The economic consequences of the Brexit deal

CENTRE *for* ECONOMIC PERFORMANCE

The **UK** in a **Changing Europe**

Foreword

Amidst the political fighting and fevered speculation about leadership challenges and parliamentary defeats for the government, one crucial issue seems to have been lost from sight. The deal negotiated with the European Union will, if approved and implemented, have significant implications for the UK economy.

In what follows, we provide an objective and impartial analysis of what those implications might be. Comparing the deal with the cases of continuing membership of the EU and a 'no deal' outcome, we attempt to come to some conclusions about the economic effects of the decision that parliament will debate in the coming weeks.

As ever, this report has relied on the hard work of a number of individuals. It was written by Peter Levell and Thomas Sampson, alongside ourselves. We would like to express our profound gratitude to Swati Dhingra, Hanwei Huang and Thomas Pope for their hard work and willingness to work to unreasonable deadlines. We hope they are as pleased as we are with the outcome, and that you find what follows useful in assessing the Brexit deal on offer.

Anand Menon and Jonathan Portes

Contents

Introduction p4

Trade p5

Modelling the deal p6

Trade and productivity p8

Migration p9

Fiscal impacts p12

Divorce bill p12

EU contributions p13

Economic impacts p13

Conclusion p15

Introduction

So the deal is signed. And the next few weeks, if not months, will be dominated by the political debate over whether parliament should accept the deal or not. There will be much frenzied speculation about options, about principles, about political ambitions. Careful scrutiny will, as ever, be focussed on parliamentary arithmetic, Conservative Party gossip, Labour Party dithering and Cabinet conflict.

We are anxious, however, that attention is also paid to what the deal on offer might mean for the British economy.

Our intention in producing this report is to provide an objective and informed assessment of the likely impacts on the UK economy of the proposed Brexit deal. In doing this, we hope to inform both Parliament and the public of the potential implications of the decisions that will be taken over the weeks and months to come.

We consider the impact of changes in trade and migration on output and government revenue. In particular, we estimate the impact on UK GDP and GDP per capita—the size of the UK economy, and average incomes—and we also calculate the resulting impact on the public finances.

However, in order to assess the impact of the proposed deal, we need to have something to compare it with. As the Prime Minister put it, the choice is "this deal, no deal, or no Brexit." We therefore consider three scenarios: remaining in the EU (the 'baseline'), the deal and no deal—a situation in which there is no agreement between the UK and the EU and hence, in the long term, we trade with it as a third country with no free trade agreement. We spell out the implications of this 'WTO outcome' in more detail in a separate report to be published next week.

It is important to be clear here. Our no deal scenario simply relates to the absence of a trade or customs agreement with the EU. We do not discuss, still less model, the short-term impacts of failing to agree a Withdrawal Agreement. As our earlier report "Cost of No Deal Revisited" sets out in detail, the short-term disruption resulting from no deal would be severe and would have major economic and political consequences, with a severe recession a significant possibility. But, given the uncertainties involved, we do not believe meaningful quantitative modelling of this scenario is feasible.

Nor does this report discuss issues relating to the relationship between Northern Ireland and Ireland (or Northern Ireland and Great Britain). Although these are clearly of great importance and have to a large extent shaped the recent debate, their overall economic impact on the UK is limited.

Economic modelling is not an exact science, and in order to produce the analysis set out in this report, we have had to make a large number of assumptions, some of them subjective. Moreover, economic models provide at best an imperfect map of the world. For example, our model requires us to transform the legal language of the Withdrawal Agreement into assumptions about percentage changes in non-tariff barriers. This is an inexact art that relies on informed judgment more than scientific measurement. Equally, there is insufficient detail in the Withdrawal Agreement to know exactly how the customs backstop would operate or the extent of future regulatory divergence between the UK and the EU. This introduces additional uncertainty into our assumptions.

All this being said, these findings represent our best judgement about the impact of the deal. That does not mean they will be correct—indeed, they almost certainly will be inaccurate to some extent. However, we have tried to be as clear and transparent as possible, and to spell out both the key assumptions and the basis for them. Clearly, in a number of areas it would be perfectly legitimate to take a different view. There are therefore large uncertainties around our numerical estimates.

We do not claim, in other words, to have got this absolutely right, but would maintain that are our broad conclusions are credible. They are, moreover, consistent with both the theory and existing empirical literature, and in line with the consensus of the substantial majority of economists working in this area.

Our findings relate to a ten-year period (until 2030)—which would allow the economy time to adjust and means our results should be viewed as estimating the long-run impact of the deal. We find that no deal would, in the long term (ignoring the impacts of short-term disruption) lead to a reduction in UK GDP per capita, compared to the 'baseline' of remaining an EU member, of 3.5% to 8.7%—the large range reflecting the very substantial uncertainties involved. The negative impact of the proposed deal would be smaller, but still substantial, amounting to between 1.9% and 5.5% of GDP per capita. The associated fiscal consequences would also be negative, far outweighing any gains resulting from reduced EU contributions.

