projected reduction of the labour force, the most important contributor to long-term economic growth is total factor productivity. It measures aspects like the efficiency with which labour and capital are used together, but also technological progress. Like in most countries, total factor productivity growth has been slowing for several decades, but the decrease since the crisis is more pronounced than in most *Innovation Leaders* and *Strong Innovators* ([41]) (see Graph 3.4.1). Since 2015, total factor productivity has been growing again weakly. However, this might be mainly driven by the economic upswing rather than by structural components, as total factor productivity growth behaves cyclically (OECD, 2018c). Total factor productivity for the whole economy follows the developments in the manufacturing sector, where it has been stagnating since the crisis. Negative Total factor productivity growth is visible in the construction sector, as well as in information and communication technology and professional services, while it stagnated in financial services ([42]).

Since the crisis, productivity growth was also negatively affected by a decline in information and communication technology capital per hour worked, as well as increased inefficiency of labour allocation in the information and communication technology sector. Overall, improved labour allocation across sectors and less dispersion in labour productivity between sectors contributed positively to aggregate productivity growth (macro-level allocative efficiency) in 2000-2014. In 2005-2016, productivity growth in most sectors was also supported by an increased efficiency in the allocation of workers across firms within the sector, with the exception of the information and communication technology and the construction sector. This hints at barriers making it increasingly difficult for workers to move towards more productive information and communication technology and construction companies, such as regulations that might not be flexible enough to adapt to the rapid evolution in information and communication technology sector. In certain service sectors, in particular professional services, allocative efficiency is even negative ([43]) (2014 data, though improving somewhat in 2005-2016), hinting that barriers and regulations act as a drag on productivity in these sectors. The decrease in growth of information and communication technology capital per hour worked since shortly before the crisis has also contributed to the slowdown in productivity and economic growth (WIFO, 2019; OECD, 2018c).

Graph 3.4.1: **TFP developments in selected countries**



(1) DE for data before 1992 linked data for GDR and West Germany
Source: European Commission

([41]) As defined by the European Innovation Scoreboard 2018 – *Innovation leader*: SE, DK, FI, NL, UK, LU *Strong innovator*: DE, BE, IE, AT, FR, SI.

([42]) European Commission calculations based on EU KLEMS. Sectors according to NACE.REV.2. Financial services = Financial and Insurance activities; Professional services = Professional, scientific, technical service activities.

([43]) Sectoral labour productivity is written, in logs, as the sum of two terms: the unweighted average of firms' productivity and the extent to which the relatively more productive firms have a greater share of employment. Saying that allocative efficiency is negative means that labour is not predominantly allocated to the more productive firms.

Investment needs

The strong cyclical upswing masks underlying weaknesses of the Austrian economy related to regulatory rigidities and insufficient productivity-enhancing investments. The Austrian economy has experienced a strong economic upswing in 2018. This has been visible in strong investment growth, but also other key indicators of business dynamism, such as start-up numbers. This positive economic climate however masks structural challenges that bear down on continued growth prospects and economic resilience. These include the only slowly returning productivity growth, the still moderate innovation outcomes and insufficient progress towards a digital and sustainable Austrian economy. In its national Research, Technology and Innovation strategy 2011-2020 (BKA et al., 2011), Austria set itself the aim of becoming an *Innovation Leader* by 2020 (it is currently a *Strong Innovator*; see below). This remains the crucial reference for assessing its growth- and productivity-targeting policy measures. The effectiveness of investments depends notably on addressing restrictive regulations, in particular in Austria's services (Section 3.4.2), reducing administrative burden and improving procurement practices (Section 3.4.4). Austria has not addressed the Council Recommendation yet but it is planning to appoint a National Productivity Board in the coming months.

Focussing investments on innovation, digitalisation and sustainability is needed to boost productivity and strengthen growth in Austria. Untapped human capital hampers productivity and long-term growth (see Section 3.3). In parallel, productivity-enhancing investments are important to ensure sustainable growth, in particular measures addressing the growth and competitiveness of Small and Medium Enterprises. Lack of diffusion of digital technologies and business models among such firms are bottlenecks for productivity. Furthermore, high investments in R&D are not yet fully translating into innovation outcomes, highlighting inter alia the need to foster science-business links. Investments into eco-innovation, the circular economy, energy efficiency, renewables and sustainable mobility are needed for more sustainable growth.

Research and innovation

R&D investments have been increasing continuously, driven by the public and private sector. R&D intensity in Austria has surpassed 3 % of GDP since 2014, reaching 3.16 % of GDP in 2017. This is still far from the national target of 3.76 % of GDP for 2020. The private sector is the key driving force behind this trend, accounting for more than 70% of total R&D intensity. With 2.22 % of GDP in 2017, Business Expenditure on R&D is the second highest in the EU. Business Expenditure on R&D as a percentage of GDP performed by small and medium-sized enterprises has also increased since 2007 and was the third highest in the EU in 2015. Austria ranked fifth in the EU with respect to total government support to business R&D (as a percentage of GDP) in 2015, with R&D tax incentives accounting for 54 % of total support (OECD, 2018d). After significant increases between 2006 and 2009, public R&D intensity has stabilised at around 0.93 % of GDP in 2017. In 2015, five out of the 30 most R&D intensive regions in the EU were in Austria (European Commission, 2018j).

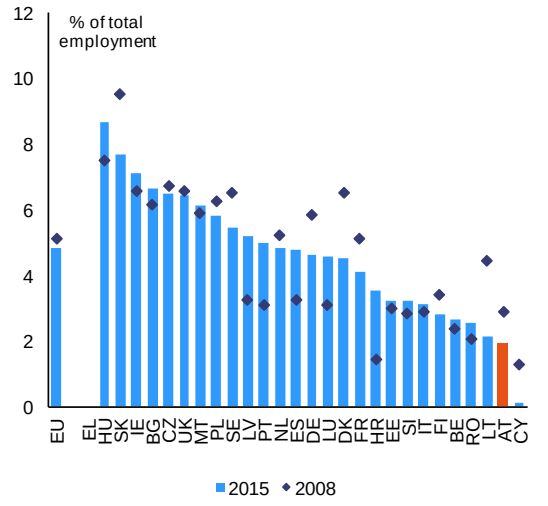
However, there is room to improve the overall effectiveness of the research and innovation system by better translating R&D investments into excellent science and ground-breaking innovation. Despite the relatively high level of investment in the public science base and the increasing international openness of the research system ([44]), Austria has not progressed since 2007 with respect to the key indicators of scientific excellence (such as scientific publications within the top 1 % or top 10% most cited scientific publications worldwide). The performance on these indicators stays around EU average. Despite an increase in its innovation performance since 2010, Austria is still not an *Innovation Leader*, but remains in the second rank category of *Strong Innovator* (European Commission, 2018k). In particular, concerning employment in fast-growing innovative firms ([45]), Austria performs poorly,

([44]) The country ranked fourth in international co-publications as a percentage of total publications in 2017.

([45]) Number of employees in high-growth enterprises in 50 % most innovative sectors, as a share of total employment for enterprises with 10 or more employees. High growth firms are defined as those firms with an average annual growth in employees greater than 10 % a year, over a three-year period, and with 10 or more employees at the beginning of the observation period.

ranking in the bottom three of EU Member States in 2015 (see Graph 3.4.2). Unicorn companies ([46]) are also rare in Austria with only Tricentis, a *software testing solutions* company from Vienna, reaching unicorn status in 2018 (Dealroom, 2018). Despite significant increases in R&D investments in the high-tech and medium-high tech manufacturing sectors over the last decade, the shares of these sectors in total value added slightly decreased.

Graph 3.4.2: **Employment in fast-growing enterprises in innovative sectors (% of total employment)**



(1) Greece: no data
Source: European Innovation Scoreboard, Eurostat

Further investing into small and medium-sized enterprises' innovation capacity and in complementary intangible assets could generate productivity gains. The share of small and medium-sized enterprises innovating in-house is below the one of *Innovation Leaders* such as Finland, Sweden and the Netherlands, while the sales of new-to-market and new-to-firm product innovations are even below the EU average (European Commission, 2018k). This is related to a dominant focus on incremental innovation (OECD, 2018e). Besides R&D investments, it is increasingly important to invest in other intangible assets (such as e.g. software and databases, but also training, design, organizational capital, etc.) which are complementary and increasingly essential for business success and productivity growth in Austria (European Commission, 2019a). Public and private investments into intangibles, such as organisational capital, market research and training (as percentage of GDP) are below their levels in other *Innovation Leaders* and *Strong Innovators* ([47]). Furthermore, Austria's non-R&D innovation expenditure is clearly below the EU average ([48]).

Science-business links are well-established overall, but their full potential is not yet exploited. In 2017, Austria ranked fourth in the EU regarding public-private scientific co-publications as a percentage of total publications, but has not progressed since 2007. It has a consolidated and diverse landscape incentivising collaboration and technology transfer between public and private sectors. The *OECD* highlights the importance of stronger linkages between industry and science targeting ground-breaking innovation in strategic fields. This also requires better strategic steering and coordination of research and technology organisations (OECD, 2018e)

Austria's innovation performance would benefit from more cooperation between its *Länder* and with other countries in corresponding Smart Specialisation fields. The Austrian Smart Specialisation approach is based on the national RTI strategy and regional strategies at the level of the nine *Länder*. In 2016, a policy framework was presented to improve the interaction between the national strategy and regional strategies (OEROK, 2016). The progress in implementing the Smart Specialisation Strategy process differs between the *Länder*, with some being Smart Specialisation pioneers and others still catching up. There are also important regional differences in relation to the R&D intensity, which ranges from 1 % of the regional GDP in Burgenland to 5.16 % in Styria in 2015. Such regional disparities can be addressed by strengthening cooperation between the Austrian *Länder* and with regions in other countries (OECD, 2018e).

([46]) Privately held start-up company valued at over USD 1 billion.

([47]) SPINTAN and INTAN data.

