

Executive summary

1. Global outlook: forward to the past

Over the last 25 years, the UK has embraced globalisation as well as the establishment, extension and constant deepening of the European Single Market more than many other advanced economies. The UK is a world leader in advanced-economy service provision and has been more successful than most in attracting international capital and workers. This successful specialisation has coincided with the UK economy mostly outperforming others in the G7.

In this context, however, the UK is now facing challenges, including its own vote to leave the EU and the broader challenges to globalisation – in terms of both the slowing pace of integration and the political backlash in many countries against globalisation.

In this part of Citi's contribution to the Green Budget, we take a prospective look at the international environment for the UK economy. This includes an assessment of the near-term growth outlook of the UK's major trade partners. But more importantly, it includes a discussion of the UK's vulnerability to a reversal of economic and financial integration, be it at the global level (reversal of globalisation) or at a regional level (in the form of the UK's exit from the European Union).

Key findings

- **The UK has adapted well to globalisation opportunities.** Over the past 25 years, it has been a world leader in advanced-economy service provision and some manufacturing industries. The UK imports consumer and industrial goods. UK manufacturing has high shares of imported goods in its value added by international standards, making it especially vulnerable to increased trade barriers.
- **Services trade as a fraction of national income is higher in the UK than in many other major economies and has grown substantially over the last two decades.** This increase has in part been helped by the establishment, extension and deepening of the EU Single Market. The UK has a trade surplus in services of 5.5% of national income, three-quarters of which came from financial and professional services. Trade in these highly regulated industries depends particularly on trust and cooperation between jurisdictions.
- **The UK depends on global capital and migrant labour, and has been successful in attracting both.** It has become a destination of choice for direct investment and internationally mobile workers. The UK depends on both to fund its large current account deficit and to close skills gaps.
- **Working-age immigrants from the EU are substantially more likely to be in paid work than either those born in the UK or immigrants from the rest of the world.** Foreigners accounted for more than half of UK employment growth in the last two decades, but the contribution from EU citizens has recently fallen sharply. Should this persist, the direct effect would be to halve trend UK GDP growth.

- **Even leaving Brexit aside, the business models of many globalised economies are being challenged.** First, as labour cost differentials diminish, the rush to offshore production may have peaked. Second, there is the US-forced reordering of international trade relations, with a risk of sustained alienation between the US and China in particular. Third, there is a rising aversion to immigration in many advanced economies.
- **The global outlook is for strong growth but with growing discrepancies.** The fiscal-stimulus-fuelled US economy is firing on all cylinders and Europe is still growing nicely, but the synchronised upswing of 2017 is past and risks are emerging.

2. UK outlook

One of the most significant challenges facing the UK in a globalised world is the outcome of its June 2016 decision to leave the European Union. Brexit will have an enormous impact on the UK's prospects for economic growth, so the continued uncertainty around what shape it will take makes forecasting the UK economy a very challenging exercise.

In line with most forecasters, we assume the EU and the UK will agree on a transition phase (likely lasting much longer than 21 months), during which not much would change for businesses and consumers. This long transition could potentially see UK growth continue or even accelerate due to pent-up demand. In the alternative scenario, where the UK leaves the EU without a deal, we would expect material economic disruption in the short term, not least due to a breakdown of political cooperation between the two sides. But that would also be unlikely to be the end state. The longer-run impacts of Brexit will depend on how the UK uses its new freedoms to make choices about regulation, trade rules and immigration systems.

Amid all the uncertainty, the past two years have yielded a wealth of lessons about the UK economy. In particular, the big changes forecasters made to the UK economic projections around the EU referendum and how these forecasts played out provide lessons going forward. In this chapter, we provide an overview of the UK's recent economic performance and compare it with our and other forecasters' projections in 2016. We then present our current forecasts, based on our 'smooth Brexit' base case.