Finally, we should of course note that The UK in a Changing Europe, and the authors of this report, do not take any position on which of the three scenarios is preferable. We recognise that there are many other considerations than simply economic ones. GDP is not everything and decisions such as those over Brexit involve a number of trade-offs. Nevertheless, we think it important that Parliament, and the country as a whole, make choices on the basis of the best available evidence.

Trade

To analyse how the Withdrawal Agreement deal would affect trade and living standards, we need to take a stance about what it means for the long-term trading relationship between the UK and the EU. We assume future relations—'the deal'—are based on the customs backstop written into the Withdrawal Agreement. Under this scenario, the UK remains in a permanent customs union with the EU, but, with the exception of Northern Ireland, does not remain in the single market for either goods or services. This is consistent with the government's position that the UK will leave the single market, and in particular will end free movement, and the EU's position that the benefits of the single market, in particular the 'frictionless trade' that follows from full regulatory alignment, is not available to a non-member.

Leaving the single market would give Great Britain (though not Northern Ireland) the opportunity to diverge from EU regulations. However, any divergence would mean that traders have to design their products to satisfy different regulations in different markets. This would create new trade barriers between Great Britain and the EU and between Great Britain and Northern Ireland. The Withdrawal Agreement does include some level playing field provisions intended to ensure fair competition between Britain and the EU. These relate to state aid, competition, taxation, environmental standards, and labour and social protection. We assume these provisions slightly reduce future regulatory divergence, but our judgment is that they are unlikely to have a major impact.

Staying in a customs union with the EU means there would be no tariffs on UK-EU trade, no customs checks at the border and no need for firms to satisfy rules of origin requirements. We further assume that the UK and the EU would be successful in convincing third countries to allow the UK to continue participating in existing EU free trade agreements. Consequently, there would be no change in the UK's access to non-EU markets.

However, being in a customs union would restrict the UK's ability to have an independent trade policy, as tariffs and customs procedures would be set by the EU. In principle, the UK could still seek to negotiate new agreements on services trade. We do not model this, however, as there is currently no concrete information on what such agreements might include.

To compare the deal with no deal, the second scenario that we analyse is the 'WTO' case, where the UK and the EU revert to trading on the basis of World Trade Organization (WTO) terms. Under this scenario, the UK would leave both the single market and the customs union, leading to the imposition of far larger

trade barriers between the UK and the EU. The EU's most-favored nation (MFN) tariffs would apply to UK-EU trade and non-tariff barriers between the UK and the EU would rise due to new trade costs caused by customs checks at the border, rules of origin, and product certification and testing requirements, among others. Regulatory divergence would also be greater than in the 'deal' scenario.

In each case, we analyse the effect of changes in UK-EU trade barriers on aggregate real income per capita ten years after the new trading arrangements are introduced—in practice, given the transition period, this means approximately 2030. A ten-year window allows the economy time to adjust and means our results should be viewed as estimating the long-run impact of the deal and WTO options. We do not attempt to model the short-run effects of either. Our view is that the short-run effects are harder to forecast than the long-run ones because less is known about the speed at which consumers and business react to higher trade barriers. However, we note that the short-run costs of a no deal Brexit are likely to be severe and could exceed the long-run costs.

Our analysis does not attempt to forecast how much the UK economy will grow over the next ten years. Since the UK's economic growth depends on many factors other than relations with the EU, that would be a fool's errand. Instead, we address a narrower question that can be answered with a greater degree of confidence. Namely, compared to remaining in the EU, what would be the change in the UK's income per capita, assuming the future relationship were based on either the deal or no deal (WTO) option? This implies our results should be interpreted as estimating how UK levels of income per capita will change relative to a counterfactual world where the UK continues with its existing economic arrangements with the EU.

As with all economic forecasts, our estimates should be treated with caution. We analyse how the deal and WTO options would affect the UK economy using the best available information and modelling techniques. However, there are several unavoidable sources of uncertainty, in addition to the assumptions set out above. First, the analysis focuses on trade and does not account for foreign direct investment (FDI). Previous research suggests that any deal with the EU that provides less market access than that enjoyed by members of the single market would reduce FDI and therefore lower economic activity in the UK. Second, we do not model the separate treatment of Northern Ireland under the deal.

Modelling the deal

To model the economic impact of the 'deal' and WTO scenarios, we use the Centre for Economic Performance (CEP) trade model, which is a Computable General Equilibrium (CGE) model. The CEP trade model was used prior to the referendum to study how a 'Norway-style' Brexit or a 'WTO-style' Brexit would affect the UK. We use the same calibration of the model employed in previous CEP work.[1] The model divides the world into 31 sectors and 35 regions, including the UK and the major EU economies. It features trade in intermediate inputs, as well as final goods, and takes account of how changes in trade barriers affect income levels through their impact on the UK's trade with both the EU and the rest of the world.

