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Table of contents

Executive summary 9

1 Key policy insights 14

The COVID-19 crisis is having a major social and economic impact 16
The United Kingdom was significantly affected by the COVID-19 pandemic 16
The COVID-19 crisis has hit some sectors disproportionately 17
The COVID-19 shock led to market tensions but banks have proved resilient so far 19
Activity is set to reach pre-crisis levels only gradually 21
Managing the risks of a disorderly Brexit 24
Moving from crisis management to recovery 25
Monetary policy has eased 27
Fiscal policy should support the recovery 28
The anti-corruption drive is strong 54
Seeking a close trade relationship with the European Union 56
The United Kingdom has been deeply integrated with the European Union 56
Maintaining a close trade relationship would help limit the costs of exiting the EU Single Market 57
The impacts of the new trade arrangements will vary across sectors and regions 59
Ensuring market access in services is key to a good outcome 60
Making sure the immigration system remains flexible 62
Keeping the global financial role of the City 63
Bibliography 67

2 Boosting productivity in the service sectors 73

A rebound in productivity in the service sectors is key to supporting a sustainable recovery 74
Productivity performance has been poor since the financial crisis 75
Productivity has been lacklustre in the service sectors 78
Productivity in the service sector needs to accelerate markedly 85
Low investment and innovation rates and a lack of knowledge diffusion across firms are the main factors behind the poor productivity performance 86
A large part of the post-crisis productivity shortfall reflects low investment and slower innovation 86
A large tail of less productive firms accounts for much of the productivity shortfall in services 87
How to encourage firms to adopt new technologies? 89
Some firms are not engaging in the most advanced technologies 90
Facilitating access to digital infrastructure 93
Improving Research and Development support 94
Easing access to finance of new and young firms 96
Maintaining low barriers to trade and competition 100
Ensuring basic skills in a modern workplace after the COVID-19 crisis 106

Retraining low-skilled workers is a double dividend policy following COVID-19 106
Upgrading management skills will improve the capability of firms to benefit from digitalisation 111
Improving efficiency in the public sector 113
Productivity growth in the public sector has improved since the beginning of the decade 113
Further developing digital Government 114
Bibliography 118

Tables

Table 1. Activity will stay below pre-crisis levels 10
Table 1.1. Past recommendations on macroprudential policies and financial markets regulations 20
Table 1.2. Short-term economic projections 22
Table 1.3. Main measures of the emergency package and fiscal costs 26
Table 1.4. Main measures of the Plan for Jobs and additional measures 27
Table 1.5. Main elements of the UK Industrial Strategy 31
Table 1.6. Past recommendations on infrastructure and innovation 32
Table 1.7. Impact of selected reforms on growth and inequality 33
Table 1.8. Past recommendations on regional development 34
Table 1.9. Past recommendations on labour markets and skills 46
Table 1.10. Past recommendations on green growth 50
Table 1.11. Past recommendations on fiscal policy and tax 53
Table 1.12. Long-term fiscal costs of selected recommendations 54
Table 2.1. Productivity gaps between UK exporting and non-exporting firms 100
Table 2.2. Long-run determinants of productivity growth 101
Table 2.3. Moving from EU to non-EU in restrictions to service trade would reduce long-term productivity in the service sectors 102

Figures

Figure 1. Most UK households report lower income since the crisis started 10
Figure 2. Services play a key role in UK exports 11
Figure 3. Productivity growth has been weak 11
Figure 1.1. Output has fallen dramatically with the COVID-19 crisis 15
Figure 1.2. Containment measures slowed the spread of cases 16
Figure 1.3. Output fell dramatically, especially in some services sectors 17
Figure 1.4. Claims for universal credit surged in March 18
Figure 1.5. Most UK households experienced an income reduction in the aftermath of the coronavirus outbreak 19
Figure 1.6. Stress in financial markets has eased 20
Figure 1.7. Capital buffers and macroprudential caution have increased resilience 21
Figure 1.8. The fiscal position would deteriorate markedly further in the event of a no-deal exit 23
Figure 1.9. A no deal would predominantly affect manufacturing industries 24
Figure 1.10. Monetary policy has eased 28
Figure 1.11. The emergency package and the fall in GDP will raise the public debt-to-GDP ratio 29
Figure 1.12. Investment has been lower than in many other leading economies 30
Figure 1.13. Risk of automation is higher in lower-earning regions 34
Figure 1.14. Lower-earning regions have been hit harder 35
Figure 1.15. The demographics and labour market situation are different across regions 36
Figure 1.16. A large majority of firms applied for the Coronavirus Job Retention Schemes 38
Figure 1.17. Participation in lifelong learning has been decreasing 42
Figure 1.18. Minimum wages in the United Kingdom are among the highest in the OECD relative to productivity 43
Figure 1.19. Poverty rates are highest among households out of work and single parents 44
Figure 1.20. Job creation was strong prior to the COVID-19 shock but inclusiveness is more challenging 45
Figure 1.21. Women participate less in the labour force than men and are more likely to work part time 46
Figure 1.22. Average hours in early childhood education and care are short 47
Figure 1.23. Some self-employed enjoy important tax incentives compared with employees 48

Figure 1.24. CO_2 intensity is lower in the United Kingdom than in the OECD average 49
Figure 1.25. Public health spending has risen 51
Figure 1.26. Tax revenues are lower than in peer countries 52
Figure 1.27. Corruption is perceived to be low in the United Kingdom 55
Figure 1.28. Tax transparency is largely compliant and anti-money laundering measures are effective 55
Figure 1.29. Services play a key role in UK exports 56
Figure 1.30. Higher non-tariff barriers and barriers to service trade under a free trade agreement will lead to lower incomes than under EU membership 58
Figure 1.31. Export and import losses vary across sectors 59
Figure 1.32. UK regions have different export and employment exposure 60
Figure 1.33. Work-related immigration from the European Union has fallen sharply 63
Figure 2.1. Transport and tourism were hit severely by the COVID-19 crisis 75
Figure 2.2. Productivity growth was weaker after the financial crisis than in earlier recoveries 76
Figure 2.3. Productivity has fallen short in OECD countries since the financial crisis 77
Figure 2.4. The productivity gap with the United States is large 77
Figure 2.5. The service sector accounts for 80% of the UK economy 78
Figure 2.6. Service sectors represent a large share of exports and investment 79
Figure 2.7. Digital services constitute a large share of service exports 79
Figure 2.8. Productivity levels are higher in manufacturing than in services 80
Figure 2.9. Service sectors account for a large share of the productivity shortfall 81
Figure 2.10. The service sector is heterogeneous 82
Figure 2.11. Productivity has been weak in both financial and non-financial sectors 83
Figure 2.12. Illustrative scenarios on productivity developments in the United Kingdom 85
Figure 2.13. Investment rates in the service sectors are low 86
Figure 2.14. Firm dynamism is relatively high 88
Figure 2.15. The United Kingdom displays a long tail of low-productivity firms 89
Figure 2.16. The productivity gap between leader and laggard firms is higher in the United Kingdom 89
Figure 2.17. Adoption of new technology lags the best performers 90
Figure 2.18. A range of policies can support productivity through digital adoption in the United Kingdom 92
Figure 2.19. The share of firms with high-speed broadband is lower than in peer countries 93
Figure 2.20. Most major investment projects are in transport, energy and utilities 94
Figure 2.21. Spending on research and development is lower than the OECD average 95
Figure 2.22. Small firms only receive a limited share of support 96
Figure 2.23. Reliance on venture capital is relatively low 97
Figure 2.24. The pensions market is large 98
Figure 2.25. Equity capital is a small portion of SME finance in the United Kingdom 99
Figure 2.26. Restrictions on trade in service sectors will rise when the United Kingdom leaves the EU Single Market 102
Figure 2.27. Restrictions to trade in digital services are currently low in the United Kingdom 103
Figure 2.28. Basic skills are lacking amongst applicants to new position 107
Figure 2.29. The share of jobs at risk is lower in the United Kingdom than in most countries but sizeable 107
Figure 2.30. Participation in lifelong learning has declined 109
Figure 2.31. Low-skilled workers receive less firm-based training 109
Figure 2.32. Own-account workers participate less in training 110
Figure 2.33. Management skills can be upgraded further 112
Figure 2.34. Managerial quality tends to be lower in family-owned firms 113
Figure 2.35. Health services contributed the most to productivity growth in the public sector in recent years 114
Figure 2.36. The uptake of digital government services is average 115

Boxes

Box 1.1. Containment and economic response to the outbreak of coronavirus 25
Box 1.2. The Industrial Strategy 31
Box 1.3. GDP and inequality impact of selected recommendations to support the recovery 33
Box 1.4. The COVID-19 crisis could hit lower-earning regions hardest 35
Box 1.5. Selected policies to support the recovery in OECD countries 39
Box 1.6. Recent trends in on-the-job training 43
Box 1.7. Prudent debt in New Zealand 50
Box 1.8. 21st Century Trade Agreements 61

Box 2.1. The United Kingdom is a service-based economy 78
Box 2.2. Measuring productivity in the service sectors 84
Box 2.3. Does engaging in new technologies boost productivity? 91
Box 2.4. Explaining productivity developments: insights from sectoral and firm-level data 101
Box 2.5. Main recommendations of the Digital Competition Expert Panel 105
Box 2.6. Adult learning for displaced individuals and those with low-skills 111

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Basic statistics of United Kingdom, 2019

(Numbers in parentheses refer to the OECD average)[1, 2]

LAND, PEOPLE AND ELECTORAL CYCLE					
Population (million)	66.8		Population density per km² (2018)	274.7	(38.0)
Under 15 (%)	17.7	(17.9)	Life expectancy at birth (years, 2018)	81.3	(80.1)
Over 65 (%)	18.5	(17.1)	Men (2018)	79.5	(77.5)
Foreign born (%, 2018)	13.8		Women (2018)	83.1	(82.8)
Latest 5-year average growth (%)	0.7	(0.6)	Latest general election	December-2019	
ECONOMY					
Gross domestic product (GDP)			Value added shares (%)		
In current prices (billion USD)	2 829.8		Agriculture, forestry and fishing	0.7	(2.6)
In current prices (billion GBP)	2 216.5		Industry including construction	19.5	(26.8)
Latest 5-year average real growth (%)	1.8	(2.2)	Services	79.8	(70.5)
Per capita (000 USD PPP)	48.7	(48.3)			
GENERAL GOVERNMENT Per cent of GDP					
Expenditure	40.9	(41.7)	Gross financial debt (2018, OECD: 2017)	116.6	(108.9)
Revenue	38.7	(38.5)	Net financial debt (2018, OECD: 2017)	82.3	(69.0)
EXTERNAL ACCOUNTS					
Exchange rate (GBP per USD)	0.78		Main exports (% of total merchandise exports)		
PPP exchange rate (United States = 1)	0.68		Machinery and transport equipment	36.6	
In per cent of GDP			Miscellaneous manufactured articles	15.0	
Exports of goods and services	31.6	(54.2)	Chemicals and related products, n.e.s.	14.3	
Imports of goods and services	32.7	(50.5)	Main imports (% of total merchandise imports)		
Current account balance	-4.0	(0.3)	Machinery and transport equipment	33.2	
Net international investment position	-25.9		Miscellaneous manufactured articles	14.4	
			Commodities and transactions, n.e.s.	13.0	
LABOUR MARKET, SKILLS AND INNOVATION					
Employment rate (aged 15 and over, %)	60.9	(57.5)	Unemployment rate, Labour Force Survey (aged 15 and over, %)	3.7	(5.4)
Men	65.5	(65.6)	Youth (aged 15-24, %)	11.1	(11.7)
Women	56.4	(49.9)	Long-term unemployed (1 year and over, %)	0.9	(1.4)
Participation rate (aged 15 and over, %)	63.2	(61.1)	Tertiary educational attainment (aged 25-64, %, 2018)	45.8	(36.9)
Average hours worked per year (2018)	1,538	(1,734)	Gross domestic expenditure on R&D (% of GDP, 2018)	1.7	(2.6)
ENVIRONMENT					
Total primary energy supply per capita (toe, 2018)	2.7	(4.0)	CO2 emissions from fuel combustion per capita (tonnes, 2018)	5.3	(8.6)
Renewables (%, 2018)	11.5	(10.5)	Renewable internal freshwater resources per capita (1 000 m³, 2014)	2.2	
Exposure to air pollution (more than 10 g/m³ of PM 2.5, % of population, 2017)	65.0	(58.7)	Municipal waste per capita (tonnes, 2018)	0.5	(0.5)
SOCIETY					
Income inequality (Gini coefficient, 2017, OECD: 2016)	0.357	(0.310)	Education outcomes (PISA score, 2018)		
Relative poverty rate (%, 2017, OECD: 2016)	11.9	(11.6)	Reading	504	(487)
Median disposable household income (000 USD PPP, 2017, OECD: 2016)	23.9	(23.9)	Mathematics	502	(489)
Public and private spending (% of GDP)			Science	505	(489)
Health care (2018)	9.8	(8.8)	Share of women in Parliament (%)	32.0	(30.7)
Pensions (2015)	7.3	(8.5)	Net official development assistance (% of GNI, 2017)	0.7	(0.4)
Education (% of GNI, 2018)	5.5	(4.5)			

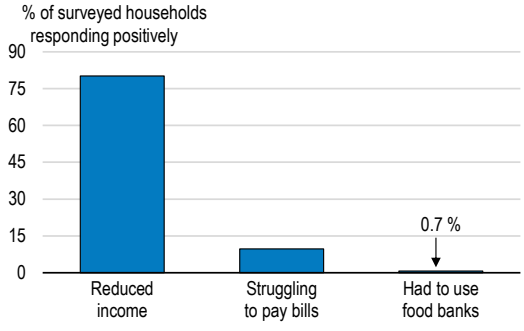
1.The year is indicated in parenthesis if it deviates from 2019.
2. Where the OECD aggregate is not provided in the source database, a simple OECD average of latest available data is calculated where data exist for at least 80% of member countries.
Source: Calculations based on data extracted from databases of the following organisations: OECD, International Energy Agency, International Labour Organisation, International Monetary Fund, World Bank.

Executive summary

The United Kingdom is at a critical juncture

Like many countries, the United Kingdom has been hit severely by the COVID-19 outbreak. A strict lockdown, was essential to contain the pandemic but halted activity in many key sectors. While restrictions have eased, the country now faces a prolonged period of disruption to activity and jobs, which risks exacerbating pre-existing weak productivity growth, inequalities, child poverty and regional disparities (Figure 1). On-going measures to limit a second wave of infections will need to be carefully calibrated to manage the economic impact. The country started from a position of relatively high well-being on many dimensions. But productivity and investment growth have been weak in recent years and an ambitious agenda of reforms will be key to a sustainable recovery. Leaving the EU Single Market, in which the economy is deeply integrated, creates new economic challenges. Decisions made now about management of the COVID-19 crisis and future trade relationships will have a lasting impact on the country's economic trajectory for the years to come.

Figure 1. Most UK households report lower income since the crisis started



Source: ONS (2020), "Coronavirus and the social impacts on Great Britain", June.

StatLink https://stat.link/k9e0lx

The Government has moved quickly to support the economy, while continuing to prepare the exit from the EU Single Market and the Customs Union and to pursue policies to address weak productivity and investment. Since March, monetary and fiscal policies have eased significantly and major programmes were implemented to protect workers and firms to prevent long-term economic scars. Since July 2020, the Government has moved to a new phase of support with the Plan for Jobs and the Winter Economic Plan. It has phased out some emergency measures, extended and introduced others, including programmes to help people get back to work, incentives to promote social consumption, and temporary reductions in VAT rates for the hospitality sector and stamp duty on property transactions. The Industrial Strategy, a multidimensional approach intended to foster productivity growth in place since 2017, includes measures that will also help to boost investment, innovation and skills.

Activity is set to reach pre-crisis levels only gradually

The economy contracted sharply in Spring 2020 and unemployment is likely to increase (Table 1). The COVID-19 crisis occurred against the background of subdued growth and investment since 2016. Many activities fell sharply during the lockdown, but some have since picked up substantially. Nevertheless, overall demand is set to recover only gradually as consumer-facing sectors remain disrupted and due to higher unemployment and business closures leaving scars on the economy.

Table 1. Activity will stay below pre-crisis levels

Annual percentage change

	2019	2020	2021
Gross domestic product (%)	1.5	-10.1	7.6
Unemployment rate (%)	3.8	5.3	7.1
Fiscal balance (% GDP)	-2.2	-15.2	-8.4
Government gross debt (% of GDP)	116.2	138.2	140.1

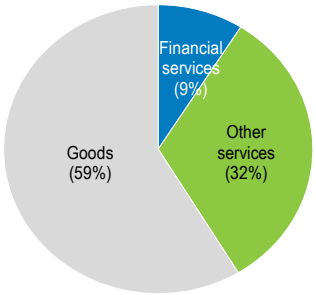
Source: OECD (2020), OECD Interim Economic Outlook.

The outlook is exceptionally uncertain. A resurgence of COVID-19, leading to further lockdown measures would lead to weaker growth, higher unemployment and even greater pressure on balance sheets. A disorderly exit from the EU Single Market, without a trade agreement with the European Union, would have a major negative impact on trade and jobs.

Agreeing a close trade relationship with the European Union would support recovery, productivity and employment for both parties. While negotiations have focused on maintaining low trade frictions on goods, trade in services is crucial for a service-based economy such as the United Kingdom (Figure 2). Following exit from the Single Market, UK-based financial institutions will lose their passporting rights. Keeping close relationships with the European Union will help to limit costs.

Figure 2. Services play a key role in UK exports

UK exports to the EU27, 2018



Source: ONS (2019), "UK Balance of Payments, The Pink Book".

StatLink https://stat.link/k321ha

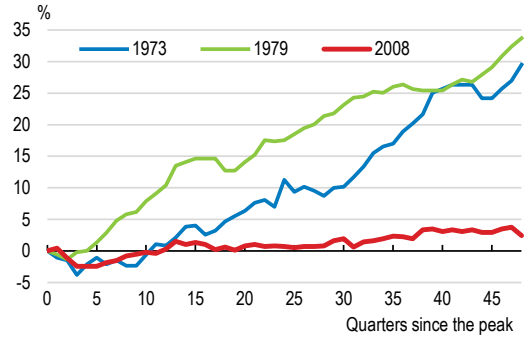
Moving from crisis management to achieving recovery

Implementation of a multifaceted package will help support a sustainable recovery following COVID-19 and raise growth potential. The supportive fiscal policies already in place will hasten the recovery but further measures will be needed to mitigate scarring. The scope for further monetary easing is limited but low interest rates provide fiscal space. A key challenge will be ensuring that people in activities that are lastingly impacted by the COVID-19 crisis are able to move to new activities and do not become detached from the labour market.

Well-directed good-quality public investment and higher private investment are needed to strengthen the recovery and boost productivity. Low investment and innovation rates have been key factors behind the weak productivity performance of past years (Figure 3). Adoption rates of complex technologies lag best performers. The competition framework is well designed but will need to be adapted to changes in business models triggered by digitalisation. Land-use restrictions impede effective competition. The Government has accelerated the substantial increase already underway in funding to housing, transportation and R&D investment. Policy continuity in other areas of the Industrial Strategy should be ensured to sustain progress in economic development. The long-standing challenge of narrowing regional differences, which may be exacerbated by the COVID-19 crisis, requires investing in the capacity of lagging regions. There is a commitment to invest 0.2% of GDP in broadband infrastructure by 2025. Emergency support to firms has prevented business failures but will need to be better targeted to viable firms.

Figure 3. Productivity growth has been weak

Real output per hour, change from start of recession



Source: OECD calculations based on ONS (2020), Labour productivity database, July.

StatLink https://stat.link/yelurx

The Government has started to exit from emergency employment measures, while implementing new measures with the Plan for Jobs and the Winter Economic Plan to support low-income and youth workers. The Job Retention Scheme has helped to prevent massive layoffs during the lockdown. It is being phased out and will be replaced by a new six-month wage subsidy programme at the end of October. A bonus was introduced to encourage firms to continue to employ furloughed workers through to 2021. Although unemployment benefits remain low by international standards, the Universal Credit and Working Tax Credit payments temporary increase

has supported incomes in response to the crisis. A temporary wage subsidy scheme, Kickstart, has been introduced to encourage the hiring of young people. Resources were also allocated in July for job search and training. Additional spending on active labour market measures are welcome and further increases would help to accompany unemployed workers in their job search and ease adjustment to new working arrangements, alongside measures to strengthen adult education and training.

Expanding efforts now to provide good-quality ICT training to low-skilled workers would help adapt to the changes in the labour market, while boosting productivity growth and reducing inequality. The proportion of under-qualified workers is one of the highest in OECD countries. Public and corporate spending on adult learning has declined, alongside participation in lifelong training. Additional support for job search, skills and apprenticeships was set out in July 2020. Further measures should prioritise schemes to develop digital skills and to improve access for low-wage, low-skilled workers. Better targeting of the apprenticeship system would also help.

Very low-income households are mostly those out of work or single-parent families, groups particularly affected by the crisis. The minimum wage has risen rapidly to one of the highest levels in the OECD. While past rises had a negligible impact on employment, a further sharp rise in the minimum wage now could have harmful impacts on youth and low-qualified workers. In-work benefits and tax credits are more effective tools to support low-income households as they can be targeted without harming employment.

The COVID-19 crisis may have exacerbated gender inequality. Prior to the crisis, the share of women in work had increased, but was still significantly lower than for men. The high share of women with a part-time job resulted in a large gender pay gap. Precarious female employment is often associated with child poverty. Increasing support for good-quality childcare would help women to take up full-time jobs.

The crisis provides an opportunity to encourage more environmentally-sustainable growth. The United Kingdom was in 2019 the first G7 country to legislate a target of zero net emissions by 2050. Despite more rapid falls in carbon emissions than in other OECD countries, the country is not on track to meet its target. The Plan for Jobs includes measures to increase the carbon efficiency of the public sector and social housing, together with subsidies to improve home insulation, complementing measures taken over the years. Further concrete actions are needed to reduce emissions in the transport sector. Policy coherence would be improved by equalising carbon pricing across sectors and fuels and by ending incentives to oil and gas field development, while taking action to address fuel poverty.

Ensuring long-term sustainability in the post-pandemic world

Once the recovery is firmly established, addressing the remaining structural deficit and putting the public debt-to-GDP ratio on a downward path should come to the fore. In responding to the COVID-19 crisis, the public debt-to-GDP ratio will reach a historically high level, despite low interest rates, and a structural deficit is likely to emerge. Population ageing is putting pressure on public finances. Indexing state pensions to average earnings rather than using the "triple lock" (the maximum of earning growth, inflation and 2.5%) would improve sustainability. Pension reforms should ensure that adequate support is provided to poorer pensioners. Once growth has firmed, broadening the tax base would support social objectives, such as health, while raising equity.

The current fiscal framework combines three targets and provides little effective medium-term guidance, particularly given the major changes to the wider economic and fiscal outlook. A review of the fiscal framework and a spending review are planned for the autumn. A more credible and stable medium-term framework would provide a better guide to policy, recognising the trade-off facing the United Kingdom, and other economies, in balancing responding to the immediate crisis whilst maintaining the sustainability of the public finances.

MAIN FINDINGS	KEY RECOMMENDATIONS
Moving from crisis management to achieving recovery	
The economy contracted sharply during the COVID-19 crisis. While some activities have now picked up, overall demand is expected to recover only gradually. There are major downside risks related to COVID-19 and a disorderly exit from the EU Single Market. Monetary policy has eased. The Government rapidly put in place a range of substantial economic support measures to firms and workers. Since July 2020, policies have been adjusted or phased out and new measures introduced.	Ensure support is available and adapted as needed based on epidemiological and economic developments, while not hindering the reallocation of resources towards firms and sectors with better growth prospects. Consider introducing more targeted measures. Further increase active labour market spending to displaced and low-skilled workers. Prioritise digital infrastructure, particularly in deprived regions, in the allocation of the planned increase in public investment. Ensure sound governance of infrastructure investments. Keep monetary policy accommodative until there are clear signals of price pressures.
The UK economy is deeply integrated with the European Union and leaving the EU Single Market will hamper trade. Services account for a large share of trade, but negotiations have focused mostly on goods.	Keep low barriers to trade and investment with the European Union and others, particularly market access for the service sectors including financial services. Enhance communication on a no-deal exit from the European Union. Prepare targeted support to firms and workers that may suffer the most. Put in place trade facilitation measures to smooth disruptions at the border.
Supporting a sustainable recovery	
Productivity growth has underperformed compared to past business cycles and other OECD countries. Low investment and slow innovation rates contribute to weak productivity performance. The competition framework is well designed, and the United Kingdom is currently one of the least restrictive countries in terms of business regulations. The framework will need to be refined to adapt to a fast changing environment. Stringent land-use regulations prevent an efficient allocation of housing supply.	Ensure continuity in government support through the Industrial Strategy, a multidimensional approach to boost investment, innovation and skills intended to foster productivity growth. Refine the competition framework to adapt it to the digital economy: enable greater personal data mobility and systems with open standards; adopt a broader approach to merger assessment including an evaluation of the overall economic impact of mergers. Ease land-use regulations to seek the right balance between improving resource allocation, and environmental and social concerns.
The proportion of under-qualified workers is one of the highest in OECD countries. Although it is higher than the OECD average, participation in lifelong learning has been declining. Spending allocated to adult training is low. Despite a new apprenticeship system, there has been a drop in the number of total apprenticeship starts.	Develop digital skills of low-skilled workers, including through further increasing public spending on training.
The COVID-19 crisis is a shock to employment and incomes. The minimum wage has been increasing at a fast pace and is now one of the highest in OECD. Poverty is concentrated in out-of-work and single-parent households.	Use well-designed in-work benefits to support low-income earners.
The COVID-19 crisis may have increased gender inequality. The female labour force participation rate is depressed by high costs of childcare.	Strengthen efforts to make good-quality childcare less costly.
Carbon emissions have fallen significantly and the crisis provides an opportunity to accelerate the move toward a decarbonised economy. The United Kingdom has set an ambitious zero net emissions target by 2050, but further efforts are needed to meet it. Limited green spending has been announced to support the recovery.	Continue effort to reduce emissions in the transportation sector. Align carbon pricing across sectors and fuels and eliminate incentives to develop oil and gas fields. Continue to give fuel poverty full consideration.
Ensuring long-term sustainability in a post-pandemic environment	
The public debt-to-GDP ratio is expected to reach historically high levels. Age-related pressures are rising. The current pension uprating (triple lock) will be costly in the future. There is scope to improve the efficiency and fairness of the tax system. A spending review has been launched and the last tax review dates back 2011.	Once the recovery is firmly established, address the remaining structural deficit and put the public debt-to-GDP ratio on a downward path. Replace the pensions "triple lock" by indexing pensions to average earnings and ensure adequate income is provided to poorer pensioners. Carry out comprehensive tax and spending reviews and broaden the tax base to fund social objectives, once the recovery is fully entrenched.
Fiscal rules are complex and fail to provide medium-term guidance, particularly given major changes to the wider economic and fiscal outlook. A review of the fiscal framework is planned for this Autumn.	Set a stable medium-term framework to improve guidance to policy and markets.

1 Key policy insights

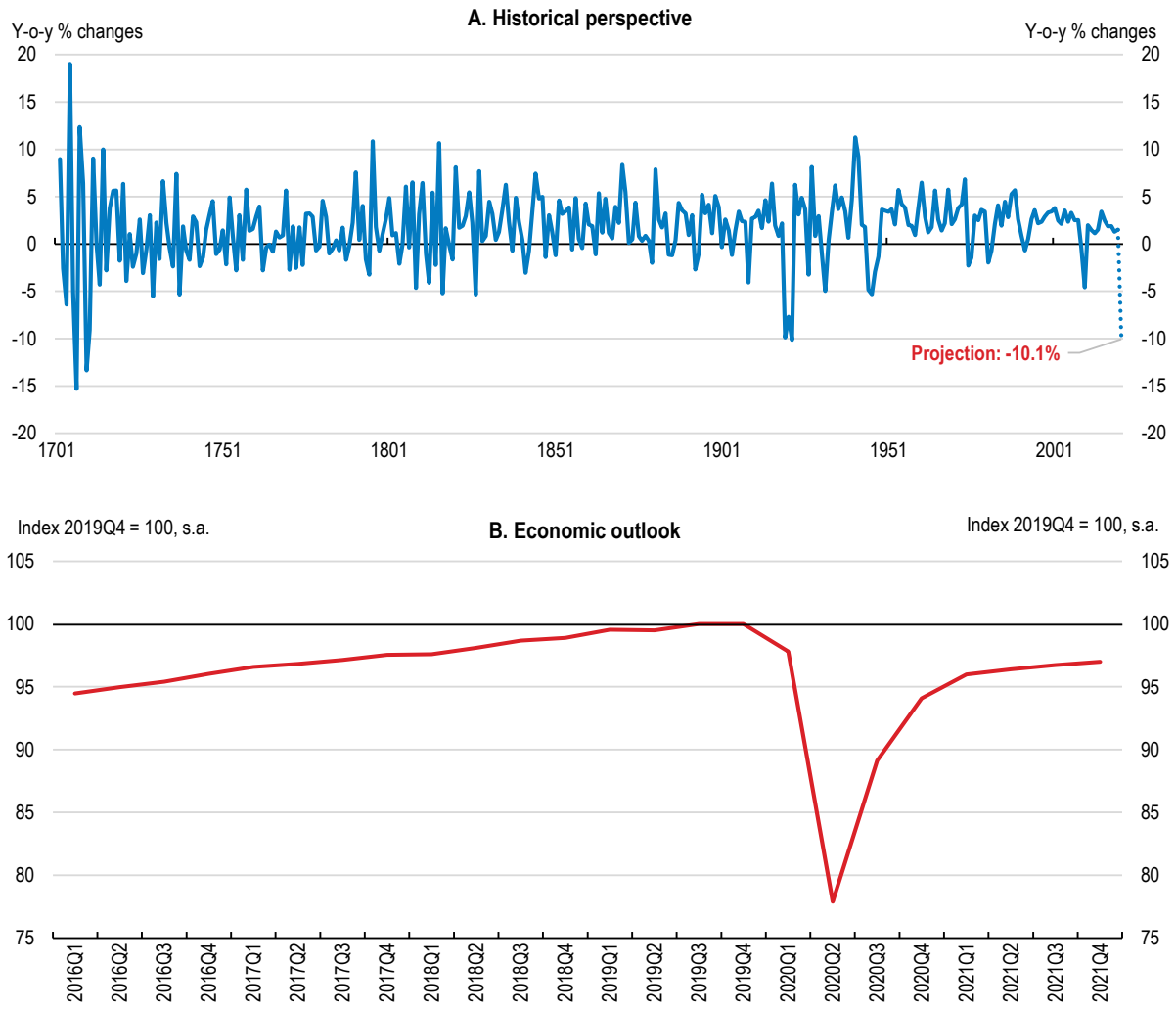
Like many countries, the United Kingdom has been hit hard by the outbreak of COVID-19 and the measures taken to contain the pandemic have triggered the most severe fall in output since the 1920s (Figure 1.1). As the public health situation improves, the economic consequences will come to the fore. While some activities are picking up as restrictions ease, overall demand is expected to recover only gradually and unemployment will increase and remain high for some time. The service sectors, particularly those involving face-to-face interactions, bore the brunt of the COVID-19 shock, affecting many lower-skilled and more vulnerable workers. A rapid and massive emergency policy response, including extra funding to the health system and massive support to workers and firms, helped steady the economy. Policies moved to a second phase since July with the Plan for Jobs and the Winter Economic Plan, winding down some emergency measures, extending some support and introducing new measures focused on buttressing demand and jobs. A sustained and strong recovery will depend heavily on the resilience of the economy and the effectiveness of Testing, Tracking and Tracing (TTT) measures to limit the spread of the virus until a vaccine or an effective treatment are available. Fostering productivity growth in the service sectors, which has been flat-lining since the financial crisis and is lagging behind its main trading partners, will be key to support a long-lasting and sustainable recovery and deliver prosperity for all.

The United Kingdom left the European Union on 31 January 2020 and is due to leave the EU Single Market at the end of 2020. This will be a major change in trade relationships with Europe, in which the economy is deeply integrated, and other countries, where market access arrangements as an EU Member will need to be rebuilt. The nature of the future relationship between the United Kingdom and the European Union is still uncertain, as is the transition path toward this new regime. This Survey assumes a smooth transition to a new Free Trade Agreement, which will have a significant negative impact on the economy, but a more costly and disruptive disorderly exit remains a risk.

The economy also faces several significant longer-standing challenges, including poor productivity performance compared to past business cycles and to peer countries. In the years ahead, it will have to adapt to changes in business models, consumption habits and trade patterns, triggered by demographic ageing and digitalisation. Prior to the COVID-19 crisis, well-being was relatively high but some dimensions could be improved upon, in particular work-life balance, adult skills, housing affordability, air and water quality, according to the OECD Better Life Index. The COVID-19 crisis is expected to increase regional disparities given the differences in sectoral activity and may have exacerbated inequalities, which both were already high relative to other OECD countries. The income share of the top 1% households has remained relatively high by international standards in recent years (Balestra and Tonkin, 2018). However, severe material deprivation has been high for out-of-work and single-parent households. Real wage stagnation has resulted in falling absolute social mobility with many people's living standards being no better than their parents were in the previous generation (Major and Machin, 2019). Policy changes will be needed over time to raise living standards across the population, while also making the economy more environmentally sustainable and keeping a sound macro-economic framework, resilient labour markets and a favourable business environment. Decisions made at this juncture will have a lasting impact on the country's economic trajectory for many years to come.

Figure 1.1. Output has fallen dramatically with the COVID-19 crisis

Real GDP



Source: Bank of England Millennium of Macroeconomic Dataset, ONS and OECD (2020), OECD Interim Economic Outlook, September.

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Against this background, this assessment focuses on ways to ensure a strong, inclusive and sustainable recovery from the COVID-19 crisis, in a context where leaving the EU Single Market and Customs Union and megatrends are altering the structure and the functioning of the economy. The three main policy messages of this Economic Survey are the following:

- Fiscal measures, adapted as needed, and monetary policy support will be key to foster a sustainable recovery. The opportunity should be seized to foster digitalisation and accelerate the shift to an environmentally sustainable economy.
- Getting people back to work in good-quality jobs and supporting low-income households following the COVID-19 crisis require implementation of short-term incentives and measures to support job search, training and childcare.
- A close trading relationship with the European Union and other countries, particularly with high access for services trade including financial services, would support the recovery.

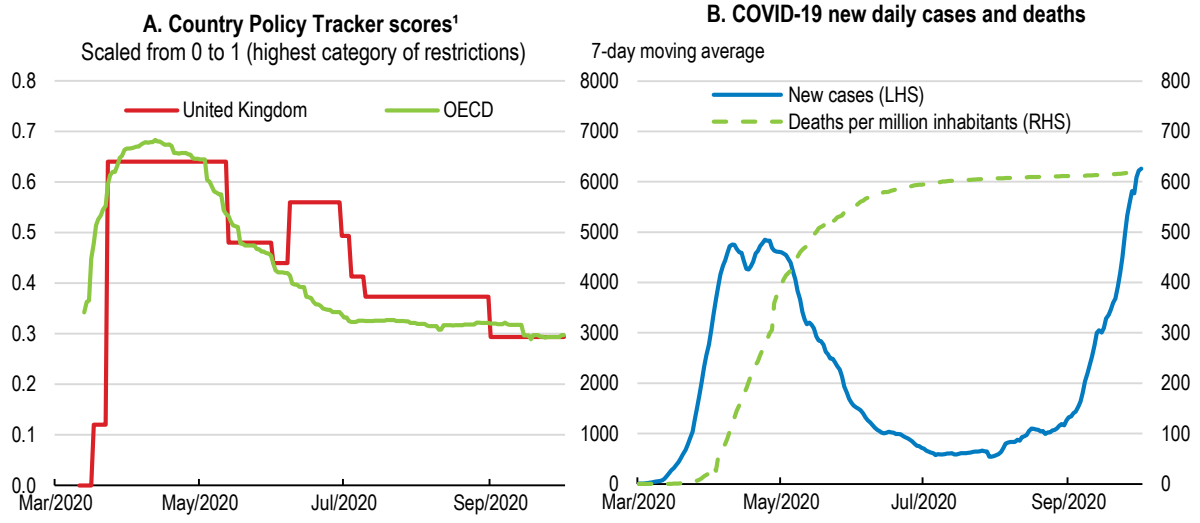
The COVID-19 crisis is having a major social and economic impact

Like most countries, the United Kingdom had to face a major health emergency and responded by imposing measures to contain the spread of COVID-19. These necessary measures have succeeded in slowing the spread of infections and reducing the death rate, but have resulted in large short-term economic disruptions and job losses, compounded by falling confidence. In addition, while the crisis hit many economies in a period of solid growth, growth in the United Kingdom had been relatively sluggish since the 2016 Brexit Referendum on the UK's membership of the European Union as a result of lower investment and high uncertainties.

The United Kingdom was significantly affected by the COVID-19 pandemic

The COVID-related death toll has been high, with the number of daily confirmed deaths peaking in mid-April (Figure 1.2). Transmission within the United Kingdom was first documented on 28 February. Since containment measures were implemented on 23 March, the infection rate fell to a low level. However, infections have risen again from August and new restrictions were introduced in September.

Figure 1.2. Containment measures slowed the spread of cases



1. The OECD COVID-19 Country Policy Tracker score is an index averaged across five containment policy components and scaled from 0 (no restriction) to 1 (highest category of restrictions). The containment policies include domestic quarantine and movement restrictions; travel restrictions; closure of educational facilities; closure of public events and places; and obligatory closure of economic activities.
Source: OECD calculations based on OECD Key country policy tracker https://www.oecd.org/coronavirus/country-policy-tracker/ and European Center for Disease Prevention and Control (ECDC) though Our World in Data.

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The virus has had a proportionally higher impact on the most deprived areas (ONS, 2020a). From March to mid-April, the coronavirus-related death rate for the most deprived area was 118% higher than for the least deprived area. The virus has been more deadly for people aged 80 and above and for men (Public Health England, 2020). Among the most affected were people in nursing homes. People of black African, Asian and minority ethnic origin have also experienced higher COVID-19 related death rates (ONS, 2020b). Only part of the differences between ethnic groups in COVID-19 mortality can be explained by socio-economic disadvantages and occupational exposure (ONS, 2020b; Platt and Warwick, 2020).

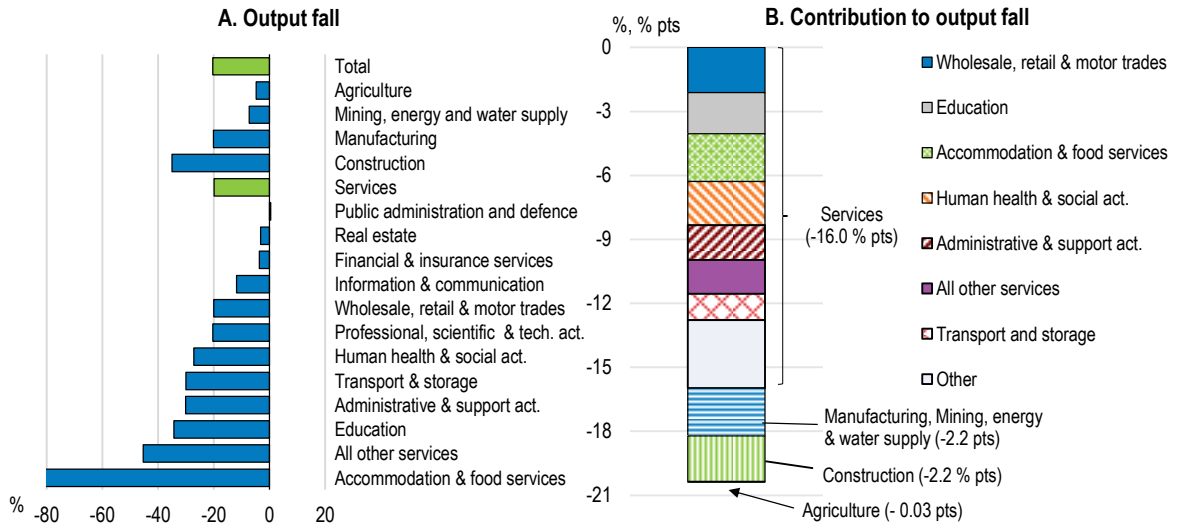
COVID-19 has underlined existing pressures in social care, particularly for the elderly. These services are largely delivered through local authority budgets but have placed an increasing burden on the NHS and on informal, family carers. At the same time, population ageing has increased demand for social care services. Unmet need for social care services affects hospital bed use, with a significant proportion of delayed patient discharges caused by the unavailability of social case services (NHS England, 2019). In the four nations of the United Kingdom, short-term funding injections have been regularly provided to local Councils to finance care services. Additional funding for adult social care has been granted to tackle COVID-19 pressures. However, the additional funding has been piecemeal, limiting the ability to plan and to build capacity in the care provider market (Cromaty, 2019).

The COVID-19 crisis has hit some sectors disproportionately

Containment measures shut down production in specific sectors, notably service sectors which require face-to-face interactions, such as the hospitality sector, or were subject to travel restrictions such as air transportation (Figure 1.3). The lockdown measures led to a dramatic drop in activity in the UK property market. Other services, where face-to-face interactions are less critical and where teleworking is possible, have not been affected to the same extent. This is the case of the information and communication industry, where 53% of employees reported having worked from home in 2019, as opposed to only 10% of employees in the accommodation and food services industry (ONS, 2020c). Heightened uncertainty and depressed confidence amplified the direct impacts of lockdown measures on spending and production.

Figure 1.3. Output fell dramatically, especially in some services sectors

Sectoral breakdowns of GDP, growth rates and contributions to output fall, April to June 2020



Note: Based on rolling three-month estimates. GDP from April to June 2020 compared with GDP from January to March 2020. Growth for aggregate sub-sectors is a weighted average of components. Component contributions may not sum exactly to the total.
Source: ONS (2020), "GDP monthly estimate, UK: June 2020", August.

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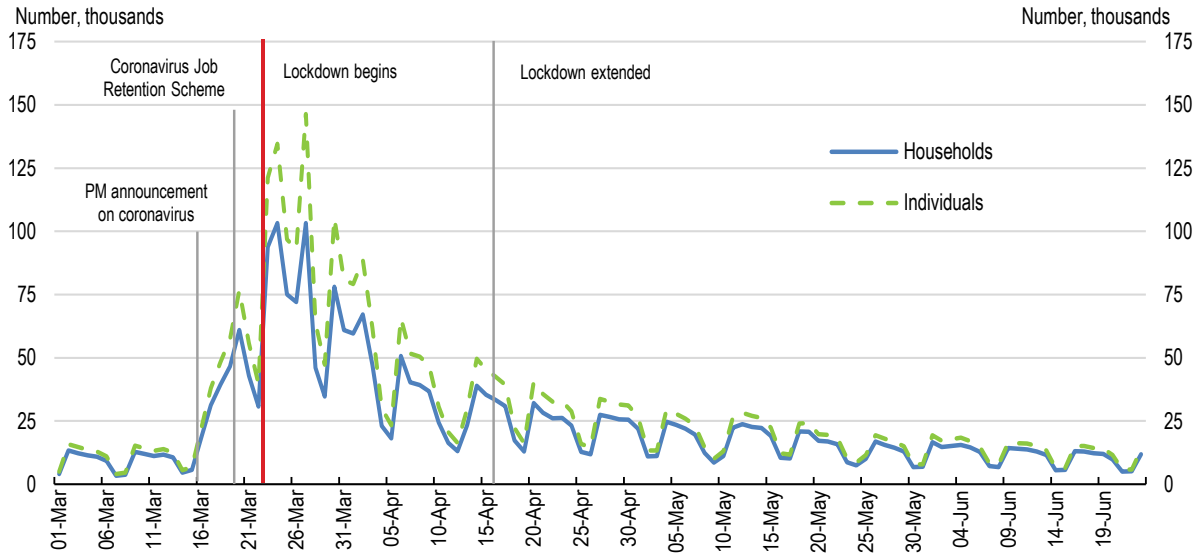
Many workers have been furloughed or lost their jobs. About 19% of the workforce of firms which continued trading was furloughed by late June/early July, with the proportion reaching 64% in arts, entertainment and recreation and 45% in accommodation and food services. Only a small proportion of the workforce has so far returned from furlough after restrictions eased (HM Revenues and Customs, 2020). New claims for Universal Credit, a single means-tested benefit for low-income people, which consolidates and simplifies the pre-existing system of benefits and tax credits, surged when containment measures were announced, signalling the extent of job losses (Figure 1.4). Overall, hours worked fell a record 18.4% from January to June (ONS, 2020d).

Increased joblessness, reduced hours, and enforced self-isolation for multiple vulnerable groups have led to an increase in UK food insecurity and growing poverty. A large share of households reported income losses, struggled to pay bills or had to resort to food banks (Figure 1.5). There are signs that the crisis hit vulnerable groups more, exacerbating pre-existing and relatively high inequalities. Employees who were working in occupations with a higher propensity for homeworking were on average more likely to have higher household disposable income (ONS, 2020e; Eliot Major and Machin, 2020). By contrast, low-income and younger earners have been and will be hit the hardest (Adam-Prassl et al., 2020). Increases in welfare spending since March are expected to mitigate some of the rise in inequality.

Figure 1.4. Claims for universal credit surged in March

New declarations for Universal Credit



Source: ONS (2020), "Coronavirus and the latest indicators for the UK economy and society: 2 July 2020".

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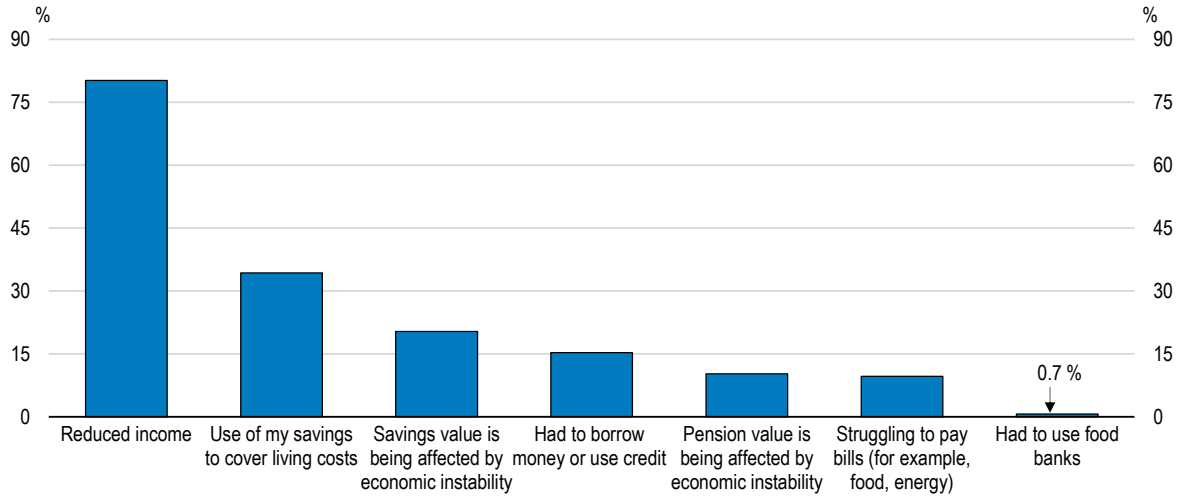
Figure 1.5. Most UK households experienced an income reduction in the aftermath of the coronavirus outbreak

Impact of COVID-19 on household finances



Note: Based on ONS Opinions and Lifestyle Survey (COVID-19 module), 4 to17 May 2020. Respondents were asked to choose more than one option answering a question: "In the past seven days, how have your household finances been affected?"
Source: ONS (2020), "Coronavirus and the social impacts on Great Britain", June.