Key findings

- **Post-EU-referendum forecasts were not very far off after all.** Instead of a short-term hit and quick rebound, Brexit slowed growth more gradually. GDP in 2018 looks set to be only marginally higher than forecasters expected immediately after the referendum, and almost 2% lower than implied by pre-referendum forecasts predicated on a Remain vote.
- **The UK economy has been somewhat supported by a strong eurozone economy.** Contrary to immediate post-referendum forecasts, the eurozone economy appears to have been unaffected by Brexit uncertainty and continues to grow robustly.
- **UK consumer spending held up better than expected in the wake of the referendum.** However, that has been at the expense of a plunging household saving ratio. With saving rates at historic lows, the consumer might find it harder to ride to the rescue again in the event of a no-deal Brexit.

- **A weakened currency, higher inflation, and lower business investment as a result of increased uncertainty have all hit UK growth.** We estimate that the sterling depreciation in the wake of the referendum raised UK consumer prices by 1.7%. These outcomes are very much in line with most initial forecasts of the effect of the Brexit vote.
- **Brexit is likely to weigh on growth for the foreseeable future.** Most scenarios will see less free trade with Europe and lower immigration. This would result in lower growth. The scale of long-term effects will depend on how the UK uses any new freedoms. A more liberalised ‘global Brexit’ in which the UK is open to immigration and free trade will be less damaging to the economy in the long run, but more difficult in the short run, than a ‘drawbridge Brexit’ in which trade barriers are erected, protectionist policies implemented and immigration minimised.
- **Our central assumption is that the UK and the EU agree on a transition period preserving essentially the same relationship they have today.** This transition period will likely have to be extended beyond 2020 in order to facilitate the political calendar, detailed future trade negotiations and a ratification procedure that involves national and subnational governments across the continent.
- **There is some reason for optimism about the UK economy.** As the Brexit deadline approaches, investment and thus growth are likely to slow further (just as they did prior to the 2016 referendum). But after Brexit Day, there could be a growth rebound, before new uncertainty about the next Brexit cliff edge sets in.

3. Risks to the UK public finances

Chancellor Philip Hammond will present his Budget in a period of heightened uncertainty, with a deficit back to pre-crisis levels but a debt level that is much higher. He will have to balance commitments made to the NHS in the summer and the Prime Minister’s recent promise of an end to austerity with the government’s overarching fiscal objective – reaffirmed in last year’s general election manifesto – to eliminate the deficit entirely by the mid 2020s.

In this chapter, we set out the current state of the public finances, the outlook for the future, and some of the key economic and policy risks to the public finances in the medium and long term.

Key findings

- **Borrowing has now returned to pre-crisis levels, and is lower than successive post-referendum forecasts.** At £40 billion, or 1.9% of national income, the deficit in 2017–18 was the smallest annual borrowing figure since 2001–02. It was also over £18 billion lower than the OBR forecast in March 2017, and at a similar level to the last pre-referendum forecast in March 2016. This is not because the OBR’s economic forecasts were too gloomy in November 2016; rather, the public finances have proved more robust than expected given economic performance.
- **Developments since March suggest that the outlook for borrowing has improved.** Data from the first five months of 2018–19 suggest that borrowing this year might

be around £5 billion lower than the OBR's forecast of £37 billion. By 2022–23, it might be around £6 billion lower than the OBR's forecast of £21 billion.

- **On the narrowest possible definition, 'ending austerity', as the Prime Minister has promised, would require the Chancellor to find £19 billion of additional public service spending relative to current plans by 2022–23.** That would leave unprotected day-to-day departmental spending just constant in real terms, and falling as a share of national income. It would still leave in place £7 billion of further cuts to social security.
- **Without much higher growth than forecast or substantial tax rises, 'ending austerity' is not compatible with eliminating the deficit by the mid 2020s.**
- **The deficit is down to pre-crisis levels, but debt is higher than it was by 50% of national income (over £1 trillion in today's terms).** Running a deficit of 1.8% of national income (as forecast for 2018–19) in 'good times' could easily leave debt on a rising path as a share of national income over the long term, while in the past it would have been consistent with projected debt falling fairly quickly. This is due to a combination of low growth forecasts and student loan accounting flattering the headline borrowing measure.
- **There is a lot of uncertainty around any public finance forecast, but current levels of uncertainty are higher than usual.** Based on historical forecast accuracy, the central forecast implies a one-in-three chance that the deficit will be eliminated in 2022–23, but a similar chance that the deficit in that year will rise from its current level. Brexit uncertainties raise the chances of the deficit turning out a lot different from forecast.
- **We should worry that the Chancellor seems to treat forecast improvements and deteriorations differently.** Evidence since 2010 suggests that Chancellors are more willing to spend windfall improvements than to enact a fiscal tightening when the forecast worsens. If this pattern of behaviour were to continue, this effect would push up the central forecast of the deficit in 2022–23 by £10 billion.