To implement the model, we have made a series of assumptions about how trade costs between the UK and the EU change under the deal and WTO scenarios. We divide changes in trade costs into three parts: (i) tariffs on goods trade; (ii) non-tariff barriers to trade arising from customs checks, product standards and regulations, and other costs of cross-border trade; and (iii) after Brexit the UK may not participate in future steps the EU takes towards reducing non-tariff barriers through deeper integration.

1 For a technical description of the model see: Dhingra, S., H. Huang, G. Ottaviano, J.P. Pessoa, T. Sampson and J. Van Reenen, "The Costs and Benefits of Leaving the EU: Trade Effects", Economic Policy, 2017, 32, 651-705. A non-technical overview is given in: Dhingra, S., G. Ottaviano, T. Sampson and J. Van Reenen, "The Consequences of Brexit for UK Trade and Living Standards", CEP Brexit Analysis 02, March 2016.

We model the WTO scenario using the same assumptions made in previous CEP work: first, that UK-EU goods trade would be subject to the EU's MFN tariffs; second, that all UK-EU trade would face an increase in non-tariff barriers three-quarters as large as the estimated reducible non-tariff barriers between the EU and the US, which implies an increase in non-tariff barriers of 8.3%; and third, intra-EU trade costs fall 40% faster than trade costs in the rest of the world over the ten-year forecast horizon, but UK-EU trade costs do not. Assuming the fall in trade costs applies to three-quarters of reducible non-tariff barriers, this implies a 12.7% reduction in intra-EU non-tariff barriers that the UK does not benefit from.[2]

In the 'deal' scenario, there would be no tariffs on UK-EU trade and no customs-related border procedures. However, goods trade would still be subject to new regulatory requirements and checks due to the UK's departure from the single market. We assume UK-EU goods trade would be subject to a quarter of the reducible non-tariff barriers between the EU and the US, implying a 2.8% increase in non-tariff barriers. This is the same increase in non-tariff barriers previously used by the CEP to model a soft Brexit scenario where the UK stayed in the single market, but not a customs union. Therefore, our assumption is that leaving either the customs union or the single market leads to similar increases in non-tariff barriers. Indirect support for this hypothesis comes from the government's own Brexit analysis, which (also using a CGE model) found that the impact of non-tariff barriers (excluding regulatory divergence) on UK GDP was similar in size for customs non-tariff barriers and for other non-tariff barriers.

The customs agreement would not apply to services trade, but the level playing field measures in the Withdrawal Agreement suggest non-tariff barriers to services trade would still be somewhat lower than in the WTO scenario. We assume services trade would be subject to two-thirds the estimated reducible non-tariff barriers between the EU and the US, implying a 7.3% increase. Finally, we again assume the UK does not benefit from future falls in intra-EU trade costs. However, we take the view that regulatory divergence is likely to be more limited in the 'deal' scenario than the WTO scenario. Consequently, for goods we assume the fall in intra-EU trade costs only applies to a quarter of reducible non-tariff barriers, while for services it applies to two-thirds.