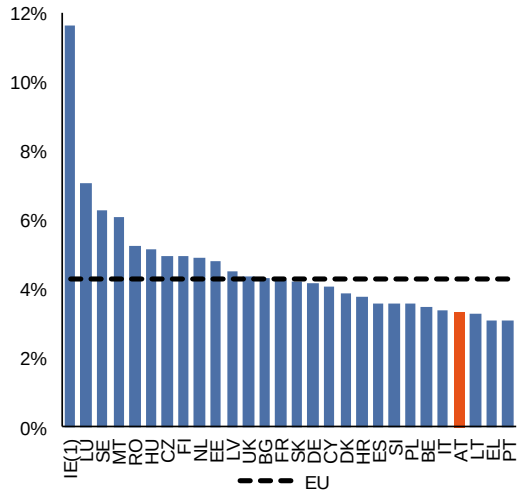
([48]) Non-R&D innovation expenditure includes the acquisition of machinery, equipment and software, expenditure for acquisition of other external knowledge, 'training', 'market introduction of innovations' and 'other preparations expenditures'.

Digital transformation

Austria's firms invest in information and communication technology but notably smaller businesses lag in adopting new digital technologies and business models. Austria's share of information and communication technology investments (as a percentage of total investments) is above the EU average (WIFO, 2019). In terms of digital intensity Austria's large businesses rank relatively well in EU comparison. However, this is not the case for its small and medium-sized enterprises, as41.7 % are considered to have a very low level of digital intensity (using less than three digital technologies). Among information and communication technology adoption proxies relevant for smaller businesses, Austria ranks low in cloud computing services (European Commission, 2018i). Austrian businesses also face an increasing number of cyber-crimes (Bundeskanzleramt, 2018a). In early 2018, 61 % of businesses reported in a survey to be victims of a cyber-attack, with smaller businesses being particularly vulnerable (KPMG, 2018). The considerable take-up of the programme 'KMU Digital' shows demand and interest among small and medium-sized enterprises in getting advice on digitalisation. The program ends in Spring 2019. Austria plans to extend it. A call to establish Digital Innovation Hubs in the regions has been launched. These hubs will support small and medium-sized enterprises, universities and municipalities in the uptake of digital technologies.

Austria's information and communication technology sector is comparatively small. Austria is not performing on par with *Innovation Leaders* in the field of producing (tradeable) information and communication technology products and services. Its information and communication technology producing sector ([49]) is smaller than in *Innovation Leaders* and has stagnated both in terms of GDP as well as employment share (see Graph 3.4.3). This notably holds for information and communication technology services, where significant growth could be observed in other *Innovation Leaders*. Correspondingly, the information and communication technology producing sector in Austria has a comparatively low share in total valued added. (WIFO, 2019). This is most problematic in fields where early-mover advantages are at play (OECD, 2017). Austria support for research and innovation in information and communication technology companies is part of wider R&D- and business-support programmes.

Graph 3.4.3: **Share of ICT sector in GDP**



(1) Data for Ireland refers to 2014
Source: European Commission

While digitalisation is a key priority for Austria, there is uncertainty on implementation, monitoring and budget for many of the intended measures. The effectiveness of Austria's policy framework for digitalisation has for a long-time suffered from fragmentation (WIFO, 2019). In addition, there is a growing risk of a digital divide between its regions. To address these issues, Austria adopted in January 2017 the Digital Roadmap Austria as its first nationwide comprehensive digital strategy. The subsequently elected government has incorporated many of the strategy's measures in its government programme. Work on a new digital strategy is ongoing. In addition, a new digital agency has been established at the Austrian Research Promotion Agency. However, implementation, budgetary allocations and monitoring tools for Austria's digitalisation policy are not yet defined.

([49]) The information and communication technology producing sector would comprise notably the manufacturing of information and communication technology components as well as information and communication technology services, such as information and communication technology consulting, data processing, maintenance. (OECD 2006 based on Eurostat NACE 2 codes).

3.4.2. MARKET FUNCTIONING AND THE SERVICES SECTOR

Service sector regulation

Austria's service sector regulation remains restrictive, notably in the area of business services and professions. The level of services trade restrictiveness in Austria is higher than the EU average in sectors such as accounting, architecture, engineering, computer services as well as construction services and wholesale and retail services (OECD, 2019). In 2017, the Commission identified specific restrictions on seven key professions. Austria has so far not sufficiently addressed these restrictions. The government programme, while acknowledging the regulatory and administrative burden on businesses, has neither announced specific measures to address the identified restrictions nor a wider review of service sector restrictions. The 2017 revision of the trade licence act (*Gewerbeordnung*) brought benefits for certain trades, for example in the form of ancillary exercise rights (*Nebenrechte*), but has not significantly reduced overall restrictiveness. The government has announced a further review of the trade licence act by 2020.

The economic development of the Austrian retail sector is lagging behind EU-wide developments. Sales by the Austrian retail sector increased by 0.8 % in 2016 and 1.1 % in 2017, thus much less than the EU average of 2.6 % and 2.4 % respectively. The decrease in the number of retail stores slowed in 2017 compared to previous years (i.e. 1 % decrease or 400 stores) (WKÖ, 2018a). At the same time, the retail sales area remained stable at a high level. Retail prices in supermarkets remain higher than in neighbouring Member States, notably Germany. Price differences of up to 28 % exist for the identical products, notably in the food sector, despite similar value-added tax rates (20 or 10 % in Austria compared to 19 or 7 % in Germany) (Arbeiterkammer Wien, 2018). In other words, differences in quality or tax-rates cannot explain the price level differences.

The regulatory environment in particular, but also territorial supply constraints, are an obstacle for the development of the Austrian retail sector. Austria ranks high in the Commission's 2018 Retail Restrictiveness Indicator (European Commission, 2018l). As regards operational restrictions, Austria is among the four worst performing countries. This is inter alia due to limited shop-opening hours and restrictions on the distribution of specific products, such as non-prescription medicines. Shop opening hours remain restricted and inflexible, with extensive rules on opening hours. As regards retail establishment, the complexity of the procedure to open a shop differs between the regions (*Länder*) and depends largely on the local authority. Shops with a floor surface of over 800 m² are in general subject to an in-depth scrutiny by authorities. Municipalities specify the type of assortment that only shops in city centres can sell. Territorial supply constraints also represent a significant challenge for retailers, notably in the food sector (Handelsverband Österreich, 2018).

E-commerce is growing, including cross border, but Austrian sellers and retailers are lagging behind their peers in other countries. E-commerce is on the rise in Austria. Around 60.3 % of Austrians are ordering goods and services online, which is better than the EU average of 59.5%. Almost 49 % of Austrians order from sellers from other EU countries, which is topped only by Luxembourg. These numbers are not matched on the seller side, where Austrian firms are slightly below the EU average as regards online sales (14.4 % compared to 17.2 %). Among Austrian small and medium-sized enterprises, only 6.6 % of their turnover resulted from e-commerce in 2017, which is well below the EU average of 10.1%. The Austrian retail sector is also trying to benefit more from the shift to e-commerce. The number of online shops almost tripled from 3 200 to 9 000 in 2006-2017, with 20.8 % of retail companies having their own online shop in 2018, compared to 24.2% EU average. Turnover from online sales by Austrian retailers is lower than for their European counterparts (5.3 % in Austria compared to 10.7 % in the EU). Part of the explanation is the strong e-commerce position of German retailers in Austria.

Austria's tourism sector is booming but faces labour shortages and structural change due to digitalisation. Austria's large tourism industry is currently experiencing a strong boom with record numbers of visitors. This boom, coupled with a generally tight labour market, has resulted in skill

and labour supply shortages, notably in the West of the country. Furthermore, tourism in Austria is strongly impacted by new online business models. Austria is reacting with a policy initiative as regards digitalisation (*Tourismus-Digitalisierungsstrategie*). The new government programme 2017-2022 furthermore foresees an overall tourism strategy with annual monitoring. A first specific measure to strengthen the profitability of the tourism sector is a reduction of value-added tax on accommodation from 13 % to 10 %.

Austria has only started to adapt its regulatory framework to the emerging collaborative economy. The collaborative economy has a strong growth potential in Austria, notably in the transportation and accommodation fields. Austria's authorities, including its municipalities, have adopted different regulatory frameworks. For example, Vienna, has adopted pioneering rules concerning the collection of the tourist tax from collaborative accommodation providers (European Commission, 2018c). Implementation of these rules is ongoing. Vienna has concluded an agreement with one platform, significantly reducing the administrative burden for the collection of this tax. In the case of other platforms (which refused to provide information as well as negotiations for a similar agreement), an administrative decision imposing a fine for non-compliance with the information obligation is currently under evaluation by Austria's highest court.

Start-up and scale-up

Austria's start-up environment benefits from the strong business cycle. Austria is seeing a continued increase in start-up numbers after a record high already in 2017 (WKÖ, 2018b). Survival rates are also higher than in other Member States. These positive developments are partly the result of Austria's substantial efforts to improve the start-up climate and partly a reflection of the good business cycle. Among the more structural issues, entrepreneurship education remains a problem. Using data from the Global Entrepreneurship Monitor 2016, it becomes evident by both overall entrepreneurial intention and opportunity-driven entrepreneurship that in Austria, the entrepreneurial route is not a professional career choice that is as attractive as in other EU countries including in *Innovation Leaders*. Further reductions of the administrative burden linked to starting a business would also help (European Commission, 2018m).

Scaling up however remains a problem for Austrian companies. The country´s share of high-growth firms in 2015 was well below the EU average and in the 'bottom 5'. Furthermore, Austria ranked 19th in the EU in 2015 in terms of the share of start-ups in firms having at least one employee. A key factor influencing the scale-up rate of Austria's smaller firms is their innovation capacity notably as regards innovation that is more than incremental (see Section 3.4.1). Austria's Research Promotion Agency is allocating roughly 30 % of its funding to research in small and medium-sized enterprises. For high-growth innovative companies in particular, the lack of venture capital and other sources of equity financing is a major barrier to growth (see Section 3.2).