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The COVID-19 shock led to market tensions but banks have proved resilient so far

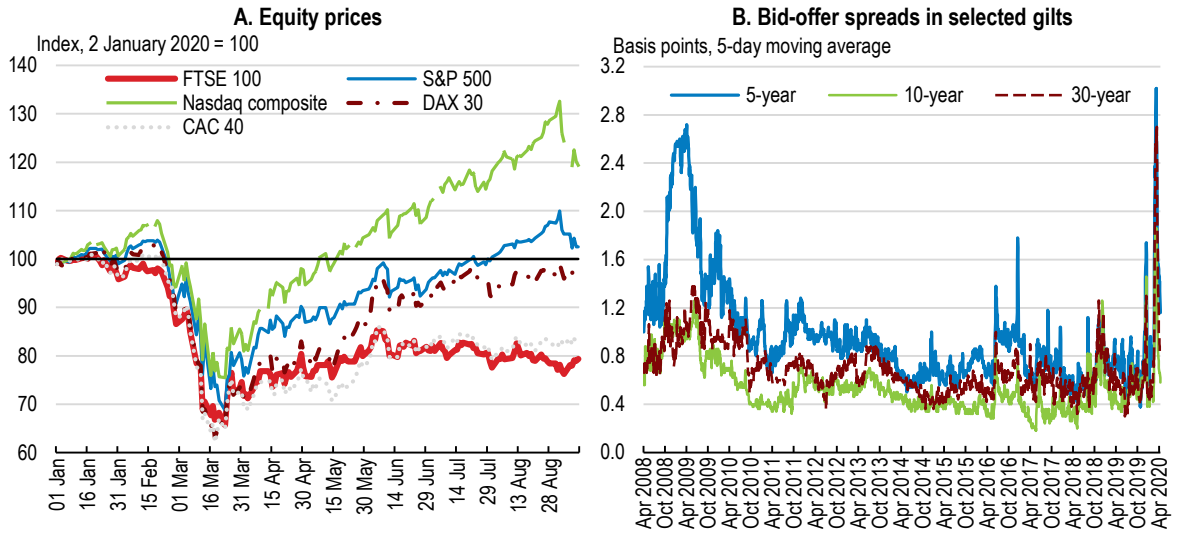
Financial markets reacted to the COVID-19 shock in early March, triggering large and sudden price falls across a range of assets and market tensions (Figure 1.6). Money market rates spiked in a sign of serious market dysfunction and bid-offer spreads on gilts also widened considerably. In an unprecedented liquidity injection, the Monetary Policy Committee decided on 19 March to purchase an additional GBP 200 billion gilts and corporate bonds, later expanded by a further GBP 100 billion, and on 24 March decided to lend unlimited amounts of sterling at close to Bank Rate, against a broad range of collateral in the Contingent Term Repo Facility (CTRF) (Cunliffe, 2020). Gilt markets have since normalised but financial asset prices have only partly recovered.

Banks have weathered the COVID-19 crisis well so far, entering with Regulatory Tier 1 Capital ratios twice as high as before the financial crisis (Figure 1.7, Panel A). Net lending to the corporate sector spiked to over GBP 30 billion in March, up from an average of just over GBP 1 billion per month over the past three years, as companies drew down existing facilities to boost liquidity. Stress tests suggest that bank capitalisation will stay well above regulatory requirements as the crisis and aftermath unfold (Bank of England, 2020a). Timely and sizeable liquidity support to the private sector has been important to avoid unnecessary bankruptcies. However, substantial losses could still be expected as the economy remains weak and many firms have suffered from a sharp loss of income.

Going into the crisis, the household debt-to-disposable income ratio was around the OECD average, after having fallen since 2007 (Figure 1.7, Panel B), with historically low servicing costs. Growth in consumer credit had also come down and corporate debt to GDP was slightly below the OECD average. Macroprudential recommendations on mortgages in place since 2014 have helped dampen housing price growth and debt accumulation. These include recommendations that most new loans should be less than 4.5 times the borrower's income (DTI) and that lenders stress-test new loans to ensure they would also be affordable if interest rates were to rise. Even though risks to financial stability from the mortgage market

seem to be limited at the current juncture according to the Bank of England, the macroeconomic risk that leveraged households reduce consumption as unemployment increases remains (Bank of England, 2019 and 2020b). A plunge in construction activity during the crisis has exerted a drag on GDP, and may accentuate long-standing housing shortages and affordability concerns.

Figure 1.6. Stress in financial markets has eased



Source: Calculations based on Refinitiv and Bank of England (2020), "Interim Financial Stability Report", May.

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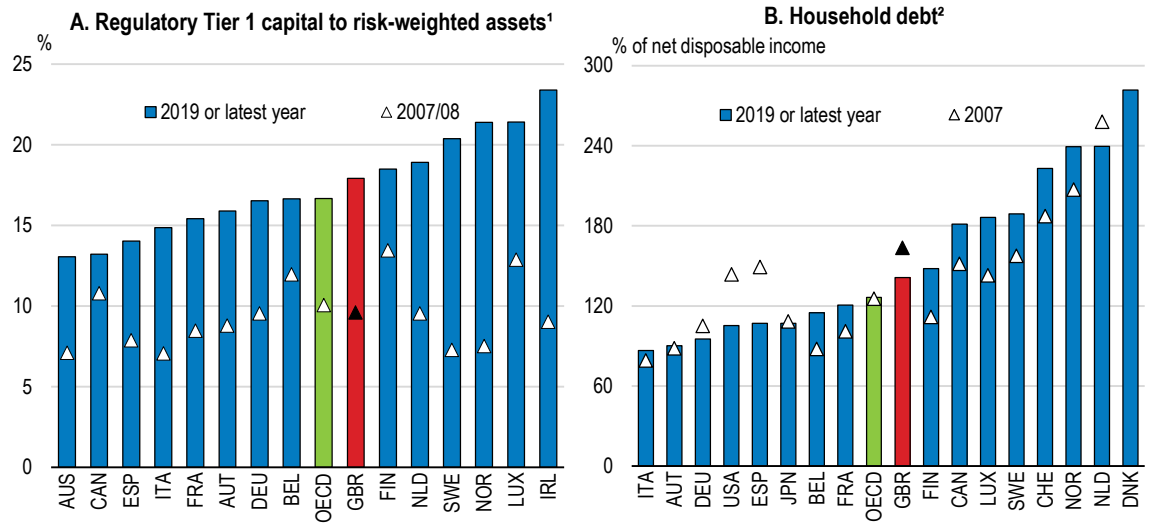
Some households will experience difficulties having been furloughed or lost their jobs, despite increased savings in the household sector as a whole. The Bank of England (2020a) estimates that the proportion of households with high debt servicing costs compared to their income could increase from around 1% in 2019 to around 2% at the height of the current crisis. Interest- and down payment- holidays will help in the short term, but some households may struggle to service their debt at a later stage.

Table 1.1. Past recommendations on macroprudential policies and financial markets regulations

Recommendations in previous *Surveys*	Actions taken and current assessment
Introduce debt-to-income ratios for borrowers depending on their exposure to shocks.	In 2015 HM Treasury legislated to give the Financial Policy Committee (the UK macroprudential authority) with powers of direction over debt-to-income ratios for mortgage lending. In June 2014, the FPC made the following Recommendation (14/Q2/2): The Prudential Regulation Authority (PRA) and the Financial Conduct Authority (FCA) should ensure that mortgage lenders do not extend more than 15% of their total number of new residential mortgages at loan to income ratios at or greater than 4.5. This Recommendation applies to all lenders which extend residential mortgage lending in excess of GBP 100 million per annum. The FPC reviewed this Recommendation in December 2019 and decided not to amend the calibration.
Consider higher leverage ratios for global systemic banks to complement risk-weighted capital ratios.	The FPC implemented higher leverage ratio buffer requirements for global systemic banks in 2016 and for domestic systemic banks in 2019.
Encourage the development of new credit providers and gradually extend regulatory instruments beyond the banking sector.	The Government launched Open Banking in 2018 and made refinements to the regulatory regime for alternative finance providers.
Collect and share credit information on businesses through credit reference agencies or directly through the regulator.	The Commercial Credit Data Sharing scheme, which went live in 2017, improves credit access for SMEs. The largest UK banks are required to share data on their SME customers with designated credit reference agencies.

Figure 1.7. Capital buffers and macroprudential caution have increased resilience



1. 2008 data are used for countries with no available data in 2007. Unweighted average of 32 countries.
2. Includes non-profit institutions serving households. Unweighted average of 31 countries for the OECD aggregate.
Source: OECD (2020), OECD National Accounts Statistics (database) and IMF (2020), IMF Financial Soundness Indicators Database.

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A range of policy interventions have encouraged banks to keep lending and helped firms to borrow. The Financial Policy Committee responded to the crisis by reducing the countercyclical buffer from 2% to 0% and communicating clearly that existing buffers are meant to be used to support lending in the current situation. Large-scale government guaranteed loan facilities have played an important role in allowing banks to lend to the corporate sector without tying up regulatory capital. In the COVID Corporate Financing Facility (CCFF), the Treasury lends via the Bank of England to predominantly large companies that had investment grade rating before the crisis. Private banks lend to SMEs with Government Guarantees under the Bounce Back Loan Scheme (BBLS) and the Coronavirus Business Interruption Loan Scheme (CBILS), and to larger enterprises under Coronavirus Large Business Interruption Loan Scheme (CLBILS). The Bank of England's Term Funding scheme with additional incentives for SMEs (TFSME), provides a cost-effective source of funding for banks and building societies to support additional lending to the real economy, particularly SMEs (Bank of England, 2020). Monitoring the situation carefully, and gradually reducing state guarantees on new lending is needed to return to prudent credit standards. Improving credit standards is necessary to allow structural change to go ahead, and a mechanism to quickly resolve bad debt covered by state guarantees should be put in place to speed up such reallocation.

Activity is set to reach pre-crisis levels only gradually

The initial downturn was more severe in the United Kingdom than in most OECD countries, reflecting that it was hit hard by the virus and had to keep the lockdown in place for a relatively long time, its higher reliance on service sectors and its integration in the world economy. The projections assume that sporadic local outbreaks will continue, but that these will be addressed by targeted local interventions and less stringent policies than national lockdowns. It further assumes that the United Kingdom smoothly leaves the EU Single Market and Customs Union at the end of 2020 to enter a Free Trade Agreement (Table 1.2).

GDP is projected to decline by 10% in 2020. While many activities fell sharply during lockdown, some have since picked up substantially as lockdown measures have eased. Nevertheless, overall demand is set to remain well below previous levels in the coming quarters. Consumer-facing sectors remain disrupted and

business and consumer confidence depressed with high joblessness uncertainty about the evolution of the pandemic. Economic measures to tackle the crisis and the sharp fall in revenues will lead to a large fiscal deficit. Uncertainties are high around epidemiological developments and how the virus will spread in the next few months, and a scenario where a second wave of contagion imposes stricter restrictions than envisaged cannot be ruled out.

The COVID-19 crisis is likely to reduce productivity and employment for several years, although the extent is hard to gauge. Scarring effects are likely to affect long-term output significantly, as job losses have been massive, firms have held back investment and many will exit the crisis with a debt overhang (Demmou et al., 2020). Demand in some sectors, such as tourism, may be lower for a long time. An unwinding of global value chains would further hamper efficient resource reallocation. However, the crisis may also trigger shifts in production process and working arrangements towards more teleworking. Consumer preferences could also change permanently, accentuating the transition in retail towards greater use of e-commerce and the digital delivery of services.

Table 1.2. Short-term economic projections

Annual percentage change, volume (2016 prices)

	2016 Current prices (billion GBP)	2017	2018	2019	Projections	
					2020	2021
Gross domestic product (GDP)	1,995.5	1.9	1.3	1.5	-10.1	7.6
Private consumption	1,299.1	2.2	1.6	1.0	-9.2	10.2
Government consumption	381.5	0.3	0.4	3.4	-6.9	6.4
Gross fixed capital formation	343.7	1.6	-0.2	0.7	-16.4	5.5
Total domestic demand	2,027.8	1.2	1.3	1.6	-11.7	8.2
Exports of goods and services	567.5	6.1	1.2	5.0	-12.4	1.4
Imports of goods and services	599.8	3.5	2.0	4.6	-16.9	4.0
Net exports[1]	-32.3	0.7	-0.3	0.1	1.6	-0.8
Other indicators (growth rates, unless specified)						
Employment		1.0	1.2	1.1	-1.1	-2.5
Unemployment rate (% of labour force)		4.4	4.1	3.8	5.3	7.1
Consumer price index (harmonised)		2.7	2.5	1.8	0.8	0.7
Core consumer prices (harmonised)		2.3	2.1	1.7	1.2	0.8
Household saving ratio, gross (% of disposable income)		5.3	5.8	5.8	17.5	4.7
Current account balance (% of GDP)		-3.5	-3.9	-4.0	-3.3	-4.0
General government financial balance (% of GDP)		-2.4	-2.2	-2.2	-15.2	-8.4
General government gross debt (% of GDP)[2]		119.9	116.6	116.2	138.2	140.1
General government net debt (% of GDP)[2]		85.4	82.3	81.8	103.9	105.8
Public sector net debt (% of GDP)[3]		82.9	82.4	80.7		
Three-month money market rate, average		0.4	0.7	0.8	0.5	0.4
Ten-year government bond yield, average		1.2	1.5	0.9	0.4	0.3

1. Contribution to changes in GDP.
2. Projections for 2019.
3. Based on Office for Budget Responsibility (OBR). It is defined as public sector's consolidated gross debt, less its liquid assets. Data refer to the fiscal year. For example, the year 2019 corresponds to 2018-19.
Source: OECD (2020), OECD Interim Economic Outlook: Statistics and Projections (database), September and Office for Budget Responsibility, April 2020.

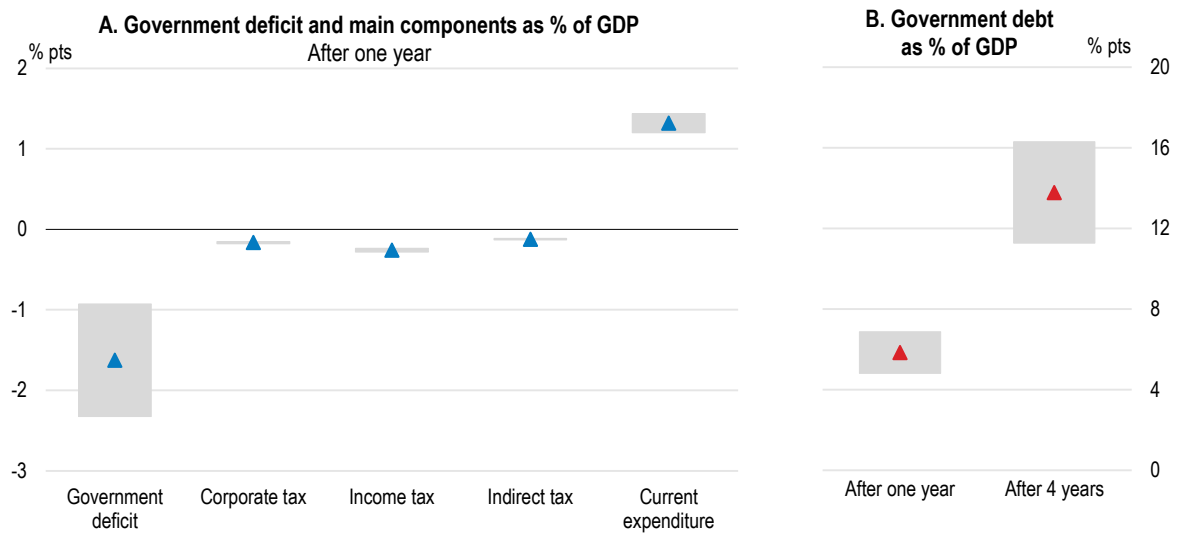
The main risks facing the economy are uncertainty related to the future course of the COVID-19 crisis, including the development of a vaccine and the effectiveness of confinement strategies, and its economic impact together with risks around exit from the EU Single Market at the end of 2020. A failure to provide credit to capital-weak small enterprises would result in higher business failures and unemployment, while a large fall in house prices might weigh on banks' capital buffers and reduce their lending capacity at a critical time. Other risks relate to the international trade and financial environment. As an open economy deeply integrated in global value chains, the United Kingdom would be affected markedly should tariffs and/or non-tariff barriers increase. The United Kingdom is also exposed to risks in financial markets given high asset valuations and indebtedness globally.

A disorderly Brexit as the result of a failure to conclude a Free Trade Agreement before the end of 2020 would have a strongly negative effect on trade and jobs and entail physical and financial disruptions. The transitional impacts of a hard Brexit are estimated to be of the order of 4-5% of GDP after 2 years (Bank of England, 2018; OBR, 2019). Assuming no fiscal response and based on the macro-economic assumptions underlying the OBR fiscal stress test, the government deficit would deteriorate markedly, as tax revenues decline and spending, notably in the form of unemployment benefits, increases (Figure 1.8). Automatic stabilisers would offset some of the downturn but only marginally. The ratio of public debt as a percentage of GDP could rise between 4.8 and 6.8 percentage points after one year. Such a situation would likely be transitory, as the United Kingdom has indicated it will seek out WTO-consistent regional agreements with its main trade partners.

A disorderly Brexit would affect UK sectors differently in the medium term. OECD simulations using the METRO model suggest that motor vehicle and transport, meat and textile sectors would be the most affected, with exports falling by over 30% (Figure 1.9). However, minimising barriers to services trade and investment should be a priority, given the importance of services in the UK economy and the integration of services in supply chains in other sectors.

Figure 1.8. The fiscal position would deteriorate markedly further in the event of a no-deal exit

Difference to a remain baseline, percentage points



Note: The computation replicates the GDP impact of no-deal scenario used in the OBR fiscal stress tests. Assumptions on customs duties, fuel duties, national insurance contributions, property transaction and capital taxes are taken from OBR (2019). Confidence bands are computed using different assumptions on monetary policy reaction and on whether automatic stabilisers are free to operate. The model accounts for the feedback effect between output and public finances and uses the fiscal elasticity estimated in Price, Dang and Botev (2015).
Source: Calculations using UK fiscal model.

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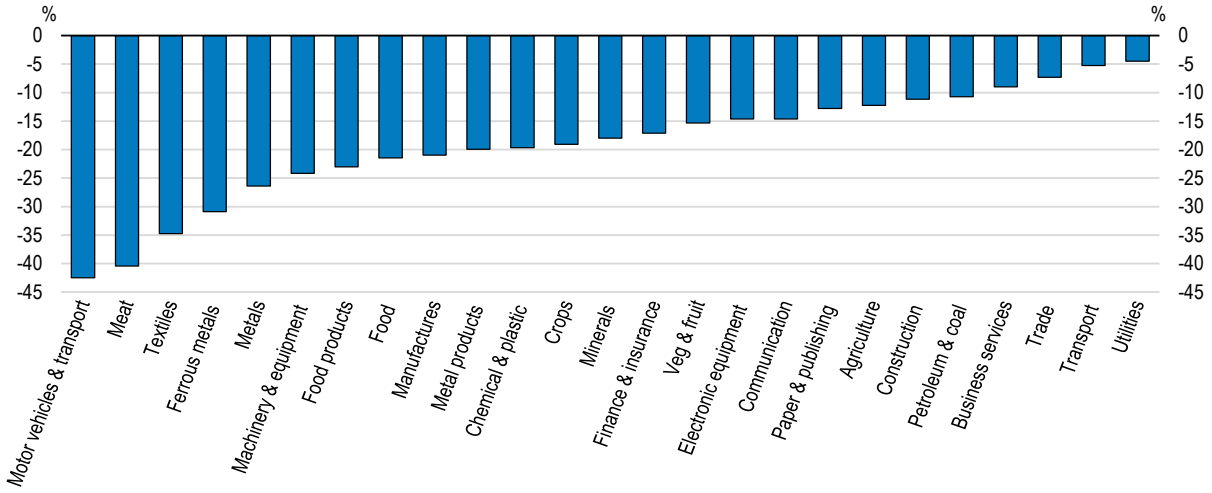
Figure 1.9. A no deal would predominantly affect manufacturing industries

% reduction in exports compared to a remain baseline in the medium term



Note: The METRO model is a computable general equilibrium model (CGE) and is described in detail in Arriola et al. (2020). The simulations represent medium-term shocks where production factors are mobile, but there is no capital accumulation. The estimate for Finance & insurance imperfectly captures the true impact and is probably a lower bound.
Source: OECD METRO model.

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Managing the risks of a disorderly Brexit

The COVID-19 crisis would further complicate the management of a disorderly Brexit. Firms have diverted attention away from Brexit and towards the crisis, likely reducing preparedness, although some, in particular in service sectors with stringent regulations, had advanced preparation in the run-up to a potential no-deal in 2019. Evidence suggests that, as of June 2020, more than half (61%) of British businesses had made no preparation for leaving the EU Single Market (House of Commons Northern Ireland Affairs Committee, 2020). Containment measures have negatively affected firms' balance sheets and reduce the resources available to them to invest in new systems, staff and training. Many businesses, for instance in pharmaceutical industries, have run down stockpiles to mitigate the disruption in supply chains caused by the coronavirus (House of Commons Committee on the Future Relationship with the European Union, 2020).

According to the European Central Bank and the European Commission, financial firms have started to take a number of necessary steps to prepare for an absence of agreement in the short term, although it remains crucial that banks and other participants use the remaining time to implement their EU exit plans so they are prepared to changes in the regime after the transition period (European Central Bank, 2020; European Commission, 2020). The United Kingdom has put in place a temporary permission regime for EU passporting firms and investment funds operating in the United Kingdom, which should help smooth the transition. A number of Memoranda of Understanding have also been signed to allow certain financial activities to continue and minimise disruptions in the event of a no-deal exit.

Policies can help mitigate the economic damages in case of a no-deal exit. Introducing trade facilitation measures would help firms' adjustments to new trade relations. Disseminating information on future border procedures, through the existing online information portal, will allow firms to prepare and adapt their operating systems. Options include adopting a consistent approach to customs declarations and border processes across all ports of entry (including on temporary storage facilities) and setting out a regulatory framework that allows systems already in place in UK Customs and other border agencies to continue coordinating and sharing information. The Government needs to anticipate which type of support would be

needed at the end of the year and factor it into any economic package to support the recovery. The focus should be on preparing small firms which lack resources and access to information, and on firms that have been made fragile by the COVID-19 crisis. The Government should communicate on which of the measures prepared in 2019 would be put in place.

Moving from crisis management to recovery

In the aftermath of the COVID-19 outbreak, the Government moved quickly to put in place a package of emergency measures in the March 2020 Budget to preserve existing businesses and jobs, and support incomes (Box 1.1). Soon after, the Government put in place a substantial set of economic measures, amounting to 5.5% of GDP in discretionary spending, to support businesses and households. This has helped mitigate the economic impact of lockdown measures and the virus outbreak. As conditions develop, policy support should be available as long as needed, while ensuring that it encourages firms and jobs moving towards activities with the best prospects.

Large-scale effective "tracking, tracing and testing" (TTT) programmes constitute an essential part of a successful strategy as long as no vaccine or treatment is available. The Government has committed GBP 10 billion (0.5% of GDP) to finance such a programme in the United Kingdom. This is key to suppress local outbreaks and contain the spread of the virus by testing more people to identify who is infected; tracking and isolating them to make sure they do not spread the disease further; and tracing others they have been in contact with (OECD, 2020a). In event of a further general virus outbreak later in the year, such programmes would allow to apply more targeted measures than in the first outbreak, limiting the economic fallout of a new lockdown.

The Government moved to a second phase of support in the July 2020 Plan for Jobs with a package that extends some existing measures, winds down others and introduces new measures targeted at getting back to work and supporting demand. Additional measures were announced in the Winter Economic Plan in September. Further support and adaptation of policies may be needed depending on epidemiological and economic developments. Policy support should not hinder the reallocation of resources, which will be essential to foster productivity. Monetary policy should remain very accommodative and ensure that interest rates remain low to prevent the crowding out of private spending.

Box 1.1. Containment and economic response to the outbreak of coronavirus

An economy-wide lockdown was introduced on 23 March. All social events and gatherings were banned, and all shops selling non-essential goods were closed. The Government announced a gradual easing of restrictions in England on 13 May. A second phase saw the reopening of non-essential retail stores on 15 June. It was followed by the hospitality and part of the entertainment sectors in July. Since national restrictions were eased, local restrictions have been put in place to manage outbreaks in Leicester and the Greater Manchester area amongst others. The Government responded to an increase in new cases by implementing a general limit on six people meeting for social gatherings from 14 September. Further measures announced 22 September included advice to telework when possible, tighter rules on the use of face coverings, limiting opening hours for restaurants and pubs and strengthening enforcement.

In Budget 2020, the UK Government committed over GBP 6 billion (0.3% of GDP) of new healthcare funding over this Parliament. The health system was scaled up, doubling the number of critical care beds within a month and expanding its testing and tracing capacity, which has helped keep the heath crisis under control.

The Government put in place a substantial set of economic measures, corresponding to 5.5% of GDP in discretionary spending, to support businesses and households (Table 1.3). The Coronavirus Job Retention

Scheme has provided employers with grants to pay 80% of the wages of furloughed employees up to a cap of GBP 2500. In addition, the self-employed can receive a taxable grant of up to 80% of their previous earnings over the past three years. The Government also temporarily increased basic unemployment support, raising levels of net income that a worker maintains when falling out of work from 56% to 63%.

Support has also been targeted directly to firms. The Government has waived business rates, a tax charged on most non-domestic properties, for the whole of 2020-21 for most businesses in the retail, hospitality and leisure sectors. Grants have been made available to businesses, with eligibility depending on the rateable value of the properties they occupy, their sector and other factors. Furthermore, GBP 40 billion of tax deferrals have been set aside. The GBP 330 billion COVID Corporate Financing Facility, run jointly with the Bank of England, provides state loans and guarantees for businesses affected by the crisis. However, co-financing requirements of 20% limit the take-up among smaller businesses.

Monetary policy has further eased in the context of increased market stress. The Bank of England cut interest rates from 0.75% to 0.10% and announced an increase of its bond-purchasing programme by GBP 200 billion (9% of GDP), to a total of GBP 645 billion. The programme was expanded in June by an additional GBP 100 billion through December. The Bank of England reduced the counter-cyclical capital buffer to preserve banks' capacity to lend to households and firms.

Additional measures were announced in the Plan for Jobs for a total amount of 0.9% of GDP (Table 1.4). They include a new Job Retention bonus to encourage employers to bring furloughed employees back to work, a wage-subsidy scheme (Kickstart Scheme) targeted on 16-24 year olds, who are claiming Universal Credits, an increase in the number of work coaches, a temporary cut in VAT rates for the hospitality and the tourism sectors, a temporary cut in the stamp duty on residential transactions, a 'Eat Out to Help Out' grant and a GBP 3 billion package to retrofit homes and decarbonise public buildings.

Table 1.3. Main measures of the emergency package and fiscal costs

GBP billions, 2020-21

Spending		Fiscal costs (GBP billion)	% of GDP
Public spending		18.8	0.8
Employment support			
	Job Retention Scheme	52	2.3
	Self employed	15.2	0.7
Welfare support		8	0.4
Support to firms			
	Small businesses grants	14.8	0.7
	Business rate holiday	12.2	0.6

Source: OBR Monitoring policy database, 14th July. https://obr.uk/coronavirus-analysis/

The Job Retention Scheme is being gradually phased out and will close on 31 October. The new Job Support Scheme will open on 1 November. It is designed to protect viable jobs in businesses who are facing lower demand over the winter months due to COVID-19 and to help keep their employees attached to the workforce. Under the scheme, the Government will pay a third of hours not worked up to a cap, with the employer also contributing a third, and employees will need to work a minimum of 33% of their usual hours. The scheme is targeted to small and medium-sized firms, and large firms whose turnover has fallen during the pandemic.

Table 1.4. Main measures of the Plan for Jobs and additional measures

GBP billions, 2020-21

Spending		Fiscal costs (GBP billion)	% of GDP
Plan for Jobs		**19.8**	**0.9**
	Job retention bonus	6.1	0.3
	Kickstart scheme	0.7	0.0
	Boosting worksearch, skills and apprenticeships	1.6	0.1
	Reduced rate of VAT for hospitality, accommodation and attractions	2.5	0.1
	Eat out to help out	0.5	0.0
	Infrastructure package	4.0	0.2
	Public sector and social housing decarbonisation and green homes grants	3.1	0.1
	Stamp Duty Land Tax temporary cut	1.3	0.1
Other measures		**30.4**	**1.4**
	Additional health spending	25.1	1.1
	Local Government	1.5	0.1
	Other measures	3.8	0.2

Source: OBR Monitoring policy database, 14th July. https://obr.uk/coronavirus-analysis/

The speed and strength of the recovery from the COVID-19 crisis will largely depend on a rebound of the service sectors that have been hit hard by the crisis, and higher productivity will play a key role in the recovery. UK productivity growth has underperformed in recent years compared to past business cycles and to developments in other OECD countries (Chapter 2). Leaving the EU Single Market is also expected to dampen productivity in some sectors (Chapter 2). The digitalisation of the economy offers an opportunity to revive productivity growth, but requires a whole-of-government approach combining actions in a range of areas: raising investment rates and enhancing skills. Policy measures as set out below will be key to support growth and inclusiveness, given the effects of the COVID-19 crisis and of leaving the EU Single Market on the supply side of the economy.

Monetary policy has eased

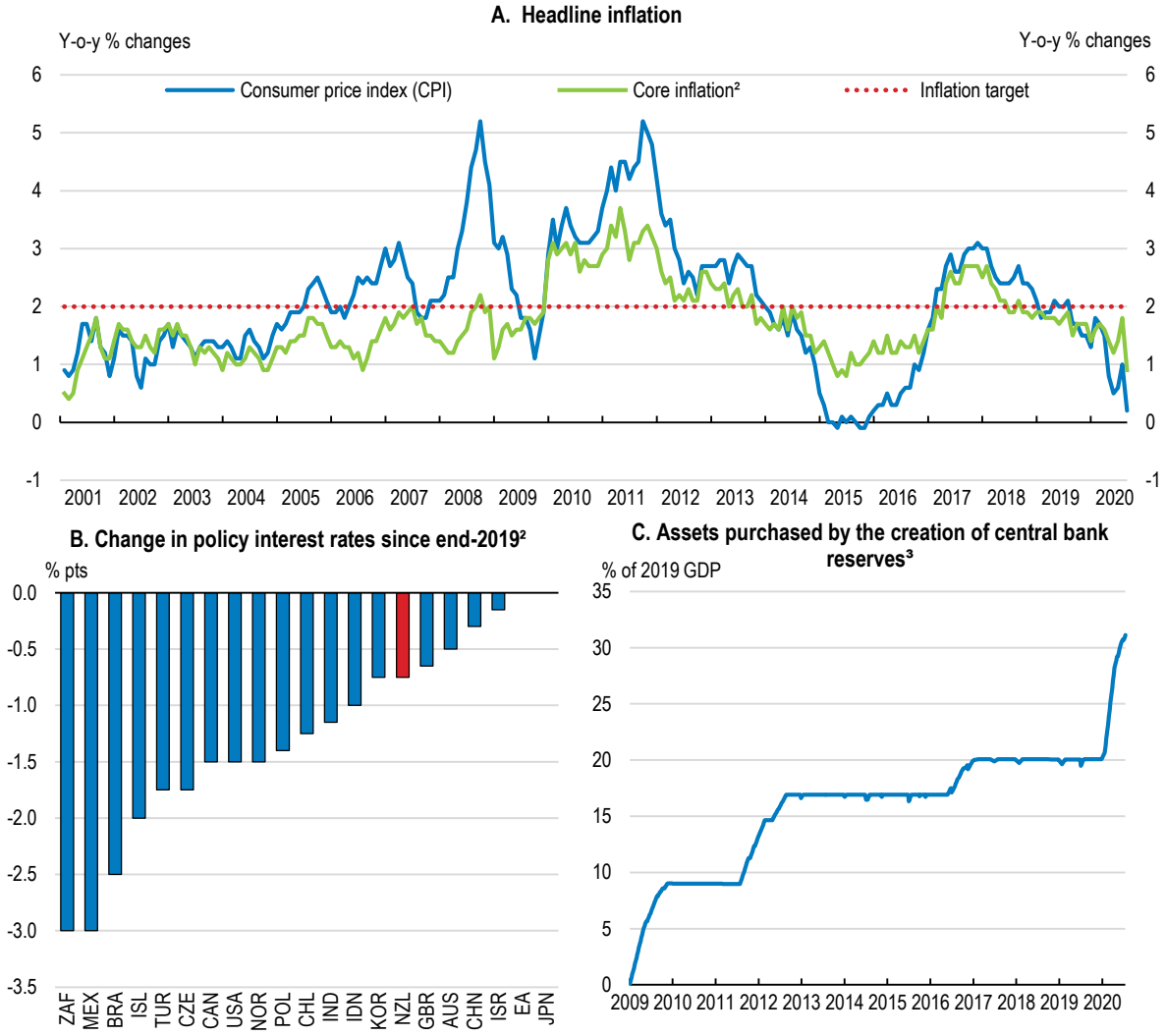
Monetary policy has further eased since the start of the pandemic in the context of increased financial stress (Figure 1.10). The Bank of England cut interest rates and expanded its bond-purchase programmes. While important to avoid a deterioration in financial conditions, these exceptional measures are not likely to raise borrowing or demand much (OECD, 2020b).

The monetary and fiscal authorities have worked together in some areas. HM Treasury and the Bank of England agreed to temporarily extend the Ways and Means overdraft facility, but at the time of writing, the Government has not made use of the extended facility. Those arrangements are consistent with the law and were used in early 2009. At that time, the Treasury made a small and short-lived drawing on the Ways and Means facility, increasing the advances for three months from GBP 370 million to nearly GBP 20 billion (1% of GDP) at the peak.

Current very low interest rates create substantial headroom if maintained (Blanchard, 2019; OECD, 2016). Despite the sharp rise in the public debt-to-GDP ratio, the UK Government is borrowing at negative rates for horizons of up to three years and can currently borrow at 50-year maturities for less than half a per cent annually. The Debt Management Office is planning to raise a minimum of GBP 385 billion from April to November 2020 through the issuance of conventional and index-linked gilts. The United Kingdom has a large share of its public debt has a very long maturity. In March 2020, 42% of the debt portfolio had a long

maturity (over 15 years), 21% an ultra-short maturity and the average maturity of gilts and T-bills was 15 years. Locking in the low rate with long-term borrowing to finance the emergency spending will help lower the sensitivity of public debt to an increase in interest rates in the medium to long term.

Figure 1.10. Monetary policy has eased



1. Excludes energy, food, alcohol and tobacco.
2. Between end-2019 and 1 October 2020.
3. On a settled basis. The first data point refers to 12 March 2009 and the last point refers to 23 September 2020.
Source: OECD (2020), Economic Outlook: Statistics and Projections (database), ONS (2020), Inflation and price indices (database), and Refinitiv.

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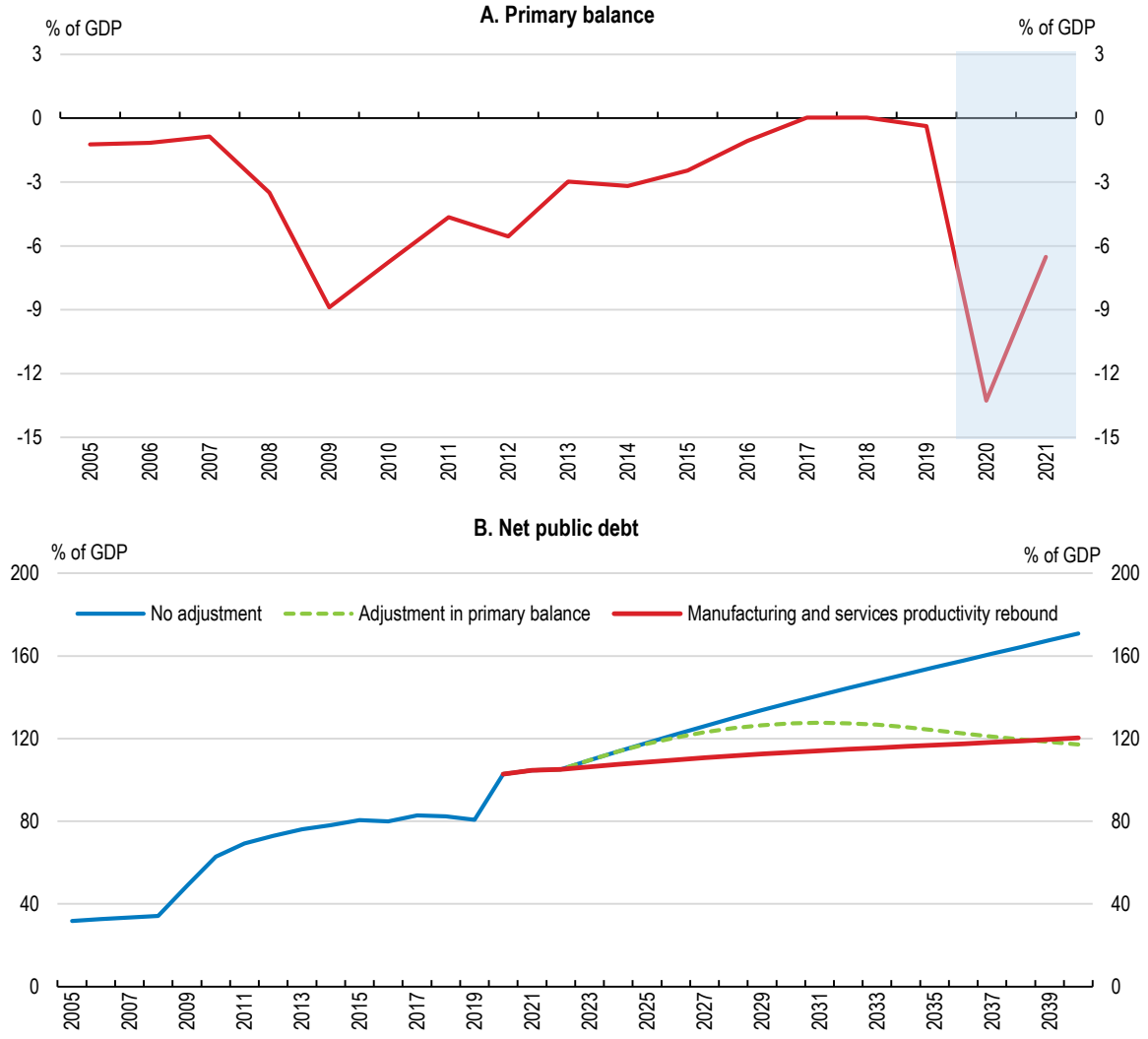
Fiscal policy should support the recovery

Given the unprecedented nature of the crisis and the large uncertainties regarding future prospects, fiscal policy will have to remain agile and to adapt swiftly to changes in the economic environment. At the start of the health crisis, the priority was to provide emergency support measures for workers and firms, together with health measures. In the recovery phase, a sizeable fiscal stimulus is warranted to boost anaemic

growth, likely over several years. Once the recovery is firmly established, addressing the remaining structural deficit and putting the public debt-to-GDP ratio on a downward path should come to the fore.

Figure 1.11. The emergency package and the fall in GDP will raise the public debt-to-GDP ratio



Note: The "No adjustment" scenario has been derived using the OBR measure for net public debt for historical data and OECD Interim Economic Outlook data. It accounts for ageing costs. The primary balance is assumed to stay constant in terms of GDP after 2021. In this scenario, productivity is assumed to grow at rate experienced since the financial crisis, and the nominal interest rate would stay constant. The "Adjustment in primary balance" scenario assumes that the primary balance improves by 0.5% of GDP per year over 2025-2035 and remains unchanged after 2035. The "Manufacturing and services productivity rebound" scenario assumes no adjustment in the primary balance and that productivity growth in the service sector will rebound to 2% and to the 1995-2005 average in manufacturing.
Source: OECD (2020), OECD Interim Economic Outlook database and calculations using data from Office for Budget Responsibility (OBR) and OECD (2020), OECD Economic Outlook: Statistics and Projections (database).

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The public finances have supported the economy through discretionary spending and tax measures and the automatic stabilisers. In the March 2020 Budget, before the impact of COVID-19 became clear, the Government was running an ongoing deficit that would broadly stabilise the public debt-to-GDP ratio over the medium term rather than reduce it (OBR, 2020). As the extent and the severity of the pandemic became clearer, policies have been redirected with an emergency package, estimated at around 5.5% of GDP. Additional measures announced in the Plan for Jobs in July will increase public spending corresponding

0.9% of GDP. A temporary VAT rate cut from 20% to 5% was announced to support the hospitality and tourism sectors, with an estimated fiscal cost of GBP 2.5 billion (0.1% of GDP). This could shape consumers' expectations and encourage them to consume. But the final impact on consumption remains uncertain in a context where many firms are financially constrained and may increase their margins. From a political economy point of view, VAT cuts are often difficult to revert once the situation normalises. There are also more transparent instruments to support struggling sectors. For instance, the cash transfer ('Eat Out to Help Out') scheme announced in July, although small in scale is probably a more transparent way to support these sectors. Take up for the scheme has been higher than expected, and helped to support restaurant booking during the Summer. Measures were complemented by the Winter Economic Plan. The plan introduced the new Job Support Scheme and the SEISS Grant Extension, and also included more flexibility in loans repayments and extended the VAT cut for the hospitality and tourism sectors to March 2021.

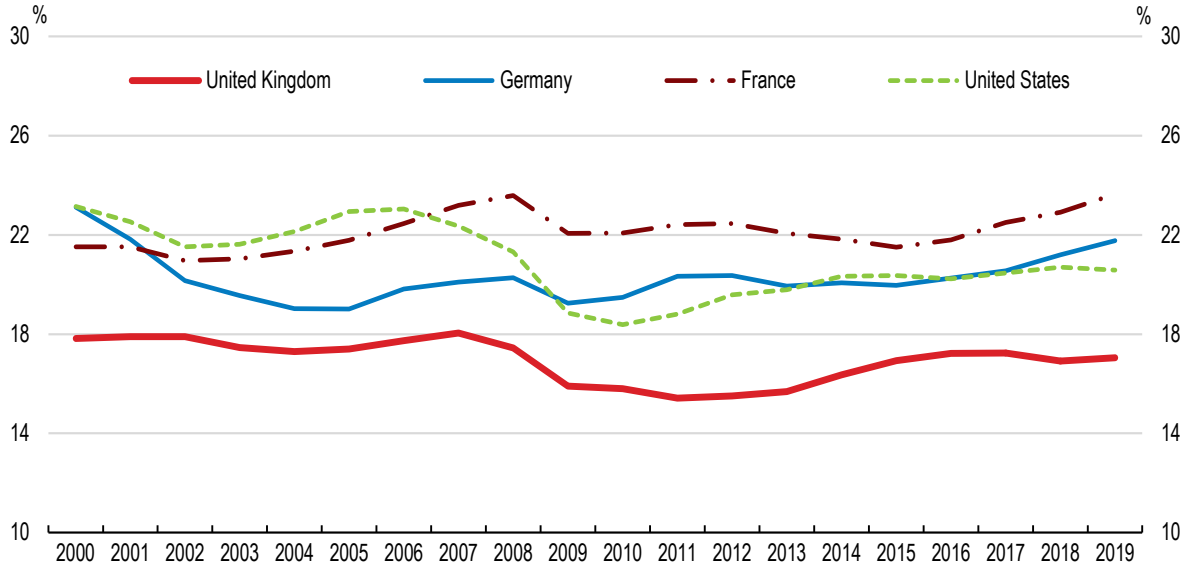
The deterioration in public finances in the current year will be offset to some extent in 2021 by a cyclical budget improvement and the scaling down of emergency measures. Still, based on policies announced prior to the Plan for Jobs, public debt would be around 20 percentage points higher in 2021 than in 2019. Over the longer term, the COVID-19 crisis will likely leave a structural budget deficit that would need to be narrowed or closed to stabilise the public debt-to-GDP ratio, albeit at a high level by historical terms. Raising productivity growth, in particular in the service sectors, would bring significant output gains but further policy measures will be needed to bring the public debt ratio onto a declining path (Figure 1.11).

Strengthening investment

Stronger public investment should play a key role in boosting demand in the short term and addressing the sluggish private and public investment of recent years (Figure 1.12).

Figure 1.12. Investment has been lower than in many other leading economies

% of GDP



Note: Investment refers to gross fixed capital formation.

Source: OECD (2020), OECD Economic Outlook: Statistics and Projections (database).

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Investment in fixed capital has been consistently lower as a share of GDP in the United Kingdom than in the United States, Germany and France. Business investment collapsed after the financial crisis. It

subsequently recovered but markedly slowed after the 2016 Referendum. Firms were around 11% less likely to increase expected expenditure on IT, vehicles, plants and machinery and on land and buildings in the period after the Referendum (de Lyon and Dhingra, forthcoming). There is increasing evidence that the sluggishness in investment reflects to a large extent Brexit-related uncertainties (Meloninna, Miller and Tatomir, 2018; Bloom et al., 2019). After decades of public under-investment, the Government started to deal with the infrastructure deficit through the Industrial Strategy and set out ambitious plans to remedy shortfalls in network infrastructure (Box 1.2, Table 1.6). Some public investment plans have been accelerated in response to the COVID-19 crisis.

Box 1.2. The Industrial Strategy

Since 2017, Governments have detailed and pursued the implementation of the Industrial Strategy, which regroups a range of measures to foster productivity growth (Table 1.5). Some of the financing has been clarified in recent Budgets. Action plans have been signed in key sectors and four grand challenges have been identified (Artificial Intelligence, Ageing, Green Growth and Future of Mobility) in September 2019. An independent Council oversees and assesses progress in implementation.

Table 1.5. Main elements of the UK Industrial Strategy

Ideas	Places
Raise total R&D investment from 1.7% to 2.4% of GDP by 2027 Increase the rate of R&D tax credit to 12%	Agree local industrial strategies Create a Transforming Cities Fund providing GBP 1.7 billion for intra-city transport Provide GBP 42 million to pilot a Teacher Development Premium
Infrastructure	**Business environment**
By the end of the Parliament, public sector net investment will be triple the average over the last 40 years in real terms Around GBP 640 billion of gross capital investment by 2024-25 (on average 5.8% of GDP per year) with GBP 88 billion for 2020-21 will be provided for roads, railways, communications, schools, hospitals and power networks across the country	Launch and roll out sector deals. 8 deals have been signed: aerospace, artificial intelligence, automotive, construction, creative industries, life sciences, nuclear, offshore winds and rails Drive over GBP 20 billion of investment in innovative and high potential business including through the establishment of a GBP 2.5 billion Investment Fund Launch a review to identify the most effective actions to improve productivity in small and medium enterprises
People	
Establish a technical education system that rivals the best in the world, invest GBP 406 million in maths, digital and technical education and create a national retraining scheme	

Source: UK Industrial Strategy website: https://www.gov.uk/government/topical-events/the-uks-industrial-strategy

The Industrial Strategy is a step in the right direction, which allows to focus on long-term investment planning. It will be important to maintain such a focus and ensure policy continuity. It would be useful to focus action more tightly on a set of core policies that have sufficient scope to deliver sizeable results. Long-standing investment gaps have been identified in a number of areas including education and skills development (Boshoff et al., 2019), infrastructure (Jones and Llewellyn, 2019) and digital infrastructure (Aitken et al., 2019). Large investment spending will also be needed to move toward a low carbon economy (OECD, 2017a).

While the current low-interest environment and easy financing conditions have been favorable to business investment, investment decisions have weakened further since the outbreak of the coronavirus. Policy can create favourable conditions to invest. The United Kingdom is currently one of the least restrictive countries in terms of business regulations and the competition framework is well designed, but the latter will need to be refined to adapt to a fast changing environment and new working arrangements and consumption

patterns (Chapter 2). In addition, stringent land-use regulations prevent an efficient allocation of housing supply and hamper effective competition, driving up costs.

In the March 2020 Budget, the Government announced that around GBP 640 billion of gross capital investment by 2024-25 (on average 5.8% of GDP per year) with GBP 88 billion for 2020-21 will be provided for roads, railways, communications, schools, hospitals and power networks across the country. It also announced a yet to be published National Infrastructure Strategy (Table 1.6). Some of the infrastructure and maintenance spending has been brought forward since then and GBP 5 billion (0.2% of GDP) have been committed to fund digital infrastructure in the most remote regions by 2025. Overall, this would mean that the United Kingdom could exceed by 2024-25 the public investment rates in France, Germany and the United States observed in 2019. The allocation and the timing of most of these investments are expected to be set out in the forthcoming Spending Review.

An increase in good-quality investment, including soft investment, could boost output in the short and long term without endangering fiscal sustainability in a low-growth environment (Mourougane et al., 2016). In particular, it is expected to bring higher short and long-term output gains than untargeted tax cuts or an increase in public consumption. OBR estimates that a permanent rise of public investment to 3% of GDP by 2022-23 would add 2.5% to potential output in the long term. OECD estimates also found that a sustained increase in public investment could bring sizeable long-term output gains, and would help to reduce inequalities (Box 1.3). Sound governance of infrastructure will be key to reap those gains. Despite some good cross-departmental coordination through the Infrastructure Project Authority and the set-up of a National Infrastructure Commission in 2017, there is scope to improve governance related to appropriate planning and management and coordination across government levels. Moving to infrastructure governance best practises (such as those observed in the Netherlands) is estimated to boost productivity growth for an average firm in an average downstream sector by 0.7 percentage point after a year, and by an average yearly 0.2 percentage point over a 10-year period (Demmou and Franco, 2020).

