Brexit: A Sectoral Overview

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Key Messages

- Brexit-related challenges are likely to be felt by the Irish economy in the short, medium and long term:
  
  **Short term:** Uncertainty and exchange rate volatility.
  
  **Medium term:** Interim period of adjustment and lower GDP growth compared to a no-Brexit scenario.
  
  **Long term:** Trade relationship post-Brexit, sector-specific labour adjustments, lower potential output and GDP growth compared to a no-Brexit scenario.

- It is expected that the effects of Brexit, although still largely unknown, will have an impact on the bilateral trade flows between the UK and Ireland. ‘Trade preventing’ forces, e.g. increased transportation costs, additional regulatory burdens and longer lead times, may weigh heavily on ‘trade creating’ forces. These ‘trade creating’ forcing include; close proximity, historical ties and similar consumer preferences.

- The paper notes the following in relation to the performance of the UK and Irish economies at present:
  
  **UK Economy:** The weak level of economic growth, currently being experienced within the UK economy, is particularly pronounced when compared to UK GDP growth in 2014, before the UK referendum to leave the EU. Furthermore, the Pound Sterling has experienced a significant depreciation since the referendum to leave the EU.
  
  **Irish Economy:** Domestic and external economic forecasts and commentaries for the Irish economy point to strong prospects for the Irish economy from a broad perspective. However, forecasts reviewed for this paper note the adverse challenges that may arise due to externally driven risks, especially Brexit. The literature suggests that Brexit will have negative consequences for Irish growth, both in the short and long run, relative to a no-Brexit scenario.

- Additional non-tariff barriers have been deemed likely. Additional non-tariff barriers would have implications for a wide range of stakeholders including; exporting firms, transportation companies and the Government.

- A high level of uncertainty continues to exist in relation to a number of different Brexit-related challenges that may arise for the Irish economy. The paper notes that uncertainty has the potential to lead to negative implications for investment, employment and productivity.
There may also be positives for the Irish economy to leverage, especially in relation to investment opportunities. However, the negative impacts of Brexit are expected to outweigh the potential positive investment gains that may materialise over the coming years.

It is unclear at present if exchange rate volatility associated with Brexit represents a more permanent shift although, the Pound Sterling has remained 15 to 20 percent below its 2015 peak since Brexit. The depreciation of the Pound Sterling may have the potential to adversely affect the competitiveness of certain sectors, e.g. the Irish tourism and agri-food sectors, with implications for trade.

In light of Brexit, and in addition to the Brexit proofing measures announced in Budget 2017 and 2018, there may be a need to re-direct some existing State Agencies’ resources to support clients, firms and individuals to respond to Brexit-specific challenges within existing Exchequer Allocations. This would ensure an efficient response to Brexit through the continued sustainable management of public expenditure.

This paper suggests that some existing supports offered by State Agencies may help mitigate against some Brexit challenges, e.g. R&D and promotion of market. In addition, State Agencies have prioritised addressing Brexit issues by introducing a number of specific Brexit measures.

As part of the whole-of-Government response to Brexit, a number of measures were put in place in Budget 2017 and Budget 2018 to help firms deal with existing and potential Brexit-related challenges. Section 7.8 details Department of Agriculture, Food and the Marine (D/AFM), Department of Business, Enterprise and Innovation (D/BEI), D/AFM and D/BEI, Department of Foreign Affairs and Trade (D/FAT) and Department of Tourism, Transport and Sport (D/TTAS) Brexit proofing measures announced in Budget 2018.

In terms of trade, East-West implications are significant. Specifically, the UK remains a key market for the agri-food and some other domestic manufacturing firms. Given that East-West trade is crucial for the Irish agri-food sector, the sector will be heavily affected by Brexit. On the other hand, certain sectors of the economy, e.g. chemical and beverage sectors, are more internationally diversified and face less exposure relative to indigenous sectors of the economy.

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• Brexit has highlighted an ongoing pattern in Irish trade: a reliance on the UK landbridge for trade. Should any additional barriers to trade (tariff and non-tariff barrier costs) between the UK and EU come into effect post-Brexit, this will complicate trade using the UK landbridge.²

• This paper notes existing research highlighting the potential implications for Irish trade due to the reliance on the UK landbridge; (a) an ESRI working paper “Ireland’s international trade and transport connections” (2017) and (b) Bord Bia “Brexit Barometer: Industry Findings Report” (2017). Forthcoming research examining the UK landbridge question within an Irish context is being conducted by the Irish Maritime Development Office (IMDO) for the Department of Transport, Tourism and Sport (D/TTAS).