4. Trade-offs for the forthcoming Spending Review

According to his Spring Statement speech, at this year's forthcoming Budget the Chancellor will set a firm overall path for public spending for the years beyond 2019–20. At some point next year – perhaps in the Autumn 2019 Budget – this will be followed by a Spending Review to set detailed allocations for individual departments.

In the coming months, the Chancellor will therefore need to make a number of difficult choices. First, in setting the overall spending envelope, he will have to balance carefully any extra spending against the additional tax or borrowing required to fund it. He will then need to trade off spending on public services against spending on social security, and balance the competing demands of ministers and departments, to determine his priorities and set plans for the years ahead.

This chapter sets out the context for the choices facing the Chancellor, considers the necessary trade-offs and describes some of the possible implications for public service spending.

Key findings

- **The Chancellor faces extremely tough choices over next year's Spending Review.** Keeping to the provisional spending totals used in the Spring Statement would mean continued cuts for many areas of public service spending. But increasing spending relative to these provisional plans would push him further away from his target of eliminating the deficit by the mid 2020s unless taxes are increased or spending cut elsewhere.
- **The government recently announced an increase in NHS spending of £20.5 billion over five years (£12.0 billion between 2019–20 and 2022–23).** Existing commitments on overseas aid and defence also mean that day-to-day spending on these areas is expected to increase by £0.6 billion between 2019–20 and 2022–23, and a continuation of the existing agreement with the Democratic Unionist Party (DUP) could entail an additional £0.3 billion a year of day-to-day funding for Northern Ireland.
- **These commitments would imply cuts to other areas of day-to-day spending amounting to £14.8 billion in 2022–23 if the provisional spending totals from the Spring Statement are kept to.**
- **After eight years of cuts to spending on public services, making more would be extremely difficult.** Increasing real earnings growth in the public sector also means future cuts to service spending would imply large reductions in government employment, after six years of relative stability.
- **The Chancellor may well therefore decide to increase overall spending on services relative to the provisional totals set out in March.** But doing so would require some combination of tax increases, higher borrowing and/or cuts to other spending, such as social security. None of these are easy options.
- **The additional uncertainty over the form and effects of Brexit make these decisions and trade-offs even harder.** Even ignoring the likely adverse effects of leaving the EU on economic growth and consequently tax revenues, there is likely to be virtually no 'Brexit dividend' over the next Spending Review period that could be diverted to fund public services. In 2022–23, net savings from contributions to the EU could be less than £1 billion a year, and higher UK administration costs – for customs, for example – could easily exceed this saving.

5. Options for raising taxes

The Chancellor's fiscal objective is to close the budget deficit – which stands at 1.8% of national income (£37 billion) – by the middle of the next decade. Against the backdrop of this challenging target, the government has promised an additional £20 billion of funding for the NHS. Meeting both of these commitments will require lower spending elsewhere or higher taxes.

This chapter considers where the Chancellor might look if he wanted to increase tax receipts by about 1% of national income – enough to pay for the promised increase in NHS spending. We investigate how various possible tax rises differ in the revenue they would

raise, the people who would pay them, and the extent to which they would weaken work incentives and improve or worsen other distortions.

