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EXECUTIVE SUMMARY

Recent reforms have supported a job rich economic expansion. The Belgian economy has grown at a moderate but steady pace over recent years. Growth rates, however, remain below those recorded before the financial crisis. Strengthening potential growth would require a combination of further investment and productivity-enhancing reforms. This would imply maintaining the reform momentum while progressing with the implementation of previously announced reforms. Challenges have been identified and have yet to be addressed, notably: by removing barriers to competition and investment in the product and services market; by tackling infrastructure weaknesses in the energy and transport sectors; and by ensuring the long-term sustainability of public finances. Labour market participation rates remain low, despite high vacancy rates in some segments. This points to significant skills mismatches and to the need for further investment in training and in the education system. The current political situation, with a caretaker government at federal level, risks to slow down reforms. ([1])

Economic growth is expected to slowdown gradually. In 2018, GDP growth was underpinned by robust, albeit weakening domestic demand. Growth in consumer spending is expected to strengthen, as household income should rise owing to employment growth and new tax reductions as part of the continuing of the 'tax shift', a multi-year tax reform lowering the tax pressure on labour. Business investment growth is expected to increase only moderately, reflecting lower economic growth expectations. After contributing significantly to growth in 2017 and 2018, net exports are expected to start weighing on growth from 2020, as Belgium's cost competitiveness compared to neighbouring countries is forecast to weaken. Overall, GDP growth in Belgium is forecast to slow down from 1.4 % in 2018 to 1.3 % in 2019 and 1.2 % in 2020.

In recent years, growth in Belgium has been job-rich. This has led to the lowest unemployment rate since 2000, at 5.9 % in 2018. However, the impact of policies to help create jobs, in particular wage cost moderation, is gradually fading. Combined with labour shortages in some sectors, this is expected to hold back employment growth. The unfavourable inflation gap in Belgium compared to the euro area is projected to narrow gradually.

Budget consolidation could have been more structural given the relatively supportive macroeconomic conditions. From its trough of a deficit of 4.1 % of GDP in 2011, the structural balance has improved by 2.7 pps of GDP. However, almost half of the improvement stems from the low interest rates environment, which reduced interest payments. According to the Commission's autumn forecast, Belgium's structural deficit is expected to reach 1.4 % of GDP in 2018. The gradual reduction of public debt is projected to continue, allowing a debt-to-GDP ratio of 98.7 % in 2020.

Further investment in transport infrastructure and energy transition, innovation, education and training would strengthen Belgium's long-term growth potential, while helping to address regional disparities. Total investment in Belgium is among the highest in the EU at 23.5 % of GDP in 2017. The relatively good performance overall is due to private investment. By contrast, low public investment has led to a decrease in the quality of the national infrastructure, especially roads and railways. The renovation of the old building stock, which predates the introduction of energy norms, will contribute to meet the 2020 and 2030 emission reduction targets. In the light of Belgium's commitment to fully phasing out nuclear energy by 2025, there is a need for major investment in power generation, as well as interconnection capacity, smart grids and storage. Addressing labour shortages, especially of employees with backgrounds in science, technology, engineering and mathematics, will require investment in the training and education system. There are important needs in terms of social infrastructure (Early Childhood Education and Care, social housing, schools) and workers in the social sector. Digitalisation of public services and justice, as well as the reinforcement of certain regulators, would improve institutional

([1]) This report assesses Belgium'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.

governance. Annex D identifies key priorities for support by the European Regional Development Fund and the European Social Fund Plus, building on the analysis of investment needs and challenges outlined in this report.

Overall, Belgium has made limited ([2]) progress in addressing the 2018 country-specific recommendations.

There has been some progress in the following areas.

- Measures have been taken to tackle investment needs in existing transport infrastructure

There has been limited progress in the following areas.

- Disincentives to work remain and there is still a need to strengthen the effectiveness of active labour market policies, in particular for vulnerable groups.
- Further action is needed to improve the efficiency and composition of public expenditure.
- Sectoral regulation is still high in some professional services, which remain sheltered from competition, and in retail. Addressing mobility issues remains a priority.

Regarding Belgium's progress towards its national targets under the Europe 2020 strategy, the employment rate target of 73.2 % is still out of reach despite substantial job creation. Belgium is broadly on track to reach the targets for R&D intensity, reducing early school leaving and increasing tertiary educational attainment. By contrast, additional efforts are needed to meet the targets for greenhouse gas emissions, renewable energy, energy efficiency and reducing the risk of poverty.

Belgium performs well on a number of indicators of the Social Scoreboard supporting the European Pillar of Social Rights, whilst challenges remain. It scores well on fair working conditions. Nevertheless, a number of Pillar principles merit attention (e.g. employment rate). Participation in adult learning is relatively low and educational outcomes show considerable variations linked to the socio-economic status. Some population groups, in particular people with a migrant background, could be better integrated in the labour market. Compared to other countries, persons with disabilities are more at risk of poverty or social exclusion. Belgium presents good outcomes in terms of gender equality and childcare.

Key structural issues analysed in this report, which point to particular challenges for the Belgian economy are the following:

- **The concentration of innovation in a few industries and barriers to competition and investment in product and services markets are weighing on productivity growth.** Belgium is lagging behind its neighbours in terms of total factor productivity growth. Among the explanatory factors, the rate of business creation and failure appears to be lower than in peer countries, which represents an obstacle to higher productivity growth, as it may lock resources in lower-productivity firms. Restrictions to competition and investment remain high in several legal, accounting, architectural, real estate and transport services; this has adverse implications for the manufacturing sector. The retail sector still faces a complex operational environment that hinders productivity and discourages investment. While a fourth mobile operator might enter the mobile telecom market, competition in telecommunication services remains weak, in particular in fixed networks, creating obstacles to bundled services. Another factor weighing on productivity growth is that high R&D spending, partly driven by tax incentives, are concentrated in a few industries and there is insufficient diffusion of innovation to the rest of the economy.
- **In spite of efforts, heavy administrative burden, legislative complexity, and low digitalisation of public services weighs on entrepreneurship and investment.** The complexity of administrative procedures is

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

perceived by most firms as a problem for doing business. In particular, long delays for building permits, a costly property registration procedure and lengthy judicial proceedings are perceived as obstacles hindering business investment. The government is simplifying the company code and its tax system. However, some areas of taxation remain complex. Policy-making still has room to benefit from improved analytical support. The quality of digital public services for business is low. The lack of digitalisation of the justice system remains a serious challenge.

- **Deteriorating road infrastructure, distortive incentives in transport, and infrastructure bottlenecks also hinder productivity growth.** Roads in Belgium are among the most congested in the EU. The quality of road infrastructure is deteriorating after years of low public investment. The maintenance of a large and dense network does not seem cost-effective for regions and local authorities. The rail infrastructure is dense and of good quality, but it is congested around Brussels and in the access to ports (Antwerp, Zeebrugge). The quality of rail services is low and there is insufficient urban and urban-rural public transport. Regulatory barriers to competition and investment in domestic passenger railway services, intercity coach services and taxis constrain the supply of alternative collective and low-carbon transport services. Important investments are planned in suburban rail infrastructure and signalling, but are being held back notably by budgetary allocation rules across regions.

- **Skills mismatches and low job mobility hamper job and productivity growth.** Labour shortages are observed in many sectors, and concern mostly professionals in information and communication technologies, and workers in the construction and health sectors. Growth of the construction sector is also impacted by uneven reforms across regions regulating construction and craft professions. Tertiary education attainment is high, yet there are too few graduates in science, technology, engineering, and mathematics, which are particularly important for innovation and economic growth. Shortages of professionals with an entrepreneurship knowledge in these areas hold back the development of start-ups. The overall level of digital skills is good, but not improving. There are important needs in terms of re-skilling and up-skilling the labour force in some sectors. Adult participation in education and training and job mobility are also low. Poor linguistic skills are an important issue, in particular in Brussels.

- **Reforms to reverse the decline in educational outcomes and to tackle disparities are progressing slowly.** The decline in the educational performance and the existence of significant disparities in the education systems remain a concern. The percentage of young people not mastering basic skills can be improved in all Communities, and in particular in the French Community. The early school-leaving rate has decreased, but remains high in Brussels and among non-EU born young people and young men in cities. Educational inequalities are also observed in tertiary education. There is room to improve the cost-effectiveness of the education system.

- **Disincentives to work and weaker activation reduce labour market participation.** Labour market participation is low for the young, older workers and the low-skilled. The activity rate of low-skilled is significantly below the EU average. Youth unemployment is well above the EU average, notably in Brussels. Existing labour activation measures are less effective for persons with a migrant background. Some concerns emerged about the full enforcement of the principle of "active availability" by the Regions, and the potential impact on federal and local public finances. Although the tax shift reduced the labour tax wedge (income tax plus employer and employee contributions) for very low wage earners (fifty percent of the average wage), it remains the highest in the EU for average wage earners. High tax disincentives for second income earners – mainly women – remain, contributing to high part-time employment among women. For single parents there is little financial incentive to take-up full-time employment. Belgium remains the only country in which unemployment benefits are not limited in time,

though they gradually fall. In the context of the envisaged 'jobs deal' the federal government announced its intention to increase their degressivity.

- **The composition and efficiency of public spending can be improved in order to create space for more public investment.** Primary expenditure is high. At the same time, public investment, which is mostly carried out by regions, communities and municipalities, remains relatively low. It has recently dropped at local level notably because of rising expenditure trend and tight budgetary constraints imposed by the regions. While a large portion of public spending is mandated by permanent legislation, limiting the government's ability to review and change spending priorities, the use of spending reviews and policy evaluations to improve the efficiency of public spending is still limited.

- **The extensive use of tax expenditures reduces the efficiency of the tax system, makes it complex and creates economic, social and environmental distortions.** While tax expenditures may be justified to correct market failures, streamlining them would simplify the tax system and would allow tax rates to be reduced. Taxes on rental income are low in Belgium. Revenues from environmental taxes remain among the lowest in the EU. The taxation framework for financial investments is also relatively complex and reduced value-added tax (VAT) rates create economic distortions. In addition, high transaction taxes on immovable property, combined with the company car scheme, adversely affect mobility and the environment.

- **In spite of recent reforms, the medium-long term sustainability of the pension and the long-term care systems remains a challenge.** The latest projections point to a considerable increase in the expected cost of demographic ageing despite the measures on long-term care and the positive impact of recent pension reforms, highlighting risks to the sustainability of public finances. The previously envisaged introduction of a credit-based public pension system is intended to improve long-term fiscal sustainability by providing for automatic adjustment mechanisms in response to structural demographic or economic developments. Public debt is decreasing but its high level aggravate sustainability concerns.

- **Policy coordination between the different government levels is complex and not always effective, weighing on public investment and the efficient delivery of certain policies.** Budget coordination between entities is currently not sufficiently flexible to create room for public investment in large-scale projects. There is still no formal agreement on annual targets at all levels of government, in spite of the cooperation agreement signed in 2013, complicating budget coordination. The responsibility for the social protection systems is split between the federal and the sub-national levels, which may lead to coordination problems. Policy coordination in climate, energy, digital and transport policies is complex and not always effective.

Other key structural issues analysed in this report, which point to particular challenges for Belgium's economy, are the following.

- **Economic disparities across regions and provinces in Belgium remain.** While the GDP per capita is on average higher in Belgium than in the EU, there are important inter- and intra-regional disparities in terms of revenue, employment, education and innovation. Unemployment is high in Walloon cities and in Brussels, where there are also important revenue disparities.

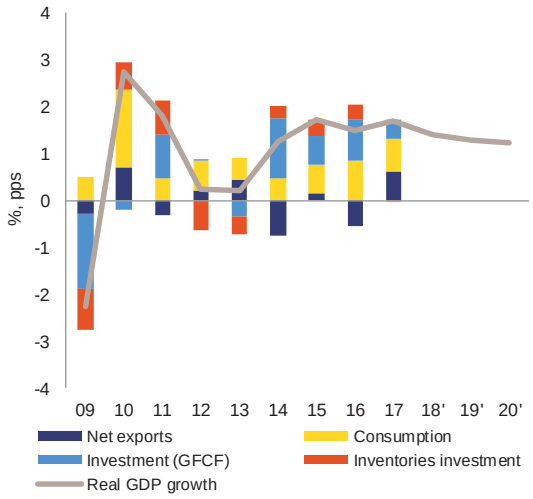
- **Although Belgium has an effective social redistribution system, pockets of poverty remain**. The at-risk of poverty rate for low working intensity households increased significantly. It is above the EU average especially for households with children. There are strong inequalities in health access and outcomes by socio-economic status. People with disabilities face particularly strong challenges. In terms of long-term care, there is also a very large gap for unmet needs in formal home care services, well over twice the EU average.

1. ECONOMIC SITUATION AND OUTLOOK

Economic growth

Economic growth is expected to largely match developments in the euro area, having slowed down to 1.4 % in 2018. Growth is expected to have been driven by still robust domestic demand and positive net exports in 2018. However, while household consumption growth is expected to have weakened slightly to 0.8 %, investment growth decelerated more markedly from 1.8 % in 2017 to 1.4 % in 2018, while government consumption grew moderately (0.9 %). Public investment is projected to have edged up to 2.3 % of GDP due to the local electoral cycle. The contribution of net exports is expected to have remained largely positive in 2018, after a notable increase in 2017 (see Graph 1.1).

Graph 1.1: **Breakdown of GDP growth**



Source: European Commission

Economic growth is expected to ease to 1.3 % in 2019 and 1.2 % in 2020. According to the Commission's 2019 winter interim forecast, economic growth from 2018 to 2020 is expected to ease gradually to a level below the average growth of 1.6 % over the previous three years. As the contribution from net exports is forecast to become neutral in 2019 and slightly negative in 2020, GDP growth is projected to be driven exclusively by internal demand. Households' purchasing power is projected to increase slightly as the job market continues to develop favourably and further income tax cuts are implemented. Investment by both business and households is expected to contribute less markedly to growth. The start of major infrastructure works and defence investments are forecast to drive public investment growth, particularly from 2020. Public investment is projected to account for 2.4 % of GDP in 2020.

Domestic demand has been the main growth driver in recent years, notably thanks to sustained investment. Since 2013, household consumption and investment growth have contributed roughly evenly to economic growth, with private consumption expected to become the main driver until 2020. Investment has held up well in Belgium compared to other Member States, accounting for 22.5 % of GDP on average from 2007 to 2017. It is expected to increase to 23.7 % of GDP in 2018-2020 on average. Investment growth has been primarily driven by business investment, especially in recent years.

Household consumption is expected to gain momentum in 2019-2020 as a result of job and wage growth. Private consumption growth slowed from 1.3 % per year in 2000-2011 to 1 % per year in 2012-2017. This stems from modest increases in real disposable income until 2016, reflecting wage moderation policies aimed at recovering part of the cost competitiveness lost in the past. Income growth has picked up since 2016, with the resumption of wage indexation and of real wages increases, together with strong job creations, while income tax cuts have been made as part of the 'tax shift', a multi-year tax reform lowering the tax pressure on labour. A sustained improvement in labour market performance has also supported households' purchasing power, as employment grew by 1.2 % and the unemployment rate fell to 5.9 % in 2018. Overall, household consumption is estimated to have grown by 0.8 % in 2018 and is projected to rise by 1.2 % in 2019 and 1.6 % in 2020.

Net exports are no longer expected to support growth from 2019. After contributing significantly to growth in 2017 and 2018, net exports are forecast to provide limited support in 2019, and to start weighing on growth from 2020. This is expected for several reasons. First, weakening world trade is likely to slow-down export growth. Second, a pick-up in internal demand is forecast to drive up imports. Third, Belgium's gains in export market share over 2012-

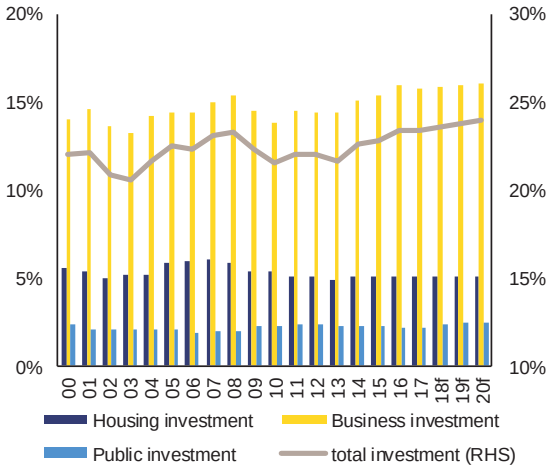
2017, based on improved cost-competitiveness, are expected to come to an end and to be followed by a slight deterioration over the coming years.

Investment

The particularly robust business investment seen in 2016 and 2017, supported by relatively favourable financing conditions, high capacity utilisation and rising profitability, slowed down in 2018. Belgian businesses have benefited in recent years from historically low financing costs. Although capacity utilisation fell into line with its historical average at the end of 2018, its high level since 2016 has supported investment growth. Meanwhile, measures taken to reduce labour costs have contributed to a steady increase in profit margins. The slow-down in business investment in 2018 came after sustained growth in the three previous years, in a context of weaker final demand, deteriorating confidence and rising supply constraints in some segments of the labour market. Risks surrounding the outlook are mainly rooted in the external environment, as illustrated by worsening leading indicators regarding order expectations and business climate. A gentle weakening of business investment growth is expected in 2019-2020.

Investment has also been supported by housing and the public sector. Low mortgage interest rates and low yields on alternative investment assets played a role in the sustained real estate investment growth seen since 2014, which slowed down however in 2017. The local government investment cycle in the run-up to local elections in 2018 drove public investment in 2017-2018, although to a lesser degree than in previous cycles. The public investment-to-GDP ratio of around 2.2 % is expected to edge up over 2018-2020 (see Graph 1.2), but to remain among the lowest in the EU.

Graph 1.2: **Composition of investment spending (%GDP)**



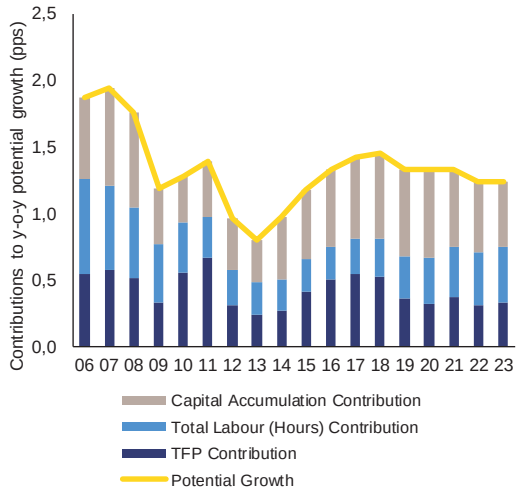
Source: European Commission

Potential growth

The weaker growth outlook is consistent with modest estimates for potential growth. Although, the estimate for potential growth has improved since 2013, it has remained broadly stable at around 1.4 %, which is significantly below pre-crisis levels (see Graph 1.3). This subdued improvement reflects the long-term trend of limited gains in total factor productivity (see Section 3.4), as well as the declining contribution of labour due to slow growth in the working-age population and a fall in average hours worked. These factors have been offset by increased private sector capital accumulation and large job creations in recent years. The output gap([3]) became positive in 2017, from a trough of -1.2 % in 2013. The positive output gap is forecast to widen slightly in 2018-2020 as growth remains above its potential. Demographic ageing, which is projected to affect Belgium and almost all European countries, will increasingly depress labour's contribution to potential growth. This means that potential growth is rather unlikely to return to the pre-crisis level.

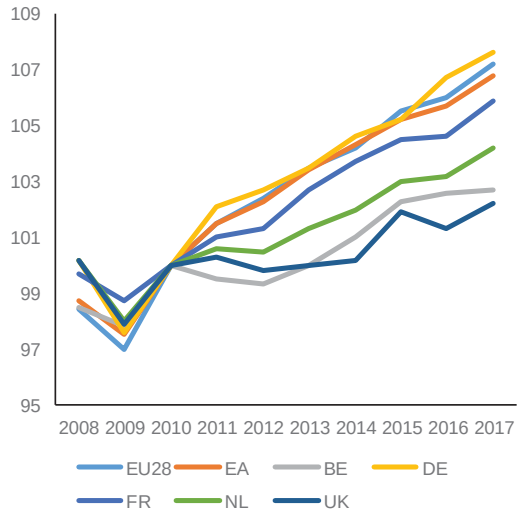
([3]) Output gap as calculated according to the Commonly Agreed Methodology.

Graph 1.3: **Breakdown of potential growth**



Source: European Commission

Graph 1.4: **Real labour productivity growth (2010=100)**



Source: European Commission

Productivity is among the highest in the EU, but it has grown relatively slowly over the past decade. The high level of productivity is notably due to large private capital accumulation, a highly skilled workforce and strong innovation performance in key sectors (pharmaceuticals, minerals, chemicals). However, labour productivity growth has been relatively muted in the past decade (Graph 1.4). This can largely be explained by the growth of services, which represent more low-skilled professions. This was facilitated by policies aimed at increasing labour force participation. Analyses at industry level (Dumont and Kegels, 2016) also suggest that employment shifted from industries with high productivity growth towards lower-productivity sectors (non-tradable services for example). Over the medium term, the factors weighing on productivity growth are expected to remain relevant (such as the growth of the share of services and the efforts to increase labour participation) or gain a stronger impact (population ageing). Therefore, policies to increase total factor productivity are expected to play an important role in raising productivity growth prospects (see Section 3.4.1).

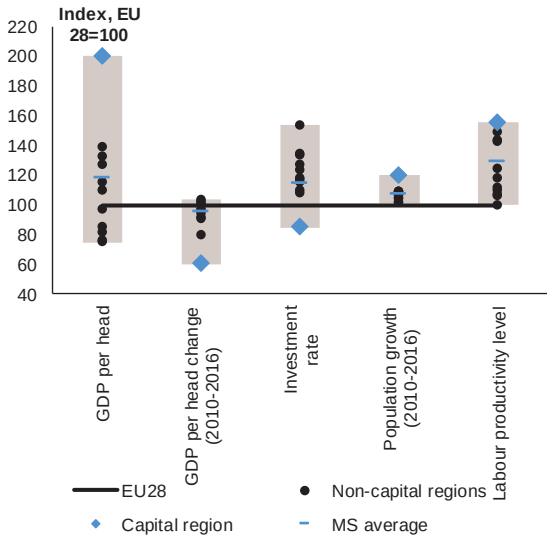
Regional disparities

Disparities in economic performance between the various Belgian regions persist. The GDP of the Brussels capital region, which accounted for 18 % of Belgium's GDP in 2016, grew by 0.2 % annually from 2009 to 2016, well below the national average of 0.8 %. Over the same period, GDP per capita grew in line with the EU average (1.2 %) in the Flemish provinces, and at a slower pace in Wallonia. GDP per capita increased more slowly in Brussels than in the rest of Belgium from 2010 to 2016, mainly because of stronger demographic growth there. Nevertheless, Brussels' GDP per head remains much higher than the national and EU averages (Graph 1.5). The contrast in GDP per capita between Brussels and the rest of Belgium also stems from the fact that a large commuter population works in Brussels but lives in the other two regions. Although labour productivity (measured in volume) is higher in Belgium than in the EU, it fell by 0.5 % in the Brussels region and by 0.7 % in Wallonia from 2010 to 2016 relative to the EU. In 2015, the investment rate was below the national average in Brussels, in one Flemish province and in two Walloon provinces, while only Brussels underperforms relatively to the EU average.

There are also regional disparities in terms of labour market opportunities. In 2017, the unemployment rate in Flanders (4.4 %) was well

below the EU average (7.6 %), while it was substantially higher in Brussels (14.9 %) and Wallonia (9.7 %). The share of the working-age population with tertiary education varies considerably across Belgium. In Wallonia, it varies from 57.1 % (Walloon Brabant) to 27.3 % (Hainaut). In Flanders, it ranges from 50.7% (Vlaams-Brabant) to 35.4% (Limburg). The rate of young people neither in employment nor in education and training also differs widely, from 7.2 % in Flanders to 11.6 % in Wallonia and 13.3 % in Brussels.

Graph 1.5: **Regional disparities in Belgium**



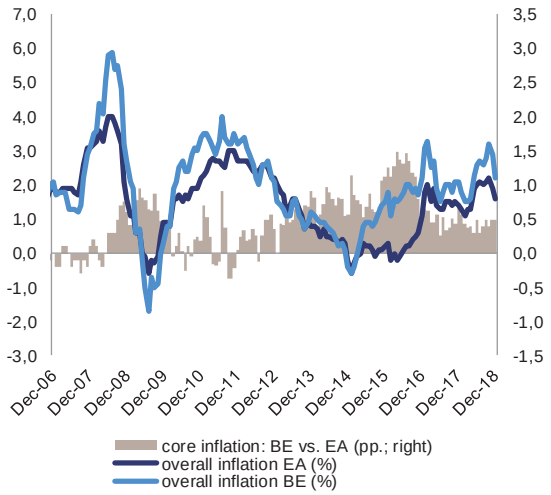
Source: Eurostat, European Commission

Inflation

Headline inflation rose to 2.3 % in 2018 and is expected to slow down by 2020. Price pressures persisted in 2018, reflecting crude oil and electricity prices developments and rising processed food prices. Although energy and food prices are expected to grow at a slower pace from 2019, rising labour costs are forecast to contribute to higher inflation in services. Headline inflation is projected to slow down gradually, reaching 1.9 % and 1.7 % in 2019 and 2020, respectively.

Comparatively high inflation remains a feature of the economy. Between 2012 and 2018, headline inflation was on average 0.5 pp. higher in Belgium than in the euro area as a whole. For core inflation — which excludes energy and unprocessed food items — the difference over the same period amounted to 0.6 pp. (see Graph 1.6). This structural difference is driven among others by the more direct transmission of oil price fluctuations to Belgian energy prices, by fiscal measures, by relatively weaker competition in some service sectors in Belgium (European Commission, 2018a) and by the automatic indexation of wages.

Graph 1.6: **Consumer inflation**



Source: European Commission

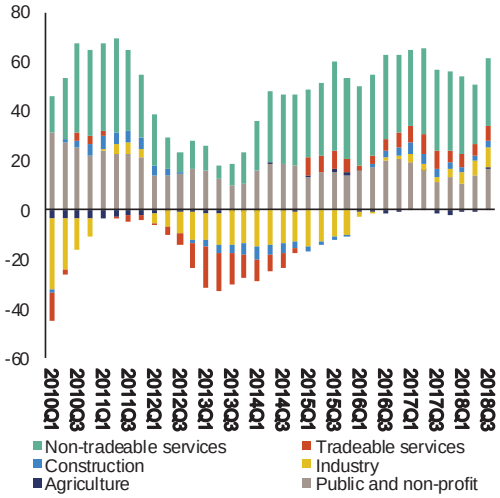
Labour market and social developments

The labour market continues to benefit from economic expansion and policies to reduce the high cost of labour. Employment growth is expected to remain positive (1.2 %), but to slow down compared to 2017 as a result of increasing labour skills mismatches and rising labour costs. Until the beginning of 2017, employment growth was particularly significant in the public and non-profit sectors, where a third of new jobs were created. However, since the second half of 2017, employment growth in the private sector intensified, especially in industry and non-tradeable services (Graph 1.7). In 2018, the unemployment rate continued to decrease and reached 5.9 %.

Despite an overall improvement in performance, the labour market remains highly segmented. More than 25 % of the working age population is not in the labour market. In 2017, the activity rate reached 73.7 %, which is well below the level in neighbouring countries and the EU average (78 %). Labour market participation

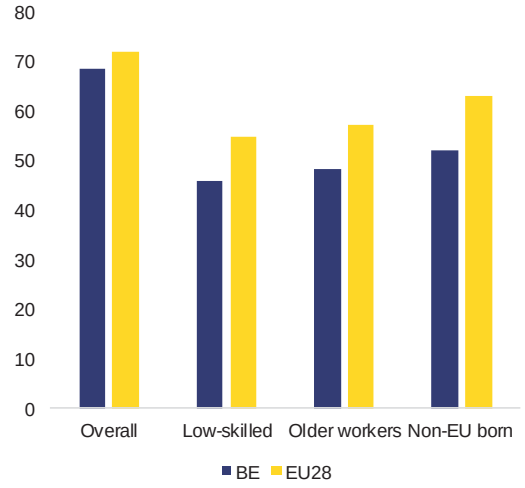
remains particularly low for specific groups, in particular older (55+) and low skilled workers and those with a non-EU immigrant background (see Graph 1.8). Youth unemployment has declined markedly but remained above the EU average in 2018 (16.6 % vs. 15.6 %).

Graph 1.7: **Employment growth by sector (thousands, year-on-year changes)**



Source: Eurostat

Graph 1.8: **Disparities in the employment rate for specific population groups (2017)**



(1) Note: The age group considered is 20-64, except for older workers (55-64).
Source: Eurostat

Income and wealth inequality remain stable and below the EU average. In 2017, the income of the top quintile of the income distribution was 3.8 times larger than the income of the bottom quintile (against 5.1 times larger for the EU in 2017). Taxes and the benefit system, especially, have a large impact on reducing income inequality ([4]). Compared to other euro area countries, wealth is relatively evenly distributed in Belgium.

