Understanding the economic impact of Brexit
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Economic considerations are one of the questions that will weigh on MPs’ minds when they come to scrutinise and vote on the Government’s EU withdrawal agreement. This short paper summarises what is known about the long-term economic impact of Brexit and what questions must be addressed by the Government’s final analysis of this issue.¹

Brexit will lead to a significant change in the UK’s relationship with other European countries and could reopen the opportunity to negotiate trade deals directly with non-EU countries. MPs are soon expected to be given the opportunity to cast a meaningful vote on the withdrawal agreement that the UK Government has drawn up with EU negotiators in Brussels.

Many questions will shape MPs’ and the public’s opinions about the merits of the Brexit deal and the political declaration on the future relationship, one of which is the impact they will have on the economy. It is therefore very important that politicians and the public understand what is and is not known about how Brexit might affect the UK economy.

¹ This paper provides a summary of a longer report published by the Institute for Government in October 2018. The full report is available at: https://www.instituteforgovernment.org.uk/publications/understanding-economic-impact-brexit.
Numerous studies have been published setting out a range of projections for how Brexit is likely to affect UK economic performance in the longer term. The answers range from a prediction that Brexit will boost future economic output by up to 7% through to a prediction that it will reduce it by 18%, compared to what would happen if the UK remained a member of the bloc.

The report – of which this paper is a summary – surveys 14 studies, from a range of organisations including the UK Government, Dutch Government, academic researchers and City institutions. We examine the evidence and explain why different studies have come up with such a range of answers. We focus on describing the predictions that have been made about the long-term impact of Brexit, rather than on short-term forecasts. This is because economic theory and evidence provide a much stronger basis for making long-term projections than for making short-term forecasts.

Theresa May has said that her government will publish its assessment of the likely economic impact of the proposed Brexit deal with the EU, as set out in the political declaration on the future framework. An amendment added to the Finance Bill by a cross-party group of MPs requires the government to publish not only their assessment of the fiscal and economic implications of the proposed deal and of no deal, but also to show the economic outlook if the UK were to remain in the EU.

**Nine points the Government should address in its analysis**

The Government’s analysis may support or depart from the majority of studies we have analysed to date. What is important is that readers, commentators, MPs and experts understand why they reached certain conclusions. To ensure that MPs in particular are properly informed, we have made nine recommendations for what the Government needs to do and to make clear when it publishes its final analysis of this question. Doing so will ensure that MPs and other interested observers are able to assess the Government’s conclusion, weigh up the potential impact – including on their constituency – and decide how to cast their vote.

1. **Make assumptions transparent**
   Assumptions made about the impact of Brexit on trade barriers, migration, investment and, in particular, productivity can have large effects on the estimates of the economic consequences of leaving the EU. The final results of the Government’s analysis must be transparent about what it has assumed in these areas.

2. **Clarify migration and regulatory policy assumptions**
   Brexit opens up the possibility of changing migration policy, regulations and trade arrangements with non-EU countries, all of which could have material economic consequences. Not all of these policy changes will be nailed down in the next few months, but the Government must still make clear in its final analysis what has been assumed about future changes in these areas.
3. Exclude non-Brexit policy changes
The Government should not factor into its Brexit projections any policy changes that would have been possible even without Brexit. Some commentators have argued that Brexit will provide an impetus to, for example, radically reform skills training in the UK. While the Government should continue to consider such policies on their own merit, they should not be presented as being part of the economic consequence of Brexit.

4. Clarify baseline assumptions
All the assessments of Brexit’s economic impact that have been published so far (including the leaked Government analysis) have assessed how UK economic output post-Brexit would compare to output in a hypothetical future world in which the UK remained a member of the EU. If the Government’s final analysis also follows this approach, it needs to make clear what is assumed to happen in this future world, and what exactly the UK forgoes or benefits from by exiting the EU.

5. Ensure the consistency and plausibility of assumptions
The Government must avoid the trap into which some independent studies have fallen of including inconsistent or implausible sets of assumptions. The most common pitfall that some studies have fallen into is presenting a scenario that includes both a deep relationship with the EU, and a free trade agreement with the USA. This is likely to be impossible, given the incompatibilities of regulations between the two systems.