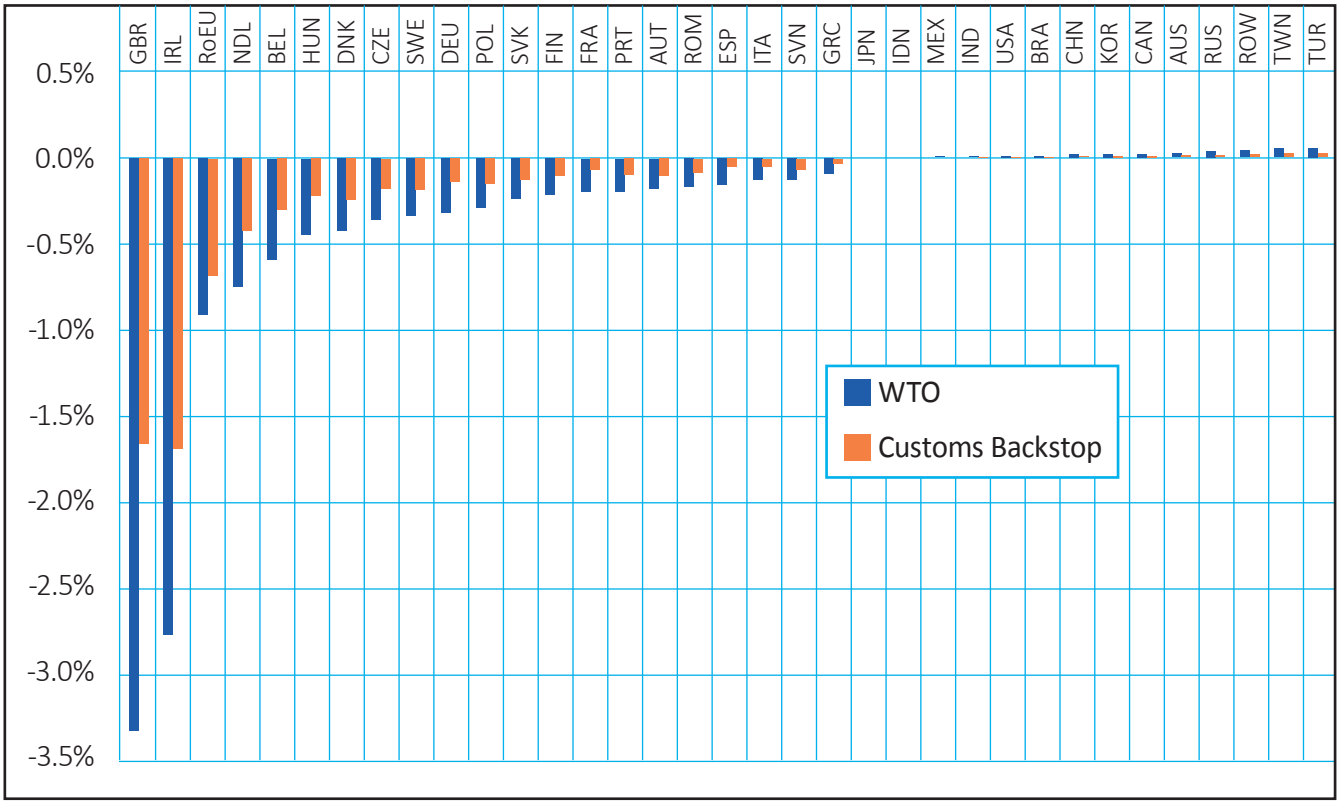
The modelling results show that relative to staying in the EU, UK income per capita declines by 1.7% in the 'deal' scenario, but by 3.3% in the WTO case. This leads to the following observations:

- both the deal on offer and the WTO scenario would reduce UK living standards compared to staying in the EU;
- the trade-related costs of Brexit are roughly twice as large for the WTO case than if long-term relations were based on the arrangements specified in the Withdrawal Agreement; and
- the estimated costs are comparable to those found in earlier CEP work and in the broader literature on Brexit and trade, although no previous study has analysed the 'deal' scenario. The results for the 'deal' scenario are close to the CEP estimates for a Norway-style Brexit, where the UK stays in the single market but not the customs union.

We have also calculated how the two scenarios would affect income per capita in other countries. The results are shown in the figure below. Income per capita falls under both scenarios in all EU countries and the costs are approximately twice as large in the WTO case. The reduction in Ireland's income per capita is comparable in size to the UK effect, but for most EU countries the losses are around ten times smaller than for the UK, which highlights why Brexit matters more to the UK than the EU. Ireland is the worst-affected EU country because of its high share of trade with the UK. Non-EU countries experience very small income gains due to trade diversion effects.

2 See Dhingra et al. (2017) for details on how these changes in trade costs are calculated.

Income per capita effects by country



Source: CEP calculations

Trade and productivity

The CEP trade model does not allow for any dynamic effects of trade on productivity. Trade integration can raise productivity by promoting efficiency through increased competition, by stimulating innovation or by reducing the cost of intermediate goods. For an alternative way to analyse the two scenarios, we turn to the empirical literature on how trade affects income per capita. A central estimate from this literature is that a 1% decline in trade reduces income per capita by around 0.5%. This estimate is designed to capture all channels through which trade affects income, including productivity changes in addition to the mechanisms embedded in the CEP trade model. It may also partially capture the consequences of changes in foreign investment and immigration that are correlated with changes in trade policy.

Combining this estimate with the changes in UK trade calculated by our model gives, in the 'deal' scenario, a fall in income per capita of 4.9%. In the WTO scenario, income per capita falls by 8.1%. These costs are around two and a half times as large as the falls in income per capita obtained directly from the trade model, which is consistent with the idea that the model does not incorporate all the channels through which trade affects output and living standards.

Our results are summarised in the table below. We conclude that, although the exact magnitudes are uncertain, both the "deal" and no deal options are likely to lead to substantial declines in UK living standards.

Income per capita effects for the UK

	Change in UK income per capita (relative to remaining in the EU)	
	Without productivity adjustment	With productivity adjustment
Deal	-1.7%	-4.9%
WTO	-3.3%	-8.1%

Source: CEP calculations. Assumed elasticity of income per capita to trade equals 0.5.

Migration

The Withdrawal Agreement, although it contains extensive provisions relating to EU citizens currently resident in the UK (and Britons resident elsewhere in the EU), does not contain any provisions directly relating to future UK immigration policy (although it confirms that the Common Travel Area between the UK and Ireland will continue as now, meaning that the prospect of the UK fully 'controlling its borders' with respect to the movement of people remains as far away as ever).