Nonetheless, children with disadvantaged backgrounds face inequalities of opportunity. The variation in science scores of the 2015 Programme for International Student Assessment (PISA) explained by parental background remained much higher than in other EU countries, indicating a lack of equal opportunities to quality education. The gap in the risk of poverty and social exclusion for children due to parental educational background is high (62.1 % against an EU average of 53.4 % in 2017). There are also specific concerns for children with a migrant background. In addition, the share of children younger than 6 years old living in very low work intensity households remains high in 2017 at 13.3 % (against 8.1 % for the EU in 2017).

Competitiveness

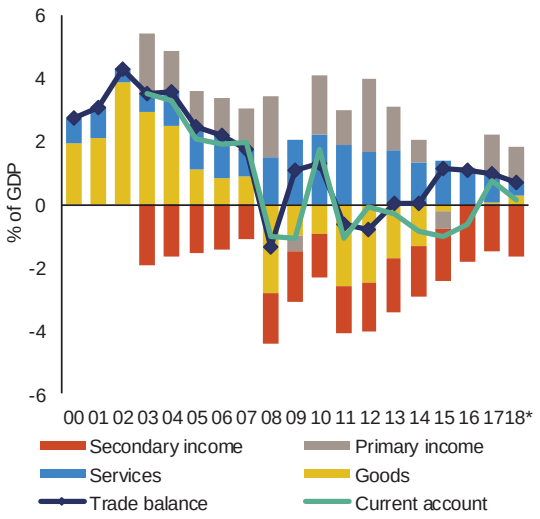
Belgium's share of global export markets has declined for most of the years since 2000. While the downward trend ended in 2013, the accumulated losses remain substantial: 21 % (in nominal terms) of international market shares were lost between 2000 and 2017. Over the same period, the export market shares of France and the Netherlands fell by 26.3 % and 12.9 % respectively while Germany's export market share increased by 0.4 %.

The downward trend in export market shares was driven by a lower export performance in goods, while export performance in services was broadly stable. The less favourable geographical distribution (Belgian companies export mainly towards countries whose import growth is less dynamic than global imports) does not entirely explain the negative performance. Belgian exports tend to be in below-average quality goods. This specialisation has been stable in recent years, according to estimates (Vandenbussche, 2014).

([4]) Percentage reduction in the S80/S20 for taxes and benefits (2016): benefits 56 %, taxes 10.5 % (EU 31.9 % and 12.4 %). Percentage reduction in the Gini for taxes and benefits (2016): Gini benefit 23.21 % taxes 8.13 % (EU 14.9 %, 7.4 %).

These segments could be, to some extent, subject to harsh price competition and this makes Belgium' export performance more dependent on cost factors (see Section 3.4.1).

Graph 1.9: **Breakdown of current account balance (%GDP)**



(1) BPM5 methodology until 2007, BPM6 thereafter
(2) 2016 based on data for first nine months
Source: NBB

External position

In 2018, the current account is expected to record a small surplus for the second year in a row. From an average deficit of 0.7 % of GDP in 2011-2016, it improved to a surplus of 0.7 % in 2017 and to an estimated 0.2 % in 2018 (see Graph 1.9). The recent improvement is reflected in both the trade balance and the primary income. Exports of goods have been the more volatile component, with exports of services recording a gradually decreasing surplus in recent years.

Private indebtedness

Corporate leverage remains moderate despite non-financial companies' high gross debt. Belgian corporate financial assets and liabilities figures are inflated by widespread intra-group lending, notably encouraged over the years by the notional interest deduction, an allowance for corporate equity within corporate income taxation. Therefore the debt-to-financial assets ratio provides for a better measure of companies' financial situation. This leverage measure, at 47 % in 2018 on a consolidated basis, compares favourably to the euro area average, suggesting that deleveraging needs remain relatively modest. Household debt is dealt with in Section 3.2.

Public finances

According to the Commission's 2018 autumn forecast, drafted prior to the adoption of a provisional budget in December 2018, the general government deficit is expected to have reached 1.0 % of GDP in 2018. Belgium's headline deficit has steadily decreased in recent years, from 4.2 % of GDP in 2012 to 0.9 % of GDP in 2017. Expenditure, as a share of GDP, is expected to have continued on a downward path. Revenues were positively impacted by resilient social contributions, rising indirect taxes and by a measure aimed at incentivising ex ante corporate income tax payments. The authorities have postponed their objective of achieving a structural balanced general government budget from 2019 to 2020. Nevertheless, the latest available information points to a better fiscal performance than that presented in the authorities' 2019 Draft Budgetary Plan (-1.1 %) or the Commission's 2018 autumn forecast.

The tendering of the Prime Minister's resignation in December 2018 opens a scenario of rolling budgets that increase uncertainty. In the absence of a formal budget, Parliament has approved a "current affairs" budget. This aims to ensure appropriate resources are available to keep the state running. It uses a percentage of the previous year's approved credits (generally granted for periods of 3-4 months, strictly used on a monthly basis) and can be adapted, to ensure that, at a minimum, all the government's contractual and legal obligations are fulfilled. Policy initiatives outside the scope of the provisional budget need to be separately approved by Parliament.

Public debt is forecast to have fallen to 101.4 % of GDP in 2018. The Commission 2018 autumn forecast predicts a further reduction in public debt, with the debt-to-GDP ratio falling to 99.8 % and 98.7 % of GDP in 2019 and 2020, respectively. The debt of rail infrastructure manager Infrabel was consolidated within public debt in 2018, with retroactive effect from 2014. The most recent budget made no mention of future disinvestments in the financial sector, to which the Belgian State

Table 1.1: **Key economic and financial indicators - Belgium**

						forecast		
	2004-07	2008-12	2013-15	2016	2017	2018	2019	2020
Real GDP (y-o-y)	2.9	0.6	1.1	1.5	1.7	1.4	1.3	1.2
Potential growth (y-o-y)	1.9	1.3	1.0	1.3	1.4	1.5	1.3	1.3
Private consumption (y-o-y)	1.5	1.2	0.8	1.7	1.1	.	.	.
Public consumption (y-o-y)	1.3	1.5	0.5	-0.2	0.6	.	.	.
Gross fixed capital formation (y-o-y)	5.9	-0.3	2.3	3.8	1.8	.	.	.
Exports of goods and services (y-o-y)	5.6	1.7	3.2	7.6	5.0	.	.	.
Imports of goods and services (y-o-y)	5.7	2.1	3.3	8.5	4.3	.	.	.
Contribution to GDP growth:								
Domestic demand (y-o-y)	2.3	0.9	1.0	1.7	1.1	.	.	.
Inventories (y-o-y)	0.5	0.0	0.1	0.3	0.0	.	.	.
Net exports (y-o-y)	0.1	-0.2	-0.1	-0.5	0.6	.	.	.
Contribution to potential GDP growth:								
Total Labour (hours) (y-o-y)	0.5	0.5	0.3	0.5	0.5	0.5	0.4	0.3
Capital accumulation (y-o-y)	0.6	0.5	0.4	0.6	0.6	0.6	0.7	0.7
Total factor productivity (y-o-y)	0.8	0.4	0.2	0.2	0.3	0.3	0.3	0.3
Output gap	1.3	-0.1	-0.8	-0.2	0.0	0.1	0.3	0.4
Unemployment rate	8.2	7.6	8.5	7.8	7.1	6.4	6.1	5.9
GDP deflator (y-o-y)	2.1	1.7	0.9	1.8	1.7	2.2	1.9	1.8
Harmonised index of consumer prices (HICP, y-o-y)	2.1	2.5	0.8	1.8	2.2	2.3	1.9	1.7
Nominal compensation per employee (y-o-y)	2.7	2.5	1.2	0.5	1.9	2.2	2.0	2.1
Labour productivity (real, person employed, y-o-y)	1.6	-0.2	0.7	0.2	0.3	.	.	.
Unit labour costs (ULC, whole economy, y-o-y)	1.1	2.6	0.4	0.3	1.6	1.7	1.2	1.3
Real unit labour costs (y-o-y)	-1.0	0.9	-0.5	-1.5	0.0	-0.5	-0.7	-0.5
Real effective exchange rate (ULC, y-o-y)	0.3	0.3	-0.7	0.2	1.9	1.2	-1.1	-0.8
Real effective exchange rate (HICP, y-o-y)	0.3	-0.3	-0.5	2.9	1.6	2.4	-0.7	-0.6
Savings rate of households (net saving as percentage of net disposable income)	9.0	8.3	4.8	3.9	4.0	.	.	.
Private credit flow, consolidated (% of GDP)	9.3	13.0	6.2	23.0	-1.5	.	.	.
Private sector debt, consolidated (% of GDP)	124.6	174.9	172.3	198.9	187.0	.	.	.
of which household debt, consolidated (% of GDP)	43.9	52.7	57.5	58.9	59.8	.	.	.
of which non-financial corporate debt, consolidated (% of GDP)	80.7	122.2	114.8	140.0	127.2	.	.	.
Gross non-performing debt (% of total debt instruments and total loans and advances) (2)	2.6	4.2	3.9	2.6	2.3	.	.	.
Corporations, net lending (+) or net borrowing (-) (% of GDP)	1.9	2.5	1.9	2.1	1.6	1.9	2.4	2.8
Corporations, gross operating surplus (% of GDP)	24.8	24.7	24.9	26.5	26.6	26.9	27.5	28.1
Households, net lending (+) or net borrowing (-) (% of GDP)	2.5	2.8	0.9	0.1	0.2	0.3	-0.1	-0.3
Deflated house price index (y-o-y)	6.8	0.7	0.1	0.9	1.7	.	.	.
Residential investment (% of GDP)	5.9	6.1	5.8	5.9	5.9	.	.	.
Current account balance (% of GDP), balance of payments	0.0*	-0.3	-0.7	-0.6	0.7	1.2	1.1	1.1
Trade balance (% of GDP), balance of payments	2.5	-0.1	0.4	1.1	1.0	.	.	.
Terms of trade of goods and services (y-o-y)	-0.5	-0.5	0.4	0.6	-0.9	0.2	0.0	0.2
Capital account balance (% of GDP)	-0.2	-0.1	-0.1	0.1	0.1	.	.	.
Net international investment position (% of GDP)	35.5	57.4	47.6	57.0	52.4	.	.	.
NIIP excluding non-defaultable instruments (% of GDP) (1)	.	63.8	55.5	52.3	45.0	.	.	.
IIP liabilities excluding non-defaultable instruments (% of GDP) (1)	.	232.4	193.8	206.9	194.6	.	.	.
Export performance vs. advanced countries (% change over 5 years)	0.4	-2.2	-8.4	-5.0	-0.8	.	.	.
Export market share, goods and services (y-o-y)	.	.	-1.1	7.9	-0.5	.	.	.
Net FDI flows (% of GDP)	-2.0	-3.5	2.0	-6.4	6.1	.	.	.
General government balance (% of GDP)	-0.7	-3.8	-2.9	-2.4	-0.9	-1.0	-1.1	-1.3
Structural budget balance (% of GDP)	.	.	-2.7	-2.2	-1.4	-1.4	-1.3	-1.7
General government gross debt (% of GDP)	92.3	99.7	106.5	106.1	103.4	101.4	99.8	98.7
Tax-to-GDP ratio (%) (3)	45.3	45.7	47.6	46.4	46.9	46.6	46.4	46.3
Tax rate for a single person earning the average wage (%)	42.0	42.3	42.3	40.8	.	.	.	.
Tax rate for a single person earning 50% of the average wage (%)	25.8	26.6	25.7	21.6	.	.	.	.

(1) NIIP 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, Automn forecast 2018 otherwise)

has a large exposure. Public finances are discussed in Section 3.1.

2. PROGRESS WITH COUNTRY-SPECIFIC RECOMMENDATIONS

Since the start of the European Semester in 2011, 48 % of all country-specific recommendations addressed to Belgium have recorded at least 'some progress' ([5]). 'Limited' or 'no progress' has been made on 52 % of these recommendations (see Graph 2.1). Substantial progress has been achieved in improving the cost-competitiveness of the economy, while full implementation has been achieved in the stabilisation of the financial sector.

Since 2011, Belgium has made some progress in strengthening public finances. However, a significant share of the improvement stemmed from a reduction in interest spending thanks to the low interest rates environment. A more structural budget consolidation could have been undertaken. Meeting the target of a structurally balanced budget has been postponed to 2020. After peaking at 106.8 % of GDP in 2014 the public debt-to-GDP ratio has started to decline though remains at a high level, contributing to fiscal sustainability risks.

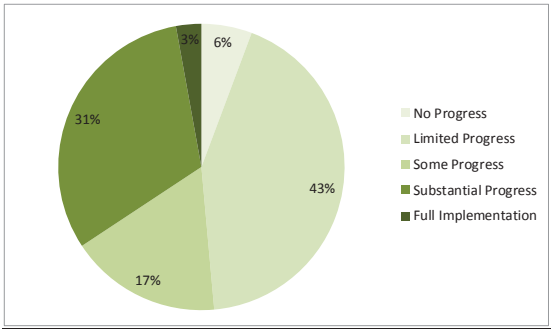
Measures have been introduced to increase the effective retirement age, but the sustainability of the pension system remains a challenge. Since 2012, age and career length requirements for early retirement have been repeatedly increased. In 2015, an increase by two year in the statutory retirement age was legislated, with an impact in 2025 and 2030. In addition, the option of leaving the labour market prematurely through the system of unemployment with company allowance has been progressively tightened. Smaller pension reforms concerned civil servant pensions, for example the reduction of preferential accrual rates and the way years of study are taken into consideration.

In spite of recent improvements, potential growth estimates remain below pre-crisis levels. The subdued improvement reflects the declining contribution of labour, due to the slow growth in the working-age population and the fall in average hours worked. Between 2013 and 2017, various wage moderation policies were implemented to stimulate job creation, including a real wage freeze, changes to parameters of the indexation calculation mechanism and a temporary suspension of wage indexation agreements.

Measures have been taken to reduce the tax wedge on labour. Gradual decreases in personal income taxation and employers' social security contributions, with more than proportional reductions for lower salaries have been legislated. The targeting of low wages favours the young and the low-skilled, who tend to have lower wages, but also the lowest employment rates; thus it supports activation for some of the most vulnerable groups. Overall, estimates by the Federal Planning Bureau and the National Bank of Belgium suggest additional job creation of 45 000–65 000 jobs by 2021. These measures will also contribute to improving the cost-competitiveness, which is gradually being eroded.

Recent changes to the corporate income tax system will further reinforce the cost-competitiveness of the economy. The move towards a system with lower statutory rates and fewer tax exemptions will also help to simplify an overall complex tax system and to increase the attractiveness of the Belgian economy for doing business. The extension of the tax shelter scheme to SMEs removes one of the constraints to the development of dynamic, fast-growing firms, by providing easier access to financing.

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: Different CSR assessment categories.
*** The multiannual CSR assessment looks at the implementation since the CSRs were first adopted until the 2019 Country Report.
Source: European Commission

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

Investment is also crucial within a longer-term perspective. Although overall investment did not experience the steep decline observed in other countries in the wake of the financial crisis, the situation is far less rosy when it comes to public investment. This has been structurally low for several decades, as a result of policy choices within a context of prolonged fiscal consolidation. Sustained cutbacks in investment budgets have resulted in net public investment averaging zero since the 1990s, eroding the quality of public infrastructure (see Section 3.4). The political agreement on a national pact for strategic investments, the announcement of an inter-federal energy pact in 2017 and calls to agree an inter-federal mobility strategy could provide renewed impetus for investment, including in energy and transport infrastructure.

Belgium has made limited progress in addressing the 2018 country-specific recommendations. There has been limited progress on distributing fiscal targets among the various levels of government in a way that can be enforced. Limited progress has been made on improving the composition of public expenditure. No spending review has been undertaken at the federal level, despite the high needs for expenditure reprioritisation. Meanwhile, through the National Plan for Strategic Investment, an increase in infrastructure investment is projected. There is also limited progress on vocational training, quality of education reforms with regard to equity, although Communities are phasing in major education reforms (e.g. reforms covering several sectors in the Flemish Community and the French Community's Pacte d'Excellence). There is limited progress on labour market reforms with regard to disadvantaged groups. Limited progress has been made in fostering investment in knowledge-based capital, even if measures vary in scope at regional, community and federal level. Progress on sector regulation has been limited overall. For certain professional services, regulatory restrictions continue to hamper competition. Also, limited progress has been made in improving the functioning of the retail sector for the benefit of businesses and consumers. Finally, some progress has been made in improving mobility.

Table 2.1: **Progress with the implementation of 2018 CSRs**

Belgium	**Overall assessment of progress with 2018 CSRs: Limited progress**
CSR 1: *Ensure that the nominal growth rate of net primary government expenditure does not exceed 1.8 % in 2019, corresponding to an annual structural adjustment of 0.6 % of GDP. Use windfall gains to accelerate the reduction of the general government debt ratio. Pursue the envisaged pension reforms and contain the projected increase in long-term care expenditure. Pursue the full implementation of the 2013 Cooperation Agreement to coordinate fiscal policies of all government levels. Improve the efficiency and composition of public spending at all levels of government to create room for public investment, notably by carrying out spending reviews.*	Belgium has made **limited progress** in addressing the fiscal-structural part of CSR1(1): • **Limited progress** in pursuing the envisaged pension reforms. • **Limited progress** in containing the projected increase in long-term care expenditure. • **Limited progress** pursuing the full implementation of the 2013 Cooperation agreement. • **Limited progress** in improving the composition and efficiency of public spending, by carrying out spending reviews.
CSR 2: *Remove disincentives to work and strengthen the effectiveness of active labour market policies, notably for the low-skilled, people with a migrant background and older workers. Pursue the education and training reforms, including by fostering equity and increasing the proportion of graduates in science, technology, engineering and mathematics.*	Belgium has made **limited progress** in addressing CSR2 • **Limited progress** in removing disincentives to work and strengthening the effectiveness of active labour market policies. • **Limited progress** in pursuing education and training reforms. • **Limited progress** in increasing the proportion of graduates in science, technology, engineering and mathematics.
CSR 3: *Reduce the regulatory and administrative burden to incentivise entrepreneurship and increase competition in services, particularly retail, construction and professional services. Tackle the growing mobility challenges, in particular through investment in new or existing transport infrastructure and reinforcing incentives to use collective and low emission transport.*	Belgium has made **limited progress** in addressing CSR3 • **Limited progress** in reduce the regulatory and administrative burden to incentivise entrepreneurship. • **Limited progress** in increasing competition in services, particularly retail, construction and professional services. • **Some progress** in tackling the growing mobility challenges, in particular through investment in new or existing transport infrastructure. • **Limited progress** in reinforcing incentives to use collective and low emission transport.

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

Box 2.1: EU funds and programmes contribute to addressing structural challenges and to fostering growth and competitiveness in Belgium

The financial allocation of the European Structural and Investment Funds (ESI Funds), aimed to support Belgium in facing development challenges, amounts to up to some EUR 2.7 billion in the current Multiannual Financial Framework, with a national co-financing of EUR 3.3 billion. The total investment is around 0.2 % of the country's GDP. As of the end of 2018, some EUR 2.27 billion (around 83 % of the total) has already been allocated to specific projects. Competitiveness of SMEs, sustainable and quality employment, social inclusion, educational and vocational training as well as research and innovation were the main themes covered by ESIF Funds.

About 28 % of the total ESI funds spent in Belgium aims to increase the competitiveness of SMEs. This is achieved by supporting innovation and research activities and stimulating the growth of the e-economy by developing synergies between businesses, R&D centres and higher education, supporting entrepreneurship and by improving skills of the workers.

The European Social Fund has contributed to the improvement of the social situation at all levels. EUR 1.1 billion in investment will contribute to the development of human capital growth and improve labour market participation, promoting social inclusion, improving the outcomes of the education and training systems and helping the most vulnerable groups in society (in particular the young and long-term unemployed) to find work.

Over the period, EUR 657 million will be spent to shift towards a low-carbon economy through investment in energy efficiency, by encouraging the sustainable and efficient use of natural resources. EUR 114 million will be spent on making buildings more energy efficient and improving district heating and high-efficiency cogeneration and EUR 64 million will be allocated to the move towards an energy-efficient, decarbonised transport sector. Investments will be made on the sustainability of fisheries and aquaculture as well as of agriculture practices and ecological management, alongside investments in new technologies.

Belgium is among the top participating countries in the H2020 projects, being the 7th largest participant. 886 SMEs participated in H2020 projects.

EU funds have helped to address policy challenges identified in the 2018 CSRs. ESI Funds contributed in addressing two of the three recommendations of the 2017 and 2018 reports, namely through the above mentioned investments in educational and vocational training as well as through research and innovation and support to SMEs.

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. Belgium, notably Flanders, for example, is receiving support to carry out spending reviews to ensure better management of public expenditure. The Commission is also assisting the authorities in their efforts to improve traffic conditions in the Antwerp port area through better use of inland waterways. In addition, work will soon start on promoting integrated primary care in Flanders and on a feasibility assessment for introducing advanced new technologies in customs procedures.

In Belgium, the overall volume of approved operations by the European Investment Bank with European Fund for Strategic Investments (EFSI) backing amounts to EUR 1.8 billion, which is set to trigger a total of EUR 8.3 billion in additional private and public investments (February 2019). Belgium ranks 18th as to the overall volume of approved operations as a share of GDP. Under the Infrastructure and Innovation window, 22 projects financed by the EIB with EFSI backing were approved, for a total of about EUR 1.6 billion set to trigger EUR 7.1 billion in total investment. On the SMEs side, 17 approved projects were financed by the EIB with EFSI backing, for approximately EUR 169 million in total financing set to trigger EUR 1.2 billion in

total investment with some 8 254 SMEs and mid-cap companies expected to benefit from improved access to finance. An EFSI-backed project in Belgium is "Northern Offshore Wind", for which the EIB is lending EUR 450 million to build the Northest wind farm off the Belgian coast. It will comprise 44 wind turbines and supply electricity to around 324 000 Belgian families.

More information at: https://cohesiondata.ec.europa.eu/countries/BE

3. REFORM PRIORITIES

3.1. PUBLIC FINANCES AND TAXATION

3.1.1. FISCAL POLICIES

According to the Commission 2018 Autumn Forecast, the Belgian general government deficit was projected to remain broadly stable. The headline deficit was estimated to have increased from 0.9 % of GDP in 2017 to 1.0 % in 2018 and is projected to increase further to 1.1 % of GDP in 2019. Revenue growth is expected to be affected by cuts in personal income taxation and social security contributions in the context of the "tax shift", a multi-year tax reform lowering the tax pressure on labour. Expenditure growth is expected to remain contained by lower interest payments and by moderate growth in public sector wages and social transfers in kind. These moderating factors are expected to be partially offset by an increase in public investment.

Budget consolidation is expected to have paused in 2018, with the structural balance remaining broadly unchanged. From a deficit of -4.1 % of GDP in 2011, the structural balance improved by 2.8 pps of GDP. However, almost half of the improvement stemmed from a reduction in interest spending thanks to the low interest rates environment. A more structural budget consolidation could have been undertaken, given the relatively supportive macroeconomic conditions. However, due to the caretaker government, structural reform will most likely stall in 2019, slowing the consolidation effort.

Public debt is on a declining trend, but its high level is a source of vulnerability. Debt is projected to have declined to 101.4 % of GDP in 2018, from a peak of 107.6 % of GDP in 2014. The gradual reduction of public debt is expected to continue, allowing a debt-to-GDP ratio of 98.7 % in 2020 according to the Commission 2018 autumn forecast. Combined with the structural budget deficit, high debt limits the authorities' scope for new or countercyclical policies in case of a downturn. The projected increase in age-related spending, if left unaddressed, would amplify those risks (see Section 3.1.5). Moreover, Belgium will have to cope with important public investment in defence and infrastructure in the years to come.

3.1.2. COMPOSITION OF PUBLIC SPENDING

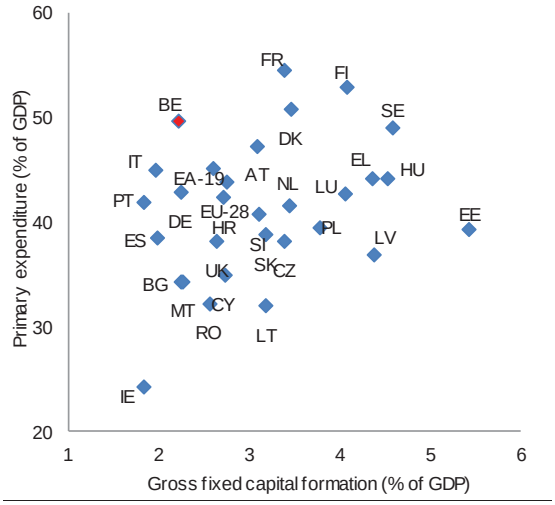
General government expenditure

In spite of a recent decrease, total expenditure as a share of GDP in Belgium remains among the highest in the euro area. This is still true even when netted out from interest spending. Primary expenditure (total public expenditure net of interest payments) stood at 49.8 % of GDP in 2017, down from a peak of 52.5 % of GDP in 2014, but still 3.5 percentage points of GDP above the 2009 level. Lower interest spending played a leading role by in the decrease in total public expenditure since 2014. At the same time, public investment is low at 2.4 % of GDP, representing less than 5 % of total primary spending (Graph 3.1.1).

The high level of public expenditure suggests that there is scope for a more spending-based fiscal adjustment. A large portion of public spending is mandated by permanent legislation, which limits governments' ability to review and change spending priorities. However, integrating spending reviews on broad spending aggregates at each level of government could support such a spending-based fiscal adjustment and medium-term expenditure control and create space for much-needed investment.

Spending reviews and policy evaluations can improve the efficiency of public expenditure. Spending reviews are a key tool for reprioritising expenditure towards spending outlays to better meet a country's economic and societal goals. By unlocking efficiency gains, they can generate savings without constraining growth. Most Member States have embarked on spending reviews, partly prompted by the 2016 Eurogroup common principles. Belgium has so far not undertaken a spending review at the federal level, despite the high needs for expenditure reprioritisation.

Graph 3.1.1: **Primary expenditure versus gross fixed capital formation in 2017**



Source: European Commission

Federal and regional authorities have recently expressed interest in integrating spending review in their budgetary mechanism. At regional level, Flanders is working to incorporate spending reviews in its budgetary process with the support of the Commission. As a first step, the Flemish government is carrying out a pilot project on service vouchers (*dienstencheques/titres services*) to be finalised in spring 2019. A key ingredient for the success of such reviews is sound policy evaluation. Despite the apparent consensus about the usefulness of such a system, its design and implementation are made more difficult by the fragmented allocation of responsibilities across different federal services and government levels. ([6])

Spending reviews can help Belgium prioritise expenditures. A selectivity index (which is equal to 0 when all fiscal categories grow at the same pace) shows how Belgium's spending policy has not been as selective as that of other EU Member States([7]). This likely reflects a reliance on containing expenditures across-the-board, compared to targeted measures. In addition, indexation of wages and of social transfers generates unavoidable growth trends.

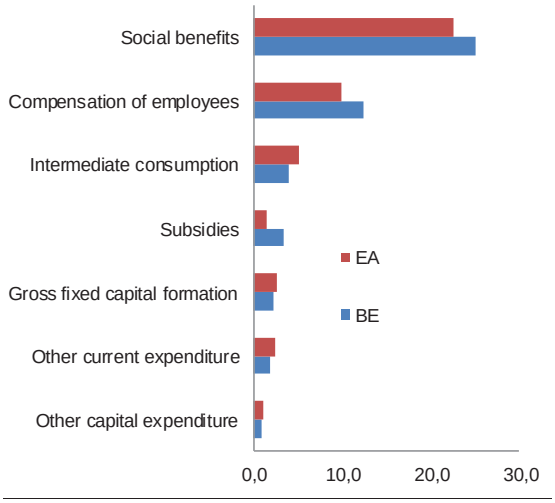
Belgium spends comparatively more than the euro area average on public wages, private sector subsidies and social benefits (Graph 3.1.2). The public wage bill represents about a quarter of public expenditure in Belgium, notably due to one of the highest number of public sector workers as a share of the labour force (IMF, 2016). Additionally, subsidies have doubled, as a percentage of GDP, since 2000 as they include some targeted reductions in taxes and employer social security contributions, as well as the subsidies for the service voucher system. Finally, social benefits, mainly pensions, healthcare and elderly care services, account for around half of public expenditure in Belgium. Due to population ageing, the growth of social expenditure is expected to accelerate (see Section 3.1.5).

Given the high level of public expenditure, the outcomes of certain policies and the quality of certain public services raises questions of cost-efficiency. The National Bank of Belgium has questioned the overall efficiency of education, health and mobility policies. In particular, the quality of educational outcomes does not reflect the high spending on education in Belgium, though there are important regional differences (see Section 3.3.2). Health spending increased steadily over the past 10 years and is higher than in most EU countries. Although the healthcare system performs generally well, primary care and prevention can improve and there are important disparities in unmet care needs by income group. The provision of informal care is above the EU average (see Section 3.3.3). The World Economic Forum has ranked Belgium 41st in terms of efficiency of railway services and 52nd in terms of quality of roads (see section 3.4.2).