Circular economy, renewables and resource efficiency

Austria is on track to meet the renewable target for 2020 but risks missing the energy efficiency and greenhouse gas emission reduction targets. Progress was made in increasing energy efficiency through measures under the Energy Efficiency Law. However consumption in primary and final energy continued to increase in 2016, putting further pressure on the attainment of the EU 2020 energy efficiency target. Austria will also fall short of its 2020 emission reduction target in sectors outside the emission trading system, not least due to increasing emissions from the transport sector (details in Annex A). Austria has set goals for 2030 regarding the reduction of greenhouse gas emissions, energy intensity, limitation of primary energy consumption, increase of renewable energy share and a full decarbonisation of the energy sector by 2050 in its policy document 'Mission-2030' (Bundeskanzleramt, 2018b). However, none of these targets will be met without additional efforts (Umweltbundesamt, 2017). Such efforts could take the form of identifying concrete steps in the context of achieving the goals set by the #mission2030. On the other hand, necessary investments in building renovation, energy-saving technologies, renewable electricity generation and transport infrastructure could provide significant impetus to the Austrian economy.

Increased energy efficiency and a higher renewables share in Austria's business sector are important for reaching its 2030 climate and energy targets. Even if the greenhouse gas intensity of the Austrian economy is below the EU average, it is still considerably higher than the one of leading EU Member States such as Sweden or Denmark (European Commission, 2017b). The market uptake of available energy efficiency solutions and technological innovation, in particular in small and medium-sized enterprises has the potential to drive the energy efficiency market further. In its National Energy and Climate Plan, to be adopted by 31 December 2019 in line with the Regulation on the Governance of the Energy Union and Climate Action ([50]), Austria will provide an overview of its investment needs until 2030 for the different dimensions of the Energy Union, including renewable energy, energy efficiency, security of supply, and climate mitigation and adaptation. The information provided, including in the draft plan submitted on 27 December 2018, will further contribute to the identification and assessment of energy and climate-related investment needs for Austria.

Austria's eco-innovation performance is negatively impacted by only moderate investment in environmental and energy R&D and insufficient structures for cooperation between eco-innovators. Austria ranked eighth on the 2017 Eco-innovation Scoreboard thanks to a flourishing environmental technology sector and several environment-related financial incentives offered by the government (European Commission, 2017c) However, with 0.02 % of GDP, Austria´s government budgetary appropriations allocated to R&D in the area of environment and energy were below the EU average (0.04 %) in 2016 and less than half compared to the leading countries Germany, Finland and Portugal with 0.07 % each (European Commission, 2017c). The supplier structure of environmental technologies is small and dominated by small and medium-sized enterprises, meaning that financial and human resources are limited. This often hampers R&D activities as well as its market success. Better interconnectedness among environment technology clusters and networks would mitigate these issues.

Austria is advancing towards a circular economy, but progress is slowed by the lack of a overall strategy and below-average investment by businesses. Austria has one of the highest recycling rates in the EU. Per capita municipal waste generation rates are also among the highest and have fallen only marginally over the last few years. The circular (secondary) use of material in Austria was at 10.6% and below the EU average of 11.7 % in 2016. Private sector investments into circular economy-related activities are below the EU average, particularly in Austria's large small and medium-sized enterprises sector. Further progress requires social and technological innovation and strategic implementation across all value chains. An overarching strategy to ensure this, including eco-design, secondary raw materials use, recycling processes and industrial symbiosis, does not yet exist in Austria.

3.4.3. REGIONAL ISSUES AND INFRASTRUCTURE

Regional and urban challenges

Austria faces regional disparities in its demographic and economic structure. Despite its relatively small size, Austria has a diverse settlement structure (see also Section 1). Almost two thirds of the overall population of 8.8 million live in urban areas (31 % in cities, predominantly in the bigger cities including Vienna, Linz, Graz and Salzburg, and 30 % in towns and suburbs) and 39 % in rural areas. Between 2005 and 2015, the population decreased in most districts in the southern part of the country, except for the regional capitals and the South-West of Styria, while it increased in most of the rest of Austria. Population growth in this period was particularly high (equal or above 7 %) in the agglomerations of Innsbruck, Graz, as well as Vienna and its wider catchment area.

Air pollution and congestion continue to be a challenge in urban areas. Growing cities and urban sprawl in certain regions in Austria have resulted in conflicts of land use, air pollution and congestion. Between 1990 and 2016, CO2 emissions from transport increased by 68 %, being the main reason for the 8.2 % increase in overall

([50]) Regulation (EU) 2018/1999 of the European Parliament and of the Council of 11 December 2018 on the Governance of the Energy Union and Climate Action.

CO2 emissions in Austria (Umweltbundesamt, 2018). Seven air quality zones do not meet EU air quality standards for nitrogen dioxide in 2017, including all bigger Austrian agglomerations. Although innovative solutions for traffic management are being developed and tested ([51]), more effort and investment in sustainable mobility solutions is required to tackle mobility and related air quality challenges.

Network infrastructure

Austria made progress on its connectivity, but remains behind in the roll-out and take-up of (ultra) fast broadband, in particular in rural areas. Austria's aim is nation-wide coverage of ultrafast broadband and 5G mobile connections by 2025. In 2017, 66 % of households were covered by ultrafast broadband (of up to 100 Mbps), but only 4.9 % subscribed to it. Country-wide, Austria achieved 90 % coverage for fast next generation access networks, but this drops to 45 % in rural areas. 20% of primary schools have no internet connection and information technology equipment varies considerably between school types (see also Section 3.3). Investment efforts such as the 'broadband billion' and adapting funding programmes to support the deployment of fibre have led to some progress. Austria operated a small number of 5G test pilots and made the preparations for its first auction of '5G spectrum'. Austria has maintained its rank among the medium performing EU countries.

Cross-border gas and electricity connections to Austria's neighbouring countries remain an issue. Domestic gas and electricity infrastructure in Austria is well-developed, while cross border connections require improvements (European Commission, 2017b). In gas infrastructure, Austria acts as a regional hub. It has invested in new pipeline connections with neighbouring countries in Central Europe. The progressing liberalisation of the energy markets in South-East Europe will recreate pressure to enable effective reverse flows and to enhance connections, notably to the Czech Republic, Slovenia and Hungary. This will contribute to regional market integration. Gas market functioning is furthermore weighed down by a fragmented two-tier-structure ([52]). Austria's well developed electricity infrastructure is facing pressure for further enhancements from the fast growing share of renewable electricity as well as from Austria's unique economic potential of utilising hydro-pumped storage across borders for balancing purposes.

Austria's progress towards competitive rail transport markets is slow. In passenger rail transport, the incumbent *ÖBB* maintains around 90 % market share in the market for public service contracts, while its nine competitors have increasing but still limited market shares (European Commission, 2019b). This is partly the result of Austria's practice of attributing public service contracts, constituting around 70 % of the passenger rail market, by direct award (European Commission, 2019b). In the rail freight market, the market shares for all but the principal freight rail undertaking reached 26 % in 2016, compared to 14 % in 2011. While this represents a higher degree of market opening than in passenger rail, it is modest compared to other EU countries which opened the rail freight market to competition (up to 63% market share for non-incumbents; European Commission, 2019b).

Housing supply and demand

Together with house prices, rents increased strongly, notably in Vienna. The increase in house prices and rents in Austria in the past decade has been largely driven by developments in Vienna. Since 2015 however, prices have also picked up in the rest of the country. While in Vienna, house prices are estimated to be overvalued by 21.4 % for Q2-2018, overvaluation for the whole of Austria is estimated at only 11.1 % ([53]) (see Section 3.2). Similarly, rents increased by 50 % in Vienna since 2005, which is above the aggregate in the rest of the country ([54]). The increase in rents is problematic for the capital, as more than three quarters of its market is made up by rentals with a high share or private rentals: 34 % versus an average of 14 % in the rest of Austria ([55]). Additionally, rising construction and

([51]) 10 % of all EU Smart City projects are based in Austria; BMNT, (2019)

([52]) E-Control recently consulted about changes to the Austrian regime to produce a single integrated set of arrangements, consistent with the Balancing Network Code (BAL NC).
([53]) OeNB, Real estate data for Austria – November 2018.
([54]) OeNB, Real estate data for Austria – November 2018.
([55]) Mikrozensus 2017, STATISTIK AUSTRIA.

land prices are putting pressure on the availability of social housing, especially in the low and medium-price sector (GBV, 2018a). In November 2018, the city of Vienna adopted an amendment to the Vienna Building Code (new construction areas will have a legal two-thirds quota for the building of subsidised dwellings), with the aim of increasing the availability of affordable housing (RIS, 2018).

Housing demand was particularly strong in the past decade, exceeding housing supply and contributing to price increases. Demand for housing increased strongly after 2011. This holds especially for Vienna, where population growth was particularly high. Until 2010, housing demand was mostly driven by decreasing household sizes. Since then, net migration has been the main contributor. In contrast, housing supply, as measured by the completion of new dwellings, dropped considerably after the crisis. This accumulated an estimated excess demand since 2009, reaching 55 000 dwellings in 2016. This likely contributed to the strong increase in housing prices; demand is estimated to have peaked in 2016. In 2017, building completion increased again and investment in construction also picked-up. Investment in construction includes not only investment in new buildings but also renovations. Rising number of building permits hint at an increase in housing supply in the coming years. This should help to decrease the pressure on the housing market. Demand and supply are expected to be in line again in 2020 (Schneider, 2019).

An increase in the share of privately financed dwellings and constructions costs contributed to rising house prices and rents. The evolution in the housing market has been accompanied by a change in the structure of housing supply. Since 2005, the share of completion of privately financed housing has increased, while the completion of publicly funded housing decreased (GBV, 2018b). Due to strict rental regulations linked with public funding and subsidies, the share of buildings that are without rental control increased, likely contributing to increasing rents. The decrease in construction of publicly financed buildings is linked to the relative decline in real housing assistance expenditure by 20% since 2010. While housing assistance expenditure per capita decreased in all regions, the largest decrease can be found in Vienna and Lower Austria (OeNB, 2017). The regional differences and overall decrease in public investment in housing assistance and social housing can be linked to the abolishment of the earmarking of housing funds in 2008. This allows for the use of the redemption of housing loans for non-housing purposes (Mundt, A., Amann, W., 2010, pp 35-44).

