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Future UK Trade Arrangements: Potential Impact on the European Union Economy

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This policy note is based on academic work being carried out at Durham University Business School. At the time of writing, the underpinning research is in working paper format and hence it represents work in progress. The findings reported in this note are based purely on independent academic work and therefore do not reflect the feasibility or desirability of any political views. Any remaining errors are ours.

OVERVIEW

This briefing considers the implications of five possible future trade scenarios between the United Kingdom (UK) and both European Union (EU) and Non-EU countries on key areas of the European Union (EU) economy (labour productivity, the average real wage, GDP, the unemployment rate, total profits of EU firms and profits of EU firms from the domestic market) using a bespoke macroeconomic model of international trade developed at Durham University.

1. **'No Deal' (WTO rules)**
2. **'Barnier' Free Trade Agreement (FTA)**
3. **Full FTA**
4. **Unilateral Reductions in Barriers to UK Imports with WTO/'No Deal' Rules for UK Exporters**
5. **Unilateral Reductions in Barriers to UK Imports with '*Barnier*' Free Trade Agreement for UK Exporters**

Appendix 1 provides a description of each of these scenarios. The macroeconomic model used for the forecasts presented here is based on a unique combination of the following key features:

- Differentiation between exports and imports.
- Trade between more than two countries simultaneously – both aspects being crucially important for an appropriate and thorough analysis of the effects of changes in barriers to trade with both EU and Non-EU countries following the UK's withdrawal from the European Union.
- An analysis of the short-term, as well as long-term, behaviour of the main UK economic variables.

IMPACT ON THE EU ECONOMY

1. Under the '*No Deal*' scenario:

- *EU labour productivity* is expected to fall by 1.14% in the short run and by 0.79% in the long run relative to its level when the new terms of trade are announced;
- *The average EU real wage* is expected to fall below the level at which it will have been when the new terms of trade were announced by 0.99% in the short run and by 0.79% in the long run;
- *EU GDP* is expected to fall by 1.32% in the short run and by 1.08% in the long run relative to the level at which it was when the new terms of trade are announced;
- The long-term *EU unemployment* rate is predicted to increase from 7.86% to 8.13%;
- The *total profits* of EU firms are predicted to fall below the level at which they will be when the new terms of trade are announced by 1.17% in the short run and 1.1% in the long run;
- *Profits of EU firms from the domestic market* are predicted to rise by 0.34% in the long run relative to level at which they will be when the new terms of trade are announced, as more firms enter the EU domestic market to benefit from the reduced competition from UK imports into the EU.

2. Under the 'Barnier' Free Trade Agreement scenario:

- *Labour productivity* is expected to fall by 0.59% in the short run and by 0.4% in the long run relative to its level when the new terms of trade are announced;
- *The average real wage* is expected to fall below the level at which it will have been when the new terms of trade were announced by 0.51% in the short run and by 0.4% in the long run;
- *GDP* is expected to fall by 0.68% in the short run and by 0.55% in the long run relative to the level at which it was when the new terms of trade are announced;
- The long-term *EU unemployment* rate is predicted to increase from 7.86% to 8%;
- The *total profits* of EU firms are predicted to fall below the level at which they will be when the new terms of trade are announced by 0.6% in the short run and 0.56% in the long run;
- *Profits of EU firms from the domestic market* are predicted to rise by 0.18% in the long run relative to level at which they will be when the new terms of trade are announced, as more firms enter the EU domestic market to benefit from the reduced competition from UK imports into the EU.

3. Under the Full FTA scenario:

- *Labour productivity* is expected to fall by 0.32% in the short run and by 0.22% in the long run relative to its level when the new terms of trade are announced;
- *The average real wage* is expected to fall below the level at which it will have been when the new terms of trade were announced by 0.27% in the short run and by 0.22% in the long run;
- *GDP* is expected to fall by 0.37% in the short run and by 0.29% in the long run relative to the level at which it was when the new terms of trade are announced;
- The long-term *EU unemployment* rate is predicted to increase from 7.86% to 7.93%;
- The *total profits* of EU firms are predicted to fall below the level at which they will be when the new terms of trade are announced by 0.32% in the short run and 0.3% in the long run;
- *Profits of EU firms from the domestic market* are predicted to rise by 0.1% in the long run relative to level at which they will be when the new terms of trade are announced, as more firms enter the EU domestic market to benefit from the reduced competition from UK imports into the EU.