Key findings

- **Raising tax revenue by 1% of national income would put the tax burden in the UK at around the highest level seen in the post-war era.** Such an increase, which would take tax receipts to around 35% of national income, would still leave the UK's tax burden ranked near the middle of OECD countries.
- **Increases in the rates of income tax, National Insurance contributions (NICs) or VAT could raise substantial sums.** Adding 1 percentage point (ppt) to all income tax rates, or all employee and self-employed NICs rates, or the main rate of VAT, would each raise a similar amount – between £5.4 billion and £6.2 billion. In all cases, the revenue would come disproportionately from higher-income households – though this is truer for income tax and NICs than it is for VAT.
- **Labour proposals for substantial rises to income tax rates on those with incomes over £80,000 would likely raise a lot less than these 1ppt increases – perhaps £2½ billion a year (though there is much uncertainty about that).** Increases in tax rates on those with high incomes need to be implemented in the knowledge that we are already dependent on a small number of very-high-income individuals for a large fraction of tax revenue (over a quarter of income tax revenue comes from 0.6% of adults) and that there is great uncertainty over how they might respond to tax rises.
- **There are many inequitable and inefficient parts of the tax system which need reform and which could, if so desired, raise more from the wealthy.** Council tax is paid at a lower fraction of property value on higher-value properties. Doubling it on the top four bands would raise over £8 billion a year. Capital gains tax should be charged at death and entrepreneurs' relief abolished. The current treatment of pension pots that are bequeathed is indefensibly generous.
- **NICs could be charged on the earnings of those over state pension age,** raising perhaps £1 billion a year (though with big potential impacts on the work decisions of those near retirement age). There is also a case for levying a low rate of NICs on private pensions in payment, to reflect the fact that NICs were never paid in respect of employer contributions.
- **Corporation tax increases could bring in substantial revenue, but are not a free lunch.** Cancelling the planned cut from 19% to 17% due in 2020–21 would raise around £5 billion in the short run, while the increases proposed in Labour's 2017 manifesto could raise a further £14 billion a year in the short run – though less in the longer term. Like all taxes, corporation tax rises are always borne ultimately by households, through lower wages for workers, higher prices for consumers or lower returns for shareholders.

6. ICAEW: public sector assets

Public assets are integral to both the government's balance sheet and the functioning of the UK. Some of these assets, such as schools and hospitals, are essential in delivering public services. Others, such as the road network, are part of the economic, social and legal infrastructure that supports economic activity and hence the tax revenues needed to pay for public services.

The government is undertaking a Balance Sheet Review, considering how it can use public assets in the most effective way to advance its policy priorities, and how it manages its liabilities and other financial commitments. In advance of the progress report expected with the 2018 Autumn Budget, this chapter provides an overview of the assets owned by the UK public sector and discusses how the Balance Sheet Review can be used to improve the utilisation of public assets and the prospects for a comprehensive investment and asset management strategy.

Key findings

- **HM Treasury is conducting a Balance Sheet Review that is due to report alongside the 2018 Autumn Budget. This provides an opportunity to develop a comprehensive investment and asset management strategy**, going beyond ad hoc initiatives such as the recent establishment of the Government Property Agency to improve the management of offices and other general-purpose central government property.
- **Public sector assets are less than half the size of public sector liabilities.** At 31 March 2017, the government reported assets of £1.9 trillion (94% of national income), compared with total liabilities of £4.3 trillion (214% of national income). Most public sector assets are not readily saleable and could not easily be used to settle liabilities, although the public sector's most significant resource – the ability to levy taxes – is excluded.
- **Capital investment is a relatively small component of public spending and has declined since 2009–10, although the government plans to increase investment next year and the year after.** Capital expenditure in 2016–17 of £55 billion (2.8% of national income) was less than 7% of non-capital expenditure of £819 billion (41.2% of national income) and 9% lower in real terms than in 2009–10. Net additions to fixed assets after depreciation and disposals were just £18 billion (0.9% of national income).
- **The government is reliant on future tax revenues to fund its financial commitments, with public debt currently standing at close to £2 trillion.** There are no social security or social care funds. No money has been set aside for £1.9 trillion in unfunded public service pensions, nuclear decommissioning or clinical negligence liabilities.
- **Labour party proposals for nationalisation would add to public sector assets, but the borrowing required would add considerably to liabilities. Higher revenues would follow, but there is a risk of underinvestment in the future without a change in capital allocation approach.** Nationalising utilities, train operations, the Royal Mail and PFI contracts could potentially increase public debt by more than £200 billion.