Table 1.6. Past recommendations on infrastructure and innovation

Recommendations in previous *Surveys*	Actions taken and current assessment
Infrastructure	
Continue to build on the progress made with the National Infrastructure Plan to further enhance long-term infrastructure strategy and planning.	In December 2017 the Infrastructure Projects Authority (IPA) outlined the Transforming Infrastructure Performance (TIP) programme. The National Infrastructure Commission (NIC) published their first National Infrastructure Assessment (NIA) in July 2018, which set out their assessment of the UK's long-term infrastructure needs.
Champion the recently created strategic planning and delivery agencies for transport infrastructure to achieve a stable and more efficient long-term investment framework.	In October 2018, the Government announced that the National Roads Fund will be GBP 28.8 billion between 2020 and 2025. The Rail Network Enhancements Pipeline was established in 2018.
Develop further the use of public-private partnerships (PPP) and public guarantees for privately financed infrastructure projects, recording the associated assets and liabilities in the government fiscal accounts. Enhance the provision to investors and the public of comparable data about public guarantees and the financial and operational performance of PPP projects.	The Government has a range of tools to support private investment, including the GBP 40 billion UK Guarantees Scheme. The Government has taken measures to improve the transparency of existing PPP projects and analyse the performance of existing PFI projects.
Improve the use of roads by introducing user-paid tolls, and of railways by ensuring the arms-length responsibility for awarding rail franchises.	Levy rates for the cleanest (EURO VI) lorries were reduced by 10% on 1 February 2019 and increased by 20% for other trucks.
Innovation	
Continue to increase direct and indirect support for private and public R&D.	The Government increased tax credits and direct spending in 2020.

Box 1.3. GDP and inequality impact of selected recommendations to support the recovery

This box presents estimates of the impact on GDP and inequality of selected recommendations to support the recovery formulated in this Survey. Some measures will be win-win policies. Increasing public investment is expected to bring sizeable output gains in the short and long term, while reducing inequality (Table 1.7). In the same vein, stepping up active labour market policies and upgrading technical skills would also foster long-term output and lower inequality. These estimates come with very strong caveats. First, the short-term impact of measures is imperfectly captured as it does not account for the position in the cycle. Second, the impact of measures has been estimated in isolation, leaving aside possible synergies or trade-offs, so the impact of the measures cannot be added up.

Table 1.7. Impact of selected reforms on growth and inequality

	Magnitude	Effect on GDP (per cent)		Effect on inequality (Gini, percentage point)
		After 3 years	Long term	Long term
Increase public investment	1% of GDP	0.8	4.5	-2.5
Increase active labour market policies	0.5% of GDP		0.2	Negative
Upgrade skills (technical and managerial)	closing one-fourth of the gap to best performers	1		Negative (for technical skills)
Ease financing for young innovative firms	closing one-fourth of the gap to best performers	0.9		
Make higher use of e-government	closing one-fourth of the gap to best performers	0.7		
Reduce barriers to digital trade	closing one-fourth of the gap to best performers	0.2		
Reduce regulatory barriers to competition and reallocation	closing one-fourth of the gap to best performers	0.1		

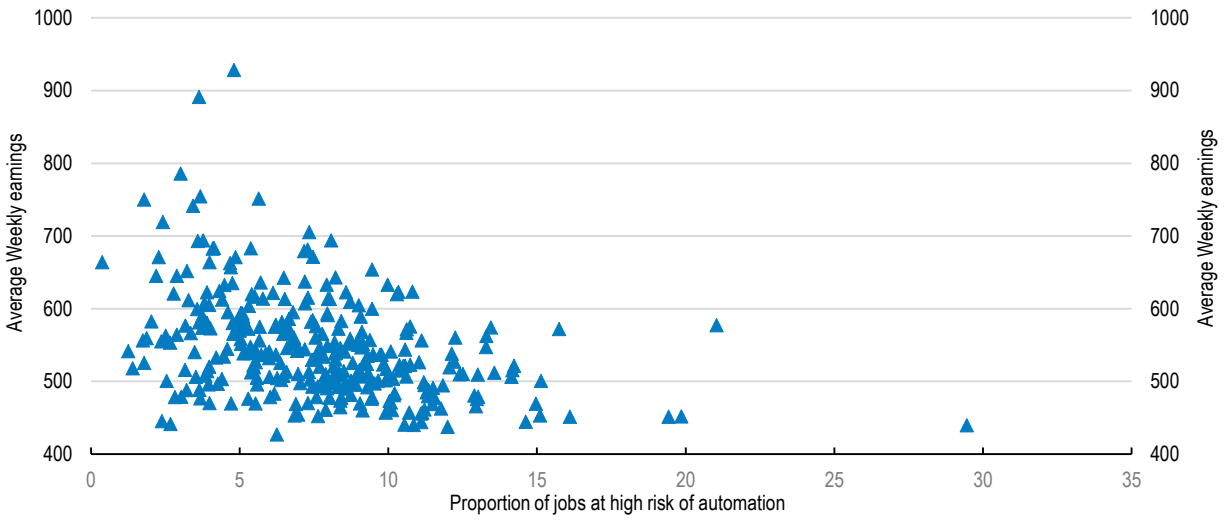
Note: Only the impact of selected recommendations could be quantified given the tools available. Estimates of long-term impacts of measures to boost digital adoption are not available.
Source: Fournier and Johanssen (2016), Cournède, Fournier and Hoeller (2018), Egert and Gal (2017), Sorbe et al. (2019).

Investments in sustainable transport systems and digital infrastructure are key to addressing the long-standing issue of the falling behind of some regions in terms of productivity and well-being, a problem which may be made more acute by the COVID-19 crisis (Table 1.8). Lower-earning regions appear to have been hit harder economically (Box 1.4) and the number of COVID-19 related deaths has been much higher in the most deprived regions (ONS, 2020a). Managing the impact on jobs may be more difficult in areas already lagging behind in terms of employment and incomes. Both productivity and earnings in London are more than 30% higher than the national average, but in Wales they are 15% lower (Zankaro, 2020). Lower-earning regions also face long-term challenges such as a higher risk of automation (Figure 1.13), and vulnerability to Brexit (HM Government, 2018). Climate change may in some cases add to these problems as some of the most affected communities are already socially vulnerable (UK2070 Commission, 2020).

The local dimensions of the Industrial Strategy could also play a key role in addressing short- and long-run regional disparities, but there is at the moment little information on how the Government intends to allocate funding to reduce regional disparities. One avenue to consider would be to prioritise public funding on investment projects in the most deprived regions, while ensuring that good value-for-money projects are selected and local authorities have the capacity to manage those projects. GBP 900 million (0.04% of GDP) have been announced for ‘shovel ready’ infrastructure projects, through the Getting Building Fund,

over the course of this year and next. The majority of this funding will be directed to areas outside of London and the South East. This is a step toward a rebalancing of investment away from London and the South East, where public investment spending per head is higher than anywhere else in the country (Zankaro, 2020). Following the exit from the EU Single Market, it will also be important to clarify what kinds of new systems will be in place to ensure that the most deprived regions receive the support they need, in the absence of EU funds. Those funds have helped to sustain employment and development in the poorer regions, particularly in West Wales and the South West of England (University of Sheffield, 2016). The Government has committed to replace EU structural funds with the UK Shared Prosperity Fund.

Figure 1.13. Risk of automation is higher in lower-earning regions



Note: The average weekly earnings are based on data in April 2018, whereas the automation data is in 2017.
Source: ONS (2019), "The probability of automation in England: 2011 and 2017", and "Employee earnings in the UK: 2018".

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Table 1.8. Past recommendations on regional development

Recommendations in previous *Surveys*	Actions taken and current assessment
Develop integrated, regionally focused policy packages based on current and emerging regional strengths. Prepare impact assessments of the EU departure and climate change objectives.	In England, local areas have worked with the Government to publish Local Industrial Strategies. The first strategy was published in June 2019 and to date, seven Local Industrial Strategies have been published including the West Midlands, Greater Manchester, Buckinghamshire, Cambridge and Peterborough, Oxfordshire, South East Midlands and the West of England.
Continue decentralisation by concluding deals with all city-regions.	The Government, together with the devolved administrations, local authorities and partners, has concluded a number of City and Growth Deals. Eight English city regions have now elected Metro Mayors, following devolution deals which have included significant devolved powers and responsibilities, as well as new funding for local priorities. In March 2020, Government agreed a devolution deal with West Yorkshire Combined Authority, which is expected to be implemented later this year. The previously-agreed deal with Sheffield City Region is also now progressing to consultation following local agreement.
Allow local authorities to retain more revenues from locally levied property taxes.	The Government's aim is to increase the proportion of business rates retained by local government from 50% to 75% by devolving grants of equivalent value. The Government will continue working with Local Authorities in order to determine the best approach to implementing changes to business rates retention. Since 2017-18, some areas have been piloting 75% or 100% Business Rates Retention.

Box 1.4. The COVID-19 crisis could hit lower-earning regions hardest

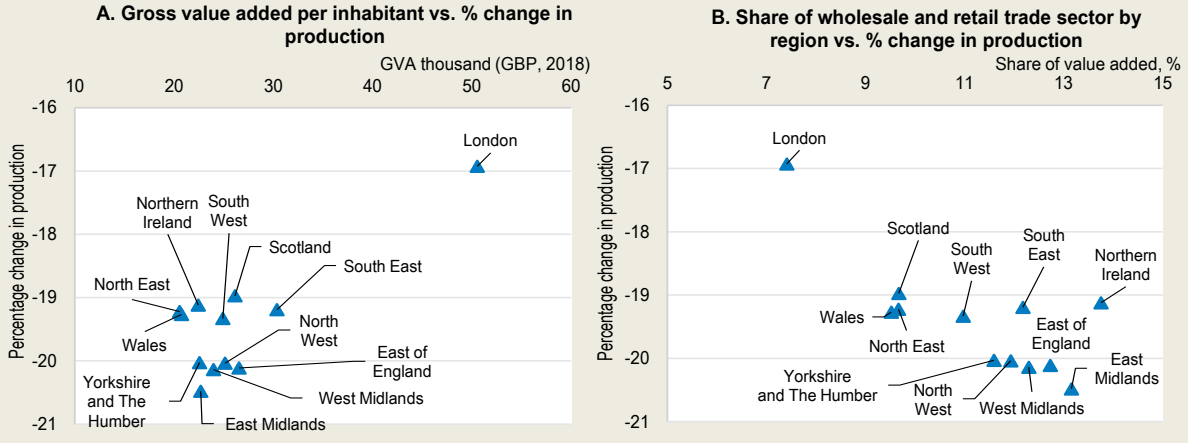
During the lockdown period, in the three months to May 2020, nearly all UK regions are estimated to have experienced severe output losses of 19-20% (three months on previous three months). However, output reductions were more pronounced in lower-earning regions (Figure 1.14, Panel A), although differences across regions are small relative to the size of the COVID shock.

Regions with a higher share of wholesale and retail trade activities tended to have a larger reduction in their total output (Figure 1.14, Panel B). Furthermore, manufacturing is estimated to be a main contributor to the output falls in the hardest-hit regions and Wales, while, in London, accommodations and food services as well as professional, scientific and technical activities sectors were the most important drivers. The impact on labour markets is mixed. London, Scotland and Northern Ireland experienced the largest falls in employment, while Wales registered an increase in employment during the period.

Looking ahead, there may be longer lasting regional impacts if there are persistent weaknesses in some sectors such as tourism or specific manufacturing activities. Higher unemployment may be more difficult to reverse in areas with less dynamic labour markets. Some of these effects may be localised. For instance, coastal areas are very dependent on tourism and with relatively limited alternative activities. Given the regional diversity in labour markets dynamics and demographics, the persistence of the shock is likely to differ across regions (Figure 1.15). London and South East's labour-market resilience is estimated to be the highest among the UK regions, while Wales and North-East of England would have the least resilient markets (Whiteshield Partners, 2020).

Figure 1.14. Lower-earning regions have been hit harder

Percentage changes in production to UK output fall, by regions, March to May 2020



Note: Regional changes in production are calculated as the average of nation-wide sectoral effects on output, weighted with the shares of sectoral value added in each region. NUTS1 areas of the United Kingdom are Wales, Scotland, Northern Ireland, and the nine English regions.
Source: Calculations based on ONS (2020), "GDP monthly estimate, UK: May 2020", July, ONS (2019), "Regional gross value added (balanced) by industry: all NUTS level regions (database)", December, and ONS (2020), "Population estimates for the UK, England and Wales, Scotland and Northern Ireland: mid-2019", June.

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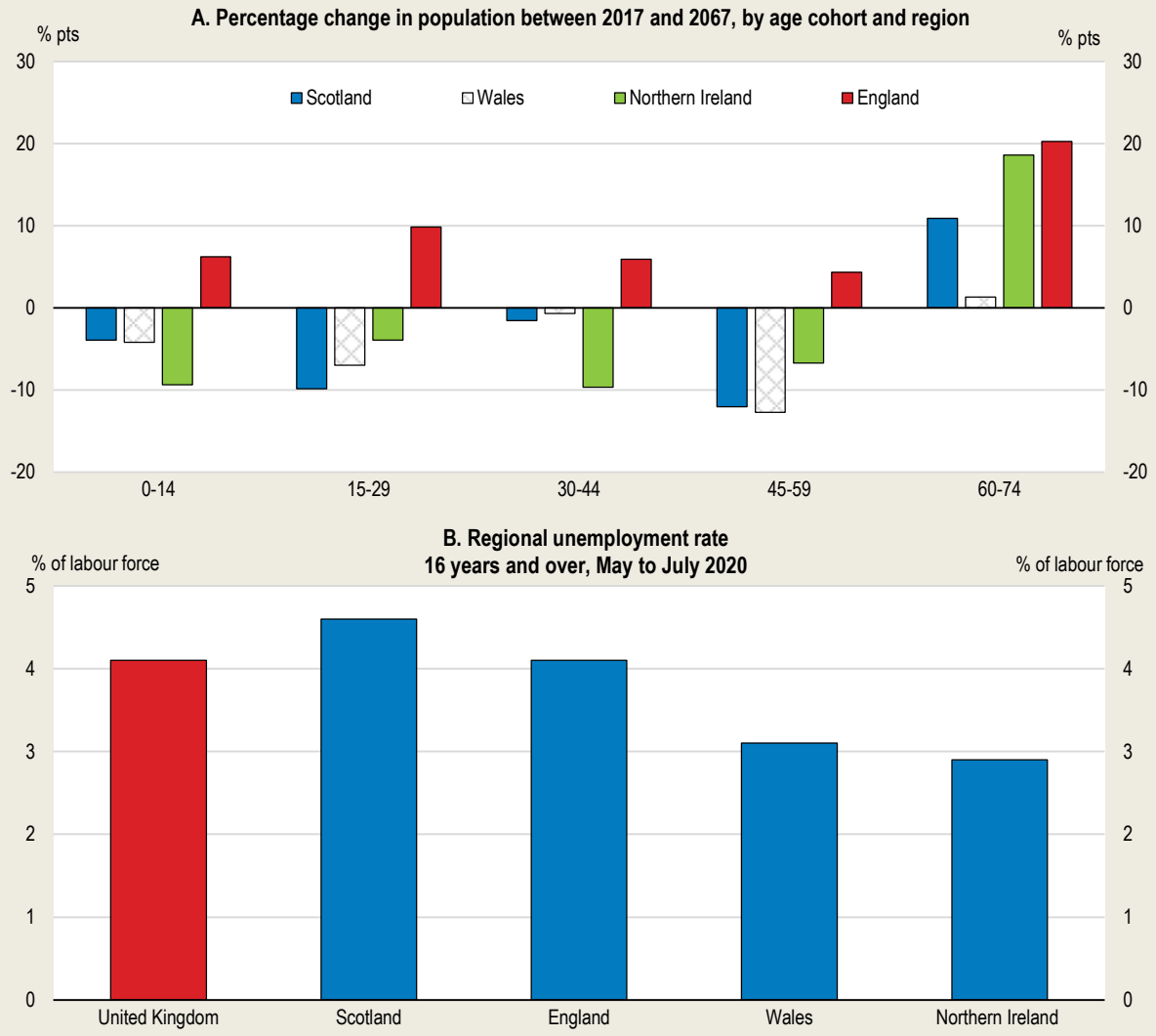
Figure 1.15. The demographics and labour market situation are different across regions



Source: OBR (2018), Fiscal Sustainability Report, July, and ONS (2020), "Regional labour market statistics in the UK: September 2020".

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Supporting viable firms

One challenge is to help firms overcome temporary liquidity difficulties in the current business environment, while facilitating the exit of firms that were either not viable even before the COVID-19 crisis or which are unlikely to return now to profitability. This will be particularly important as those firms may face additional difficulties to cope with the exit from the EU Single Market. The COVID-19 crisis has caused sharp reversals in non-financial company performance expectations worldwide and worsened the situation on the market for corporate debt, following a period of a marked rise in borrowing by businesses with low credit scores prior to the COVID-19 crisis (OECD, 2020c). Like most other OECD countries, the United Kingdom introduced several programmes to support firms through the COVID-19 disruption, including tax deferrals and government-backed loans. These measures have prevented firms' liquidity problems from turning into immediate solvency issues. However, they may turn out to be costly and ineffective if support

is provided to firms that are not viable (OECD, 2020d). To minimise the risks, the programmes should be evaluated over time and adjusted if needed. More generally a review of the many support programmes that have been introduced over the years and reprioritisation toward firms, such as young innovative firms, that suffer from severe temporary financing constraints is necessary (Chapter 2).

Fast resolution of insolvent firms would support a speedy recovery. Streamlined debt resolution schemes may be helpful to minimise barriers to corporate restructuring and spur productivity-enhancing capital reallocation (Adalet McGowan et al., 2017). The Corporate Insolvency and Governance Act, passed in June 2020, introduces tools similar to the US's Chapter 11 scheme. It provides greater flexibility in the insolvency regime and gives companies a moratorium to explore options for rescue whilst supplies are protected. This is particularly important for small businesses (Financial Conduct Authority, 2020). To avoid otherwise solvent firms going bankrupt, the Government could also consider improving access of capital-weak SMEs to existing loan schemes by temporarily easing co-financing requirements, while keeping strict monitoring in place.

Like many other OECD countries, there are calls to take equity stakes in firms experiencing difficulties. Such an approach should be limited to firms where this support is necessary, whose financial distress is linked to the downturn and which are likely to return to profitability once economic conditions improve (OECD, 2020f). In addition, in order to contain costs to taxpayers and minimise moral hazard risks related to the expectations of future bailouts, strict recovery plans should be imposed on the firms benefiting from these interventions. Clear conditions for exit from state ownership should also be set, relying on independent advice to ensure sound valuations of investments and divestments. Improving governance will help to maximise the benefits of such measure. While governance of state-owned entities is generally high in the United Kingdom, some SOEs operating in competitive markets benefit from a legal status that may shield them from the full application of private company law.

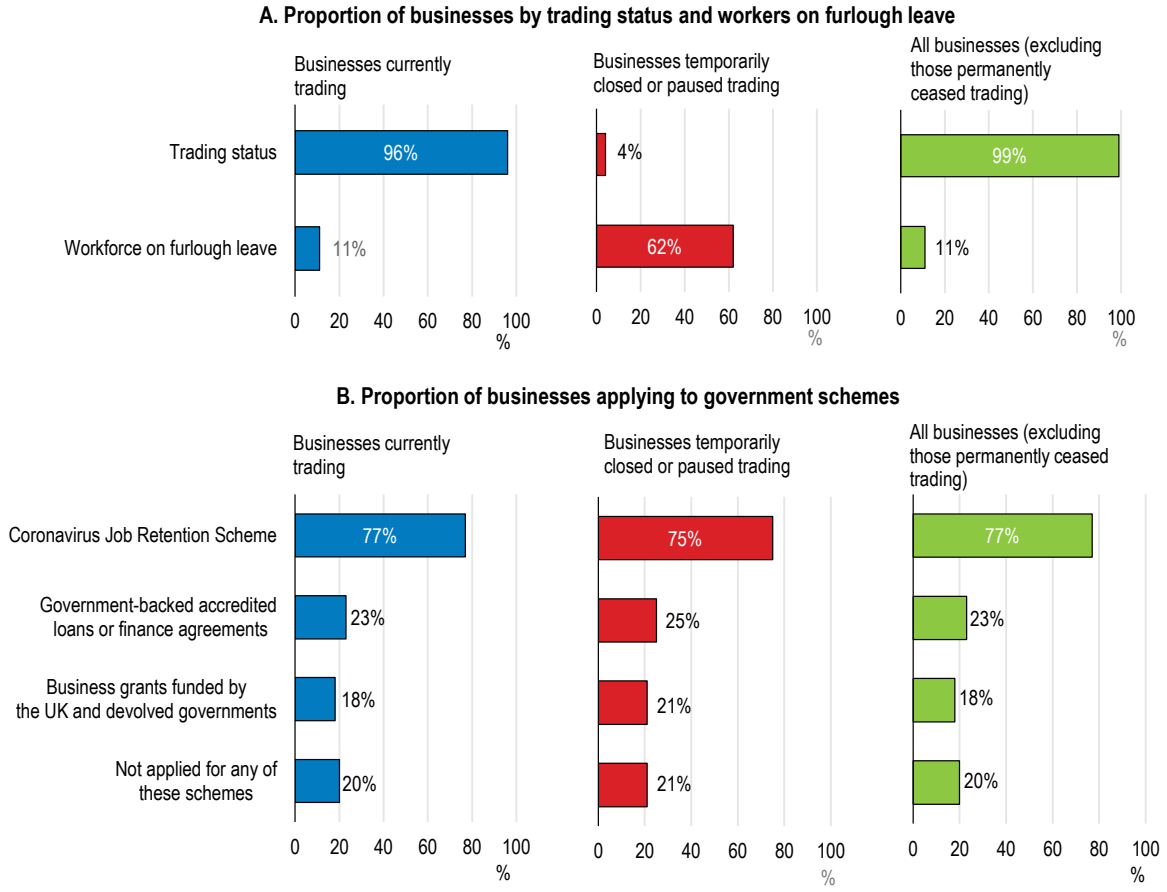
Supporting workers

The COVID-19 crisis has led to substantial disruptions to employment during the lockdown phase and on-going job losses, leading to risks of rising poverty, despite substantial support measures. Leaving the EU Single Market is also expected to increase the unemployment rate to a various degree across sectors (see below). Protecting vulnerable households should continue to be a priority during the recovery phase, including ensuring that those who lose their jobs are able to move to new activities and do not become detached from the labour market.

The Job Retention Scheme (JRS, “furlough”), which was implemented in March, has helped mitigate the crisis impact on labour markets. Its take-up was massive (Figure 1.16). It was complemented by a similar scheme for the self-employed. According to official data, by mid-July 2020, around 9.6 million workers, or 43% of private sector employees, had received wage subsidies through the furlough programme with a further 3 million receiving income support through the self-employment scheme. Similar measures were also put in place in other European and OECD countries, following Germany’s positive experience during the financial crisis (Box 1.5). The unemployment rate would have been much higher in the absence of these measures.

Figure 1.16. A large majority of firms applied for the Coronavirus Job Retention Schemes

Headline indicators from the Business Impact of Coronavirus Survey



Note: Based on ONS Business Impact of Coronavirus (COVID-19) Survey. Businesses were asked for their experiences for the reference period 10 August to 23 August 2020. All percentages are a proportion of the number of businesses who responded apart from the percentages on furlough leave which are a proportion of the workforce apportioned by workforce size.
Source: Office for National Statistics.

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The Government has implemented a gradual phase-out of the JRS, raising employers' financial contributions to the scheme gradually. The Government has also announced the Job Support Scheme, to open on 1 November and run for 6 months. The scheme aims at protecting viable jobs in businesses which are facing lower demand over the winter months due to COVID-19, to help keep their employees attached to the workforce. In principle, it is appropriate over time to move from supporting all jobs to a more targeted approach to limit fiscal costs and avoid supporting jobs that are no longer viable (OECD, 2020b; 2020g). With emergency support being wound down, the UK Government also introduced in July a Job Retention Bonus (GBP 1000 per furloughed employee) to encourage employers to retain furloughed employees. This measure is likely to limit the expected increase in unemployment. However, this untargeted measure carries some deadweight loss as support goes to firms which were planning to bring back their employees anyway. As the crisis progresses with some sectors recovering and others not, it will be important to ensure support is available and adapted as needed based on epidemiological and economic developments, while not hindering the reallocation of resources towards firms and sectors with better growth prospects. The effects on the labour market should be closely monitored. It could be useful in this second phase to explore job support on a targeted basis (OECD, 2020g). France applies different rules with respect to the cost of firms for the job retention scheme between sectors that are open for business and sectors that remain subject to health restrictions.

The COVID-19 crisis has pushed up youth unemployment. In May 2020, over 500 000 people aged 16 to 24 claimed unemployment related benefits, double the number in March. The situation is expected to deteriorate further when new graduates enter the labour market after the summer. The Plan for Jobs announced the Kickstart Job Scheme, which will include a subsidy of 100% of the minimum wage for each young employee hired, for 25 hours a week and for six months. It is estimated that about 300 000 16-24 year olds at risk of long-term unemployment will benefit from the scheme and that the fiscal cost will be GBP 2 billion (0.1% of GDP). Such time-limited hiring subsidies targeted at low-paid workers can promote job creation, especially during downturns (OECD, 2020g). A somewhat similar scheme, the Future Job Fund, was introduced in 2009 in the United Kingdom. An *ex post* evaluation suggests that, after six months, this programme resulted in a net benefit for participants and employers and had a fiscal cost that was lower than the net benefits for society (Department of Work and Pensions, 2012). Long-term impacts remain uncertain, however.

Box 1.5. Selected policies to support the recovery in OECD countries

This box reviews policies that are starting to be put in place in countries which have moved to a second phase of support, from emergency action to recovery. The challenge for policy will be to strike the right balance between providing needed support to workers and firms still affected by restrictions, while helping viable businesses in need but also permitting necessary restructuring. The box builds extensively on the July *Employment Outlook* and on recent OECD policy briefs.

Securing income and improving job matching

Unemployment benefits are among the key instruments providing protection against earnings falls resulting from job losses, while allowing for a sufficient degree of reallocation. Combining generous unemployment benefits with rules that provide subsidies or tax relief for firms that recall previously dismissed workers could support workers and preserve job matches to a similar extent as short-time work schemes (Schwellnus et al., 2020). Israel, for instance, introduced a recall subsidy of around USD 2100 at the end of May 2020.

In a few countries, the focus has also been on encouraging hiring of young workers who are likely to be massively affected by the crisis (United Kingdom, France). Such schemes could prevent long-term scarring (OECD, 2020g). France introduced new one-year (or more) hiring subsidies for workers younger than 25, with lower social contributions worth EUR 4000, up to 1.6 times the minimum wage. The subsidy is conditional on new hiring on permanent contracts or on temporary contracts of more than six months.

Countries have also increased funding of active labour market policies, in particular the budget of public employment services (PES) to cope with higher volumes of services (Finland, United Kingdom). Finland assigned preliminary budget increases to the PES offices for the next years already in early April 2020 and further increases are under discussion (OECD, 2020h). Countries have also made increasing use of online and effective skills profiling tools essential to ensure that training is efficiently focused on jobseeker skill gaps (Australia, the Netherlands).

A number of countries have extended support for vocational education and training to improve job matching (OECD, 2020i). Canada or France have opted for an extension of existing skill development schemes. Pre-existing online training solutions enabled many countries to maintain some training provision with minimal investment (Austria, Belgium, Denmark, Estonia, the Netherlands and some regions of Italy). Some countries have boosted online training options (Denmark, France, Sweden).

Targeting support for firms or sectors

With the move to the second phase of support, policies have become more targeted and differentiated according to the conditions of firms and sectors. Germany introduced a EUR 25 billion loan support

programme for small firms that have seen their sales drop by more than 60% in the June to August period, with a view to help bars, restaurants, hotels and other hospitality businesses. In Japan, the "Go To Campaign" (0.3% of GDP) provides Japanese residents with domestic tourism vouchers that cover half of the travel expenses and 20% of food and entertainment expenses. Countries also used temporary VAT cuts to support struggling sectors (Austria, Germany, and the United Kingdom). Several countries have programmes targeting SMEs, including equity funding and convertible loans for tech start-ups (France, Germany and United Kingdom). Some countries have put in place measures to facilitate a fast resolution of insolvent firms, either through streamlined debt resolution or debt forgiveness (the Netherlands, United Kingdom).

Using recovery plans to protect the environment and fasten digitalisation

A number of countries increased green investments into renewable energy technologies and smart grids to raise energy efficiency (Korea), in the transport sector and in the development of a hydrogen industry (Germany) or mandatory local green recovery plans (France). In Canada, the federal government has provided funds for cleaning up inactive oil and gas wells.

Nine countries have announced public investment in digitalisation (Borowiecki and Pareliussen, 2020). An important component is the frontloading of the rollout of 5G infrastructure (Germany, Japan, Korea, and the United Kingdom) or the improvement of e-government services (Germany, Korea). Korea has brought forward investment plans for digitalisation to support private investment of low-productivity firms. Japan has increased funding to support the digitalisation of SMEs.

The COVID-19 crisis will test the responsiveness of the United Kingdom's ambitious, ongoing welfare reform. The Universal Credit integrates a number of the legacy system's benefits and aims at simplifying access and extending the existing activation efforts across all benefits. Those working very few hours at the minimum wage are eligible for unemployment support. Integrating benefits is improving take-up, increasing overall benefit spending. To help buffer the COVID-19 shock, the Government swiftly expanded the Universal Credit's eligibility rules, allowing many new claimants (Figure 1.3) and temporarily somewhat raised Universal Credit and Working Tax Credit payments.

When it started to be rolled out, Universal Credit was widely seen as a very promising way to modernise activation policies and simplify the delivery of welfare benefits. There have been major implementation and administration issues, including the timing and approach to assessing and making transfers, and the stringency and penalties related particularly to job search requirements. Nonetheless, in the first months of the COVID-19 crisis the system has been robust and able to swiftly support incomes in the face of an unprecedented number of new claims. The Universal Credit's requirements that recipients engage in labour activation support (Department of Work and Pensions, 2015a), and the credible threat of sanctions improves employment rates for many groups (Department of Work and Pensions, 2015b). However, there is evidence that for some groups, the Universal Credit's sanctions have harmed well-being rather than supporting movement into better quality work (Watts and Fitzpatrick, 2018; Williams, 2020). Punitive conditions discourage the households with the greatest needs (the homeless, the mentally ill and those with poor literacy) from applying for or maintaining enrolment in Universal Credit (Batty et al., 2015; Wright et al., 2016; Work and Pensions Committee, 2018) and may discourage some individuals from looking for work (Immervoll and Knotz, 2018). Recognising these issues, the Government has abolished some sanctions, is reviewing others, and the share of Universal Credit recipients receiving sanctions has been declining since 2018 (Webster, 2020). It is important to ensure that job-search requirements, in the form of payment sanctions, support movement into work and do not impose unnecessary hardship to the most vulnerable workers, and that the system continues to be assessed and adjusted to improve its effectiveness.

Poverty rates are highest in the United Kingdom amongst households that are out-of-work and the severity of the crisis has increased substantially the risks of falling into poverty. Prior to the COVID-19 crisis, poverty

had increased amongst the working-age population and the share of people reporting severe low income and material deprivation increased by 2 percentage points to 5% from 2011-12 to 2018-19 (Department for Work and Pensions, 2019). Despite the temporary increase in basic unemployment support and minimum income benefits, unemployment benefits for many household types in the United Kingdom remain below levels in many other OECD countries. Depending on the latest epidemiological and economic developments, continuing to provide support to the unemployed could support demand and inclusiveness.

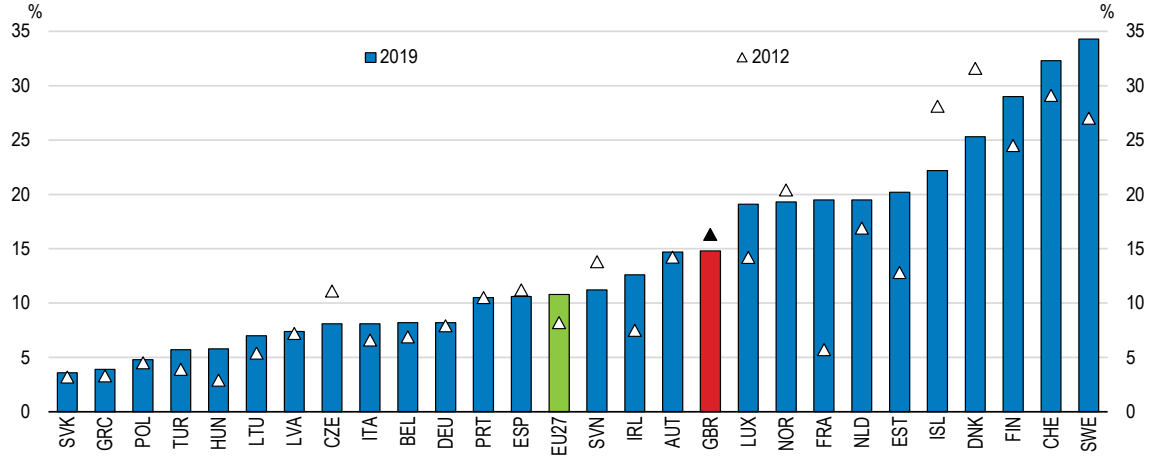
Helping people to find work and get better quality jobs

Expanding the funding and the services provided by the public employment services provider JobCentre Plus will help improve the re-employment of people who lose their jobs in the COVID-19 crisis (Desiere, Langenbucher and Struyven, 2019). In July 2020 the Government increased funding for Job Centres by GBP 1.2 billion (0.05% of GDP), including GBP 0.9 billion to double the number of staff working with job seekers, and this adds add to GBP 2 billion for the 'Kickstart' programme and other programmes to support job search. Those measures are welcome, and expanding such measures further would be warranted. Spending on activation policies per unemployed person is low by international standards, even when correcting for labour market conditions, with spending on public employment services particularly weak (OECD, 2017b). There is evidence that active labour market programmes had been scaled back in recent years prior to the COVID-19 crisis (Orton and Green, 2019). Improved matching of workers' skills with employers' needs through enhanced active labour market policies would help employment to recover from the COVID-19 shock, raise workers' productivity, increase inclusion and reduce the cost of welfare. Along with strengthened skill training discussed below, further expanding JobCentres' targeted profiling facilities may be particularly fruitful.

The Government is also now increasing resources for training schemes available to the unemployed. These can improve employability for workers displaced by COVID-19 and other labour market transformations and ensure they can adapt to the constantly evolving skill requirements of the modern labour market years. Building up skills, in particular digital skills, will be key to help workers and firms adjust to the new economic environment by facilitating digital adoption, and the Government's increased support for basic digital skill training are steps in the right direction. These measures can go further, towards laying the foundations of a sustained recovery from the COVID-19 shock and reducing the number of underqualified workers in the United Kingdom, who make up a larger share of the workforce than in many other OECD economies, as underlined in the previous Survey. OECD work shows that providing good-quality ICT training to low-skilled workers could be a 'double dividend' policy (OECD, 2019a). It can boost productivity and reduce inequality by bridging the digital divide.

Although participation in lifelong learning in the United Kingdom is higher than the average of European OECD countries, it has been declining in recent years (Figure 1.17). Public funding for adult skills has fallen over the last decade (Britton, Farquharson and Sibieta, 2019). In the March 2020 Budget, the Government committed to a new GBP 2.5 billion National Skill Fund (0.1% of GDP) and funding to skills and apprenticeships has been increased in the Plan for Jobs by GBP 1.6 billion, most likely over several years. There is evidence that the quality and effectiveness of many of the training programmes offered by Jobcentre Plus have been poor (Dwyer, 2018). Research undertaken for this Survey suggests that on-the-job training expenditure planned by firms has been trending down since the financial crisis (Box 1.6). The Government has started to roll out the National Retraining Scheme, which seeks to provide financial support to firms and help their employees, who have lost their jobs because of automation or Artificial Intelligence, to seek employment elsewhere. Improving the offer of individual lifelong learning, similarly to what has been done in a number of OECD countries such as France or Finland, is important to encourage participation in training to adapt to workplace changing needs (Chapter 2).

Figure 1.17. Participation in lifelong learning has been decreasing



Note: The indicator measures the share of people aged 25 to 64 who stated that they received formal or non-formal education and training in the four weeks preceding the survey, over the total population of the same age group, excluding those who did not answer to the question. Adult learning covers formal and non-formal learning activities, both general and vocational, undertaken by adults after leaving initial education and training.
Source: Eurostat, based on the EU Labour Force Survey.

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Postponing future increases in the minimum wage (National Living Wage), especially for younger workers, would reduce employment and income risks given the weakening of the labour market as a result of COVID-19 and of the exit from the EU Single Market and the Customs Union. The minimum wage started in 1999 at a relatively low level but subsequent changes would sharply increase it. In 2019, the minimum wage relative to productivity in the United Kingdom was above most OECD countries (Figure 1.18). The minimum wage was increased in 2020 to GBP 8.72 per hour for adults. With the projected fall in median wages, this raises the minimum wage to around 60% of the median wage. The Government is considering increasing it to 66% of the median wage by 2024, if economic conditions allow, while reducing the age workers become eligible for the National Living Wage from 25 to 21. In October 2020, the Low Wage Commission's experts will recommend a minimum wage rate that should apply from April 2021 in light of economic conditions towards reaching the 66% of the median wage target by 2024. The Commission could also recommend a review of the 2024 target or its timeframe. Given the overall strength of the labour market prior to the COVID-19 crisis, there was a negligible impact on aggregate employment from the increases in the minimum wage (Low Pay Commission, 2019a), consistent with international experience (Dube, 2019). However, there were negative employment effects in the retail sector and also amongst women who work part-time (Aitken, Dolton and Riley, 2019). Given the weakness of demand and higher operating costs following the COVID-19 shock, especially in sectors where many employees are young or low-skilled workers, there is a risk that future sharp rises in the minimum wage harm employment more and these workers' overall incomes.

To address the problem of low incomes, strengthening the United Kingdom's in-work benefits would be more effective as it can address the gap between underlying market wages and adequate incomes without creating employment risks. As well as potentially pricing some workers out of the labour market, minimum wages are not particularly well-targeted to reduce poverty. Past increases in the minimum wage have helped to support the incomes for low-paid individuals in the United Kingdom, but the share of workers on low weekly pay has barely fallen since 2009. Higher minimum wages can reduce the incidence of low pay and wage inequality, at least in the short term, largely by the higher minimum wages 'rippling' into wages higher up the distribution (OECD, 2018a). However, poverty is concentrated among those out of work, many minimum wage workers live in households well above the poverty line, and in-work poverty is often associated with short working hours which risk being shortened further in response to the higher wage rate (Figure 1.19; Atkinson et al., 2017; OECD, 2018b; Brewer and De Agostini, 2015).

Box 1.6. Recent trends in on-the-job training

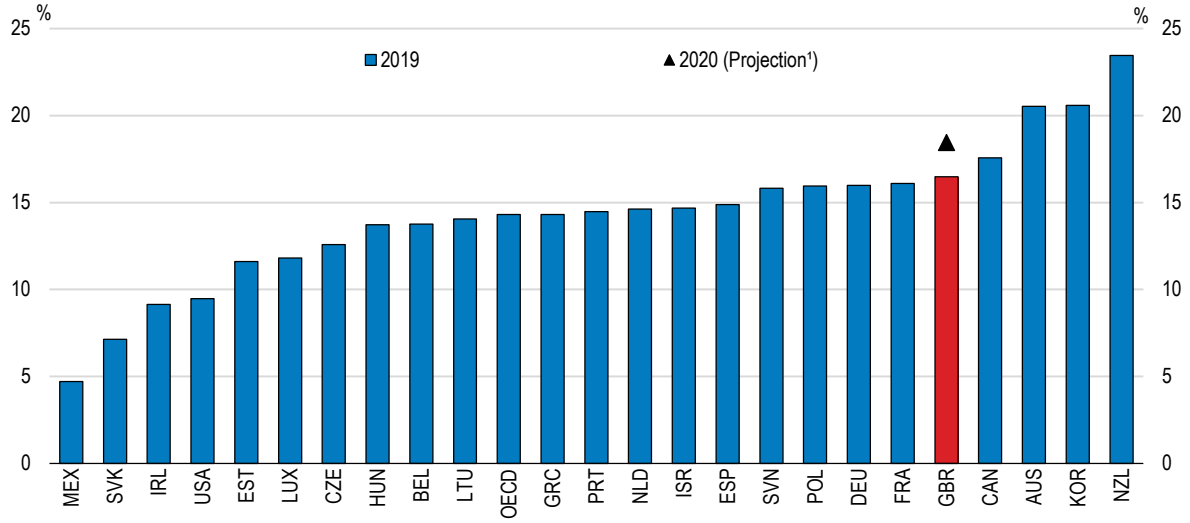
New research for this Economic Survey examines recent trends in employer-provided training. De Lyon and Dhingra (forthcoming) use firm-level survey data collected by the Confederation of British Industry (CBI) over the period 2005-2018. They identify two major changes in the trends in firms' training expenditure.

The first, most stark change, occurred in the wake of the financial crisis. Looking at within-industry changes in investments, firms were around 10% less likely to increase training expenditure during the Great Recession than in the period before, as they experienced a fall in demand for their output. The effect is likely to have been compounded by increasing uncertainty and more limited access to credit.

The second major change in training expenditure occurred immediately after the 2016 Referendum. Since 2016, firms were 7.5% less likely to increase their training than in the period before and 9% less likely when looking at within-industry changes. The combined effects of higher import costs, reduced future export demand and greater uncertainty could be the likely reasons for the cut-back in investments. The effects are strongest for larger firms, as measured by employment and turnover, perhaps because these firms initially provide more training while no significant change was observed for small and medium size enterprises.

Figure 1.18. Minimum wages in the United Kingdom are among the highest in the OECD relative to productivity

Ratio of hourly minimum wage to output per hour worked, at current purchasing power parity



Note: The 2019 data on output per hour worked are estimated based on OECD Economic Outlook 107 database, if they are not available. Unweighted average of the shown data for the OECD aggregate.
1. Based on the growth in the National Living Wage (NLW) from 1 April 2020 (6.2%) and the Economic Outlook projection of productivity.
Source: OECD calculations based on OECD (2020), OECD Productivity Statistics (database), OECD National Accounts Statistics (database) and OECD Economic Outlook 107 database.

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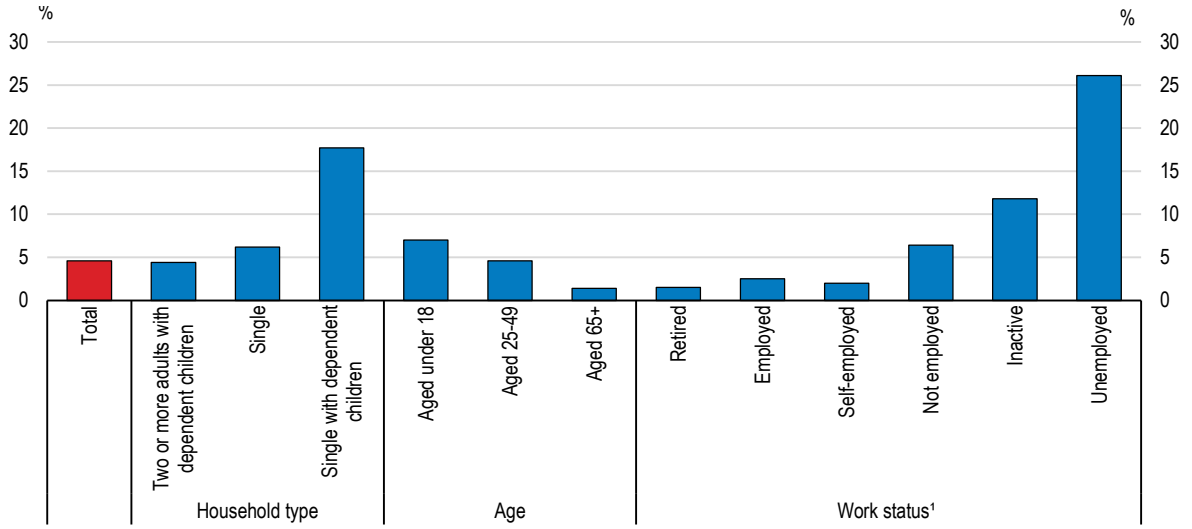
Figure 1.19. Poverty rates are highest among households out of work and single parents

Severe material deprivation rate, 2018



Note: The severe material deprivation rate is the proportion of the population living in households unable to afford at least four of the following items: unexpected expenses, a one-week annual holiday away from home, a meal involving meat, chicken or fish every second day, the adequate heating of a dwelling, durable goods like a washing machine, colour television, telephone or car, or are confronted with payment arrears.

1. Population aged 18 years and over.

Source: Eurostat (2020), EU Statistics on Income and Living Conditions (database).

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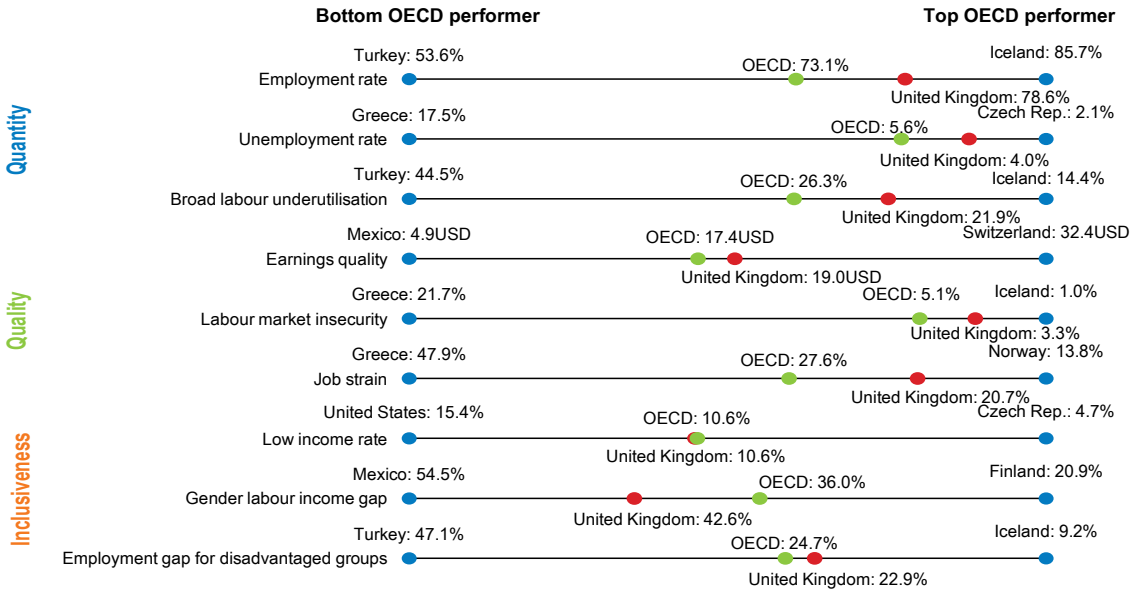
The COVID-19 crisis is likely to have affected women particularly badly, given their higher share of employment in customer-facing activities and the care responsibilities they often assume. The UK's labour market lags other OECD countries in the gender wage gap and in the share of workers earning low incomes and there are risks of a further widening in the aftermath of the COVID-19 crisis (Figure 1.20; OECD, 2018a). The female labour force participation rate has increased since 2000 but was still 8 percentage points below male rates in early 2020 (Figure 1.21). A significant proportion of inactive women (38% in 2019) have caring responsibilities that may act as a barrier to work. Surveys suggest that these responsibilities increased disproportionately for women during the COVID-19 crisis in many OECD countries, including the United Kingdom. The share of British women in employment holding a part-time job was over three times that of men in 2018, one of the highest ratios in the OECD. This results in a large pay gap: British women on average earned 43% less from working than men in 2015, compared to a gap of 39% on average in OECD countries (OECD, 2017b). Precarious female employment is also the primary cause of low incomes of poor families and of child poverty (Thévenot and Manfredi, 2018).

Figure 1.20. Job creation was strong prior to the COVID-19 shock but inclusiveness is more challenging

2019 or latest year



Note: Employment rate: share of working age population (20-64 years) in employment (%). Broad labour underutilisation: Share of inactive, unemployed or involuntary part-timers (15-64) in population (%), excluding youth (15-29) in education and not in employment (%). Earnings quality: Gross hourly earnings in PPP-adjusted USD adjusted for inequality. Labour market insecurity: Expected monetary loss associated with the risk of becoming unemployed as a share of previous earnings. Job strain: Percentage of workers in jobs with a combination of high job demands and few job resources to meet those demands. Low income rate: Share of working-age persons living with less than 50% of median equivalised household disposable income. Gender labour income gap: Difference between per capita annual earnings of men and women (% of per capita earnings of men). Employment gap for disadvantaged groups: Average difference in the prime age men's employment rate and the rates for five disadvantaged groups (mothers with children, youth who are not in full-time education or training, workers aged 55-64, non-natives, and persons with disabilities; % of the prime-age men's rate).
Source: OECD (2018), OECD Jobs Strategy https://www.oecd.org/employment/jobs-strategy/country/; OECD Employment database, www.oecd.org/employment/database; and OECD Income Distribution Database (IDD), http://oe.cd/idd.