4. Under the Unilateral Reductions in Barriers to Imports with WTO/'No Deal' Rules for UK Exporters scenario:

- *Labour productivity* is expected to fall by 0.87% in the short run and by 0.6% in the long run relative to its level when the new terms of trade are announced;
- *The average real wage* is expected to fall below the level at which it will have been when the new terms of trade were announced by 0.68% in the short run and by 0.6% in the long run;
- *GDP* is expected to fall by 0.98% in the short run and by 0.82% in the long run relative to the level at which it was when the new terms of trade are announced;
- The long-term *EU unemployment* rate is predicted to increase from 7.86% to 8.07%;
- The *total profits* of EU firms are predicted to fall below the level at which they will be when the new terms of trade are announced by 0.79% in the short run and 0.84% in the long run;

- *Profits of EU firms from the domestic market* are predicted to rise by 0.27% in the long run relative to level at which they will be when the new terms of trade are announced, as more firms enter the EU domestic market to benefit from the reduced competition from UK imports into the EU.

5. Under the Unilateral Reductions in Barriers to Imports with '*Barnier*' Free Trade Agreement for UK Exporters scenario:

- *Labour productivity* is expected to fall by 0.57% in the short run and by 0.38% in the long run relative to its level when the new terms of trade are announced;
- *The average real wage* is expected to fall below the level at which it will have been when the new terms of trade were announced by 0.4% in the short run and by 0.38% in the long run;
- *GDP* is expected to fall by 0.63% in the short run and by 0.52% in the long run relative to the level at which it was when the new terms of trade are announced;
- The long-term *EU unemployment* rate is predicted to increase from 7.86% to 7.99%;
- The *total profits* of EU firms are predicted to fall below the level at which they will be when the new terms of trade are announced by 0.37% in the short run and 0.53% in the long run;
- *Profits of EU firms from the domestic market* are predicted to rise by 0.17% in the long run relative to level at which they will be when the new terms of trade are announced, as more firms enter the EU domestic market to benefit from the reduced competition from UK imports into the EU.

Figures 1 - 5 below show the short and long-term impact on these key areas of the EU economy under these five scenarios.

NB: It is assumed that the post-withdrawal terms of trade are released/known to the public and businesses in both the UK and the EU one year before they come into effect**.** The period between the announcement of the new terms of trade and the point at which they come into effect is shown in the figures by the shaded grey area.

Figure 1. *Short-term and long-term behaviour of main EU economic variables under the* ***'No Deal'* *(WTO rules)*** *scenario*

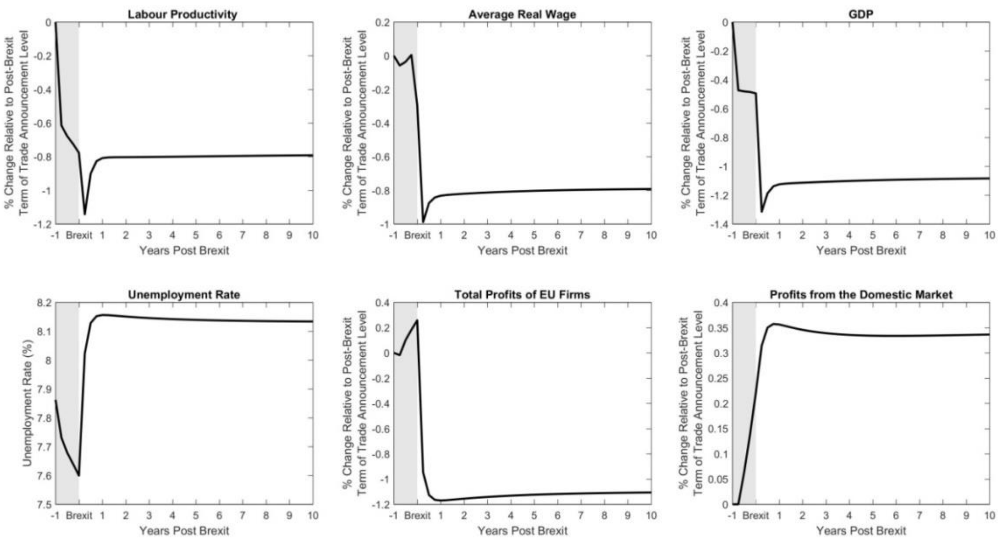


Figure 2. *Short-term and long-term behaviour of main EU economic variables under the* ***'Barnier'*** ***Free Trade Agreement*** *scenario*