6. Provide a range of uncertainty
There will be considerable uncertainty surrounding any estimate of the Brexit impact. To help MPs and other interested observers to understand how to interpret the figures, the Government should publish a confidence interval around any central estimate: that is, a range within which they are reasonably certain the figure will lie.

7. Show the sensitivity of results
To provide further reassurance that the predictions reflect the best central estimate of the likely effect, the Government should show the sensitivity of its results to alternative plausible assumptions. This should help avoid the analysis being presented as a definitive guide to the future, and instead make clear that it is just a reasonable simulation based on evidenced assumptions.

8. Set out regional and sectoral impacts
As far as possible, the Government should make clear how different sectors and regions of the economy are likely to be affected by the proposed deal – particularly in cases where the effect on a specific sector or region is expected to be very different from the average effect for the country as a whole.

9. Outline short-term impacts
MPs and UK residents will care not only about the long-term impact of the Brexit deal, but also about what happens in the short-term – particularly if this could be more disruptive than long-term projections suggest. Even if the Government does not provide
a full medium-term economic forecast, it should outline whether and how it expects the short-term impact of Brexit to differ from the projected long-term impact.

The vast majority of economic projections suggest that Brexit will harm UK economic growth

A large number of economic studies have now been produced which attempt to quantify the likely longer-term impact of Brexit on UK economic output. These studies focus on estimating how the level of UK output in around the year 2030 is likely to compare, post-Brexit, to the level of output that would have been produced in that year if the UK had remained a member of the EU.

Economists have attempted to predict this difference on the basis of the extensive body of economic evidence that examines the relationship between the strength of trade, investment and migratory links between countries and their economic growth. This demonstrates that stronger links between countries have in the past (and in other parts of the world) been associated with faster economic growth. There is broad agreement among UK-based economists that stronger trade, investment and migratory links boost a country’s economic output.

These insights – coupled with a prediction that Brexit is likely, overall, to raise barriers to trade between the UK and other countries – lead most economists to believe that Brexit will hamper UK economic growth.

The vast majority of the Brexit impact studies suggest the UK economy will grow more slowly after Brexit than it would do as a member of the EU, with those predictions ranging from a negligible cost to an 18% reduction in output in 2030 compared to a world in which the UK remained a member of the EU. The predictions are more pessimistic for scenarios in which significant barriers to trade develop between the UK and EU – for example, if the UK and EU were to trade with each other on World Trade Organization (WTO) terms.

Only one study – that produced by Economists for Free Trade – has predicted that Brexit will provide a significant boost to the UK economy. They forecast that UK national income would be at least 4% (and perhaps as much as 7%) larger if the UK leaves the EU and unilaterally adopts completely free trade than if the UK were to remain a member of the EU. But their prediction is at odds with those of other studies, which suggest that leaving the EU and adopting a policy of unilateral free trade would reduce economic growth or – at best – offer a much smaller benefit.

In the report, we summarise and explain the predictions that have been made by twelve independent organisations together with two official sets of projections for the long-term economic impact of Brexit. To the best of our knowledge, these studies between them cover the full spectrum of predictions that have been made.

The eventual impact of Brexit will depend on what trading relationship the UK has in future with the EU. Since there has remained great uncertainty about exactly what this
will be, most of the existing studies have considered the potential impact under a number of different scenarios, such as the UK remaining a member of the European Economic Area (EEA), signing a free trade agreement (FTA) with the EU, or trading with the bloc on WTO terms.

The projections that have been made are summarised in the figure below, with the estimated impact varying across papers and depending on the nature of the future UK-EU trading relationship.

The long-term economic projections are based on different evidence and insight than the oft-criticised short-term predictions of the Brexit vote

Before the referendum, the Treasury forecast that a vote for Brexit would lead to an immediate recession. This prediction proved wrong, as did some other pessimistic forecasts produced before the referendum. But this does not automatically mean that the longer-term projections made by the same organisations should be rejected out of hand. The techniques and evidence used to inform the short-term forecasts are very different from those used to project the long-term impact of Brexit.