• Landbridge issues are expected to be higher for Irish owned SMEs, when compared to FDI located in Ireland.³ Many SMEs outsource transportation and logistics matters to external hauliers and freight forwarders⁴. Therefore, Irish SMEs may be unaware of the reliance on the UK landbridge for their export goods, especially when compared to large, FDI firms who are likely to be better positioned to track exposure to the UK landbridge.

• Brexit challenges may be more acute in regional areas of the Irish economy given the composition of employment in these regions and the reliance on the UK as a trading partner.⁵

• Although the depreciation of the Pound Sterling presents challenges for exporting SMEs, there may also be opportunities for some firms to benefit from this development in the short term. In particular, the weaker value of the Sterling translates into cheaper imports of goods and services used as part of firm’s intermediate production processes. This is especially relevant in light of the ESRI’s forecasted real annual import growth, which is expected to outpace export growth over the coming years.⁶

• In regard to Brexit vulnerability, some sectors are likely to be more sensitive to the negative implications of Brexit than others. This paper explores three exposed sectors flagged in Brexit literature; the Irish tourism, agri-food and domestic manufacturing sectors.

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² There are a wide range of implications that may arise in relation to the UK landbridge in addition to the transport of goods via the UK landbridge, e.g. possible Ro-Ro and Lo-Lo logistics costs, transit times for imports and exports whose origins and destinations are confined within an Ireland-NI-UK context.
⁵ Mogenroth, E. (2018) notes that “Brexit is likely to have regionally differentiated effects”.
Overall, given that the Brexit negotiations are still in progress it is impossible to forecast the true extent of the potential challenges the Irish economy may face. This uncertainty has been noted in most Brexit literature and reports, etc. reviewed for this paper. Furthermore, the literature, at time of publication, highlights that Ireland is likely to be worse off than a no-Brexit scenario.
Section 1: Methodology

1.1 Aim of Research
This paper seeks to provide a broad exploration of a number of Brexit-related challenges facing the Irish economy. In order to achieve this, the paper draws on a broad selection of Brexit-specific literature, reports and other documents from an Irish perspective. Additionally, some UK and EU Brexit-related literature sources are drawn upon in order to establish a knowledge base around some of the implications of Brexit that may arise for the Irish economy. By doing so, the paper aims to contribute to the analysis being undertaken on the implications of Brexit for the Irish economy, particularly given the country’s exposure and close proximity to the UK economy.

The paper aims to inform D/PER and other stakeholders about a number of key existing and potential Brexit issues:

- Short term challenges; (i) exchange rate volatility and (ii) uncertainty.
- Medium to long term challenges; (i) trade, (ii) employment, (iii) landbridge implications and (iv) regional issues.

Furthermore, the paper provides information in relation to some existing supports already in place to help mitigate against Brexit challenges. The paper presents the following:

- Supports for SMEs, in recognition of the significant Brexit exposure faced by some Irish SMEs.
- A selection of Government supports; (i) Government Department Brexit responses (ii) State Agency supports and (iii) Budget 2017 and Budget 2018 Brexit risk mitigating measures.

1.2 Data
The research for this paper was mainly desk-based, relying on a wide range of sources including a selection of Brexit-related academic literature, stakeholder reports, economic outlooks & forecasts for the Irish and UK economy and CSO statistics. A full data source description is provided in Appendix 1 of the paper.

1.3 Existing Brexit-related Literature
Brexit literature has explored a number of possible challenges, including the following areas:

- Potential trade arrangements
Tariffs and non-tariff barriers\footnote{This paper uses Lawless, M. and Edgar L.W. Morgenroth’s (2017) definition of non-tariff barriers; “any and all policies that restrict international trade flows apart from direct tariffs.”}

- Exchange rate fluctuations and uncertainty
- Estimated effects on output
- Sectoral issues (e.g. trade, employment)
- Implications for the Irish agri-food sector
- Landbridge challenges
- EU context