3.4.4. INSTITUTIONAL QUALITY AND GOVERNANCE

Administrative burden remains a pressing concern for Austrian businesses. The cost of complying with regulatory frameworks is among the main barriers to investment and growth cited by companies (WKÖ, 2018c). The government programme for 2017-2021 acknowledges problems of administrative burden for the business environment. Seeking to reduce this burden, Austria adopted a new 'clearing' law (*Zweites Bundesrechts-bereingungsgesetz*), pursuant to which all federal laws adopted before 2000 were repealed on 31 December 2018 unless listed in the law's annex. This will concern about 5 000 laws, half of which are expected to be repealed. Austria has started reviewing national rules that implement EU directives, going beyond what is required by the directives (so-called gold plating).

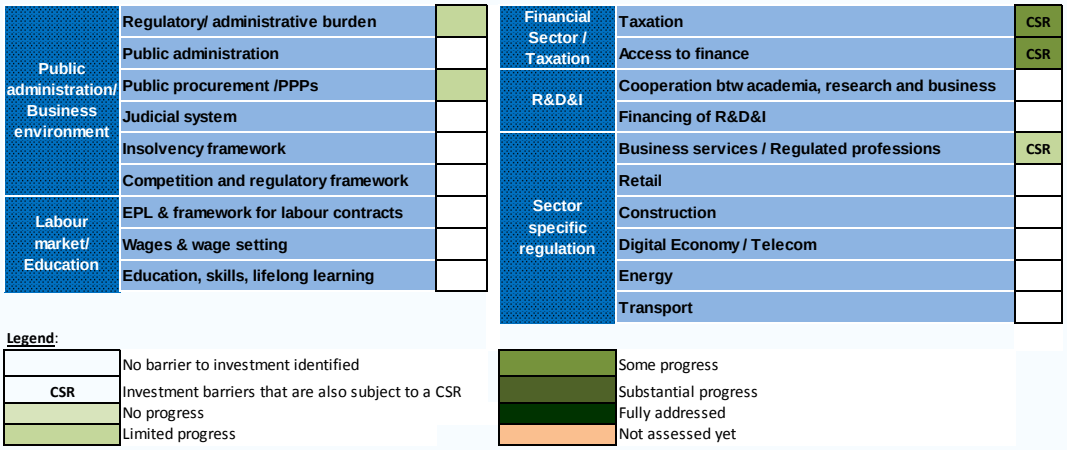
Austria has revised its public procurement rules as a start to address its low performance on key aspects of effective procurement. Austria adopted in April 2018 a revision of its procurement rules. The scope for improvement is large and trends over recent years were not always positive. The share of public contracts for works, goods and services published by the Austrian authorities and entities under EU procurement legislation was only 1.9 % of GDP. This is a reduction of 0.3 pps from 2015 and is less than half the EU average of 4.21 %. In 17 % of contract awards the tendering authority (always at federal level) received only a single bid in 2018. This is identical to 2017 but an increase over 11 % of 2015, indicating less competition between bidders. In 2018 Austria used central purchasing bodies and joint procurement among public authorities for only 6 % of tenders, which constitutes a slight improvement over 2011 and is below the EU average of 8 %. 42 % of the contract awards have gone to small and medium-sized enterprises, which is below the EU average of 54 %.

Box 3.4.1: Investment challenges and reforms in Austria

Section 1. Macroeconomic perspective

In the aftermath of the crisis, investment in Austria declined, leading to a backlog. Along with the economic upswing, it picked up again in 2015, mostly in investment equipment. Investment in the construction sector grew strongly in 2017, after being subdued for several years, despite the accumulation excess housing demand (see section 1). Equity funding remains underdeveloped, posing an obstacle to firm's growth (see Section 3.4).

Section 2. Assessment of barriers to investment and ongoing reforms



Barriers to investment in Austria exist but are relatively modest overall. Continued efforts to reduce the tax wedge (see section 3.1), improve the business environment, support the availability of risk capital and reduce regulatory barriers will help strengthen overall investment and boost productivity in Austria (see section 3.4).

Selected barriers to investment and priority actions underway:

1. While the tax wedge on labour is among the highest in the EU, several recently implemented measures aim at reducing the burden both on the side of employees and employers (see Section 3.1). There remains scope for shifting the tax burden to more growth-friendly sources of revenue, which can incentivise investment activities.

2. The high degree of regulation of the services sector constitutes a barrier to investment and competition in services but also for manufacturing firms. Administrative burden constitute a main barrier to investment for Austria's business. As a key initiative, Austria notably adopted a new "clearing" law. A new segment on the Vienna Stock Exchange has been create for small and medium-sized enterprises, but risk capital is still lacking and hindering business growth (see Section 3.4).

Austria Wirtschaftsservice GmbH (AWS) is Austria's federal promotional bank for company-related financing. The AWS offers Austrian companies financial assistance as well as consultancy services from the start-up to expansion phase. It uses both its own resources and EU financial instruments e.g. European Investment Funds.

Austria is rolling out e-procurement but, more generally, risks losing its frontrunner position on e-government. Austria remains one of the best performing EU countries in terms of availability of public services, to be completed online, i.e. via mobile devices and by pre-filled online forms. However, Austria only ranks around average in terms of online availability of public services needed for starting a business and for conducting regular business operations. The 2018 online one-stop-shop has made it easier to create one-person companies. Such companies are the most common businesses in Austria. While Austria is developing an open-data strategy, it recently reached EU average in terms of open-data policies. As regards e-procurement, Austria implemented the respective EU directives only in April 2018. Austrian authorities have adopted different e-procurement systems. Ensuring interoperability between these systems would prevent unnecessary burden for bidders.

ANNEX A: OVERVIEW TABLE

Commitments	**Summary assessment ([56])**
2018 country-specific recommendations (CSRs)	
CSR 1: Achieve the medium-term budgetary objective in 2019, taking into account the allowance linked to unusual events for which a temporary deviation is granted. Ensure the sustainability of the health and long-term care and the pension systems, including by increasing the statutory retirement age and by restricting early retirement. Make public services more efficient, including through aligning financing and spending responsibilities.	Austria has made **Limited Progress** in addressing CSR 1
Achieve the medium-term budgetary objective in 2019, taking into account the allowance linked to unusual events for which a temporary deviation is granted.	The compliance assessment with the Stability and Growth Pact will be included in Spring when final data for 2018 is available**.**
Ensure the sustainability of the health	**Some Progress** Public expenditure remains below the legislated ceilings and structural measures contribute to dampen expenditure growth but fiscal sustainability issues persist. The announced merger of social security funds will bring about high upfront costs of yet unknown magnitude.

([56]) The following categories are used to assess progress in implementing the 2017 country-specific recommendations (CSRs):

No progress: The Member State has not credibly announced nor adopted any measures to address the CSR. This category covers a number of typical situations, to be interpreted on a case-by-case basis taking into account country-specific conditions. They include the following:
-no legal, administrative, or budgetary measures have been announced
-in the national reform programme,
-in any other official communication to the national Parliament/relevant parliamentary committees or the European Commission,
-publicly (e.g. in a press statement or on the government's website);
-no non-legislative acts have been presented by the governing or legislative body;
-the Member State has taken initial steps in addressing the CSR, such as commissioning a study or setting up a study group to analyse possible measures to be taken (unless the CSR explicitly asks for orientations or exploratory actions). However, it has not proposed any clearly-specified measure(s) to address the CSR.

Limited progress: The Member State has:
-announced certain measures but these address the CSR only to a limited extent; and/or
-presented legislative acts in the governing or legislative body but these have not been adopted yet and substantial further, non-legislative work is needed before the CSR is implemented;
-presented non-legislative acts, but has not followed these up with the implementation needed to address the CSR.

Some progress: The Member State has adopted measures
-that partly address the CSR; and/or
-that address the CSR, but a fair amount of work is still needed to address the CSR fully as only a few of the measures have been implemented. For instance, a measure or measures have been adopted by the national Parliament or by ministerial decision, but no implementing decisions are in place.

Substantial progress: The Member State has adopted measures that go a long way towards addressing the CSR and most of them have been implemented.

Full implementation: The Member State has implemented all measures needed to address the CSR appropriately.

and long-term care	**Limited Progress** Implemented measures generally support the de-institutionalisation of long-term care. However, the abolishment of the 'Pflegeregress' may have the opposite effect in addition to requiring higher public spending with negative effects for the fiscal sustainability of the system.
and the pension systems, including by increasing the statutory retirement age and by restricting early retirement.	**Limited Progress** The focus is on increasing the effective retirement age by restricting access to early retirement. No measures have been adopted to increase the statutory retirement age.
Make public services more efficient, including through aligning financing and spending responsibilities.	**Limited Progress** The Intergovernmental Fiscal Relations Act 2017 has introduced numerous changes but cannot be considered a major step towards increased tax autonomy or a more transparent assignment of competences. Work in these areas is still ongoing and several initiatives such as task-oriented financing and spending reviews are at risk of being delayed. A comprehensive constitutional reform for a more transparent assignment of competences is high on the political agenda. The "Kompetenzbereinigungspaket" can be seen as a first step into the right direction but more needs to be done.
CSR 2: Reduce the tax wedge, especially for low-income earners, by shifting the tax burden to sources of revenue less detrimental to growth. Improve labour market outcomes of women. Improve basic skills for disadvantaged young people and people with a migrant background. Support productivity growth by stimulating digitalisation of businesses and company growth and by reducing regulatory barriers in the service sector.	Austria has made **Some Progress** in addressing CSR 2
Reduce the tax wedge, especially for low-income earners, by shifting the tax burden to sources of revenue less detrimental to growth.	**Some Progress** While several measures have been implemented that contribute to reducing the tax wedge on labour, the overall tax structure remains basically unchanged. The potential to shift the tax burden to other bases (e.g., wealth or environmentally harmful activities) still remains under-utilized.
Improve labour market outcomes of women.	**Some Progress** Labour market outcomes of women improved mainly as a result of implementing the Agreement (in accordance to Art 15a of the Federal Constitution Act) of the government with the provinces on early childhood education and care for the years 2018/19 until 2021/22. This led to expansion of formal childcare opportunities for children under the age of 3 years and an increase of