([6]) A recent report from the Court of Audit concluded that the federal government did not properly integrate a system of public policy evaluation related to government budget, Cour des Comptes, April 2018, Capacité des services publics fédéraux à évaluer les politiques publiques.

([7]) For details on the methodology, see Lorach and Sode (2015) and IMF (2016).

Graph 3.1.2: **Primary expenditure by type - % of GDP**



Source: European Commission

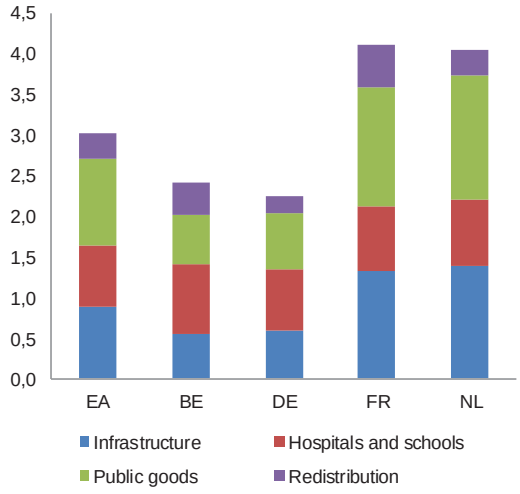
Investment

Public investment, commonly considered key in boosting the economy's long-term growth potential, remains relatively low. Successive governments have chosen to reduce capital spending over current expenditure under budgetary constraints. As a result, public investment in Belgium merely compensated for the depreciation of the existing capital stock in recent years. Since 1995, the public net stock of capital has declined by around 15 percentage points of GDP. Germany experienced similar evolution, but since 2006 the drop halted. By contrast, France managed to slightly increase its capital stock over the same period. In 2017, government fixed capital formation expenditure stood at 2.2 % of GDP, in line with Germany, but less than in the euro area (2.6 % of GDP) and well below France and the Netherlands (both at 3.4 % of GDP).

The composition of public investment has changed over time, with the share of public investment in infrastructure on a declining path. Infrastructure investment decreased by 0.1 percentage point of GDP between 2005 and 2016. Over the same period, investment in hospitals and schools increased by 0.4 % percentage point of GDP (Biatour, Kegels, Van der Linden and Verwerft, 2017). Investment in infrastructure is supposed to have a larger effect on economic growth than other types of government investment. This is because public investment in network infrastructure such as roads, railways, energy and high-speed data has a positive effect on the productivity of the private sector. In 2016, infrastructure investment in Belgium stood at 0.5 % of GDP compared to 0.6 % in the euro area and more than 1 % in France and the Netherlands (Graph 3.1.3).

An increase in public investment or even a change in its composition would positively impact on medium to long-term economic growth. Available empirical studies (Biatour, Kegels, Van der Linden and Verwerft, 2017) suggest that increasing public investment permanently by 0.5 pp. of GDP would increase the economic output by 0.24 pp. after 1 year and by 2.77 pps after 20 years. Alternatively, raising infrastructure investment by 0.5 % of GDP, keeping total public investment unchanged (implying a reduction in non-infrastructure investment), could raise GDP by more than 1 pp. after 3 years and by more than 8 pps after 20 years.

Graph 3.1.3: **Government investment: breakdown by functional classification (average 2008-2016), % of GDP**



Source: European Commission

Most public investment is carried out by the federated entities (regions and communities) and local authorities. Almost 90 % of total public investment is at the level of regions/communities and local governments (Graph 3.1.4). The figures are even higher for infrastructure investment, with local government responsible for almost all infrastructure investment carried out in recent years. This reflects the distribution of competences

across the different levels of government, where the federal administration focused its investment on public goods (mostly defence and general public services). Regions and communities are responsible for education and most research; they share responsibility for the road network with municipalities. Local government invested in transport and redistribution (in particular social protection, recreation, culture and religion).

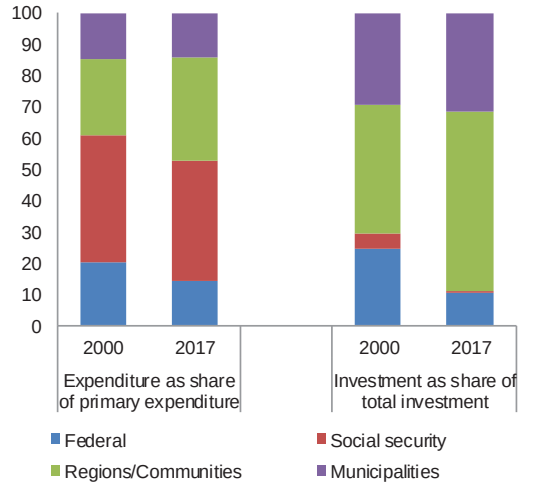
Overall investment by the federated entities (regions and communities) and by local authorities has remained stable since 2000, hovering at around 2 % of GDP, but over this period the trend has diverged among them. Capital expenditure by the regions and communities increased from 1.0 % of GDP in 2000 to 1.3 % in 2017. By contrast, investment by local government fell from 1.0 % of GDP to 0.7 % of GDP in 2017. It has also fallen from 16.5 % of total local government primary spending in 2000, to 10.1 % in 2017.

Increased budgetary constraints explain most of the drop in local government investment. In 2017, wages represented around 60 % of local governments' expenditure. The increase in social contributions to be paid stemming from the 2012 reform of the financing system of their statutory staff pensions is expected to continue to push up labour costs for local government in the medium term. Social spending is also increasing. The "*integration income*" paid by the local public welfare centres (CPAS/OCMW) accounted for 0.3 % of GDP in 2017, up from 0.1 % of GDP in 2000. This notably reflects higher needs associated with new restrictions on unemployment benefits and the limitation in time of the "*insertion allowance*" for jobseekers.

Budgetary rules to which municipalities are subjected are rather strict. Municipalities are requested to observe the principle of an annual balanced budget. In 2002 the monitoring of the local public finances was handed over to the regions. Since then, different rules governing the budget of the local governments budget have been introduced at regional level. However, on average the framework has been reinforced, keeping the principle of the annual balanced budget (which led to an overall positive balance as well in the European System of Accounts - ESA 2010 terms). It is likely that those rules, in combination with rising staff and pension costs, have also put a lid on investment spending, which is easier to reduce than operational expenditure.

Initiatives have been taken to increase the efficiency of local public spending. To achieve economies of scale and rationalise operations, the Flemish and Walloon regions decided to streamline the competencies of provinces and offer municipalities incentives to merge. In Flanders, municipalities and the CPAS/OCMW will merge their governance, budgetary planning and some of their key support functions. More broadly, increased collaboration across local government in some specific functions (public works management, financial planning, IT platforms, public procurement, and debt management) can yield efficiency gains through economies of scale and the spread of best practice.

Graph 3.1.4: **Share of direct expenditure (net of intra-government transfers) and investment by level of government**



Source: European Commission

On the initiative of the federal government, a committee of experts outlined a National Pact for Strategic Investment identifying public and private investment needs and addressing investment recommendations to authorities at all government levels. The report recommends EUR 144-155 billion additional investments by 2030, coming from both the public (45%) and the private sector (55%), as well as support measures. This would increase the annual investment rate to between 3 % and 3.5 % of GDP. Investment would

target digitisation, cyber security, education, health care, energy and mobility.

Due to the separation of competences, the Pact's implementation will require close coordination across all levels of government. A step in this direction has been the creation of an inter-ministerial conference, which aims to facilitate coordination across all government levels with regard to inter-federal investment projects and associated regulatory barriers.

A global agreement on an enforceable distribution of fiscal targets among government levels could incorporate investment space, taking into account large-scale projects in every region and their timing. The EU budgetary framework of the Stability and Growth Pact (SGP) applies to Belgium as a whole, and not to its individual entities. Under the 2013 Cooperation agreement (see Section 3.1.3) each individual entity has a commitment to achieve a balanced budget in the medium term. Cooperation between all entities could allow for greater flexibility, and a temporary softening of the budgetary constraints for an entity facing substantial investment needs, without exceeding the limit imposed by the SGP at national level.

3.1.3. FISCAL FRAMEWORK

The autonomy of the High Council of Finance (HCF) has recently been reinforced. The Royal Decree of 23 May 2018 boosted the independence of the Public Sector Borrowing Requirements section of the High Council (HCF-PB), which was appointed as the independent monitoring institution envisaged by the TSCG ([8]). The royal decree also provided the section with additional staff and ensured its capacity to communicate freely. The authorities also signed a protocol on the free exchange of information between the National Accounts Institute and the HCF-PB. Progress has also been achieved in formalising the 'comply or explain' principle, whereby the opinion of the HCF-PB would either be followed, or the government would explain why it departed from it.

([8]) The Treaty on Stability, Coordination and Governance in the Economic and Monetary Union (TSCG) was formally concluded on 2 March 2012, and entered into force on 1 January 2013.

Budgetary coordination is not sufficiently effective yet, as the 2013 cooperation agreement has not been fully implemented. As described in the 2018 country report, Belgian federated entities and the federal government signed a cooperation agreement in 2013 to ensure effective budget coordination. In contrast with the practice of previous Stability Programmes, when the Concertation Committee 'took note' of the fiscal trajectory, all levels of government approved the overall fiscal trajectory presented in the 2018 Stability Programme and supported the achievement of the fiscal targets by 2020 for all government levels. Although this approval added credibility to the overall trajectory, there was no formal agreement on the annual fiscal targets at each level of government. A lack of agreement on the targets at each level of government may undermine the viability of the overall trajectory towards the medium-term objective. In addition, this prevents the Public sector borrowing requirements section of the High Council of Finance from effectively monitoring compliance with these targets (see High Council of Finance, 2018, pp 13-14).

3.1.4. DEBT SUSTAINABILITY ANALYSIS AND FISCAL RISKS

Short-term debt sustainability does not seem to give cause for concern. The short-term indicator S0 ([9]) does not flag significant risks, as the identified short-term fiscal challenges are not acute enough to generate overall risks of fiscal stress. The low short-term risk is consistent with the 'AA' rating category given to Belgian government debt by the three major rating agencies.

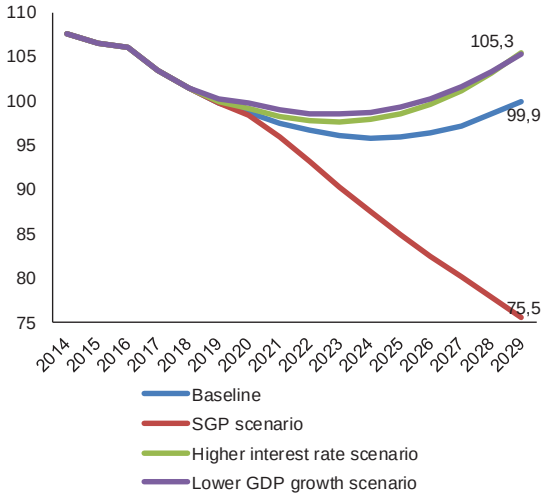
In the medium and long term, Belgium fiscal sustainability faces substantial challenges. Both the debt sustainability analysis and the S1 indicator ([10]) (4.3 pps of GDP) indicate high risk in the medium term. This is mostly due to the high level of public debt and to a lesser extent to the projected increase in age-related expenditure. Adhering to the existing fiscal rules (full

([9]) The S0 indicator aims at an early detection of fiscal stress stemming from risks within a one-year horizon, making use of the signalling power of its components

([10]) The S1 indicator measures the required fiscal adjustment needed between 2019 and 2024 to bring the public debt ratio down to 60 % of GDP by 2032.

compliance with the requirements of the preventive arm of the SGP and convergence with the medium-term objective) would significantly reduce the public debt over GDP ratio compared to a baseline scenario of unchanged fiscal policy (Graph 3.1.5). In the long term, the S2 indicator (4.3 percentage points of GDP) ([11]) points to medium sustainability risk. However, vulnerabilities linked to the high debt burden, as captured by the debt sustainability analysis, indicate high sustainability risks overall in the long term ([12]).

Graph 3.1.5: **Public debt medium-term projection and scenarios (% of GDP)**



Source: European Commission

3.1.5. PENSIONS AND LONG-TERM CARE

Pension system

The sustainability of the pension system is expected to worsen in the medium term. At 12.1 % of GDP in 2016, pension expenditure in Belgium was above the EU average of 11.2 % of GDP. Public pension expenditure is projected to increase by 2.9 percentage points of GDP between 2016 and 2070, compared to an average decrease of 0.2 pp. in the EU (European Commission, 2018d). The bulk of this increase is expected to emerge in the next few decades. The main driver of this development is demographic ageing. Graph 3.1.6 illustrates the impact on the projections of changes in the underlying assumptions. Lower migration or lower employment rates would increase pension expenditure by around 0.5 pps of GDP relative to the baseline. A main downward risk relates to the prospect of lower-than-assumed productivity growth. Also, more pronounced ageing (through greater gains in longevity or lower fertility) risks pushing up baseline projections considerably. Conversely, increased employment among older workers or higher productivity growth would help contain ageing costs. The same holds for introducing a link between the statutory retirement age and gains in longevity.

Past government measures are projected to help raise the employment rate of older people and lower the coverage ratio ([13]). The average effective age of exit from the labour market is projected to increase from 61.8 years in 2016 to 64.3 years by 2030 as a result of the tightening of early retirement conditions and the increase in the statutory retirement age in 2025 and 2030. Projections show an increase in the participation rate of those aged 55-64, with an upward convergence in female participation. However, the lower coverage ratio is partly offset by the rise in the benefit ratio ([14]) until 2040, which is currently below the EU average of 43.5 % (Federal Planning Bureau, 2018).

The average length of retirement is projected to increase considerably. According to the 2018 Ageing Report projections, life expectancy would increase faster than the effective retirement age. The outgoing government planned to lay the groundwork for revising the public pension scheme from a defined benefit system to a point system, with the prospect of introducing stabilisation mechanisms. However, plans were delayed and eventually abandoned. The envisaged

([11]) The S2 indicator shows the adjustment to the current structural primary balance required to fulfil the infinite horizon inter-temporal budget constraint, including paying for any additional expenditure arising from an ageing population.

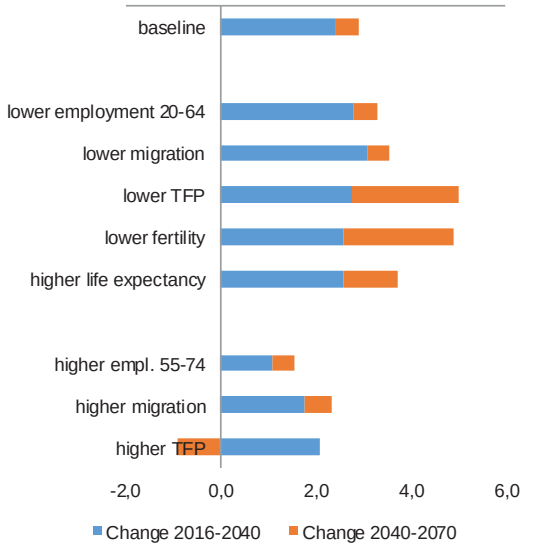
([12]) For a detailed discussion of the approach to the overall long-term sustainability challenges see the 2018 Fiscal Sustainability Report (European Commission, 2019b).

([13]) The coverage ratio effect is defined as the number of pensioners of all ages to the population over 65 years. The analysis of the coverage ratio provides information about how the developments of the effective exit age and the share of the population covered by the pension system influence pension spending.

([14]) The benefit ratio is the average pension as a share of the economy-wide average wage.

"credit-based public pension system" could have contributed to the sustainability of the public pension system by adjusting to life expectancy or the dependency ratio.

Graph 3.1.6: **Increase in pension expenditure - selected scenarios – percentage points of GDP**



Source: European Commission

Considerations related to the definition of 'arduous jobs' might slow down the increase in the effective retirement age. An agreement was reached between the authorities and labour unions on public sector jobs that could be considered arduous; about half of all public sector jobs would fall under the scheme. The same guiding principles were meant to apply to private sector jobs. However, following extensive negotiations, social partners failed to reach an agreement on the criteria for arduous work in the private sector. As a result, it is unclear whether the new scheme will still start in 2020 and, if so, which jobs will qualify. A broad application of the 'arduous jobs' notion risks undoing, at least partially, the impact of earlier reforms on the effective retirement age.

Poverty risks among pensioners are projected to decrease. The increasing employment rate, the higher average exit age and especially the increasing activity rate of women are expected to translate into higher pension benefits. In 2016, 16.4 % of people aged 65 or over were "at risk of poverty and social exclusion" (AROPE). This is below the EU average (18.2 %), but higher than in France and the Netherlands (both 10.0 %).

Long-term care

There are challenges to the fiscal sustainability of long-term care, both in the medium and in the long term. With demographic changes, public spending on long-term care, at 2.3 % of GDP (above the EU average of 1.6 % in 2016) is projected to steadily increase up to 4.0 % according to the "Ageing Working Group reference scenario" and up to 5.8 % according to the "Ageing Working Group risk scenario", which accounts for additional cost drivers to demography and health status. Higher long-term care expenditure will add to pressure on the budget, contributing 0.2 pp. of GDP to the S1 indicator for the medium term and 1.3 percentage point of GDP to the high long-term fiscal sustainability risk indicator S2.

Spending on long-term care is almost exclusively devoted to in-kind services. In-kind services ([15]) accounted for 99.7 % of long-term care spending in 2016 (EU average: 84.4 %). In-kind benefits are more often provided as institutional care rather than home-care. As the cost of institutional care appears relatively high in Belgium compared to that of home care, long term care provision may gain in efficiency by further focusing on home care, even if Belgium relies already on home care for 43.7 % (EU average: 33.7 % in 2016) (Commission services-EPC, 2019). The provision of informal care in Belgium is above the EU average (see Section 3.3.3).

The devolution to the regions of long-term care does not appear to question the fundamentals of the current system, but it is too early to assess its impact. This transfer of responsibilities might render the organisation of an already complex system more challenging. However, despite the risk of regional divergence, there seems to be a consensus on giving priority to in-kind benefits, keeping the role of cash allowances limited, rolling out a new long-term care insurance scheme, and using sickness funds in the new insurance scheme.

([15]) In-kind services are care services directly provided by care institutions without direct payment from the beneficiary, whereas cash benefits allow the beneficiaries to purchase services directly.

Whether devolved long-term care management proves more efficient, and thereby has an impact on fiscal sustainability, will largely depend on the quality of governance at regional level.

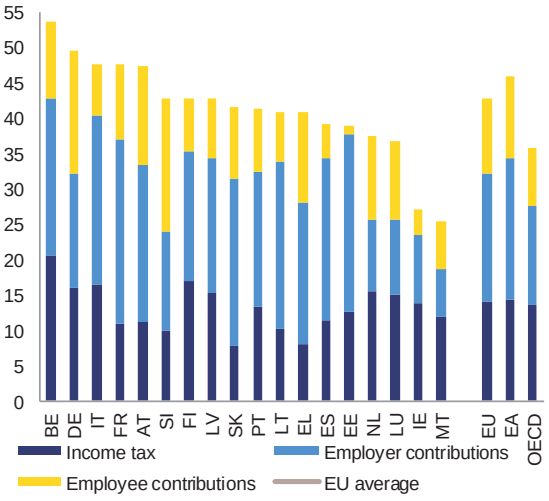
3.1.6. TAXATION

Labour is highly taxed as a factor of production in Belgium. The recent 'tax shift' ([16]) reduced the tax wedge for the lowest income earners. In particular, the labour tax wedge for those earning 50 % of the average wage fell by 4.7 pps from 2015 to 2017. Nevertheless, for those earning a low wage (67 % of the average wage) or average wage, the tax wedge remains the highest in the EU (Graph 3.1.7). This high tax burden on labour is due to narrow personal income tax brackets. Even average income earners are subject to the highest income tax rate. Broadening the tax base by reducing tax expenditures could generate the necessary revenue to broaden tax brackets. In addition, the ceiling for claiming the *'marital quotient'*, applied in the personal income tax, is a high disincentive to work for second earners.([17])

The extensive use of tax expenditures reduces the efficiency of the Belgian tax system. The proportion of tax expenditure in most tax categories is high ([18]) and this leads to economic distortions. For instance, reduced VAT rates, widely used in Belgium, are not an efficient redistribution mechanism, as they do not allow targeting low-income households. While tax expenditures may be justified to correct market failures, streamlining their use would simplify the tax system and generate the necessary revenue to reduce tax rates.

Taxes on rental income are low in Belgium. When immovable property is rented out for housing purposes, it is not the rental income received but the outdated cadastral income (indexed value of 1975 estimated income) that is included in the personal income tax base. Using the actual rental income received as the tax base and granting a tax deduction for related expenses would make the tax system more asset-neutral and less distortive. A Commission study (European Commission, 2019a) estimated that taxing net rental income would have a positive budgetary impact of 0.3 % of GDP. This additional revenue could be used in a more growth-friendly way, for example to further reduce the tax burden on labour. Moreover, making all rental expenses fully tax-deductible could stimulate the building sector, improve the quality of the housing stock (encouraging energy-saving investments) and help reduce the informal economy. Any reform should, however, be carefully considered against the background of (rental) housing market policies and of its budgetary impact.

Graph 3.1.7: **Tax wedge on labour, single earner, average wage (2017)**



Source: European Commission

Transaction taxes on immovable property remain high in Belgium, hindering, amongst other negative effects, labour mobility. These taxes are among the highest in the EU at 2.3 % of GDP (1.0 % average in the EU) in 2017 ([19]). According to the World Bank Ease of Doing

([16]) Taxes on labour, including social contributions, are being reduced in several steps between 2016 and 2020, while others, mainly consumption taxes, have been increased, partially compensating for the labour tax cuts.

([17]) This feature of the personal income tax calculation for couples assigns part of taxable income from the partner with the highest income to the partner without an income of their own, or with a limited own income. However, the couple can no longer benefit from the marital quotient when the partner earns more than 30 % of the couple's total earned income.

([18]) 23.1 % of personal income tax receipts (excluding tax expenditures through the company car system which amounts to some EUR 1.5 billion) more or less half of which related to replacement income; 13.4 % of corporate income tax receipts; 32.3 % of value-added tax (VAT) receipts (Belgian tax expenditures report, 2017).

([19]) Other taxes on property. Taxation trends in the European Union, 2019, forthcoming

Business report, the process of transferring a property has become the second most expensive among the EU Member States at 12.7 % of the property value. High transaction taxes on immovable property hamper the functioning of the real estate market, increase commuting and appear to have an effect on labour mobility. Moreover, reliance on transaction taxes generates a more volatile revenue stream. The Walloon and Brussels-Capital regions increased the transaction tax deduction for first dwellings in 2017, while keeping the tax rate at 12.5 %. Flanders reduced the transaction tax rate for the purchase of the first dwelling from 10 % to 7 % in 2018. Further shifting away from transaction taxes towards recurrent property taxes would maintain a constant level of revenue while reducing economic distortions and commuting congestion.

The company car scheme adversely affects mobility and the environment and makes the tax system complex. In 2018, the so-called 'cash-for-car'([20]) was introduced as alternative to the company car scheme. Rather than having a company car as part of their remuneration package, certain employees can choose to give up the car for additional net pay. As the extra pay is often not high enough to match the private use of a company car, the alternative schemes are expected to have only a limited impact on congestion and pollution. Moreover, the new schemes adds to the complexity of the Belgian tax system and favour a subgroup of the working population.

Revenues from environmental taxes remain among the lowest in the EU ([21]). Environmental taxes accounted for 2.2 % of GDP in 2017 against a EU average of 2.4 %. These include energy taxes amounting in 2016 to 1.5 % of GDP against an EU average of 1.8 %. In 2017, the federal Ministry for Energy and Environment launched a national debate on carbon pricing, which ended in June 2018. The final report concluded that the introduction of a budget-neutral carbon price in the building and transport sectors is particularly promising and manageable if the proceeds are used to compensate for the potential adverse effects, and provided there is successful coordination between the different authorities. ([22])

Belgium is implementing a reform to simplify its corporate income tax system. The 2017 reform provides for a move towards lower statutory rates and fewer exemptions and deductions. The statutory tax rate has been lowered from 33.99 % (including a 3 % austerity surcharge) to 29.58 % in 2018 and should be reduced to 25 % in 2020 (and the austerity surcharge cancelled). ([23]) The reform also introduced amendments to ease taxation on start-ups and small companies.

The corporate income tax reform also adjusted the application of the notional interest deduction, limiting the risk of aggressive tax planning. In addition, in August 2018, Belgium introduced a specific anti-abuse rule to further limit the potential abuse of the Notional Interested Deduction scheme for Aggressive Tax Planning purposes (anti-cascading measure).

The taxation of financial income is complex and creates economic distortions. Financial income is excluded from the personal income tax base and subject to a final withholding tax rate of 30 % in Belgium. However, reduced rates apply to several types of investment, distorting resource allocation and potentially generating tax-induced over-investment in certain types of assets. Moreover, differentiated tax rates add to the complexity of the system and are rarely the most cost-efficient means of achieving given economic and social policy goals. For instance, the new tax of 0.15 % on securities accounts exceeding EUR 500 000 is likely to create distortions, given the number of products excluded from its scope (life insurance, pension products, nominal shares, term saving

([20]) The so-called 'mobility budget', which would extend the company car scheme to other means of transport, has not yet been adopted, despite the political agreement of July 2018. Its introduction is foreseen for March 2019.

([21]) Excise duty rates on diesel are being increased to align with those on petrol. Moreover, from 1 April 2016 the three Belgian Regions started levying a kilometre charge for heavy goods vehicles with a maximum authorised mass of more than 3.5 tonnes. The annual revenue from this levy was put at EUR 700 to 900 million, which is a significant increase on the revenues for environment related taxes in Belgium. (Green Budget Europe 2017).

([22]) Vehicle taxation was identified as the largest potential source of tax revenue in the Eunomia study. The suggested increase in vehicle taxation could account for EUR 3.25 billion in additional revenue by 2030 (real 2015 terms), equivalent to 0.63 % of GDP.

([23]) For SMEs, 20.4 % (20 %+ 2 % austerity surcharge) on the first EUR 100.000 for the fiscal years 2019 and 2020 and 20% (abrogation of the 2% austerity charge) as from the fiscal year 2021).

option, liquidity). More details on this can be found in last year's Country report.

3.2. FINANCIAL SECTOR AND HOUSING

The financial sector appears relatively sound, but its profitability is under pressure. Bank solvency is good; the capital adequacy ratio was stable at 18.4 % in June 2018. Credit quality is high, with low non-performing loan ratios. Banks remain relatively profitable, with return on equity ratio close to 9 % in 2017 (above the euro area average of 5.6%), but slightly weakening since the beginning of 2018. The challenges for banks remain largely the same as last year: a high cost-to-income ratio, a relatively high banking tax, the obligation to pay a minimum interest rate (0.11 %) on regulated savings accounts (which puts net interest margins under pressure in the current low interest rate environment), digitalisation, compliance costs, clients changing preferences and intense competition. In light of the delayed privatisation of Belfius, state ownership remains substantial. Dexia still represents a sizeable, but relatively stable contingent liability of EUR 33.5 billion (7.4 % of GDP) for the Belgian state.

The contributions to the Belgian Deposit Guarantee Scheme (DGS) are not invested in a segregated, diversified portfolio of low-risk assets. As explained in previous country reports, the absence of a ring-fenced and autonomous DGS is not optimal from a financial stability perspective. Contributions to the Belgian DGS (around EUR 3.4 billion altogether in December 2017) directly enter the federal budget as tax revenues and contribute to reducing the deficit. If the DGS needs to intervene and compensate depositors, Belgium will have to finance the entire cost of the intervention from the budget.

Insurers' solvency has been broadly stable, even though traditional life insurance business continues to suffer from the low interest rate environment. Insurers' average solvency ratio has improved slightly from 176 % in 2016 to 192 % in 2017. As in other Member States, this ratio sometimes benefits significantly from particular adjustments of the Long-Term Guarantee package of EU measures. Life insurance slowly moves from traditional, guaranteed interest rate contracts to unit-linked contracts. Some insurers have also taken measures to accelerate the transition to a more sustainable business model, including by selling part of their legacy portfolio (see European Commission, 2018a). Finally, life insurance premiums are taxed more than contributions to accumulating investment funds ('*SICAV de capitalisation*'), limiting the asset-neutrality of the tax system.

Access to finance

Small and medium-sized enterprises (SMEs) continue to have good access to finance although the situation has relatively deteriorated. Belgium is performing well in equity funding and professional 'business angel' funding for new and growing firms. Belgian corporates tend to be significantly less dependent on loans from the financial sector than their EU peers. This relative (albeit decreasing) preference for equity over debt might be partly due to the former Belgian regime of "notional interest deduction". The market capitalisation of Belgian quoted non-financial corporations reached 67.3 % of GDP in 2017, higher than the EU average (54.2 % of GDP) confirming the preference for equity. The borrowing cost for small loans relative to large ones is half the average cost in the EU. However, the number of rejected SME loan applications has increased marginally. This finding is in line with the 13.6 % of respondents to the SAFE survey who indicated that banks were less willing to provide loans in 2017, against 9.7 % in 2016. Meanwhile, access to public financial support appears to improve, with only 9.7 % those respondents indicating a drop in 2017, against 14.2 % in the previous year.