In addition, a number of economic outlooks and forecasting reports highlight the potential downside risks associated with Brexit. These challenges have been noted by domestic (e.g. Economic and Social Research Institute, Central Bank of Ireland and Department of Finance), external (e.g. International Monetary Fund, European Commission and Organisation for Economic Cooperation and Development) and UK (e.g. Bank of England inflation reports and Office of National Statistics) institutions. These economic outlooks point to positive prospects for the Irish economy from a broad perspective, however, all forecasts note the adverse challenges that may arise due to Brexit. Consequently, the Irish economy is likely to be worse off relative to a baseline where the UK remains within the EU.\footnote{See: Bergin, A., Garcia-Rodriguez, A., McInerney, N., Morgenroth, E. and D. Smith. (2016). Modelling the Medium to Long Term Potential Macroeconomic Impact of Brexit on Ireland. Working Paper No. 548. Dublin; Economic and Social Research Institute.}

### 1.4 Limitations

Some data constraints were encountered during the course of this qualitative research study.

Firstly, the latest available data at the time of writing each section was used to prepare this paper. As a result, there are time lags in terms of the employment, trade, region and sector statistics used throughout the paper. In an ideal situation, statistical information for the same year would be used throughout the paper. However, given the continuously changing economic landscape and the evolving nature of Brexit, this has not been possible.

Secondly, the reporting of statistics from varying timeframes led to challenges in relation to making like for like comparisons. By way of example, manufacturing information was not as readily available as information regarding the Irish agri-food sector, e.g. when analysing the export intensity of the sector. In addition, the figures reported in different papers varied in some cases, e.g. variations in
trade and employment statistics reported by different sources. Therefore, different statistical sources referenced in the paper may use different definitions and methodologies.

Finally, at the time of writing, robust statistics on the importance of the UK landbridge to the Irish economy are currently unavailable, although a recent ESRI paper seeks to estimate these\(^9\). The availability of more robust statistical data on the volume and value of goods exported and imported through the UK landbridge would have been beneficial for the preparation of this paper.

### 1.5 Structure of the Paper
The remainder of the paper is structured as follows:

- **Section 2** presents background information and outlines recent Brexit developments. Some of the potential implications associated with Brexit are discussed.
- **Section 3** provides context. The section explores Brexit through the Gravity Model for Trade and outlines some of the possible consumer and producer implications that may arise. The section concludes by detailing some of the key features of the UK and Irish economy at present.
- **Section 4** discusses some of the potential types of trade arrangements examined in existing Brexit-related literature. An outline of some of the possible non-tariff barrier costs that may arise is also provided.
- **Sections 5** describes some of the potential issues in relation to investment decisions, employment effects and implications on productivity.
- **Section 6** devotes attention to exploring exchange rate volatility issues in the context of Brexit.
- **Section 7** outlines existing supports in place to help firms facing Brexit-specific challenges.
- **Section 8** focuses on trade between Ireland and the UK.
- **Section 9** explores the potential landbridge challenges.
- **Section 10** looks at the regional challenges that may arise due to Brexit.
- **Section 11** explores sectors that are exposed to Brexit-related issues.
- **Section 12** offers concluding remarks, while mentioning some of the potential medium to long term implications of Brexit.
- References and an Appendix follow. Appendix 2 provides definitions for some of the terms referred to throughout the paper.

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Section 2: Introduction

2.1 Background

On the 23rd June 2016, the UK electorate voted to leave the European Union (EU). Existing literature and related publications suggest negative implications for the Irish economy arising from Brexit, when compared to a no-Brexit scenario. The Irish Fiscal Advisory Council (2017) has noted that “persistent downside risks are visible” within the medium term outlook for the Irish economy with Brexit identified as the most significant of the external risks.\(^\text{10}\) The extent to which the Irish economy will be affected will depend on the future shape of the relationship between the EU and the UK, the details of which will not be finalised until after the UK becomes a third country. In addition, a high degree of uncertainty will persist, pending the outcome of the EU-UK Brexit negotiations.

In light of the challenges highlighted in existing Brexit-related literature and reports, this paper seeks to provide an overview of some of the key implications of Brexit for the Irish economy. The paper aims to achieve this by reviewing a broad selection of academic Brexit-related literature, stakeholder reports and other Brexit-specific materials in order to broaden the knowledge base of all stakeholders on Brexit-related matters. The paper focuses on some of the key impacts that may arise for the goods sectors of the economy, particularly in light of the reliance of Ireland’s indigenous sectors on the UK economy, as well as employment in regional areas (outside Dublin) in these sectors, e.g. the Irish agri-food sector.\(^\text{11}\) The paper was prepared by the Department of Public Expenditure and Reform (D/PER), mainly during the latter half of 2017.