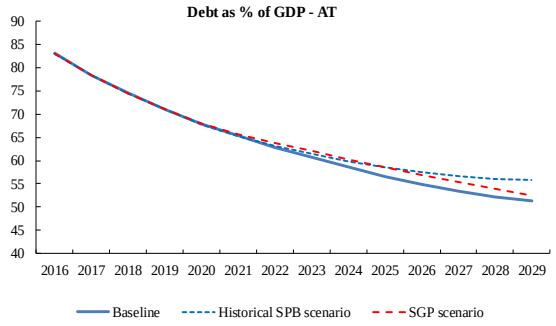
	full-day school forms. In the absence of other measures, female employment rates still increased mainly due to part time employment the share of which remains high together with a high gender pay and employment gap. The Barcelona target has still not been reached and there are disparities in child-care provision between the regions.
Improve basic skills for disadvantaged young people and people with a migrant background.	**Limited Progress** Expansion of all day schools risks to slow as the implementation period of the additional funding (EUR 750 million)that has already been made available has been doubled, now until 2032. Reforms intentened and implemented partially counteract previous reforms. They are not always in line with best practice in the OECD and the EU, therefore their positive impact has still to materialize. This is also the case for the pedagogical package (Pädagogikpaket 2018). Positive is that formerly temporary funding for German language support has now been integrated into the education budget. However this was done without making available additional resources for the education budget.
Support productivity growth by stimulating digitalisation of businesses	**Some Progress** The "KMU Digital" programme to support business digitalisation has been prolonged by three months.A new digital agency has been established which will develop policies in five key areas, including business digitalisation. A call for proposal to establish Digital Innovation Hubs in the regions has been launched. These hubs will support small and medium-sized enterprises, universities and municipalities in the uptake of digital technologies.
and company growth and by reducing regulatory barriers in the service sector.	**Limited Progress** As a key measure to improve (fast) growing companies' access to the necessary funding, Austria adopted a revision of its stock corporation law to remove obstacles to SME listings on the Viennese stock market. The lack of a specific segment dedicated to SME at the Vienna Stock Exchange was a marked contrast to other countries. Service sector companies profit from Austria's administrative burden reduction efforts, such as the 2018 law to repeal roughly half of the federal laws adopted before 2000. Austria has however not addressed the restrictions on key professions identified in 2017 by the Commission. The government programme has neither announced specific measures to address the identified restrictions nor a wider review of service sector restrictions.

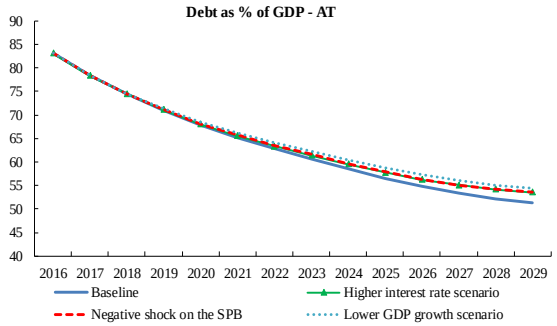
Europe 2020 (national targets and progress)	
Employment rate target set in the NRP: 77-78%.	Austria's employment rate reached 76.2 % in Q3 of 2018, thus reaching the Europe 2020 target. Given the current trend in the Austrian employment rate, the country is on track to meet the national target of 77-78 % by 2020.
R&D target set in the NRP: 3.76 % of GDP	Austria has surpassed the EU's 2020 target since 2014, reaching an R&D intensity of 3.16 % of GDP in 2017, the second highest in the EU. However, it remains below the national target of 3.76 % of GDP. Business enterprise R&D expenditure is the key driving force, with around 2/3 of total R&D intensity.
National greenhouse gas (GHG) emissions target: 16 % in 2020 compared with 2005 (in sectors not included in the EU emissions trading system)	Austria will fall more than 2 percentage points short of meeting its 2020 emission reduction target for greenhouse gases in the sectors not covered by the EU Emission Trading System. The transport sector is the biggest contributor, accounting for 45 % of total emissions. Emissions are constantly increasing due to increasing traffic.
2020 renewable energy target: 34 %	Austria is well on track and close (2016: 33.5 %, estimation for 2017: 33.7 %) to attaining its renewable energy target for 2020 (EEA Report No 16/2018).
Energy efficiency, 2020 energy consumption targets: Austria's 2020 energy efficiency target is 31.5 Mtoe expressed in primary energy consumption (25.1 Mtoe expressed in final energy consumption).	Austria's primary energy consumption is continuously increasing. It is estimated that in 2017 it reached 32.8 Mtoe, an increase by more than 1 Mtoe compared to 2016 (31.7 Mtoe).Austria's final energy consumption increased by over 1 % compared with the 2016 figure (28.13 Mtoe).
Early school/training leaving target: 9.5 %.	ESL was at 7.4 % in 2017 below both the national target of 9.5% and the EU target. While the rate fell also for foreign-born students they are still twice as likely to leave school early.
Tertiary education target: 38% of population aged 30-34.	Tertiary education attainment has at 40.8 % in 2017 surpassed the EU average and the national target
Target for reducing the number of people at risk of poverty or social exclusion, expressed as an absolute number of people: -235 000	In the baseline year 2008, the number of people at risk of poverty and social exclusion was 1 699 000. The respective number for 2017 was 1 563 000, i.e. 136 000 less, requiring additional efforts to meet the target

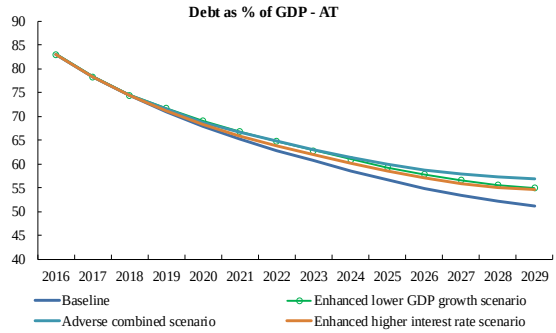
ANNEX B: COMMISSION DEBT SUSTAINABILITY ANALYSIS AND FISCAL RISKS

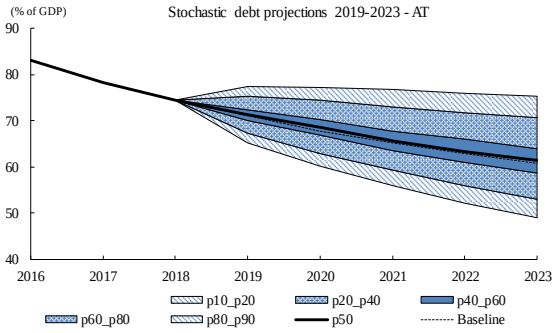
General Government debt projections under baseline, alternative scenarios and sensitivity tests

AT - Debt projections baseline scenario	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Gross debt ratio	**78.3**	**74.5**	**71.0**	**67.8**	**65.2**	**62.9**	**60.7**	**58.6**	**56.6**	**54.8**	**53.3**	**52.1**	**51.2**
Changes in the ratio (-1+2+3)	*-4.7*	*-3.8*	*-3.5*	*-3.2*	*-2.6*	*-2.4*	*-2.2*	*-2.1*	*-2.0*	*-1.8*	*-1.5*	*-1.2*	*-0.9*
of which													
(1) Primary balance (1.1+1.2+1.3)	**1.0**	**1.3**	**1.5**	**1.6**	**1.5**	**1.4**	**1.3**	**1.3**	**1.2**	**1.1**	**1.0**	**0.9**	**0.6**
(1.1) Structural primary balance *(1.1.1-1.1.2+1.1.3)*	***1.0***	***0.8***	***1.0***	***1.3***	***1.3***	***1.3***	***1.3***	***1.3***	***1.2***	***1.1***	***1.0***	***0.9***	***0.6***
(1.1.1) Structural primary balance (bef. CoA)	*1.0*	*0.8*	*1.0*	*1.3*	*1.3*	*1.3*	*1.3*	*1.3*	*1.3*	*1.3*	*1.3*	*1.3*	*1.3*
(1.1.2) Cost of ageing					*0.0*	*0.0*	*0.0*	*0.1*	*0.2*	*0.3*	*0.5*	*0.6*	*0.9*
(1.1.3) Others (taxes and property incomes)					*0.0*	*0.1*	*0.1*	*0.1*	*0.2*	*0.2*	*0.2*	*0.3*	*0.2*
(1.2) Cyclical component	***0.1***	***0.5***	***0.5***	***0.3***	***0.2***	***0.1***	***0.0***	***0.0***	***0.0***	***0.0***	***0.0***	***0.0***	***0.0***
(1.3) One-off and other temporary measures	***0.0***	***0.0***	***0.0***	***0.0***	***0.0***	***0.0***	***0.0***	***0.0***	***0.0***	***0.0***	***0.0***	***0.0***	***0.0***
(2) Snowball effect (2.1+2.2+2.3)	**-1.2**	**-1.7**	**-1.3**	**-1.1**	**-1.1**	**-0.9**	**-0.9**	**-0.9**	**-0.8**	**-0.6**	**-0.5**	**-0.3**	**-0.3**
(2.1) Interest expenditure	*1.8*	*1.6*	*1.5*	*1.4*	*1.4*	*1.3*	*1.3*	*1.3*	*1.4*	*1.4*	*1.4*	*1.5*	*1.5*
(2.2) Growth effect	*-2.0*	*-2.1*	*-1.4*	*-1.2*	*-1.2*	*-1.0*	*-1.0*	*-1.0*	*-1.0*	*-0.9*	*-0.8*	*-0.8*	*-0.8*
(2.3) Inflation effect	*-1.0*	*-1.2*	*-1.4*	*-1.3*	*-1.2*	*-1.2*	*-1.2*	*-1.2*	*-1.1*	*-1.1*	*-1.1*	*-1.0*	*-1.0*
(3) Stock-flow adjustments	**-2.5**	**-0.9**	**-0.7**	**-0.6**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**









Short term	Medium term	S1	Debt sustainability analysis (detail)						DSA	S2	Long term
				Baseline	Historical SPB	Lower GDP growth	Higher interest rate	Negative shock on SPB	Stochastic projections			
			Risk category	LOW	LOW	LOW	LOW	LOW	LOW			
			Debt level (2029)	51.2	55.9	54.5	53.6	53.5				
			Debt peak year	2018	2018	2018	2018	2018				
			Percentile rank	35.0%	44.0%							
			Probability debt higher						11.7%			
			Dif. between percentiles						26.3			
LOW (S0 = 0)	LOW	LOW (S1 = -0.8)								LOW	MEDIUM (S2 = 2.6)	MEDIUM

Note: For further information, see the European Commission Fiscal Sustainability Report (FSR) 2018.