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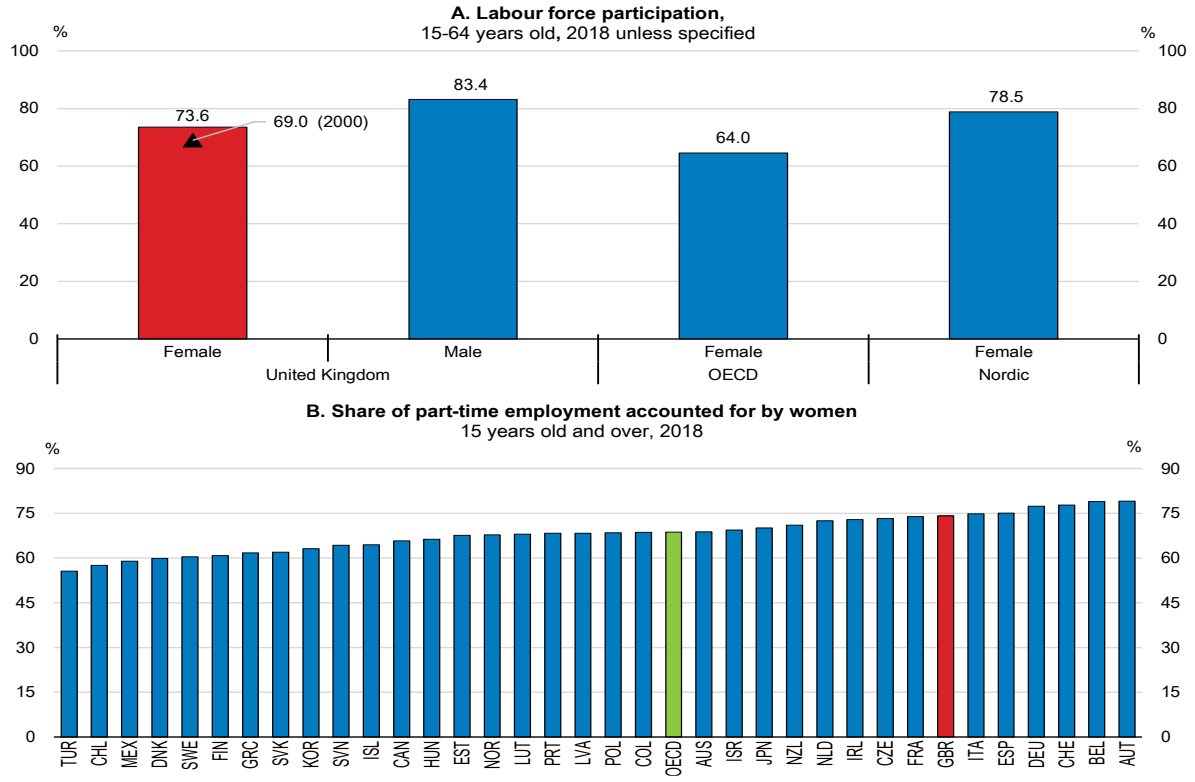
Distancing rules due to COVID-19 are likely to reduce further scarce childcare places. Enrolment rates in childcare are close to the OECD average, but children spend less time in childcare (Figure 1.22). In recent years, high cost of childcare, rather than lack of childcare places, has held back women's participation in full-time work, and led to among the highest disincentives for women to enter work across the OECD (OECD, 2020). Childcare costs amount to a much larger share of disposable income for a low-income family than in other OECD countries. To reduce these costs, the Government has extended access to 30 hours per week of free and to tax-free childcare for some households (Table 1.9). However, the United Kingdom is still spending less than many OECD countries on 0 to 3 year olds. The United Kingdom should consider further supporting carers entering work by expanding access to full-time high-quality childcare. Limiting costs relative to disposable income, following the example of Norway's recent reforms would equitably improve access to childcare for households across the distribution (OECD, 2017c). This also favours social mobility for children from disadvantaged backgrounds. As gaps related to socio-economic status appear early, access to quality early childhood education can improve long-term educational and career outcomes and social mobility by ensuring equitable access to learning environments that help children acquire essential social and emotional skills (OECD, 2017c and 2018f).

Figure 1.21. Women participate less in the labour force than men and are more likely to work part time



Source: OECD (2020), OECD Labour Force Statistics (database).

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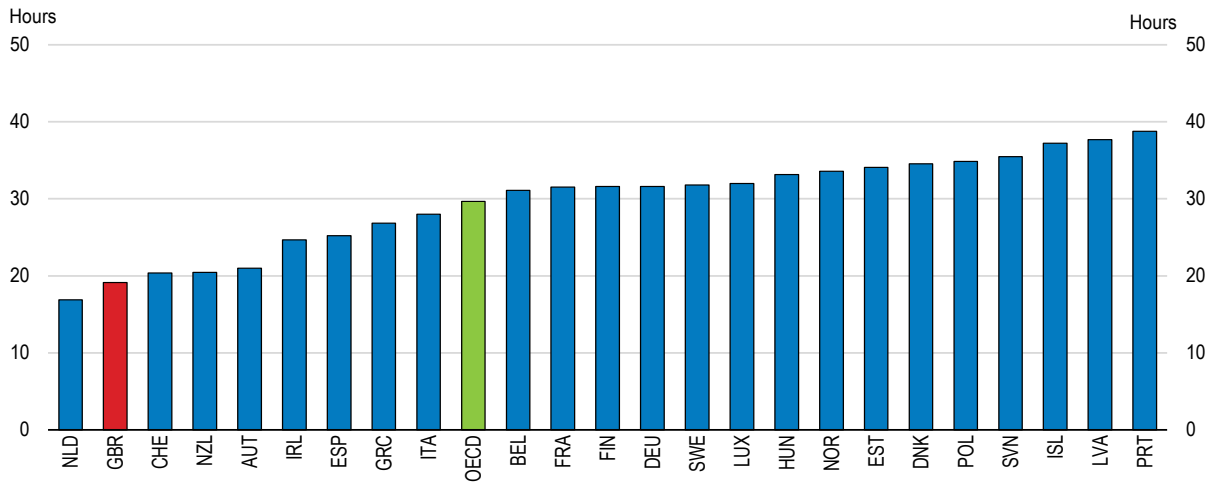
Table 1.9. Past recommendations on labour markets and skills

Recommendations in previous *Surveys*	Actions taken and current assessment
Prioritise funding to training and skills development of childcare staff.	The Government has introduced new criteria which will strengthen level 2 childcare qualifications for Early Years practitioners.
Use existing flexibility in reaching the National Living Wage 2020 target in case of negative economic shocks.	The Government has asked the Low Pay Commission to recommend whether economic conditions allow increasing the minimum wages from April 2020 to reach 60% of median earnings by October 2020.
Grant workers on zero-hours contracts enhanced job security rights after three months. Keep under review the interplay of taxes and welfare benefits to raise incentives to work more hours. Introduce tighter criteria to restrict self-employment to truly independent entrepreneurs.	The Government published its 'Good Work Plan' in December 2018. It sets out measures to address the issue of one-sided flexibility, promote employer transparency, increase protection for agency workers, and strengthen enforcement. The Agency Workers (Amendment) Regulations 2019 also ensured that all agency workers are entitled to pay parity with other employees. At Budget 2020, the Government increased the National Insurance contributions (NICs) Primary Threshold and Lower Profits Limit, for employees and the self-employed respectively, to GBP 9500 from April 2020. In the 2018 Budget, the Government increased support for Universal Credit. The Government has since increased work allowance to the GBP 1000. In February 2018 the Government completed the rollout of Tax-Free Childcare.
Introduce individually targeted programmes for low-wage and low-skilled workers to improve their life-long learning opportunities.	From August 2020, the Government is extending the statutory entitlements of the Adult Education Budget to fully fund all adults to take basic digital skills courses.
Increase financing and continue to promote the effectiveness of active labour market policies for youth who are neither in employment nor in education or training.	The Youth Obligation Support Programme helps young people develop the skills and experience they need to get into sustainable employment.

Figure 1.22. Average hours in early childhood education and care are short

Average usual weekly hours for children using early childhood education and care services, 0- to 2-year-olds, 2017 or latest year



Note: 2014 for Switzerland and 2015 for Iceland. Unweighted average of data shown for the OECD aggregate. With the exception of New Zealand, data are OECD estimates based on information from EU-SILC. Data refer to children using centre-based services (e.g. nurseries or day care centres and pre-schools, both public and private), organised family day care, and care services provided by (paid) professional childminders, regardless of whether or not the service is registered or ISCED-recognised. For New Zealand, data cover children using licensed centre-based and home-based services, only. All non-licensed care is excluded regardless of whether it is paid or unpaid.
Source: OECD Family Database (http://www.oecd.org/els/family/database.htm).

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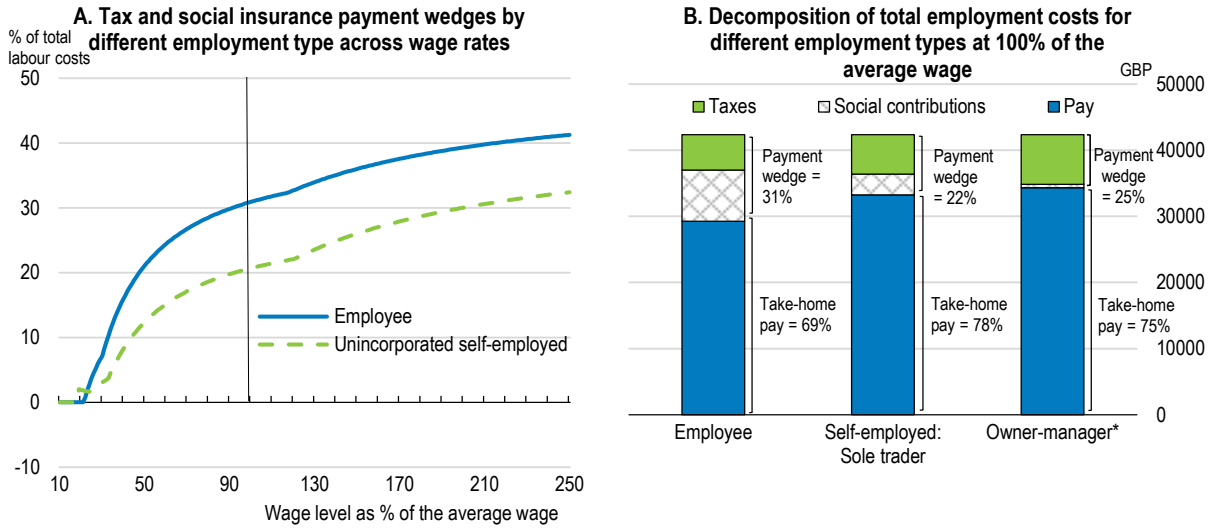
Self-employed workers are among those who suffered the greatest losses of income from the COVID-19 crisis (ONS, 2020f). Even prior to the crisis, the self-employed without employees were at higher risk of very low income, and generally had less access to training or other means of raising their productivity and opportunities than dependent employees (OECD, 2019b, Chapter 2). Self-employed individuals enjoy considerable tax benefits compared with employees, in particular lower rates of social security contributions (Figure 1.23). Similar incentives exist in many other OECD countries and reflect fewer social benefits. However, in the United Kingdom, lower social security contribution rates for the self-employed do not translate into significantly lower contributory benefits received, which makes self-employment attractive from a tax perspective. The discrepancy between social security contribution rates should be reduced, by increasing contributions paid by the self-employed. The 2020 Budget raised the income threshold for National Insurance Contributions, benefiting employees more than the typical self-employed. This is a step towards making the tax system fairer and reducing the incentive for people to be self-employed where being an employee would be more productive and yield a higher quality job. Given the high degree of heterogeneity of the self-employed, it will be important to ensure that the low-income self-employed are able to negotiate and access decent earnings net of social contributions.

Figure 1.23. Some self-employed enjoy important tax incentives compared with employees

2017



Source: Milanez and Bratta (2019), "Taxation and the future of work: How tax systems influence choice of employment form", OECD Taxation Working Papers, No. 41, and "Annex - Taxation and the Future of Work: How Tax Systems Influence Choice of Employment Form", OECD Taxation Working Papers, No. 42.

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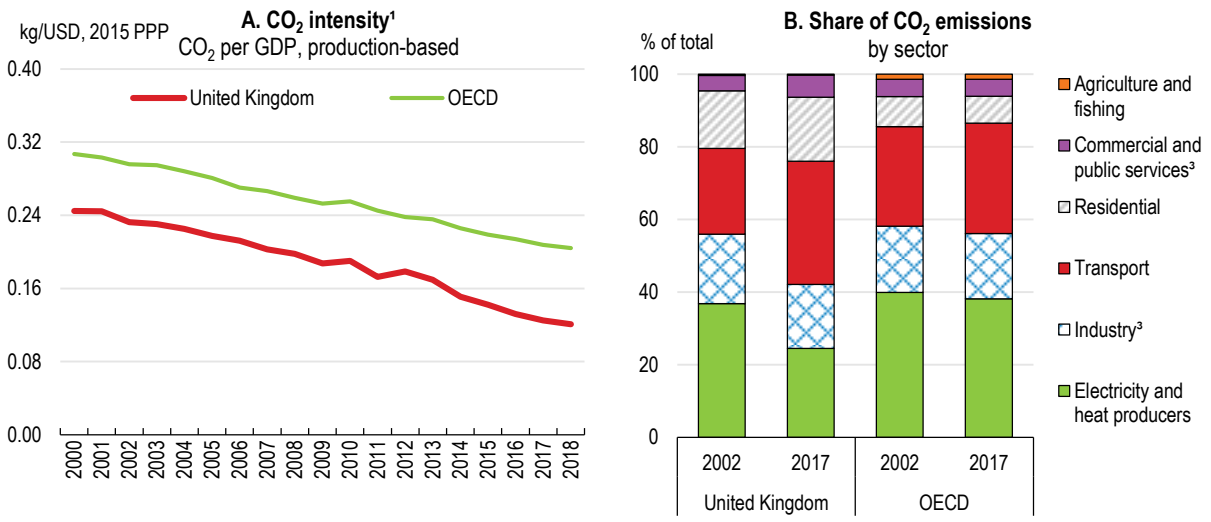
Greening the recovery

The recovery from the crisis is an opportunity to accelerate the shift to a more environmentally sustainable model. The United Kingdom was the first G7 country to legislate a target of zero net emissions by 2050 (HM Government, 2019a). The Committee on Climate Change estimates that this would cost 1 - 2% of GDP a year, assuming no further technological cost break-through, but would result in substantial wellbeing gains. However, on current policies, the United Kingdom is not on a trajectory to meet its past, less ambitious 80% emission-reduction target (Committee on Climate Change, 2019). CO_2 emissions per unit of GDP have fallen more rapidly in the United Kingdom than elsewhere in the OECD (Figure 1.24; Table 1.10; IEA, 2019). Most of the reductions in emissions so far have reflected lower emissions in the power sector, industry and to a lesser extent in waste, with little change in the other sectors.

One lesson from the global financial crisis was that countries missed an opportunity to encourage firms to move toward a more environment-friendly production process. The United Kingdom implemented various programmes at the time to encourage the move toward green transport or renewable energy sources, but they were small in size, at less than 0.1% of GDP (OECD, 2020f). Efforts to foster the move toward a decarbonised economy have strengthened over the years. A number of measures, including an increase in the climate change levy, the introduction of a green gas levy and investment in electric cars were introduced in the March 2020 Budget. In the Plan for Jobs a GBP 3 billion (0.1% of GDP) package of green spending was announced to decarbonise public buildings and retrofit poorly insulated homes. This is welcome but insufficient given the extent of the investment needed to achieve the net zero emission target. While the primary focus of the package should be to boost growth and prevent scarring effects, other considerations such as the environmental and distributional impacts need to be considered explicitly to ensure the policy response is consistent with long-term goals. Support to firms should be made conditional on moving to cleaner production processes in pollution-intensive sectors, such as the automobile sector, that are particularly affected by the crisis.

Figure 1.24. CO_2 intensity is lower in the United Kingdom than in the OECD average



1. CO2 emissions from combustion of coal, oil, natural gas and other fuels. Gross Domestic Product (GDP) is expressed at constant 2015 USD using PPP.
2. CO2 Emissions from fuel combustion. Emissions are calculated using IEA's energy balances and the 2006 IPCC Guidelines. See http://wds.iea.org/wds/pdf/WorldCo2_Documentation.pdf for more details.
3. Commercial and public services include final consumption not elsewhere specified. Industry includes other energy industries.
Source: OECD Green Growth Indicators database and IEA CO2 emissions from fuel combustion database.

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Pursuing reform of transport policies will be key to reaching the 2050 emission reduction and air quality targets and can also make cities more attractive. A Transport Decarbonisation Plan to put transport on a pathway to net zero emission is under development (Department of Transport, 2020). Stronger policies to incentivise low-cost abatement options, including to boost onshore wind electricity generation and afforestation, would also have to be pursued more vigorously. The Committee on Climate Change is calling, for example, for an earlier end to the sale of diesel or petrol-fired cars, by 2030 rather than 2040 (Committee on Climate Change, 2019). A consultation on ending the sale of new petro-diesel and hybrid cars and vans by 2035 or earlier is underway.

Uneven pricing across sectors and fuels compromises cost effectiveness. The United Kingdom has become one of the OECD countries with the smallest gaps between its pricing of CO_2 emissions and international climate cost benchmarks. Nevertheless, industrial CO_2 emissions, notably from coal, are priced less than in electricity generation. Moreover, tax reductions in the form of investment allowances incentivise the development of oil and gas fields. Emissions in the household sector are priced even lower than industrial emissions (OECD, 2018d). A reduced VAT rate effectively subsidises domestic heating fuel. Setting higher prices for heating fuels would require action to compensate low and middle-income households. As the United Kingdom is scheduled to exit the EU Emissions Trading System (EU ETS) at the end of this year, the establishment of UK Emissions Trading System (UK ETS) which is currently being developed provides a good opportunity to address these issues.

Table 1.10. Past recommendations on green growth

Recommendations in previous Surveys	Actions taken and current assessment
Strengthen the Green Investment Bank and other targeted financial aids to further support the implementation of not yet commercially viable low-carbon technologies that have the prospect of becoming so in the foreseeable future.	The Green Investment Bank was moved to the private sector to allow it to raise its own finance and be free from state aid and other public-sector constraints. The Government is supporting the British Standards Institution in developing three Publicly Available Specifications in Sustainable Finance.
Evaluate the interaction between the Electricity Market Reform and existing policies to promote renewable energies.	The Department for Business, Energy and Industrial Strategy will publish an Energy White Paper, which will address the challenges arising from the transformation of the energy system out to 2050, consistent with the UK climate change objectives.

Refining the fiscal framework to prepare for future challenges

Setting fiscal goals is an important first step toward achieving long-term sustainability following the COVID-19 crisis. The UK Treasury will review the fiscal framework ahead of the next Budget 2020. Fiscal rules announced in the March 2020 Budget combined a current budget balance rule with a net investment rule and a debt-interest-to-revenue ratio trigger. There are ways to simplify these rules to improve the orientation of policy and fiscal credibility, and to reflect the changed fiscal outlook following the crisis. A simpler and promising avenue consistent with the successful experience of New Zealand, which also operates on the Westminster parliamentary model, would be to focus on a medium-term fiscal objective with clear set of operational targets for the life of each Parliament. This has the benefit of aligning the framework to a simple overarching principle and increasing transparency. While there many uncertainties about the appropriate level of debt and this should take into account other long-term pressures including ageing, research provides some insights on prudent debt-to-GDP levels (OECD, 2015). It is also a political choice, which is made explicit by a debt target. On an operational level, this goal can be complemented by a range of more technical rules and norms as is the case in New Zealand (Box 1.7). The target could usefully be complemented by a medium-term expenditure plan, whose consistency with the target could be assessed by the OBR, which would increase transparency about the medium-term orientation of policy. Given the exceptional uncertainty following the COVID-19 crisis, it could be appropriate to set out a general framework at this time, but only fix the parameters once uncertainty has returned to more normal levels.

Box 1.7. Prudent debt in New Zealand

The Public Finance Act 1989 established the objective of reducing total debt to prudent levels so as to provide a buffer against factors that may impact adversely on the level of total debt in the future by ensuring that, until those levels have been achieved, total operating expenses in each financial year are less than total operating revenues in the same financial year.

The pursuit and the maintenance of a "prudent" level of public debt is estimated to have created a fiscal buffer that had enabled the automatic fiscal stabilisers to operate (Buckle, 2018). As a result, New Zealand entered the COVID-19 crisis with low debt levels (net debt on a national accounts basis was negative), which provided more room to support the economy. COVID fiscal support in 2020 was around 5.9% of GDP, the highest in the OECD.

While some aspects of the NZ fiscal framework may be transposable to other countries, parameters of the framework, including the level of the debt target will need to be carefully calibrated according to country specificities.

Using fiscal policies to promote inclusive growth

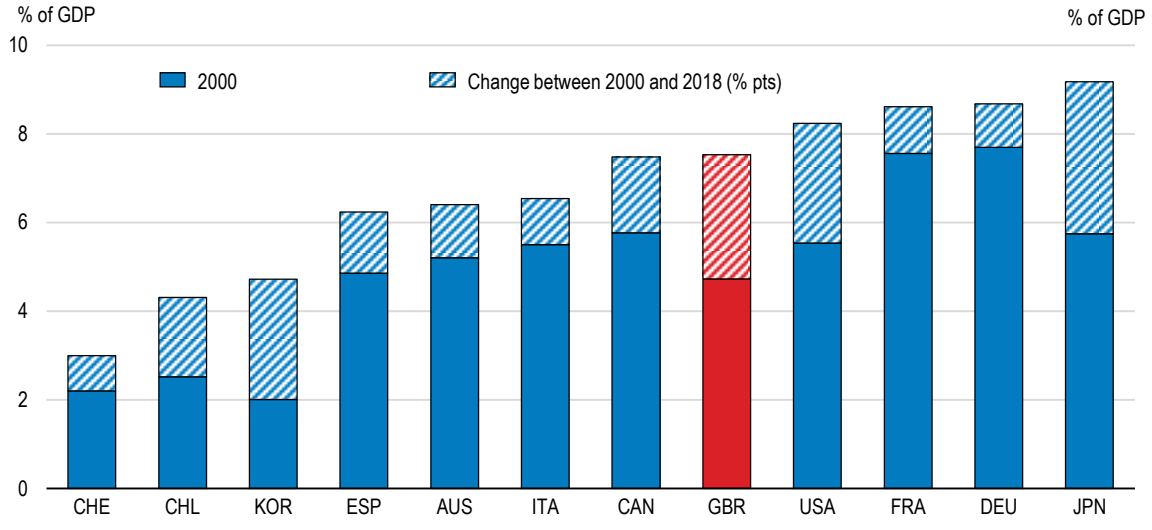
Following a period of stimulus to support the COVID-19 recovery, gradual fiscal adjustments will be required once growth has firmed up. Like other OECD countries, population ageing is going to put increasing pressure on public finances in the coming years, increasing spending and reducing revenues (OBR, 2018b and 2019). Leaving the Single Market is also expected to lower growth prospects and tax revenues. Productivity-enhancing reforms can alleviate these pressures but to some extent only. A rebalancing of the tax and spending mix will help to increase fairness and equality, while keeping public finances on a sustainable path in the face of rising health care and ageing costs.

Health, long-term care and welfare spending present clear risks in the long term. The United Kingdom faces strong pressures on health spending, which is predominantly financed from general taxation. Health spending rose from 4.5 to 8% of GDP from 2000 to 2017, moving the United Kingdom from a relatively low spender towards the mid-range of OECD countries (Figure 1.25). Looking forward, projections point to substantial increase in health spending to reach 14.4-15.3% of GDP by 2069-70, although the precise magnitude will depend on the extent of cost pressures (OBR, 2020b).

The NHS Long-Term Plan, released in 2019, set out a list of ambitions over the next 10 years. It followed up on the announcement in June 2018 of a GBP 20.5 billion increase in funding for NHS England between 2019-20 and 2023-24 in real terms (GBP 34 billion in nominal terms, 1% of GDP). The long-term focus of the plan is a welcome innovation and this new approach will help with planning and predictability compared with making such decisions on a yearly basis. However the plan was not accompanied by details on how the money will be used and how the extra funding will be financed (OBR, 2019). In addition, the funding settlement did not include key areas of health spending, such as capital investment for buildings and equipment, disease prevention initiatives and training for the healthcare workforce (National Audit Office, 2019). The COVID-19 crisis is likely to call for significant changes to these plans, but the idea of a longer term approach remains relevant.

Figure 1.25. Public health spending has risen

2000 and 2018 (or latest year)



Note: Public health spending excludes compulsory private insurance schemes.
Source: OECD (2020), OECD Health Statistics.

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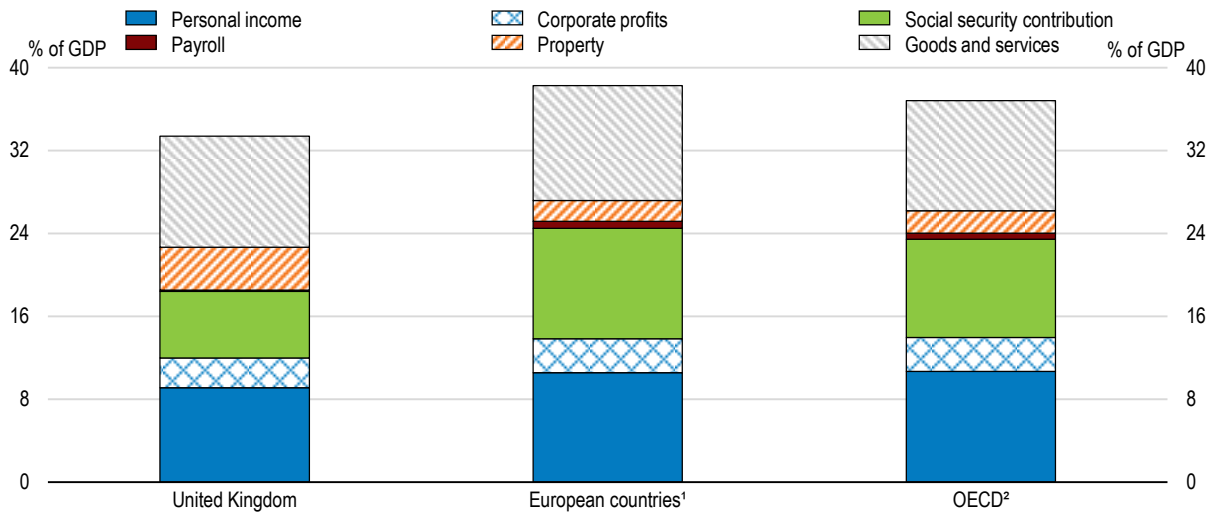
Spending on state pensions, which include pensions and pensioner benefits, is expected to increase from 4.5% of GDP in 2019-20 to 7.4% in 2067-68 (OBR, 2020b). The United Kingdom has taken steps to contain this rise. The age at which men and women can access their pensions is set to gradually increase to reach 67 years by 2028. There have also been actions to increase incentives to continue working at an older age and to ease combining care and work (OECD, 2018c). The 'triple lock' that relates the annual uprating of pensions to the higher of average earnings growth or consumer price inflation or 2.5% each year is expected to increase public pension spending. OBR (2020b) shows that if pensions were to be uprated by average earnings only, spending would be lower by GBP 3.2 billion (0.14% of GDP) in 2024-25 relative to a situation when the triple lock is applied. If such a change was decided, it will be important to ensure that pensions provide decent income to retirees, especially those with low pension entitlements.

As part of any future fiscal adjustment, ensuring a growth-friendly and fair, broad-based tax system is likely to become increasingly important given spending pressures, even if spending can be better targeted and made more efficient. There is room to broaden the tax base once there are clear signs that growth is firming up, while improving the efficiency of the tax system and maintaining or increasing the extent of redistribution. At 33.5%, the UK's tax-to-GDP ratio remains relatively low compared with many European countries, although English-speaking countries also display lower ratios (Figure 1.26). Regular tax and spending reviews are essential to achieve fiscal sustainability in an efficient manner. The March 2020 Budget launched the Comprehensive Spending Review, which is expected to be concluded in Autumn 2020 (HM Government, 2020). It will set out detailed spending plans for public services and investment, covering resource budgets for three years from 2021-22 to 2023-24 and capital budgets up to 2024-25. Total departmental spending has been set to grow at 4% over the period covered by the review. Starting a review of public expenditures early is important because reallocation of spending towards priority areas is usually gradual.

Figure 1.26. Tax revenues are lower than in peer countries

Decomposition of tax revenue, 2018



1. Unweighted average of 15 European countries: Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden and Switzerland.
2. Unweighted average of 18 OECD countries: Austria, Belgium, Canada, Denmark, Finland, France, Germany, Ireland, Italy, Luxembourg, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, and the United States.
Source: OECD (2020), OECD Tax Revenue Statistics (database).

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Table 1.11. Past recommendations on fiscal policy and tax

Recommendations in previous *Surveys*	Actions taken and current assessment
Perform a tax and spending review to allow for additional productivity-enhancing fiscal initiatives, for example by raising national insurance contributions for the self-employed or indexing the state pension on average earnings only. Seek further efficiency gains in health and education spending	In 2017 the Government announced an extra GBP 1.3 billion over 2018-19 and 2019-20 to support the introduction of the national funding formula for schools. The Department for Education published a school resource management strategy in August 2018 that sets out how the Government will work with schools to identify the main drivers of effective resource management. The Government has prioritised NHS spending in its 10-year Long Term Plan. In March 2020, the Government has announced unprecedented support for public services, businesses and individuals and is monitoring the impact measures are having, keeping all policies under review. GBP 16 billion has been allocated towards public services via the COVID-19 Response Fund, including the National Health Service and local authorities involved in the fight against coronavirus.

No comprehensive tax review is currently planned. It will be important to review the existing tax and spending mix with a particular view to end reliefs and exemptions that do not serve an economic or social purpose. Options to improve the tax system include :

- Reducing tax expenditures would improve resource allocation. According to HM Resource and Customs, reliefs and exemptions from personal income tax alone amounted to GBP 34.5 billion (1.7 % of GDP) in 2018-19. In particular, ending relief or exclusion from the climate-change levy and the carbon price floor and removing zero-rating on value-added tax for passenger transport would help even carbon pricing across sectors and fuels.
- The Council tax could be increased to raise tax on high housing wealth. At the moment, the tax is charged at a much lower percentage of property value for high-value properties than for low-value properties. As recommended by the Mirrlees Review (2011), it would be simpler and more efficient to use a simple percentage of property value. At the same time, this could be an opportunity to rebalance property taxes, moving away from stamp duties and transaction taxes. This would boost labour force mobility and encourage more efficient use of the housing stock. As the Council tax is local, resources could be used either to reduce the grant provided by the central Government to local authorities, or alternatively to finance services delivered at the local level which have been cut in the past years.
- Bringing accumulated pension wealth into the inheritance tax base would raise fairness. When inheritance tax is paid after a death, pension savings of the deceased person are not included in taxable base. This encourages the use of pensions as a savings vehicle for bequests and unfairly favours those who inherit pension wealth rather than other forms of wealth, while the income tax and national insurance contributions systems already provide generous tax treatment for pension savings.
- Higher social security contributions could be levied on the self-employed to level the playing field between self-employed and employees. Given the heterogeneity of the self-employed group, it will be important to calibrate the rise to prevent a marked fall in net earnings (after social contributions) for disadvantaged workers.
- Continuing to fight against tax evasion and avoidance can bring revenue gains as well. In addition to continue to actively participate in the G20/OECD initiative to tackle tax base erosion and profit shifting (BEPS), the United Kingdom could try to raise revenue by increasing the number of ‘targeted’ audits, to those who are most likely to misreport their tax liability or to misreport it by a substantial amount (IFS, 2018).

For illustration, Table 1.12 costs two packages of structural fiscal measures that would lead to stronger, more inclusive and sustainable growth in a way that is fiscally neutral. Scenario A shows that a permanent upward shift in the public investment rate can be financed by spending reforms and higher Council tax,

removing favourable treatment of the self-employed for social security contributions and higher carbon taxes. However, to finance a permanent GBP 10 billion increase in health spending would require further increases in taxation, for instance doubling the increase in the Council tax. The Government announced a temporary cut in the stamp duty on property transactions to bolster the housing market. There would be benefits to making this permanent as part of a package that would increase the Council tax to rebalance property market.

Table 1.12. Long-term fiscal costs of selected recommendations

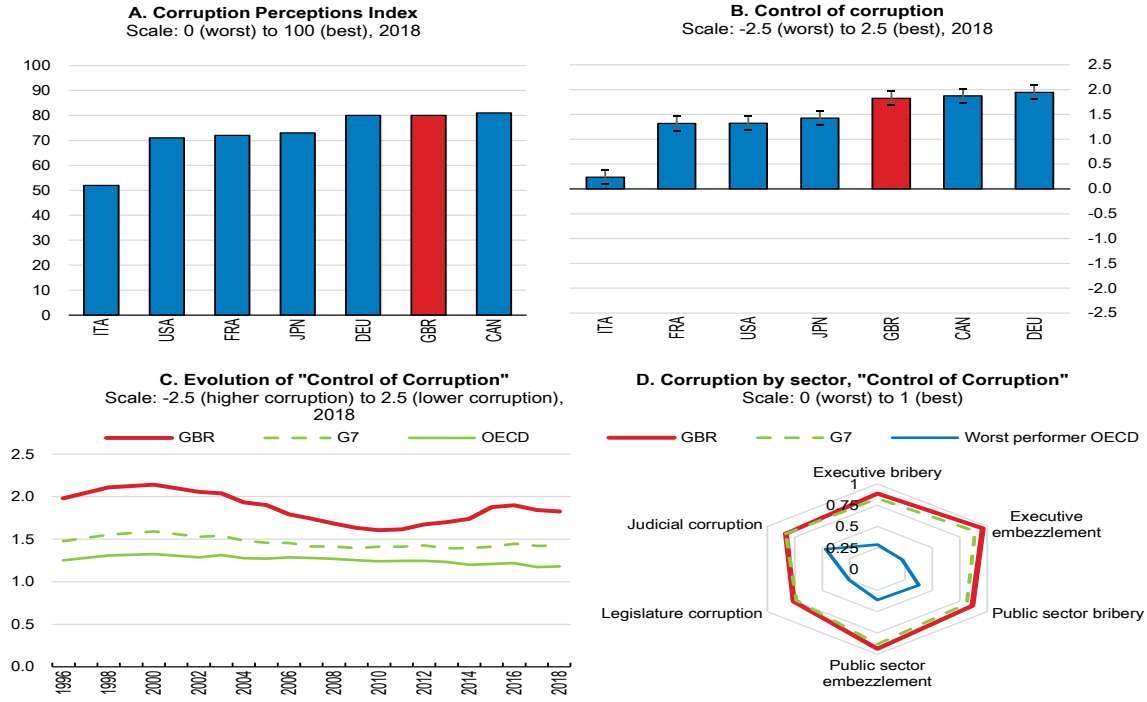
	A. Higher investment scenario		B. Higher investment and healthcare scenario	
	GDP billion	% of GDP	GDP billion	% of GDP
Spending		-1		-1.5
Increase in health spending			-10	-0.5
Increase public investment	-20.3	-1	-20.3	-1
Replace triple lock by average earning	10.2	0.5	10.2	0.5
Increase ALMPs	-10.2	-0.5	-10.2	-0.5
Revenues		1		1.5
Increase social contributions paid by self-employed	5.2	0.3	5.2	0.3
Increase Council tax	8.0	0.4	*17.9*	*0.9*
Cut in stamp duties	-0.7	-0.03	-0.7	-0.03
Even carbon pricing	6.6	0.3	6.6	0.3
Gains from fight against tax avoidance and evasion	0.6	0.03	0.6	0.03
Net cost		0		0

Note: A negative number represents a fiscal cost. These estimates are subject to a wide margin of error. They do not represent the actual gain if the relief were to be removed as they do not take account behavioural effects. The impact does not account for the change in GDP. The increase in social contributions of the self-employed levels the playing field with employees. The increase in the Council tax corresponds to doubling the rates for bands F, G, H and E. The cut in stamp duties corresponds to a cut of the 2% marginal rate by 1 percentage point. Gains from tax evasion are the average amounts budgeted in past budgets and are probably over-estimate the expected gains. Even carbon pricing ends tax expenditure on the carbon levy tax, the carbon price floor, the petroleum revenue tax and the zero-rating on passenger transport.
Source: OECD calculations using estimated costs of principal tax reliefs from HM revenues and customs, principal tax reliefs and IFS (2018), IFS Green Budget, October.

The anti-corruption drive is strong

Indicators of perception of corruption suggest that corruption is low by international standards in the United Kingdom (Figure 1.27 and 1.28). In 2019, the OECD Working Group on Bribery in International Business Transactions considered that the United Kingdom had addressed a number of key recommendations formulated in 2017, notably asserting the Serious Fraud Office's role and generally enhancing the capacity for detection and enforcement of the foreign bribery and related offences. On the other hand, the Working Group expressed regret that no steps had been taken to address long-standing recommendations to ensure the independence of foreign bribery investigations and prosecutions or to enhance detection through anti-money laundering reporting mechanisms (OECD, 2019c).

Figure 1.27. Corruption is perceived to be low in the United Kingdom



Note: Panel B shows the point estimate and the margin of error. Panel D shows sector-based subcomponents of the "Control of Corruption" indicator by the Varieties of Democracy Project.
Source: Panel A: Transparency International; Panels B & C: World Bank, Worldwide Governance Indicators; Panel D: Varieties of Democracy Institute; University of Gothenburg; and University of Notre Dame.

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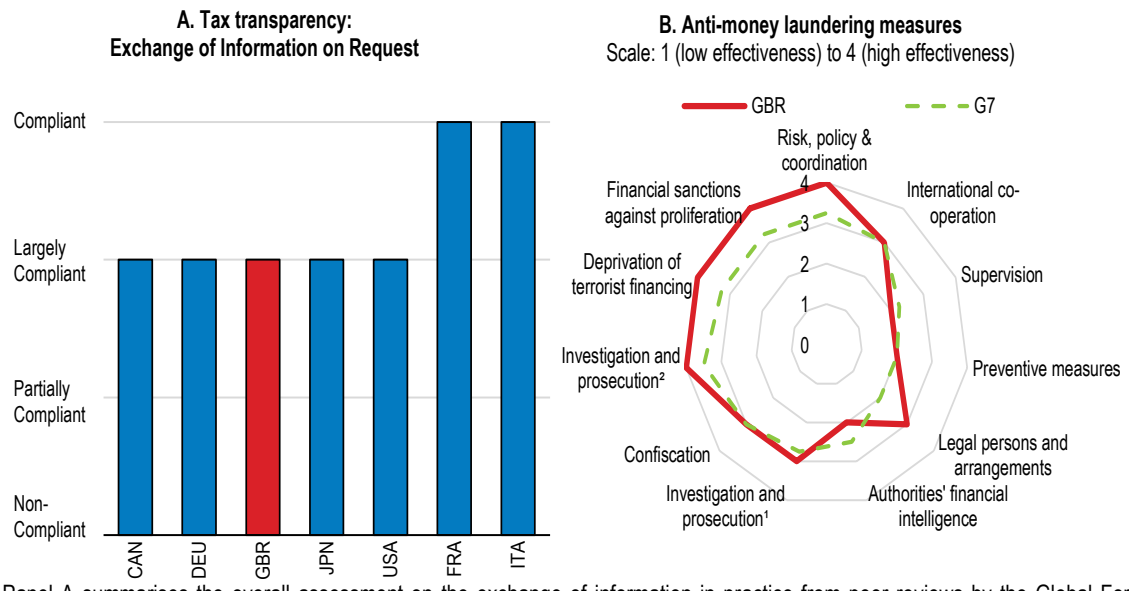
Figure 1.28. Tax transparency is largely compliant and anti-money laundering measures are effective



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

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Seeking a close trade relationship with the European Union

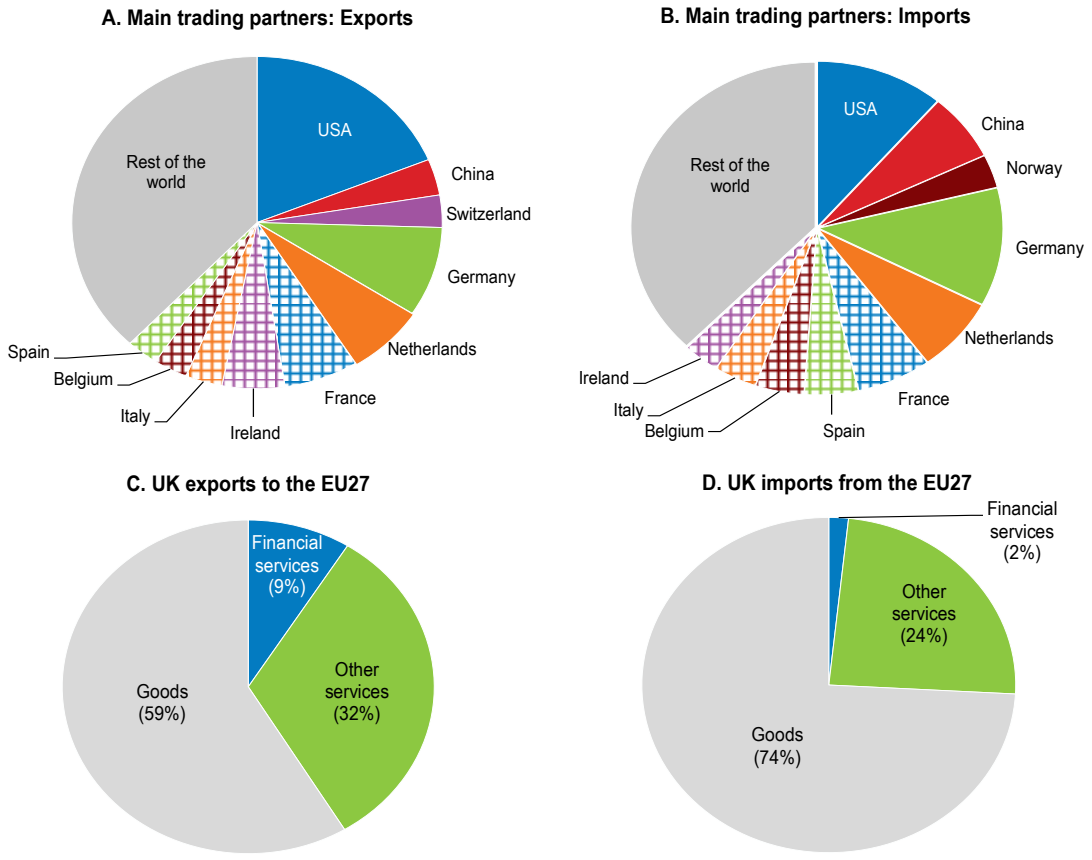
Although the United Kingdom left the European Union on 31 January 2020, the decision to leave has already had a significant impact on the economy since the 2016 Referendum. The economy rebounded immediately after the financial crisis and grew steadily in the subsequent years, but has slowed markedly since 2016, particularly as a result of lower investment growth. A key factor in the recovery will be how exit from the EU Single Market and the Customs Union is managed at the end of 2020 and beyond.

The United Kingdom has been deeply integrated with the European Union

Productivity and employment in the United Kingdom have benefitted from extensive trade with the European Union (Figure 1.29). Services account for a large share of UK exports. With service exports representing now around 45% of total exports, the country has built on its revealed comparative advantage in financial services (OECD, 2020h). The United Kingdom also exhibits strong advantages in insurance, personal services and other business services. By contrast, sectors where the United Kingdom has less revealed comparative advantages, such as agriculture or the fabrication of metal products, employ predominantly low-to-medium-skilled workers.

Figure 1.29. Services play a key role in UK exports

Exports and imports of goods and services, 2018



Source: ONS (2019), "UK Balance of Payments, The Pink Book: 2019".

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Maintaining a close trade relationship would help limit the costs of exiting the EU Single Market

Trade agreements take time to negotiate. Reaching an agreement with the European Union usually takes between 4 and 10 years depending on the complexity and the depth of the agreements, given the necessity to consult with Member countries (Kierzenkowski et al., 2016). For instance CETA, the trade agreement between European Union and Canada took five years of negotiations.

Leaving the EU Single Market and the Customs Union will entail a sharp increase in trade costs and significant disruption in trade with the European Union and with other third countries, where the United Kingdom currently benefits from EU trade agreements, through rising barriers to trade and investment. Research on the likely impact of leaving the Single Market has underlined that the more integrated the United Kingdom stays with the European Union the less costly the exit is expected to be (HM Government, 2018; NIESR, 2018; Kierzenkowski et al., 2016; IMF, 2018). This is consistent with the broader literature on the benefits of trade openness in particular on productivity (Kim, Mourougane and Baker, forthcoming).

The negotiations have focused on reducing customs frictions and trade costs on goods, while the UK Government has indicated its intention to leave the EU Single Market and the Customs Union. The content of the Political Declaration between the European Union and the United Kingdom aims at providing general guidance for the future trade negotiations, although it is not legally binding (HM Government, 2019b). Since the beginning of the year both the United Kingdom and the European Union have set out their initial negotiation positions. They reflect the unprecedented nature of the forthcoming agreement, between two parties whose standards and rules are perfectly in line at the outset of the negotiations.

The UK Government has indicated its desire to move toward a Free Trade Agreement (FTA), with the European Union by the start of next year. A FTA could avoid tariffs and quotas all goods traded between the United Kingdom and the European Union. Securing a zero tariff and quota-free trade agreement with agreed standards is subject to negotiations and the interest of both the UK and EU's economies.

Even assuming a comprehensive accord, there will be rising technical barriers and sanitary and phytosanitory measures and a lower level of trade facilitation on goods as well as increased non-tariff barriers on services, as regulations between the United Kingdom and the European Union diverge over time. In addition, rules-of-origin requirements will need to be put in place to determine whether goods qualify for tariff-free entry. UK exports will thus face much higher compliance costs stemming from increased customs checks and border delays.

Although the details of any agreement are unknown, new simulations using the OECD general-equilibrium METRO model suggest that an agreement on a comprehensive FTA could still lead to a fall by about 6.1% of UK exports and 7.8% of UK imports in the medium term compared to the current situation (see Arriola et al., forthcoming for the underlying assumptions behind the simulations). The overall output loss would amount to 3.5% (Figure 1.30). Those losses are within the range of estimates reported in Kierzenkowski et al. (2016) and HM Government (2018). About two-thirds of the cost would come from rising trade costs on goods and the remaining one-third stems from rising regulations on services. Rules of origin and border transition costs would have a small effect. Calculations using an Okun Law suggest that output losses would translate into a rise in the unemployment rate by around 1 percentage point on average across sectors.

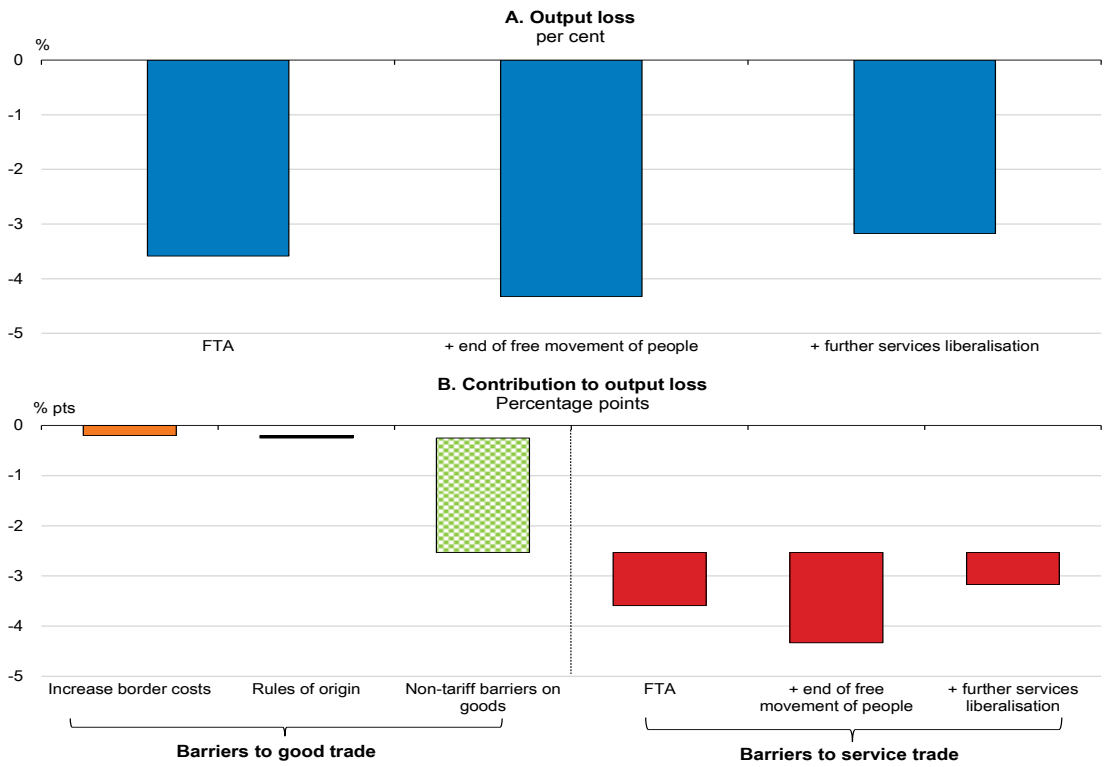
The effects of the exit from the Single Market could be accentuated by slower migration flows from EU countries. The UK Authorities have announced they will overhaul the UK immigration system, with changes expected to be put in place in 2021. They plan to end free movement of EU nationals, who will be subject to the same rules as non-EU nationals. Ending free-movement of people for EU nationals is expected to bring additional regulatory costs to the services economy. This would add some 0.7 percentage point of GDP to the cost of leaving the EU Single Market. This is a lower bound estimate as only the increase in

services regulation costs is considered while the effects on international migration and labour supply are omitted.