The world is very uncertain, meaning any forecast of the future level of economic activity (such as the sort of short-term forecasts made before the referendum) is subject to uncertainty and the eventual outturn will be shaped by all sorts of hard-to-predict macro-economic events. But the longer-term projections for the economic impact of Brexit do not attempt to pinpoint exactly what the level of economic activity will be in future. Rather they are a statement about how much higher or lower economic output is likely to be in a world in which the UK is not a member of the EU than in a world in which the UK is a member. Both worlds are uncertain but the difference between them (regardless of what else happens) should be easier to predict.
To provide a medical analogy: a doctor would struggle to predict accurately when you are going to die, but she could predict with much greater certainty that the date is likely to be sooner if you smoke 20 cigarettes a day than if you do not.

**Different assumptions—rather than different economic models—drive the varying predictions of each study**

The Brexit studies that have been published so far use one of two broad approaches to model the long-term economic impact of Brexit. Though there are some differences between the models used, the underlying structure of the models is not what drives most of the difference between the overall results. Instead, most of the variation is driven by differing assumptions how Brexit will impact the economy, in particular the different assumptions made about the following five areas.

**Trade barriers** can be reduced either by removing tariffs or eliminating non-tariff barriers to trade. Historic evidence on trade in goods and services strongly supports the notion that barriers to trade reduce trade between countries and thus reduce economic output. Numerous academic studies find this. All the projections made for the impact of Brexit on the UK economy assume this relationship holds. Indeed, the main way in which economists think Brexit will affect UK economic growth is through its potential impact on barriers to trade. But studies differ in what they assume about exactly what will happen to non-tariff barriers between the UK, the EU and non-EU countries and exactly how these would affect growth.

**Foreign Direct Investment** contributes directly to national income, providing firms with additional funds to invest in expanding their businesses. It can also help raise productivity by giving companies access to new ideas from abroad. About two fifths (42.6%, as of January 2018) of foreign investment in the UK comes from other EU countries. Theory and empirical evidence suggests that the UK’s attractiveness to foreign investors is closely tied to trade – that is, the ability of multinational companies based in the UK to be part of global supply chains and to serve a larger market beyond the UK’s shores. Leaving the EU could, therefore, affect the UK’s attractiveness to foreign investors.

**Migration** – from the EU and elsewhere – after Brexit could also have important effects on long-term economic growth. The studies that we surveyed have shown that different assumptions about future changes to the rules governing the migration of skilled and unskilled workers can have as significant a direct impact on overall economic growth as trade. Migration affects overall economic output by changing the number of workers, changing the mix of skills available and potentially by affecting levels of innovation within an economy.

**Regulations** affect how cost-effectively businesses are able to use workers, capital and technology to produce output. But regulations also have a purpose, aiming to ensure that certain objectives – for example, around competition, health and safety or
environmental protection – are achieved. Some studies posit significant economic gains if the UK repealed or adapted regulation as a result of leaving EU.

**Productivity** in the long term is crucial for economic growth. Becoming more productive means that workers can produce increasingly large quantities of output without needing any more capital to work with. This is key to enabling rising living standards. Economists do not have a good understanding of why UK productivity growth has been so poor in recent years and so it is difficult to predict with any certainty how it might change in future. Economic theory suggests that trade can boost productivity but the size of this effect is difficult to estimate and the empirical evidence on this question is mixed. If Brexit has a permanent impact on productivity growth, it would have a large effect on the UK’s future growth.

All of the studies that we consider look at the impact of Brexit on barriers to trade. A few also consider all of the other areas listed above but most consider only a subset of them.

**New barriers to trade with the EU are likely to lower the UK’s long-term growth but studies disagree on how much**

Most studies conclude that Brexit will introduce new barriers to trade with the EU – in the form of tariffs or non-tariff barriers to trade – which are likely to reduce trade flows and economic growth. The impact is predicted to be more negative in scenarios in which the UK trades with the EU on WTO terms than if the UK and EU maintain closer trading ties. For example, researchers at the Centre for Economic Performance estimate that higher trade barriers would reduce economic output by 2.9% in 2030 in a WTO scenario compared to remaining in the EU, but only 1.4% if the UK remains a member of the EEA. However, the latter outcome is ruled out as an option for the future relationship by the draft political declaration drawn up by EU and UK negotiators.