[1] The first table presents the baseline no-fiscal policy change scenario projections. It shows the projected government debt dynamics and its decomposition between the primary balance, snowball effects and stock-flow adjustments. Snowball effects measure the net impact of the counteracting effects of interest rates, inflation, real GDP growth (and exchange rates in some countries). Stock-flow adjustments include differences in cash and accrual accounting, net accumulation of assets, as well as valuation and other residual effects.

[2] The charts present a series of sensitivity tests around the baseline scenario, as well as alternative policy scenarios, in particular: the historical structural primary balance (SPB) scenario (where the SPB is set at its historical average), the Stability and Growth Pact (SGP) scenario (where fiscal policy is assumed to evolve in line with the main provisions of the SGP), a higher interest rate scenario (+1 pp. compared to the baseline), a lower GDP growth scenario (-0.5 pp. compared to the baseline) and a negative shock on the SPB (calibrated on the basis of the forecasted change). An adverse combined scenario and enhanced sensitivity tests (on the interest rate and growth) are also included, as well as stochastic projections. Detailed information on the design of these projections can be found in the FSR 2018.

[3] The second table presents the overall fiscal risk classification over the short, medium and long-term.

a. For the short-term, the risk category (low/high) is based on the S0 indicator. S0 is an early-detection indicator of fiscal stress in the upcoming year, based on 25 fiscal and financial-competitiveness variables that have proven in the past to be leading indicators of fiscal stress. The critical threshold beyond which fiscal distress is signalled is 0.46.

b. For the medium-term, the risk category (low/medium/high) is based on the joint use of the S1 indicator and of the DSA results. The S1 indicator measures the fiscal adjustment required (cumulated over the 5 years following the forecast horizon and sustained thereafter) to bring the debt-to-GDP ratio to 60 % by 2033. The critical values used are 0 and 2.5 pps. of GDP. The DSA classification is based on the results of 5 deterministic scenarios (baseline, historical SPB, higher interest rate, lower GDP growth and negative shock on the SPB scenarios) and the stochastic projections. Different criteria are used such as the projected debt level, the debt path, the realism of fiscal assumptions, the probability of debt stabilisation, and the size of uncertainties.

c. For the long-term, the risk category (low/medium/high) is based on the joint use of the S2 indicator and the DSA results. The S2 indicator measures the upfront and permanent fiscal adjustment required to stabilise the debt-to-GDP ratio over the infinite horizon, including the costs of ageing. The critical values used are 2 and 6 pps. of GDP. The DSA results are used to further qualify the long-term risk classification, in particular in cases when debt vulnerabilities are identified (a medium / high DSA risk category).

ANNEX C: STANDARD TABLES

Table C.1: **Financial market indicators**

	2013	2014	2015	2016	2017	2018
Total assets of the banking sector (% of GDP)[1)]	282.1	263.0	248.1	236.6	219.9	216.2
Share of assets of the five largest banks (% of total assets)	36.7	36.8	35.8	34.5	36.4	-
Foreign ownership of banking system (% of total assets)[2)]	27.6	30.4	31.9	23.9	23.7	22.7
Financial soundness indicators:[2)]						
- non-performing loans (% of total loans)	-	7.5	6.5	5.1	3.5	2.9
- capital adequacy ratio (%)	15.4	15.6	16.2	18.2	18.9	18.4
- return on equity (%)[3)]	-0.7	1.1	7.6	7.1	8.7	9.0
Bank loans to the private sector (year-on-year % change)[1)]	-1.0	0.5	0.6	2.2	4.0	5.4
Lending for house purchase (year-on-year % change)[1)]	2.2	3.0	4.3	4.4	4.7	4.8
Loan to deposit ratio[2)]	-	105.1	102.0	98.7	97.8	98.4
Central Bank liquidity as % of liabilities[1)]	-	1.8	2.1	1.8	3.1	3.0
Private debt (% of GDP)	127.1	124.8	124.2	124.1	122.5	-
Gross external debt (% of GDP)[2)] - public	66.4	74.1	69.2	65.9	60.1	56.9
- private	33.0	34.8	36.4	37.7	38.2	36.8
Long-term interest rate spread versus Bund (basis points)*	44.0	32.4	25.0	28.7	26.5	28.7
Credit default swap spreads for sovereign securities (5-year)*	19.8	20.1	16.4	18.0	11.6	7.5

(1) Latest data Q3 2018. Includes not only banks but all monetary financial institutions excluding central banks.
(2) Latest data Q2 2018.
(3) Quarterly values are annualised
* Measured in basis points.
Source: European Commission (long-term interest rates); World Bank (gross external debt); Eurostat (private debt); ECB (all other indicators).

Table C.2: **Headline Social Scoreboard indicators**

	2013	2014	2015	2016	2017	2018 [6]
Equal opportunities and access to the labour market						
Early leavers from education and training (% of population aged 18-24)	7.5	7.0	7.3	6.9	7.4	:
Gender employment gap (pps)	9.1	8.2	8.2	7.8	8.0	9.0
Income inequality, measured as quintile share ratio (S80/S20)	4.1	4.1	4.0	4.1	4.3	:
At-risk-of-poverty or social exclusion rate[1] (AROPE)	18.8	19.2	18.3	18.0	18.1	:
Young people neither in employment nor in education and training (% of population aged 15-24)	7.3	7.7	7.5	7.7	6.5	:
Dynamic labour markets and fair working conditions[†]						
Employment rate (20-64 years)	74.6	74.2	74.3	74.8	75.4	76.1
Unemployment rate[2] (15-74 years)	5.4	5.6	5.7	6.0	5.5	4.9
Long-term unemployment rate[3] (as % of active population)	1.3	1.5	1.7	1.9	1.8	1.5
Gross disposable income of households in real terms per capita[4] (Index 2008=100)	96.4	96.4	95.2	96.3	96.1	:
Annual net earnings of a full-time single worker without children earning an average wage (levels in PPS, three-year average)	24755	25379	26039	26859	:	:
Annual net earnings of a full-time single worker without children earning an average wage (percentage change, real terms, three-year average)	-0.5	-0.1	0.5	2.1	:	:
Public support / Social protection and inclusion						
Impact of social transfers (excluding pensions) on poverty reduction[5]	44.4	44.5	45.7	46.4	42.2	:
Children aged less than 3 years in formal childcare	17.0	16.0	22.2	20.5	18.2	:
Self-reported unmet need for medical care	0.4	0.1	0.1	0.2	0.2	:
Individuals who have basic or above basic overall digital skills (% of population aged 16-74)	:	:	64.0	65.0	67.0	:

(1) People at risk of poverty or social exclusion (AROPE): individuals who are at risk of poverty (AROP) and/or suffering from severe material deprivation (SMD) and/or living in households with zero or very low work intensity (LWI).
(2) Unemployed persons are all those who were not employed but had actively sought work and were ready to begin working immediately or within two weeks.
(3) Long-term unemployed are people who have been unemployed for at least 12 months.
(4) Gross disposable household income is defined in unadjusted terms, according to the draft Joint Employment Report 2019.
(5) Reduction in percentage of the risk of poverty rate, due to social transfers (calculated comparing at-risk-of poverty rates before social transfers with those after transfers; pensions are not considered as social transfers in the calculation).
(6) Average of first three quarters of 2018 for the employment rate, long-term unemployment rate and gender employment gap. Data for unemployment rate is annual (except for DK, EE, EL, HU, IT and UK data based on first three quarters of 2018).
Source: Eurostat.

Table C.3: **Labour market and education indicators**

Labour market indicators	**2013**	**2014**	**2015**	**2016**	**2017**	**2018** [4]
Activity rate (15-64)	75.5	75.4	75.5	76.2	76.4	76.8
Employment in current job by duration						
From 0 to 11 months	13.9	13.4	14.0	14.3	14.8	:
From 12 to 23 months	9.4	9.3	9.0	9.5	9.6	:
From 24 to 59 months	16.3	16.6	16.9	16.6	16.2	:
60 months or over	60.4	60.7	60.1	59.6	59.4	:
Employment growth* (% change from previous year)	0.3	1.0	0.6	1.3	1.7	1.8
Employment rate of women (% of female population aged 20-64)	70.0	70.1	70.2	70.9	71.4	71.6
Employment rate of men (% of male population aged 20-64)	79.1	78.3	78.4	78.7	79.4	80.6
Employment rate of older workers* (% of population aged 55-64)	43.8	45.1	46.3	49.2	51.3	53.7
Part-time employment* (% of total employment, aged 15-64)	26.0	26.9	27.3	27.8	27.9	27.3
Fixed-term employment* (% of employees with a fixed term contract, aged 15-64)	9.2	9.2	9.1	9.0	9.2	9.1
Participation in activation labour market policies (per 100 persons wanting to work)	25.2	23.8	21.2	21.6	:	:
Transition rate from temporary to permanent employment (3-year average)	45.8	47.9	45.9	46.9	43.3	:
Youth unemployment rate (% active population aged 15-24)	9.7	10.3	10.6	11.2	9.8	9.4
Gender gap in part-time employment (aged 20-64)	37.0	37.8	38.1	37.4	37.4	37.5
Gender pay gap[1] (in undadjusted form)	22.3	22.2	21.7	20.1	19.9	:
Education and training indicators	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**
Adult participation in learning (% of people aged 25-64 participating in education and training)	14.1	14.3	14.4	14.9	15.8	:
Underachievement in education[2]	:	:	21.8	:	:	:
Tertiary educational attainment (% of population aged 30-34 having successfully completed tertiary education)	27.1	40.0	38.7	40.1	40.8	:
Variation in performance explained by students' socio-economic status[3]	:	:	15.9	:	:	:

* Non-scoreboard indicator

(1) Difference between the average gross hourly earnings of male paid employees and of female paid employees as a percentage of average gross hourly earnings of male paid employees. It is defined as 'unadjusted', as it does not correct for the distribution of individual characteristics (and thus gives an overall picture of gender inequalities in terms of pay). All employees working in firms with ten or more employees, without restrictions for age and hours worked, are included.