2.2 Brexit Developments

Figure 2.1 depicts the core issues that the Irish economy will face in the short and medium to long run, due to Brexit.

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\(^{11}\) A comprehensive exploration of the implications of Brexit on the Irish services sector is outside the scope of this paper. Some of the Brexit-related challenges for the services sector as a result of Brexit include; prolonging of investment decisions on foot of high levels of uncertainty, potential regulatory changes and issues concerning the movement of people between the UK and Ireland, for example.
2.3 Potential Implications

The potential implications of Brexit span across various Government Departments, as well as the wider economy. It is recognised that a ‘one size fits all approach’ will not adequately address the negative implications that the Irish economy now faces.

There are a number of key Brexit-specific considerations including a selection listed as follows:

- Challenges for specific Votes, e.g. D/AFM, D/BEI, D/FAT, D/TTAS and Office of the Revenue Commissioners.\(^\text{12}\)
- Regional challenges, especially for the agri-food and certain manufacturing sub-sectors.
- The relationship between the North and South, cross border EU funding.
- European level issues, e.g. potential future trade arrangements which are currently being negotiated at an EU level with the UK.

Furthermore there are implications for the economy more broadly:

- Employment, particularly within the SME sectors of the Irish economy.
- Trade considerations, especially for certain sub-sectors of the economy with a significant reliance on the UK market, e.g. beef and prepared consumer foods.\(^\text{13}\)
- Landbridge issues, with a significant proportion of Irish goods travelling through the UK land frontier.\(^\text{14}\)

In recognition of this, the Irish Government has adopted a whole-of-Government approach to addressing the challenges raised by the UK exit from the EU.

The Government of Ireland has outlined a number of key priorities as part of the response to Brexit. The four key priorities are; (i) minimising the impact on trade and the economy (ii) protecting the

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\(^{12}\) This list is not exhaustive, implications for other Votes are mentioned throughout the paper. In addition, as the true extent of the implications of Brexit become clear, specific challenges for other Vote sections may emerge.


Northern Ireland peace process (iii) maintaining the Common Travel Area (iv) influencing the future of the EU. In addition, five key mitigation strategies underpin the Government’s response to Brexit, as outlined as follows:

- To continue to manage the economy and the public finances prudently to enable the economy to meet future challenges;
- To negotiate effectively as part of the EU 27 with the objective of reaching an agreement that sees the closest possible relationship between the EU and the UK while also ensuring a strong and well-functioning EU;
- To continue supporting business and the economy through Government measures, programmes and strategies;
- To explore existing and possible future EU measures that could potentially assist Ireland in mitigating the effects of the UK’s withdrawal on specific Irish businesses and economic sectors while also, in the light of developments, making a strong case at EU level that the UK’s withdrawal represents a serious disturbance to the Irish economy overall and that we will require support;
- To maximise fully any economic opportunities arising from the UK’s decision to leave the EU.

The potential adverse impacts of Brexit go beyond the reach of D/PER. However, there are specific questions and implications for the economy and the use of public expenditure that D/PER needs to be informed about.

In light of this, the paper seeks to:

- Build an evidence base within the D/PER about the key issues facing the Irish economy on foot of Brexit.
- Provide material for Votes and other sections when engaging with Departments on their Brexit demands and allocations.
- Provide D/PER with information to assist in targeting Exchequer spending and other supports towards exposed sectors and regions of the economy, due to Brexit.
- This paper will also be fed into the wider evidence and research base informing the Government’s ongoing Brexit contingency planning, which is being taken forward through the cross-Departmental coordination structures chaired by the Department of Foreign Affairs and Trade.

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Section 3: Context

3.1 Introduction
This chapter seeks to contextualise the current state of both the Irish and UK economies against the backdrop of potential risks, particularly those which could arise from Brexit. The section also outlines the changing nature of the global economy and investigates some of the potential implications of Brexit as indicated by traditional trade theory.

Changing Patterns of Globalisation:
The 2015 US election and the UK’s decision to exit the European Union (EU) in 2016 demonstrate a changing geo-political and economic world landscape. Following a period of strong “job-rich” recovery after the global financial crisis, the International Monetary Fund (IMF) warn of “substantial, mainly externally-driven downside risks” for Ireland\(^\text{16}\). In particular, Brexit is expected to have particularly adverse effects for the Irish economy compared to other EU Member States\(^\text{17}\).