Each of the studies is clear in the assumptions it makes about how tariffs on trade between the UK and EU could change following Brexit and it is easy to understand what motivates their choices. For example, the default – in the event that the UK and EU fail to reach an agreement – would be that they trade with each other on the basis of the terms agreed by the EU with other WTO members. Under those circumstances, the average tariff charged on UK exports to the EU and vice versa is estimated to be between 2% and 3% – leading to lower trade and a direct reduction in GDP of about 1%.

However, it is non-tariff barriers – rather than new tariffs – that are predicted to have the largest effect on economic output. Non-tariff barriers include, for example, plant and animal health regulations, or manufacturing requirements that have to be met before goods can be legally imported. The EU single market has gone much further than any other international trade agreements in removing non-tariff barriers to trade in goods and services. But studies differ in their predictions of exactly how much non-tariff barriers between the UK and EU might increase after Brexit.
It is more difficult – as the cross-Whitehall analysis leaked to the media in January 2018 noted – to know exactly what would happen to non-tariff barriers, since these are harder to quantify in practice and arise as a result of various administrative requirements and policy differences. At one extreme end of the possible spectrum, the Economists for Free Trade assume that no new barriers of this sort would arise between the UK and the EU post-Brexit and that all such existing barriers between the UK and non-EU countries would disappear.

The other studies try to gauge how large new non-tariff barriers between the UK and EU could be by looking at those that currently exist between the EU and other countries, in particular the USA. Using a variety of methods, various papers have estimated that these non-tariff barriers are equivalent to a tariff of at least 10% on all trade – much higher than the cost of tariffs. Some of these barriers are likely to be unavoidable if the UK left the EU Single Market and Customs Union. For example, unless the UK remains in a Customs Union with the EU, anyone exporting goods to the EU would have to demonstrate that enough of their product was made in the UK (or another qualifying country) to be eligible for preferential tariffs (that is, that they met so-called ‘rules of origin’).

But non-tariff barriers between the UK and EU almost certainly would not be as high as they are between the EU and USA – not least because the two will start off with identical regulations, unlike the EU and USA. As the table below shows, studies make a range of predictions about how large non-tariff barriers would be – ranging from CPB (Netherlands Bureau for Economic Policy Analysis), which assumes that non-tariff barriers would be equivalent to a 12.9% average tariff, to Ciuriak finding a 3.26% tariff-equivalent increase in trade costs (arising just from the administrative and time costs of clearing customs) in a WTO scenario.

<table>
<thead>
<tr>
<th>Study</th>
<th>Predicted change in non-tariff barriers with the EU (% tariff-rate equivalent)</th>
<th>EEA</th>
<th>FTA</th>
<th>WTO</th>
<th>UFT</th>
</tr>
</thead>
<tbody>
<tr>
<td>EFT</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>No change</td>
</tr>
<tr>
<td>Ciuriak / Open Europe</td>
<td>+3.26%*</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>CEP</td>
<td>+2.8%</td>
<td>-</td>
<td>+8.3%</td>
<td>+8.3%</td>
<td>-</td>
</tr>
<tr>
<td>PwC</td>
<td>-</td>
<td>-</td>
<td>+8.3%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Rabobank</td>
<td>+3.3%</td>
<td>+5.9%</td>
<td>+8.3%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>NMG</td>
<td>+4%</td>
<td>+7%</td>
<td>+10%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>CPB</td>
<td>-</td>
<td>+6%</td>
<td>+12.9%</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

* This figure includes only the additional costs of border procedures and paperwork. Ciuriak’s modelling (which is also used in the Open Europe report) also includes additional non-tariff barriers to services trade but the published report does not state how large these are predicted to be.

** PwC assume that in an FTA scenario, non-tariff barriers between the UK and EU would rise by one quarter of the difference between those that currently exist between the UK and EU and those between the UK and non-EU countries. In a WTO scenario, they assume barriers rise by three quarters of this difference. However, they do not provide a figure for the overall average increase in non-tariff barriers in either scenario.

Notes: All the other studies (Beritelsmann, NIESR, IEEO, Oxford Economics, Treasury) assume there is some increase in non-tariff barriers between the UK and EU in all scenarios but do not spell out how large these are predicted to be in terms of the tariff-rate equivalent.
New trade deals with non-EU countries could boost growth – but not by much

Much has been made of the potential for the UK to offset losses in trade with the EU with new free trade agreements with other countries. But all the studies that have attempted to quantify the benefits of such deals conclude they are likely to be relatively modest.