(2) PISA (OECD) results for low achievement in mathematics for 15 year-olds.

(3) Impact of socio-economic and cultural status on PISA (OECD) scores.

(4) Average of first three quarters of 2018 for the activity rate, employment growth, employment rate, part-time employment, fixed-term employment. Data for youth unemployment rate is annual (except for DK, EE, EL, HU, IT and UK data based on first three quarters of 2018).

Source: Eurostat, OECD.

Table C.4: **Social inclusion and health indicators**

	2012	2013	2014	2015	2016	2017
Expenditure on social protection benefits* (% of GDP)						
Sickness/healthcare	7.3	7.3	7.3	7.4	7.5	:
Disability	2.1	2.1	2.0	1.9	1.9	:
Old age and survivors	14.2	14.5	14.7	14.7	14.6	:
Family/children	2.8	2.8	2.7	2.8	2.8	:
Unemployment	1.5	1.6	1.6	1.6	1.7	:
Housing	0.1	0.1	0.1	0.1	0.1	:
Social exclusion n.e.c.	0.4	0.4	0.5	0.6	0.8	:
Total	28.4	28.8	29.0	29.0	29.4	:
of which: means-tested benefits	2.3	2.4	2.5	2.6	2.8	:
General government expenditure by function (% of GDP, COFOG)						
Social protection	20.9	21.3	21.5	21.4	21.6	:
Health	7.7	7.8	7.8	7.9	8.0	:
Education	5.0	5.0	4.9	4.9	4.9	:
Out-of-pocket expenditure on healthcare (% of total health expenditure)	18.7	19.2	19.1	19.0	18.9	:
Children at risk of poverty or social exclusion (% of people aged 0-17)*	20.9	22.9	23.3	22.3	20.0	23.0
At-risk-of-poverty rate[1] (% of total population)	14.4	14.4	14.1	13.9	14.1	14.4
In-work at-risk-of-poverty rate (% of persons employed)	8.1	7.9	7.2	7.9	8.3	7.7
Severe material deprivation rate[2] (% of total population)	4.0	4.2	4.0	3.6	3.0	3.7
Severe housing deprivation rate[3], by tenure status						
Owner, with mortgage or loan	1.0	1.4	1.2	0.7	0.6	0.7
Tenant, rent at market price	9.4	9.5	10.0	10.0	9.3	10.8
Proportion of people living in low work intensity households[4] (% of people aged 0-59)	7.7	7.8	9.1	8.2	8.1	8.3
Poverty thresholds, expressed in national currency at constant prices*	11730	11576	11920	11774	11898	12309
Healthy life years (at the age of 65)						
Females	9.5	8.8	7.7	7.7	7.4	:
Males	8.9	8.9	8.4	7.9	8.2	:
Aggregate replacement ratio for pensions[5] (at the age of 65)	0.6	0.6	0.6	0.6	0.6	0.6
Connectivity dimension of the Digital Economy and Society Inedex (DESI)[6]	:	:	50.8	57.9	61.4	63.5
GINI coefficient before taxes and transfers*	49.7	49.5	49.9	49.8	49.9	50.4
GINI coefficient after taxes and transfers*	27.6	27.0	27.6	27.2	27.2	27.9

* Non-scoreboard indicator
(1) At-risk-of-poverty rate (AROP): proportion of people with an equivalised disposable income below 60 % of the national equivalised median income.
(2) Proportion of people who experience at least four of the following forms of deprivation: not being able to afford to i) pay their rent or utility bills, ii) keep their home adequately warm, iii) face unexpected expenses, iv) eat meat, fish or a protein equivalent every second day, v) enjoy a week of holiday away from home once a year, vi) have a car, vii) have a washing machine, viii) have a colour TV, or ix) have a telephone.
(3) Percentage of total population living in overcrowded dwellings and exhibiting housing deprivation.
(4) People living in households with very low work intensity: proportion of people aged 0-59 living in households where the adults (excluding dependent children) worked less than 20 % of their total work-time potential in the previous 12 months.
(5) Ratio of the median individual gross pensions of people aged 65-74 relative to the median individual gross earnings of people aged 50-59.
(6) Fixed broadband take up (33 %), mobile broadband take up (22 %), speed (33 %) and affordability (11 %), from the Digital Scoreboard.
Source: Eurostat, OECD.

Table C.5: **Product market performance and policy indicators**

Performance indicators	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**
Labour productivity per person[1] growth (t/t-1) in %						
Labour productivity growth in industry	1.12	1.32	0.77	0.88	3.31	3.73
Labour productivity growth in construction	-1.58	-0.04	-3.53	-1.81	-0.86	0.81
Labour productivity growth in market services	-1.18	-0.71	0.19	0.69	0.26	-0.07
Unit Labour Cost (ULC) index[2] growth (t/t-1) in %						
ULC growth in industry	3.49	1.31	1.59	0.57	-0.65	-1.70
ULC growth in construction	4.60	3.45	6.56	4.77	3.13	-0.49
ULC growth in market services	3.89	3.73	1.86	1.53	2.37	1.70
Business environment	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**
Time needed to enforce contracts[3] (days)	397	397	397	397	397	397
Time needed to start a business[3] (days)	25.0	25.0	22.0	22.0	21.0	21.0
Outcome of applications by SMEs for bank loans[4]	0.23	0.35	0.41	0.49	0.31	0.35
Research and innovation	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**
R&D intensity	2.91	2.95	3.08	3.05	3.13	3.16
General government expenditure on education as % of GDP	5.00	5.00	4.90	4.90	4.90	:
Employed people with tertiary education and/or people employed in science and technology as % of total employment	39	41	46	47	48	48
Population having completed tertiary education[5]	17	18	27	28	29	30
Young people with upper secondary education[6]	86	87	90	89	90	87
Trade balance of high technology products as % of GDP	0.13	0.19	0.50	0.10	-0.26	-0.16
Product and service markets and competition				**2003**	**2008**	**2013**
OECD product market regulation (PMR)[7], overall				1.61	1.37	1.19
OECD PMR[7], retail				3.50	3.30	2.40
OECD PMR[7], professional services				3.21	3.08	2.71
OECD PMR[7], network industries[8]				2.47	1.84	1.55

(1) Value added in constant prices divided by the number of persons employed.
(2) Compensation of employees in current prices divided by value added in constant prices.
(3) The methodologies, including the assumptions, for this indicator are shown in detail at: http://www.doingbusiness.org/methodology.
(4) Average of the answer to question Q7B_a. '[Bank loan]: If you applied and tried to negotiate for this type of financing over the past six months, what was the outcome?'. Answers were scored as follows: zero if received everything, one if received most of it, two if only received a limited part of it, three if refused or rejected and treated as missing values if the application is still pending or if the outcome is not known.
(5) Percentage population aged 15-64 having completed tertiary education.
(6) Percentage population aged 20-24 having attained at least upper secondary education.
(7) Index: 0 = not regulated; 6 = most regulated. The methodologies of the OECD product market regulation indicators are shown in detail at: http://www.oecd.org/competition/reform/indicatorsofproductmarketregulationhomepage.htm
(8) Aggregate OECD indicators of regulation in energy, transport and communications.
Source: European Commission; World Bank — Doing Business (for enforcing contracts and time to start a business); OECD (for the product market regulation indicators); SAFE (for outcome of SMEssmall and medium-sized enterprises' applications for bank loans).

Table C.6: **Green growth**

Green growth performance		2012	2013	2014	2015	2016	2017
Macroeconomic							
Energy intensity	kgoe / €	0.11	0.11	0.11	0.11	0.11	0.10
Carbon intensity	kg / €	0.26	0.26	0.25	0.25	0.25	-
Resource intensity (reciprocal of resource productivity)	kg / €	0.58	0.57	0.57	0.56	0.56	0.56
Waste intensity	kg / €	0.16	-	0.18	-	0.19	-
Energy balance of trade	% GDP	-3.9	-3.5	-3.0	-2.3	-1.9	-2.1
Weighting of energy in HICP	%	9.09	9.41	9.75	8.86	8.42	8.06
Difference between energy price change and inflation	%	1.1	-0.1	-1.8	-3.0	-2.8	-2.8
Real unit of energy cost	% of value added	15.1	13.9	12.3	12.7	13.2	-
Ratio of environmental taxes to labour taxes	ratio	0.10	0.10	0.10	0.10	0.10	-
Environmental taxes	% GDP	2.4	2.4	2.4	2.4	2.4	2.4
Sectoral							
Industry energy intensity	kgoe / €	0.09	0.10	0.10	0.09	0.09	0.09
Real unit energy cost for manufacturing industry excl. refining	% of value added	15.2	13.6	12.7	13.2	13.7	-
Share of energy-intensive industries in the economy	% GDP	10.1	10.3	10.3	10.3	10.8	10.9
Electricity prices for medium-sized industrial users	€ / kWh	0.11	0.11	0.11	0.10	0.10	0.10
Gas prices for medium-sized industrial users	€ / kWh	0.04	0.04	0.04	0.04	0.03	0.03
Public R&D for energy	% GDP	0.01	0.02	0.02	0.03	0.03	0.03
Public R&D for environmental protection	% GDP	0.02	0.02	0.01	0.01	0.01	0.01
Municipal waste recycling rate	%	57.7	57.7	56.3	56.9	57.6	57.7
Share of GHG emissions covered by ETS*	%	37.8	37.3	36.8	37.4	36.4	-
Transport energy intensity	kgoe / €	0.57	0.59	0.58	0.60	0.60	0.59
Transport carbon intensity	kg / €	1.45	1.53	1.45	1.48	1.51	-
Security of energy supply							
Energy import dependency	%	64.5	61.5	65.7	60.6	62.5	64.4
Aggregated supplier concentration index	HHI	40.5	25.2	36.3	23.2	30.5	-
Diversification of energy mix	HHI	0.27	0.27	0.27	0.27	0.27	0.27