7. ICAEW: defence

In 2017–18, the UK spent £43 billion on defence and security, just meeting the target among NATO members to spend 2% of national income on defence. However, there are growing questions as to whether this level of spending is sufficient to provide for the defence of the UK, with calls from the Defence Committee of the House of Commons and the Secretary of State for Defence to increase spending. These questions reflect the UK's changing strategic position amid greater international tensions, together with significant cost pressures on the defence budget that could mean cutting existing defence capabilities if not addressed.

This chapter considers how the evolving defence and security position may affect defence resources and spending, and the pressure that this could put on the public finances. We provide an overview of the UK's defence arrangements in light of the ongoing update to the 2015 National Security Strategy and Strategic Defence and Security Review (the 2015 SDSR) and explore what that might mean for defence spending and for the public finances. We also analyse the finances and financial management of the Ministry of Defence. We highlight several risks going forward, including the management of multi-year complex programmes to procure new equipment and the currency and other risks of multi-year capital programmes.

Key findings

- **The UK has enjoyed a substantial post-Cold-War peace dividend that has effectively been used to fund the growing welfare state.** The proportion of UK public spending going on defence and security has decreased from 15% fifty years ago to just over 5% today. Over the same period, spending on social security and health has increased from around a quarter to over half of the total.
- **Further cuts to the defence budget to fund other spending priorities are no longer possible if the UK is to meet its commitment as a member of NATO to spend 2% of national income on defence.** Defence and security spending in 2017–18 of 2.1% of GDP only marginally exceeded the 2% NATO threshold.
- **Changing perceptions of potential threats could lead to higher defence spending over the next few years, adding to the pressure on the public finances.** The UK's national security strategy is under review in response to increasing international tensions. The Defence Committee of the House of Commons believes the Armed Forces need to be larger and better equipped for the UK to maintain its leading position within NATO and has called for defence spending to rise by £20 billion a year, or an extra 1% of national income.
- **The UK needs to match its aspirations for a global military role to the amount it is willing to spend on defence.** UK defence spending of £36 billion in 2017–18 was higher as a fraction of national income than that of most G7 countries, though a smaller share than the US. And, in cash terms, it was less than 8% of the £470 billion spent by the US in 2017 and around a fifth of the amount spent by China.
- **There is a significant potential for cost overruns in the procurement budget.** The National Audit Office has identified risks that could lead to additional costs of between £5 billion and £21 billion in the 2017 to 2027 Equipment Plan.

- **The 10-year Equipment Plan would cost an extra £4.6 billion at an exchange rate of \$1.25 to £1 instead of the \$1.55 to £1 rate originally forecast.** This could adversely affect defence capabilities if additional funding is not found. Denominating a proportion of parliamentary funding for defence in dollars would reduce the risk of having to make cuts to personnel or equipment if sterling weakens, or the incentive to spend currency gains if sterling strengthens.

8. How the UK spends its aid budget

The UK is committed by law to spending 0.7% of gross national income on overseas aid every year. This fiscal commitment is notable given the significant public spending pressures across government. In this context, the government has overseen some important changes to how its aid is allocated in recent years. These include the pursuit of new strategic objectives, a greater emphasis on a cross-government approach, and an explicit focus on the role aid can play in serving the UK's national interest.

This chapter does not seek to offer new evidence on the effectiveness of UK aid or to provide recommendations on how – or how much – aid should be spent. Instead, we provide a descriptive analysis of aggregate UK aid spending and its composition. We draw out trends in how this composition has changed and highlight where this appears to be driven by recent updates to the government's overarching strategy, outlining potential challenges and areas of uncertainty for the future of UK aid along the way.