By contrast, losses could be partly compensated by growth-enhancing changes to UK regulations. The United Kingdom is, by international standards, performing relatively well thanks to a well-designed service regulatory regimes (excluding dimensions related to movement of people). There is some room to take action on the price and speed of visa deliverance. Other actions could be related to government procurement, screening or cross-border data flows, but some of these reforms may be more difficult to implement in the short term. Overall, the room to lower restrictions is relatively limited. Assuming all these reforms take place does not make up for the higher trade barriers with the European Union: output losses would still amount to 3.2% in the medium term.

Figure 1.30. Higher non-tariff barriers and barriers to service trade under a free trade agreement will lead to lower incomes than under EU membership

Real GDP, difference relative to the current situation in the medium term



Note: The FTA scenario considers no-tariff no quotas on goods, border, rules-of-origin and non-tariff barriers increases on goods and services. The "end of movement of people" scenario adds the regulatory impact on trade costs of those measures into the FTA. The "further services liberalisation" assumes the United Kingdom is implementing a set of reforms on visa procedure, procurement, screening and cross-border flows.
Source: Arriola et al. (forthcoming).

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Future UK growth prospects could be improved by trade deals with other non-EU countries, but in a limited way. Five trade agreements have been signed with non-EU countries or regions. Some other deals are well advanced, but most are at an early stage of negotiation. These deals are likely to bring only limited benefits relative to EU membership, given the current strong integration of the UK economy with the European Union, the distance from other countries, and the large number of preferential trade agreements the European Union has concluded in the past decade to which the United Kingdom will lose access. About

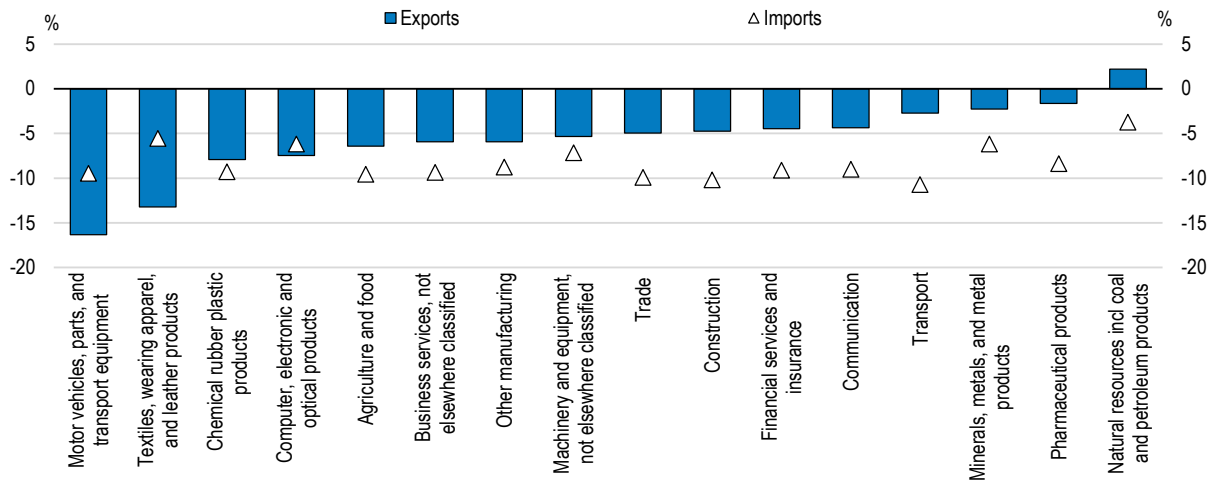
41% of EU trade in goods with the rest of the world is covered by preferential trade agreements, when including recent agreements such as Canada, Japan, Singapore, Viet Nam or the yet-to-be implemented Mercosur (European Commission, 2019).

The impacts of the new trade arrangements will vary across sectors and regions

The impact of leaving the Single Market to enter a FTA would vary markedly across sectors, reflecting their degrees of openness, sensitivity to policy changes and other structural differences. In the goods sector, motor vehicle, parts and transport equipment and to a lesser extent chemical rubber plastic products would experience the largest falls in exports (Figure 1.31). This reflects the deep integration of the United Kingdom in the EU supply chains in these sectors. Output losses in the service sectors would range from 2 to 7% in the medium term, with losses above 3% reported in key sectors, such as finances, business services, communications and construction. Although those falls are lower in relative terms, they represent large losses given the size of these sectors in the UK economy. Workers would also be unevenly affected. The unemployment rate would rise by 2.4 percentage points in the motor vehicle, parts and transport equipment sector. At the other end of the spectrum, almost no impact on unemployment would be observed in the natural resource sector.

Figure 1.31. Export and import losses vary across sectors

Difference to baseline, exports and imports in the medium term



Source: Arriola et al. (forthcoming).

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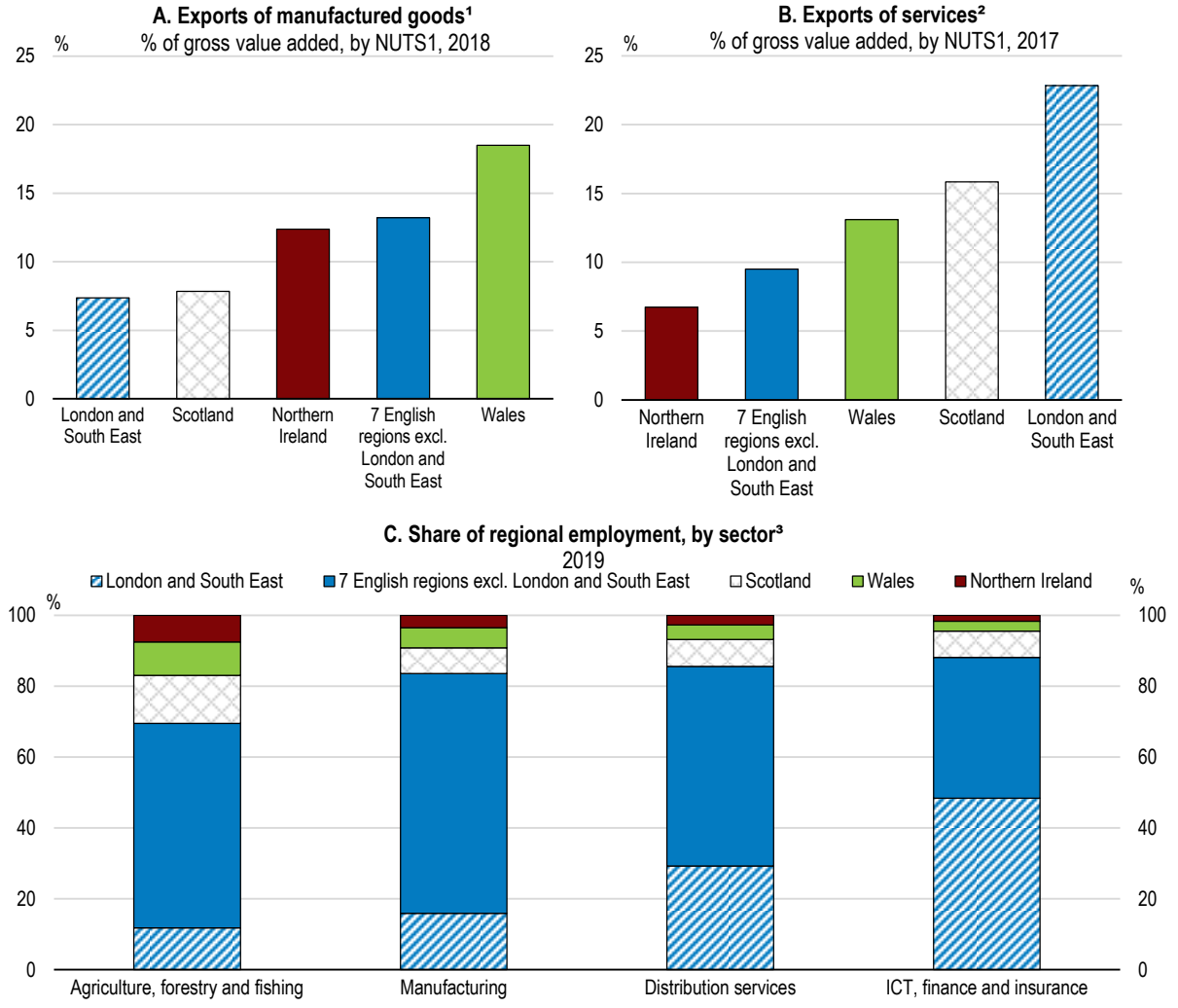
Leaving the EU Single Market is expected to have a differentiated impact across regions, reflecting their degree of openness, structure of trade and their job intensity (Figure 1.32). The North East and North of England and Wales will be particularly affected by the expected fall in manufacturing trade in the move to a FTA. London and Southern England are the areas most exposed to a disruption in trade in services. Those are also the regions which attract about half of the FDI projects and where jobs are concentrated. The extent of the disruption across regions will depend to a large extent on outcomes of the negotiations on financial services and equivalences. Thiessen et al. (2019) show that leaving the European Union is likely to increase regional disparities.

Figure 1.32. UK regions have different export and employment exposure



Note: NUTS1 areas of the United Kingdom are Wales, Scotland, Northern Ireland, and the nine English regions.
1. Includes machinery and transport, and miscellaneous manufactures.
2. Based on ONS's experimental estimates of international exports of services for 2017 with the use of several data sources including the International Trade in Services (ITIS) survey, the International Passenger Survey (IPS) and other non-survey national services sources.
3. Employment refers to the sum of employee and self-employment jobs, and government-supported trainees and HM forces.
Source: HM Revenue & Customs (2020), "Regional trade statistics first quarter 2020: accompanying tables", June; ONS (2019), "Regional gross value added (balanced) by industry: all NUTS level regions, December; ONS (2019), "International exports of services from subnational areas of the UK: 2017", September; and ONS (2020), "JOBS05 Workforce jobs by region and industry (seasonally adjusted)", June.
subnational areas of the UK: 2017", September; and ONS (2020), "JOBS05 Workforce jobs by region and industry (seasonally adjusted)", June.

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Ensuring market access in services is key to a good outcome

Market access for services trade is crucial for a service-based economy such as the United Kingdom and will support job creation. Barriers to trade and to foreign entry have been generally low in the UK service sectors, especially with European countries. Research undertaken for this Survey suggests that an increase in the stringency of barriers to trade and competition by the United Kingdom from the current low levels related to intra EU trade to higher levels faced by non-EU countries could depress long-term productivity by 3% to 5% in most service sectors. The impact would vary across sectors, with transport and storage, professional scientific and technical activities and finance and insurance being the most affected (Chapter 2).

The coverage of services in trade agreements has increased over the years, especially regarding financial services (Box 1.8). Agreements on services are hard to reach because trade in services is influenced more by domestic regulation and standards than trade policy *per se* and involves long processes of mutual recognition. To be consistent with the WTO rules, regional agreements should cover substantially all services trade (i.e. a large share of trade and mode of supply and not be restricted to specific sectors), and not increase barriers to countries which do not participate in the agreement.

Alongside negotiations to get a comprehensive deal with the European Union, the United Kingdom could seek to reinvigorate the plurilateral Trade in Services Agreement (TiSA) to ease services market access. TiSA includes the key provisions of the GATS and aims at opening up markets and improving rules in areas such as licensing, financial services, telecoms, e-commerce, maritime transport, and professionals moving abroad temporarily to provide services. It covers 70% of world services trade and is currently being negotiated by 23 members, including the European Union, whose role will also be key to achieve significant progress in facilitating market access.

Box 1.8. 21st Century Trade Agreements

This box reviews selected recent preferential trade agreements to underline their innovative features rather than provide a comprehensive description. Those agreements include the Comprehensive Economic and Trade Agreement (CETA, Canada, European Union), the EU Japan Economic Partnership Agreement (EUJEPA), the United States-Mexico-Canada Agreement (USMCA), the Digital Economy Partnership Agreement (DEPA, New Zealand, Chile and Singapore) and the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP, 11 countries in the Asia-Pacific region, including New Zealand, Australia, Brunei Darussalam, Canada, Chile, Japan, Malaysia, Mexico, Peru, Singapore, and Viet Nam). Those agreements go beyond the standard provisions on preferential tariff treatment and often include commitments on services and investment, public procurement, competition and subsidies and regulatory issues. Agreements usually refer to specificities of existing regimes rather than clauses from the GATS.

Sectoral coverage

While the coverage of services sectors has improved compared to the first generation of trade agreements, about half of the agreements still focus on goods trade. According to the World Trade Organisation (WTO), amongst the existing 304 agreements in place, 150 were on goods, 152 on goods and services and 2 on services only.

Both the CETA and the EUJEPA secure some limited opening of services markets, in particular financial services, postal and courier services telecommunications and transport. For financial services, Canada's market access under CETA is limited to a small selection of cross-border services, which, except for insurance intermediation and portfolio management, is basically identical to the EU's Most Favoured Nations commitments that apply to services in the GATS. The EUJEPA contains provisions on new financial services, self-regulating organisations, payment and clearing systems and transparency, and rules on insurance services provided by postal entities. Many of these are based on rules developed under the WTO.

Most trade agreements provide broad language that encourages countries to recognise each other's regulatory measures to co-operate and exchange information. In terms of mutual recognition, both the CETA and the EUJEPA provide a framework to recognise qualifications in certain regulated professions.

The EUJEPA includes the most advanced provisions on movement of people for business purposes that the European Union has negotiated so far. They cover all traditional categories such as intra-corporate transferees, business visitors for investment purposes, contractual service suppliers, and independent professionals, and newer categories such as short-term business visitors and investors.

Investment

Most agreements provide basic investment provisions. The CETA and EUJEPA build on and reinforce the commitments taken regarding intellectual property rights in the WTO, in line with the EU's own rules. USMCA extends the terms of copyright to 70 years beyond the life of the author (up from 50 in NAFTA).

Regulations

Most agreements have introduced horizontal good-regulatory practices and/or international regulatory cooperation, suggesting an increased commitment to regulatory quality and coherence (Kauffmann and Saffirio, 2019).

Progressive clauses

Major trading nations now include environmental protection and social policy provisions in their trade agreements. Those progressive provisions aim at establishing minimum standards of protection, rather than harmonising divergent legislation. In particular, the CPTPP includes legally-enforceable commitments to safeguard high labour and environmental standards. They ensure that member countries have in place laws and practices governing workers' wages and safety. The CETA also sets legally-binding commitments on environmental protection and labour rights and the EUJEPA includes a comprehensive chapter on trade and sustainable development. The United States is regarded as having set what may be regarded as a benchmark for monitoring and reporting on the implementation of environmental provisions in regional trade agreements (George and Yamaguchi, 2018).

Public procurement

The CETA provides for a significant opening of the Canadian procurement market, including at the provincial and the local levels, which represent a significant share of the public procurement market in Canada. The EUJEPA gives EU companies access to the procurement markets of 54 large Japanese cities, and removes obstacles to procurement in the railway sector at national level.

Digital trade and e-commerce

The USMCA and the CPTPP have upgraded provisions on digital trade and e-commerce. USMCA for instance prohibits duties on music and ebooks, and provides protections for internet companies so they are not liable for content their users produce. In January 2020, the European Union and Japan agreed to allow personal data to flow freely and safely between the two partners. DEPA considers all aspects of the digital economy that might support trade (e.g. consumer and data protection).

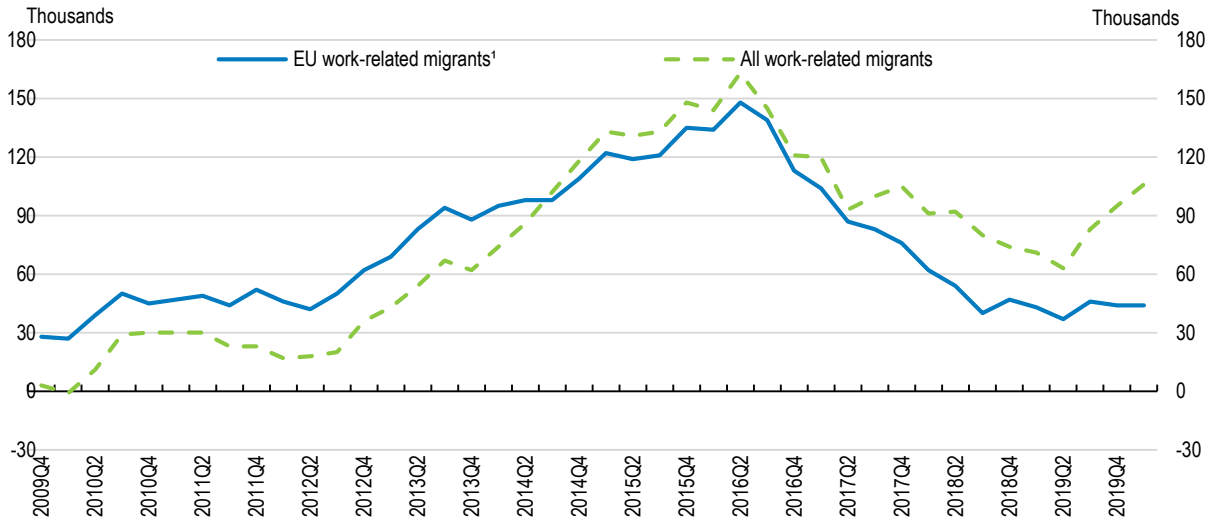
Source: European Commission (2019), USMCA, CETA, CPTPP, DEPA websites.

Making sure the immigration system remains flexible

The COVID-19 crisis has temporarily reduced movement and migration. However, in the context of the exit from the European Union, the UK Government had previously announced major plans to overhaul the immigration system by 2021. It has committed to ending free movement of EU nationals, who will be subject to the same rules as non-EU nationals. It will bring in a point-based system to cater for the most highly skilled workers, skilled workers, students and a range of other specialist work routes including routes for global leaders and innovators. The Government has reduced the general salary threshold for migrants on the skilled worker route and the skills requirement. However, there will not be a general low-skilled or temporary work route. In July 2020, the Government announced a fast-track process with reduced fees for doctors, nurses and other 'skilled' healthcare staff, but notably not for social care workers. The precise list of occupations for which there are not enough resident workers to meet demand and that will benefit from preferential treatment, has not yet been made public.

Figure 1.33. Work-related immigration from the European Union has fallen sharply

Net migration to the United Kingdom for work-related reasons, by citizenship[1]



1. "Work related" includes "Definite job" and "Looking for work".
Source: ONS (2020), "Provisional long-term international migration estimates", August.

StatLink https://stat.link/h04ocs

The composition of net international migration has changed since 2016 with a rise in the share of non-EU migrants for work while net migration from EU countries has slowed down and more recently stabilised (Figure 1.33). EU migrants, including students, still represent a sizeable share of the workforce in some activities. Changes to immigration rules are likely to impact regions and sectors differently. Sectors, such as the hospitality and personal care sectors, which rely disproportionately on EU migrants are also likely to be particularly affected in the short to medium term. In the event that migration from EU countries markedly decelerates, it would be useful to reactivate existing short-term schemes or create similar schemes to address labour shortages in sectors such as social care or hospitality or regions which are highly dependent on EU migration.

OECD experience suggests that there is no prevailing immigration model (OECD, 2018e; OECD, 2019d). Countries with a point system which seems to have worked well are also those that have allowed parameters of the system to be easily amended (Canada, Australia). For instance, the Canada model is reported to have ensured greater flexibility in selection and application management, better responsiveness to labour market and regional needs and quick application processing (OECD, 2019d). It will be important to ensure similar flexibility in the UK immigration system. In this regard it is useful that the policy statement detailing the main features of the new immigration system refers to the possibilities to adapt some routes (e.g. for international students), to changes in the global environment.

Keeping the global financial role of the City

London is a major global financial centre which, along with New York, has the deepest financial markets in the world. It benefits from favourable regulation, a well-qualified workforce and market size (Financial Centres Futures, 2020). It currently provides financial intermediation services to European investors and acts as an important gateway for non-EU countries to gain access to European markets. Although it remains a major hub, there is evidence that the UK financial and insurance sector has already lost some of its centrality since the financial crisis (Criscuolo and Timmins, 2018). Financial sector productivity growth has been declining since the financial crisis, but measured productivity levels remain higher than in other

service sectors. Evidence points to some reallocation toward EU countries, including since 2016, with some other European financial centres very active in attracting financial services.

Following the end of the transition period and under the envisaged Free Trade Agreement starting in 2021, UK-based financial institutions will lose their passporting rights, which allow UK-regulated firms to provide financial services anywhere in the European Union and define the prudential treatment of exposure. Their ability to access EU markets will be governed by more restrictive third-country equivalence arrangements, as stated in the Political Declaration, unless there is an enhancement in access to the EU financial markets agreed between the United Kingdom and the European Union.

Contrary to passporting rights, equivalence can be withdrawn if legislation between the European Union and the third party and supervisory practises diverge. In addition, EU legislation does not provide equivalence for all financial services (e.g. for wholesale and retail commercial banking). This creates an incentive for firms to move their operations to an EU country to continue to benefit from the passporting regime. This could have potentially large economic and fiscal implications, given that the tax revenues raised from these activities would accrue to the EU country. HM Government (2018) estimates that the loss of passporting would lead to a 13% increase in trade costs for financial services if the United Kingdom enters in an average FTA with the European Union. The City could eventually reorient its activities to adapt to a post-Brexit environment, although there seems to be very little clarity about how this would happen. Looking forward, some features of the UK regulatory and institutional framework are likely to remain attractive. This includes a well-developed legal tradition that protects creditor and shareholders' rights, as well as tax and employment regulation that are attractive to the financial industry.

Overall it is likely that the consequences of leaving the European Union will vary across activities and financial service companies. Dhingra and Simpson (2019) predict that financial intermediation will experience relatively greater losses. Wholesale banking is highly dependent on passporting, whereas insurance already operates on the basis of subsidiaries with separate legal personalities (EU Parliament, 2017). Finally, for certain financial services, the potential loss of EU-specific trading might be mitigated by the historical size and liquidity of the London market. London is one of the primary markets for over-the-counter derivatives trading, accounting for the vast share of trade in foreign exchange and interest rate derivatives. Keeping close relationships with the European Union and dispelling uncertainties on the nature of the agreement as rapidly as possible will help to minimise the costs from losing passporting rights.

MAIN FINDINGS	RECOMMENDATIONS (Key recommendations in bold)
Moving from emergency to reinvigorating growth measures	
The economy contracted sharply during the COVID-19 crisis. While some activities have now picked up, overall demand is expected to recover only gradually. There are major downside risks related to COVID-19 and a disorderly exit from the EU Single Market. Monetary policy has eased. The Government rapidly put in place a range of substantial economic support measures to firms and workers. Since July 2020, policies have been adjusted or phased out and new measures introduced.	**Ensure support is available and adapted as needed based on epidemiological and economic developments, while not hindering the reallocation of resources towards firms and sectors with better growth prospects. Consider introducing more targeted measures.** **Further increase active labour market spending to displaced and low-skilled workers.** **Prioritise digital infrastructure, particularly in deprived regions, in the allocation of the planned increase in public investment. Ensure sound governance of infrastructure investments.** **Keep monetary policy accommodative until there are clear signals of price pressures.** Review support to firms and prioritise measures that are directed to firms facing temporary financing needs. Monitor the situation carefully, and gradually reduce state guarantees on new lending to return to prudent credit standards. Improve credit standards to allow structural change to go ahead, put in place a mechanism to quickly resolve bad debt covered by state guarantees to speed up such reallocation
The UK economy is deeply integrated with the European Union and leaving the EU Single Market will hamper trade. Services account for a large share of trade, but negotiations have focused mostly on goods.	**Keep low barriers to trade and investment with the European Union and others, particularly market access for the service sectors including financial services.** **Enhance communication on a no-deal exit from the European Union. Prepare targeted support to firms and workers that may suffer the most. Put in place trade facilitation measures to smooth disruptions at the border.**
Supporting a sustainable recovery	
Productivity growth has underperformed compared to past business cycles and other OECD countries. Low investment and slow innovation rates contribute to weak productivity performance. The competition framework is well designed, and the United Kingdom is currently one of the least restrictive countries in terms of business regulations. The framework will need to be refined to adapt to a fast changing environment. Stringent land-use regulations prevent an efficient allocation of housing supply.	**Ensure continuity in government support through the Industrial Strategy, a multidimensional approach to boost investment, innovation and skills intended to foster productivity growth.** **Refine the competition framework to adapt it to the digital economy: enable greater personal data mobility and systems with open standards; adopt a broader approach to merger assessment including an evaluation of the overall economic impact of mergers.** **Ease-land use regulations to seek the right balance between improving resource allocation and environmental and social concerns.**
The proportion of under-qualified workers is one of the highest in OECD countries. Participation in lifelong learning has been declining. Spending allocated to adult training is low. Despite a new apprenticeship system, there has been a drop in the number of total apprenticeship starts.	**Develop digital skills of low-skilled workers, including through further increasing public spending on training..** Better target the apprenticeship system to favour access of low-skilled workers. Introduce individually targeted programmes for low-wage and low-skilled workers to improve their lifelong learning opportunities**.**
Universal Credit intends to consolidate the welfare system, but its heavy focus on sanctions may be having a negative impact on people finding quality jobs. Some self-employed workers enjoy considerable tax benefits compared with employees.	Ensure that the stringency of the job-search requirements in Universal Credit, in the form of payment sanctions, are not too strict. Continue to reduce the tax gap between self-employed and employees.
The COVID-19 crisis will lead to widespread job losses and poverty. The minimum wage has been increasing at a fast pace and is now one of the highest in Europe. Poverty is concentrated in out-of-work and single-parent households.	**Use well-designed in-work benefits to support low-income earners rather than continuing steep increases in the minimum wage.**
The COVID-19 crisis has increased gender inequality. The female labour force participation rate is depressed by high costs of childcare.	**Strengthen efforts to make good-quality childcare less costly.**
Carbon emissions have fallen significantly and the crisis provides an opportunity to accelerate the move toward a decarbonised economy. The United Kingdom is not on track to meet zero net emissions by 2050. Limited green spending have been announced to support the recovery.	**Continue efforts to reduce emissions in the transportation sector.** **Align carbon pricing across sectors and fuels and eliminate incentives to develop oil and gas fields. Continue to give fuel poverty full consideration**.

Ensuring long-term sustainability in a post-pandemic environment	
The public debt-to-GDP ratio is expected to reach historically high levels. Age-related pressures are rising. The current pension uprating (triple lock) will be costly in the future. There is scope to improve the efficiency and fairness of the tax system. A spending review has been launched and the last tax review dates back 2011.	**Once the recovery is firmly established, address the remaining structural deficit and put the public debt-to-GDP ratio on a downward path.** **Replace the pensions "triple lock" by indexing pensions to average earnings and ensure adequate income is provided to poorer pensioners. Carry out comprehensive tax and spending reviews and broaden the tax base to fund social objectives once the recovery is fully entrenched.**
Fiscal rules are complex and fail to provide medium term guidance. A review of the fiscal framework is planned for this Autumn.	**Set a stable medium-term framework to improve guidance to policy and markets**.

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2 Boosting productivity in the service sectors

The United Kingdom has been among the most affected OECD economies by the COVID-19 crisis, reflecting the high share of services in output and its integration in the world economy. Productivity growth in the United Kingdom has consistently underperformed relative to expectations and was more disappointing than in most other OECD economies since at least the global financial crisis. Sluggish productivity growth in the service sectors was the main factor behind this weak performance. Raising productivity will help to sustain employment and wages but will require a broad range of policies.

Keeping low barriers to trade and competition in the UK service sectors will create a supportive environment for strong productivity performance. Prioritising digital infrastructure in the allocation of the planned increase in public investment is expected to bring large productivity dividends. Reviewing the system of support to small firms in the light of the COVID-19 crisis will help to re-prioritise resource towards young innovative firms. Further increasing public spending on training to develop the digital skills of low-qualified workers, which have been particularly affected by the COVID-19 crisis, will be a double-dividend policy, boosting productivity and lowering inequality.

The United Kingdom has been among the most affected OECD economies by the COVID-19 crisis, reflecting the high share of services in output and its integration in the world economy. Lockdowns have had a disproportionate impact on service sectors, especially those where teleworking is less prevalent and face-to-face interactions are needed. Those sectors are also likely to recover only slowly from the easing of containment measures, as their activity will be constrained by distancing and measures to limit the spread of the virus. Firms will also need to adapt to the new trade relationships with the European Union. Growth is likely to be subdued for some time, with potential reallocation across sectors, even with policies in place to reignite growth and support a sustainable recovery.

Raising productivity will help sustain employment and wages. Looking back, productivity performance in the United Kingdom has been disappointing, despite a favourable business environment and flexible labour markets. Productivity growth did not recover after the 2008 financial crisis and the productivity gap with leading OECD countries is large. Sluggish productivity in the service sector has contributed prominently to the lacklustre economy-wide productivity performance and needs to pick up to reinvigorate UK productivity growth. Against this background, raising productivity has been one the United Kingdom's key priorities and is at the centre of its Industrial Strategy, which has made progress since 2017. Further steps have been taken toward raising productivity in the March 2020 Budget and the Plan for Jobs as part of the response to the COVID-19 crisis.

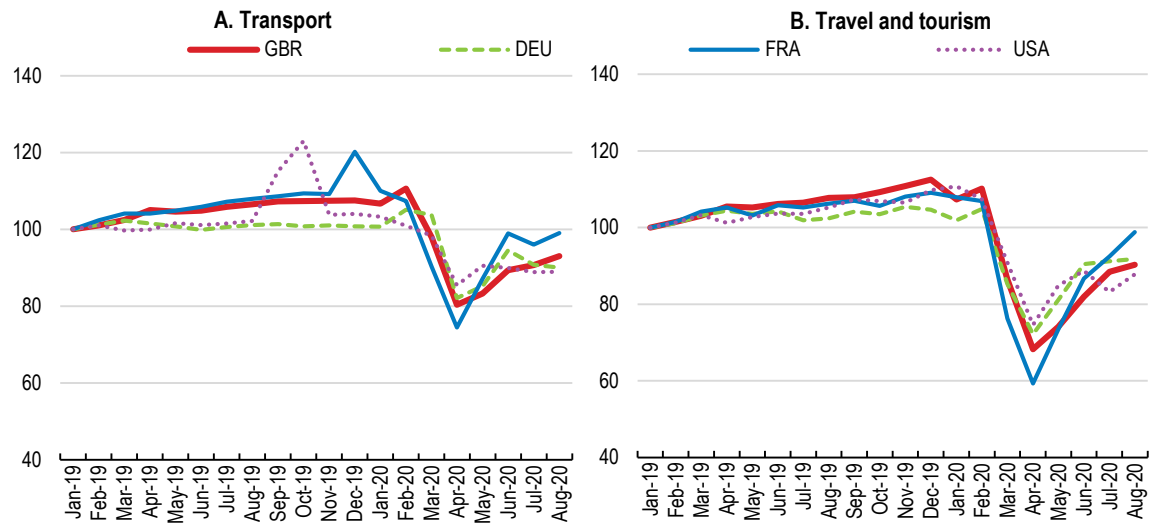
After putting recent productivity performance in the United Kingdom into historical and international perspective, this chapter identifies areas where potential payoffs from reforms could be large and where policy changes are required to adapt to a new post COVID-19 environment and the fast digitalisation of the economy. It first examines policies to encourage firms to adopt new technologies, by securing funding for projects that facilitate access to digital infrastructure, improving support to R&D, easing access to finance and keeping low barriers to trade and investment in the service sectors. It then discusses how to ensure basic skills in a modern workplace, before suggesting ways to raise efficiency in the public sector.

A rebound in productivity in the service sectors is key to supporting a sustainable recovery

Service sectors have been hit severely by the outbreak of the coronavirus and the health measures that were introduced to contain the pandemic. In particular, sectors such as hospitality, retail, tourism, cultural activities and travel, which are less amenable to teleworking, were largely shut down by the containment measures and, in the case of air transportation, by the widespread restrictions to international passenger travel (Figure 2.1). Recognising this, policies have been put in place to cushion the downturn, including targeted measures such as a temporary tax cut on some services and "Eat Out to Help" scheme (see *Key Policy Insights*). The health crisis could linger for months or years and any activity that involves person-to-person engagement is likely to be depressed for a long period of time. It may also be long in air transport, depending on how long passenger travel will be restricted.

Figure 2.1. Transport and tourism were hit severely by the COVID-19 crisis

Index 1 January 2019 = 100



Note: Indicators have been computed using selected categories of Google trends search data.
Source: Gonzales F., A. Jaax and A. Mourougane, "Nowcasting Services Trade", forthcoming.

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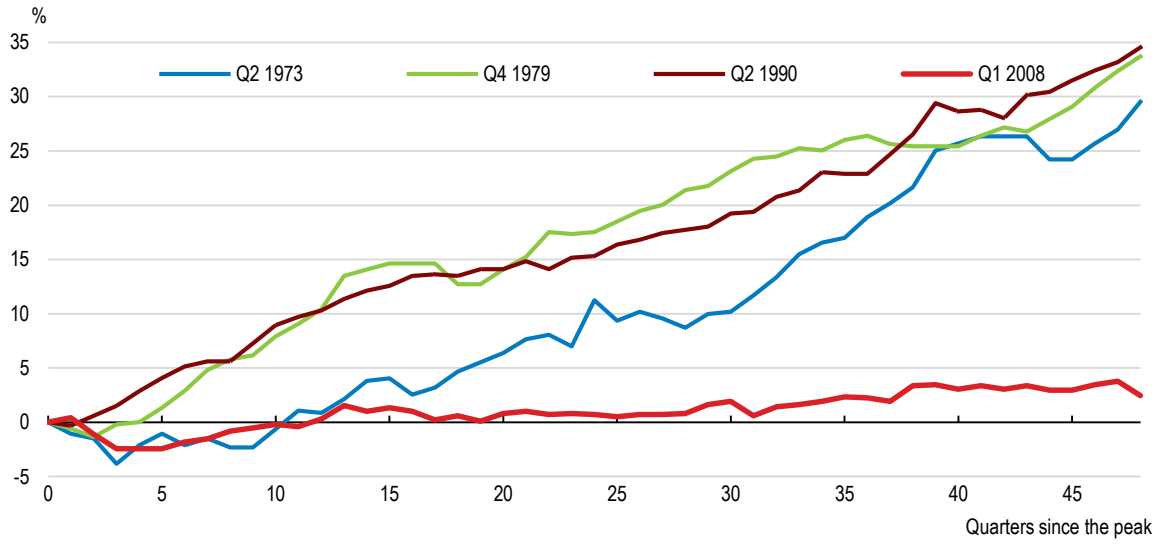
Productivity performance has been poor since the financial crisis

The post-2008 productivity cycle was unusual

Productivity growth in the United Kingdom consistently underperformed relative to expectations since at least the global financial crisis. Output per hour stagnated in the post-financial crisis recovery (Figure 2.2). Poor productivity in the recovery reflected a combination of poor GDP growth on average and sustained employment growth. In the first few years following the financial crisis, the UK economy had reduced working time rather than shedding jobs (Barnett et al., 2014a, OECD, 2019a). Subsequently, labour markets proved quite resilient, with employment growing rapidly and the unemployment rate reaching a record low. However most additional net jobs created since the crisis were in below-average productivity and wage activities (OECD, 2019a). At the same time, corporate insolvencies were low in the recession that followed the financial crisis (Bryson and Forth, 2015; Riley, Rosazza Bondibene and Young, 2014). This may have entailed inefficient resource allocation and hindered creative destruction, thereby contributing to keep productivity down. But these effects were temporary and firm dynamism, as measured by firm creation and death, recovered after 2012 (OECD, 2019b). Beside those factors, the UK economy has suffered from weak investment and low multi-factor productivity growth, whose slowdown pre-dated the financial crisis (see below). Looking forward, the COVID-19 crisis may have very different implications across sectors and business models with potentially lasting effects through unemployment, firm failures, sectoral reallocation and productivity, although it is too early to provide evidence on the magnitude and the duration of these changes.

Figure 2.2. Productivity growth was weaker after the financial crisis than in earlier recoveries

Real output per hour, change from start of recession



Note: Output refers to real gross value added.
Source: OECD calculations based on ONS (2020), Labour productivity database, July.

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The shortfall in productivity is larger in the United Kingdom than in most OECD countries

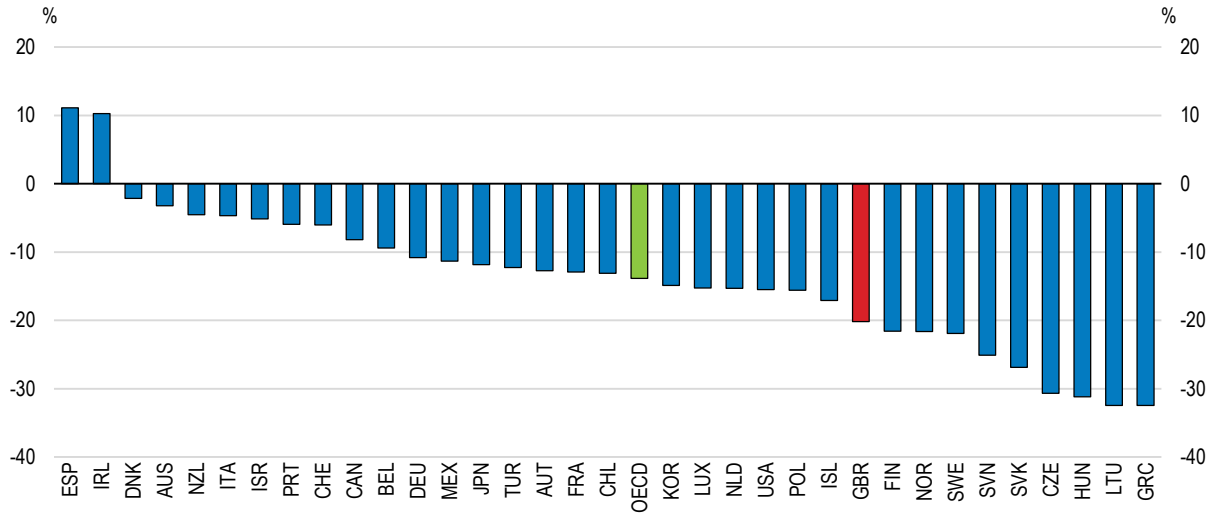
Productivity growth performance in the United Kingdom was more disappointing than in most other OECD economies since the financial crisis, while labour productivity in the United Kingdom grew faster than in most countries from the mid-1990s up to 2008. Productivity growth has been weak in many OECD countries, with the slowdown in productivity often pre-dating the financial crisis (OECD, 2015; 2019a), but there is evidence that the weakness has been more marked in the United Kingdom than in peer countries.

Since the financial crisis, there has been a productivity shortfall between actual productivity levels and the level productivity would have reached had it improved at pre-financial crisis rates in most OECD countries. This shortfall is estimated to be around 10% on average across OECD countries, but it amounted to 20% in the United Kingdom in 2019 (Figure 2.3).

As a result, the UK productivity gap compared to the United States - the productivity leader among large advanced economies - is still large (Figure 2.4). Historically, comparisons of productivity across countries have shown substantial gaps, even between similar-sized economies at a same stage of development. However, Ward et al. (2018) found that at least a part of these gaps disappears once differences in how countries measure labour input are adjusted for. In the case of the United Kingdom, the gap in labour productivity levels with the United States is around 6.3 percentage points smaller than was previously thought – but nevertheless remains large at around 17.8%.

Figure 2.3. Productivity has fallen short in OECD countries since the financial crisis

Deviation of the level of productivity from the pre-crisis trend path, 2019 or latest year



Note: Labour productivity is defined as real gross domestic product (GDP) per hour worked. Pre-crisis trend growth is calculated between 1997 and 2007. The OECD aggregate is calculated as an unweighted average.
Source: OECD calculations based on OECD (2020), OECD Productivity Statistics (database).

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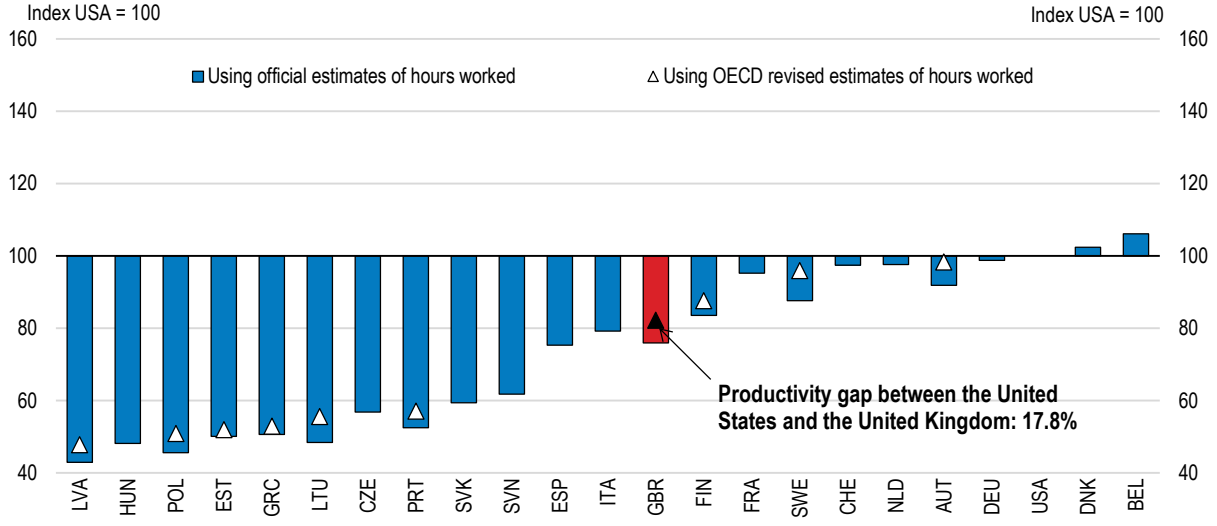
Figure 2.4. The productivity gap with the United States is large

Gaps in GDP per hour worked, 2016



Note: Hours worked are measured using average hours worked from official national accounts and from the OECD labour force survey based simplified component method.
Source: Ward et al. (2018), International productivity gaps: Are labour input measures comparable?, OECD Statistics Working Papers, No. 2018/12.

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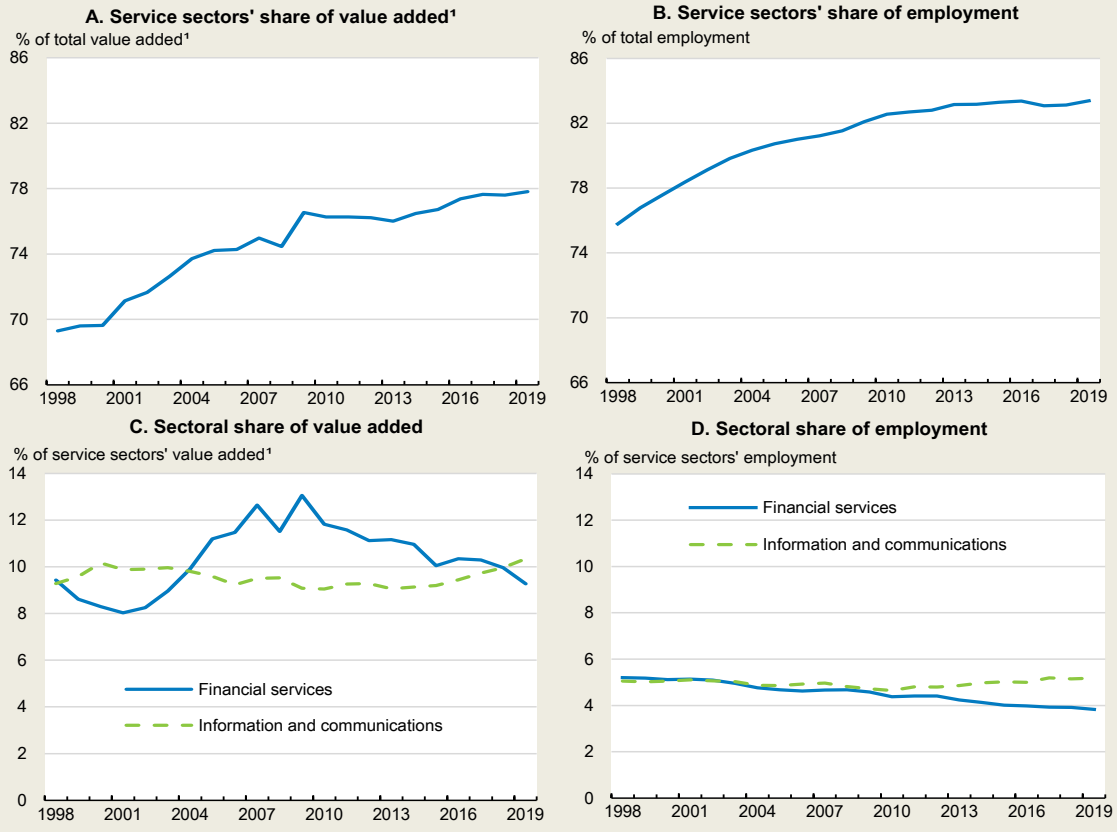
Productivity has been lacklustre in the service sectors

The United Kingdom is overwhelmingly a service-based economy (Box 2.1). The service sector accounts for a high share of output and employment, close to 80%. This share has stabilised since the financial crisis, reflecting some downsizing in the financial sector. Although those trends are also visible in other OECD countries, the share of the service sector in the United Kingdom remains one of the highest in the OECD countries.

Box 2.1. The United Kingdom is a service-based economy

The share of the service sector grew after the financial crisis (Figure 2.5). It represents about 80% of the economy both in terms of output and of employment (as compared to around 70% for employment and production on average in the OECD). Within the service sector, the share of financial services has been trending down to under 10% in terms of value-added and 4% in terms of employment. The service sector also plays a significant role in terms of investment, accounting for 64% of business investment in 2018 (Figure 2.6). Services represent 45% of total exports, of which about a third is of financial services. Digital trade has developed fast. At 42.5%, the share of services trade that can be delivered digitally is one of the highest amongst OECD countries (Figure 2.7). The share of digital exports of financial services is particularly high.

Figure 2.5. The service sector accounts for 80% of the UK economy



1. Excludes imputed rents. Data refer to nominal gross value added.
Source: ONS (2020), "Quarterly National Accounts: Oct to Dec 2019", and "Productivity jobs, productivity hours, market sector workers, market sector hours", April.

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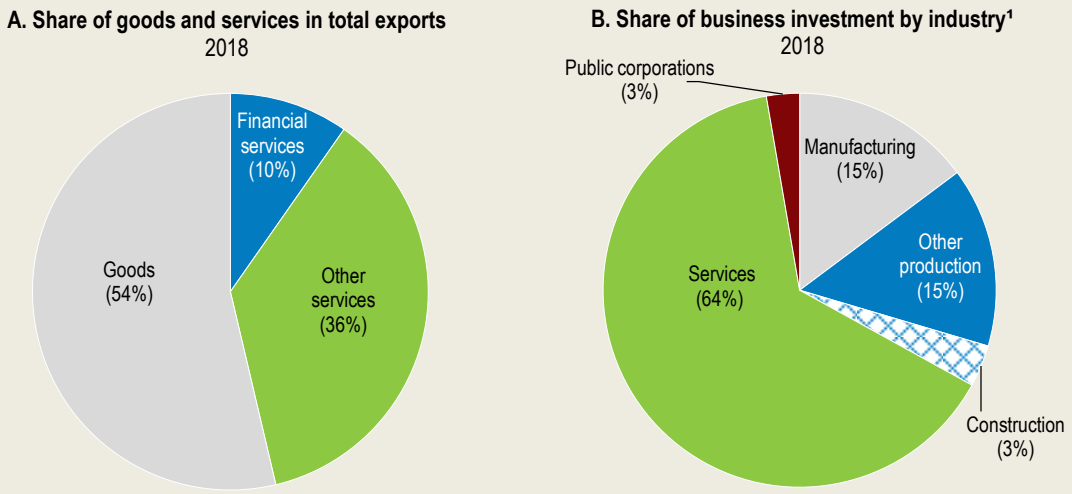
Figure 2.6. Service sectors represent a large share of exports and investment



1. Based on nominal gross fixed capital formation.
Source: ONS (2019), "UK Balance of Payments, The Pink Book: 2019" and "Business investment by industry and asset", March.