Lending to non-financial corporations has accelerated and will require specific monitoring. Because of the persistent low interest rate environment, credit growth remains substantial. In particular, the year-on-year growth of loans to non-financial corporations, corrected for sales and securitisation, is the highest in the euro area (10.1 % in October 2018, against 2.8 % in the euro area) and needs to be closely monitored. While credit developments are supported by a broad-based trend, specific one-off factors also played a role, like merger and acquisition operations and advance payments of taxes by non-financial corporations. Households' indebtedness

The increase in households' debt since 2005 remains in line with fundamentals, while substantial. Belgian households' indebtedness overtook the euro area average in 2015 and reached 59.8 % of GDP in 2017, against 56.9 % of

Table 3.2.1: **Domestic banking groups and standalone banks, foreign (EU and non-EU) controlled subsidiaries and foreign (EU and non-EU) controlled branches**

	2016q2	2016q3	2016q4	2017q1	2017q2	2017q3	2017q4	2018q1	2018q2
Non-performing loans	3,5	3,4	3,2	2,9	2,8	2,7	2,7	2,5	2,4
o/w foreign entities	2,8	2,7	2,6	2,4	2,3	2,3	2,3	2,1	2,0
o/w NFC & HH sectors	4,5	4,4	4,2	4,1	4,0	3,9	3,6	3,5	3,4
o/w NFC sector	5,3	5,2	4,8	4,7	4,8	4,7	4,3	4,2	4,0
o/w HH sector	3,8	3,8	3,7	3,6	3,4	3,3	3,0	3,0	2,8
Coverage ratio	43,5	43,3	43,7	43,9	44,3	44,3	42,7	44,8	44,9
Return on equity(1)	9,7	9,8	8,9	8,0	10,2	9,5	8,8	6,7	8,3
Return on assets(1)	0,7	0,7	0,6	0,6	0,7	0,7	0,7	0,5	0,6
Total capital ratio	18,3	18,5	18,8	18,6	18,5	18,3	19,0	18,4	18,4
CET 1 ratio	15,2	15,4	15,7	15,5	15,6	15,7	16,2	15,5	15,3
Tier 1 ratio	15,7	15,9	16,2	16,1	16,1	16,2	16,9	16,4	16,3
Loan to deposit ratio	90,3	87,7	88,0	85,6	83,3	83,8	90,2	85,8	86,6

(1) Annualised data
Source: ECB - CBD2 - Consolidated Banking data - European Commission

GDP in the euro area. By contrast, indebtedness has started to decline on average in the euro area in the wake of the financial crisis. Households' debt remains however close to the level suggested by economic fundamentals. Households' private debt norm ([24]) points to limited deleveraging needs for Belgium (around 10 %) according to the prudential threshold.

Belgium house prices currently present limited signs of overvaluation. After a period of dynamic growth between 1998 and 2008 (5 % average annual increase) house prices have risen by 2.2 % on average annually in nominal terms since 2008 and by 0.7 % per year in real terms. Steadily increasing house prices explain part of the increase in households' debt, as the latter is mostly mortgage-based. Traditional indicators (price to income, i.e. affordability and price-to-rent i.e. dividend) signal a potential 15 % overvaluation gap of Belgian house prices. However, a more sophisticated indicator developed by the European Commission, which takes into account housing demand and supply fundamentals like interest rates shows no evidence of overvaluation, whereas the National Bank of Belgium valuation model only finds a slight overvaluation (6.5 %) (National Bank of Belgium, 2018).

In April 2018, a macroprudential measure addressing risks in the residential mortgage market entered into force. ([25]) The measure aimed at addressing several risks, including loose credit standards, rising households indebtedness, a substantial share of vulnerable households, a relatively high banking exposure to mortgages and the possibility of a future correction in real estate prices. By increasing banks' resilience to a downturn in the mortgage market, this measure has achieved its primary objective. At this (still early) stage, it does not seem to have affected mortgage interest rates or credit growth.

The generally favourable wealth position of households is considered as a positive factor further softening sustainability concerns about households debt. Belgium households hold more assets on average than euro area households and have positive net assets positions. Nevertheless, the distribution of assets and debt points to pockets of vulnerability. 3 % of outstanding mortgage debt is held by households that have a mortgage loan-to-value above 80 % and pay more than half of their income in debt service. Moreover, 5.9 % of debt is held by households that have a mortgage loan-to-value above 80 % and do not have enough liquid assets to serve more than 2 months of debt payments. It implies that, because financial wealth is unequally distributed, a severe unemployment shock with income loss could hurt many mortgage-

([24]) Bricongne, J. C., L. Coutinho and N. Philiponnet, 2018.
([25]) The measure is based on two components. The first consists of a flat 5 percentage point risk weight add-on to the microprudential risk weight for mortgage exposures for banks using the internal ratings-based approach to capital requirements for credit risk. The second is a more targeted component that would increase risk weights in line with the risk profile of the bank's mortgage portfolio by applying an additional macroprudential risk weight add on equal to 33% of the microprudential risk weight, which is to be applied to each (IRB) bank's (residential) mortgage portfolio. The measure takes the form a Royal Decree adopted on 4 May 2018.

indebted households involving a significant part of total outstanding mortgage debt (Du Caju, 2017).

3.3. LABOUR MARKET, EDUCATION AND SOCIAL POLICIES

3.3.1. LABOUR MARKET

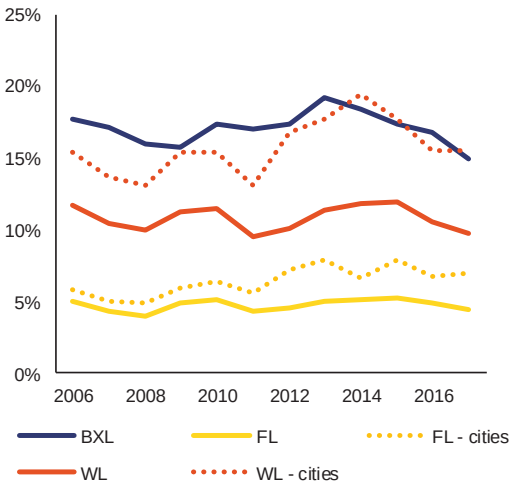
The labour market continued to improve, in a context of sustained economic growth. In 2017, employment grew the fastest since 2009 (1.4 %). More than 4.7 million people were employed, which is the highest level in the past ten years. In particular, there is a growing number of older workers (55-64) due to the combined effect of longer working lives and the ageing of the population. It resulted in a steady increase in the employment rate to 69 % in the second quarter of 2018, still below the EU average (73.2 %). The activity rate (20-64) remains low (73.7 % in 2017), well below the EU average of 78 %, having increased only moderately (less than 1 pp) over the last ten years. The unemployment rate declined (5.5 % in Q3 2018), and is now below the 2018 level of structural unemployment.

Large differences in unemployment rates persist between regions. Regional disparities are the highest for unemployment. Unemployment is particularly high in Brussels (14.9 % in 2017, 5.2 pps higher than in Wallonia and 10.5 pps higher than in Flanders). This can only partly be explained by the urban context. The difference with Wallonia disappears when only urban areas are considered, but with Flanders an important gap remains (Graph 3.3.1). A similar pattern can be observed for long-term unemployment.

The inactivity rate is among the highest in the EU and an increasing share of the inactive are sick or have disabilities. In 2017, the inactivity rate (25-64) was 23.4 %, well above the EU average of 20.4 %. While the inactivity rate has remained stable over time, the reasons for inactivity have changed considerably. The inactive population between 25 and 64 years that self-report to be sick or to have disabilities increased from 16 % in 2007 to 30 % in 2017. The increase is found across all regions, ages and skill levels but is particularly large for women, middle-aged (35-54) and older (55-64) workers (Graph 3.3.2**)**. It is linked to increased labour participation of older workers, an increase in muscular and psychological diseases and low levels of re-integration into the labour market.

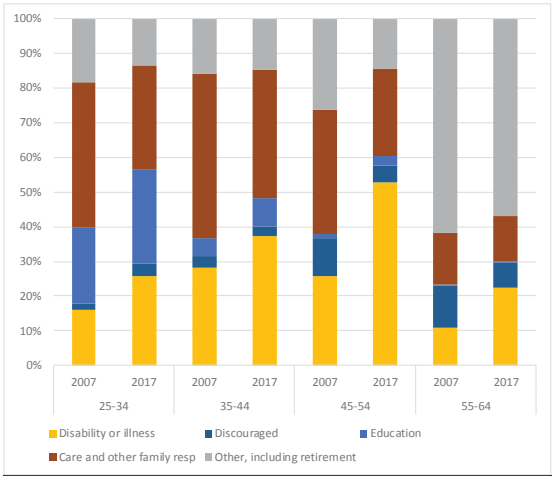
Low labour market participation coincides with a high vacancy rate, suggesting a high level of skills mismatches. The vacancy rate (3.6 % in 2018 Q3) is amongst the highest in the EU (average 2.2 %) and is higher in Flanders (4.1 %) than in Brussels (3.3 %) or Wallonia (2.8 %). The gap between the employment rates of low-, medium-, and high-skilled workers remains among the widest in the EU in all three Regions (see Graph 3.3.2 in European Commission, 2018a). Skills mismatches are, among other factors, associated with high labour costs and taxation, low transitions to employment and low job mobility.

Graph 3.3.1: **Unemployment rate by region and level of urbanisation (% of active population)**



Source: European Commission

Graph 3.3.2: **Reasons for inactivity by age (2007-2017)**



Source: Eurostat

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

The European Pillar of Social Rights is designed as a compass for a renewed process of convergence towards better working and living conditions in the European Union. ([1]) 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.

Belgium performs well on a number of indicators of the Social Scoreboard supporting the European Pillar of Social Rights. The labour market improved driven by sustained economic growth. It is becoming increasingly tight in spite of a relatively low employment rate. The vacancy rate is amongst the highest in the EU (3.5 % vs. an EU average of 2.1 %). The high vacancy rate and the increasing skills shortages contrast with high inactivity and unemployment for some groups, notably the low skilled and the young. Resolving these issues will require addressing remaining financial disincentives to work (also for second earners), increasing job mobility and participation in lifelong learning and upskilling. Furthermore, employment rates are low for third country immigrants and this affects to some extent as well their descendants. Promoting their labour market integration would contribute to increasing labour supply and productivity.

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

Inequalities of opportunities persist between different population groups. The income gap between persons with low and high educational attainment is amongst the highest in the EU for the working age population. Educational inequalities limit social mobility. There are strong inequalities in the health system. Self-reported unmet medical needs are low on average but high for the lower income quintile.

The effectiveness of social transfers in reducing poverty is at EU average level. It has been however declining since 2005 for the working age population. Income inequality remains stable and below the EU average (S80/S20 of 3.8 against 5.1), due to the combination of an intermediate level of market income inequality with a highly redistributive tax and benefit system. Though wealth is evenly distributed compared to other euro area countries, pockets of poverty persist as part of the population lacks access to the labour market.

([1]) The European Pillar of Social Rights was proclaimed on 17 November 2017 by the European Parliament, the Council and the European Commission.

Labour shortages are observed in most sectors, in particular because of lack of adequate skills. The vacancy rates in almost all sectors are significantly above the EU and euro-area averages. Analyses by the Public Employment Services (PES) show that the list of occupations most in demand is relatively stable, including health care workers, information and communication technologies analysts and certain occupations in the construction sector. ([26]) Many of them require

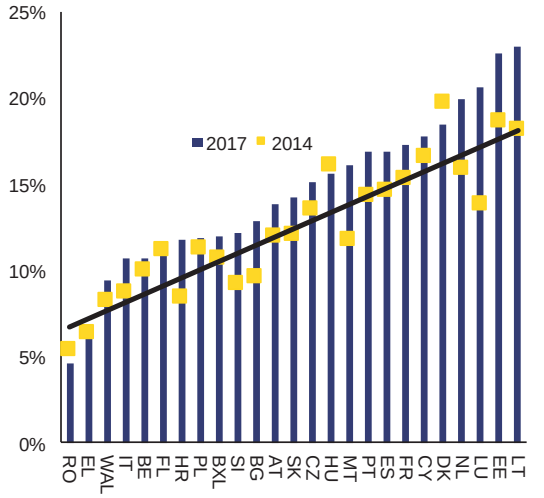
([26]) Labour shortages of health professionals concern in particular doctors (European Commission/OECD/European Observatory of Health Systems and Policies, 2017). To address this problem, the government has substantially

secondary training and not always a tertiary degree. ([27]) Employer surveys point to a lack of applicants with appropriate experience and skills as the most important driver of labour shortages (Manpower Group, 2018). In particular, shortages are linked to the lack of graduates in science, technology, engineering and mathematics and more broadly digital skills (see Section 3.3.2). Poor language skills are also an important issue, in Brussels for instance, where only 27 % of the job seekers declare an average/good knowledge of the other national language. Finally, some sectors also face image problems or working conditions are not sufficiently attractive (e.g. in accommodation and food service activities).

Despite increasing labour demand, transitions from inactivity or unemployment to employment are low, in particular for the low-skilled. Participation in Active Labour Market Policies (ALMPs) is among the highest in the EU. In 2016, 67 % of those wanting to work were enrolled in an ALMP. Nevertheless, transition rates from unemployment or inactivity to employment remain well below the EU average (Graph 3.3.3). Transitions to employment are in particular low for low skilled (6 % vs. 11 % for medium skilled and 19 % for high skilled). For all skills levels, transitions in Wallonia are lower than in Flanders and Brussels. In addition, job mobility (i.e. the willingness of employees to change work) is low, which may limit productivity growth ([28]). Low job mobility is among others linked to seniority pay, long notice periods, and low levels of adult learning.

Given the inter-regional differences in unemployment rates, inter-regional mobility of workers has room for improvement. According to FOREM, 11 % of Walloon workers work in Brussels, but only 4.4 % work in Flanders, despite higher vacancy rates in these two regions compared to Wallonia. In February 2018, Flanders and Wallonia have developed an action plan to ease inter-regional labour mobility, through reinforced cooperation between the Walloon and Flemish public employment services (respectively FOREM and the VDAB, the improvement of linguistic skills and campaigns.

Graph 3.3.3: **Transition rate from unemployment/inactivity to employment, 2014-2017 (% total inactive or unemployed)**



The transition rate is calculated as a share of employed individuals in year T who were unemployed or inactive in T-1 in the total number of unemployed or inactive in year T-1
Source: European Commission

Important financial disincentives to take up employment remain. Although the tax shift reduced the labour tax wedge (income tax plus employer and employee contributions) for very low wage earners (fifty percent of the average wage), it remains the highest in the EU for average wage earners. Moreover, Belgium remains the only country in which unemployment benefits, though degressive, are not limited in time ([29]). High tax disincentives for second earners – mainly women – remain, contributing to high part-time employment among women (40.9 %) (European Commission, 2018a). There are also financial disincentives for beneficiaries of sickness and disability schemes to take up full-time employment. In particular, single parents (and to a lesser extent couples with children) face limited financial incentives to take up (full-time) employment due to a combination of costs and withdrawal of benefits (Hufkens, T., and

increased the numerus clausus of medical graduates and has extended the role of other professionals.

([27]) For example, in 2017 only 38 % of the vacancies registered by the Flemish public employment service specifically required a tertiary degree, while 40 % of the vacancies required low education or no educational level was specified. This vacancy rate persists despite more than 40 % of unemployed being low-skilled.

([28]) ACERTA (2018) Talent Pulse

([29]) According to the benchmarking exercise in the area of unemployment benefits and active labour market policies conducted within the EMCO Committee. See the Draft Joint Employment Report 2019, European Commission, 2018 for details

others, 2016). This effect is particularly strong in case beneficiaries start working at a lower wage than in previous employment.

The responsibility for the social protection systems is split between the federal and sub-national levels, which may lead to coordination problems. The unemployment benefits and invalidity allowances are administered at the federal level (representing 1.8 % of GDP in 2016), while social assistance is partly financed by the municipalities, whose finances are strained (see Section 3.1.4). Target group activation measures and the control of availability are run at the regional level. The data from the monitoring frameworks applied by the Regional Public Employment Services are not directly comparable any more. This complicates the analysis of "active availability", which implies that unemployed have to actively look for employment and respond to the offers of the Public Employment Service, set in the federal normative framework. Current figures might indicate that the control obligations are not fully met by all Regions. This may have an impact on federal and local public finances.

At regional level, governments have reformed and simplified the employment incentives and the monitoring and guidance activities of their respective public employment services (PES). The situation on the regional labour markets and the functioning of the regional PES remain very different. This is reflected in their reform agendas. Regional governments and PES have concluded ambitious management contracts for 2017 – 2022 with challenging objectives for each of the PES. But their capacity to carry-out the necessary monitoring and act on the information generated seems uneven. In Wallonia, Forem has started an ambitious reorganisation project to improve its efficiency and effectiveness. In Brussels, Actiris is working on improving quality, efficiency and effectiveness of services. The Flemish Region aims to improve employment performance through a new policy approach called 'Focus on Talent', which provides bespoke guidance to jobseekers and inactive people. It is also focussing on career security for all citizens and a new approach to employers.

At the federal level, major reforms were announced to improve incentives to work in the so-called 'Jobs Deal'. The 28 measures announced in Summer 2018 cover training, wage costs, career end, activation and the interaction between federal and sub-national measures. The political situation, with the federal care-taker government, may complicate the adoption of these measures. In addition, several of these would need concrete agreements between social partners or with the Regional Governments. If implemented, the impact of the reform of the degressivity of unemployment benefits on the unemployment trap as a function of the salary level would need careful assessment.([30]) The measure allowing for EUR 6 000 of tax-free professional income for employees working at least 80 % of a full-time job equivalent, self-employed and pensioners became effective in July. As approximately 166 000 self-employed declared less than EUR 5 000 per year ([31]), the uptake and the budgetary impact will need to be monitored.

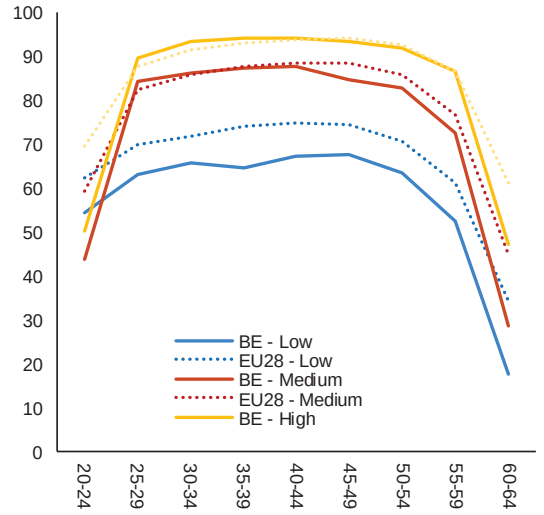
Labour market situation of vulnerable groups

Labour market participation remains particularly low for specific socio-economic groups. There are large differences in inactivity and unemployment rates as a function of age, educational attainment, and origin (see European Commission, 2018a). The activity rate is particularly low for the young, older workers and the low-skilled. The activity rate of the low-skilled of all age cohorts is significantly below the EU average (Graph 3.3.4). The Socio-economic monitoring of the Federal Public Service Employment and the latest report from the Higher Council for Employment also point to the very low activity and employment rates among third country immigrants and their descendants (FOD WASO, 2017).

([30]) The initial level of the unemployment benefit is calculated as a share of the gross wages. Low wages holders benefit from a number of schemes to increase net wages, for instance the work bonus. The result is that the replacement income is low in comparison to the net wages. This is not the case for people of medium wages. The risk is therefore to create high unemployment traps.

([31]) NAR (2017) Advies 2.065 - Verenigingswerk, occasionele diensten van burger tot burger en deeleconomie via erkend platform – Ontwerp van wet en koninklijk besluit – Gevolg rapport nr. 107 over digitalisering en deel-economie.

Graph 3.3.4: **Activity rate by age and educational attainment (20-64, %)**

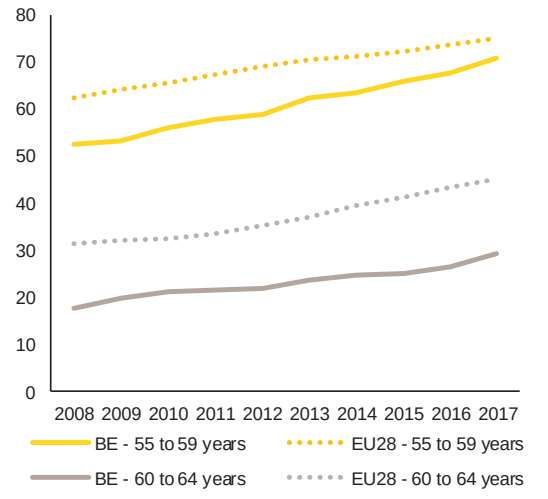


Source: Eurostat

Youth unemployment remains above the EU average. In the last quarter of 2018, it further decreased to 15.4 % %. However, there are substantial regional disparities, ranging between 33.2 % in Brussels and 12.8 % in Flanders in 2017. In addition, there are large regional disparities in the rate of young people (15-24) not in employment nor in education or training (NEET). The NEET rate was 13.3 % in Brussels in 2017, lower in Wallonia (11.6 %) and substantially lower in Flanders (7.2 %). The federal government aims to address this issue by lowering the statutory minimum wage for young workers. However, based on an evaluation of the repeal of the youth minimum wage in 2015, the impact on youth employment is likely to be limited (European Commission, 2017).

Past reforms have incentivised longer careers and resulted in higher activity rates for older workers. The gap in the activity rate of workers between 55 and 59 years relative to the EU average decreased from 9.6 pps in 2008 to 4.0 pps in 2017. On the other hand, the gap with the EU average for those older than 60 years is even diverging, despite the increase in the activity rate (Graph 3.3.5). This can be partly explained by the presence of transitional measures for older workers with long employment histories. Until 2015, the activity rate of older workers increased faster than the employment rate pointing to an increase in the unemployment rate of older workers. This underlines the importance of targeted activation measures for older workers (European Commission, 2018b).

Graph 3.3.5: **Activity rate for older workers (%)**



Source: Eurostat

People with a migrant background and their descendants have particularly unfavourable labour market outcomes. These groups represent an important share of the workforce with nearly a million persons (14.0 % of the population aged 18-64).([32]),([33]) Controlled for differences in age and educational attainment, the gaps in labour market outcomes of non-EU immigrants with native-born individuals are among the highest in the EU, in particular for women.([34])

The employment premium for tertiary educated is lower for persons with a migrant background. This is especially true for those having qualifications obtained abroad. In the Brussels Capital Region, in 2016, 43%of unemployed job-seekers had not been granted equivalence of the education level that they had received abroad.([35]) Also for the native born with a migrant background, the unfavourable labour market situation can only to some extent be related to lower educational outcomes (see European Commission, 2018a; OECD, 2017c). Immigrants

([32]) These numbers do not cover the persons originating from an EU Member State. They represent an additional 15.6 %.
([33]) FOD WASO (2017) ibid.
([34]) Conseil Supérieur de l'emploi (2018), Les immigrés nés en dehors de l'Union européenne sur le marché du travail en Belgique. Rapport 2018
([35]) Conseil Supérieur de l'emploi (2018), ibid

and their descendants tend to also be relatively more in lower quality jobs with more precarious contracts, and to experience in-work poverty or over-qualification.([36]) These are generated, among others, by lack of networks and role models, limited access to jobs in the public sector even when holding Belgian citizenship, as well as (direct) discriminatory practices and stereotypes that limit diversity in the workplace. The self-employment rate of non-EU citizens is also low. While immigrants often have strong entrepreneurial cultures and entrepreneurship could be used to help these groups integrate into society, very little entrepreneurship support has been implemented for them so far (EU/OECD, 2017).

Current activation measures are less effective for persons with a migrant background. A recent analysis of critical success factors for the activation of immigrants in Flanders revealed that second-generation jobseekers with a non-EU background have a lower exit rate from unemployment than jobseekers with two Belgian-born parents (Vandermeerschen *et al.*, 2017). Other research ([37]) suggests that targeted strategies should be developed for this specific group. Flanders and Wallonia set up integration schemes that guide this group toward the appropriate employment related services on the basis of their needs, including language training.

The inflows of asylum seekers and the need to adapt the integration measures available are driving a number of policy changes with regard to third-country immigrants. Recognition of qualifications has been simplified and made free in the Flemish Community, though it remains an important obstacle to be tackled to facilitate labour market integration. Employers are encouraged to describe their vacancies in terms of competences required, while government subsidies to employers to hire these groups still require proof of diplomas or certificates. Mandatory integration programmes – covering a variety of aspects in a particular language - are now in place in Flanders, Wallonia and the German-speaking Community. However, it is unclear whether these programmes can be sufficient to improve employability. Beyond the mainstream access to general measures, more tailored approaches have recently been adopted, such as the "Integration through work" (2016-18 action plan) in Flanders. Despite some new initiatives, there is still limited coordination between various policy domains (i.e. social, employment, educational) and levels of power.

There is no systematic application of the policy to promote diversity of origins in the public sector. In Flanders, the 'Equal Opportunities and Diversity Plan', consisting of workforce diversity targets for municipalities, was discontinued and replaced by the approach "Focus on Talent". The Brussels-Capital Region introduced in 2018 a "tutor premium" and a "youth bonus" to support dual training, replacing earlier federal measures. Regions have action plans against discrimination (for instance Action Plan to combat work-related discrimination in Flanders, Plan et Charte Diversité in the Walloon public administration); however they most often rely on awareness raising and self-regulation in sectors.

3.3.2. EDUCATION, TRAINING AND SKILLS

The overall good educational performance has been worsening and disparities related to socio-economic and migration backgrounds are high. The issues highlighted in previous country reports remain a concern (European Commission, 2018a). ([38])([39]) The equity gap in educational outcomes due to socio-economic and migration background is high. Belgium continues to display significant socio-economic inequalities in educational outcomes.([40]) The reading performance gap by socio-economic status increased from 13.7 % in 2000 to 17.1 % in 2015 (OECD, 2018). Half of students from disadvantaged background are concentrated in schools characterised as disadvantaged.

The percentage of young people not mastering basic skills can be improved in all Communities (and in particular in the French Community). In the Flemish, French and German-speaking Communities, the percentage of low-achieving 15-years old students in the three domains science,

([36]) OECD-EU Settling in 2018, *forthcoming.*
([37]) De Cuyper P., Havermans N., Vandermeerschen H. (2018).
([38]) UNIA (2018) Baromètre de la diversité – Enseignement.
([39]) Chzhen Y. et al. (2018).
([40]) OECD (2018) Equity in Education – Breaking down barriers to social mobility.

reading and maths represent, respectively, 10.9 %, 14.9 % and 8.8 %. By failing to meet the minimum standards required in three essential subjects, these students are most likely to face serious problems in their future education, on the labour market and later in life([41]).

Participation in early childhood education is very high, despite lingering challenges concerning low income and immigrant families. Despite a high participation rate of 98 % in 2016, the early childhood education system faces challenges to reach families in poverty and to deal with the multi-cultural context. The population of 3-year-old children reached an all-time high in 2018, with the fastest growth among disadvantaged groups, especially with an immigrant background. Enrolment and regular attendance gaps remain significant and may affect language skills. The Flemish Community has enhanced the staff-to-child ratio and supports increased enrolment and attendance by granting a premium to schools for each child of non-Dutch speaking parents to improve the child's language skills. It also trains future pre-primary teachers in how to deal with deprivation and diversity.([42]) The French Community has been increasing staff-to-child resources but shortages remain. The Pact for Excellence aims to reinforce the quality of childcare including support for educational success. There will be also free pre-primary school as of September 2019.

Belgium has reduced the early school leaving (ESL) rate, but it remains high in Brussels and among non-EU born young people and young men in cities. The ESL rate in 2017 was 8.9 %, below the 10.6 % EU average and the national Europe 2020 target of 9.5 %. However, disparities remain high between regions (Flanders 7.2 %, Wallonia 10.5 %, Brussels Capital Region 12.9 %) and population groups. ESL is particularly high for non-EU born young people (16.7 %), and for young men in cities (14.4 %). ESL is correlated to early tracking, grade repetition and track/school/course changes, particularly in urban vocational schools and in disadvantaged neighbourhoods. Belgium has a high share of repeaters in primary and secondary education. In the French Community's worst-performing schools, 80 % of pupils have delayed education, mostly due to grade repetition, against 20 % in the best-performing schools (OECD, 2018), (Lafontaine, 2017).

Measures are taken to further reduce early school leaving. The French Community aims to reduce early school leaving and grade repetition by 50 % by 2030.([43]) From 2019, as part of the new school governance regulation, schools must adopt a plan to reduce school failure, grade repetition and early school leaving. The 'School contract' in the Brussels Capital Region funds projects to improve relationships between young people, schools and neighbourhoods. The Flemish Community intends to strengthen pupils' guidance and support, while its 'Strategy for literacy' aims to raise literacy levels among pupils at risk of dropping out. The full roll-out of dual vocational education and training in 2019 also aims to reduce early school leaving by increasing students' motivation.