The leaked Government study – which goes into greatest detail on the subject – estimated that a free trade agreement with the US would add at most 0.3% to economic output, and that trade deals with China, India, Australia, the Gulf countries, and the nations of Southeast Asia would add, in total, a further 0.1% to 0.4% to GDP. This is consistent with most assessments of past free trade agreements, which find they have not provided large gains to overall GDP.

Leaving the EU poses the risk that the UK could lose access to preferential trade deals that it currently benefits from as a member of the EU. The UK Government has stated a desire for these deals to be grandfathered over after the UK leaves the bloc but there is no guarantee yet that this will happen. Most of the Brexit impact studies assume the UK retains access to these deals. But some show the potential cost if this did not happen. For example, Rabobank estimate that trade costs could be increased by 0.8% if the UK lost access to three fifths of the EU’s existing free trade agreements.

If Brexit has an impact on productivity, the losses to GDP would be magnified substantially

As described above, economic theory suggests that greater trade could boost not only demand for a country’s produce but also its productivity. However, even with a lot of data on what has happened in the past, it is difficult to estimate exactly how strong the relationship between trade and productivity is. This is because so many other factors beyond trade affect productivity, making it hard to isolate the impact of trade alone.

Because of this uncertainty, many of the Brexit impact studies have assumed that productivity growth would be unaffected by Brexit. This could be regarded as a cautious assumption as it will tend to minimise the estimated impact of Brexit on economic growth.

Those studies that have allowed Brexit to affect productivity (including the estimates published by the Treasury before the referendum) predict significantly larger effects of Brexit on the UK economy than those that do not, as the table below shows.

As we can see from the table, NIESR (National Institute for Economic and Social Research) estimate that trading with the EU on WTO terms rather than remaining a member would reduce UK GDP by 2.7% if there is no knock-on impact on productivity growth. This static impact is more than doubled when they allow for an effect on productivity. This underlines how important it is for the Government to set out
Brexit could also affect UK economic growth through changes to migration and foreign investment

The most significant impacts of Brexit on UK economic growth are predicted to come through the impact on trade and on productivity, though not all studies incorporate the latter effect. But there are also three other ways in which Brexit could affect UK economic growth that are factored into some studies: changing migration, foreign investment and regulations.

After trade and productivity impacts, the next most important way in which Brexit could affect overall UK economic output (and, to a lesser extent, output per person) is through its impact on migration. Only a minority of the existing studies of the long-term economic impact of Brexit allow for changes in immigration from the EU and/or non-EU countries. The others simply assume migration would be the same as if the UK remained in the EU.

Those studies that have allowed for a change in migration have all assumed that overall net migration to the UK will be reduced as a result of Brexit, leading to somewhere between a 0.2% and 1.6% reduction in GDP. These impacts are predicted to be smaller if the Government chose to adopt something like the recent proposals of the Migration Advisory Committee, which suggested restricting immigration of low-skilled workers from the EU but relaxing controls on highly skilled migrants from non-EU countries.

Academic studies have shown that foreign direct investment is closely tied to the strength of trading relationships. However, since annual flows of foreign direct investment are relatively small compared to the size of the economy, the direct impact

<table>
<thead>
<tr>
<th>Study and scenario</th>
<th>Estimated Impact on GDP</th>
<th>Dynamic (with productivity impact)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Static (no productivity impact)</td>
<td>Dynamic (with productivity impact)</td>
</tr>
<tr>
<td>CEP EEA</td>
<td>-1.3%</td>
<td>-6.3% to -9.5%</td>
</tr>
<tr>
<td>Rabobank EEA</td>
<td>n/a</td>
<td>-10%</td>
</tr>
<tr>
<td>Rabobank FTA</td>
<td>n/a</td>
<td>-12%</td>
</tr>
<tr>
<td>Rabobank WTO</td>
<td>n/a</td>
<td>-18%</td>
</tr>
<tr>
<td>CFP FTA</td>
<td>-5.4%</td>
<td>-5.9%</td>
</tr>
<tr>
<td>CFP WTO</td>
<td>-4.1%</td>
<td>-8.7%</td>
</tr>
<tr>
<td>Treasury EEA</td>
<td>n/a</td>
<td>-6.4% to -4.3%</td>
</tr>
<tr>
<td>Treasury FTA</td>
<td>n/a</td>
<td>-6.8% to -7.8%</td>
</tr>
<tr>
<td>Treasury WTO</td>
<td>n/a</td>
<td>-5.4% to -9.5%</td>
</tr>
<tr>
<td>NIESR WTO</td>
<td>-2.7%</td>
<td>-7.8%</td>
</tr>
</tbody>
</table>