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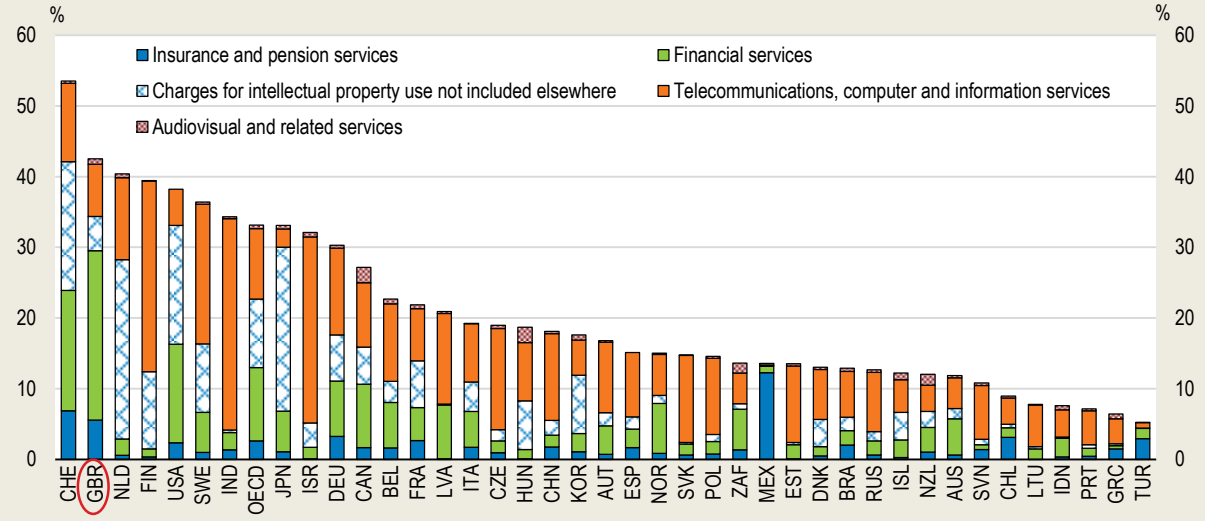
Figure 2.7. Digital services constitute a large share of service exports

Exports in predominantly digital services, % of total service exports, 2017



Note: The service sector classification is based on the Extended Balance of Payments Services Classification (EBOPS). For Chile, Mexico, New Zealand, and Switzerland, audiovisual and related services include other personal, cultural, and recreational services.
Source: OECD (2019), Going Digital: Shaping Policies, Improving Lives.

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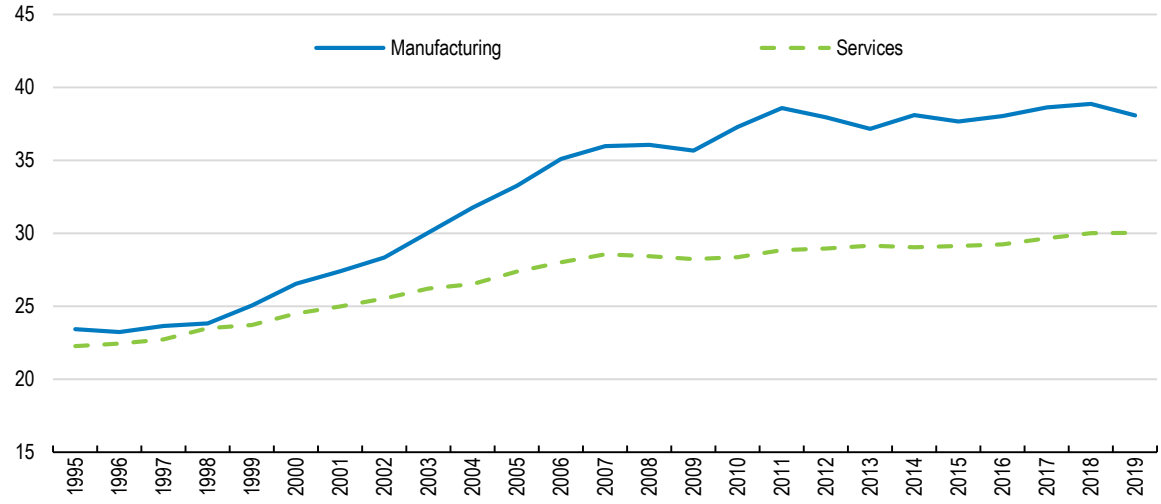
The shift towards service activities explains little of the poor aggregate productivity trends

The sectoral composition of output has implications for productivity, as productivity levels are higher in manufacturing than in services (Figure 2.8). Levels of productivity in the United Kingdom were 21% lower in services than in manufacturing in 2019. Indeed services tend to be less standardised than goods and some of them have to be delivered in person, hindering economies of scale and automation. Regulations are also usually more stringent in the service sectors, which can reduce trade in services and erect entry barriers (OECD, 2020a). Smaller productivity level differentials between services and manufacturing were observed in France, Germany and Italy.

Figure 2.8. Productivity levels are higher in manufacturing than in services

Real value added per hour worked in GBP



Note: Service sectors' real value added excludes imputed rents. It may be different to official aggregate data due to chain-linking methodology.
Source: OECD calculations based on ONS (2020), "GDP output approach – low-level aggregates", May, and "Productivity jobs, productivity hours, market sector workers, market sector hours", April.

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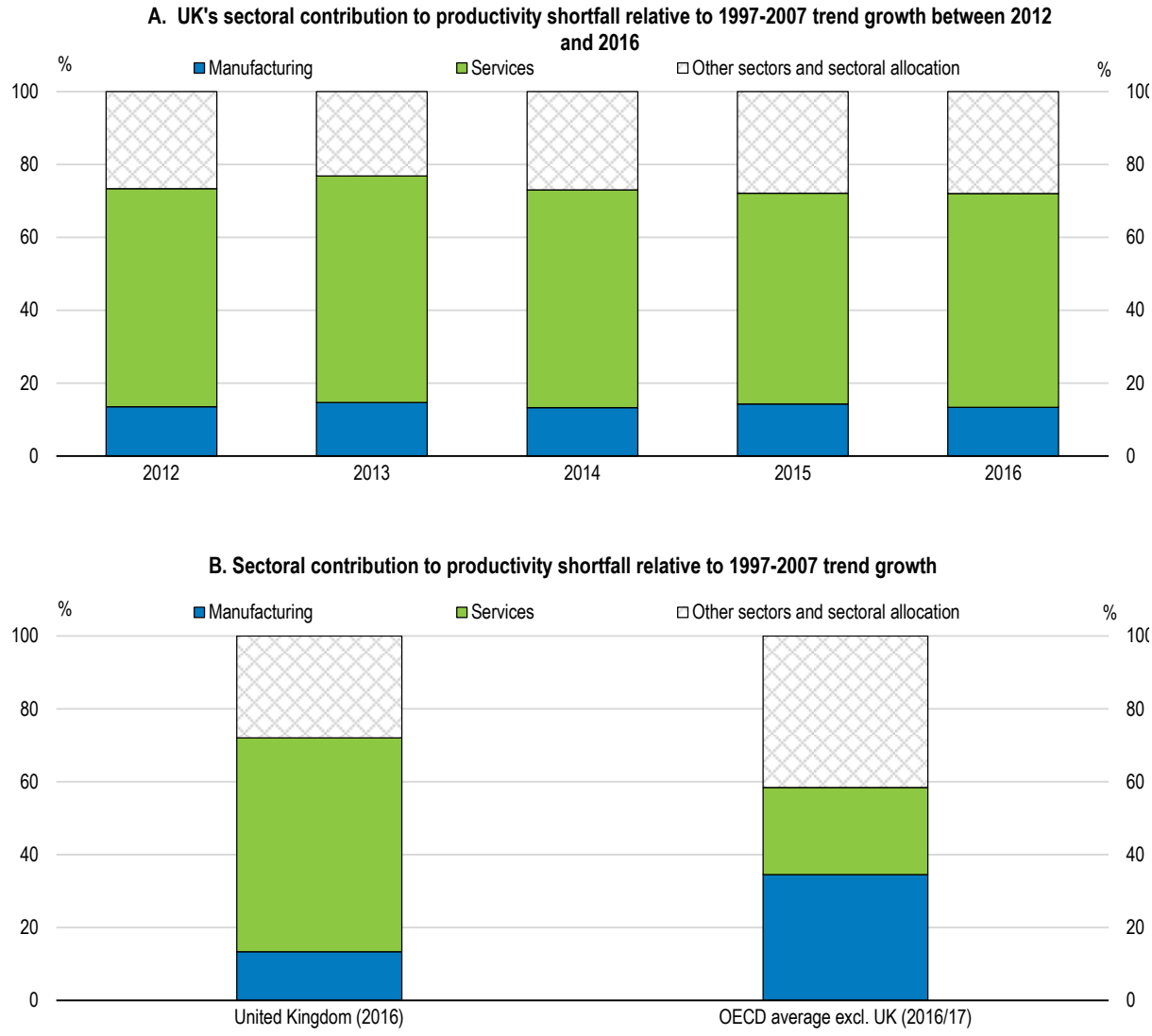
The sectoral shift to services from manufacturing accounts for a small part of the weakness in productivity in the United Kingdom after the financial crisis: it would explain around 1 percentage point in the productivity shortfall. This is consistent with Barnett et al. (2014b), Haldane (2017), Kierzenkowski et al. (2018), Riley, Rincon-Aznar and Samek (2018) and Sorbe, Gal and Millot (2018). It is comparable to what has been observed in other economies: the reallocation of resources from sectors where productivity growth has been relatively poor would amount to around 1 percentage point of the productivity shortfall after the financial crisis on average across OECD countries.

Weak productivity growth in the service sector has been the main factor behind the poor aggregate performance

Weak productivity performance in the service sector was the main factor behind weak aggregate productivity growth. The contribution of the service sectors to the productivity shortfall since the financial crisis has been more pronounced in the United Kingdom than in many other OECD countries (Figure 2.9). Weak service productivity is estimated to account for 59% of the productivity shortfall since the crisis, as opposed to 24% on average in OECD countries, reflecting essentially the high weight of the service sector in the UK economy. Productivity is estimated to have grown by 0.6% on average per year in the United

Kingdom since 2010 in the services sectors and 1% in the manufacturing sector. The productivity slowdown in the manufacturing sector contributed less in the United Kingdom than in other OECD countries.

Figure 2.9. Service sectors account for a large share of the productivity shortfall



Note: Based on the decomposition formula of shift-share analysis. For the OECD aggregate, unweighted average of 19 countries excluding the United Kingdom.
Source: OECD calculations based on OECD (2019), OECD National Accounts Statistics (database) and OECD Structural Analysis Database (STAN).

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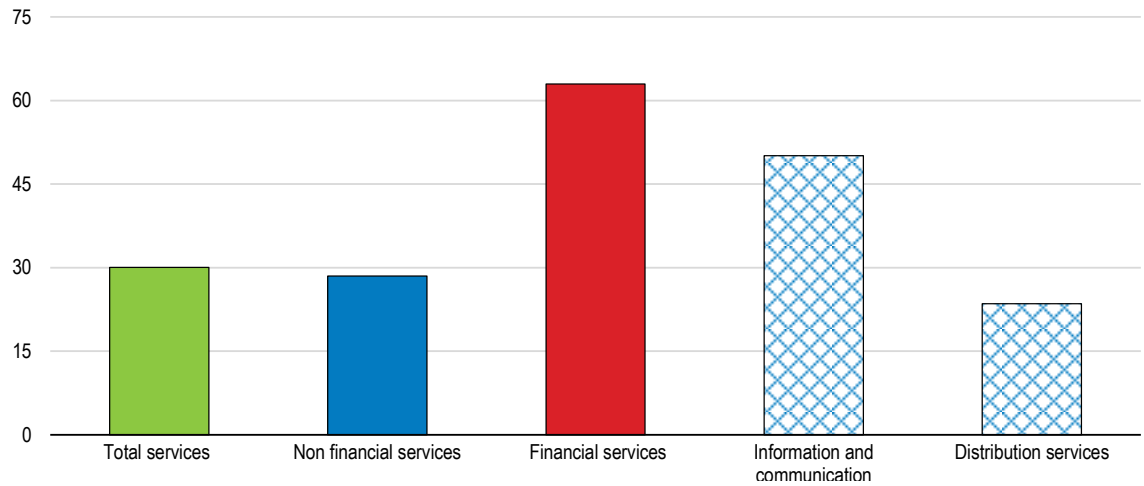
All service sectors experienced poor productivity growth

The service sector is very heterogeneous and categories within the sector display different productivity levels (Figure 2.10). Some low-productivity categories such as retail sales involve a higher share of routine tasks, which are currently far from automated and generally performed by low- or middle-skilled workers. By contrast, knowledge-intensive services such as financial services and information and technology experience higher productivity levels, as they employ high-skilled workers and can more easily benefit from

economies of scale, capital deepening and knowledge spillovers (Sorbe et al., 2019). The lower-productivity activities are more likely to have been impacted negatively by the COVID-19 crisis as they are more reliant on face-to-face operations and less able to use technology to continue producing.

Figure 2.10. The service sector is heterogeneous

Real value added per hour worked in GBP, 2019



Note: Overall service sectors' real value added is computed by aggregating individual service sectors. It excludes imputed rents.
Source: OECD calculations based on ONS (2020), "GDP output approach – low-level aggregates", May, and "Productivity jobs, productivity hours, market sector workers, market sector hours", April.

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In the period since the financial crisis, most service sectors experienced weak productivity growth, distribution being an exception (Figure 2.11). Sectors which experienced a more pronounced slowdown in productivity, such as the financial and information and technology sectors, are also those where productivity is hardest to measure (Box 2.2). Failure to account for intangible capital or the difficulty to price rapid quality improvements, in particular for digital products, have often been put forward as a source of underestimation of productivity growth. Mismeasurements are, however, unlikely to be the main explanation of poor productivity performance in most sectors (Byrne, Fernald and Reinsdorf, 2016; Syverson, 2017; Ahmad, Ribarsky and Reinsdorf, 2017).

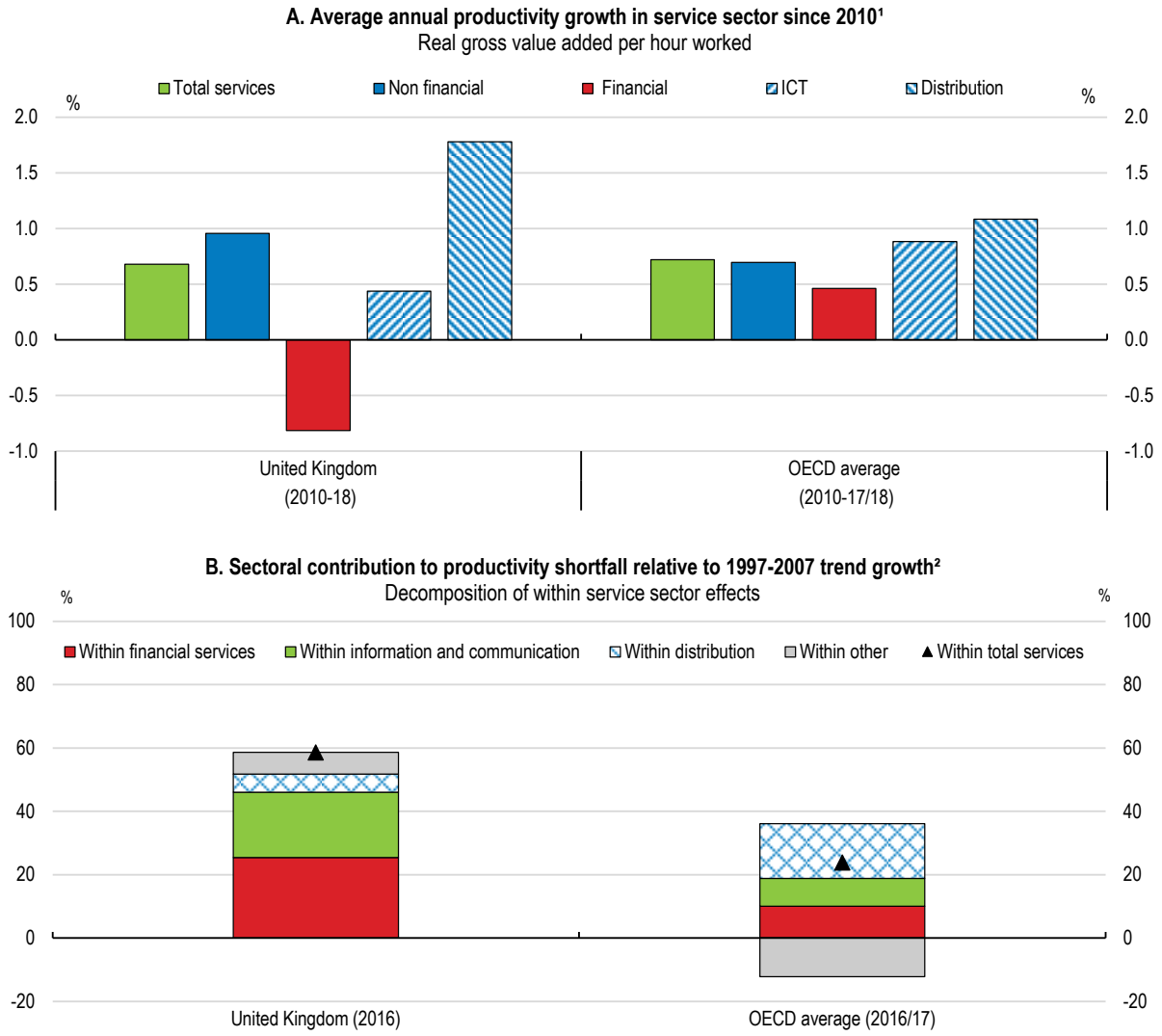
Both financial and non-financial sectors were major contributors to the productivity shortfall (relative to pre-crisis trend productivity growth). The main drag to productivity in the United Kingdom was the financial and the ICT sectors. In these two sectors, the contribution to the productivity shortfall was much more pronounced than in the average of OECD countries (Figure 2.11).

Despite the rapid pace of technological advancements in recent years, productivity in the ICT sector, which accounted for 8.1% of total value-added (excluding imputed rent) in 2019, is estimated to have grown more slowly in the decade since the financial crisis than in any other period since World War Two. This coincided with a gradual decline in investment rates in the ICT sectors. Eurostat data point to a decline in the investment rate in that sector from 22% of GDP in 2000 to only 12% in 2018, part of it reflecting price effects. Investment as a share of value added in intangible assets also markedly declined in the ICT sector (ONS, 2018a).

Productivity growth in the financial services sector slowed markedly after the financial crisis from 7.8% on average per year during the period 1998-2008 to 2.9% from 2009 to 2017. The apparent slowdown in productivity growth partly reflects an unusually high measured productivity growth prior to the crisis, driven

by higher leverage and risk-taking within financial firms. The scaling back of these activities since the crisis is a welcome development in terms of stability but may have stifled measured productivity, a development that may have been entrenched by the move to international standard agreed in Basel III through increasing lending rates and dampening investment activity (Brooke et al., 2015). Despite these trends, financial services productivity is twice as high as overall productivity across the United Kingdom (Bardalai, 2019).

Figure 2.11. Productivity has been weak in both financial and non-financial sectors



1. Service sectors' value added excludes imputed rents.
2. Based on the decomposition formula of shift-share analysis. The OECD aggregate is the unweighted average of 19 countries excluding the United Kingdom.
Source: OECD calculations based on ONS (2019), "GDP output approach – low-level aggregates", May and "Productivity jobs, productivity hours, market sector workers, market sector hours", April; OECD (2019), OECD National Accounts Statistics (database) and OECD Structural Analysis Database (STAN).

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Productivity in real estate has also performed poorly since the financial crisis, with productivity growth being more negative in the real estate sector before than after the crisis. This holds whether imputed

housing rents are included or not in gross value added in the United Kingdom. However, because such a correction cannot be easily undertaken on a cross-country basis, it is difficult to compare productivity developments in the real estate sector in the United Kingdom with those in other countries.

Productivity growth in the UK retail sector appears to have outperformed other OECD countries in the years after the financial crisis. Compared to other key sectors, the retail sector had the lowest average level of labour productivity since 2009, but the highest average labour productivity growth rate. The faster labour productivity growth rate from 2009-14 may reflect firms making use of opportunities for increased automation in supply chain management and logistics as well as in customer-facing roles (Institute for Employment Studies, 2016). It could also be related to higher ICT use.

Box 2.2. Measuring productivity in the service sectors

Productivity measurement is more challenging in services than in other sectors

Productivity is notoriously difficult to measure. Difficulties are compounded by the development of the digital economy, which has given rise to new products and rapid quality improvements, potentially resulting in overestimated inflation and, in turn, underestimated real output.

Measurement issues are more challenging in the service sector. The intangible nature of much of service output, which often involves human interactions between providers and consumers, implies that transactions can be heterogeneous and their exact nature ambiguous, creating difficulties to disentangle quality from quantity and to effectively price units of service output (Griliches, 1992; Triplett and Bosworth, 2003; Wölfl, 2005; Grassano and Savona, 2014). To address this issue, statistical agencies use various pricing methods of market services (direct use of prices of repeated services, unit value method, component pricing method, percentage fees, model pricing, pricing based on working time).

Measurement is even more challenging for services where there is no market price…

Due to the lack of data, the value of real output in some public services is assumed in many countries to be equal to the value of inputs, resulting in zero productivity growth.

ONS publishes alternative measures of productivity for the public services following the framework set out in the Atkinson Review (2005). These estimates use a basket of activities measuring the quantity and in turn the value of 'output' directly rather than through a sum of costs approach. Baskets vary by service area. For example, for healthcare it may include number of operations, number of patients, number of GP appointments, number of dental check-ups, and so on (Center for Health Economics, 2019). Where possible, these outputs are quality-adjusted to reflect the changing quality of the output being provided (e.g. number of successful operations, out of total operations).

… and for the financial sector

In financial services, output (Financial Intermediation Services Indirectly Measured, FISIM) is calculated as the difference between the effective rates of interest payable and receivable, and a "reference" rate of interest. In the banking sector, for instance, it is based on the observation that depositors are usually paid an interest rate that is below the risk-free reference rate. The difference represents the value of depositor services produced by banks, in the form of safekeeping, bookkeeping and payment services. On the other hand, borrowers almost always pay an interest flow above the risk-free reference rate. In this case, the difference represents the value of borrower services provided by banks in the form of credit-rating and monitoring.

Source: Sorbe et al. (2019), Mersch (2008), OECD (2013), ONS website.

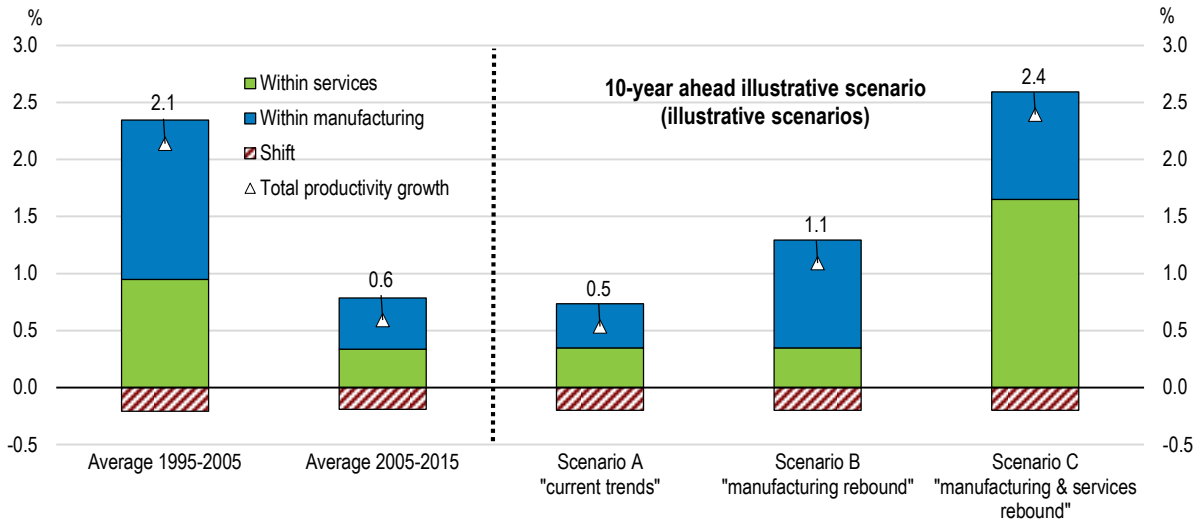
Productivity growth in the construction and in the transport sectors disappointed across the board both in the United Kingdom and in the average of OECD countries. The contributions to the productivity shortfall in those sectors in the United Kingdom appear to be close to the average contribution observed in OECD countries.

Productivity in the service sector needs to accelerate markedly

Looking forward, illustrative simulations underline that improving aggregate productivity performance will require a marked rebound in services sector productivity growth (Figure 2.12). Achieving such a rebound will be extremely challenging, particularly following the COVID-19 crisis.

Figure 2.12. Illustrative scenarios on productivity developments in the United Kingdom

Labour productivity growth in the medium term



Note: The scenarios presented here solely aim at underscoring the key role play by the services sectors. They do present predictions nor seek to quantify the magnitude of the rebound that will be needed to recover from the COVID-19 crisis. Scenario A assumes that productivity growth over the medium term will be similar to what was observed during the 2005-15 period. Scenario B assumes that productivity will grow at rates similar to what was observed during the 2005-15 period in the service sector but will rebound in manufacturing to rates observed in 1995-2005. Scenario C assumes that productivity growth in the service sector will rebound to 2% and to the 1995-2005 average in manufacturing.
Source: Calculations using Sorbe, Gal and Millot (2018).

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If, once the COVID-19 crisis has passed, productivity growth were to return in all sectors to the rates observed after the financial crisis, economy-wide productivity would grow around 0.5% a year. A rebound in the manufacturing sector only, with its productivity growth returning to its 1995-2005 average, would only lead to a limited pick up in aggregate productivity. By contrast, productivity growth in the service sector needs to reach 2% – double the rate currently observed – in addition to the manufacturing rebound for aggregate productivity to grow at rates similar to what was observed over 1995-2005. This represents the direct contribution of the service sectors to productivity and does not account for the indirect input it can provide in raising the quality of products in other sectors (Sorbe, Gal and Millot, 2018).

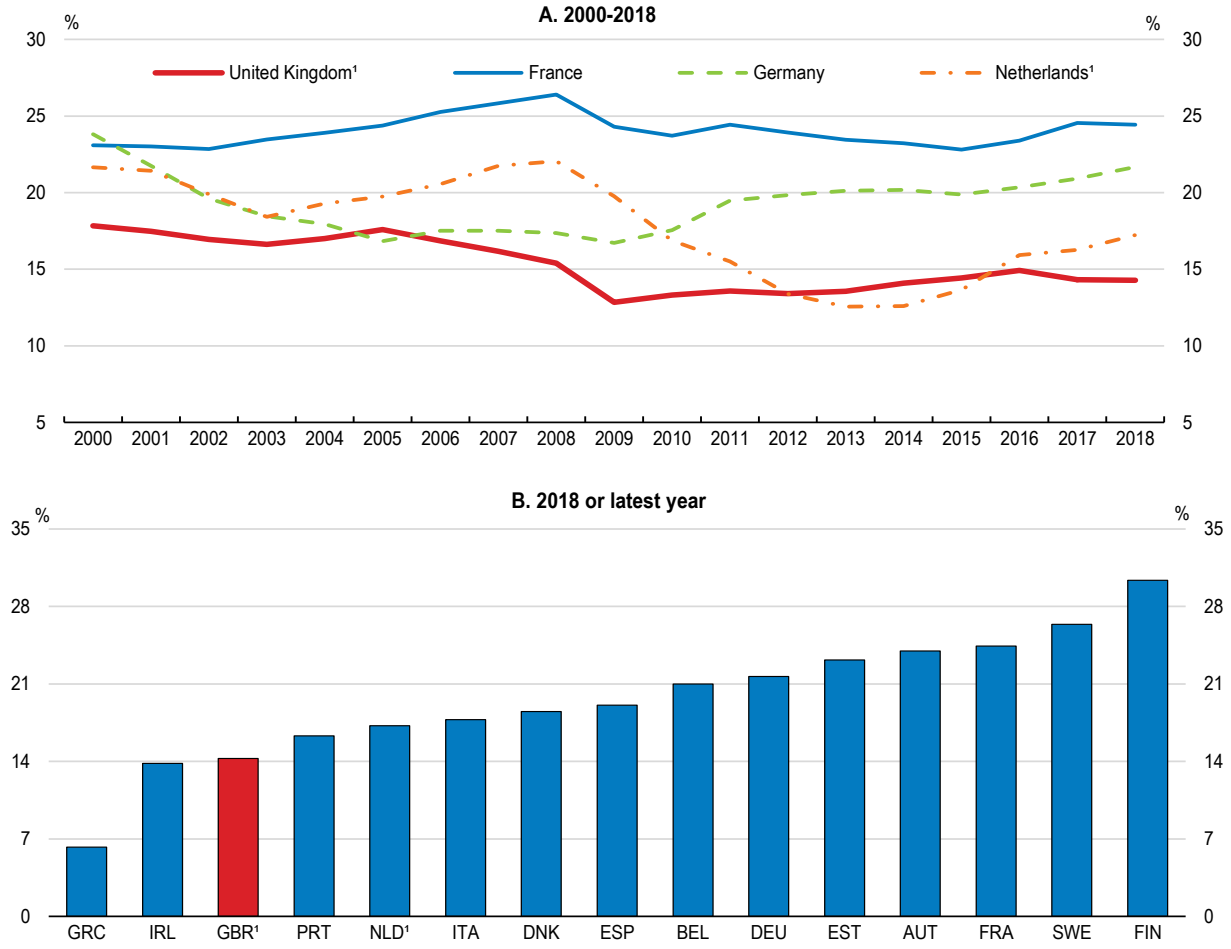
Low investment and innovation rates and a lack of knowledge diffusion across firms are the main factors behind the poor productivity performance

A large part of the post-crisis productivity shortfall reflects low investment and slower innovation

A simple way to examine the productivity growth slowdown is to use a standard growth accounting framework and split productivity growth into the efficiency with which both capital and labour are used to produce output — 'multi-factor productivity' and the amount of capital available per hour worked — 'capital deepening'.

Figure 2.13. Investment rates in the service sectors are low

Investment in the service sectors as % of GDP



Note: Nominal gross fixed capital formation. Service sectors comprise information and communication (J), finance and insurance activities (K), real estate activities (L) and professional, scientific and technical activities (M). Only some intangible assets (R&D, software and databases, entertainment literary and artistic originals, and mineral exploration rights) are included in the national-account definition of investment.
1. For the United Kingdom, data on service sector output in 2017 and 2018 are computed using the output growth for the whole economy. For the Netherlands, investment data on professional, scientific and technical activities in 2017 is used for missing investment data in 2018.
Source: Eurostat (2020), National accounts aggregates by industry (database) and Gross capital formation by industry (database).

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Multi-factor productivity (MFP) growth started weakening before the 2008 financial crisis in some sectors, such as the ICT sector. The UK Innovation Survey conducted by the ONS indicates a marked decline in the rate of both product and process innovation in UK firms. Still, the fall in the number of product innovators is estimated to account for less than one-tenth of the productivity shortfall relative to the pre-crisis trend between 2008 and 2012 (Barnett et al., 2014b).

Slower capital deepening can represent a significant part of the weakness in productivity growth even before the financial crisis. Investment in fixed capital in the service sectors has been low as a share of GDP in the United Kingdom (Figure 2.13). Both private and public investment have been sluggish (see *Key Policy Insights*). Business investment collapsed after the financial crisis. It subsequently recovered but markedly slowed after the 2016 Referendum. There is increasing evidence that the sluggishness in investment reflects to a large extent Brexit-related uncertainties (Meloninna, Miller and Tatomir, 2018; Bloom et al., 2019).

Evidence also points to a strong correlation between intangible assets and productivity (Haskel and Westerlake, 2017). While investment in intangible assets is now, in terms of GDP, larger than investment in tangible assets in the United Kingdom, investment rates of intangible assets have also markedly declined in a few service sectors such as ICT, professional and scientific activities, administrative services and accommodation and food services (ONS, 2018a).

A large tail of less productive firms accounts for much of the productivity shortfall in services

Weak firm-level productivity, whether due to low multi-factor productivity or a low capital-to-labour ratio, seems a widespread phenomenon across sectors, firm size and firm age. Although small, young firms, in the hotel and restaurant and distribution sector, located in Wales and North East are over-represented in the bottom 10% of the productivity distribution, the worst-performing firms can be found in all regions, industries and size groups (ONS, 2017). These firms are likely to have weaker cashflows and are more likely to be impacted by the COVID-19 crisis relative to similar firms and the concentration in hotels, restaurants and distributions points to their exposure. Similarly, the most productive firms are found in a broad range of industries, in all firm sizes and regions.

The presence of zombie firms was found to have had only a small impact on aggregate productivity in the United Kingdom since 2008 (LSE Growth Commission, 2017; Adalet McGowan et al., 2017). Since the financial crisis, pressure for corporate restructuring may have been lower in the United Kingdom than in the previous recession and business liquidations have been low compared to the size of the output shock and relative to the previous recession of the early 1990s. This has been attributed to an extended period of low interest rates and the reluctance of banks to write off loans for poorly performing companies, granting them interest payment holidays instead (a phenomenon known as “forbearance”). This may raise difficult choices about how far firms with weaker performance can be supported following the COVID-19 crisis. Firm dynamism is generally relatively high in the United Kingdom (Figure 2.14). After a fall in the aftermath of the financial crisis, firm creation has started to recover and deaths fell as of 2012 (Anyadike-Danes and Hart, 2017). By 2014, births, deaths and the stock of continuing firms had recovered to pre-crisis values. Ensuring that conditions remain favourable to the creation of new and dynamic firms will be important in the coming years as the economy recovers. Strong business dynamism implies labour adjustment and reallocation to new positions, which require skills that are not necessarily similar to positions that have been destroyed. It will be also important to make sure that workers have the right skills to work in a new environment and that adequate training is available (see below).

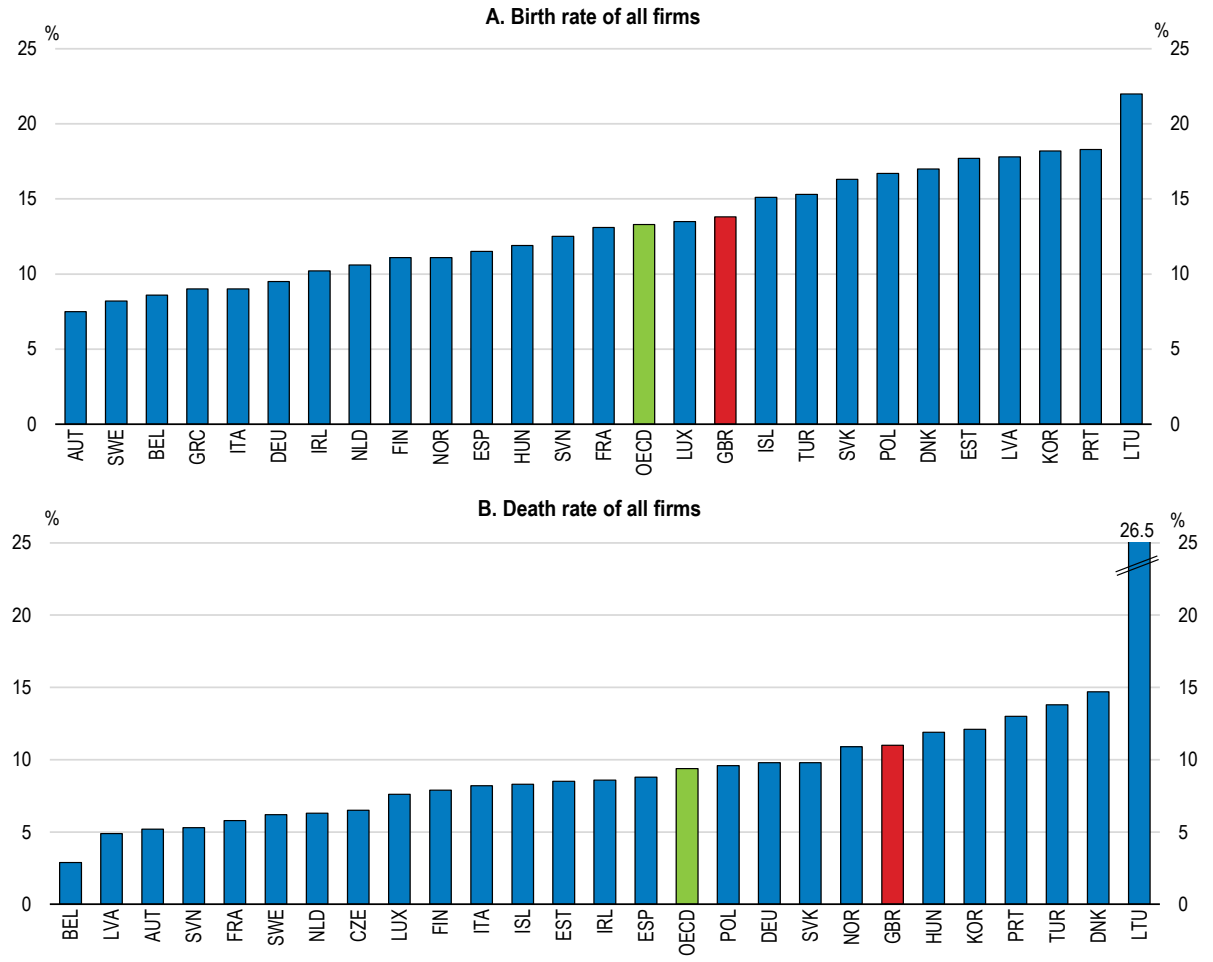
One specificity of the UK economy is a larger share of low-productivity firms than in other advanced economics such as France or Germany (Figure 2.15). At the other end of the spectrum UK top-productivity firms perform relatively well by international standards (ONS, 2017). The productivity gap between the national top and bottom-performing 25% of companies in the service sectors appears to be larger in the

United Kingdom than in some other advanced economies (Figure 2.16). This productivity gap has also widened since the financial crisis, in the UK service sectors, while it has been stable or even declined in some other economies. ONS data suggest that productivity increased from 2003 to 2015 for both the bottom 10% and the top 10% firms, but the latter experienced stronger growth.

One reason for the large gap is that knowledge diffusion from leaders to less innovative firms may have been weaker after the financial crisis (Andrews, Criscuolo and Gal., 2016; Haldane, 2018). According to Cornell University, INSEAD and WIPO (2019), the United Kingdom ranks only 12th globally for knowledge diffusion and 27th for knowledge absorption, although it ranks 5th in the global index. This ranking is based on a variety of indicators including intellectual properties receipts, high-tech and ICT services exports, and FDI outflows. Accelerating knowledge diffusion and absorption would narrow the productivity gap between leader and laggard firms.

Figure 2.14. Firm dynamism is relatively high

Birth and death of firms, Information and communication technology (ICT) services, 2017 or latest year



Note: Data refers to the private sector economy. ICT services are defined as the aggregate of the following activities (ISIC rev. 4): ICT trade industries, Software publishing, Telecommunications, Computer programming, consultancy and related activities, and Repair of computers and communication equipment. Unweighted average for the OECD aggregate.
Source: OECD (2020), OECD Structural and Demographic Business Statistics (database).

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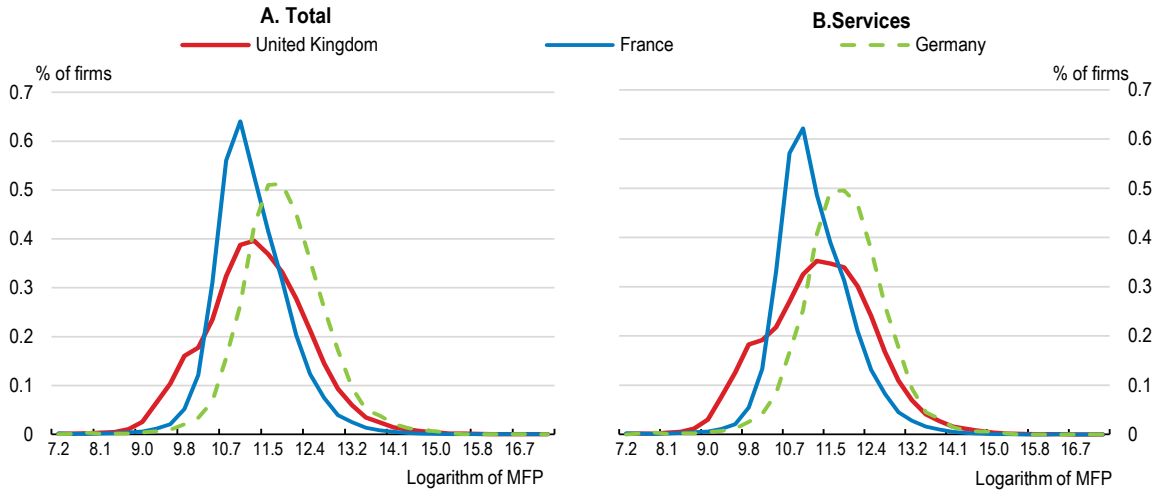
Figure 2.15. The United Kingdom displays a long tail of low-productivity firms

Distributional estimates of multi-factor productivity (MFP), 2016



Note: Multi-factor productivity is computed using the Wooldridge method. The business service sector excludes the financial sector. The sample includes firms with at least 20 employees on average over their observed lifespan. Data for Germany may suffer from selection bias. Because of the cleaning of the dataset, well-performing firms are not represented in this chart.
Source: OECD calculations based on ORBIS data.

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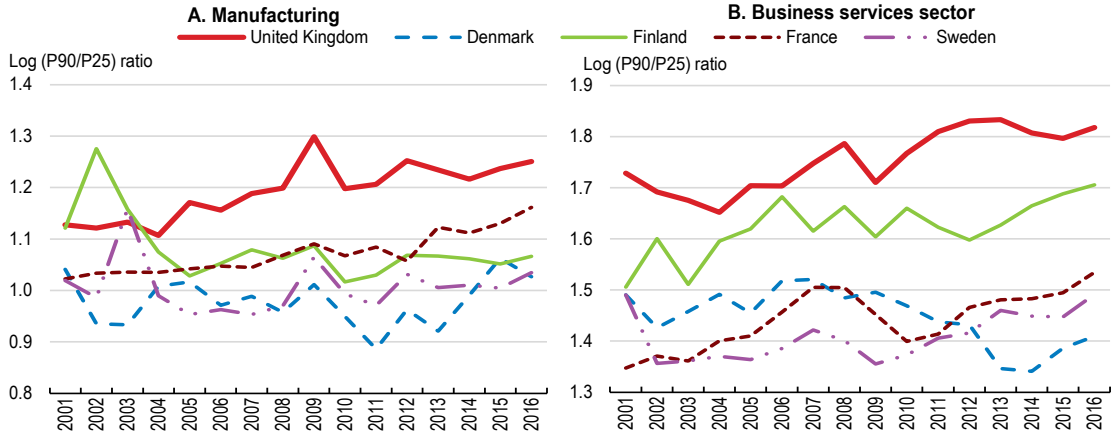
Figure 2.16. The productivity gap between leader and laggard firms is higher in the United Kingdom

Ratio of 10% of firms with highest multi-factor productivity to 25% of firms with lowest productivity



Note: Multi-factor productivity is computed using the Wooldridge method. The business service sector excludes the financial sector. The sample includes firms with at least 20 employees on average over their observed lifespan.
Source: OECD calculations based on ORBIS data.

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How to encourage firms to adopt new technologies?

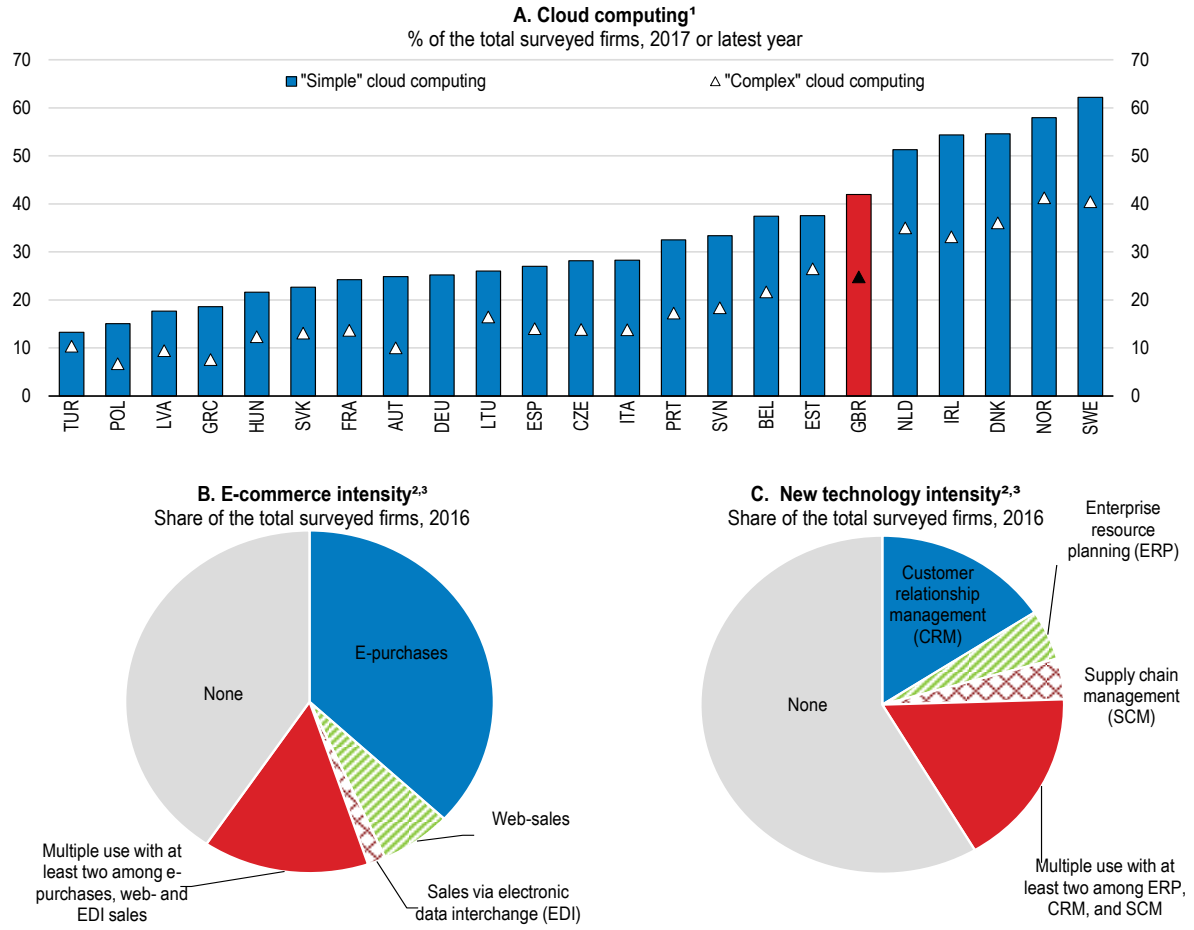
Digitalisation is likely to have contributed to the divergence between leader and laggard firms since this trend is in most OECD countries more pronounced in digital-intensive industries (Gal et al., 2019). Moving to a digital economy will also be key to support the recovery in a context where firms and households will have to adapt their behaviour to distancing rules and other measures to limit the spread of the virus until a

vaccine or a treatment are readily available. The following sections review policies which could help foster productivity, by improving investment, innovation or knowledge diffusion across firms.

Some firms are not engaging in the most advanced technologies

The United Kingdom fares relatively well in terms of adoption rates in basic technologies but less so in terms of more advanced technologies (Figure 2.17).

Figure 2.17. Adoption of new technology lags the best performers



1. Adoption rate of "simple" (e.g. e-mail services) and "complex" (e.g. online renting of data or computing capacities) cloud computing services among firms with at least 10 employees. The figure presents the average adoption rate across industries in each country, using the industry structure of the United States as a benchmark to weigh industries in order to avoid that differences in industry structure affect the results.
2. Based on the E-commerce survey. Firms with at least 10 employees.
3. Firms' use of electronic platforms and software to manage their business processes.
Source: ONS (2019), "Information and communication technology intensity and productivity" and Sorbe et al. (2019), "Digital dividend: policies to harness the productivity potential of digital technologies", OECD Economic Policy Papers, No. 26.