Teachers need more support to deal with diversity. Belgium is one of the few EU countries where school principals report that the quality of teacher resources in disadvantaged schools is worse than in the others.([44]) Considering the shortages in some subjects and geographical areas, the ageing teacher population, the high leaving rates from the profession, especially among young teachers, and the growth in the pupil population, measures are needed to make the profession more attractive, such as by providing effective support and enhancing teachers' status. In both Communities, the reforms to improve the quality of and to adapt the initial teacher education to the more demanding school environment have been adopted and will be rolled out from September 2019 onwards in the Flemish Community and as of 2020 in the French Community.

Comparing Belgium's spending and education outcomes with other EU countries with similar characteristics suggests that better outcomes are possible, in particular in the French Community. Public expenditure in education is one of the highest in the EU (6.4 % of GDP in Belgium compared to 4.6 % in euro area in 2016),

([41]) PISA (OECD), 2015, table B2.I.46.
([42]) National Reform Pogramme (2018)
([43]) National Reform Pogramme (2018)
([44]) OECD (2018), Effective Teacher Policies — insights from PISA.

resulting in a high education expenditure per student. It is highly skewed towards staff costs (78 % of overall expenditure), to the detriment of capital expenditure. According to a study (Cornille, D. and other, 2017), there are however important regional differences in efficiency, as Flanders performs almost as efficiently than most efficient education systems like Germany and Finland in the ratio between outcomes and the level of expenditure ([45]). Studies (Canton E., and others, 2018) ([46]) which benchmark the spending on education and the achieved outcomes, suggest that more efficiency gains can be achieved which will better support both equity and excellence. The Communities are developing and/or implementing some reforms in this direction. Challenges related to demography, digitisation, inequalities and the implementation of recent education reforms are also projected to require high-quality investments.

Given the already high spending levels on education, reforms will need to be implemented with a stronger focus on increasing efficiency, effectiveness, future-oriented competences (science, technology engineering, mathematics and digital skills) and labour market relevance of the education system. For example, the cost of delayed progress linked to grade repetition in the French Community was estimated at 10 % of the education budget.([47]) In third level, high drop-out rates are costly. The French Community also does not systematically measure completion nor drop-out rates. In both Communities, there is no systematic use of graduate tracking to channel information on graduates' careers into higher education policy planning.

The implementation of the 'Pact for Excellence', the French Community's flagship school reform to improve basic skills, efficiency, governance and tackle inequalities, is progressing slowly. From 2019, there will be a gradual increase in the budget for individualised child support to reduce grade repetition and school failure. New quality assurance and school governance measures as well as the recently adopted reform of the initial teachers' education aim to improve educational performance and to reduce inequalities. Nevertheless, major reforms are still pending, such as the extension of the common multi-disciplinary curriculum to the 9th grade and the new working organisation of teachers.

The Flemish Community is implementing some reforms in secondary education as of 2019/2020. Measures include a new toolkit of validated end-of-primary-education test and a new classification of the study offer to help pupils make the right choices. Differentiation and remediation in the first stage, and easier transition to higher education or the labour market should contribute to more equal opportunities. However, early tracking of pupils remains a concern. Higher attainment targets for first stage secondary education will be rolled out as of 2019/2020, to be followed in the next years for the second and third stage.

Educational inequalities are also observed in tertiary education. The tertiary attainment rate (45.9 % in 2017) is close to the national 2020 target (47 %). Inequalities linked to socio-economic status, family and migrant background persist. While 48.8 % of the native-born population aged 30-34 has completed tertiary education, only 29.5 % of the non-EU born population has done so.([48]) The attainment gap between people with disabilities and those without far exceeds the EU average (25.5 pps against 13.2 pps).([49])

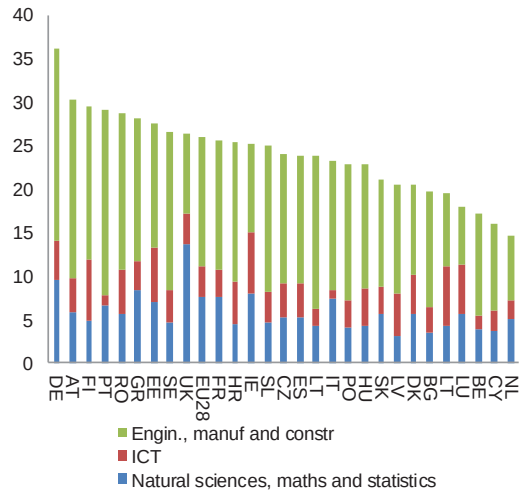
Tertiary education attainment is high, but there are too few graduates in sectors most supportive of innovation and growth, like science, technology, engineering and mathematics (STEM). In 2016, Belgium ranked 26th in the EU for tertiary graduates in STEM ([50]) education (see Graph 3.3.6) with a low rate of new entrants to related tertiary education fields ([51]), in particular for women. ([52]) In 2017, the proportion of young Belgians aged 16/24 with basic or above basic digital skills' levels (78.8 %) was lower than the EU average (81.9 %). Belgium rate of

([45]) The percentage of education expenditure (% of GDP) and a composite indicator covering results of the Programme of International Student Assessment (PISA) test and the share of population with a secondary or tertiary diploma.
([46]) Education and Training Monitor 2018
([47]) Fédération Wallonie-Bruxelles, 2017
([48]) Source Eurostat. Online data code: edat_lfs_9912.
([49]) EU-SILC 2016.
([50]) Science, Technology, Engineering and Mathematics
([51]) Natural sciences, mathematics and statistics, Information and Communication Technologies (ICT), engineering, manufacturing and construction, OECD (2018)
([52]) The proportion of female graduates in IT is among the lowest in international comparison (OECD, 2018).

graduates (1.8 per 1000 inhabitants) are low notably vis-à-vis France (2.4) and Germany (3.0) (Joint Research Centre, 2018). The overall implementation of the "STEM Action Plan 2012-2020" shows progress, but the number of STEM secondary graduates in technical and vocational paths has stagnated since 2010 ([53]). The French Community has no STEM action plan and still needs to implement its recently adopted "Strategy for Digital Education" plan for schools.

Furthermore, many graduates are still not familiarised enough with the mind-set of a "knowledge entrepreneur". They are often not provided with the skills required to generate and implement new ideas through new ventures (St-Jean, É. and other, 2017). Flanders is currently implementing reforms to furthers enhance entrepreneurial skills in higher education and establish being an entrepreneur as a true career choice for students.

Graph 3.3.6: **Graduates in STEM (ISCED 5--8) as a percentage of total graduates (2016)**



Source: Eurostat, own calculations

Dual learning and apprenticeship training are being promoted. Initiatives were undertaken in recent years to improve the work-based learning component in vocational and educational training (VET) (see European Commission, 2018a). The Flemish Community is rolling out the dual learning system as a new secondary education pathway, while higher VET is transferred from adult education centres to higher education institutions. The French Community is reinforcing practical training, notably through the experimental implementation of certification by units in formal IVET programmes. It also offers the possibility to follow, in some areas, a bachelor or a master degree in a dual learning system in both Higher Education and Adult Education School.

Adult participation in education and training is low, reflecting weak incentives. The participation rate in adult learning increased in 2017 but remains below the EU average (8.5 % against 10.9 %). There are strong regional differences, as Brussels' participation rate (12.6 %) is nearly twice that of Wallonia (6.7 %)([54]). It decreases with age and increases with skill levels. Belgium performs better in training within companies, with a higher share of provision by companies (12 % vs EU average of 9.5 %) and a higher than average share of employee participation. Training by companies focuses more on technical, practical or job specific skills than in most Member States. This suggests there are insufficient incentives for up-and re-skilling.

3.3.3. SOCIAL POLICIES

Belgium's social protection system prevents poverty from becoming a major problem. The at-risk of poverty (AROP-) rate was 15.9 % in 2017, below the EU average of 16.9 %. However, before social transfers, the AROPE rate was of 26.3 %, higher than in Germany and France (both 24.1 %). Pockets of poverty persist while part of the population lacks access to the labour market.

The efficiency of social transfers to reduce poverty is high, though it has been declining since 2005 for the working age population. The at-risk of poverty (AROP) rate for people living in quasi-jobless households increased significantly (70 % in 2017). It is above the EU average especially for households with children. While unemployment benefits are not limited in time, they decline to about a level of social assistance after a period of 14 to 48 months, depending on the number of previous years in employment. The

([53]) STEM Monitor 2018.

([54]) The French Community does not participate in the Programme for the International Assessment of Adult Competencies (PIAAC) survey.

adequacy of social benefits for the working age population is above the EU average ([55]), but below the poverty threshold for a range of family situations. Lower-income families have a poorer access to health care services than in the EU average.

Some workers have limited social protection. Not all self-employed workers have formal access to unemployment, accident and occupational injuries' benefits. Apprentices below the age of 19 do not enjoy the right to unemployment benefits, sickness, maternity and pensions (European Commission, 2018c).

There are strong inequalities in health access and outcomes by socio-economic status. The gap in health outcomes between the poorest and richest quintiles is pronounced (European Commission/ESPN, 2018). At age 50, Belgian men with the lowest level of education can expect to live about six years less than those with the highest education level. Differences in life expectancy between provinces (78.8 years in Hainaut and 82.9 years in Vlaams Brabant) are mainly explained by socio-economic status. There are also disparities in unmet needs for medical care by income group. In fact, the gap between the poorest and richest quintiles is the most pronounced of all western European countries.

Effectively reaching out to disadvantaged groups remains a challenge. General practitioners and multidisciplinary neighbourhood health centres can play an important role in tackling health differences due to socio-economic status. The suspension of new community health centres has been lifted and the sector can continue to grow. Flanders launched a reform of integrated primary care – with technical support from the European Commission – to create over 60 multidisciplinary primary care zones.

Greater prevention requires stronger primary care. Some health inequalities could be remedied cost-effectively by better health promotion and disease prevention, including early detection amongst risk groups. This requires strong primary care, but the necessary inter-governmental collaboration is challenged by the sharing of health responsibilities between the federal level and federated entities. ([56]) The role of primary care within the larger health system is relatively weak.

The provision of informal care is higher than the EU average. This is particularly the case for persons providing around 10 hours-or-less of weekly informal care (65 % against an EU average of 59 % in 2016). Belgium has a higher than EU average share of persons providing informal care between 10 to 19 hours per week (19.2 % and 17.2 % respectively). The recent European Social Protection Network report notes that the Belgian system of residential care, though well developed, faces challenges in sustainability and access, in particular in view of an ageing population.

People with disabilities face particularly strong challenges regarding poverty, educational attainment and employment. The employment rate for people with disabilities is much lower than the EU average (40.5 % vs. 48.1 %). The transition from the traditional disability-welfare approach towards a rights-based approach (considering persons with disabilities as active citizens needing access to all community services) is slow. Considering the diversity of fields to address (work, education, services, social benefits, etc.), the lack of a de-institutionalisation strategy concerted between federal and federated entities (in line with the UN Convention on the Rights of Persons with Disabilities) makes the situation more difficult to tackle.

In parallel, there are important investment needs in social housing. In Belgium, the percentage of social housing compared to total housing market is rather weak (6.5 % of all dwellings), in particular in comparison to the Netherlands (34 %) and France (18.7 %). All regions are affected, in particular Brussels where the demand would be double to the offer.

Investment

Significant investments are necessary to increase activity and employment rates, to tackle

([55]) According to the benchmarking exercise in the area of minimum income schemes conducted within the Social Protection Committee. See the draft Joint Employment Report 2019.

([56]) European Commission/OECD/European Observatory of Health Systems and Policies (2017), State of Health in the EU.

inequalities of opportunities, and to improve the performance and outcomes of the education and training systems. High levels of skills shortages and mismatches, especially among some groups, point to the need to invest more in targeted support on the labour market (activation measures, training, re-/up-skilling, etc.) and in better aligning programmes to labour market needs (including science, technology, engineering, mathematics and future-oriented competences).School digital equipment and infrastructure should also be among the priorities. Inequalities of access to and completion of education and training should also be tackled. Strong investment are also required in social inclusion, in particular so as to ensure equal and inclusive access to services (including healthcare and long term care), full participation of the people with disabilities in society and to better include third country nationals (addressing notably discrimination). Investments in these areas should be backed up by investments in matching infrastructure. Attention should be paid to geographical disparities, as well as to the repartition of competences between federal and federated entities.

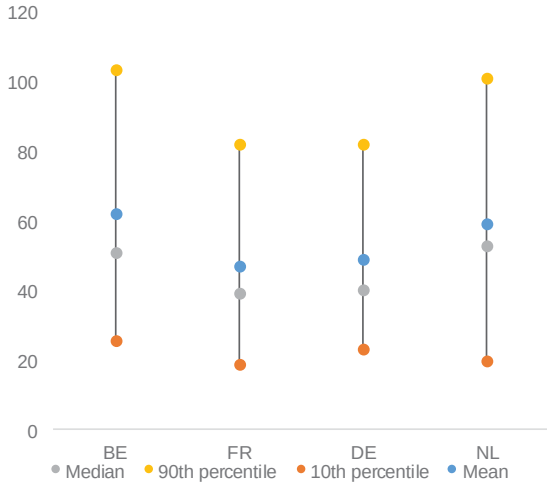
3.4. COMPETITIVENESS AND INVESTMENT

3.4.1. COMPETITIVENESS, PRODUCTIVITY AND INNOVATION

Competitiveness and productivity

Labour productivity growth has slowed down more in Belgium than in its neighbouring countries and in the euro area on average since 2000. Productivity growth started to pick up again in 2015 in the euro area and in neighbouring countries, but this productivity revival has been less pronounced in Belgium. The main reason for this was low productivity growth rates in the services sector in the context of a particularly labour-intensive growth. Job creation has been higher in services with low added value such as accommodation and food services, transportation and storage, wholesale and retail. Productivity growth in manufacturing, by contrast, has proved more resilient (Biatour and Kegels, 2017).

Graph 3.4.1: **Distribution of labour productivity growth, selected countries, 2014**



Source: Compnet, own calculation

The productivity gap between the most and the least productive firms is large and widening (see Graph 3.4.1). As in other advanced economies, Belgium's most productive firms display significantly higher productivity growth than the rest. This dispersion is however more important for Belgium than its major neighbouring countries, notably France and Germany. It has been estimated that the productivity gap increased by 29 pps from 1996 to 2016 (De Mulder J., Godefroid H., 2018). The fact that only a few firms drive most aggregate productivity gains may point to obstacles in the diffusion of innovation (see infra). A recent study (Dhyne *et al*., 2018) estimates that differences in information and communication technologies investment could explain up to 17 % of the productivity dispersion at firm level.

Productivity tends to be higher in firms directly integrated to global value chains. The share of Belgian firms that export or import directly is small, as in other advanced economies (Dhyne and Duprez, 2017). However, almost two thirds of businesses are directly or indirectly connected to foreign demand. Recent empirical results showing the productivity of Belgian firms according to their proximity to foreign markets highlight that the firms least connected to international markets tend to lag behind in terms of technological efficiency (cf. Dhyne and Duprez, 2017).

Restored productivity growth is essential to preserve external competitiveness and ensure future economic growth in the context of an ageing population. The evolution in cost competitiveness (in terms of nominal unit labour cost ([57]) compared to neighbouring countries), which benefited largely from wage moderation (after the wage norm reform) and the tax shift, is set to be less positive in 2019 because of expected rising domestic wage costs. However, with a slightly improved productivity growth, the increase in labour costs per unit produced is expected to remain lower than the wage cost in 2019 and 2020 (De Mulder J., Godefroid H., 2018).

Belgium is lagging its neighbours in terms of Total Factor Productivity (TFP) growth.([58]) During the post-crisis recovery, Belgian TFP accelerated at a slower pace than in the rest of the EU and stagnated in recent years. The deceleration of the aggregate TFP growth is mainly attributable to a lower productivity growth within firms (De Mulder J., Godefroid H., 2018), suggesting a slowdown in firms' internal TFP growth. Moreover, between-firms reallocation of resources increased importantly after the crisis, becoming the

([57]) Nominal unit labour cost, a key measure of competitiveness, is determined by the evolution of nominal wages in relation to productivity developments.

([58]) Total Factor Productivity is defined as the part of output that is not explained by the amount of inputs (e.g. labour and capital) used in the production process, and therefore captures the efficiency in the use of inputs.

largest positive component of the overall TFP growth. This is mainly due to a more efficient resources allocation between firms of the same sector, notably in industry, and may point to some cleansing effect of the crisis, which pushed less productive firms out of the market. On the other hand, TFP gains from between sectors reallocations, especially from industry towards expanding services sectors, remain weak as the latter are characterised by a more limited internal TFP growth.

A number of factors are behind the evolution of productivity growth. In addition to the impact of an ageing population (Ariu and Vandenberghe, 2014), an increasing share of the services sectors in the economy, common to most of the developed countries, seems to weigh more on the aggregate TFP growth deceleration in Belgium than in the neighbouring countries (IMF, 2018). This points to country-specific factors influencing the aggregate trends. Unnecessary barriers to competition and investment in the product and service markets (see section 3.4.2) as well remaining rigidities in labour market (see section 3.3) weigh on productivity growth by hampering business dynamics, resources reallocation and diminish workers' and firms' incentives to invest in skills (e.g. IMF 2018, Duval *et al.*, 2017). Despite higher R&D spending than in the EA (2.5 % against 2.1 % of GDP, respectively), the Belgian economy does not perform proportionately better in terms of patents, innovative products creation and high-tech exports (Basselier *et al.*, 2017). These rigidities may also partly explain a larger share of less productive "zombie firms" than in neighbouring countries ([59]) accounting for around 10 % of all Belgian companies compared to 2 % in France (De Mulder J., Godefroid H., 2018). Although this group of firms remains heterogeneous with some presenting good characteristics, their survival crowds out growth opportunities for more productive enterprises. Moreover, in Belgium the declining quality of infrastructure resulting from years of insufficient public investment (see section 3.1) has likely contributed to depress productivity growth (Biatour, Kegels, Van der Linden and Verwerft, 2017).

Belgium has recently adopted a law creating a National Productivity Board ([60]). The Boards are meant to be independent institutions whose aim is to inform the debate on productivity-related policy challenges and structural reforms. National Productivity Boards, as referred to in the Council Recommendation of September 2016, can help facilitate the debate on country-specific needs and share good practices.

Investment

Focussing investment in transport and energy infrastructures and innovation would strengthen the long-term growth potential of Belgium, while contributing to address regional disparities. In spite of a relatively high level of investment ([61]), investment needs remain significant. A protracted low level of public investment has led to a deterioration in the quality of road infrastructure and public transport services, increasing congestion. R&D investment is concentrated in a few sectors, while innovation diffusion remains limited. Public support to research and innovation is uneven among Regions and Communities. In light of Belgium's commitment to fully phase-out nuclear energy by 2025, there is a need for important investments in power generation and interconnection capacity, smart grids and storage. Renovating the existing building stock is necessary to meet the 2020 and 2030 emission reduction targets. Digitalisation of public services and justice, as well as the reinforcement of certain regulators (see Section 3.4.4), would improve institutional governance The analysis carried out by the national authorities in the context of the National Pact for Strategic Investment (see Section 3.1) broadly identifies the same sectors as those where investment needs are more important.

([59]) According to the definition adopted by the OECD, a firm is considered a zombie firm if it is aged at least 10 years and it had an interest coverage ratio less than one for three consecutive years (Adalet McGowan et al., 2017).

([60]) The NPB has 12 members: 6 members representative of the federal level and 6 members representative of the regional level (2 for each Region). At the federal level, all members are nominated by the King, 2 of them on the proposal of the Secretariat of the Economic Council, 2 of them on the proposal of the National Bank of Belgium (NBB) and 2 of them on the proposal of the Federal Planning Bureau (FPB).

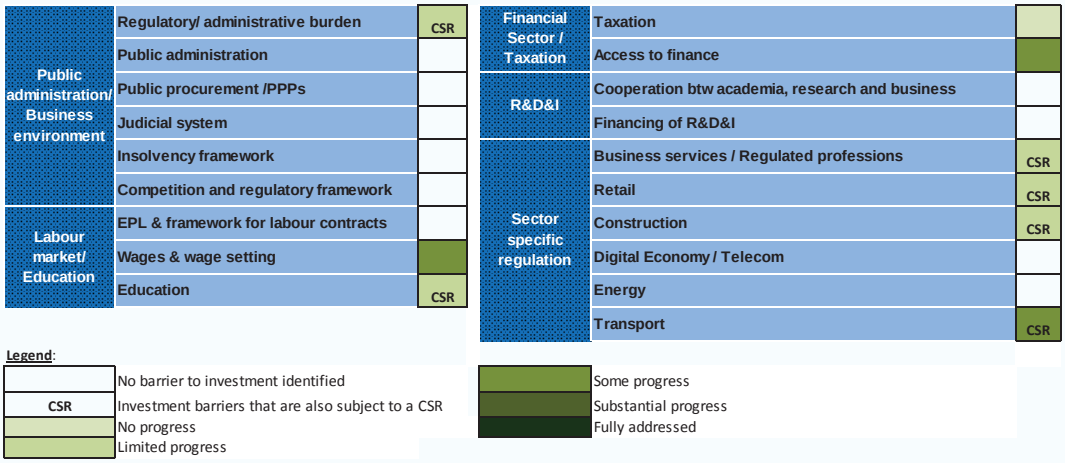
([61]) Total national investment in Belgium remains relatively high at 23.5 % of GDP in 2017. Total investment (measured as gross fixed capital investment) was above the EA average (20.6 % of GDP) and of each of its main trading partners, France, Germany and the Netherlands

Box 3.4.1: Investment challenges and reforms in Belgium

Section 1. Macroeconomic perspective

At 23.5 % of GDP in 2017 total investment in Belgium (measured as gross fixed capital investment) was above the euro area average (20.6 % of GDP) and that of each of its neighbouring countries, France, Germany and the Netherlands. Investment in Belgium has proved rather resilient to the crisis and in 2017 the level of overall investment was higher than in 2007; by contrast in the euro area as a whole and in neighbouring countries the current level of investment was still below its pre-crisis level. The relatively overall good performance is due to private investment, while the level of public investment remains low.

Section 2. Assessment of barriers to investment and ongoing reforms



Progress has been made to reduce barriers to private investment in Belgium, for instance substantial progress has been made in reducing the labour cost handicap. Nevertheless, more ambitious liberalisation of regulated professions and business services is key in light of the increasing importance of services as input for the manufacturing sector (see section 3.4.2). Relatively low labour participation and job mobility and a high degree of skill mismatches result in job vacancy rates among the highest in the EU, and job offers for critical occupations taking longer to fill (see section 3.3). Regional disparities are also important (see section 3.4.3)

Selected barriers to investment and priority actions underway

1. The fragmentation of competencies regarding investment between multiple layers of government complexifies the investment decision-making process. Combined to the need to pursue fiscal consolidation, this has led to a low level of public investment for a protracted period of time (see section 3.1). The latter is reflected in the deteriorating quality of the country's public infrastructure, weighing on the competitiveness of the country. The complexity of procedures and delays in obtaining permits further hamper the realisation of major infrastructure projects (see section 3.4.2).

Reflecting the federal structure of Belgium, promotional banks and agencies have been set up at federal ([1]) and regional ([2]) levels to support private sector initiatives and implement specific sectoral policies, through a range of loan and guarantee products using both own resources as well as EU financial instruments.

([1]) Société Fédérale de Participation et d'Investissement / Federale Participatie- en Investeringsmaatschappij
([2]) Société Régionale d'Investissement de Bruxelles, Société Régionale d'Investissement de Wallonie/SOWALFIN, Participatie Maatschappij Vlaanderen

Overview of the business environment and business dynamics

In spite of government efforts, the administrative burden on firms remains heavy and weighs on entrepreneurship. Belgium is one of several leading EU Member States where only three procedures are required to start a business according to the 2019 World Bank Ease of Doing Business report. It also scores best in trading across borders (ranking 1st) and insolvency (ranking 8th). However, overall it only ranks 45th out of 190 assessed economies, with long delays for building permits (212 days, hence ranking 168th), notably because of appeals (see Section 3.4.4) and poor performance in registering property (ranking 143). The process of transferring a property is the third slowest in the EU at 56 days (see Section 3.4.4) and the second most expensive among the EU Member States at 12.7 % of the property value. Finally, Belgium also lags behind in terms of social protection of self-employed people (see Section 3.3.3).

Belgium plans a reform of its company law code, which is expected to enter into force in the first half of 2019. It reduces the number of legal forms of companies from 17 to 4, removes the minimal capital requirements for setting up a company, abolishes the unlimited liability of administrators and allows e-mail to replace registered letters.

Entrepreneurship is being boosted by lower taxation and support for disadvantaged groups. The reform of the Corporate Income Tax law alleviates taxation on start-ups and small companies (see Section 3.1.6). The Brussels and Walloon regions also provide additional support for entrepreneurship, particularly to disadvantaged groups and women. In Flanders, a monthly gross premium is now available to unemployed people over 45 years old who wish to start their own business.

Innovation and business dynamics

Belgium is a strong innovator thanks to an excellent public science base and very good interlinkages between public research and industry. In the Innovation Scoreboard([62]), Belgium is in the same group as Germany and France, but behind innovation leaders like the Netherlands. The excellence of its public science base, the linkages between public research and industry and the presence of a number of R&D centres of multinational companies are among the strong points of its research and innovation system. Belgium benefits from adequate public and private infrastructures. Regions are participating in 16 out of 28 partnerships in the Smart Specialisation Thematic Platforms. However, differences exist among provinces.

Private R&D intensity is high, but public R&D intensity can improve and is mostly driven by R&D tax incentives. Belgium's overall R&D intensity increased remarkably, from 1.84 % in 2007 to 2.58 % in 2017, mostly thanks to growth in business R&D intensity (from 1.28 % to 1.76 %). Public R&D intensity increased too, but remains below that of most other Member States with a similar level of economic development. Public R&D undertaken in Flanders is higher than for Belgium as a whole (Debackere et al, 2018), suggesting that public research is likely to be below the EU average (0.7 %) in other Regions/Communities. Nevertheless, indirect public support for business R&D is high (see Box 3.4.2), without any bias against small and medium-sized enterprises (SMEs).

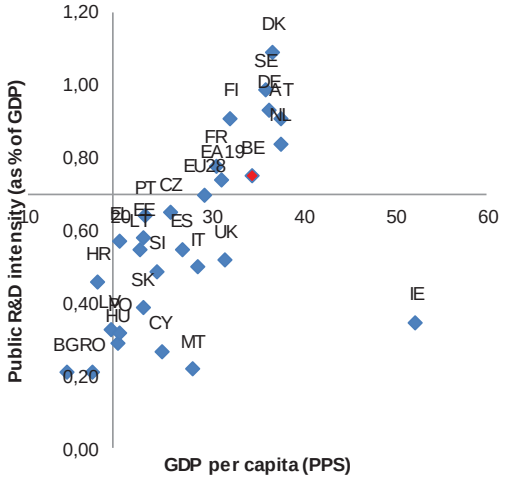
As Belgian R&D investment is concentrated in a few business sectors (mainly in the pharmaceutical industry – see previous country reports), public authorities have been pushing for R&D in other areas. The share of environmental inventions in total patents has risen very substantially since the early 90s, as in many countries, but still lags the OECD average by around 30 % on a per-capita basis (OECD, 2017b). The National Pact for Strategic Investment aims to boost coordination of investment in R&D in cross-cutting areas like digitalisation (cybersecurity, e-health), health, mobility, intelligent transport systems and energy. Belgian regions have had a consistent policy of supporting the emergence of new industries, in particular in the low-carbon

([62]) According to the European Innovation Scoreboard 2018, available at: https://ec.europa.eu/growth/industry/innovation/facts-figures/scoreboards_en

economy, notably through 'smart specialisation'.([63])

The renewal of the Belgian economy as measured by entry and exit firm ratio is slower than in peer countries. This occurs despite a good access to funding and efforts to boost entrepreneurship. Start-ups can be found in several sectors, notably in financial technology, media and healthcare. Belgian start-ups are also quick to venture into international markets and are very much focused on business-to-business connections. However, Belgium ranks 23rd in terms of employment in high-growth innovative enterprises (2.7 %, while the EU average is 4.8 %). According to the 2018 Digital Transformation Scoreboard, there has been a downward trend in the number of newly created information and communication technologies start-ups for the last 5 years and in 2018, with regional variations.

Graph 3.4.2: **Public R&D intensity (government plus higher education) and GDP per capita (PPS) - 2016**



Source: European Commission

Digitalisation

Reinforcing the digitalisation of the Belgian economy has been identified in the National Pact for Strategic Investment as a promising avenue to boost productivity and the innovation capacity of the country. This requires investments in digital infrastructure and human capital as well as an accelerated take-up of digital technology, in particular by those firms that have been lagging behind so far, and by the public sector. There is an overall mixed picture concerning the digitalisation of public services in Belgium (see Section 3.4.4).

The ongoing digital transformation of the Belgian economy requires more graduates in science, technology, engineering and mathematics ('STEM') as well as a major effort to re-skill and up-skill the labour force (see Section 3.3). The level of digital skills is good but stagnating and more than one third of the labour force has insufficient digital skills. According to a report, up to 584 000 open vacancies could remain unfilled by 2030 if no decisive action is taken while 310 000 workers would need to be retrained for a new job (Agoria, 2018a).