The Political Declaration states clearly that the UK will end free movement of people. It also refers to short-term business visits and visas, but although both the UK (in the Chequers white paper) and the EU27 have previously referred to 'ambitious provisions' on labour mobility, there is no reason at this stage to think this means anything more ambitious than those contained in the Canada-EU deal, which have little or no impact on immigration policy, will be implemented.

This suggests that, if the Withdrawal Agreement is passed, free movement of people with the EU will come to an end, and the UK will largely be free to set its own immigration policy after the end of the transition period, with relatively few constraints from any agreements with the EU. What policy would be adopted, and what would the economic impacts be? The Migration Advisory Committee (MAC), in its report on the impact of EEA migration published in September, made a number of recommendations on post-Brexit immigration policy. The government responded positively to the MAC report and signalled its support for the broad approach outlined by the MAC. It has promised to publish a white paper on immigration before Christmas. For the purposes of this exercise, therefore, it seems appropriate to assume that in either case—deal or no deal—the UK's immigration policy after the end of the transition period, will be broadly in line with that proposed by the MAC, and we model the impacts on that basis.

The key recommendations from the MAC for a post-Brexit immigration system were the following.

a) There should be no 'European preference' for EU or EEA citizens seeking to move to the UK for work purposes after Brexit. In other words, after the end of free movement, there should be no intermediate position where EU or EEA citizens still find it easier to move to the UK than non-EU ones.

b) EU/EEA citizens would therefore have to apply for permission to live and work in the UK in the same way as non-EU citizens do at present. In practice, for most, this will mean applying for a Tier 2 ('skilled worker') visa, which requires the applicant to satisfy a number of criteria (relating, depending on the job, to salary, occupation, skill level and the non-availability of workers from within the UK). Various fees and charges are also payable.

c) However, the MAC also recommended that the Tier 2 visa route be simplified and liberalised. In particular, it recommended that the main criterion should be the current salary threshold (for most workers) of £30,000 and that the current 'cap' on the number of Tier 2 visas should be removed. Nevertheless, applying for a Tier 2 visa would still involve considerable cost and the completion of numerous administrative tasks.

What would this mean in practice for different groups of potential immigrants? For these purposes, we can divide work-related migrants into four categories and describe in broad terms how they will be affected:

a) *EU migrants earning less than £30,000.* TThese currently benefit from free movement. Under the proposed system, they would not be able to obtain a Tier 2 visa (of course, some may be able to move to the UK through other routes which allow work, for example family/spouse visas). So this group would face a much more restrictive regime, although the government has signalled that it is open to extending the Youth Mobility Scheme to EU nationals, which would allow some younger EU nationals to move to the UK to fill lower-paid jobs.

b) *EU migrants earning more than £30,000.* Again, these benefit from free movement currently. In future, they would in most cases, in principle, be able to secure a work visa. However, they would face very significant new barriers. They would have to have a job offer, they or their employers would need to pay various fees and charges, and the current bureaucratic process is extremely burdensome. Moreover, as well as these costs, there are other reasons that it is less attractive to be resident in the UK on a Tier 2 visa than via freedom of movement; the latter has fewer rights, in particular with respect to other family members and access to public services and welfare, and also faces additional barriers should they seek to apply for permanent settlement. So this group will face a considerably more restrictive migration regime, new financial incentive and opportunity costs, and a less attractive status in the UK once here.

c) *Non-EU migrants earning less than £30,000.* This group cannot, by and large, migrate for work purposes to the UK under the current regime, and this will not change. So there will be no significant direct effects.

d) *Non-EU migrants earning more than £30,000.* Assuming the MAC recommendations are accepted, they will face a somewhat more liberal and less restrictive regime, although how much more so will depend both on whether the recommendations are accepted in full (in particular the removal of the cap) and on whether the Home Office genuinely adopts a more migrant- and business-friendly approach.

Assessing the economic impacts therefore depends on how large the impacts of the proposed changes are on groups a, b and d. There is considerable evidence that free movement resulted in a large increase in migration flows to the UK, increasing them by approximately 500%. Moreover, since the referendum, net migration from the EU has fallen by more than half, with net migration for work purposes falling even farther, even though nothing has as yet changed in policy terms. While this is not solely due to the Brexit vote, it is clearly a significant factor, since non-EU migration has not changed much.

Ending free movement is therefore likely to lead to a large reduction. For the purposes of this analysis, we assume that EU migration of those earning more than £30,000 is reduced by 50%, while for those earning less it is reduced by 75%. For non-EU migrants earning more than £30,000, we assume that a somewhat more liberal regime increases numbers by 25%.

In order to estimate the impact on future migration flows and hence on the UK workforce, we apply these proportional changes to the number of migrants in each category who are currently resident in the UK and who arrived in the last nine years.[3] Implicitly, therefore, we assume that future migration flows would be similar to the recent past, without any Brexit-induced policy change. From this, we derive an estimate of the impact on numbers of the proposed policy change, over ten years, to match the trade modelling. This methodology implicitly takes account of return or onward migration for future arrivals—we are looking at the impact of alternative policies on the resident workforce over ten years.