All macro intensity indicators are expressed as a ratio of a physical quantity to GDP (in 2010 prices)
Energy intensity: gross inland energy consumption (Europe 2020-2030)(in kgoe) divided by GDP (in EUR)
Carbon intensity: greenhouse gas emissions (in kg CO2 equivalents) divided by GDP (in EUR)
Resource intensity: domestic material consumption (in kg) divided by GDP (in EUR)
Waste intensity: waste (in kg) divided by GDP (in EUR)
Energy balance of trade: the balance of energy exports and imports, expressed as % of GDP
Weighting of energy in HICP: the proportion of 'energy' items in the consumption basket used for the construction of the HICP
Difference between energy price change and inflation: energy component of HICP, and total HICP inflation (annual % change)
Real unit energy cost: real energy costs as % of total value added for the economy
Industry energy intensity: final energy use in industry (in kgoe) divided by gross value added of industry, including construction (in 2010 EUR)
Real unit energy costs for manufacturing industry excluding refining : real costs as % of value added for manufacturing sectors
Share of energy-intensive industries in the economy: share of gross value added of the energy-intensive industries in GDP
Electricity and gas prices for medium-sized industrial users: consumption band 500-20 00 mWh and 10 000-100 000 GJ; figures excl. VAT.
Recycling rate of municipal waste: ratio of recycled and composted municipal waste to total municipal waste
Public R&D for energy or for the environment: government spending on R&D for these categories as % of GDP
Proportion of GHG emissions covered by EU emissions trading system (ETS) (excluding aviation): based on GHG emissions (excl land use, land use change and forestry) as reported by Member States to the European Environment Agency.
Transport energy intensity: final energy use in transport sector including international aviation, (in kgoe) divided by transport industry gross value added (in 2010 EUR)
Transport carbon intensity: GHG emissions in transport sector divided by gross value added of the transport activities
Energy import dependency: net energy imports divided by gross inland energy consumption plus consumption of international maritime bunkers
Aggregated supplier concentration index: Herfindahl-Hirschman index for net imports of crude oil and NGL, natural gas and hard coal. Smaller values indicate larger diversification and hence lower risk.
Diversification of the energy mix: Herfindahl-Hirschman index of the main energy products in the gross inland consumption of energy
* European Commission and European Environment Agency
Source: European Commission and European Environment Agency (Share of GHG emissions covered by ETS); European Commission (Environmental taxes over labour taxes); Eurostat (all other indicators)

ANNEX D: INVESTMENT GUIDANCE ON COHESION POLICY FUNDING 2021-2027 FOR AUSTRIA

Building on the Commission proposal for the next Multi-Annual Financial Framework for the period 2021-2027 of 2 May 2018 (COM(2018) 321), this Annex D presents the preliminary Commission services views on priority investment areas and framework conditions for effective delivery for the 2021-2027 Cohesion Policy. ([57]) These priority investment areas are derived from the broader context of investment bottlenecks, investment needs and regional disparities assessed in the report. This Annex provides the basis for a dialogue between Austria and the Commission services in view of the programming of the cohesion policy funds (European Regional Development Fund and European Social Fund Plus).

Policy Objective 1: A Smarter Europe – Innovative and smart industrial transformation
Despite a very high research and development intensity, Austria is not yet on par with Europe's Innovation Leaders as regards innovation outcomes, which points to a need for improving the efficiency of the research and innovation system and to fully exploit the potential of science-business links. Therefore, priority investment needs([58]) have been identified to **enhance research and innovation capacities and the uptake of advanced technologies**, within the framework of regional smart specialisation strategies that identify priority areas based on regional needs and potential, and in particular to: strengthen the science-business links, inter alia, by supporting collaborative research, development and innovation and technology transfer. Support investments in research and development infrastructure that allows small and medium-sized enterprises to participate in the research and development process; encourage cooperation activities on corresponding smart specialisation priorities and new value chains between different Austrian regions and with other countries, including in the context of the EU Strategies for the Alpine and Danube regions; strengthen eco-innovation and research and development focusing on low-carbon technologies and on making the economy more circular.
Scaling up, innovation capacity and the availability of venture capital remain an issue for Austria's smaller firms. Therefore, priority investment needs have been identified to **enhance growth and competitiveness of small and medium-sized enterprises**, and in particular to: strengthen the innovation capabilities of small and medium-sized enterprises. Encourage investments in product, process and service development, and upgrading technological capacities; encourage the entrepreneurial eco-system by providing support for clusters and networks and promote the entrepreneurial spirit; consolidate the favourable start-up climate and improve the conditions for scaling up innovative businesses, inter alia, by providing support for access to finance, for start-up accelerators and incubators and related consultancy services. Provide support for developing prototypes, demonstrators and proof of concept.

([57]) This Annex is to be considered in conjunction with the EC Proposal for a Regulation of the European Parliament and of the Council on the European Regional Development Fund and on the Cohesion Fund COM(2018) 372 and the EC Proposal for a Regulation of the European Parliament and of the Council on the European Social Fund Plus COM(2018) 382, in particular as regards the requirements for thematic concentration and urban earmarking outlined in these proposals.

([58]) The intensity of needs is classified in three categories in a descending order – high priority needs, priority needs, needs.

Austria lags behind in developing information and communications technology products and services, and in particular the small and medium-sized enterprise sector in adopting new digital technologies and business models. Therefore, priority investment needs have been identified to **reap the benefits of digitisation for companies**, and in particular to:

increase information and communications technology up-take and the adoption of new business models in small and medium-sized enterprises, inter alia, by improving digital skills and by supporting digital innovation hubs as service-providers to small and medium-sized enterprises;

offer risk-reduced environments for small and medium-sized enterprises to develop digital products and services, for example by supporting test environments for early trials and market adaptation of emerging technologies and digital applications.

Policy Objective 2: A low carbon and greener Europe – Clean and fair energy transition, green and blue investment, circular economy, climate adaptation and risk prevention

Increased efforts are required to meet Austria's climate and energy targets for 2030, and a stronger market uptake of available energy efficiency solutions, technological innovation and increased renewable energy use, in particular in small and medium-sized enterprises, can contribute to this. Therefore, investment needs have been identified to **promoting energy efficiency measures and renewable energy**, and in particular to:

reduce energy consumption by improving energy efficiency in small and medium-sized enterprises, including in their premises, installations and processes;

encourage the use of renewable energy (for the generation of electricity as well as for heating and cooling) in small and medium-sized enterprises.

There is room to improve the circularity of the Austrian economy and to increase resource efficiency, particularly in the small and medium-sized enterprise sector. Therefore, investment needs have been identified to **promote the transition to a circular economy**, and in particular to:

increase resource efficiency and promote the circular economy in small and medium-sized enterprises, e.g. by supporting small and medium-sized enterprises in implementing circular economy solutions, including through demonstrations of new technologies or processes, and by advisory services, training on business-to-business circular procurement, or 'circular hubs'.

Policy Objective 4: A more social Europe – Implementing the European Pillar of Social Rights

Insufficient provision of full-time childcare services and all-day schools, varying strongly between the Länder, is one of the determinants behind the high share of female part time-employment. Priority investment needs have therefore been identified to **promote women's labour market participation, and in particular** to:

enhance access to affordable, accessible and high-quality full-time childcare and all day schools and support the development and implementation of a quality framework in early childhood education and care;

support social partners and enterprises to raise awareness and address gender segregation in the labour market and the gender pay gap.

Older workers, workers with migrant background as well as the low-skilled do not participate fully in the labour market, while basic skills are below EU-average, socio-economic and migrant background continues to affect educational outcomes and the socio-economic integration of recently arrived refugees presents a specific challenge. Priority investment needs have therefore been identified **to promote equal access to, and completion of, quality and inclusive education and training; and to promote lifelong learning, notably flexible upskilling and reskilling for all, taking into account digital skills, facilitate career transitions and promote professional mobility,** and in particular to:

improve educational chances and basic skills attainment of disadvantaged people and under-represented groups;

develop and implement access to life-long learning and to continuing vocational education;

promote elderly-friendly forms of work organisation involving intergenerational learning.

improve access to employment through support for labour market integration, access to vocational education and training and support for transition from school to employment.

Policy Objective 5 – A Europe closer to citizens by fostering the sustainable and integrated development of urban, rural and coastal areas and local initiatives

The increasing concentration of the population, economic activities and traffic in certain regions, generates amongst others land use and environmental pressures, in particular in the urban-rural context, while inner city areas are facing social and environmental challenges. Therefore, investment needs have been identified to **fostering the integrated social, economic and environmental development in urban and** surrounding **rural areas**, **also through community-led local development,** and in particular to:

support the regeneration of deprived urban neighbourhoods in an integrated, participatory manner, including through social innovation;

improve the inclusion of communities at risk of social exclusion, in particular migrants, with a focus on their long-term integration in the workforce;

encourage sustainable mobility and support measures to reduce air pollution;

support Smart City initiatives;

support urban-rural development;

promote cooperation between cities, also across regional and national borders and within the EU Strategies for the Alpine and Danube regions.

Factors for effective delivery of Cohesion policy

improve public procurement performance, in particular in the areas flagged as weaknesses in the Single Market Scoreboard;

continue to strengthen the capacity of beneficiaries, stakeholders, social partners, civil society organisations and other bodies;

broader use of financial instruments and/or contribution to an Austrian compartment under InvestEU for

revenue-generating and cost-saving activities;

reduce the administrative burden for Austrian businesses. The cost of complying with regulatory frameworks is one of the main barriers to investment and growth.

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