3.2 Brexit through the Gravity Model for Trade
The impact of Brexit can be seen through an international economics model known as the Gravity Model for Trade (see Appendix 2). This model helps to illustrate some of the existing and potential implications of Brexit on Irish economic activity, as discussed below.

According to this theory, there are a number of ‘trade creating’ and ‘trade preventing’ factors. It is expected that the effects of Brexit, although still largely unknown, will have an impact on the bilateral trade flows between the UK and Ireland. Therefore, ‘trade preventing’ forces, e.g. increased transportation costs, additional regulatory burdens and longer lead times, may weigh heavily on the ‘trade creating’ forces that exist between the UK and Ireland. These forces include close proximity, historical ties and similar consumer preferences, etc. As a result, there will be implications for a number of sectors of the Irish economy, including possible labour market adjustments in certain sectors.

\(^\text{16}\) IMF Country Report No. 17/171.
Figure 3.1: Features of a Gravity Model for Trade

![Diagram of a Gravity Model for Trade]

Source: Author’s own diagram based on economic literature.

Some of these effects may be seen through cautious behaviour by firms in regard to investment decisions, as suggested in some existing literature. The majority of the literature to date highlights that Brexit will have adverse consequences for Irish growth, both in the short and long run relative to what otherwise would have been the case (see Table 3.1). The extent to which the economy will be affected will depend on the trade arrangements that are implemented as well as key short term concerns in the form of exchange rate fluctuations and heightened uncertainty.

Table 3.1: Macroeconomic Impact of Brexit on Ireland after 10 years relative to the benchmark (remain) case

<table>
<thead>
<tr>
<th>Percent deviation from Baseline Level:</th>
<th>EEA</th>
<th>FTA</th>
<th>WTO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross value added at basic prices</td>
<td>-2.3</td>
<td>-2.7</td>
<td>-3.8</td>
</tr>
<tr>
<td>Gross value added at basic prices, Traded sector</td>
<td>-2.6</td>
<td>-3.0</td>
<td>-4.3</td>
</tr>
<tr>
<td>Gross value added at basic prices, Non-traded sector</td>
<td>-2.3</td>
<td>-2.7</td>
<td>-3.6</td>
</tr>
<tr>
<td>Exports of goods and services</td>
<td>-3.0</td>
<td>-3.5</td>
<td>-4.9</td>
</tr>
<tr>
<td>Personal consumption of goods and services</td>
<td>-2.2</td>
<td>-2.5</td>
<td>-3.4</td>
</tr>
<tr>
<td>Employed persons</td>
<td>-1.2</td>
<td>-1.4</td>
<td>-2.0</td>
</tr>
<tr>
<td>Average wage €</td>
<td>-2.2</td>
<td>-2.5</td>
<td>-3.6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Deviation from Baseline:</th>
<th>EEA</th>
<th>FTA</th>
<th>WTO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal Consumption Deflator, %</td>
<td>-0.2</td>
<td>-0.2</td>
<td>-0.3</td>
</tr>
<tr>
<td>GDP Deflator, %</td>
<td>-0.2</td>
<td>-0.2</td>
<td>-0.3</td>
</tr>
<tr>
<td>Personal savings rate, %</td>
<td>-0.3</td>
<td>-0.3</td>
<td>-0.5</td>
</tr>
<tr>
<td>Unemployment rate, %</td>
<td>1.2</td>
<td>1.4</td>
<td>1.9</td>
</tr>
<tr>
<td>General Government Balance, % GDP</td>
<td>-0.6</td>
<td>-0.8</td>
<td>-1.0</td>
</tr>
</tbody>
</table>


18 The ESRI’s Winter Economic Commentary 2017 notes that “the uncertainty surrounding Brexit may give rise to some hesitancy in committing capital” within indigenous sectors. More broadly, the Central Bank of Ireland’s analysis of trends in business investment (Q1 January 2014), notes that “uncertainty about the future can lead firms to over or under estimate future demand conditions”.
3.3 Potential Producer and Consumer Implications
In addition, welfare losses are likely for producers and consumers – leading to increased deadweight losses\textsuperscript{19}.