In order to ensure that we broadly capture primarily work-related migration, and not other forms, we restrict the analysis to full-time workers. We do not take account of any impact on return migration rates for EU nationals already resident in the UK. This group will be entitled to apply for settled status under the Withdrawal Agreement, but some may choose to leave the UK as a result of Brexit, which would lead to additional reductions in net migration.

3 Since we are projecting future flows over the ten years after the end of the transition period, we make a proportional adjustment in the table below to take account of this.

The results are shown in the table below.

	2009-17 arrivals currently resident (000s)	Average salary	Impact of policy change	Forecast net migration over 10 years (000s)	Impact of policy change (000s)
EU, earning less than £30,000	598	£18,804	-75%	166	-498
EU, earning more than £30,000	220	£49,237	-50%	122	-122
Non-EU, earning less than £30,000	263	£18,920	0%	292	0
Non-EU, earning more than £30,000	235	£50,157	25%	326	65
Total	**1,316**	**£29,514**		**907**	**-555**

Source: Labour Force Survey/Annual Population Survey, authors calculations

In order to assess the economic impact of these changes, we adopt the following methodology. We calculate the average salary for each of these four groups (also shown in the table). We assume that the contribution of an individual worker to GDP (migrant or native) is proportional to his or her earnings. Current employment in the UK is about 27.9 million full-time equivalents. Therefore, a reduction in the workforce of approximately 555,000, as implied by our calculations, would translate into a reduction in GDP of approximately 2%, if all migrants earned the average UK salary. However, since the reductions are disproportionately concentrated on the lower paid, the implied reduction is somewhat less—approximately 1.4% of GDP.

This is the direct, arithmetic effect of a reduction in the workforce. However, as with trade, migration also has indirect impacts on productivity. In its recent report, the MAC concluded that "the literature and the studies we commissioned point towards immigration having a positive impact on productivity, but the results are subject to significant uncertainty. While the evidence on overall migration is not entirely conclusive the evidence perhaps unsurprisingly suggests that high-skilled migrants have a more positive impact." In fact, the studies commissioned by the MAC all suggested that immigration has a large and positive impact on productivity, as does the most recent major cross-country study published by the IMF.

Broadly consistent with the MAC conclusions, we assume that immigration of relatively less skilled workers has no indirect impact on productivity. Consistent with the published empirical studies, we assume that relatively skilled immigration increases productivity, with an increase in the skilled migrant share of 1 percentage point being associated with a productivity increase of 2%. These assumptions appear relatively conservative, given the consistently positive evidence on the productivity impacts of immigration. However they are, as the MAC says, subject to a high degree of uncertainty. The impact under these assumptions would be a further hit to GDP of approximately 0.4%, resulting from the assumed net fall in skilled migration of about 60,000, which is equal to about 0.2% of the full-time equivalent workforce. The total reduction in GDP resulting from the changes to immigration policy would therefore be 1.8%.

The corresponding impact on GDP per capita would be less, since reducing immigration would also reduce the population. However, this will depend on how much other, non work-related migration—that is, dependents and other family members of those in full-time work—is reduced. Lower paid migrants from the EU, who account for the bulk of the reduction, do not generally have non-working dependents, but there will be some. Assuming a ratio of working migrants to non-working dependents of 2:1, then the reduction in population would be about 1.2%. The fall in per capita GDP would therefore be approximately 0.2% without considering productivity impacts, and about 0.6% including assumptions about indirect productivity impacts.

These estimates are summarised in the table below:

	GDP	GDP per capita
Direct impact (excluding indirect impact on productivity)	-1.4%	-0.2%
Impact with productivity assumption	-1.8%	-0.6%

As outlined above, these results are subject to several caveats, both on the impact of policy on migration flows, and the impact of changes in migration flows on economic outcomes. However, it is consistent with both economic theory and the empirical literature that a less open and more restrictive migration policy should, just as with trade policy, have a negative impact on output and productivity, and the magnitudes of these impacts appear broadly sensible.

We assume for modelling purposes that the government proceeds broadly in line with currently stated policy. But there is nothing in the Brexit deal itself which dictates that. In particular, if the government lowered the administrative barriers and costs associated with Tier 2 (General) such as to reduce the fall in higher-paid EU migration, and further increase skilled non-EU migration, these impacts could in principle be mitigated or even reversed.

Fiscal impacts

The public finances have always played an important role in the Brexit debate. Theresa May recently placed 'money' first (followed by 'laws' and 'borders') in the list of key areas the deal is supposed to bring back control over. So how will the deal affect the public finances? There are broadly speaking, three main factors to consider: the 'divorce bill', the UK's current contributions to the EU budget and the impact of Brexit on the economy.