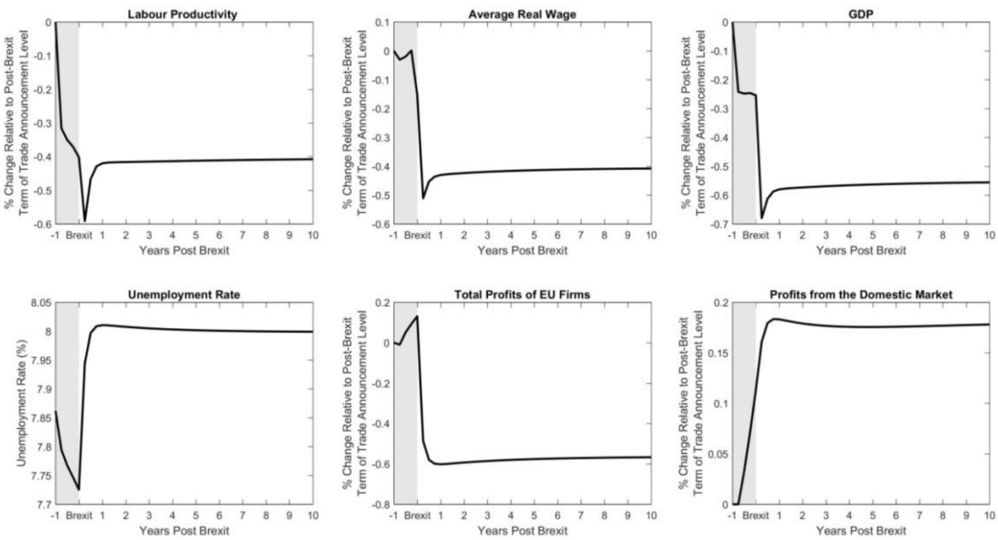


Figure 3. *Short-term and long-term behaviour of main EU economic variables under the* ***Full Free Trade Agreement*** *scenario*

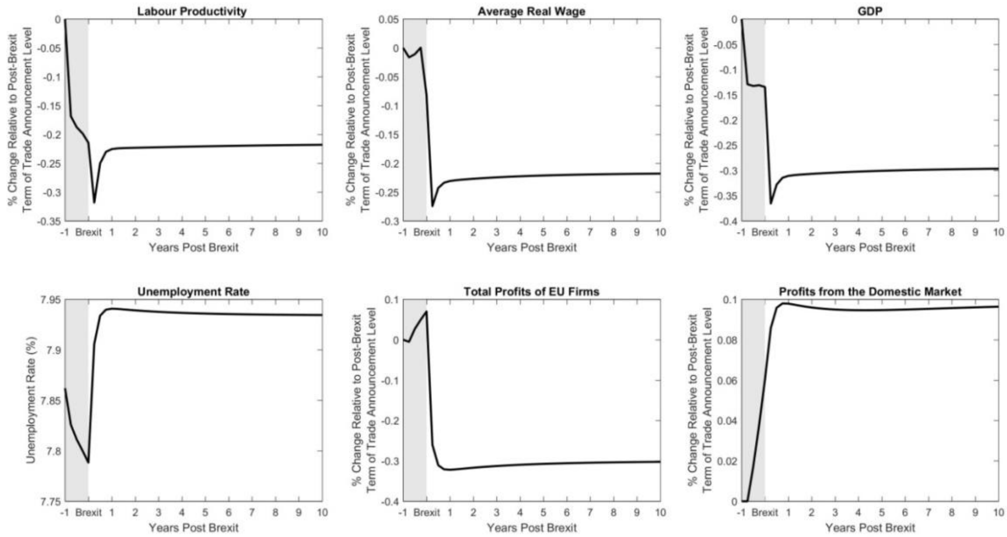


Figure 4. *Short-term and long-term behaviour of main EU economic variables under the* ***Unilateral Reductions in Barriers to UK Imports with WTO/'No Deal' Rules for UK Exporters*** *scenario*