From a Producer Perspective:
- Higher costs arising from potential additional barriers to trade and pricing pressures may adversely affect profit margins, especially for SMEs operating in low profit sectors of the economy.

From a Consumer Standpoint:
- In the short term, the depreciation of the Pound Sterling is supporting “purchasing power through downward pressure on consumer prices”\textsuperscript{20}; i.e. reducing Irish consumer prices on UK imports.
- Brexit poses employment risks for certain sectors, especially indigenous SMEs operating within the agri-food and certain manufacturing sub-sectors\textsuperscript{21}.

Therefore, a key challenge will be to minimise these adverse effects on the Irish economy both in the short and medium to long run.

In light of this, the following section outlines the key economic features of the UK and Irish economy at present against the backdrop of Brexit challenges.

3.4 Overarching Features of the UK Economy at Present

Economic Growth:
The weak level of economic growth, currently being experienced within the UK economy (2017), is particularly pronounced when compared to UK quarterly GDP growth in 2014, before the British vote to leave the EU. By way of illustration, UK GDP quarter-on-quarter growth during 2014 ranged from 0.9 percent in Q1 2014 to 0.8 percent in Q4 2014. However, slower growth has been evident within the UK economy more recently with quarter-on-quarter GDP growth ranging from 0.3 percent in Q1 2017 to 0.5 percent in Q4 2017.\textsuperscript{22}

In addition, business investment growth was 0.5 percent in Q3 2017.\textsuperscript{23} This was significantly lower than the percentage investment growth in Q3 2015 (2.2 percent), prior to the UK referendum to exit

\textsuperscript{19} Deadweight loss is the reduction in consumer and producer surplus resulting from restricting output below its efficient level.
\textsuperscript{20} Central Bank of Ireland Quarterly Bulletin 04, October 2017.
the EU. Brexit-related uncertainty is likely to be a contributory factor to the low levels of business investment growth evident within the UK economy.

Exchange Rate:
The Pound Sterling has experienced a significant depreciation since the referendum to leave the EU was held on 23rd June 2016. The Pound Sterling was valued at 0.77 against the Euro on the date of the referendum, subsequently reaching 0.93 on 29th August 2017.24 The depreciation of the Pound Sterling means that the currency is between 15 to 20 percent below its 2015 level.25 Therefore, UK exports to Ireland and other Eurozone countries are cheaper than before the UK referendum to leave the EU given the fall in the value of the Pound Sterling vis-à-vis the Euro.

Trade:
The UK currently has a trade deficit in goods and services which widened over the first half of 2017, according to the Office for National Statistics.26 However, the UK’s total trade deficit in goods and services narrowed by £4.3bn between the three months to November 2016 and the same three month period in 2017.27

Prices:
The UK economy is experiencing high inflation (CPI inflation: 3 percent Sept. 2017), approximately 1 percent above the Bank of England (BoE) target rate28. The main drivers identified in the Bank of England inflation report (November 2017) were higher import costs and a “pickup” in energy prices, passing on to consumer prices. In contrast, average annual inflation in the Eurozone area was 1.4 percent in 2017.29

Investment:

“Business investment is projected to grow at a moderate pace but by less than would have been suggested by global demand and financial conditions alone, as uncertainty around Brexit weighs on companies’ plans.”30

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29 http://ec.europa.eu/eurostat/statistics-explained/index.php/Inflation_in_the_euro_area
Some firms, especially within the services sector of the UK economy, are seeking to establish new bases within the EU in order to ensure continued passporting rights (i.e. ability to sell into the European Single Market as regulations meet the same standards) to service their EU customers.  

**Employment:**

The UK labour market continues to perform strongly. The Office for National Statistics notes that, the employment rate was recorded at 75.1 percent for the period from August to October 2017 inclusive. This was higher than the percentage recorded for the period in 2016 (74.4 percent). In addition, the unemployment rate declined from August to October 2017 to 4.3 percent (representing a 0.5 percent decrease from the same period in 2016).

### 3.5 Overarching Features of the Irish Economy at Present

The broad economic prospects for the Irish economy are mainly positive overall. However, there is a consensus amongst all forecasters cited that there are potential downside risks and external challenges evident within the economy, most notably the potential adverse effects of Brexit.

**Economic Growth:**

The growth prospects for the Irish economy continue to remain positive, with all sources used in this section forecasting increased growth in 2017, albeit at lower rates than a no-Brexit scenario (ranging from the IMF forecast of real GDP annual percentage change in growth of 3.2 percent to the ESRI estimated real annual growth of 5 percent).