Belgium is doing well when it comes to the integration of digital technology by companies. There are several complementary strategies in place to further digitalise Belgian businesses. The challenge is now to motivate companies with a low level of digitalisation to catch up.

Scarce availability of a high-skilled labour force and regulatory barriers in services markets hamper business dynamism. The shortages of professionals in sciences and engineering and, more broadly, the lack of 'knowledge entrepreneurs' are two important barriers to developing start-ups in Belgium (e.g. ICT start-ups) and will ultimately dent Belgian growth prospects (see Section 3.3.2). Similarly, several barriers in services markets also impact churn rates and the spread of innovation (see Section 3.4.2). Job mobility is low, which may limit productivity growth (see Section 3.3.2).

3.4.2. MARKET INTEGRATION

Services sector

([63]) In the area of low-carbon technologies, Flanders has notably large clusters in for instance eco-innovation and sustainable chemistry, while Wallonia has a Competitive Cluster in green chemistry, environmental biotechnologies and innovative materials (as well as private clusters).

Box 3.4.2: R&D tax incentives

Belgium has one of the highest worldwide indirect public support to business R&D – as share of GDP. In Belgium, in addition to direct support from the regions, firms can benefit from several tax benefits in support of R&D, introduced by the federal government from 2005 onwards. According to OECD data, Belgium has the higher worldwide of indirect public support to Business R&D (0.30 % of the GDP in 2015).

An innovation box has replaced the old Belgian patent box. The new regime - approved by the Code of Conduct Group on Business Taxation - requires a stronger link between the intellectual property (IP) that can benefit from the regime, and the R&D that created this IP. As a reminder, the economic evidence on the effectiveness of patent/innovation boxes as a means to encourage R&D remains limited and it may be used as a tax competition tool.

Belgian tax incentive schemes do not target a particular category of enterprises. Four schemes of partial exemption of advance payment of the withholding tax on wages of R&D personnel exist, along with tax deduction or tax credit for investment in R&D fixed assets that aim to develop new products or patents. Most schemes do not target particular categories of enterprises, but incentivise indifferently SMEs or big enterprises, firms that make profits or losses (OECD, 2017a). For instance, the absence of a profit requirement for eligibility, implies no bias in favour of incumbents (Acemoglu, 2013)

Combination of different measures decreases the effectiveness of public support to business R&D in Belgium. Recent studies (Dumont 2017, Teirlinck, Spithoven and Bruneel 2018) give indications that the combination of different measures decreases the effectiveness of public support to business R&D in Belgium, pointing out the need to account for all schemes when assessing additionality of the public support in the country and inviting for a coherent approach between federal R&D tax support schemes and regional government level R&D direct subsidies.

These studies give robust evidence that tax benefits based on the wages of researchers are effective in building R&D capacity in enterprises, with a higher impact for smaller (Bronzini 2016, Dumont, Spithoven and Teirlinck 2016) and less R&D intensive firms. However, no indication of additionality for the public support through corporate income taxation (tax credit for R&D investment and tax deduction of 80 % of patent income) were found in these studies (Dumont 2017). This is in line with a comparative study of all the R&D tax schemes in the EU (EC 2015) which highlighted tax benefits based on the wages of researchers as a best practice among the various types of R&D tax incentives. In particular, the economic evidence on the effectiveness of patent/innovation boxes as a means to encourage R&D remains limited.

Assessing the whole tax incentives to business R&D system in the framework of a spending review, as indicated by the Country Specific Recommendation 1/2018, could lead to measures to improve the efficiency and composition of public spending, to reduce the complexity of the taxation system and the erosion of taxable bases in order to create room for investments (see Section 3.1, supra).

Restrictions in services sectors negatively impact manufacturing, through value chains. Estimates show that more than 43 % of the value added included in overall gross exports by the Belgian manufacturing sector originates in the services sector. ([64]) In this context, the lagging performance of the services sector has negative implications for the manufacturing sector.

([64]) OECD TiVa statistics (latest available estimation from 2014).

Regulated professions

There are substantial restrictions to competition and investment in several business services (see previous country reports). The Commission restrictiveness indicator ([65]) shows that the Belgian regulatory framework for accountants, tax advisors, architects and real estate agents is considerably more restrictive than the EU average. Key obstacles include mandatory training requirements, mandatory chamber membership requirements, insurance requirements and

([65]) COM(2016) 820 final.

corporate structure requirements restricting investment. A recently adopted law has introduced new requirements in terms of title protection, mandatory chamber membership and compulsory insurance for patent agents. Although notaries seem to have a similar degree of regulation to that of many other Member States (except the Netherlands) and are present throughout the territory, their regulated fees for real estate transactions are at the very high end of the scale, adding to the high registration taxes (see Section 3.1.6).

Barriers to competition and investment in several business services hamper growth and productivity. Entry rates of new service providers are significantly below the EU-average ([66]). In addition, profit rates are above the EU-average, in line with the results of the market screening by the Price Observatory showing that the price cost margins for several business services are well above the national average (Price Observatory, 2018a). In addition, resources are heavily concentrated in small service providers ([67]) despite that fact that they are on average more than 20 % less productive than the sector-average productivity level. The Federal Planning Bureau estimates that an ambitious reduction of the regulatory burden in legal (e.g. legal representation, notaries, bailiffs), accounting (e.g. accounting, bookkeeping, auditing) and architectural services (e.g. construction architects, interior architects, landscape and garden architects) would increase Belgian labour productivity by 0.23 %, wages by 0.26 % and GDP by 0.29 % after only three years, partly through spill-over effects to other sectors (Ingelbrecht, Kegels and Verwerft, 2018). Furthermore, a recent analysis by the Belgian Price Observatory found no obvious link between the level of regulation and the Belgian consumers' satisfaction with the business services provided (Price Observatory, 2018b).

Reform progress in business services is limited and many obstacles remain. Although insolvency procedures for liberal professions will be eased by the reform of the company law, the action plan for the modernisation of the legal professions (lawyers, company lawyers, bailiffs and notaries), which was announced for the summer of 2018 has not been published yet. Belgium carried out a specific analysis of the need for and proportionality of specific restrictions imposed on legal persons providing professional services. No reforms seem to be planned currently as a follow-up to this analysis.

Regions have unevenly reformed crafts and trades professions. In Flanders, the establishment act imposing certain profession specific competence requirements no longer applies to a number of professions in the area of crafts and trade (as of January 2018). In addition, the requirement for all service providers to prove basic competence in company management was also abolished. Reforms in other regions are more limited. In Wallonia qualification requirements have only been removed for five craft and trade professions (as of December 2018), while evaluation is still ongoing for 22 other professions and the general proof of basic competence in company management. Brussels has announced limited reforms focused on replacing a centralised theoretical exam by a practical test. This divergence in reforms between the regions creates doubts as to the free flow of these services across the regions.

Retail sector

The retail sector still faces operational restrictions that hinder its productivity and discourage investment. The productivity of this important sector employing over 300 000 people has been falling over the past years. The supermarket sector displays a sub-optimal level of competition, mainly due to high concentration and low entry and exit dynamics.([68]) According to the Retail Restrictiveness Indicator ([69]), Belgium is the sixth most restrictive Member State as regards the operational environment for retailers. Rules on shop opening hours, sales promotions, discounts and distribution channels for non-prescription medicines contribute to this score. Moreover, the co-existence of different collective agreements

([66]) Belgium 6.1 % vs. EU 10.7 % (unweighted average), Eurostat (2016).

([67]) Here defined as fewer than 10 persons employed. In Belgium they capture 63 % of overall employment, compared to 49 % at EU-level (NACE rev 2 M – Eurostat, 2015/2016).

([68]) Price Observatory (2018a).

([69]) See Communication from the Commission 'A European retail sector fit for the 21st century', Brussels, 19.4.2018, COM(2018)219 final and Commission's SWD(2018)236 final of 19.4.2018, p. 101.

creates a more complex operational environment, with e.g. different working conditions, resulting in an uneven playing field between retailers. However, Belgium has recently taken action to allow flexibility in night work in e-commerce. Additionally, although rules on establishment have been reformed in the three regions and Belgium is not among the most restrictive Member States according to the Retail Restrictiveness Indicator, attention should be given to ensuring that the ongoing further reforms achieve their objectives.

Restrictions and labour rigidities, together with possible problems of territorial supply constraints, ultimately dent the purchasing power of consumers. Retail prices in supermarkets remain higher than in neighbouring Member States**.** According to a recent report (Price Observatory, 2018c), in 2017 goods in Belgian supermarkets cost on average 13.4 % more than in Germany, 12.9 % more than in the Netherlands and 9.1 % more than in France. Taxation differences, accumulation of regulation, commercial strategies of the main retail chains ([70]) as well as a small scale of the market and high purchasing costs for retailers are listed as underlying reasons. High purchasing costs may be explained in part by territorial supply constraints applied by suppliers. As a result, wholesale prices for identical products may differ between Belgium and its neighbours. A study carried out recently by the Benelux Council confirmed that such practices exist ([71]). A Benelux working group has been set up to examine possible ways to tackle this phenomenon. Lower prices on the other side of the border encourage many Belgians to shop over the border. This represents a significant turnover loss for domestic retailers.

Construction

The sector is growing thanks to robust private investment, mostly in real estate, but total factor productivity is on a downward trend. While contractors' productivity gains have risen, in other parts of the value chain (e.g. architects and engineers) seen no growth or have even declined (e.g. real estate). The construction sector has a crucial role to play in reaching the 2030 target for reducing greenhouse gas emission through renovation works (see Section 3.4.3), and demand for new energy and transport infrastructure.

Business dynamism in the construction sector is low, suggesting there are barriers to competition. The construction sector is characterised both by a low share of high-growth enterprises ([72]) and by low entry rates of new service providers ([73]), suggesting little competition. The Price Observatory has identified dredging services and construction equipment among its sectors to monitor. The sector suffers from late payment, with waiting times for payments above the EU average; the time and cost of building permits is also high (see Section 3.4.4). In addition, the government introduced an insurance requirement related to the 10-year liability regime of structural works by service providers. While this provides additional safeguards to consumers, it is likely to increase prices of construction services.

The growth of the sector is also held back by a lack of skills, labour shortages and uneven reforms in construction professions, prompting the sector to invest in training and attractiveness. Belgium faces a shortage of about 20 000 construction workers every year. Posted workers account for up to 20 % of the construction workforce. In Flanders, the establishment act no longer applies to 11 professions in the area of construction (as of January 2019). Service providers carrying out activities such as those of a general contractor, structural works and electro-technical activities no longer need to prove profession specific competences. In Wallonia and Brussels no similar reforms in the area of construction have been undertaken. The construction sector is undertaking several initiatives dedicated to construction skills with Regions and Communities, notably through on-the-job education.

([70]) Only one major market player has a price-following strategy; the other big retail chains do not have incentives to compete on price and concentrate on services offered to consumers.

([71]) Territorial supply constraints in the retail trade in Belgium, the Netherlands and Luxemburg. Consequences for the Benelux internal market. General Secretariat of the Benelux Union, February 2018.

([72]) Share of high growth enterprises measured in employment: number of high growth enterprises divided by the number of active enterprises with at least 10 employees – Belgium 6.4 % vs. EU 8.7 % (Eurostat, 2015/2016).

([73]) Belgium 6.9 % vs. EU 10.7 % (unweighted average), Eurostat, 2016.

Digital infrastructure and services

As regards its digital infrastructure, Belgium has a good level of fixed and mobile connectivity, for which it ranks 5th in the EU.([74]) The key challenge is to move to very-high capacity networks, which are crucial for the delivery of new services both to citizens and businesses. The deployment of these very-high capacity networks will require important investments and the right regulatory framework conditions. In fixed networks, this concerns the deployment of more fibre and in mobile communications, the rollout of 5G networks. ([75]) Tests for 5G are underway and operators as well as public authorities are preparing the ground for 5G deployment, for example by adapting norms for electromagnetic radiation. Differences between the three regions to grant permits to telecoms operators are significant. Moreover, the federal level, the communities and the regions still have to agree on the framework for the introduction of 5G, which is essential for a timely development of this key technology in Belgium.

The telecoms market is characterised by a high level of concentration (further accentuated by recent takeovers) and weak competition (BIPT, 2018). This is also illustrated by relatively high prices for services compared to peer countries. In fixed networks, the retail market is characterised by a duopoly of the incumbent and cable network operators. This may create obstacles for the provision of bundled service by other operators. The arrival of a 4th mobile operator on the market is planned.

Belgium is performing less well in mobile broadband. Despite 4G coverage increasing to 97 %, mobile broadband take-up remains among the lowest in Europe with only 73 subscriptions per 100 people. Several measures have been taken to improve the poor broadband coverage in rural areas. For example, the Belgian regulator has introduced an innovative measure to roll back regulation if operators invest.

([74]) Digital Economy and Society Index (DESI) 2018, available at https://ec.europa.eu/digital-single-market/en/desi

([75]) Take-up of fast broadband (30 Mbps and above) increased to 67 % and ultrafast broadband (100 Mbps and above) to 42 %.

Transport services and infrastructure

Belgium is suffering from chronic road congestion, affecting the environment and the access to Brussels and to the port of Antwerp. The average number of hours per year spent in traffic jams in Belgium rose from 35.8 in 2014 to 39.1 in 2017, making the country one of the three worst performers in the EU after Malta and the United Kingdom([76]). In urban agglomerations, the delay per driver even amounted to 48.8 hours in 2017([77]). The cost of traffic congestion was spelled out in the 2017-2020 stability programme, stating that assessments by the Commission, the OECD and the IMF put the likely costs at 1-2 % of GDP or EUR 4.3-8.6 billion (2017)([78]). Road congestion generates additional fuel consumption, contributes to air pollution and complicates access to the port of Antwerp, which is responsible for 7 % of EU imports.

The quality of road infrastructure is relatively low and very costly for regions and local authorities. Belgium's road infrastructure ranks 35th in the composite indicator of the World Economic Forum. However, for the quality of the roads alone, Belgium ranks only 52nd worldwide (WEF, 2018). Belgium's extensive road network and high traffic density makes road maintenance more expensive and increases the cost of transport on a national basis (National Bank of Belgium, 2017). The road system is mostly toll-free for passenger vehicles and relies on increasingly constrained regional and local funds, differently from Member States that have privatised their motorways ([79]). Finally, the share of running costs (including staff wages) represents in Belgium a larger share than in the neighbouring countries.

Distortive incentives contribute to road congestion. The increasing congestion is partly explained by the continuous increase of passenger cars since 2007, incentivised by toll-free roads, the company car tax deduction (see Section 3.1.6) and low environmental taxation. In 2018, Belgium had approximately 5.85 million passenger cars in use,

([76]) European Commission, Hours spent in road congestion annually.

([77]) European Commission, JRC, based on TomTom data, 2018.

([78]) Het stabiliteitsprogramma van België — Le Programme de Stabilité de la Belgique, 2017-2020, p. 48.

([79]) Kilometre charge tolls exist in some primary roads for heavy-duty vehicles.

out of which 8 % were company cars, representing 16 % of all passenger-km. Of key importance will be the follow-up given to the road pricing study commissioned by the Flemish government covering, inter alia, a passenger km charge, due to be completed in May 2019.

Belgium has invested and is planning to invest in additional infrastructure. Important projects are on-going such as the completion of the Oosterweel road connection in Antwerp, the Brussels Regional ExpressNet and the Seine-Scheldt canal (cf. infra). The National Pact for Strategic Investments identified a need for an estimated EUR 22-27bn of additional transport related investments by 2030. Wallonia has foreseen EUR 640 million over the period 2016-2019 for the modernisation of its roads and waterways, half of which is financed by the revenues from the heavy-duty vehicle road charge in place nationally since April 2016.

Important investments are ongoing in waterways in Antwerp Port hinterland. Work on the Seine-Scheldt link in both Flanders and Wallonia is progressing and should be completed in 2025. Other projects are ongoing on the country's inland waterway network and on several sea and inland locks, supported by the Connecting Europe Facility (Albert Canal and Terneuzen). The Price Observatory has however noted the lack of competition in area of dredging (see Section 3.4.2). Investments are also ongoing to bundle smaller flows into larger one and collaboration with the Netherlands is taking place on freight timetabling for Antwerp-Rotterdam.

Railways have an important role to play to alleviate road congestion, but infrastructure is also congested around Brussels and the two major ports (Antwerp, Zeebrugge) The two major bottlenecks for rail are the Brussels North-South connection (through which a third of all trains run) and freight transport around the port of Antwerp (important for the petrochemical industry) and between Gent and Zeebrugge. The Belgian rail freight network suffers from lack of slots, as most capacity is devoted to passenger rail. A upgrade of the railway connection Rhine-Ruhr (3RX) is planned, notably to improve connections for the chemical industry between Antwerp, the Netherlands and Germany. To cope with congestion and increase capacity on existing rail infrastructure, important investments are taking place in signalling with the deployment of European Rail Traffic Management System ('ERTMS') with a target to finish by 2022, and improving accessibility to Antwerp and Zeebrugge ports.

The completion of the Regional ExpressNet around Brussels suffers from delays, some which can be attributed to the 60/40 allocation rule. ([80]) The completion of the Regional ExpressNet has been severely delayed through lack of finance, an adequate needs assessment (60/40 allocation key between Flanders and Wallonia that does not match the real investment needs) and a lack of global mobility vision at the time when it was first conceived, delays with building permits and their appeals (see Section 3.4.4). Initially, expected to be finished in 2012, full completion of the network is now expected only by 2030. In January 2019, Regions have agreed to a multi-annual 60/40 allocation key for the Regional ExpressNet.

The quality of rail services is low and the supply of urban and urban-rural public transport has room for improvement in particular in Wallonia. The efficiency of railways (frequency, punctuality, speed and price) in Belgium is ranked 41st by the World Economic Forum. Eurobarometer surveys confirm that the satisfaction of passengers with punctuality and reliability of rail services in Belgium is below average. Costs of public transport in Wallonia are structurally important because of a lower-density of population. Lack of multi-annual expenditure planning and transport disruptions complicate the tasks of TEC, the main regional and urban transport provider. Access to employment areas is a major difficulty for job seekers (according to a survey of the employers' organisation Union des Classes Moyennes, only 68 % of businesses parks in Wallonia are reachable by public transport). ([81]) In Brussels, the Regional Government has approved a multi-annual investment programme for public transport till 2025 of EUR 5.2 billion.

([80]) The unwritten 60-40 budgetary rule on splitting every year rail investments between Wallonia and Flanders has contributed to further delays of the RER project (Court of Auditors, 2017).

([81]) Annual report of TEC, available at: https://rapportannuel.groupetec.be/srwt/#mot-de-la-direction

Regulatory barriers to competition and investment in domestic passenger railway services and intercity coach services constrain the supply of alternative collective and low-carbon transport services. The share of the passenger transport which is provided under public service obligations (PSO) remains very high in Belgium; 98.2 % in 2016 was provided by the State-owned incumbent railway undertaking NMBS-SNCB under a directly awarded contract. Private bus operators are not allowed to operate intercity coach services, although Flanders has expressed the intention to prepare a decree to open intercity coach services by April 2019. Taxi regulations vary among local authorities, restricting notably the access to Brussels airport. On the other hand, competition in the rail freight sector in Belgium has significant increased in recent years. This has resulted in Belgium ranking among the top five Member States in terms of the market share of non-incumbent freight operators in 2016 (almost 50 %).([82])

Although Regions have developed their own mobility plans, complex coordination still lies ahead to develop a consistent mobility vision within Belgium, and possibly with border cities and regions. Coordination is complex, as it requires coordination between the federal level, responsible for rail, and the Regions, responsible for other means of transport**.** The Executive Committee of Ministers for Mobility has been criticised of its handling of the Regional ExpressNet project (Court of Auditors, 2017), which lacked an assessment of needs within a broader inter-regional mobility strategy. Additionally, lack of agreement on the type of passenger car road charging to be implemented could further complicate reaching a shared vision on mobility within Belgium. Furthermore, because of the split of competences between the federal and regional level, revenues from the kilometre charging of heavy-duty vehicles cannot contribute to financing railways. Finally, there are important cross-border exchanges on borders (OstBelgien-Aachen, Lille-Tournai-Mouscron, Antwerp-Zuid Nederland, Luxembourg-Arlon).

([82]) European Commission, Rail Market Monitoring System, available at: https://ec.europa.eu/transport/modes/rail/market/market_monitoring_en.

Energy infrastructure and services

The recent unavailability of several nuclear power stations emphasises the importance of regional cross-border cooperation and of a well-functioning European interconnected electricity market. The situation has led to an increased dependence of Belgium on electricity imports from neighbouring countries (especially during winter when weather conditions can lead to increased peak load combined with reduced availability of interconnection capacity and limited production from domestic solar power generation facilities). In response, Belgian authorities have taken a number of safeguards measures to preserve security of power supply in November and in the winter, bringing additional capacity back to the market. At the same time, Belgium has called upon its neighbouring countries to provide assistance to ensure the availability of import capacity and help reduce the risk of load shedding, in close cooperation with the European Commission.

Belgium is committed to fully phase out nuclear energy by 2025, a move that requires important investments in new capacity. The interconnection level of Belgium as regards electricity was 19 % of installed generation capacity in 2017 and it is expected to increase to around 30 % in 2020 through the completion of the Nemo Link and Alegro projects, which are both under construction currently. In addition, the removal of internal bottlenecks and construction of new internal grids are also in the pipeline, strengthening the European transmission grids and electricity flows in the region. Along investment in interconnection, there is a need for important investments in power generation capacity. Belgium is currently working on a capacity remuneration mechanism to ensure that the necessary investments in power generation capacity will be made operational by 2025, in view of the country's nuclear exit. Transmission system operator Elia has indicated that Belgium would need 3.6 Gigawatts (GW) of new capacity by 2025.

Measures to support energy transition will require the mobilisation of significant investments, mainly from the private sector. ([83])

([83]) The National Pact for Strategic Investment estimates a total investment need of € 60 Billion between 2019 and 2030, mainly on retrofitting public buildings, making a transition

In March 2018, the federal government and the three regional governments agreed on the Inter-federal Energy Pact, which provides a longer-term vision on how Belgium will handle the energy transition. However, certain core elements of the pact (such as the nuclear phase-out) are open to change if analysis by the newly established federal Energy Committee (consisting of representatives of the federal government, the regions, employers and industry) judges too large impacts on the evolution of energy prices and tariffs (affordability), security of supply, sustainability and safety. Other elements of the pact include improved energy efficiency of buildings and of industrial processes, significant penetration of renewable energy (reaching 8 GW of photo voltaic, 4.2 GW of on-shore and 4 GW of off-shore wind by 2030), development and deployment of storage solutions (1.5 GW by 2030) and adjustment of the networks, including smart grids.

The integrated National Energy and Climate Plan (NECP) will be another key guidance to establish investment needs in the area of decarbonisation and energy. In its final Plan to be adopted by 31 December 2019, in line with the Regulation on the Governance of the Energy Union and Climate Action ([84]), Belgium 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 31 December 2018, will further contribute to the identification and assessment of energy and climate-related investment needs for Belgium.

The level of market concentration for power generation is decreasing but remains high in Belgium. Both the retail markets for electricity and gas have become significantly more dynamic in recent years, as reflected in lower market shares of incumbents, higher entry rates for producers and higher switching rates for consumers. This was triggered by several government measures including legislative modifications and public campaigns promoting switching of providers.

Retail prices for electricity are above the EU-average. The non-energy component of electricity bills are on average making up 75 % of the electricity price in the retail market in Belgium. In particular, distribution costs are above EU average. Distribution costs include revenues for measures to support the energy transition. While this acts as an incentive to take measures in favour of higher energy efficiency, it can also form a barrier to decarbonisation, especially if Belgium would aim to achieve this through increased electrification as part of their long term strategy.

3.4.3. THE REGIONAL DIMENSION AND THE INFRASTRUCTURE INVESTMENT

Disparities across Regions and provinces in Belgium are large. While GDP per capita is on average higher in Belgium than in the EU, the northern part of Belgium outperforms the southern provinces. The provinces of Belgium, which had GDP per head above the EU average before the crisis not only recovered, but also outperform the EU average growth, except Brussels and Antwerp. In contrast, provinces with GDP per head below the EU average prior to the crisis tend to stagnate or recess (see Graph 3.4.2) The Brussels capital regional GDP, which accounted for 18 % of Belgium's GDP in 2016, grew by 0.2 % annually in 2009-2016, well below the national average of 0.8 %. Labour productivity increased by 2.6 % overall in Belgium between 2010 and 2016, however over the same period it decreased by 0.5 % in the Brussels region and rose by only 0.7 4 % in Wallonia.

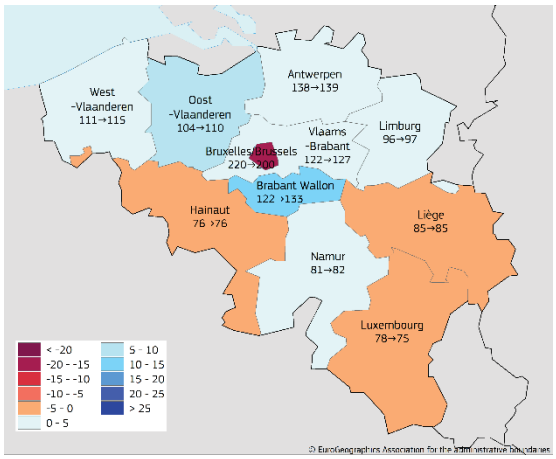
Regional competitiveness, employment, and potential growth are important challenges for Wallonia Wallonia's has revealed to be less reseilient than the rest of the country in the aftermathof the crisis, which highlighted the importance of adapting the industrial structure to the global challenges and of testing new

in the energy mix, investing in transmission and distribution networks and smart grids, and storage capacity.

([84]) 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, amending Regulations (EC) No 663/2009 and (EC) No 715/2009 of the European Parliament and of the Council, Directives 94/22/EC, 98/70/EC, 2009/31/EC, 2009/73/EC, 2010/31/EU, 2012/27/EU and 2013/30/EU of the European Parliament and of the Council, Council Directives 2009/119/EC and (EU) 2015/652 and repealing Regulation (EU) No 525/2013 of the European Parliament and of the Council (Text with EEA relevance.)

approaches to industrial transition. In that context, Wallonia is part of the Regions in Industrial Transition pilot action.

Graph 3.4.3: **Change in GDP per head (PPS), index point difference, 2007-2016**

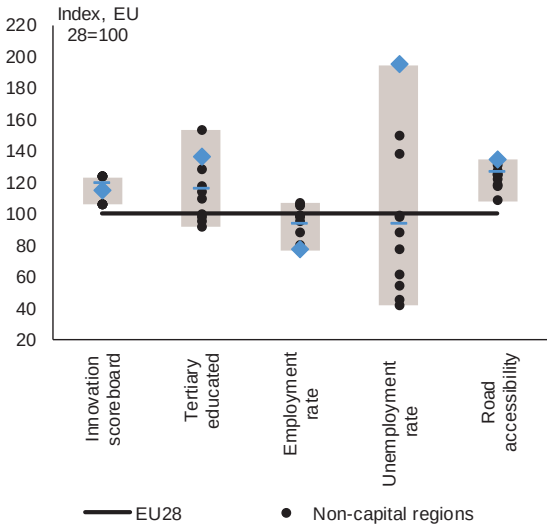


Note: The values correspond to the GDP per head relatively to the EU in 2007 and 2016, respectively (EU=100). The colours correspond to the change in the index from 2007 to 2016, with blue ones indicating an increase in the ratio. EU real GDP per head grew by 3.4 % over the period.
Source: Eurostat

Intra-regional disparities in Belgium are also very important. In Flanders, the Antwerp province GDP per inhabitant is at 139 % of the EU average, while Limburg is at 97 % of the EU average. In Wallonia, differences are even more extreme with Brabant Walloon topping at 133 % of the EU average and Hainaut and Luxembourg at 76 % and 75 % of the EU average. There are also important differences within regions in terms of unemployment (see Section 3.3.2). The Brussels-Capital Region, one of the wealthiest in the EU (200 % of EU average), hosts the seven of the poorest communes in terms of annual income, notably St-Josse/St-Joost and Molenbeek, which are respectively 50 % and 44 % below the national average (Federal Public Service Economy).

There are significant regional and sub-regional differences with respect to factor endowments (see Graph 3.4.4)**.** Differences between regions and provinces persist, in terms of innovation, labour market, level of education, health and mobility (see relevant sections in the report). The support offered by Cohesion Policy in Belgium could be, as much as possible, tailor-made to pre-identified territorial needs – in direct support to the priorities and strategies (including smart specialisation strategies) of the regions and of their provinces. The existence of inequalities at sub-regional level and the specificities of each province make the use of integrated territorial development strategies particularly relevant.