Key findings

- **The UK has reached its target of spending 0.7% of GNI on overseas aid for five consecutive years.** This represented a £14 billion commitment in 2017. Continuing to meet this would, on the latest growth forecasts, require annual spending to rise by a further £1 billion by 2022. ODA spending has risen from 0.8% of total government expenditure in 2000 to 1.1% in 2010 and 1.7% in 2017.
- **The Department for International Development (DfID) remains the main spender of UK aid, but other departments are playing an increasingly important role.** DfID spent 73% of UK aid in 2017, down from 88% in 2013. The next most significant spender was the Foreign and Commonwealth Office.
- **Bilateral aid – provided for specific countries or regions – makes up a majority of UK aid.** The focus has not changed substantially in recent years, with humanitarian, health and education projects accounting for up to 50% of bilateral aid spending. There has been a change in country focus, however. Only five of the top ten recipient countries in 2016 were also in the top ten in 2012. For example, India was the largest recipient of aid in 2012 and has since dropped out of the top ten. Pakistan and Syria were the top two recipients of UK aid in 2016.
- **New areas of focus for UK aid have also emerged in line with the 2015 aid strategy.** Notable is an increased emphasis on 'development capital': public investments in the private sector with development objectives, but which create a returnable asset. These meet the international definition of aid, but do not count towards the deficit – which could create incentives to spend more in this way than would otherwise be optimal. HM

Treasury has set minimum targets on this kind of spend for DfID, which increased from £100 million in 2013–14 to £5 billion for the period 2016–17 to 2019–20.

- **In 2016, the UK was the fifth-largest economy in the world but the largest contributor of core aid funds to multilateral institutions in absolute terms.** Over 60% of this aid went to just four organisations, with the EU the largest recipient overall. A number of important decisions regarding spending through these channels are approaching, with both Brexit and significant replenishments for other institutions taking place in 2019.
- **During the 2019 Spending Review, aid spending will come under close scrutiny.** With spending likely to again be dispersed across departments, the government needs to be clear about the overarching objectives for UK aid. Robust and transparent processes should be in place to help ensure that funds are allocated to where they can have the greatest impact, with assurances that departments are well-equipped to manage this spend effectively.

9. Barriers to homeownership for young adults

The falling rate of homeownership among young adults has become an increasingly high-profile political issue. It has also created a clear economic difference between the older and younger generations. There is consensus across the political spectrum that it is too difficult for young adults to get on the property ladder, and both the current and previous governments have introduced a range of policies intended to slow or reverse the decline in young people's homeownership.

This chapter investigates the key trends in the housing market that young adults face, and the barriers that they create for young prospective homeowners. In particular, using data on the incomes of young adults and the range of property prices in the areas in which they live, we examine the impact of deposit requirements and the cap on mortgage borrowing as a share of income. We show that, since the mid 1990s, it has become harder to save for a deposit and to borrow enough to cover the remaining property price, but the effects differ a lot between regions. We also analyse some of the policy options open to the government, in terms of their potential effects not only on young adults' homeownership but also on the housing market as a whole.

Key findings

- **The last 20 years have seen a substantial fall in homeownership among young adults.** In 2017, 35% of 25- to 34-year-olds were homeowners, down from 55% in 1997. The biggest falls have been among middle-income young adults. In terms of housing tenure, they now look much more like the poorest groups than their richer peers.
- **Since 1997, the average property price in England has risen by 173% after adjusting for inflation, and by 253% in London.** This compares with increases in real incomes of 25- to 34-year-olds of only 19% and in (real) rents of 38%. In most of the country, real house prices have not risen in the last decade; however, they have increased by 30% in London, 8% in the South East and 10% in the East of England since 2007. Rising house prices have benefited older generations at the expense of younger ones and increased intragenerational inequalities.