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Access to basic ICT technologies, such as the use of computers, having internet access, fixed broadband and a website have become mainstream. Still, there appears to be a tail of companies (representing around 10% of companies, predominantly small) which have adopted only some of these technologies. According to the ONS Annual Business Survey dataset, a notable share of firms has no ICT activity in relation to business organisation (24%) and e-commerce (17%). Adoption rates of advanced forms of new technologies are also lower than in leading countries. Low adoption rates of more advanced technologies are a potential factor explaining the poor productivity performance. OECD and ONS work suggest that

firms engaging in new technologies get a significant productivity premium, especially when they combine a number of new technologies, but that the benefits are not evenly spread across firms (Box 2.3).

Box 2.3. Does engaging in new technologies boost productivity?

This box reviews evidence on the impact of new technology adoption on productivity, drawing on Sorbe et al. (2019) and ONS (2018b).

Digital technologies support productivity…

Focusing on European countries and some forms of digital technologies, OECD work suggests that productivity gains from digital adoption can be substantial. This can reflect both productivity increases by the firm adopting these new technologies (including the benefits of concomitant investments in human and organisational capital) and positive spillovers to other firms in the same industry, such as suppliers benefitting from more fluid interactions or competitors induced to increase their productivity.

Looking at UK data, ONS (2018b) finds a significant productivity premium for engaging in new technologies. The premium is around 10% for firms using e-purchases. The use of any combination of enterprise resource planning, customer relationship management and supply chain management technologies is associated with a productivity premium of around 25%. Direct employment, outsourcing and providing ICT training to employees appear to be associated with a productivity premium, but businesses in the service industries only experience a premium when using a combination of these methods.

… but not uniformly across firms

Although evidence shows that, on average, the take up of technologies will enhance productivity, their impact may differ across types of firms (Bailin Rivares et al., 2019). Productivity gains from digital adoption depend crucially on firms' organisational capital and management skills, as well as on their ability to deploy complementary investments and innovations to improve business processes and automate certain routine tasks. In addition, productivity gains can take time to materialise.

The productivity benefits from digital adoption appear less in services than in manufacturing, and more generally tend to be higher in industries that are intensive in routine tasks. This confirms that streamlining or automating routine tasks is one of the channels through which digital adoption increases productivity. In the case of the retail sector, for example, the consequences of online retailing for labour productivity may vary between different segments of the retail sector. Selling retail services online can have low marginal costs and offer major benefits from potentially unlimited capacity. Some online retailers can achieve much higher labour productivity from consumer self-service, where product research and self-administered purchasing transactions can replace human services (Pike, 2015). Elsewhere, online businesses invest in a virtual 'chat' service for more complicated products. New online firms often emerge outside the traditional retail footprint in areas such as financial services and travel firms, and the retail sector more widely could learn from them. In contrast, supermarkets, which account for around 40% of consumer retail spending in the United Kingdom, may experience static or reduced labour productivity. This is because providing an online sales channel for low-value items such as groceries is very labour intensive for retailers.

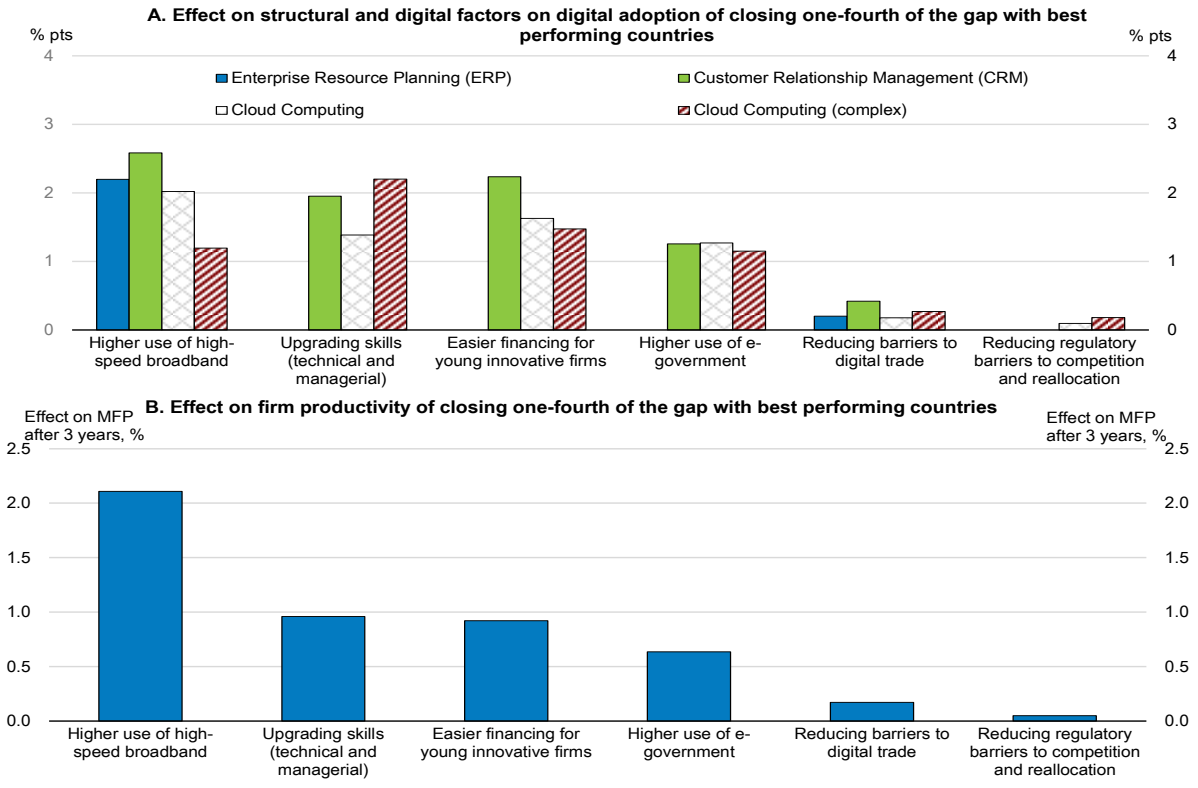
Source: Sorbe et al. (2019) and ONS (2018b).

As in other economies, the use of technology to support teleworking has been a key element of maintaining activity during the COVID-19 crisis. The effect of this change in working arrangements on productivity are still uncertain. To maximise the productivity gains from the use of more widespread teleworking, governments should promote investments in the physical and managerial capacity of firms and workers to

telework and address potential concerns for worker well-being and longer-term innovation related in particular to the excessive downscaling of workspace (OECD, 2020b).

The most productive firms are usually characterised by good management and digital skills and more prone to reorganise production processes, explaining why they are more likely to adopt new technologies and to benefit more from adoption (Gal et al., 2019). The contrast between upper-tail companies which are fast adopters of new technologies and slow technology-adopter firms is even more marked than for basic technologies (Haldane, 2018). A lack of awareness or trust, as well as the difficulty to quantify the benefits of those technologies could explain those low take-ups.

Figure 2.18. A range of policies can support productivity through digital adoption in the United Kingdom



Notes: Estimated effect on the multi-factor productivity (MFP) of the average firm of a range of policy and structural factors which are found to support the adoption of new technologies: The effect of "Higher use of high-speed broadband" on productivity combines the direct and indirect effects presented in Figure 6 in Sorbe et al. (2019). "Upgrading skills" covers participation in training, quality of management schools and adoption of High Performance Work Practices. "Reducing regulatory barriers to competition and reallocation" includes lowering administrative barriers to start-ups, relaxing labour protection on regular contracts and enhancing insolvency regimes. "Easier financing for young innovative firms" covers the development of venture capital markets and the generosity of R&D tax subsidies. It is assumed that policy factors in each group are largely independent from each other.
Source: Sorbe et al. (2019), "Digital dividend: policies to harness the productivity potential of digital technologies", OECD Economic Policy Papers, No. 26.

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Illustrative scenarios from Sorbe et al. (2019) suggest that policy reforms to facilitate the take-up of digital technologies could bring significant productivity dividends. Such estimates should be treated with caution, as they do not, for instance, assess causality. Although the magnitude of the estimated impact is uncertain, those simulations are useful to identify priorities. For instance, filling some of the gap in adoption rates of enterprise resource planning, customer relationship management and cloud computing compared to the

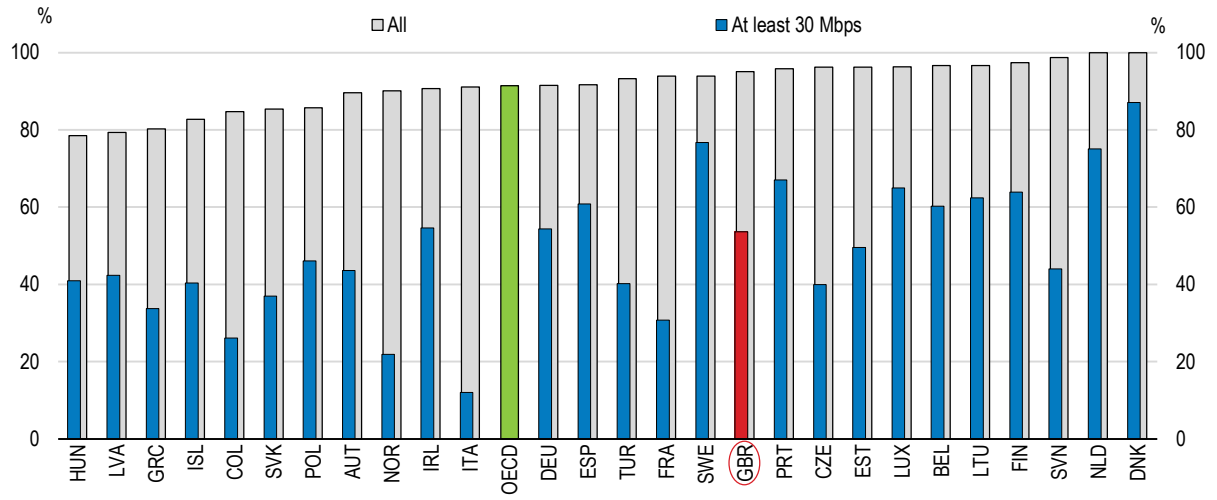
best-performing countries could bring large productivity dividends in the medium term in the United Kingdom (Figure 2.18). This could be done by developing high-speed broadband infrastructure, upgrading skills, easing financing conditions of young and innovative firms and making higher use of e-government. The United Kingdom would benefit from keeping low digital-trade barriers to trade and investment.

Facilitating access to digital infrastructure

Improving the use of digital infrastructure is expected to bring large productivity dividends in the United Kingdom. Although it has improved, the share of firms accessing high-speed broadband remains below that of many other European countries (Figure 2.19).

Figure 2.19. The share of firms with high-speed broadband is lower than in peer countries

Broadband connections, by speed, % of the total surveyed firms, 2019 or latest year



Note: High-speed broadband refers to at least 30 Mbit/sec data transfer speed. Only firms with at least 10 employees. Average across industries in each country, using the industry structure of the United States as a benchmark to weigh industries in order to avoid that differences in industry structure affect the results.
Source: OECD (2020), ICT Access and Usage by Businesses (database).

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In addition to fostering productivity, increasing investment in digital infrastructure will also help to bridge the digital divide. Access to high-speed broadband is particularly difficult in rural areas whose coverage lags behind that of urban areas, like in many other OECD countries. Although the access gap has declined since 2010, the low quality of broadband connections in rural areas, in terms of connection speed, time taken to transfer data between users or devices and errors in data transfer needs to be addressed. Mobile broadband prices are estimated to be below the OECD average, according to the OECD telecommunication price baskets measures.

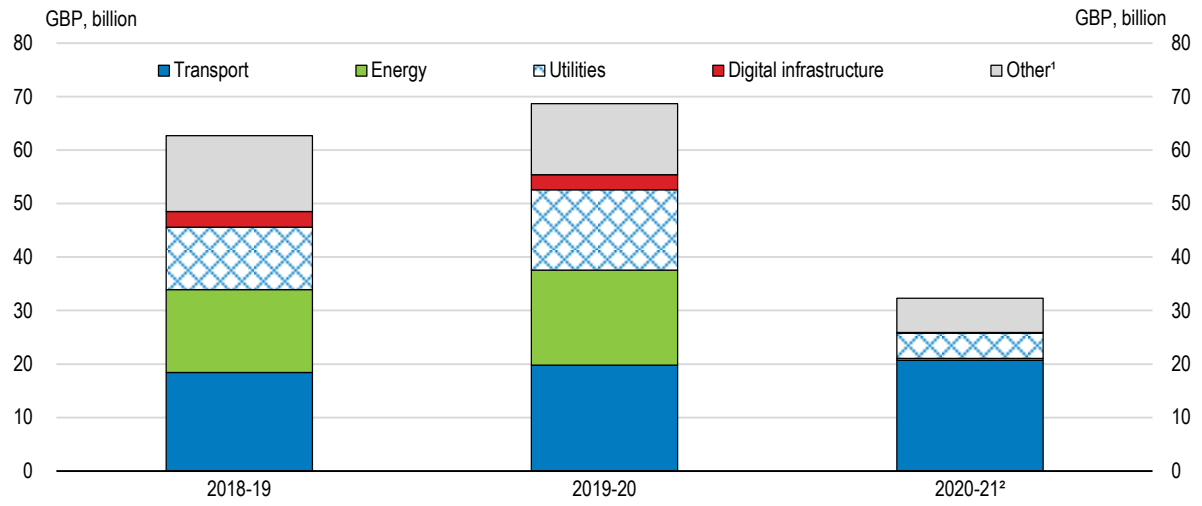
Building world-class digital infrastructure is one of the stated priorities of the UK Digital Strategy, published in 2017, and the Digital Economy Act 2017 addresses key issues relating to electronic communications services. The Government's ambition is to have nationwide gigabit-capable broadband as soon as possible, with an ambition to deliver by 2025. The United Kingdom has also committed to extend geographic coverage to 95% by 2025. Through the Future Telecoms Infrastructure Review, it has set out a regulatory model to promote network competition and private sector investment in digital infrastructure. The publication of the National Infrastructure Strategy was delayed, but the Government committed in the

March 2020 Budget to GBP 5 billion (0.2% of GDP) investment in gigabit broadband rollout in the hardest-to-reach areas by 2025 and to fund the GBP 1 billion shared rural network for mobile coverage by GBP 500 million, with the remaining matched by industry. Despite these efforts, planned investment for 2020-21 in digital infrastructure is small compared to investment in transport and utilities (Figure 2.20).

The Government set out plans for the public sector to investment GBP 640 billion over the next five years (on average 5.8% of GDP per year). This can help address the challenges brought by the management of the COVID-19 crisis and facilitate the adjustment of firms to the new business environment. It will be important to communicate rapidly on the timing and the allocations of those investments to shape firms' expectations and encourage private investment. Investment in digital infrastructure should be prioritised. Such investment has been found to bring large productivity gains and to be a prerequisite to the adoption of digital technologies (OECD, 2019c). The Government may invest directly in high-speed fixed networks or incentivise private investment, including by competitive tendering, tax exemptions, low-interest loans or lower spectrum fees (OECD, 2018a).

Figure 2.20. Most major investment projects are in transport, energy and utilities

Decomposition of investment, by sector



1. Includes other programmes such as science and research, flood and coastal erosion, and social infrastructure.
2. Based on "National infrastructure and construction procurement pipeline 2020/21, June 2020. Estimated maximum contract value.
Source: Infrastructure and Projects Authority, "Analysis of the national infrastructure and construction pipeline", Policy paper, November 2018 and "National infrastructure and construction procurement pipeline 2020/21", June 2020.

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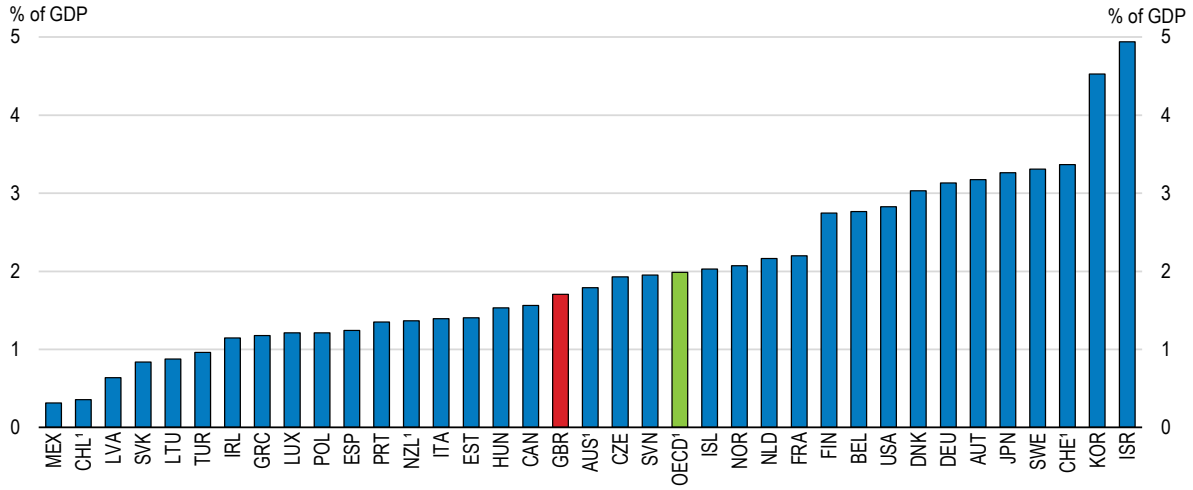
Improving Research and Development support

Spending on Research and Development (R&D) is a key driver of innovation and hence productivity growth. It has increased in the United Kingdom as a share of GDP over the past decade. However, at 1.7% of GDP in 2018, R&D spending is still low compared to peer countries (Figure 2.21). The United Kingdom has invested less in R&D than France as a share of GDP since 1986 and less than Germany since 1980. In addition, three-quarters of its private R&D spending is concentrated in only 400 companies. Among smaller firms, the United Kingdom ranks low compared to European countries in terms of in-house innovation and the introduction of new products and processes (Haldane, 2017).

The Government has committed in its Industrial Strategy to increase overall UK investment in R&D from 1.7% to 2.4% of GDP by 2027. This is welcome. This would bring the United Kingdom close to the current OECD average, but Germany is aiming to invest 3.5% of GDP in R&D by 2025. A few countries such as Austria, Sweden or Finland already invest around 3% of GDP in R&D, with Israel and Korea investing larger amounts of around 4.5% of GDP.

Figure 2.21. Spending on research and development is lower than the OECD average

Research and development expenditure, 2018 or latest year



1. Unweighted average for the OECD aggregate. 2017 for Australia, Chile, New Zealand and Switzerland.
Source: OECD (2020), Main Science and Technology Indicators (MSTI database).

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Support to spur R&D spending in the United Kingdom has increased over the years, faster than in the median of OECD countries. Total support amounted to 0.3% of GDP in 2017, up from 0.12% in 2006, placing it in the top providers of support amongst OECD countries (OECD, 2019d). Tax credits still account for 60% of government support but there is evidence that the cost of these measures has been increasing over time (HM Revenue and Customs, 2018). In March 2020, the Government announced an increase in the tax credit and broadened the scope of qualifying expenditure to include data and cloud computing. It also set out plans to increase public R&D investment to GBP 22 billion (1% of GDP) per year by 2024-25, taking direct support for R&D to 0.8% of GDP and placing the United Kingdom among the top quarter of OECD countries. Direct support is predominantly accessed by large firms, which may explain in part why R&D spending is concentrated in a few large firms (Figure 2.22). This differs from a number of other OECD countries, where direct support is often disproportionally channelled towards small and medium-sized enterprises and firms which are not part of larger business groups (OECD, 2019d).

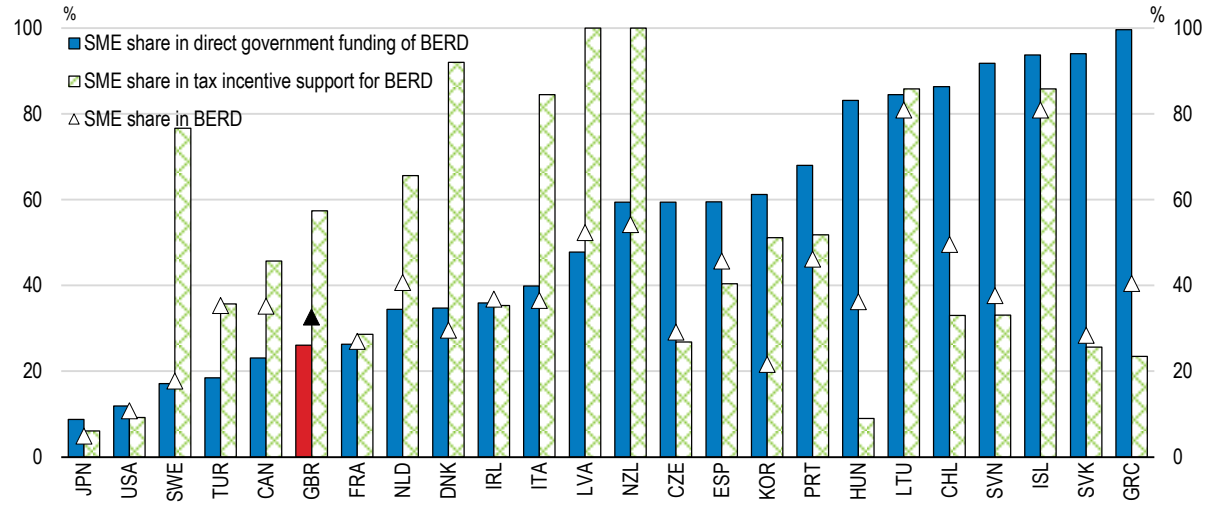
Both types of support present advantages and drawbacks and the optimal balance of R&D support varies from country to country and can evolve over time (Appelt et al., 2016). Overall, there appears to be broad consensus that tax incentives are more suited in principle to encourage R&D activities oriented towards the development of applications that have the potential to be brought to the market within a reasonable timeframe. In contrast, grants are more suitable for supporting longer-term, high-risk research and for targeting specific areas that generate public goods or that have particularly high potential for spillovers.

It will be important to continue to boost direct funding and ensure balanced support between the two sources of funding to spur productivity and digitalisation as the economy recovers from the COVID-19 crisis. This spending should be prioritised to leverage private sector innovation in potentially “disruptive”

technologies. It will also be important to ensure that small innovative firms also benefit from this support. A number of countries, such as Australia, Estonia, Ireland and Luxembourg have introduced direct SME-targeted funding and could provide good examples to consider (OECD, 2019b).

Figure 2.22. Small firms only receive a limited share of support

% of government support for business R&D, 2017 or latest year



Note: International comparability may be limited, e.g. due to variations in SME definitions for business R&D vs. R&D tax relief reporting purposes. For more information on R&D tax incentives, see http://oe.cd/rdtax. SMEs figures generally refer to enterprises with 1-249 employees.
Source: OECD (2020), OECD R&D Tax Incentive Indicators, http://oe.cd/rdtax and OECD (2020), Research and Development Statistics (database).

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Easing access to finance of new and young firms

Firms in the service sectors have suffered from financial pressures as lockdown measures have prevented sales while they continued to bear operating costs. Improving access to finance for new and young innovative firms would bring sizeable productivity gains. New firms represent a fair share of the total number of firms, with the service sector representing 98% of the newly created enterprises. Beyond the immediate needs, there is evidence of a gap in the supply and use of long-term/patient capital that is holding back firms from growing to scale (HMT, 2017; HMT 2018; IPO and British Business Bank, 2018). Against this background, a 10-year action plan was introduced in 2017 to unlock a total of over GBP 20 billion (1% of GDP) to finance growth in innovative firms (HMT, 2017; HMT, 2018). Progress in implementation has been made since then and should continue.

Better targeted support to small firms

Small firms have experienced acute financial stress as a result of COVID-19, especially those operating in the service sectors which faced the most stringent restrictions. Emergency measures have been put in place to alleviate liquidity constraints, including grants to small business (0.7% of GDP) and business rate holidays (0.5% of GDP). Those were necessary to prevent massive business failures and support income. Moving from an emergency to a recovery phase, it will be essential to restrict support to firms that face a liquidity issue but are viable in the medium term. This will favour the adjustment of businesses to the new environment.

Emergency measures add to the plethora of established government schemes to support the financing of small firms which have been introduced over the years. According to the 2019 OECD Scoreboard on

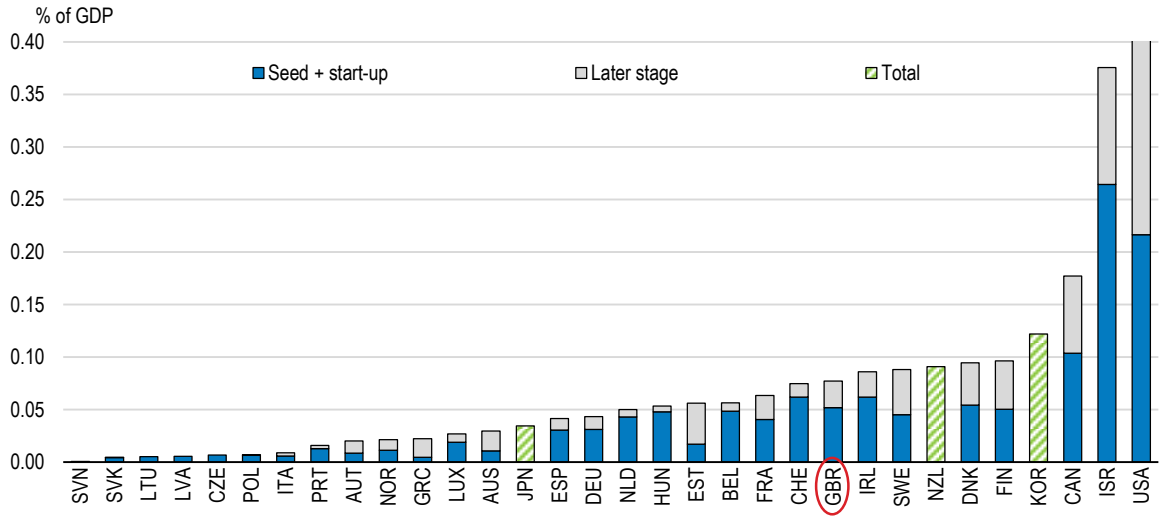
financing SMEs and Entrepreneurs these include: government loan guarantees, direct lending to SMEs, special loans for start-ups, government export guarantee or trade credit, support to venture capital equity funding and business angels SME banks, business advice consultancy, tax exemptions and central bank funding to banks depending on lending rates. There are over 500 publicly funded schemes to support businesses (Page, 2018).

The rationale for specific schemes for long-term growth is sometimes unclear and some of these measures may not succeed in facilitating access to finance of small firms. To maximise the efficiency of support, it would be preferable to review the whole system of support and re-prioritise resources toward measures that respond to a genuine market failure and support production processes that are consistent with the protection of the environment. The focus should be directed to supporting young firms, especially those that are likely to be more innovative and/or operate with a sizeable share of intangible capital. Funding should also be redirected in priority to schemes which have been assessed to be efficient.

There is uncertainty around some of the public funding of venture capital in the long term. The European Investment Fund has been a major investor in venture capital. The Government has provided the British Business Bank (BBB) to make up to GBP 200 million of additional investment in UK venture capital and growth finance in 2019-20. This will complement support through the BBB's dedicated equity finance business, British Patient Capital, and the establishment of regional funds such as the Northern Powerhouse and Midlands Engine Investment Funds. Market imperfections in this segment and the small size of the venture capital market compared to Canada, Israel or the United States could justify government's intervention to develop the market (Figure 2.23). While the BBB's capacity has been increased this year, it will be important to secure funding on venture capital over a longer term and provide clarity to investors.

Figure 2.23. Reliance on venture capital is relatively low

Venture capital investments, 2018 or latest year



Note: Venture capital is a subset of private equity such as equity capital provided to enterprises not quoted on a stock market, and refers to equity investments made to support the pre-launch, launch and early stage development phases of a business. 2017 for Canada and Japan, and 2014 for Israel.
Source: OECD (2020), OECD Enterprise Statistics (database).

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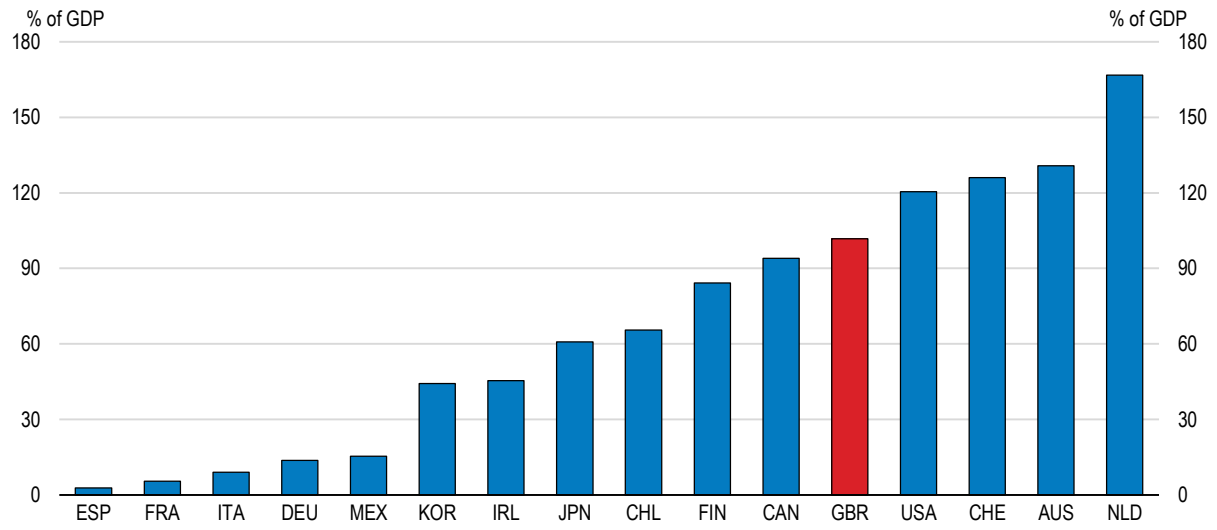
Redirecting investment from long-term investors to innovative firms

The United Kingdom has one of the biggest pensions markets (in terms of total assets) in OECD countries (Figure 2.24). According to the British Venture Capital Association, UK pension funds contributed 3.7% to the GBP 33.5 billion invested in venture capital and private equity in the United Kingdom in 2017, compared to 37.5% from overseas pension schemes. Removing barriers for UK funds to diversify their portfolios in these activities would increase the financing pool available to young innovative firms and help to support investment returns at a time when yields on other assets remain very low.

Since 2018, the Government has taken measures to remove barriers and support occupational defined-contribution (DC) schemes in investing in innovative companies, as part of a balanced portfolio. The approach is welcome to the extent it remains consistent with the original objective and mandate of the pension funds. A prerequisite is to consolidate DC schemes so that they have the critical mass to invest in higher-risk innovative activities.

Figure 2.24. The pensions market is large

Pension assets, 2018



Note: Data for Germany includes pension assets for company pension schemes. For Japan, data does not include the unfunded benefit obligation of corporate pension plans. For Switzerland, data includes autonomous pension funds only and it does not consider insurance companies assets. Data for the United State includes IRAs.
Source: Willis Towers Watson (2019), Global Pension Assets Study 2019, Thinking Ahead Institute research.

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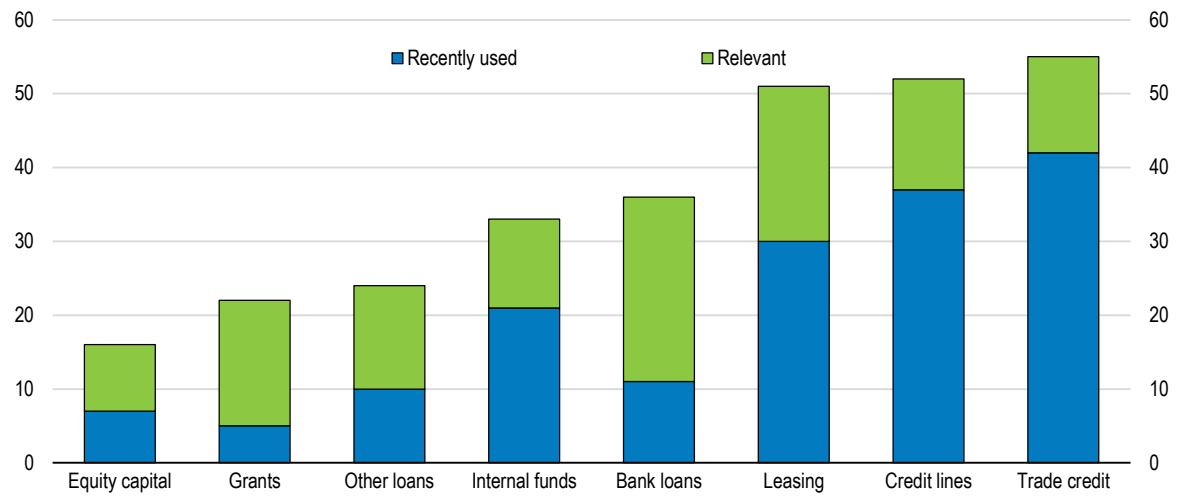
Encouraging equity-based financing

Although equity markets are more developed than in many OECD countries, equity financing accounts for a very small share of total financing of small firms in the United Kingdom and is used by only 16% of small and medium-sized firms (Figure 2.25). In 2017, the debt-to-equity ratio of non-financial corporations in the United Kingdom was close to the OECD average. As in other countries, one factor explaining this outcome is the tax bias favouring debt rather than equity financing. The effective average tax rate on new equity is estimated to be 7 percentage points higher than on debt in the United Kingdom, a differential close to what was observed in the EU28 (ZEW, 2016). In addition to lowering public revenues, such a bias is often associated with financial instability (Landgedijk et al., 2015) and it would be useful to remove it.

A few countries have put in place various supports to ease access to equity, notably allowances for corporate equity (ACE). Such a scheme has already been applied in Belgium, Latvia and Portugal and is under consideration in Denmark (OECD, 2019e). The idea of the ACE is to maintain deduction of interest expenses and give a tax allowance for equity to achieve tax neutrality across debt and equity. The challenge to implement such a reform is the need to ensure that the ACE only applies to new equity to avoid windfall gains for the investment undertaken before the introduction and to determine an imputed rate of return (the so-called notional interest rate). The ACE can also lead to strategic tax planning by multinationals if not designed adequately and accompanied by specific anti-avoidance measures (Hebous and Ruf, 2017).

Figure 2.25. Equity capital is a small portion of SME finance in the United Kingdom

2018



Note: Based on the Survey on the Access to Finance of Enterprises (SAFE), where companies were asked about the situation in the past 6 months (April – September 2018), published in November 2018.
Source: European Commission (2019), "SME access to finance conditions 2018 SAFE results – United Kingdom".

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Investigating new sources of financing for digital firms

Young firms with intangible assets face longstanding difficulties accessing finance (Demmou et al., 2020). In addition to the information asymmetries common in SME finance markets, the value of intangible assets, even when registered, is also often not properly recognised and hard to use as a collateral. Yet, firms with intellectual property (IP) are found to have lower rates of default and loss than those without. IPO and British Business Bank (2018) identified four main barriers to using IP as collateral to secure debt finance: banking regulation, legal enforceability, valuation and liquidity. Solving these market failures would benefit small innovative companies and lenders. Budget 2018 put in place support to encourage more companies to use their IP to access finance, and work with banks to improve their awareness of the opportunities and true credit risk associated with such lending.

Unlocking intellectual property as a source of collateral for finance and increasing the ability of IP-rich firms to make productivity-enhancing investments could be very positive for the UK economy. A prerequisite would be to encourage SMEs to register their IP if this form of lending is to function effectively. A number of other countries have explored the potential for IP-backed finance, with mixed results. New digital financing solutions, such as peer-to-peer lending and crowdfunding, as well as more recent innovations

like initial coin offerings (ICOs), may also help, but require further study to assess overall benefits and risks (OECD, 2018b). As the issue is likely to gain importance with the rapid digital transformation of the economy, it would be useful to examine the relative benefits of these different options in the UK financial and banking environment.

Maintaining low barriers to trade and competition

The COVID-19 crisis has hit severely trade in services, in which the United Kingdom is highly specialised (OECD, forthcoming).

Low barriers to service trade are key

New research undertaken for this Survey suggests that high barriers to international trade and investment reduce productivity while freer trade boosts productivity across countries and at the sectoral and firm level in the United Kingdom (Box 2.4). Entry barriers allow incumbent firms to gain market power and delay innovation, while frustrating the development of more innovative entrants. Global value chains increase those costs, which percolate down the supply chain. The costs of a policy environment that reduces competition from new entrants, including foreign firms, is ultimately borne by consumers and downstream business firms, which pay higher prices and enjoy less choice than they would in more open markets. There is also evidence that competition drives up the real wage and can force the least productive non-trading firms to exit, thus increasing average productivity (Ghironi and Melitz, 2005; Bloom, Draca and van Reenen, 2016). Low barriers to trade and competition will be particularly important to facilitate the adaptation of the country to a post-COVID-19 environment, with new working, production and consumption patterns.

Foreign-owned firms and exporting firms in the United Kingdom are on average more productive than domestically-oriented firms, reflecting in part inherent characteristics of those firms. On average productivity of foreign-owned firms is twice the productivity of domestically-oriented firms, and the gap is particularly large in the service sector (Haldane, 2017). Firms that export are on average 15% more productive than domestically-oriented firms. This gap has been increasing over time, especially in the service sectors (Table 2.1).

Table 2.1. Productivity gaps between UK exporting and non-exporting firms

Per cent

	Average productivity growth		Gap between exporting-non exporting firms		
	2008-2016	2000-2008	2016	2008	2000
Exporting	0.8	3.0	14.9	9.0	7.0
Non-exporting	0.1	2.8			
Services, exporting	0.2	3.1	14.9	8.2	6.4
Services, non-exporting	-0.5	2.8			

Source: Calculations using ORBIS.

Keeping low barriers to trade and competition in the UK service sectors, will create a more supportive environment for strong productivity performance than in other countries (Figure 2.26). In 2019, the United Kingdom was among the top ten countries with the most open markets for service trade (excluding movement of natural persons). Barriers are especially low vis-à-vis European countries which continue to have access to the EU Single Market. This advantage is large when sectors are not covered by multilateral trading system (air transport), only partially covered (maritime transport), or in regulation-intensive sectors such as legal services, engineering or architecture.

The sectoral cross-country estimates reported in Box 2.4 suggest that an increase in the stringency of barriers to trade and competition from the current low levels for intra-EU trade to the higher levels currently

faced by non-EU countries could depress sectoral hourly labour productivity by 2% to 5% in the long term in most service sectors (Table 2.2). The impact would vary across sectors, with transport and storage, professional scientific and technical activities and finance and insurance being the most affected. The magnitude of the impact depends both on the increase in trade barriers this implies for each sector, the current difference between intra-EEA and extra-EEA barriers, and on the pre-existing openness of each sector.

Box 2.4. Explaining productivity developments: insights from sectoral and firm-level data

New research undertaken for this Survey draws on international and UK cross-sectoral and firm-level estimates and investigates the policy levers that could help to boost productivity in the United Kingdom.

Productivity growth is modelled as a function of policies and regulations and controls. The relation is estimated for both real labour productivity and multifactor productivity using dynamic OLS (DOLS) on a panel of 17 sectors over the period 1998-2017 for the sectoral estimates. Estimates are computed for the United Kingdom only and for a sample of 12 European countries. Firm-level analyses are undertaken for the United Kingdom over a sample of around 250 000 firms. Results appear to be robust to a wide range of tests (Kim, Mourougane and Baker, forthcoming).

The main findings are:

- Barriers to trade and investment appear to be a determinant of productivity growth in the long term (Table 2.2). This is consistent with Égert and Gal (2017), which is based on aggregate productivity across a wider set of OECD countries.
- Spending on R&D and human capital also play an important role, though their effects depend on the way those variables are measured.
- The magnitude of the impact is estimated to differ across sectors, depending on the degree of openness and the job intensity.

Table 2.2. Long-run determinants of productivity growth

	UK – Firm-level data (ORBIS)		UK – Sectoral level (ONS)		OECD Sectoral level (STAN)
	Labour productivity	MFP	Labour productivity	MFP	Labour productivity
Barriers to trade and investment	-0.766**	-0.557***	-0.137**	-0.165**	-0.146**
R&D spending	0.032***'	0.029***	..	..	0.098**
Human capital	..	..	0.265**	0.298**	0.218**

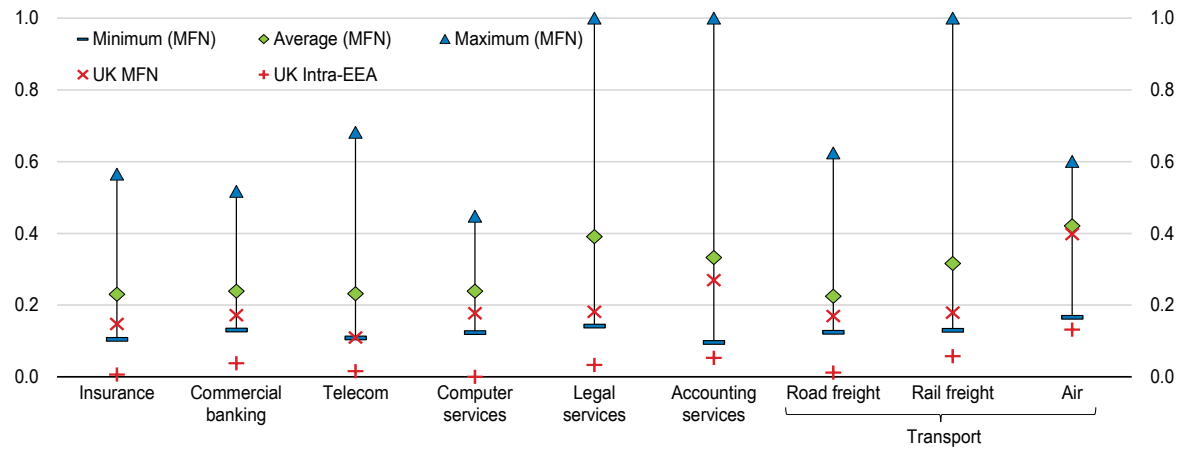
Note: MFP stands for multi-factor productivity. Estimates at the firm and sectoral levels are not comparable.** represents significance at the 95th percentile, *** represents significance at the 99th percentile. In almost all cases, the captured effect is indirect (via an interaction term).
Source: Kim, Mourougane and Baker (forthcoming).

Maintaining low barriers to trade vis-à-vis EU and other trade partners will also be key for market openness in the digital area as services play a crucial role in enabling digital trade transactions. Trade in digital services represents a high share of total exports in the United Kingdom, well above the OECD average. This reflects to some extent the relatively low level of barriers to digital trade and investment in the United Kingdom (Figure 2.27). Looking at specific measures, restrictions related to infrastructure and connectivity are in line with those of the best performing countries. The United Kingdom appears to be very open in terms of payment system and intellectual property rights. Local presence is required in order to provide cross-border services in the United Kingdom. Such a restriction exists in Australia, but not in Norway, which are best performers in this area. Regarding electronic transactions, the national contract rule for cross-

border transaction deviates from internationally standardised rules. Most countries follow a similar approach.

Figure 2.26. Restrictions on trade in service sectors will rise when the United Kingdom leaves the EU Single Market

Services Trade Restrictiveness Index, scale from 0 to 1 (most restrictive), 2019



Note: STRI are calculated on the basis of the STRI regulatory database which contains information on regulation for the 37 OECD Members, Brazil, China, Costa Rica India, Indonesia, Malaysia, Russia, Thailand and South Africa. The Intra European Economic Area STRI covers 25 countries and 22 sectors. For more methodological information, refer to Benz, S. and F. Gonzales (2019) "Intra-EEA STRI Database: Methodology and Results", OECD Trade Policy Papers, No. 223.
Source: OECD (2020), "Service Trade Restrictions Index by services sector" and "Intra-EEA Services Trade Restrictiveness Index" in OECD Industry and Services Statistics (database).

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Table 2.3. Moving from EU to non-EU in restrictions to service trade would reduce long-term productivity in the service sectors

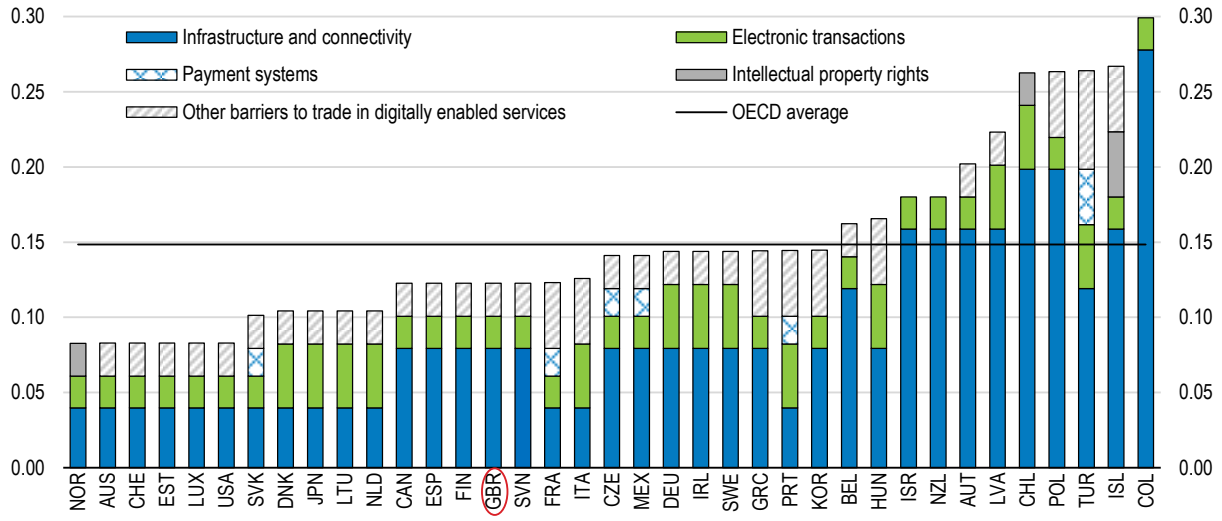
Difference to baseline, per cent

	Wholesale & retail; trade, motor trade, motor vehicle repair	Transport & storage	Information & communication	Finance & insurance	Professional scientific and technical activities
Increase in barriers	0.1	0.2	0.2	0.1	0.2
Effect on productivity					
UK sectoral	[-0.4;-1.3]	[-0.8;-2.7]	[-0.5;-1.7]	[-0.8;-2.6]	[-1.1;-3.5]
Cross-country sectoral	[-1.1;-2.1]	[-2.3;-4.4]	[-1.2;-2.3]	[-1.6;-3.1]	[-2.6;-4.9]

Note: In the simulation, restrictions to service trade raise from the intra-EU level to the most-favoured nations (MFN) level. The industrial classification is based on the UK Standard Industry Classification (SIC). UK specific elasticities have been estimated on a relatively small sample of observations and should thus be treated with care.
Source: Calculations using Kim, Mourougane and Baker (forthcoming).

Figure 2.27. Restrictions to trade in digital services are currently low in the United Kingdom

Digital Services Trade Restrictiveness Index, scale from 0 to 1 (most restrictive), 2019



Source: OECD (2020), OECD Services Trade Restrictiveness Index (database).

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Against this background, the United Kingdom should seek to maintain open service trade with the European Union. The Political Declaration states that the objective will be that of a liberalisation of service trade "well beyond WTO" building on recent EU free trade agreements. The objective is to ensure that services providers and investors are treated in a non-discriminatory manner, including with regard to establishment. There is also a willingness to achieve voluntary regulatory cooperation and "good regulatory practices", as well as "appropriate arrangements" for mutual recognition of professional qualifications and temporary entry and stay of natural persons for business purposes (European Union and UK Government, 2019). In the transport sectors, both parties agree to aim for a comprehensive air transport agreement, comparable market access in both markets for road transport operators and bilateral arrangements for cross-border rail services. Connectivity in the maritime transport sector is planned to be based on international law. In the financial services, the United Kingdom would get a third country treatment, based on equivalences.

Reaching an agreement with the European Union will be essential. A no-deal exit could have damaging effects both in the short and in the long term, that will compound with employment losses from the COVID-19 crisis (see *Key Policy Insights*). Alongside negotiations to get a comprehensive deal with the European Union, the United Kingdom could seek to reinvigorate the plurilateral Trade in Services Agreement (TiSA) to ease services market access, although success in this area will also depend on the willingness of other countries to restart the process.

Refining business regulations and the competition framework to adapt the digital transformation

Past experience has shown that the same principles of competition apply during times of recession as during times of economic expansion. The United Kingdom is estimated to have the least restrictive regulatory barriers to competition. Like many OECD countries, however, the country is experiencing deep structural changes which may require refinements to the competition framework. The UK competition authority has adopted a flexible approach to cope with the COVID-19 crisis and adjusted its working conditions as the situation develops (CMA, 2020).