Source: Institute for Government analysis
of any Brexit-induced reduction in foreign investment on UK economic output is predicted to be quite small. It could, however, have a more significant effect if – as some evidence suggests – lower foreign investment also leads to lower productivity growth.

**Brexit could offer the opportunity to reduce the economic costs of regulation**

Brexit offers the opportunity to change – currently EU-set – regulations to suit the UK’s needs better and reduce costs to businesses. Some of the studies published so far have attempted to quantify the benefit that might be gained from doing this. The estimates range from close to zero (0-0.13% predicted by Oxford Economics) to 0.7% (Open Europe and PwC), based on published official assessments of the economic cost of existing EU regulations and an assessment of what changes would be politically feasible.

The possible benefits from deregulation are predicted to come from three main sources: the removal of renewable energy targets, relaxing product standards and removing the working time directive. Given international commitments and the Government’s pledge to maintain current standards, even these would be politically challenging.

The notable outliers in terms of estimating the benefits of changing regulation, are the Economists for Free Trade and the Institute of Economic Affairs. Both predict that the economic gains from deregulation could be much more significant – suggesting it could boost economic output by 2% and 7.5% respectively.

Deregulation could lead to an increased cost to trade with the EU due to divergence from common regulations. For example, if the UK and EU had different requirements on product standards, businesses could have to produce different products for the UK and EU markets or face additional paperwork when exporting to the EU to prove that their products meet all EU requirements. The more dramatic the divergence, the larger those costs are likely to be.

**The studies that project the largest gains and losses from Brexit all combine extreme assumptions**

At one end of the spectrum, the Economists for Free Trade project that Brexit could boost economic output by as much as 7% in 15 years’ time. This positive outlook results from having made a set of assumptions that are all at the most positive end of – if not beyond the end of – the scale of what is plausible.

Economists for Free Trade assume that Brexit (coupled with the adoption of unilateral free trade) will eliminate all barriers to trade between the UK and non-EU countries, while doing nothing to increase barriers to trade with the EU. These are very strong assumptions.
All the other studies predict instead that leaving the EU will – at least to some extent – increase trade barriers with the EU. This is based on the evidence that barriers to trade are significantly higher between the EU and non-EU countries than between EU member states, which is consistent with the single market having been successful in removing at least some of the barriers to trade between member states.

Economists for Free Trade assert that WTO law could be used to force the EU to treat the UK the same as member states. However, this is an incredibly optimistic assumption given the EU’s position on what will happen in the event of no deal. Few other trade experts agree that WTO law is strong enough to compel the EU to do this. Even if a WTO ruling went in the UK’s favour, the way WTO law works means such a judgment would – at best – allow the UK to impose retaliatory tariffs (that is, to create even higher barriers to trade).

Economists for Free Trade also predict that changes to regulations post-Brexit could deliver a 2% boost to economic growth. As mentioned above, this is more than four times as large as the gains that other economists (such as Open Europe) believe are politically feasible.

At the other end of the spectrum, Rabobank project that leaving the EU on WTO terms would reduce economic output by 18% in 2030 compared to remaining in the EU. This particularly large negative figure arises from the fact that the make a set of assumptions that are all towards the gloomier end of what is possible – although none are individually out of line with what other economists believe to be plausible.