Divorce bill

Under the proposed deal, the UK must pay a financial settlement (or divorce bill), covering the UK's liabilities to the EU including, for example, its share of future pension payments and unpaid contributions as part of the EU's current multi-year financial framework. This bill isn't new—the new deal does not change the terms of the so-called divorce bill that the UK and EU agreed in March.

The current draft Withdrawal Agreement does not include an exact figure for the divorce bill, but in March the Office for Budget Responsibility (OBR) estimated it to be around £37bn (previous Treasury estimates had put it between £35-39bn). This cost is projected to be spread over a number of years, with proportionally more of the costs up front.

The costs of paying off the financial settlement are expected to be £14bn in the first year (2018-19), falling to £7bn by 2022-23 (2018-19 prices). These numbers may sound large, but they will become increasingly insignificant over the longer term. For instance, £7bn would account for just over 0.3% of GDP in 2022-23, and this number would quickly diminish over time as the bill was paid off. This is important to remember when weighing up the benefits of not paying the divorce bill, at the risk of, for example, failing to reach a comprehensive trade agreement with the EU.

EU contributions

The OBR estimates that if the UK were to remain a member of the EU, then its payments to the EU for the year 2022-23 would be £15.7bn in 2018-19 prices. However, this does not mean that, as a result of the UK leaving the EU, it would have £8.7 billion extra to spend on public services in that year (that is, £15.7bn minus £7bn of payments under the divorce bill). This is because the UK currently receives various financial transfers back from the EU, including funding for farm support, science and education. A proportion of the EU's spending on foreign aid also contributes towards the UK government's current commitment to spend 0.7% of its GDP on overseas assistance. While the Treasury has said that formal decisions on these areas will not be taken until the 2019 Spending Review, both the Prime Minister and the Chancellor have stated that they would like to see UK schemes replace EU spending on farm spending and support for scientific research.

If the government were to completely replace the EU's spending on these areas, and on overseas aid, this would leave just £600m of additional resources for increased public spending in 2022-23, and this is before we subtract any additional administrative costs associated with Brexit. The Institute for Government (IfG) has estimated that preparations for Brexit will cost these departments at least £900m in 2018–19. Many of these costs are likely to be temporary, but there may well be some permanent increases in costs as well, for example, due to increased border security or increased administration arising from new arrangements with the EU. Such costs could then offset some of, or even exceed, the extra £600m that could be made available for increased public spending in 2022–23 by leaving the EU. Brexit is therefore unlikely to free up substantial additional resources for public spending for at least the next five years.

In the longer term, once the costs of transition and paying the divorce bill have ended, the UK may benefit from reduced net contributions to the EU. Net payments to the EU budget currently amount to 0.4% of UK GDP, and this could in principle be redirected to fund greater public spending in the UK. However, some of these payments may continue after Brexit. Both Norway and Switzerland currently contribute to the EU's budget as part of arrangements that give them greater access to the single market, for example. If the UK's net contributions were similar to Norway's after Brexit, they would be a bit less than half of what they are now (i.e. around 0.2% of GDP). In addition, part of the UK's contribution also pertains to tariff revenue the UK collects on the EU's behalf, and depending on the customs arrangements the UK reaches with the EU, some of these transfers may continue. However, we assume for the purposes of this analysis that ending direct net contributions to the EU budget provides a fiscal benefit to the UK of 0.4% annually in the long run, for both the deal and no deal scenarios.

Economic impacts

However, the broader economic impacts of Brexit are likely to be by far the most important determinant of Brexit's impact on the UK's public finances. The OBR's assessment of the leave vote made in November 2016, implied an economy that would be 2% smaller in 2020–21 than it otherwise would have been. Recent analysis by Citi as part of the IFS Green Budget suggests that this effect has already largely occurred and that the economy is already 2% (or £40bn) smaller than it would have been had the vote gone the other way. The OBR estimated that this reduced growth would increase the deficit in 2020 by £15bn—an amount that is already greater than the UK's net contribution to the EU budget. Much of this reflects the impact of heightened uncertainty in the short run, as well as higher inflation associated with the post-vote depreciation in the value of the pound.

The analysis in the table estimates long-run impacts on GDP per capita from changes in trade and migration. Combining the trade and migration estimates in this report implies that in the 'deal' case GDP per capita would be 1.9% to 5.5% lower than if UK remained in the EU. In the WTO case, GDP per capita would fall by between 3.5% and 8.7%

To estimate the implications of these estimates for government finances, we assume that a 1% fall in GDP per capita reduces government revenue by 0.4% of GDP As noted above, we also assume that the public finances benefit by 0.4% of GDP per year as a result of reduced EU net contributions, although this may be optimistic. Our estimates imply a substantial reduction in funds available for public spending as shown in the table below.