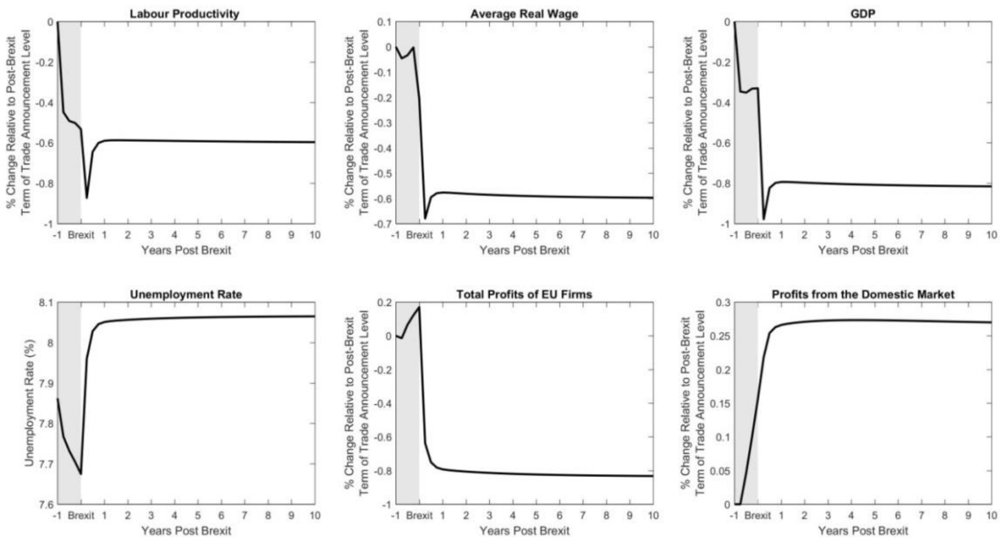
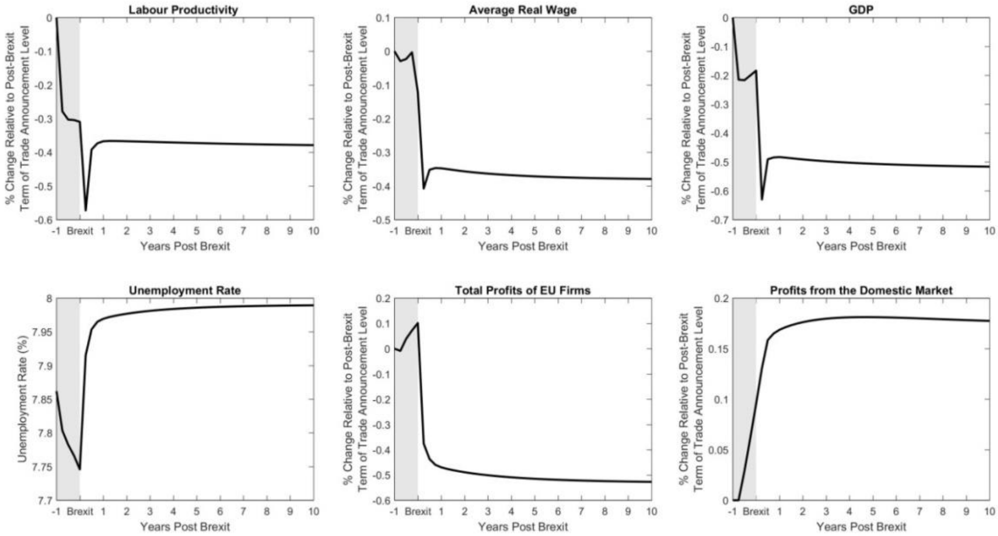


Figure 5. *Short-term and long-term behaviour of main EU economic variables under the* ***Unilateral Reductions in Barriers to UK Imports with 'Barnier' Free Trade Agreement for UK Exporters*** *scenario*



Under all five scenarios, once the new trade arrangement come into effect, EU labour productivity, the average EU real wage, EU GDP and the profits of EU firms will fall sharply below the level at which they will be when the terms of trade are announced. Long term, labour productivity, the average real wage, GDP and the profits of EU firms from the domestic market will recover relatively quickly (within one year) to a new level, however, this new level is below that when the terms of trade are announced.

This behaviour of the *main EU economic variables* is due to two main driving forces: *(a)* ***decreasing labour demand from exporters*** and *(b)* ***reduced competition on the EU market***, following UK's exit from the EU:

(a) ***decreasing labour demand from EU firms exporting to the UK*** leads to a rise in unemployment and a fall in average real wage, which leads to a drop in average household income, which in turn leads to a fall in the average real wage, as more workers need to work due to the fall in average household incomes. This *downward wage spiral* will encourage new firms to enter the EU market, and when a large enough number of new firms will enter, the *downward wage spiral* will cease.

(b) ***reduced competition on the EU market*** allows less productive firms (previously unable to compete on market) to enter the market, driving down labour productivity and average real wage (as less productive firms are not able to afford the higher wage paid by the more productive firms), and will also lead to an increase in number of EU firms. The decreased competition allows an increase in the amount of profits for EU firms from the domestic market, however this is not enough to compensate for the decreased profits from exporting to the UK.