Following the 2008 financial crisis, there have been mounting signs of increasing mark-ups and declining firm entry and exit rates in many OECD countries (Calligaris, Criscuolo and Marcolin, 2018; Calvino and Criscuolo, 2019). Studies also point to an increase in industry concentration in Europe, but less pronounced than in the United States, as well as an increasing rate of mergers and acquisitions (Bajgar et al., 2019). Focusing on the United Kingdom, the Resolution Foundation (2018) shows that there have been different phases since the early 2000s. Concentration in the United Kingdom rose by a small amount in the 2000s, increased sharply during the financial crisis and fell back more recently. To a large extent, the rise in concentration reflects a global trend, which is particularly marked in digital intensive sectors (Calvino and Criscuolo, 2019; De Loecker et al., 2018). The combined features of economies of scale and scope, killer takeovers (whereby a large incumbent absorbs a potential competitor), strong network effects, and restrictions to consumer switching and multi-homing mean that many digital platform markets have tended towards high levels of concentration.

A high degree of competition in digital markets can have benefits and limits. A small number of dominant firms may be more efficient, on average, to deliver better and more innovative products to consumers, as they benefit from network effects. But, this can raise effective prices for consumers, reduce choice, or impact quality. It can also be harder for new companies to enter or scale up. The most productive firms may become more difficult to challenge, especially in a digital environment where intangible firm-specific assets (such as tacit knowledge, data and algorithms) are an increasingly central source of value. This risks undermining business dynamism and could ultimately affect productivity. It could also impede innovation via lower contestability as larger companies have less to fear from new entrants. Finally, it can create monopsony positions and lead to a reduction in the labour share with an associated increase in inequality (OECD, 2019f). Another concern is related to the potential harm to firms that are reliant on digital platform markets to deliver services and could be particularly vulnerable to exploitation by dominant tech firms. Overall, benefits and downsides of competition can create a trade-off where the potential dynamic costs of a lack of competition in digital markets outweigh the static benefits from having a few large players with scale and network effects.

The United Kingdom has been leader in initiating a reflection on these issues and an independent expert panel on digital competition has put forward recommendations to ensure markets remain competitive as the economy becomes more digital (Digital Competition Expert Panel, 2019). One of the main recommendations is to enable greater personal data mobility and systems with open standards so that consumers can change service providers as they see fit (Box 2.5).

The potential barriers to entry in established digital platform markets mean that they cannot generally be considered freely contestable: the largest incumbents can exert significant market power over their users and may not be required to deliver the same level of positive outcomes as they would if facing normal competitive market conditions. OECD work shows that a broader set of considerations than current competition are needed to account for the specificities of digital markets (OECD, 2018c). Benato et al. (2019) also suggest that ex-post evaluation of the innovation impact of mergers is a feasible and worthwhile task (conditional on data availability).

According to the Digital Competition Expert Panel report, merger assessments should be made more forward-looking and adopt a broader approach to merger assessment, including an 'balance of harm' evaluation of the overall economic impact of mergers – taking into account the magnitude as well as likelihood of impacts. The Government has announced that changes to merger policy will be subject to consultation. Given the novelty of the process, it will be important that the new approach is widely understood and offers a high level of predictability. In addition, existing antitrust law in digital markets has been used very infrequently and cases have moved too slowly. The antitrust enforcement regime should be updated to enable greater use of interim measures to prevent harm to competition during a pending antitrust investigation. The UK Competition Authorities (CMA) welcomed the conclusions of the expert panel report and responded by launching a Digital Markets Strategy in June 2019, setting out how it will continue to protect consumers in rapidly developing digital markets, while fostering innovation

(CMA, 2019). It has now concluded a market study into online platforms, with recommendations in line with those of the expert panel report.

Box 2.5. Main recommendations of the Digital Competition Expert Panel

On 13 March 2019, a panel of independent experts, led by Professor Jason Furman, formulated recommendations to the UK Government. This box reports the main strategic conclusions of the panel.

1. Establishment of a "digital markets unit" (DMU)

The panel calls for the establishment of a DMU, which would be an independent body and would be given the remit of using tools and frameworks that will support greater competition and consumer choice in digital markets.

2. Changes to UK merger control law and policy

These include updating the merger assessment framework to provide more opportunities to intervene and to focus attention on technological developments and the possible loss of "potential competitors" as well as actual competitors; designating certain companies with "strategic market status" and requiring them to notify the competition authority (CMA) of "all intended acquisitions"; and a "balance of harm" merger test allowing the CMA to be able to weigh up (i) the magnitude and likelihood of harm from losing a rival and (ii) the magnitude and likelihood of potential benefits to consumers from efficiencies.

3. Greater use of interim measures and revising applicable appeal standards

The report suggests that the CMA should prioritise consumer enforcement work in digital markets, and should complement this with sufficient information gathering powers applicable to the digital economy.

In particular, it recommends that the antitrust enforcement regime should be updated to enable greater use of interim measures to prevent harm to competition during a pending antitrust investigation. In addition, appeal standards should be more closely aligned with the standards for judicial review and the ability to adduce new evidence in the course of an appeal should be removed.

4. A global approach to digital enforcement

The report concludes by calling for a more integrated global approach to the digital economy, including ensuring the effectiveness of remedies.

In June 2019, a long-term strategy on adapting the regulatory framework to technological innovation was published (HM Government, 2019). It proposed to introduce a new Regulatory Horizon Council to advise on rules and regulations that may need to change to keep pace with technology; a digital Regulation Navigator to help businesses find their way through the regulatory landscape and bring their ideas to market; a review of the Regulators' Pioneer Fund, which backs projects that are testing new technology in partnership with the regulators in a safe but innovative environment; and a partnership with the World Economic Forum to shape global rules on innovative products and services. In particular, the United Kingdom has developed a regulatory sandbox for fintech firms, Project Innovate, which provides a structured and controlled environment for firms to test innovative propositions in the market. This can encourage experimentation and new business models by promoting the flexible approach to regulation (OECD, 2019c). Overall, these proposals reach a good balance between the need to reform the regulatory landscape while preserving some flexibility given the uncertainty around the nature of emerging products and firms. Its focus on evaluation is particularly welcome.

Easing land-use regulations

Land-use regulation in the United Kingdom has long restricted the availability of land for urban uses, including land for retail. Regulations of retail development in England have been restrictive since 1947 and tightened decisively in 1996 with the introduction of 'Town Centre First' (TCF) policies which restrain the ability of retailers to choose locations and sites. Haskel and Sadun (2012) also suggest that planning policies led to a loss of 0.4% a year in firms' productivity from 1997 to 2003.

In the past two years, a revised National Planning Policy Framework (NPPF) was published and further liberalising reforms to the planning regime were introduced. In particular, the "shops" use class will be amended to ensure it captures current and future retail models and introduce a new permitted development right to allow shops. In addition, the existing right that allows the temporary change of use of buildings from two to three years will be extended to give businesses sufficient time to test the market with innovative business ideas. Further relaxing regulatory constraints will help to support the recovery through a better allocation of resources, improve matching of supply to consumers' preferences and support productivity growth. A consultation process on the "The Planning for the Future" aims at discussing reforms of the planning system to streamline and modernise the planning process.

Ensuring basic skills in a modern workplace after the COVID-19 crisis

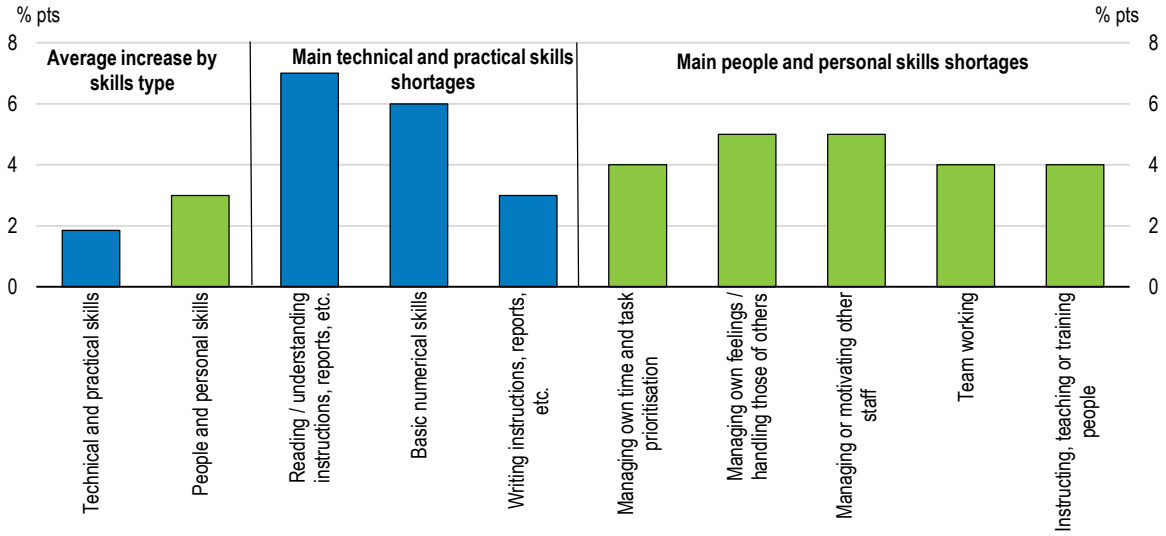
Retraining low-skilled workers is a double dividend policy following COVID-19

With the COVID-19 crisis, unemployment is expected to rise markedly in the next two years (see *Key Policy Insights*). Many service workers face unemployment and uncertain prospects. The Government has shifted to a second phase of support, from a blanket protection of employment to measures favouring a shift to activities with greater growth prospects. Upskilling, re-skilling and lifelong training will play a key role to facilitate this transition and help these workers, together with those facing longer-standing challenges due to risk of automation and digital advances. Upskilling and training provisions for many service sector jobs need to focus on improving basic skills that would generally be useful across most jobs. Indeed, basic reading comprehension and numerical skills, as well as people and personal skills, were highlighted as areas where employers saw the most growth in terms of skill needs (Figure 2.28).

From an international perspective, the share of jobs at risk of automation is relatively low in the United Kingdom, in part reflecting the smaller share of manufacturing-related positions in the overall economy (Figure 2.29). While automation may be good to boost aggregate productivity, it can have a differentiated impact across sectors. Occupations that are most at risk are those where required skill levels are low and jobs held by individuals with higher levels of education are considerably less at risk (ONS, 2019). Specific segments of these sectors may however be hard to automate, while some high-skilled jobs can be more easily displaced by technology. The COVID-19 crisis has underscored the difference in the capacity of services sectors to adapt to new working arrangements. 53% of employees in the information and communication industry reported having ever worked from home in 2019, as opposed to only 10% of employees within the accommodation and food services industry (ONS, 2020).

Figure 2.28. Basic skills are lacking amongst applicants to new position

Difference between 2017 and 2015



Note: Based on the UK Employer Skills Survey (ESS). Technical and practical skills are defined as skills required to perform the specific functions of a job role. People and personal skills are defined as skills required to manage oneself and interact with others in the workplace. The average numbers consist of 13 categories of specific skills for technical and practical skills and 10 categories for people and personal skills.
Source: IFF Research (2018), Employer skills survey 2017, Research report, August.

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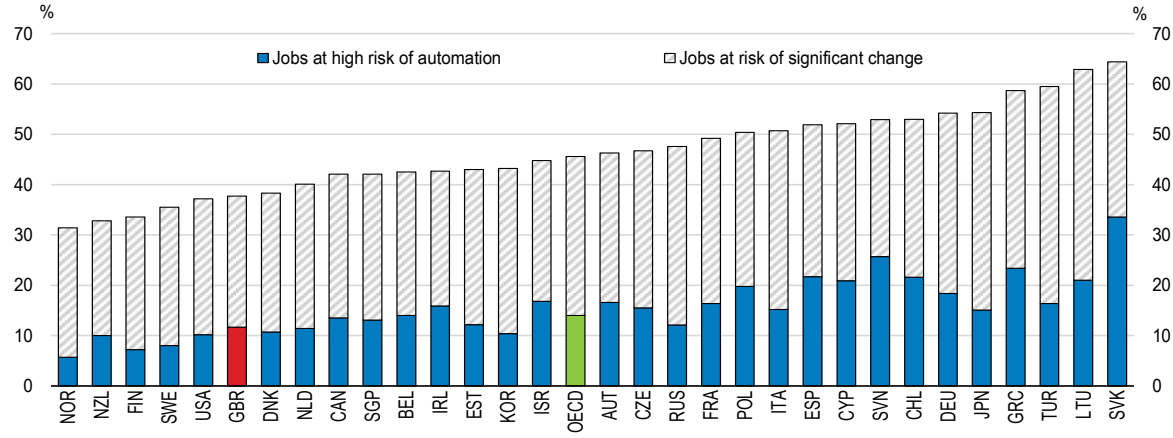
Figure 2.29. The share of jobs at risk is lower in the United Kingdom than in most countries but sizeable

The share of jobs at high risk of automation and significant change



Note: Jobs are at high risk of automation if the likelihood of their job being automated is at least 70%. Jobs are at risk of significant change if the likelihood is between 50 and 70%.
Source: Nedelkoska, L. and G. Quintini (2018), "Automation, skills use and training", OECD Social, Employment and Migration Working Papers, No. 202, OECD Publishing, Paris.

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The hospitality and retail sectors represent an important example for how labour market dynamics for low-skilled individuals are being impacted by the COVID-19 crisis and shifts in modern working practices.

These sectors collectively account for nearly a quarter of both total and private sector employment and for a large share of low-paid individuals. Employment growth in retail trade has been anaemic as consumer preferences continue to shift towards internet trading platforms and away from bricks and mortar stores and the hospitality sector has by far the highest share of workers with zero-hours contracts. Those patterns have accelerated since the lockdown during which a surge in e-commerce and consumption of digital products has been observed. Even though it is too early to know if recent trends are going to persist over time, it is unlikely that there will be a reversal of the pre-crisis move toward more online shopping.

Further education can play a useful role in helping people to retrain. It helps those who do not attend university after 18 years of age and adults in the workforce to up or re-skill with basic or intermediate skills that are vital in a changing labour market, alongside providing education for 16-19 year olds. While further-education institutions have experienced a fall in funding over the last decade, at the 2019 Spending Round the Government provided a GBP 400 million uplift to 16-19 year old funding, the largest increase for a decade. An independent panel recommended to reverse the decline in numbers of those getting post-18 education, with the cost being shared between taxpayers, employers and learners (Independent Panel, 2019). The focus should be in particular on strengthening technical education to redirect funding toward high-return courses, with more funding and a more coherent suite of technical and professional qualifications, together with a reform of the funding of further education colleges network. The Government allocated resources in the Adult Education Budget to fully-fund or co-funds some core skills, and fully fund basic digital skills. Advanced Learner Loans are also available to finance studies at a higher level. In the March 2020 Budget, the Government also announced GBP 1.5 billion over five years in capital spending to refurbish further education colleges, and plans to boost science, technology, engineering and maths teaching with GBP 270 million total capital spending for up to 20 new Institutes of Technology. In the Plan for Jobs, the Government provided new funding to support people to build the skills they need to get into work, with a substantial expansion of existing provision, providing funding to triple the number of traineeships and sector-based work academy placements, alongside further support for apprenticeship.

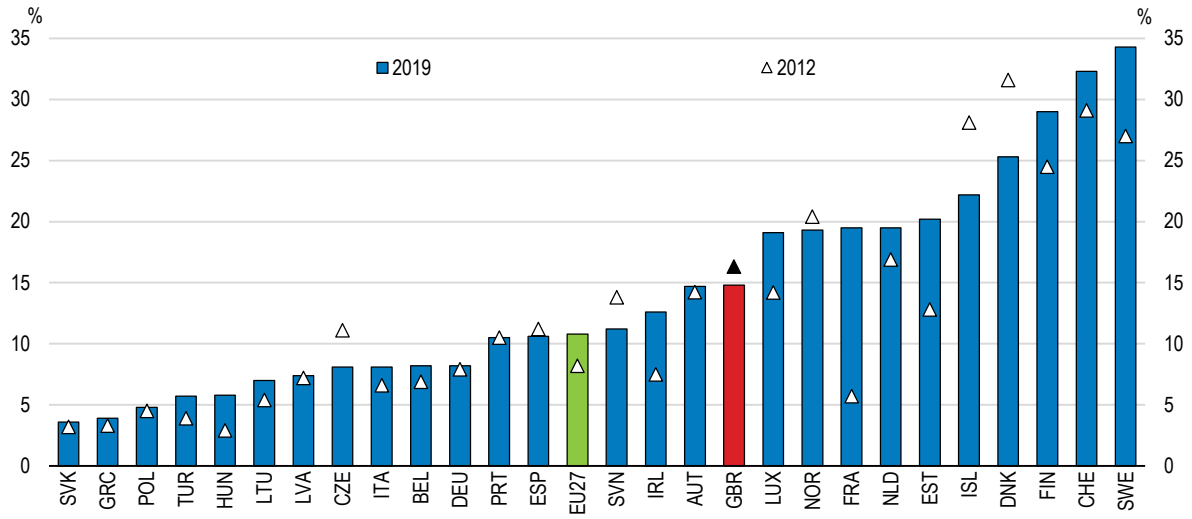
Following the COVID-19 crisis, the low participation in lifelong training in the United Kingdom compared to other high-income countries is a concern, particularly as it has been decreasing (Figure 2.30). Moreover, the United Kingdom has one of the highest gaps of training incidence between low-skilled individuals and workers of all skill levels (Figure 2.31). Some low-skilled workers face further constraints, in that their lack of basic skills can make it more difficult to meet the entry requirements of adult learning programmes (OECD, 2019g).

In the March 2020 Budget, the Government committed to a new GBP 2.5 billion National Skill Fund to improve adult skills, in part in response to the COVID-19 crisis. This is warranted though insufficient given the widespread job losses and need to retrain workers. OECD research estimates that around 1% to 4.5% of GDP in both direct and indirect training costs – the opportunity cost of attending the training -- would be needed alone to ensure the success of individuals to transition from occupations at high-risk of automation to those with a low risk (Andrieu et al., 2019). The upper range of the cost estimate would mean doubling the existing total training expenses which amounted to GBP 45.4 billion (2.2% of GDP) in 2015 (UKCES, 2016). The costs would be larger for high rather than low-skilled workers, as the former face larger opportunity costs. Although those opportunity costs are expected to fall in an environment of high unemployment, they are substantial and underline the need to allow individuals to continue working while attending their training.

With a more flexible and temporary workforce in the United Kingdom, firms may not be incentivised to invest in the skills and training of their staff, and lower-paid individuals in particular will find it difficult to pay for this training themselves. Differences in training participation between full-time permanent employees and own-account workers is the highest in the OECD (Figure 2.32). To this end, from 2020 onwards, adults who lack basic digital skills will be able to access specific skills training free of charge. The National Retraining Scheme, which aims at supporting workers' retraining, is being rolled out and is targeted to

workers aged 24 and over, with a below-graduate level qualification and individuals who have lost their jobs due to automation and Artificial Intelligence.

Figure 2.30. Participation in lifelong learning has declined



Note: The indicator measures the share of people aged 25 to 64 who stated that they received formal or non-formal education and training in the four weeks preceding the survey, over the total population of the same age group, excluding those who did not answer to the question. Adult learning covers formal and non-formal learning activities, both general and vocational, undertaken by adults after leaving initial education and training.
Source: Eurostat, based on the EU Labour Force Survey.

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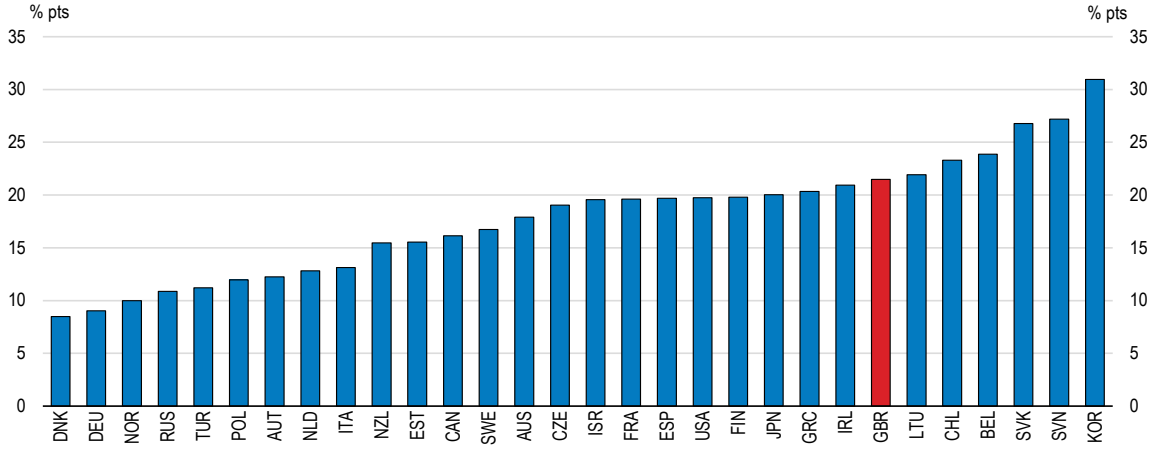
Figure 2.31. Low-skilled workers receive less firm-based training

Gap between training rates of low-skilled training workers[1], 2012 or 2015[2]



1. The percentages of trained people are calculated as the ratio of total employed persons displaying a given skill level and receiving training at least once in the year, over the number of a country's workers displaying a given skill level. Training refers to formal, on-the-job or both types. Low-skilled individuals refer to persons who have not completed any formal education or have attained 1997 ISCED classification level 1 to 3C degrees (if 3C is lower than two years). Values are reweighted to be representative of the countries' populations. The total trained workforce is the proportion of workers who engaged in training at least once in the year.
2. Based on two rounds of the Survey of Adult Skills in 2012 and 2015.
Source: OECD (2019), Going Digital: Shaping Policies, Improving Lives.

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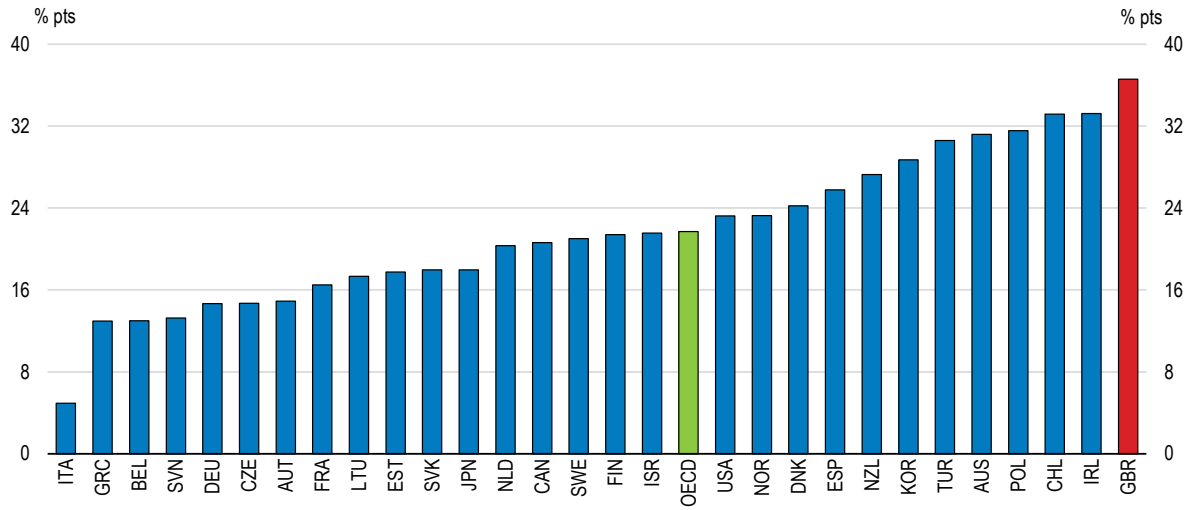
Figure 2.32. Own-account workers participate less in training

Difference in training participation, full-time permanent employees minus own-account workers, 16-65 years-old, 2012 or 2015



Note: Training participation is measured by the share of adults who participated in training over the previous 12 months.
Source: OECD (2019), OECD Employment Outlook 2019: The Future of Work and Survey of Adult Skills (PIAAC).

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Introducing individually targeted programmes for low-wage and low-skilled workers would be an effective way to help service workers following the COVID-19 crisis and to encourage the participation in training of individuals in need of the training to adapt to workplace dynamics. Past UK and international experience can help to design the scheme (Box 2.6). To ensure that such a lifelong learning accounts system benefits the most vulnerable individuals, the scheme could focus on Universal Credit recipients (Taylor Review, 2017).

The new apprenticeship system in England, which focuses on a more rigorous quality assessment and longer programme lengths, is open to all levels and workers with low and middle-level qualifications have benefited from the scheme. At the same time, a sizeable portion of small businesses have indicated that the system remains cumbersome and difficult to engage with (Industrial Strategy Council, 2020). While the set-up of the scheme resulted in a relatively low take up of levy funds, there is a risk of exceeding the budget allocation, as employers are choosing higher-level and more expensive schemes (Industrial Strategy Council, 2020). There was a considerable drop in the number of total apprenticeship starts compared to the previous system, in particular in traditional sectors such as construction and retail (Resolution Foundation, 2019; Department of Education, 2020). Further reforms to the system should aim at ensuring that younger workers, individuals from disadvantaged backgrounds, and those with low skills are able to access high-quality apprenticeships to ensure that the system as a whole does not exacerbate existing biases in training and lifelong learning provision to higher skilled individuals (OECD, 2018b).

Box 2.6. Adult learning for displaced individuals and those with low-skills

Many OECD countries have implemented programmes with a goal of improving lifelong learning for disadvantaged individuals, especially for individuals with low skills or in other groups that tend to undertake low levels of training (like the self-employed). Below are some selected examples of how OECD countries are aiming at softening or eliminating the barriers to increased participation in adult learning, building on the 2019 OECD *Employment Outlook*.

- **Belgium** – The self-employed are eligible for training expense deductions, and a separate training subsidy exists that covers one third of training costs for vulnerable groups. In Flanders, Centres for Adult Education provide training through fully modular courses, including for a wide range of technical skills and languages.
- **Estonia** – A Degree Study Allowance is offered to employed and unemployed adults with insufficient or outdated skills, facilitated through the public employment services provider (PES). The monthly allowance to cover the costs is income dependent and only paid for skills that meet sectoral skills needs based on the assessment of the Qualifications Authority. The PES also implemented a Work and Study programme which included a training card/voucher system for employed persons at risk of unemployment and a training grant for employers to improve the skills of employees at risk of losing their jobs after the introduction of new technologies.
- **Finland** – The Change Training programme offers re-training options to dismissed workers during the nine months following the dismissal. The PES covers 80% of the training costs and firms cover the remaining 20%. The Adult Education allowance provides income support during training for both employees and self-employed individuals when enrolled in a full-time training programme.
- **France** – Improvements in the recognition and certification of skills system (*Validation des acquis de l'expérience* – VAE) puts the obligation on firms to periodically inform employees about the VAE in the context of their mandated professional development assessment. The Individual learning account (*Compte Personnel de formation*) provides additional funding for individuals who are low-skilled.
- **Luxembourg** – The Digital Skills Bridge helps employees in companies facing major technological disruption to find new placement opportunities and to acquire new professional skills. Registered self-employed workers are offered training guidance and advice through professional associations. The Government provides wage compensation to self-employed workers taking education and training leave.
- **Sweden** – Job Security Councils provide specific transition services – including advice, training and business start-up support – to dismissed and soon to be dismissed workers. An education entry grant, in place since mid-2017, provides funds for low-qualified unemployed individuals to study at the primary or secondary levels.

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

Upgrading management skills will improve the capability of firms to benefit from digitalisation

Upgrading skills – both managerial and technical - would bring significant productivity dividends in the United Kingdom (Sorbe et al., 2019). The quality of management can play an important role in explaining productivity across different firms (Bloom et al., 2013) and in improving the ability of firms to adopt new

technologies and to benefit from digitalisation (OECD, 2019g). Insufficient managerial skills can act as an obstacle in the ability of businesses to develop new business models, new organisational structures and new working methods (OECD, 2019c; Andrews, Nicoletti and Timiliotis, 2018). Furthermore, management and communication skills tend to earn a higher wage premium in digital work environments when compared to those in non-digital intensive industries (Grundke et al., 2018).

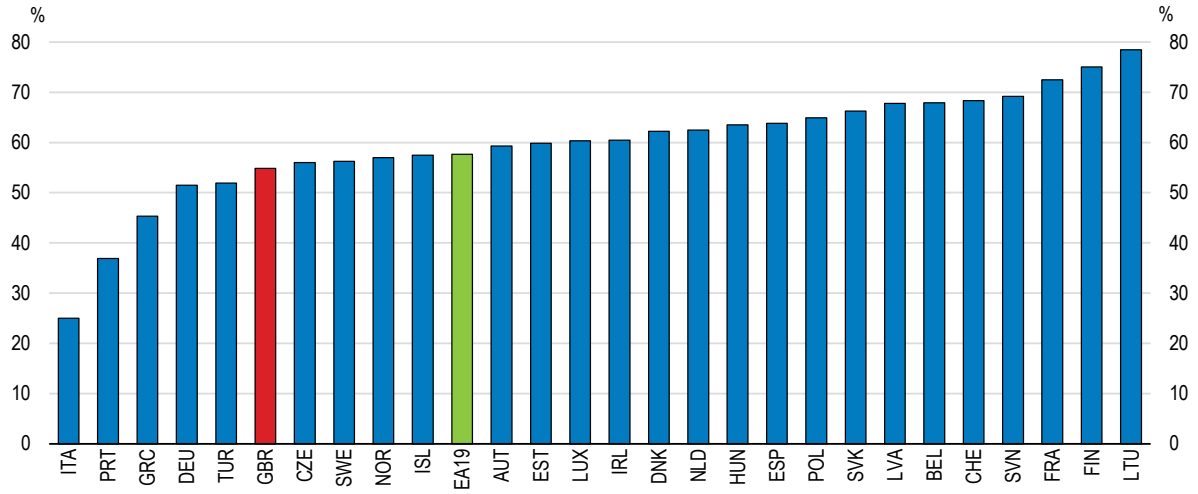
Management quality is of particular concern in the United Kingdom and has been singled out as one of the potential causal factors to the ongoing weakness in productivity growth (Haldane, 2017; Institute of Employment Studies, 2016a). Managers in the United Kingdom tend to have lower levels of formal education than in other countries, with the share of managers with at least a tertiary education well below the best performers (Figure 2.33). The issue seems to be concentrated in a long tail of poorly-managed firms (BIS, 2012).

In the United Kingdom, family-owned businesses account for around 70% of SMEs and nearly 80% of the retail/wholesale trade and hospitality sectors. The role that family connections play in management, in terms of ownership and family successions, can have important impacts on managerial quality and productivity growth. Managerial quality is lower on average in family-owned firms compared to other firms (Figure 2.34).

The inheritance tax scheme, which can in some cases benefit from a 100% relief from the tax when passing down business assets, could be contributing to the prevalence of family-owned businesses with an indirect negative impact on overall managerial quality (LSE growth paper, 2017). The UK's Office of Tax and Simplification is reviewing the inheritance tax system to simplify tax filing and payments, but also to examine whether the current framework distorts business transfer decisions. If that is the case and given that ownership is often associated with management in family-owned businesses, it will be useful to eliminate or reduce these reliefs to lower incentives to maintain businesses within families.

Figure 2.33. Management skills can be upgraded further

Share of managers with tertiary education, 2017



Note: Data refer to managers (group1) based on the International Standard Classification of Occupations 2008 (ISCO-08) and tertiary education (levels 5-8) based on the International Standard Classification of Education (ISCED 2011).
Source: Eurostat (2019), Employment and unemployment (Labour Force Survey) Statistics.

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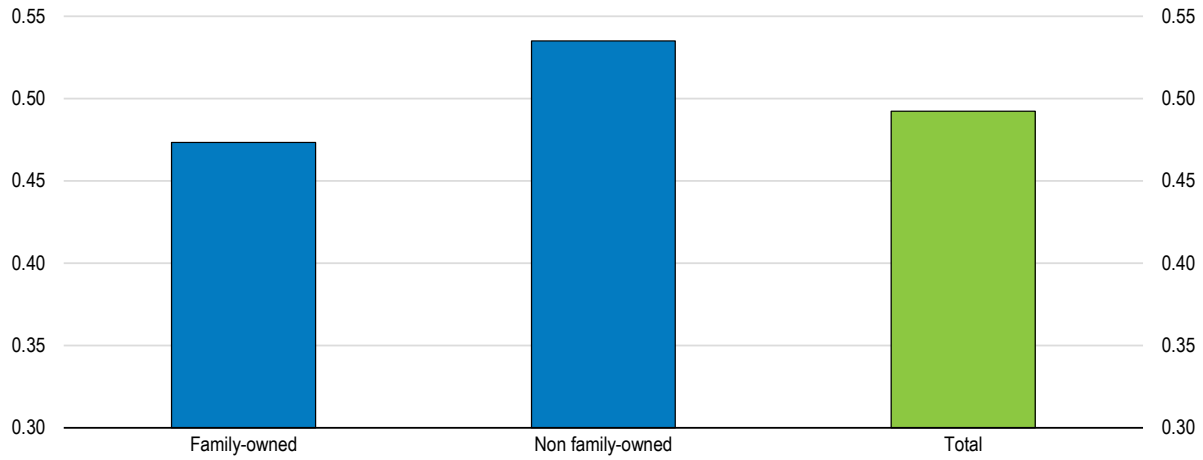
Encouraging management training would also help enhance management skills. There are numerous good-quality management schools and management training has improved through the increasing use of the apprenticeship programme to finance MBAs. However amongst the 68% of managers who received a

training in SMEs, only 38% received a training in leadership and management skills according to the 2018 Small Business Survey. The Formação-Ação in Portugal is an example of training that focuses on improving management skills in SMEs.

Figure 2.34. Managerial quality tends to be lower in family-owned firms

Management score, by ownership type, scale from 0 to 1 (the most structured management practice), 2016



Note: Based on the Management and Expectations Survey (MES). The managerial quality is measured as the average management practice score of 12 categorical questions on quantitative and qualitative aspects of business' management practices. The sample covers businesses in production and services industries with at least 10 employees, excluding firms in agriculture, forestry and fishing, and financial and insurance activities, and results are weighted to reflect the population of firms.
Source: ONS (2019), Management practices and productivity in British production and services industries - initial results from the Management and Expectations Survey: 2016.

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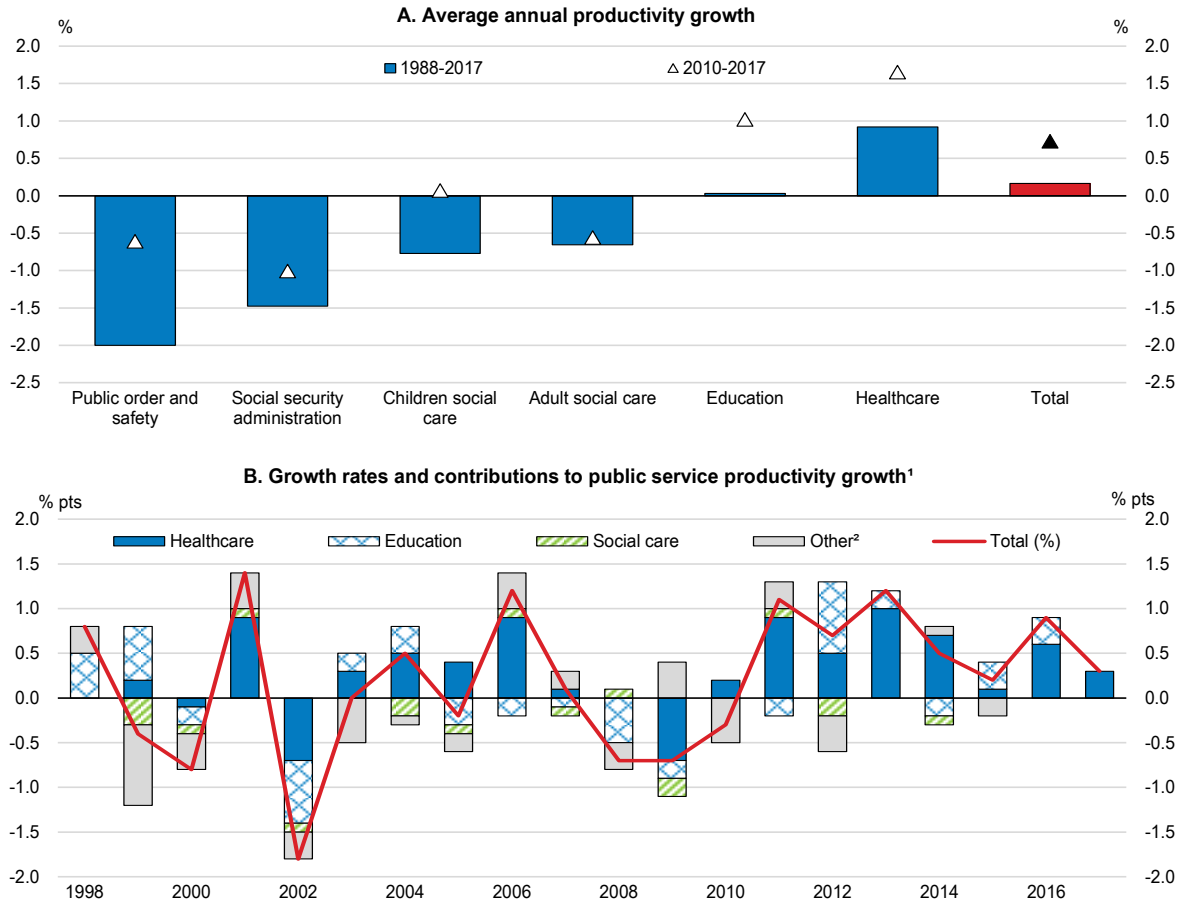
Improving efficiency in the public sector

Productivity growth in the public sector has improved since the beginning of the decade

While the health system has responded rapidly to the COVID-19 crisis, improving efficiency in the public sector, which accounts for 25.1% of value added in 2018, is key at a time of increased pressure on services. Measuring efficiency in the public sector is fraught with difficulties and the ONS has been a leader in this area (Box 2.2). According to the ONS, productivity in the public sector grew since 2011 at faster rate than in the past. Those developments have coincided with spending cuts following the 2010 Spending Review (ONS, 2019b). Productivity growth increased in most public sectors with the exception of social care and social security administration. Healthcare and to a lesser extent education services contributed the most to productivity growth in recent years, reflecting their large weights in total government expenditure (Figure 2.35). Productivity growth in the public sector still remains modest compared to what can be observed in some other service sectors, but this may reflect the nature of the public services and measurement issues. ONS estimates point to stronger productivity growth when excluding sectors where productivity is very roughly measured.

Figure 2.35. Health services contributed the most to productivity growth in the public sector in recent years



1. Contributions may not sum to total due to rounding.
2. Includes social security administration and public order and safety.
Source: ONS (2020), "Public service productivity: total, UK, 2017".

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Further developing digital Government

The United Kingdom should seize the opportunity of the rapid digitalisation of the economy, which has played a critical role in the COVID-19 crisis, to further develop digital Government. The OECD Open, Useful and Re-usable data (OURdata) Index show that, by 2017, the United Kingdom was doing better than most OECD countries in relation to the availability, accessibility, and re-use of open government data. However, results for 2019 indicate a decrease in the UK's score vis-à-vis other countries. The country has put in place an integrated online service through its one-stop platform GOV.UK, which will be updated to meet the requirements of the National Data Strategy. Nevertheless, the uptake of government services appears to be only average compared to other OECD countries (Figure 2.36).

The 2017 Government Transformation Strategy 2017-2020, and its 2018 update, focused on new technologies such as Artificial Intelligence and biometrics to support public service provision. Setting a long-term strategy to spur the digital transformation of the public sector is a step in the right direction. It can help to more fully integrate digital technologies in decision-making processes (OECD, 2019c). This

also raises awareness on the fundamental behavioural shifts triggered by digitalisation to both public employees and private sector actors. The next step is to take concrete actions and implement the strategy.

The first priority is to improve the use of public procurement as a lever to raise the efficiency of public spending. There is no conclusive evidence that one model of ownership (i.e. public, private or mixed) is intrinsically more efficient than the others, irrespective of how efficiency is defined (UNDP Global Centre for Public Service Excellence, 2015). Instead the literature suggests that the efficiency of service provision depends on the type of services and other specific contextual factors (e.g. regulation, competition).

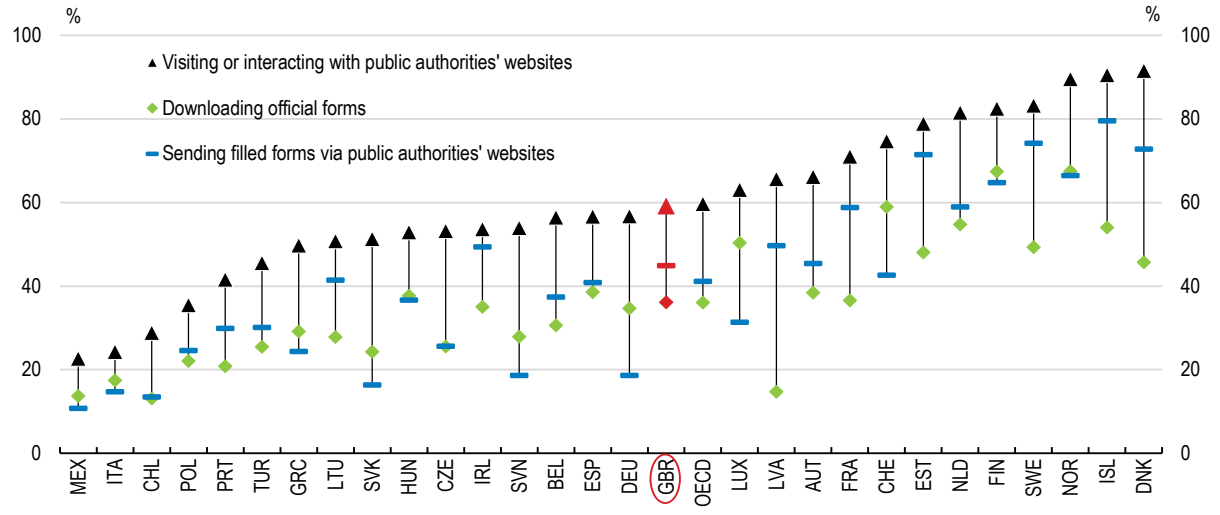
The COVID-19 crisis has underlined the capacity of the health system to swiftly adapt its process and react to the consequences of the pandemic. It has issued emergency procedures to respond to immediate needs. Beyond the crisis, procurement policies could play a decisive role in the government response to support the recovery (OECD, 2020). The crisis has revealed the necessity to increase coordination and enhance flexibility, in the context of high uncertainties and fast changing environment. Lessons from the current crisis point to the need to re-think risks and contract management frameworks in future procedures (OECD, 2020d).

Procurement accounts for a third of public expenditure (OECD, 2017). The proportion of published procurement spending going to 25 strategic suppliers – companies that receive more than GBP 100 million in revenue a year from government contracts – has grown since 2012/13 (Institute for Government, 2018). Reasons behind this increase are unclear and it would be useful to review the competitive nature of the market and increase scrutiny of large outsourcing contracts.

Public procurement in the United Kingdom is currently governed by EU rules and this will change after the transition period. In the Political Declaration, the United Kingdom and European Union indicated they wanted to go beyond what they are committed to under the WTO Government Procurement Agreement. It will be important to maintain rules consistent with the principles of transparency, non-discrimination and equal treatment of the candidates. Making sure that procurement contracts encompass an environmental dimension will also help to achieve the country's environmental objectives.

Figure 2.36. The uptake of digital government services is average

Use of digital government services by individuals, % of individuals aged 16-74, 2018 or latest year



Source: OECD (2019), Going Digital: Shaping Policies, Improving Lives and OECD ICT Access and Usage by Households and Individuals Database (http://oe.cd/hhind).

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The second priority is to foster innovation in the public sector, which is crucial for strengthening the government's capacity to respond to current and possible future challenges. The OECD draft Declaration on public sector innovation seeks to set out and gain agreement on some shared principles. Public sector innovation is a 'multi-faceted' phenomenon and can be about doing different things or doing things in different ways. As such the public sector can benefit from maintaining a portfolio of innovation activity and adopt a cross-ministry approach. This will allow to leverage on best practices across ministries to encourage public agents to innovate and set innovation at the core of the institution's objectives. An example of such an approach is the formation of the UK Policy Lab, which uses design, data and digital tools and acts as a testing ground for policy innovation across government, helping to drive change in many large projects and train civil servants in the use of experimental policy techniques. Given the multi-faceted nature of public innovation and its changing nature over time, differing forms of support or enabling conditions to function well will be needed.

A third priority will be to improve public services' access to digital infrastructure. Public private partnerships could be useful. It is a way to benefit from the experience of private IT providers, while taking into account the specific objectives and ways of operating of the public sector. Such a partnership can also identify synergies. Steps in this direction have been taken with the GovTech Catalyst, which funds suppliers to solve public sector problems using innovative digital technologies.

MAIN POLICY FINDINGS	RECOMMENDATIONS (Key recommendations in bold)
Ensure a favourable business environment	
The COVID-19 crisis has hit services trade. Productivity in the United Kingdom relies on high trade integration with the European Union. Services account for a large share of trade, but negotiations have focused mostly on goods.	**Keep low barriers to trade and investment with the European Union and others, particularly market access for the service sectors including financial services.**
The competition framework is well designed, and the United Kingdom is currently one of the least restrictive countries in terms of business regulations. The framework will need to be refined to adapt to a fast changing environment. Stringent land-use regulations prevent an efficient allocation of housing supply.	**Refine the competition framework to adapt it to the digital economy: enable greater personal data mobility and systems with open standards; adopt a broader approach to merger assessment including an evaluation of the overall economic impact of mergers.** **Ease-land use regulations to seek the right balance between improving resource allocation and environmental and social concerns.**
Raising productivity in services is key to support the recovery. Productivity growth has underperformed compared to past business cycles and to developments in other OECD countries. Low investment and slow innovation rates are two factors behind weak productivity performance. Adoption rates of new technologies lag behind best performers.	**Prioritise digital infrastructure, particularly in deprived regions, in the allocation of the planned increase in public investment.** The Government may invest directly in high-speed fixed networks or incentivise private investment, including by competitive tendering, tax exemptions, low-interest loans or lower spectrum fees. Continue to boost direct funding to R&D to raise innovation levels.
Young and small firms experienced financing constraints in the aftermath of the virus outbreak. There is evidence of a gap in the supply and use of long-term capital that is holding back firms from growing to scale.	Review the system of support to small firms in the light of the COVID-19 crisis and to re-prioritise resources towards young innovative firms. Continue to change existing investment rules to remove barriers for UK pension funds to diversify their portfolios to increase the financing pool available to young innovative firms, in light of the ongoing review. Secure venture capital public funding over the long term and provide clarity to investors in terms of how EU funding will be replaced.
Improve skills and training	
The COVID-19 crisis will lead to widespread job losses, raising the need to retain under-qualified workers, whose proportion is one of the highest in OECD countries. Spending allocated to adult training is low. Participation in lifelong learning has been declining in recent years. Low-skilled workers receive less firm-based training. Despite the introduction of a new apprenticeship programme, there has been a considerable drop in the number of apprenticeship starts.	**Further increase public spending on training to develop digital skills of low-skilled workers.** Better target the apprenticeship system to favour access of low-skilled workers. Introduce individually targeted programmes for low-wage and low-skilled workers to improve their lifelong learning opportunities**.**
Enhance public sector efficiency	
The United Kingdom has set a strategy for further e-government development.	Take concrete actions, in particular regarding government procurement, to implement the Government Digital Transformation Strategy and adopt a portfolio of innovation activities and a cross-ministry approach.

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UNITED KINGDOM

Like many countries, the United Kingdom has been hit severely by the COVID-19 outbreak. A strict lockdown was essential to contain the pandemic but halted activity in many key sectors. While restrictions have eased, the country now faces a prolonged period of disruption to activity and jobs, which risks exacerbating pre-existing weak productivity growth, inequalities, child poverty and regional disparities. On-going measures to prevent a second wave of infections will need to be carefully calibrated to manage the economic impact. The country started from a position of relatively high well-being on many dimensions. But productivity and investment growth have been weak in recent years and an ambitious agenda of reforms will be key to a sustainable recovery. Leaving the EU Single Market, in which the economy is deeply integrated, creates new economic challenges. Decisions made now about management of the COVID-19 crisis and future trade relationships will have a lasting impact on the country's economic trajectory for the years to come.

SPECIAL FEATURES: COVID-19 CRISIS; EU EXIT; PRODUCTIVITY

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