- **Increases in property prices relative to incomes have made it increasingly hard for young adults to raise a deposit.** The proportion of young adults who would need to spend more than six months' income on a 10% deposit for the median property in their area has increased from 33% to 78% in the last 20 years. Most of this increase occurred between 1996 and 2006. Over the last decade, stable or falling house prices outside London, the South East and the East of England have meant that raising a deposit has become slightly easier in most of the UK.
- **Even with a 10% deposit, many young adults are severely restricted in their ability to purchase a home.** Most mortgage lenders will not lend more than 4.5 times salary. In 1996, for almost all (93%) young adults, borrowing 4.5 times their salary would have been enough to cover the cost of one of the cheapest properties in their area assuming they had a 10% deposit. By 2016, this figure had fallen to three-in-five (61%) across England as a whole and around one-in-three (35%) in London.
- **Rates of homeownership amongst young adults could potentially be increased by recent policies to advantage young buyers over others (in particular over multiple-property owners)** – for example, by reducing stamp duty for the former and increasing it for the latter. But these policies risk increasing house prices or rents or both.
- **Increasing the supply of homes and the responsiveness (or elasticity) of supply to prices is crucial.** Planning restrictions make it hard for individuals and developers to build houses in response to demand. Easing these restrictions would reduce (or at least moderate) both property prices and rents, boosting homeownership and benefiting renters who may never own. Without greater elasticity of supply, policies to advantage young adults in the housing market will in part push up house prices and will not help (and could even harm) those young adults who will never own a home.

10. The exposure of different workers to potential trade barriers between the UK and the EU

While there is no doubt that the UK's vote to leave the European Union ('Brexit') in June 2016 will have far-reaching consequences, there is much we do not know about what these consequences are likely to be. We do not know what form of trade agreement the UK will strike with the EU, what new trade barriers may be imposed on UK-EU trade or what effects these will have on UK industries.

In the face of all this uncertainty, various studies – conducted both inside and outside government – have attempted to predict Brexit's possible impacts on growth in the economy as a whole. These studies tend to find negative economic impacts of Brexit in both the short and long run, regardless of what kind of agreement the UK strikes with the EU.

However, these economy-wide effects are likely to mask considerable differences in Brexit's potential effects on different industries, workers and regions across the UK. Some people or places may be more negatively affected than others. Some may gain. This means Brexit could have important implications for both interpersonal and interregional inequalities within the UK.

In this chapter, we focus on one particular aspect of Brexit – changes in trade barriers with the EU – and examine the consequences these might have for different industries, workers and regions. Throughout, our aim is to shed light on *relative* impacts across different groups in the population rather than their overall scale. To conduct our analysis, we calculate measures of the impact of new barriers to trade on demand for goods and services produced in the UK, and how these are likely to affect different industries and, by extension, the workers that they employ.

Key findings

- **The EU accounts for 44% of UK exports (equal to 13% of GDP) and more than half of UK imports (17% of GDP).** Leaving the Single Market and Customs Union will increase trade barriers and make both importing and exporting more costly.
- **Some industries, such as clothing and transport equipment (including car manufacturing), are likely to be especially badly affected by these changes because they sell a large fraction of their output to EU countries.** The transport equipment sector will also be hard hit because it imports 25% of its inputs from the EU. The same is true for the chemicals and pharmaceuticals sector. Finance is the most exposed services industry, as it currently exports a relatively large share of its output (12%) to the EU.
- **Industries such as agriculture may benefit from trade barriers (though at the expense of consumers)** because consumers will substitute away from more expensive imports towards products made by UK industries. However, the industries that could benefit make up a small share of the overall economy.
- **Men, in particular those with fewer formal qualifications, are more likely to be employed in the most exposed industries than women and more highly educated men.** Workers in process, plant and machinery operative occupations are particularly exposed. These tend to be older men with skills specific to their occupation who, history suggests, may struggle to find equally well-paid work if their current employment were to disappear.
- **On average, exposure to new trade barriers is set to weigh somewhat more heavily on the top half of the earnings distribution.** While earnings inequality may fall, it will come at the cost of making most UK workers poorer. The likely impacts on inequality between regions are both smaller and much more uncertain than the effects on earnings inequality.
- **Low-educated workers are more exposed in some regional labour markets than others.** While 19% of low-educated men work in industries we class as highly exposed in the UK as a whole, the fractions in Northern Ireland and the West Midlands are 25% and 24% respectively. Low-educated workers in these regions might find it particularly hard to adjust to the negative consequences of trade barriers.