Unlike many other studies, Rabobank assume that under a WTO scenario the UK would lose access to three-fifths of the EU’s existing free trade agreements with non-EU countries. This would mean potentially higher barriers to trade with existing trading partners like South Korea. They also assume that the UK would not manage to sign any other new free trade agreements by 2030. Rabobank also assume that new non-tariff barriers to trade with the EU would be equivalent to an 11% tariff on all exports; this is towards the top end of what is assumed in the other studies. They assume the government would clamp down heavily on migration – resulting in a 44% fall in net migration – and they assume that lower trade and investment would have an adverse knock-on impact on productivity growth. As mentioned above, this latter assumption means the effect of lower trade and investment on economic output are magnified.

**Predictions about the impact on total economic output hide important variation across sectors, regions and income groups**

The sort of macroeconomic models used to project the overall impact of Brexit on the UK economy are not well suited to predicting the impact on individual parts of the country or sectors of the economy. However, Brexit is likely to result in differing impacts in different sectors, regions and possibly income brackets.
Most of the studies of the long-term impact of Brexit do not look at these distributional consequences. However, some other pieces of work have tried to use the insights from the macroeconomic models to predict what could happen for different industries, regions and people with higher and lower incomes.

These analyses suggest that most groups would be impacted in the same direction as the overall effect – that is, if the overall effect is positive, most groups are predicted to be positively affected, and vice versa. However, the size of the impact varies and there are some industries that would be likely to buck the trend.

Economists have concluded that the impact of Brexit is likely to be quite evenly felt across the income distribution. If Brexit has an adverse effect on the UK economy, poorer households are likely to be hit harder by any increase in food prices, but richer households will be affected by increases in the price of services and by greater reductions in their wages.

Looking across different types of businesses, three sectors are likely to buck the overall trend if the UK trades with the EU on WTO terms or if the UK adopts unilateral free trade: the agricultural sector, and the fishing and food processing industries. The EU imposes relatively high tariffs on imports of food products and so trading with the EU on WTO terms could have a significant positive impact on domestic demand for UK-produced food, helping British farmers and food producers even while it might harm overall economic growth and reduce household living standards on average. Conversely, even though the EFT predict that unilateral free trade would be good for the UK economy as a whole, they predict that the abolition of tariffs on all food imports would essentially wipe out the UK’s agricultural sector.

The fishing industry (which makes up a very small share of the UK economy) could also benefit from Brexit if the UK Government is able to negotiate higher fishing quotas for UK fisherman.

But other businesses, particularly high-tech ones such as aerospace, are predicted to be hit hardest as their competitiveness in foreign markets declines.

Various studies that have tried to look at potential regional differences in the economic impact of Brexit reach conflicting conclusions and provide no clear evidence that Brexit is likely to either reduce or increase existing regional disparities. There are three factors that will ultimately be particularly important in determining how different parts of the country are affected.

First, the types of businesses that operate in different parts of the country and how any deal struck with the EU affects particular sectors. Second, how much businesses in each region rely on imports from and exports to the EU. Third, how readily each area can adapt to any Brexit shock, including whether workers displaced from one industry find it easy or hard to find new jobs somewhere else. The latter could be made easier by appropriate changes to government policy – for example, to help workers retrain.
The short-term impact of Brexit could be different from the predicted long-term impact

The studies of the economic impact of Brexit that we focus on in the report attempt to predict how much larger or smaller the UK economy will be in 2030 – that is, once the UK and EU have adjusted to a new relationship with one another. The short-term economic impact could either be significantly more disruptive than the long-term projections suggest or less so, depending on how the negotiations play out.

If the UK Parliament supports the agreement reached between the UK government and the EU and if both sides make good progress in putting in place the new systems needed to facilitate the future trading relationship, the short-term impact could be much smaller than the long-term effects predicted. It could – for example – take some time for any differences in UK and EU regulations to materialise and so some time for any costs to become apparent.

But if no agreement can be reached that is acceptable to both the UK Parliament and EU lawmakers, then the short-term economic impact could be much more severe than the predictions for a long-term WTO-based relationship suggest. These WTO scenarios are largely based on looking at current patterns of trade between the USA and EU. But in the absence of an overarching free trade agreement, these are backed up by a series of side deals – covering everything from aviation to data – and reflect the activity of businesses who are familiar with the administrative hoops they have to jump through to trade across the Atlantic. Without such side deals – which themselves would take time to negotiate – the immediate economic disruption could be more severe.
About the authors

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