Graph 3.4.4: **Regions in Belgium and factors endowment**



Source: Eurostat, European Commission own calculations

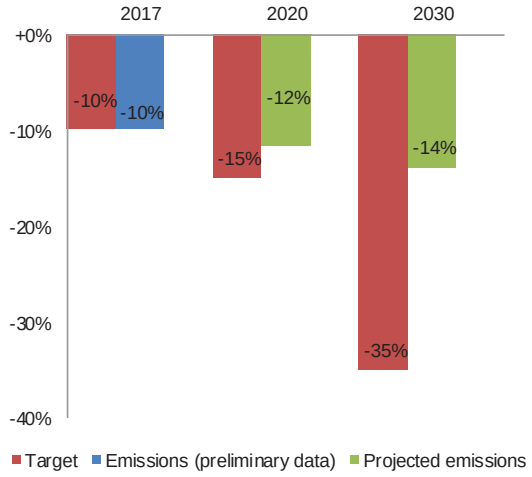
Regional differences underline distinct investment needs. Flanders plans to prioritise investment in infrastructures, in particular on mobility, school buildings, welfare and research and development. At beginning of 2018, the Walloon region has adopted a new multi-sector investment plan. The National Plan for Strategic Investment is strictly interwoven with the regional strategies calling for a strong coordination between all levels of government in order to ensure an efficient delivery of the different policies (see Section 3.4.4).

Sustainable growth and climate change

Without additional measures, Belgium is expected to miss both its 2020 and 2030 greenhouse gas emission reduction targets. Emissions in the sectors not covered by the emissions trading system in 2020 are expected to be only 12 % below 2005 levels compared to a reduction target of 15 %. The gap is expected to widen further by 2030, with emissions expected to be reduced only by 14 % below 2005 levels compared to a reduction target of 35 %.

The achievement of the 2030 energy and climate targets calls for sustained green investments. Additional measures are particularly needed in the transport sector facilitating smart mobility solutions (EUR 1.5-2 billion) through modal shift away from road towards rail and cycling; role-out of alternative fuels (EUR 0.3 billion); development of smart cities, etc.). Similar efforts are needed in the built environment (energy efficiency and fuel switching), which together represent two-third of greenhouse gas emissions in the sectors not included in the EU Emission Trading System (ETS). Energy audits is a key tool in helping firms to overcome the information barriers to energy-efficiency investments. The share of energy audits of the small and medium-sized enterprises is in line with the EU average (25 %). By contrast, considerably lower is the share of large firms with an energy audit (58 % compared to 67 % of the EU average) (2018 European Investment Bank investment survey). Investment needs will also be particularly large in the power sector (generation and grid, including smart power and data grids) and industry (resource-efficiency and circular economy). Enabling measures, such as improving environmental taxation (see Section 3.1.6), in particular by reforming the company car tax deduction, and strengthening transport regulation (see Section 3.4.2) as well as significant investments in energy, building and transport infrastructure (see infra) are also called for. These green investments could benefit from the green linear bond (Obligation Linéaire/Lineair Obligatie) that was issued by the Belgian government for EUR 4.5 billion with EUR 2.7 billion foreseen in the coming years, and the labelling for sustainable financial products by Febelfin and Beama.

Graph 3.4.5: **Target and emission under the effort-sharing legislation - Belgium (percentage change from 2005)**



Source: European Commission

The building stock in Belgium is old and a large part has been built before the implementation of energy norms. In a recent study the Federal Planning Bureau estimated that the annual renovation rate in the residential sector to ensure the energy transition in Belgium according to both the 2030 Climate and Energy framework and a low-carbon economy in 2050 would have to increase from 0.7 % to 1.3 %, which would represent roughly 800.000 housing units over the period 2019-2030. On average, 30 % of firms' building stock satisfies high energy efficiency standards, which is notably less than the EU average (37 %). The difference from the EU average is higher for the large Belgian firms. The final report on carbon pricing puts forward even more ambitious annual renovation rates of 2.6 % of the residential building stock (~120.000 buildings per year).

Some progress has been made in the development and implementation of climate and energy policies across the different levels of Government, but the overall effectiveness is undermined by the complex and evolving division of competences. This has led in the past to important delays in agreeing coordinated action, such as an internal effort sharing for the 2020 energy and climate targets, a common long-term vision for the energy transition and the completion of important infrastructure projects, such as the

Regional express Network around Brussels. Differences in opinion on the introduction of a kilometre charge for passenger cars have also delayed progress in tackling growing congestion and transport emissions. Several institutions have recently made proposals to improve climate governance in Belgium. Thus, in a report published in January 2017, the Belgian Senate made recommendations to strengthen the intra-Belgian governance with respect to the internal effort sharing. An inter-parliamentary climate consultation adopted unanimously a resolution that should lead to the adoption of an integrated climate and energy plan.

Belgium performs well in the circular economy but lack of specific skills is an obstacle to innovation and entrepreneurship in this area. At 53.5 % in 2016, Belgium's municipal waste recycling rate is among the highest in the EU. Based on the 10 indicators in the EU circular economy monitoring framework, Belgium is significantly above the EU average in circular (secondary) use of material (16.9 % in 2014 vs**.** a EU average of 11.4 %). Belgium also performs slightly above the EU average for people employed in the circular economy (1.16 % of total employment in 2015 versus an EU average of 1.71 %([85]). All regions are developing initiatives in the circular economy and important investment initiatives are ongoing or are planned in the National Pact for Strategic Investments. The Smart cities partnership between the EIB and Belfius is supported with EUR 600 million and has the potential to reach 2 million people in Belgium. Nevertheless, the incineration rate has slowly increased reaching 44.3 % in 2016 — a 0.6 % increase from 2014 and there is a lack of eco-innovation and circular economy related skills in small and medium-sized enterprises ([86]).

3.4.4. GOVERNANCE AND INSTITUTIONAL QUALITY

Policy coordination between the different government levels is complex and not always effective, complicating the delivery of certain policies. A recent report (European Public Administration Country Knowledge, 2018) shows that Belgium is one of the Member States that combines a high degree of fragmentation and a low level of coordination. There is still no formal agreement on annual targets at all levels of government, in spite of the cooperation agreement signed in 2013 in the context of the transposition of the Fiscal Compact, complicating budget coordination (see Section 3.1). Flanders and Wallonia have started an action plan to improve the labour intra-regional mobility. Imperfect activation at regional level could have an impact on federal and local public finances (see Section 3.3.1). In the area of migration policy, there have been no new initiatives to increase coordination between various policy domains (i.e. social, employment, educational) and levels of power (see Section 3.3.1). In health, greater prevention requires strong primary care, but the necessary inter-governmental collaboration is challenged by the sharing of health responsibilities between the federal level and federated entities (see Section 3.3.3). The federal level, the communities and the regions still have to agree on the framework for the introduction of 5G, which is essential for a timely development of this key technology in Belgium (see section 3.4.2). Developing a consistent mobility vision within Belgium is complex as it requires coordination between the federal level, responsible for rail, and the Regions, responsible for other means of transport (see Section 3.4.2), although in January 2019, Regions have agreed to a multi-annual 60/40 allocation key for the Regional ExpressNet.. Lack of coordination in road charging could further complicate mobility within Belgium. Finally, in spite of some progress with the implementation of climate and energy policies across all levels of government, the complex and evolving division of competences undermines their effectiveness (see Section 3.4.2).

Policy-making could benefit from improved analytical support and the reinforcement of specific regulatory or judiciary institutions. The federal regulatory Impact assessment are still of low quality according to the Agency for Administrative Simplification report (to be checked), and these are judged to not fully incorporating the principles of a better regulation agenda (Poel et al, 2016). Impact assessments are not effectively integrated in the policy-making process, and cooperation with the regional level

([85]) Eurostat, Circular Economy Indicators.
([86]) European Commission, Eco-Innovation Observatory, https://ec.europa.eu/environment/ecoap/country_profiles_en.

has still room for improvement. (Poel et al, 2016). Additionally, investments to address bottlenecks would benefit from more systematic cost-benefit analysis, which is currently under-used. The Rail Regulator still has room to broaden the scope of its regulating activities (Section 3.4.3) and the Belgian Competition Authority has limited resources compared to the resources of other Member States' Competition Authorities. Administrative justice is experiencing challenges due to lacking resources and lengthy proceedings, causing important delays, in particular for building permits (cf. infra), but also for procurement procedures ([87]). Cooperation between customs authorities and market surveillance authorities is sub-optimal increasing risks that non-compliant products enter the EU through the Belgian borders.([88])

Business environment

In spite of efforts to ease the red tape, the complexity of administrative procedures is perceived as a problem for doing business (see supra). This is the perception of 75 % of Belgian companies against an EU average of 60 %. Both federal and regional governments have introduced measures to simplify administrative procedures, reduce the reporting burden for small and medium-sized enterprises and setting up genuine one-stop-shops for enterprises.

In spite of recent progress to streamline procedures in Flanders, time for granting building permits in Belgium is long, also due to lengthy judicial review. Although Belgium ranks 38th in the 2019 World Bank Ease of Doing Business for building permits, it ranks 168th for the time needed to obtain a building permit (212 days). ([89]) For instance, for mobile radio masts, delays range from 120 days in Wallonia to 600 days in Brussels. In the context of the Regional ExpressNet, some building permits have been delayed by up to 5 years. An online platform was set up recently in Flanders to facilitate building permit procedures, which are also harmonised for public and private projects. This reduces administrative burden, despite still relatively long decision period to obtain the permit. Judicial review in case involving building permits lasts about two years at first instance and above 9 months at second instance. There is room for improvement regarding the standards on informing parties about the progress of their court case (2019 EU Justice Scoreboard (forthcoming)), which could provide more transparency and predictability, including in judicial review of building permits before administrative courts.

Digitalisation of public services

Weak and fragmented digitalisation of certain public services weights on administrative burden for businesses. Although Belgium ranks 15th for digital public services and scores well on eHealth and pre-filled forms, it ranks 20th in digital public services for business and 19th on open data. Belgium has a poor performance in registering property (ranking 143th) according to the World Bank notably because databases are missing (e.g. checking encumbrances) or are fragmented (mapping and cadastral information). In this context, information required from applicants is not always known and statistics on transactions are not available. Belgium also lags behind in the depth of credit information publicly available (World Bank Doing Business Report 2019). Building permits procedures are largely offline in Brussels and Wallonia.

Despite efforts to improve the quality of the justice system and to push forward the digitalisation, further efforts are needed to address these serious challenges. By end 2018, most courts were equipped with proper hardware, but only about half migrated to the new case-management system (MACH), and adoption (by the College of Courts and Tribunals) of court-specific procedures and unified coding system will remain outstanding at least until the end of 2019. Implementation of all these steps is a precondition for collecting reliable court data, introducing a data-led management of human and financial resources in courts, publishing judgments

([87]) Evaluation of the Remedies Directive: SWD/2017/013 final.

([88]) Belgium carries an important responsibility for the single market for goods with Antwerp being the second-largest port in the EU. Belgium is amongst the main importers of goods in the European Union, representing about 7 % of all EU product imports. The risk that non-compliant products enter the EU through the Belgian borders is correlated to the high volume of imports and a significant amount of non-compliant products could be entering through Antwerp given that cooperation between customs authorities and market surveillance authorities is sporadic.

([89]) Out of which 110 days concern the local authorities and 75 days to obtain the water and sewage connection.

online and allowing for a cost-saving electronic communication with court users (2019 EU Justice Scoreboard, forthcoming). The High Council of Justice aims to enhance the quality of the justice system through re-enforcing its external auditing of the courts, introducing a new electronic complaints system, and encouraging improvements to business processes by making this a criterion in the selection of court presidents. Lacking resources in the prosecution service are hindering the effective prosecution of certain criminal cases.

ANNEX A: OVERVIEW TABLE

Commitments	Summary assessment ([90])
2018 Country-Specific recommendations (CSRs)	
CSR 1: Ensure that the nominal growth rate of net primary government expenditure does not exceed 1.8 % in 2019, corresponding to an annual structural adjustment of 0.6 % of GDP. Use windfall gains to accelerate the reduction of the general government debt ratio. Pursue the envisaged pension reforms and contain the projected increase in long-term care expenditure. Pursue the full implementation of the 2013 Cooperation Agreement to coordinate fiscal policies of all government levels. Improve the efficiency and composition of public spending at all levels of government to create room for public investment, notably by carrying out spending reviews.	Belgium has made **limited** progress in addressing country-specific recommendation 1 (this overall assessment of country-specific recommendation 1 does not include an assessment of compliance with the Stability and Growth Pact):
• Ensure that the nominal growth rate of net primary government expenditure does not exceed 1.8 % in 2019, corresponding to an annual structural adjustment of 0.6 % of GDP. Use windfall gains to accelerate the reduction of the general government debt ratio.	The compliance assessment with the Stability and Growth Pact will be included in Spring when final data for 2018 will be available.
• Pursue the envisaged pension reforms	**Limited Progress.** A number of measures have been adopted since 2015 in order to control the costs of ageing and guaranteeing the fiscal sustainability of the first pension pillar. The measures mostly consist in: gradually raising the

([90]) The following categories are used to assess progress in implementing the 2015 country-specific recommendations:
No progress: The Member State has not credibly announced nor adopted any measures to address the country-specific recommendation. Below a number of non-exhaustive typical situations that could be covered under this, to be interpreted on a case by case basis taking into account country-specific conditions:
• no legal, administrative, or budgetary measures have been announced in the National Reform Programme or in other official communication to the national Parliament / relevant parliamentary committees, the European Commission, or announced in public (e.g. in a press statement, information on government's website);
• no non-legislative acts have been presented by the governing or legislator body;
• the Member State has taken initial steps in addressing the country-specific recommendation, such as commissioning a study or setting up a study group to analyse possible measures that would need to be taken (unless the country-specific recommendation explicitly asks for orientations or exploratory actions), while clearly-specified measure(s) to address the country-specific recommendation has not been proposed.
Limited progress: The Member State has:
• announced certain measures but these only address the country-specific recommendation to a limited extent; and/or
• presented legislative acts in the governing or legislator body but these have not been adopted yet and substantial non-legislative further work is needed before the country-specific recommendation will be implemented;
• presented non-legislative acts, yet with no further follow-up in terms of implementation which is needed to address the country-specific recommendation.
Some progress: The Member State has adopted measures that partly address the country-specific recommendation and/or the Member State has adopted measures that address the country-specific recommendation, but a fair amount of work is still needed to fully address the country-specific recommendation as only a few of the adopted measures have been implemented. For instance: adopted by national parliament; by ministerial decision; but no implementing decisions are in place.
Substantial progress: The Member State has adopted measures that go a long way in addressing the country-specific recommendation and most of which have been implemented.
Full implementation: The Member State has implemented all measures needed to address the country-specific recommendation appropriately.

	legal age; tightening the conditions of access to the early pension; gradually eliminating the consideration of years of study in careers for the public sector; introduction of the mixed pension system. However, even when taking into account those measures, the projected increase in pension expenditure is significant and put the long-term sustainability at risk. The planned measures about the definition of 'ardous jobs' and the introduction of 'credit-based public pension system' have been postponed.
• and contain the projected increase in long-term care expenditure.	**Limited Progress.** The devolution to the regions of the responsibilities for the long-term care system does not appear to have a clear impact the long-term sustainability of the system. In absence of measures, according to the Ageing Working Group reference scenario public expenditure on long-term care is projected to steadily increase from 2.3 % of GDP in 2016 to 4.0 % of GDP in 2070.
• Pursue the full implementation of the 2013 Cooperation Agreement to coordinate fiscal policies of all government levels	**Limited Progress**. According to the 2013 Cooperation Agreement, the Consultation Committee must discuss the global budgetary objective and take a decision on individual objectives for the Stability Programme based on an opinion of the High Council of Finance. In contrast with the practice of previous Stability Programmes, in which the Consultation Committee "took note" of the trajectory, all levels of government approved the overall fiscal trajectory presented in 2018 Stability Programme and supported the achievement of the fiscal targets by 2020 for all government levels. Although this approval added credibility to the overall trajectory, there was no formal agreement on the annual fiscal targets at each level of government. In addition, the lack of annual targets for individual entities undermines the possibility for the High Council of Finance to monitor the compliance with an agreed budgetary trajectory.
• Improve the efficiency and composition of public spending at all levels of government to create room for public investment,	**Limited Progress**. In March 2017, the Prime Minister announced the elaboration of a National Pact for Strategic Investments. Within the framework of the National Pact for Strategic

notably by carrying out spending reviews.	Investments, eight working groups were set up to support the Strategic Committee. Six of these working groups have made a thorough analysis of the potential investments concerning the six thematic pillars of the Pact (digital, cyber security and trust in digital, education, health, energy and mobility) and two working groups have discussed the transversal issues of the regulation and the mobilisation of capital for investment. In Mach 2017, a Strategic Committee was also established to outline the main points of the Pact and make recommendations to the government. Since October 2017, the Strategic Committee has been in the operational phase of the Pact, which is aimed at formulating concrete recommendations on investment projects and measures to promote their implementation and increase their impact on growth. In the context of the preparation of the initial budget 2019, the federal government intends to finance 447 million on strategic investment projects. The Government of Flanders is preparing the structural incorporation of a spending review approach in its budgetary process. As a first step, the Flemish Government is carrying out a pilot project with a focus on a specific topic, as recommended by the European Council. The pilot project will be completed in spring 2019. Further preparatory measures towards the structural incorporation of spending reviews in the budgetary process are planned for 2019.
CSR 2: Remove disincentives to work and strengthen the effectiveness of active labour market policies, notably for the low-skilled, people with a migrant background and older workers. Pursue the education and training reforms, including by fostering equity and increasing the proportion of graduates in science, technology, engineering and mathematics. • Remove disincentives to work and strengthen the effectiveness of active labour market policies, notably for the low-skilled, people with a migrant background and older workers.	Belgium has made **limited progress** in addressing country-specific recommendation 2. **Limited Progress**. As of 1st January 2019, the new programme for employment support - AktiF and AktiF Plus - enters into force in the German-speaking Community. It consists of financial support to employers who hire people from groups far-away from the labour market (in particular

	below 26 and 50+). In July 2018 Flanders has reinforced the existing target group policies. A higher reduction of social security contribution is introduced for employers willing to hire people over 60 years old. Employers will also be exempted from employer contributions if they hire people over 55 years old and low skilled youngsters. Support to people with a disability will be increased. The income threshold of the disability premium (VOP) will be lowered to make it more attractive to independent workers and the procedure will be simplified. The reinforced target group policy will enter into force in January 2019. At the same time existing measures will be continued: language training through 'integration through work' (PES), temporary work experience trajectories, activation long term unemployed job seekers (>2years) and trying to reach more NEET youngsters. As of Jan 1st 2019, new rules have entered into force Flanders, regarding, a.o the recruitment and hiring (and financial support) of medium and highly qualified workers from abroad. The main goal is to attract talent from outside the EU in order to fill in recurrent bottleneck professions. At the same time existing procedures have been simplified. Today employers can start a procedure to obtain a work- and residence permit at the same time for a non-Eu national who wants to work in Flanders. In 2019 an electronic platform will be developed to further simplify the existing procedures. In July 2018 the Walloon Government decided on attributing new financial means to the so-called Brasero mechanism, which aims at supporting the creation of cooperatives and social entrepreneurship. In November 2018 the Walloon government has approved the revamping/streamlining of the so-called Airbag mechanism, which aims at supporting the transition towards self-employment as main occupation. The newly adopted measures aim at reducing the delay for assessment/examinations of the dossiers and at simplifying the mechanism both for the workers and for the FOREM (in charge of its implementation). As of Jan 1st 2019, the Tax Shift enters in its last phase, with notably, among others, the reduction of

	personal social security contributions for the low-wage workers.
• Pursue the education and training reforms, including by fostering equity and	**Limited Progress.** Limited progress has been made in proposing and adoption of education and training reforms, including for fostering equity, but many important reforms still need implementation**.** The implementation of the 'Pact for Excellence', the French Community's flagship school reform to improve basic skills, efficiency, governance and tackle inequalities is progressing slowly. The French Community is gradually proposing or adopting decrees for the implementation of the Pact for Excellence, but only a few measures are being implemented so far. From 2019, there will be a gradual increase in the budget for individualised child support to reduce grade repetition and school failure. New quality assurance and school governance measures as well as the recently adopted reform of the initial teachers' education aim to improve educational performance and to reduce inequalities. Nevertheless, major reforms are still pending, such as the extension of the common multi-disciplinary curriculum to the 9th grade and the new working organisation of teachers. Some decrees improving educational outcomes and reducing inequalities have been adopted: - The decree on remediation and individualised support of pupils was adopted on 10 October 2018. - The decree on the separation of the organizing power from the regulatory power adopted on 6 February 2019 will allow the public schools' network to become autonomous and decentralised as well as the adoption and the implementation of further reforms foreseen in the Pact for Excellence in Education. - The decrees on the 6-year piloting plans of schools with improvement objectives are being gradually implemented over the next few years, as well as the macro governance measures. -Additional support staff (speech therapists) for pre-primary school have been available as of 1 January 2019 and pre-primary school will be free as of 1

	September 2019. -The decree on the implementation of certification by units in formal Initial Vocational Education and Training (IVET) programmes has been adopted on 13 June 2018 and a pilot is being implemented. The French Community has adopted on 6 February 2019 a reform of the Initial Teachers' Education for elementary and lower secondary education, which will enter into force in 2020. The main thrusts of the reform are: the extension of studies, the harmonization of teacher training at all levels of schooling, the reinforcement of training contents, in particular those giving teachers the means to manage their education. Heterogeneity of classes and to fight against school failure, the accentuation of the articulation theory and practice, the development of scientific research in teaching, and the revision of the training of trainers. Additional reforms are under preparation, but have not been adopted and implemented yet: The draft decrees on the work organisation and the workload of teachers, the status of school directors, the missions of the new school inspection and the support to low performing schools are relatively advanced in the legislative process. The government of the French Community has proposed on 19 December 2018 the legal framework for the extended Common curriculum (to be implemented as of school year 2020/2021). Parliament will need to adopt this draft decree. A follow-up draft decree on the educational attainment targets will need to be proposed and adopted before this new common curriculum can be implemented. There has been some progress in the Flemish Community to reduce inequalities, as adopted decrees targeted many education levels. Close monitoring will be needed to ensure that some of the measures mentioned below also have a positive impact on equity. The Flemish Community adopted on 28 March 2018 a decree on the modernisation of secondary school education. It will be implemented as of

	school year 2019/2020. The decree on the reform of the attainment goals for the first stage of secondary education is expected to be adopted by the Flemish Parliament before the end of the current legislature. The decree on the dual learning system in secondary education was adopted on 21 March 2018 and will be fully implemented as of 1 September 2019 onwards. The reform of the pupil guidance in secondary education was implemented as of 1 September 2018. The decree on Higher Vocational Education was adopted by the Flemish Parliament on 4 May 2018 and will be implemented as of academic year 2019/2020. The decree on the reform of Adult Education was adopted on 7 March 2018 and will be implemented as of school year 2019/2020. The adoption of the decree on the Right to enrolment in compulsory education is currently suspended. The decree on the reform of the existing system of training incentives was adopted in October 2018. The decree on the reform of the teaching career is currently being drafted. “Teacher platforms” have already been set up to provide more job security to young starting teachers. On 11 July 2017, the Government of Flanders and social partners reached an agreement on the reform of education and training incentives for adults which will start on 1/9/2019. The goal is to have an integrated training incentive policy with three instruments with a labour market-oriented and forward-looking training focus: Flemish educational leave, training vouchers and Flemish training credit.

• increasing the proportion of graduates in science, technology, engineering and mathematics	**Limited Progress.** Limited progress has been made in pursuing education and training reforms to increase the proportion of STEM graduates. The Flemish Community further pursued the implementation of the STEM action plan 2012-2020. Two of the five objectives have already been met in 2016. Specific measures advocated by the STEM platform include further development of STEM academies (driven by volunteers) to provide extracurricular initiatives to raise awareness among young people and better structural support and quality promotion through collaboration with other instances, training centres, art academies, and schools with a good STEM infrastructure. As from 2019 onwards, a broad range of initiatives will be taken in collaboration with the Regional Technological Centres of Flanders, CPD's and a broad range of VET schools. The Walloon Government decided on 13 December 2018 to grant a subsidy to the 5 Walloon universities to promote, disseminate and raise awareness of STEM studies and careers. The Digital Wallonia Plan includes measures to grant subsidies to digital projects for schools (Digital Schools) and an awareness campaign to promote STEM, and in particular digital studies for women (Wallonia Wonder Women). Brussels Capital Region has launched a call for proposals for the financing of coding projects targeting compulsory schools. The government of the French Community adopted a Digital Strategy for education (schools) on 10 October 2018 to be gradually implement in the next 5 years. The measure on digital governance will require legislative approval by the next government in 2019.
CSR 3: Reduce the regulatory and administrative burden to incentivise entrepreneurship and increase competition in services, particularly retail, construction and	Belgium has made **limited** progress in addressing country-specific recommendation 3.

professional services. Tackle the growing mobility challenges, in particular through investment in new or existing transport infrastructure and reinforcing incentives to use collective and low emission transport.	
• Reduce the regulatory and administrative burden to incentivise entrepreneurship and	**Limited progress** has been made on the reduction of administrative burden to incentivise entrepreneurhip. -The reform of the company law code will reduce the number of companies from 17 to 4, remove minimal company requirements for setting up a company, abolish the unlimited liability of administrators and allow e-mail to replace registered letters. - Flanders has adopted a decree on 18 May abolishing the legal provisions on basic knowledge of business management. - Flanders has integrated the retail license in the environmental permit. - The implementation of the 2017 reform to simplify the corporate tax system has continued. The statutory tax rate has been lowered from 33.99% to 29.58% in 2018. The reform also introduced amendments to ease taxation on start-ups and small companies. However, some inefficient tax expenditures remain in place such as the company car scheme (cf. infra). The regionalisation of some taxes may add complexity to the tax system. Digitisation of public services is still fragmented and progressing slowly in spite of a number of innovative initiatives at regional and local level. Digitalisation of the justice system is advancing slowly. The e-Deposit system allowing for a digital submission of court documents is still being implemented. The e-Box network is also still under implementation by courts. The establishment of a national register for interpreters, translators and court experts is still under implementation. The digital platform Regsol for the handling of insolvency proceedings is still under implementation. The migration of the civil register to a digital environment has been announced for March 2019. The establishment of a central platform for the extra-judicial collection of

	unchallenged monetary claims for the business-to-business environment is still being implemented.
• increase competition in services, particularly retail, construction and professional services.	**Limited** progress has been made to increase competition in services, particularly retail, construction and professional services: - Brussels has adopted a reform of the Code Bruxellois de l'Aménagement du Territoire (CoBAT) to facilitate retail establishment - Flanders has integrated the retail license in the environmental permit. - Flanders has adopted a decree to abolish the qualifications for eleven construction-related professions. - A Royal Decree has been adopted to adapt rules on activities that can be performed together with the profession of accountant has been adopted in August 2018. However, the modernisation of the legal professions announced for the summer 2018 has not been published yet. There has been no follow-up to the analysis of the need for and proportionality of specific restrictions imposed on legal persons providing professional services. Finally, no reforms have taken place to reduce the important restrictions to rail and road transport services.
• Tackle the growing mobility challenges, in particular through investment in new or existing transport infrastructure	**Some progress** was made to tackle investment in existing transport infrastructure.In January 2019, Regions have agreed to a multi-annual 60/40 allocation key for the Regional ExpressNet. The Brussels Regional Government has approved and is carrying out a multiannual investment programme for the renovation of its tunnels, bridges and viaducts worth over 1 billion euros for the coming 10 years. In addition, the Brussels Regional Government has approved a multiannual investment programme for public transport that is currently being carried out. The plan runs from 2015 until 2025 and foresees 5.2 billion euros of

	investments in new metro lines, tram lines and a greener bus fleet. An agreement for additional funding for the regional ExpressNet project was reached at the end of 2018. The agreement has been approved by the Federal Parliament and is waiting for approval by the Regional Parliaments.
• and reinforcing incentives to use collective and low emission transport.	**Limited Progress.** Belgium is still a country where the use of company cars for commuting is heavily incentivised, whereas the connectivity with collective public transport, in particular between the centre of Brussels and its outskirts is deficient. As to low-emission transport, the use of alternative fuels in new passenger cars sold in Belgium has been increasing very dynamically over the past four years. The different Belgian regions each apply their own set of support measures, potentially leading to market fragmentation, but all put emphasis on encouraging the uptake of electric vehicles. The Federal Government grants a tax credit of 30 % on the purchase of an electric vehicle.
Europe 2020 (national targets and progress)	
Employment rate (20-64): 73.2 %.	The employment rate for 20-64 years old workers increased to 68.5 % in 2017 (+0.8 pp compared to 2016), but remains below the EU average (72.2 %). At the current pace, the 2020 target of 73.2 % still seems out of reach.
R&D: 3 % of GDP.	R&D intensity has pursued its increase to reach 2.58 % in 2017. This is due to increasing private R&D (1.76 %) while public R&D remains relatively stable (0.76 %).
Greenhouse gas emissions: -15 % in 2020 compared to 2005 (in the sectors not covered by the EU Emissions Trading System (ETS)).	According to the latest national projections submitted to the Commission and taking into account existing measures, it is expected that the target will be missed: -12 % in 2020 compared with 2005 (i.e. projected shortfall of 3 percentage points).
Renewable energy: 13 %, with a share of renewable energy in all	Belgium is in line with its indicative trajectory for renewable energy (with a share of renewable energy of 8.65 % in 2016). However, additional

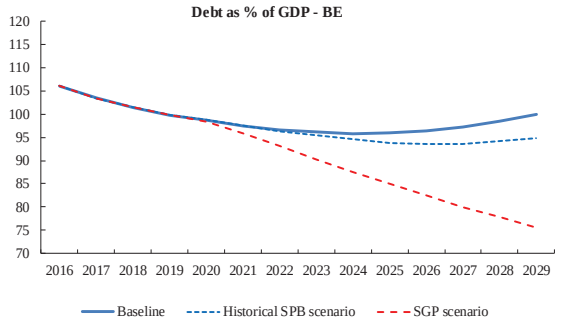
modes of transport equal to 10 %.	efforts will be needed to reach the 2020 target of 13 % of final energy consumption.
Energy efficiency: 43.7 Mtoe primary consumption and 32.5 Mtoe final energy consumption	Additional efforts will be required for Belgium to meet its ambitious indicative targets for 2020 in terms of energy efficiency: 43.7 Mtep primary energy (32.5 Mtep of final energy). In 2016, the final energy consumption reached 49 Mtep, putting at risk the achievement of the EU 2020 energy efficiency target.
Early school leaving: 9.5 %.	In 2016, Belgium reached its Europe 2020 national target of 9.5 % on early school leaving (ESL). With 8.9 % at national level in 2017, the rate is below the EU average but it remains high in the Brussels region (12.9 %). This compares to 7.2 % in Flanders and 10.5 % in Wallonia. The gender gap of 3.1 percentage points (with a higher rate of 10.4 % for men) is close to the EU average. The gap between foreign- (16.4 %) and native-born (7.9 %) population is high. The proportion of young people in 2017 not in employment, education or training (NEET, 15-24 years old) at 9.3 %, is below the EU average.
Tertiary education: 47 % of the population aged 30-34 years old.	In 2017, the proportion of 30- to 34-year-old tertiary graduates in Belgium increased to 45.9 %, on track to reach the Europe 2020 national target of 47 %. Belgian and regional rates (46.4 % in Flanders, 54.4 % in the Brussels region and 40.9 % in Wallonia) are above the EU average of 39.9 %. The tertiary attainment of women is 50.9 %, 10.1 percentage points higher than that of men (40.8 %). The gap between foreign- (37.6 %) and native-born (48.8 %) students is high
Target for reducing the number of people at risk of poverty or social exclusion: - 380 000 compared to 2008.	Though diminishing from one year to the other, the number of people at risk of poverty or social exclusion is still very high. The cumulative difference from 2008 stood at (in thousands): +146 in 2014; +143 in 2015; +141 in 2016; + 102 in 2017. Though on a downwards trend, the current pace of reduction makes it unlikely for Belgium to achieve

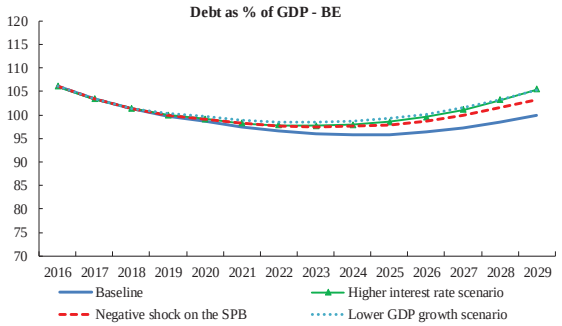
	its 2020 target.