	GDP per capita (%)	Fiscal impact (% of GDP)
No productivity assumption		
Proposed deal	-1.9%	-0.4%
WTO	-3.5%	-1%
With productivity assumption		
Proposed deal	-5.5%	-1.8%
WTO	-8.7%	-3.1%

Source: IFS calculations. Assumes a 1% of national income reduction in GDP per capita leads to reduction in public receipts of 0.4% of national income in the medium run and that leaving the EU saves the government 0.4% of GDP per year in EU budget contributions.

As we have emphasised throughout, all these estimates are subject to considerable uncertainty, for two reasons. First, there is inherent uncertainty associated with forecasting the impact of economic policy choices. Second, there is also political uncertainty as to what those future policy choices will be, both on the part of the UK and the EU. Nevertheless, it should be clear that under any plausible scenario the costs associated with Brexit's potential economic effects are much larger than the savings from reduced contributions to the EU budget. As in so many areas, the ultimate impact of Brexit on the public finances will depend crucially on the outcome of the UK and EU's future trade negotiations.

Conclusion

Our modelling leads us to estimate that the Brexit deal could reduce UK GDP per capita by between 1.9% and 5.5% in ten years' time, compared to remaining in the EU. The cost to the public finances would be between 0.4% and 1.8% of GDP over the same period, and the corresponding figures for a no deal Brexit would be 1% to 3.1%.

Taken together, the estimates imply that no deal would, in the long term (ignoring the impacts of short-term disruption), lead to a reduction in UK GDP per capita, compared to the 'baseline' of remaining an EU member, of 3.5% to 8.7%—the large range reflecting the very substantial uncertainties involved. The negative impact of the proposed deal would be smaller, but still substantial, amounting to between 1.9% and 5.5% of GDP per capita.

Such a large economic impact would also have major implications for the public finances. These would far outweigh any gains resulting from reduced EU contributions. The Institute for Fiscal Studies has estimated that if the impacts on GDP were as estimated above, then in a no deal scenario the cost to the public finances would be between 1% and 3.1% of GDP, and between 0.4% and 1.8% if the deal was implemented. This is even after taking account of the long-term saving on the UK's net EU contributions of 0.4% of GDP.

Clearly, these figures are significant. Clearly, too, their impact would be felt over time. For all the talk about a Brexit 'cliff edge,' should the withdrawal agreement be signed and subsequently ratified (admittedly a big if at the moment), the UK would continue to trade with the EU on essentially the same terms until the end of the transition period. Only thereafter would the practical impact of Brexit be felt.

Nevertheless, our findings imply challenges ahead for policy makers. The scale of impact that we have estimated will make it harder to achieve key public policy objectives. Difficult choices, particularly about taxation and spending, will have to be made. And there is little if any sign that the starkness of these choices has yet been appreciated, not least by the two main political parties, both of whose manifestos for the 2017 seemed to imply that a post-Brexit world would be one of business as usual.

We should of course stress that our results are subject to a high degree of uncertainty, relating both to the inherent difficulties in economic modelling, and to the vague and aspirational nature of the Political Declaration on the future relationship, which mean that some key elements are still to be determined. Moreover, we do not attempt to model the short-term disruption resulting from no deal, which was the subject of an earlier UK in a Changing Europe report, Cost of No Deal Revisited.

Moreover, our work is based on a number of assumptions, some of them subjective, which are set out clearly and transparently. A central estimate from the empirical literature is that a 1% decline in trade reduces income per capita by around 0.5%. To estimate the implications for the government finances, we assume that a 1% fall in GDP per capita reduces government revenue by 0.4% of GDP. The conclusions of the report are consistent with both economic theory and the empirical literature.

We carried out this exercise because we believe the public and political debates to come should be informed by the best available analysis of what the deal on offer actually means. We do not take any position of which of the three scenarios we examine is preferable. There are many other considerations than simply economic ones, and the role of our organisation is to provide evidence and not to tell people what to make of it.

However, we believe that not enough attention has been paid in the debate over Brexit to the trade-offs it implies. The profusion of 'cakeism' has meant that leading Brexiters have been unwilling to discuss what price is worth paying in order that the UK leave the EU. A necessary first step in any such debate is knowing what that price might turn out to be. We believe our estimates provide a clear indication of the broad scale of the impact of the deal negotiated by the Prime Minister.

CENTRE *for* ECONOMIC PERFORMANCE

Established in 1990, CEP was granted official ESRC Research Institute status in 2018. CEP does research in community, education and skills, growth, labour, trade, crime, urban/spatial economics, and wellbeing.

020 7955 7673 | CEP.info@lse.ac.uk | http://cep.lse.ac.uk/ | @CEP_LSE

The UK in a Changing Europe

The UK in a Changing Europe promotes rigorous, high-quality and independent research into the complex and ever changing relationship between the UK and the EU. It is funded by the Economic and Social Research Council and based at King's College London.

020 7848 2630 | ukandeu@kcl.ac.uk | www.UKandEU.ac.uk | @UKandEU