Unemployment in long term is higher as ***decreasing labour demand from EU firms exporting to the UK*** has a greater effect on the EU labour market than the increase in labour demanded by new firms entering the EU market following ***reduced competition on the EU domestic market.***

For all five scenarios, the two driving forces presented above will be at work, resulting in similar responses of the economics variables studied here among the three scenarios. The magnitude of the responses is what will vary from one scenario to another, and this depends on the extent to which tariff and non-tariff trade barriers will change.

APPENDIX 1 – DESCRIPTION OF THE FIVE SCENARIOS

1. Under the **'No Deal' scenario**, the UK leaves the European Union (EU) without a trade agreement with the EU, and also ceases to be a party to the EU **Free Trade Agreements** (FTAs) and to all other trade-related treaties with Non-EU countries to which the EU is a party. The UK will therefore trade with both EU and Non-EU countries under World Trade Organization (WTO) rules after leaving the EU.

2. Under the **'Barnier' Free Trade Agreement scenario**, the UK leaves the EU with an FTA (but not customs union membership) with the EU for trade in goods, but with no FTA for trade in services. The UK therefore sees no change in the tariff barriers to trade in goods, but increases in tariff and non-tariff barriers to trade in services to WTO levels, as well as small increases in the non-tariff barriers to trade in goods, reflecting the customs checks necessary as the UK leaves the customs union.

3. Under the **Full FTA scenario**, the UK leaves the EU with an FTA (but not customs union membership) with the EU for both trade in goods and trade in services. This scenario reflects the UK Government's stated objective of a '…. *deep and special partnership with the European Union*'. In this scenario the UK sees no change in the tariff barriers to trade in goods or trade in services, but small increases in non-tariff barriers to trade in both goods and services, reflecting the customs checks necessary as the UK leaves the customs union.

4. Under the **Unilateral Reductions in Barriers to UK Imports with WTO/'No Deal' Rules for UK Exporters scenario**, the UK leaves the EU without an FTA and also ceases to be a party to the EU FTAs and to all other trade-related treaties with Non-EU countries to which the EU is a party, but post-withdrawal, reduces the tariff and non-tariff barriers to imports from Non-EU countries to the same level as the current barriers to imports from the EU. Therefore, the UK sees increases in both tariff and non-tariff barriers for exports from the UK to the EU, but decreases in both tariff and non-tariff barriers for imports from Non-EU countries to the UK.

5. Under the **Unilateral Reductions in Barriers to UK Imports with 'Barnier' Free Trade Agreement for UK Exporters** scenario the UK leaves the EU with an FTA (but not customs unions membership) with the EU for trade in goods, but with no FTA for trade in services, and post-withdrawal reduces the tariff and non-tariff barriers to imports from Non-EU countries to the same level as the current barriers to imports from the EU. The UK therefore sees no change in the tariff barriers to UK exports of goods to the EU, but increases in tariff and non-tariff barriers to UK exports of services to the EU to WTO levels, as well as small increases in the non-tariff barriers to UK exports in goods to the EU, reflecting the customs checks necessary as the UK leaves the customs union. Additionally, the UK sees decreases in both tariff and non-tariff barriers for imports from Non-EU countries to the UK.

APPENDIX 2 – 'HEADLINE' EU FIGURES

	Labour Productivity (output per worker)		**Average Real Wage**		**GDP**		**Unemployment Rate**		**Total Profits of EU Firms**		**Profits of EU Firms From the Domestic Market**
Scenario	Short Run	Long Run	Short Run	Long Run	Short Run	Long Run	Short Run	Long Run	Short Run	Long Run	Long Run
1	-1.14%	-0.79%	-0.99%	-0.79%	-1.32%	-1.08%	7.59%	8.13%	-1.17%	-1.1%	+0.34%
2	-0.59%	-0.4%	-0.51%	-0.4%	-0.68%	-0.55%	7.73%	8.0%	-0.6%	-0.56%	+0.18%
3	-0.32%	-0.22%	-0.27%	-0.22%	-0.37%	-0.29%	7.79%	7.93%	-0.32%	-0.3%	+0.1%
4	-0.87%	-0.6%	-0.68%	-0.6%	-0.98%	-0.82%	7.67%	8.07%	-0.79%	-0.84%	+0.27%
5	-0.57%	-0.38%	-0.4%	-0.38%	-0.63%	-0.52%	7.75%	7.99%	-0.37%	-0.53%	+0.17%

Note: Except for the unemployment rate, the figures in the table present the magnitude of the departure of the economic variable from their level when the post-withdrawal terms of trade are announced. The 'short run' refers to the first three months after the new trade arrangements come into force.

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