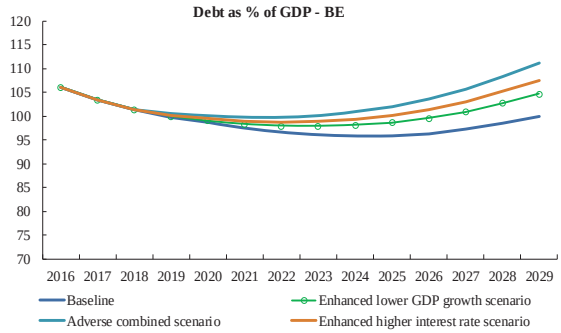
ANNEX B: COMMISSION DEBT SUSTAINABILITY ANALYSIS AND FISCAL RISKS

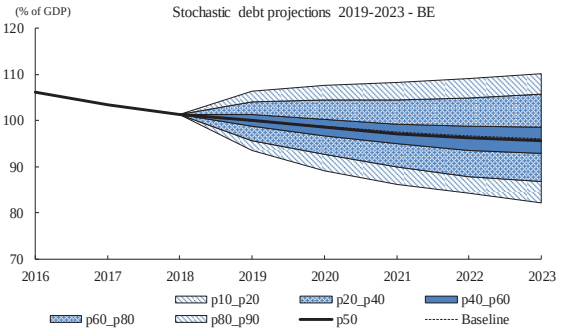
General Government debt projections under baseline, alternative scenarios and sensitivity tests

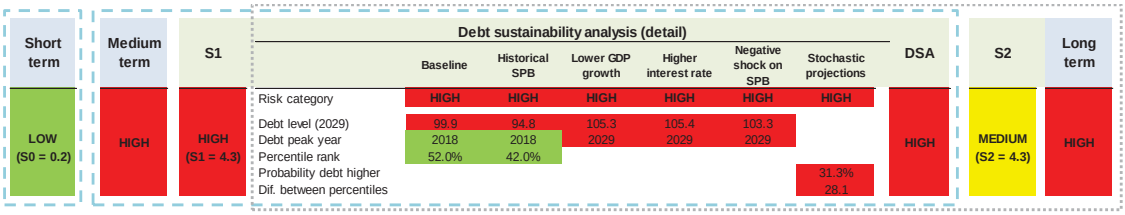
BE - Debt projections baseline scenario	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Gross debt ratio	**103.4**	**101.4**	**99.8**	**98.7**	**97.5**	**96.6**	**96.1**	**95.8**	**95.9**	**96.3**	**97.2**	**98.4**	**99.9**
Changes in the ratio (-1+2+3)	*-2.7*	*-2.0*	*-1.6*	*-1.1*	*-1.2*	*-0.9*	*-0.6*	*-0.2*	*0.0*	*0.5*	*0.8*	*1.3*	*1.4*
of which													
(1) Primary balance (1.1+1.2+1.3)	**1.6**	**1.4**	**1.2**	**0.8**	**0.4**	**0.1**	**-0.2**	**-0.4**	**-0.4**	**-0.7**	**-0.8**	**-0.8**	**-1.0**
(1.1) Structural primary balance *(1.1.1-1.1.2+1.1.3)*	***1.1***	***1.0***	***0.9***	***0.4***	***0.2***	***0.0***	***-0.2***	***-0.4***	***-0.4***	***-0.7***	***-0.8***	***-0.8***	***-1.0***
(1.1.1) Structural primary balance (bef. CoA)	*1.1*	*1.0*	*0.9*	*0.4*	*0.4*	*0.4*	*0.4*	*0.4*	*0.4*	*0.4*	*0.4*	*0.4*	*0.4*
(1.1.2) Cost of ageing					*0.2*	*0.4*	*0.7*	*1.0*	*1.0*	*1.3*	*1.4*	*1.5*	*1.6*
(1.1.3) Others (taxes and property incomes)					*0.0*	*0.1*	*0.1*	*0.2*	*0.2*	*0.2*	*0.3*	*0.3*	*0.3*
(1.2) Cyclical component	***0.0***	***0.1***	***0.2***	***0.2***	***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	***0.5***	***0.3***	***0.1***	***0.2***	***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)	**-1.0**	**-1.4**	**-1.1**	**-1.0**	**-0.8**	**-0.8**	**-0.7**	**-0.6**	**-0.4**	**-0.2**	**0.1**	**0.4**	**0.5**
(2.1) Interest expenditure	*2.5*	*2.4*	*2.2*	*2.1*	*2.1*	*2.1*	*2.2*	*2.3*	*2.5*	*2.7*	*2.9*	*3.2*	*3.4*
(2.2) Growth effect	*-1.7*	*-1.5*	*-1.5*	*-1.4*	*-1.2*	*-1.0*	*-1.0*	*-1.1*	*-1.0*	*-1.0*	*-0.9*	*-0.9*	*-1.0*
(2.3) Inflation effect	*-1.7*	*-2.2*	*-1.9*	*-1.7*	*-1.8*	*-1.8*	*-1.9*	*-1.9*	*-1.9*	*-1.9*	*-1.9*	*-1.9*	*-1.9*
(3) Stock-flow adjustments	**-0.1**	**0.7**	**0.7**	**0.7**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**











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)]	260,4	275,4	261,2	259,5	232,3	226,3
Share of assets of the five largest banks (% of total assets)	64,0	65,8	65,5	66,2	68,8	-
Foreign ownership of banking system (% of total assets)[2)]	51,1	50,3	49,2	49,5	49,1	50,1
Financial soundness indicators:[2)]						
- non-performing loans (% of total loans)	-	4,3	3,8	3,2	2,7	2,4
- capital adequacy ratio (%)	18,7	17,6	18,7	18,8	19,0	18,4
- return on equity (%)[3)]	6,2	7,8	10,3	8,9	8,8	8,3
Bank loans to the private sector (year-on-year % change)[1)]	6,2	9,9	7,0	6,8	5,5	9,5
Lending for house purchase (year-on-year % change)[1)]	10,1	19,5	12,1	9,2	5,8	9,5
Loan to deposit ratio[2)]	-	88,4	88,5	88,0	90,2	86,6
Central Bank liquidity as % of liabilities[1)]	-	1,6	1,0	1,9	2,9	2,7
Private debt (% of GDP)	169,2	166,8	180,9	198,9	187,0	-
Gross external debt (% of GDP)[2)] - public	56,6	67,8	65,4	66,3	61,6	62,3
- private	103,6	102,6	103,7	118,3	108,6	104,3
Long-term interest rate spread versus Bund (basis points)*	84,0	55,0	34,4	38,6	40,5	38,4
Credit default swap spreads for sovereign securities (5-year)*	36,3	31,0	30,0	28,8	14,6	10,7

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)	11,0	9,8	10,1	8,8	8,9	:
Gender employment gap (pps)	10,2	8,7	8,3	9,3	9,8	8,6
Income inequality, measured as quintile share ratio (S80/S20)	3,8	3,8	3,8	3,8	3,8	:
At-risk-of-poverty or social exclusion rate[1] (AROPE)	20,8	21,2	21,1	20,7	20,3	:
Young people neither in employment nor in education and training (% of population aged 15-24)	12,7	12,0	12,2	9,9	9,3	:
Dynamic labour markets and fair working conditions†						
Employment rate (20-64 years)	67,2	67,3	67,2	67,7	68,5	69,5
Unemployment rate[2] (15-74 years)	8,4	8,5	8,5	7,8	7,1	5,9
Long-term unemployment rate[3] (as % of active population)	3,9	4,3	4,4	4,0	3,5	3,0
Gross disposable income of households in real terms per capita[4] (Index 2008=100)	96,6	96,8	96,4	97,1	98,0	:
Annual net earnings of a full-time single worker without children earning an average wage (levels in PPS, three-year average)	23848	24355	24772	25082	:	:
Annual net earnings of a full-time single worker without children earning an average wage (percentage change, real terms, three-year average)	-0,1	0,2	0,1	0,1	:	:
Public support / Social protection and inclusion						
Impact of social transfers (excluding pensions) on poverty reduction[5]	42,6	43,6	44,2	41,1	39,5	:
Children aged less than 3 years in formal childcare	46,0	48,8	50,1	43,8	52,9	:
Self-reported unmet need for medical care	1,9	2,5	2,4	2,4	2,1	:
Individuals who have basic or above basic overall digital skills (% of population aged 16-74)	:	:	60,0	61,0	61,0	:

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, unemployment rate and gender employment gap. Data for unemployment rate is annual.

Source: Eurostat

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

Labour market indicators	**2013**	**2014**	**2015**	**2016**	**2017**	**2018** [4]
Activity rate (15-64)	67.5	67.7	67.6	67.6	68.0	68.4
Employment in current job by duration						
From 0 to 11 months	10.5	10.9	10.8	11.2	11.4	:
From 12 to 23 months	8.5	7.9	8.1	8.1	8.5	:
From 24 to 59 months	15.9	16.6	15.9	15.1	14.9	:
60 months or over	65.1	64.6	65.2	65.7	65.1	:
Employment growth* (% change from previous year)	-0.3	0.4	0.9	1.3	1.4	1.2
Employment rate of women (% of female population aged 20-64)	62.1	62.9	63.0	63.0	63.6	65.2
Employment rate of men (% of male population aged 20-64)	72.3	71.6	71.3	72.3	73.4	73.7
Employment rate of older workers* (% of population aged 55-64)	41.7	42.7	44.0	45.4	48.3	49.9
Part-time employment* (% of total employment, aged 15-64)	24.3	23.7	24.3	24.7	24.5	24.6
Fixed-term employment* (% of employees with a fixed term contract, aged 15-64)	8.1	8.6	9.0	9.1	10.4	10.5
Participation in activation labour market policies (per 100 persons wanting to work)	41.9	45.0	49.7	66.7	:	:
Transition rate from temporary to permanent employment (3-year average)	38.0	38.3	35.6	35.4	37.8	:
Youth unemployment rate (% active population aged 15-24)	23.7	23.2	22.1	20.1	19.3	16.6
Gender gap in part-time employment (aged 20-64)	33.8	32.8	32.3	32.6	31.1	31.7
Gender pay gap[1] (in undadjusted form)	7.5	6.6	6.5	6.1	6.0	:
Education and training indicators	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**
Adult participation in learning (% of people aged 25-64 participating in education and training)	6.9	7.4	6.9	7.0	8.5	:
Underachievement in education[2]	:	:	20.1	:	:	:
Tertiary educational attainment (% of population aged 30-34 having successfully completed tertiary education)	42.7	43.8	42.7	45.6	45.9	:
Variation in performance explained by students' socio-economic status[3]	:	:	19.3	:	:	:

* 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.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. Values for 2012 and 2015 refer respectively to mathematics and science.

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.

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	8,2	8,3	8,4	7,8	7,5	:
Disability	2,1	2,2	2,3	2,4	2,4	:
Old age and survivors	11,5	11,8	11,8	12,8	12,7	:
Family/children	2,1	2,2	2,2	2,1	2,1	:
Unemployment	3,4	3,4	3,4	3,1	2,6	:
Housing	0,2	0,2	0,3	0,2	0,2	:
Social exclusion n.e.c.	0,7	0,7	0,6	0,6	0,7	:
Total	28,3	28,8	29,0	29,0	28,2	:
of which: means-tested benefits	1,5	1,5	1,4	1,4	1,5	:
General government expenditure by function (% of GDP, COFOG)						
Social protection	19,5	20,1	19,8	20,0	20,0	:
Health	7,9	8,0	8,1	7,6	7,4	:
Education	6,2	6,4	6,3	6,4	6,4	:
Out-of-pocket expenditure on healthcare (% of total health expenditure)	17,3	17,5	17,2	16,5	15,9	:
Children at risk of poverty or social exclusion (% of people aged 0-17)*	22,8	21,9	23,2	23,3	21,6	22,0
At-risk-of-poverty rate[1] (% of total population)	15,3	15,1	15,5	14,9	15,5	15,9
In-work at-risk-of-poverty rate (% of persons employed)	4,5	4,4	4,8	4,6	4,7	5,0
Severe material deprivation rate[2] (% of total population)	6,3	5,1	5,9	5,8	5,5	5,1
Severe housing deprivation rate[3], by tenure status						
Owner, with mortgage or loan	0,1	0,2	0,4	0,1	0,8	1,2
Tenant, rent at market price	2,2	3,4	3,0	3,0	5,5	9,0
Proportion of people living in low work intensity households[4] (% of people aged 0-59)	13,9	14,0	14,6	14,9	14,6	13,5
Poverty thresholds, expressed in national currency at constant prices*	10815	11164	11140	11061	11317	11364
Healthy life years (at the age of 65)						
Females	11,0	10,9	11,0	11,0	11,4	:
Males	10,6	10,8	11,0	11,2	10,3	:
Aggregate replacement ratio for pensions[5] (at the age of 65)	0,5	0,5	0,5	0,5	0,5	0,5
Connectivity dimension of the Digital Economy and Society Inedex (DESI)[6]	:	:	69,3	74,6	75,8	77,9
GINI coefficient before taxes and transfers*	49,3	48,7	49,5	49,8	50,3	50,1
GINI coefficient after taxes and transfers*	26,5	25,9	25,9	26,2	26,3	26,0

Notes:
* 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	-0.30	2.85	6.19	5.08	0.52	0.00
Labour productivity growth in construction	0.25	-0.45	2.06	2.22	-0.85	-2.07
Labour productivity growth in market services	-0.45	0.31	-0.12	0.54	0.27	0.76
Unit Labour Cost (ULC) index[2] growth (t/t-1) in %						
ULC growth in industry	4.01	0.24	-3.49	-4.69	0.15	2.98
ULC growth in construction	1.50	0.93	0.46	-2.73	0.93	3.54
ULC growth in market services	3.24	1.42	0.61	0.02	-0.30	0.59
Business environment	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**
Time needed to enforce contracts[3] (days)	505	505	505	505	505	505
Time needed to start a business[3] (days)	4.0	4.0	4.0	4.0	4.0	4.0
Outcome of applications by SMEs for bank loans[4]	0.68	0.54	0.36	0.46	0.31	0.37
Research and innovation	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**
R&D intensity	2.27	2.33	2.39	2.46	2.55	2.58
General government expenditure on education as % of GDP	6.20	6.40	6.30	6.40	6.40	:
Employed people with tertiary education and/or people employed in science and technology as % of total employment	50	50	52	51	51	53
Population having completed tertiary education[5]	31	32	33	33	33	36
Young people with upper secondary education[6]	83	83	84	84	85	86
Trade balance of high technology products as % of GDP	0.14	0.33	0.47	0.57	0.53	0.41
Product and service markets and competition				**2003**	**2008**	**2013**
OECD product market regulation (PMR)[7], overall				1.64	1.52	1.39
OECD PMR[7], retail				4.68	4.56	4.06
OECD PMR[7], professional services				2.52	2.47	2.47
OECD PMR[7], network industries[8]				2.84	2.08	1.84

Notes:
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 here: 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 codified as follows: zero if received everything, one if received 75% % and above, two if received below 75%, three if refused or rejected and treated as missing values if the application is still pending or don't know.
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 here: http://www.oecd.org/competition/reform/indicatorsofproductmarketregulationhomepage.htm
8 Aggregate OECD indicators of regulation in energy, transport and communications (ETCR).

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 SMEs' applications for bank loans).

Table C.6: **Green growth**

Green growth performance		2012	2013	2014	2015	2016	2017
Macroeconomic							
Energy intensity	kgoe / €	0.15	0.15	0.14	0.14	0.15	0.1
Carbon intensity	kg / €	0.26	0.26	0.25	0.25	0.25	-
Resource intensity (reciprocal of resource productivity)	kg / €	0.42	0.41	0.39	0.38	0.36	0.38
Waste intensity	kg / €	0.14	-	0.15	-	0.16	
Energy balance of trade	% GDP	-5.0	-4.5	-3.8	-2.7	-2.2	-2.5
Weighting of energy in HICP	%	11.7	11.3	10.9	11.0	9.2	9.0
Difference between energy price change and inflation	%	3.3	-5.8	-8.0	-5.5	0.4	7.3
Real unit of energy cost	% of value added	17.8	16.5	16.2	17.0	17.9	-
Ratio of environmental taxes to labour taxes	ratio	0.09	0.08	0.09	0.09	0.10	-
Environmental taxes	% GDP	2.2	2.1	2.1	2.1	2.2	2.2
Sectoral							
Industry energy intensity	kgoe / €	0.14	0.14	0.13	0.13	0.13	0.13
Real unit energy cost for manufacturing industry excl. refining	% of value added	25.9	24.0	24.0	25.3	26.8	-
Share of energy-intensive industries in the economy	% GDP	8.4	8.6	9.0	9.8	9.7	8.7
Electricity prices for medium-sized industrial users	€ / kWh	0.11	0.11	0.11	0.11	0.11	0.11
Gas prices for medium-sized industrial users	€ / kWh	0.03	0.04	0.03	0.03	0.03	0.02
Public R&D for energy	% GDP	0.01	0.01	0.01	0.01	0.01	0.01
Public R&D for environmental protection	% GDP	0.01	0.01	0.01	0.01	0.01	0.01
Municipal waste recycling rate	%	53.4	52.8	53.8	53.5	53.5	53.7
Share of GHG emissions covered by ETS*	%	39.1	37.9	38.5	38.0	37.1	-
Transport energy intensity	kgoe / €	0.50	0.51	0.52	0.54	0.55	0.5
Transport carbon intensity	kg / €	1.28	1.30	1.33	1.38	1.39	-
Security of energy supply							
Energy import dependency	%	75.8	77.1	79.8	83.9	75.4	74.8
Aggregated supplier concentration index	HHI	14.1	16.2	14.4	14.0	14.9	-
Diversification of energy mix	HHI	0.27	0.27	0.28	0.28	0.27	0.3

Notes:
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 of 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 00MWh 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 and GDP); Eurostat (all other indicators)

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

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. 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 Belgium and the Commission services in view of the programming of the cohesion policy funds (European Regional Development Fund and European Social Fund Plus). ([91])

Policy Objective 1: A Smarter Europe – Innovative and smart industrial transformation

The country is a strong innovator thanks to its attractive research centres. However, attracting young people in digital/science technology careers remains a challenge. There is scope for strengthening innovation performance and fostering productivity growth by identifying smart specialisation areas based on regional needs and potential. As well, there is scope for improvement by increasing the uptake of Research, Development and Innovation outcomes in concrete products and marketed items, enhancing research and innovation capacities and the uptake of advanced technologies. Territorial specificities in the three regions (Brussels, Flanders and Wallonia with a potential focus on sub-regional dimensions) will be taken into account when developing solutions to sustain Research, Development and Innovation in Belgium.

Priority needs([92]) have therefore been identified to :

- invest in the growth of firms through support to their activities, both in a material aspect e.g. development capacities, living-labs, test-beds, joint interregional and cross-border projects and in a more immaterial aspect (networking, cluster development, transnational cooperation);
- develop the capacities of research facilities in the orientation of research and the commercialisation of their outcomes;
- facilitate the creation of links and collaborations between research centres, universities and small and medium-sized enterprises in order to have the same links with small and medium-sized enterprises as the ones existing with large companies;
- reinforce marketing and product finalisation of research;
- stimulate integrated cooperation in new value chains across regions and across borders.

([91]) 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.

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

The potential of Belgian small and medium-sized enterprises and innovation start-ups is not fully exploited and there has been a downward trend in the number of newly created Innovation and Communication Technology start-ups in the last 5 years.

Priority investment needs have therefore been identified to enhance growth and competitiveness of small and medium-sized enterprises and in promoting development of skills, digitalisation (especially in Wallonia) and new start-ups in line with the smart specialisation strategy, to:

- reinforce access to finance and advanced business services for small and medium-sized enterprises to create a boost for the establishment of new firms;
- assist small and medium-sized enterprises and provide support to start-ups in the development of new business models;
- develop small and medium-sized enterprises' and start-ups' skills and capacities in the exportation of their products and services;
- develop skills in higher education and research institutions and closer collaboration with small and medium-sized enterprises and start-ups to support their business needs mentioned above.

Although Belgium improved its digital performance in the private and public sector over the last few years, it still falls short of other countries. With a good level of fixed and mobile connectivity, there is an opportunity to move to very-high capacity networks in order to provide new services to both citizens and businesses. The level of digital skills is good but stagnating, showing that more than one third of the labour force has insufficient digital skills. Priority needs have therefore been identified to reap the benefits of digitisation for citizens, companies and governments, to:

- strengthen the capacity of the industry (including small and medium-sized enterprises) to adapt to digital transformation, exploit the potential of digitalisation and increase the Information and Communication Technology uptake within the private and public sector;
- promote skills development for smart specialisation, industrial transition (Wallonia is one of the regions chosen in the pilot phase for regions in industrial transition) and entrepreneurship.

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

Belgium is significantly above the European Union average in circular (secondary) use of material and priority needs have therefore been identified to reinforce the already existing measures in favour of circular economy.

Belgium does not fully make better use of its potential to become a low-carbon innovation leader. High priority investment needs have therefore been identified to decrease energy consumption, to increase the share of low carbon and clean energy production, and to continue to develop circular economy, where Belgium is performing well, in particular by:

- encouraging energy efficient renovations of public and residential buildings, with a particular focus on the disadvantaged;
- encouraging energy efficiency in small and medium-sized enterprises, provided that energy efficiency is the primary objective of the measure with a particular focus on addressing energy

poverty;;

- promoting eco-innovation and circular economy and related skills in small and medium-sized enterprises;
- encouraging the use of renewable energy in heating and cooling;
- promoting small-scale electricity generation based on renewable energy;
- investing in the adaptation to climate change, implementation of the national adaptation strategy and action plan, reinforced research into the impacts of climate change; and enhanced integration of climate change and disaster risk reduction.

Policy Objective 3: A more connected Europe – Mobility and regional Information and Communication Technology connectivity

Belgium suffers from chronic road congestion, which has a negative impact on climate and air quality. High priority needs have therefore been identified to develop sustainable, climate resilient, intelligent and intermodal national, regional and local mobility, including improved access to Trans-European Transport Network and cross-border mobility, by:

- improving urban cross-border mobility, especially within the public transportation system to make it more efficient in order to shift individuals from cars to public transport;
- digitalisation and decarbonisation of road transport (e.g. digitally connected roads, alternative fuels infrastructure, including those facilitating integration of renewables);
- promoting sustainable multimodal urban, urban/rural and rural mobility and other investments aiming to reduce the negative externalities of transport, in particular congestion, emissions (pollutants, greenhouse gases, noise) and traffic accidents.

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

Activity and employment rates are low and skills mismatches are high, in particular for the young, low skilled, and people with a migrant background. High priority investment needs have been identified **to improve access to employment, to assess and anticipate skills needs and to ensure support to labour market matching, transitions and mobility**, and in particular to:

- support active and preventive labour market measures and provide integrated tailor-made activation support to unemployed and inactive persons, including young people not in employment, education or training;
- support advocacy and awareness measures to improve hiring practices of employers, to address discrimination, and prevent in-work poverty;
- develop and implement comprehensive regional skills strategies;
- develop policies and actions which support voluntary labour mobility across sectors and regions;
- support existing and new business incubators, self-employment, micro-enterprises, business/jobs creation and social innovation.

Inadequate outcomes from the education system, characterised by strong inequalities and disparities, as well as low participation in lifelong learning contribute to high skills mismatches. High priority investment needs have been identified **to promote quality and inclusive education and training and to promote lifelong learning,** and in particular to:

- ensure that vocational education training systems are relevant to labour market needs and are attractive to students and employers;
- support the acquisition of key competences and 21st century skills (including digital skills) through education and training;
- upgrade infrastructure and/or equipment for early childhood education and care, school and vocational education and training and enhance supporting services for an inclusive education system;
- develop the competences of teachers, trainers, researchers, and other staff in the sector;
- target outreach and support to individual (disadvantaged) learners to increase access, improve basic skill attainment, and increase completion at all levels of education and training;
- enhance inclusive quality education and training for persons with disabilities;
- promote and upgrade adult learning via upskilling and reskilling.

Inequalities of opportunities persist between different populations groups (including in access to healthcare). People with disabilities face particularly strong multi-faceted challenges. High priority investment needs have been identified **to foster active inclusion, enhance access to services, including health- and long-term care, and to promote the socio-economic integration of third-country nationals through integrated measures**, and in particular to:

- support access to affordable social services for activation and rehabilitation of disadvantaged people;
- support cross-border healthcare and community-based services including basic/primary social care facilities;
- support the transition from institutional care to independent living community-based services for dependent persons, in particular persons with disabilities;
- support the re-skilling and upskilling of the healthcare and long-term care workforce;
- overcome prejudice and discrimination in education and the labour market;
- enhance housing and social services for the inclusion of migrants and refugees to address urban poverty and security and to foster educational and housing inclusiveness.

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

Uncoordinated strategic planning and insufficiently developed integrated approaches to interventions could create numerous negative externalities and make it more difficult to address significant disparities at regional level. High priority investment needs have therefore been identified to foster the integrated social, economic and environmental development, cultural heritage and security in urban areas,

including through community-led development, and in particular to:

- support the revitalisation of the local economy and the adaptation of the labour forces in urban areas where industrial transition takes place;
- regenerate deprived urban areas as well as integrate people with a migrant background through the missing investments in education or health infrastructure;
- improve multimodal sustainable mobility in urban and rural areas, where obstacles to mobility negatively affect socio-economic activities and where polluting emissions from transport exceed acceptable limits;
- contribute to innovative projects for culture and tourism in the urban areas in the frame of an integrated strategy.

Factors for effective delivery of Cohesion policy

- broader use of financial instruments and/or contributions to a Belgian compartment under InvestEU for revenue-generating and cost-saving activities;
- continue the efforts of improving and strenghtening the effectiveness of the management and control bodies;
- administrative capacity issues need to be addressed in relation with the sustainability of the management and control bodies.
- take into account the lessons learnt in Wallonia during the implementation of the Commission pilot project on industrial transition;
- strong support and involvement of social partners, local authorities and other public bodies and stakeholders for effective implementation;
- support to (Social) innovation and experimentation.

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