**Prices:**

Inflation has remained subdued (forecasted annual percentage change in CPI in 2017: 0.6 percent) but this is expected to increase, in the coming months as well as over a longer time horizon as the Irish economy experiences wage growth. Trends show that goods have contributed negatively to inflation growth, while services has had a positive effect on inflation within the Irish economy.

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31 For example Bank of America Merrill Lynch have announced they will establish their EU base in Dublin. See: Bank of Ireland (October 2017) Brexit – International Financial Services report, page 6.
35 ESRI Quarterly Economic Commentary Winter 2017.
Exchange Rates:

Euro/Pound bilateral exchange rate dynamics pose significant levels of risk for the Irish economy, in particular through trade implications, e.g. for indigenous goods sectors of the Irish economy. Decreases in demand, due to the depreciation of the £ vis-à-vis €, have implications for Irish exports and production.\textsuperscript{36} Sectors of the Irish economy which rely on exports to the UK market, e.g. the agri-food sector face increased pressure as a result of the depreciation of the Pound Sterling vis-à-vis the Euro.\textsuperscript{37} In addition, the weaker performance of the Pound Sterling vis-à-vis the Euro is affecting GB visitor numbers to Ireland at present (see section 11).

Trade:

Given that phase two of the negotiations between the UK and EU are in progress, the true extent of the potential implications for Ireland’s trade relationship with the UK have not emerged and cannot be fully quantified. A number of tariff and non-tariff barriers may arise and would be expected to put downward pressure on Irish exports. Depending on the outcome of the negotiation process, the trade dynamics (export and import flows, transportation and logistical issues, additional regulatory procedures and burdens, etc.) between Ireland and the UK may be significantly impacted. Yet despite the potential Brexit-related risks mentioned above, total goods exports to the UK increased by 11 percent (in value terms) between January and September 2017.\textsuperscript{38}

Investment:

Increased investment growth is forecast beyond 2017, supported by the Irish Government’s 10-year Capital Plan, with public capital investment spending expected to reach up to €8.1bn by 2021\textsuperscript{39}. In terms of private investment, residential construction is set to continue to grow significantly. The EC’s 2017 European Semester: Country Report for Ireland (February 2017) contains reference to the further increases in growth in light of “the large unmet demand” at present. However, the OECD state in their outlook for the Irish economy that caution is warranted given the current supply and demand conditions within the Irish construction sector. Their commentary warns of the potential consequences arising from “the sharp rise in prices and lending” and notes that “authorities should stand ready to tighten prudential regulations if needed”.\textsuperscript{40}

\textsuperscript{36} Department of Finance, Budget 2018 Economic and Fiscal Outlook.
\textsuperscript{37} This has been noted in Bord Bia’s Export Performance and Prospects report 2017 – 2018.
\textsuperscript{38} ESRI Quarterly Economic Commentary Winter 2017.
\textsuperscript{39} Department of Public Expenditure and Reform.
Employment:

The Irish economic recovery has been characterised by positive labour market developments to date. Employment increased by 2.2 percent in the year to Q3 2017, with more than 2.2m employed within the Irish economy at present. Whilst employment growth is projected to continue, growth will begin to moderate from annual percentage growth rates seen in recent years.\footnote{OECD (2017). Ireland – Economic Forecast Summary – June 2017.}
Section 4: Potential Trade Arrangements

4.1 Context
On 29th March 2017, the UK triggered Article 50 of the Treaty on European Union (EU) by formally notifying the Council of Europe of its intention to leave the EU. Following on from this, the UK Government is expected to formally leave the EU on 29th March 2019. There are two separate negotiation processes arising from this:

(a) The withdrawal negotiations and;
(b) The negotiations regarding the future relationship between the UK and the EU.42

On 8th December 2017, the EU and UK Government agreed “in principle”, on the following areas of the first stage of the negotiation process:

(a) Citizen’s rights (EU and UK citizens)
(b) Ireland and Northern Ireland
(c) The financial settlement

On 15th December 2017 at the European Council, Heads of State agreed that “sufficient progress” had been achieved in order to progress to the second phase of negotiations. The second phase will involve completing work on the outstanding withdrawal issues and negotiating a time-limited transition period based on the status quo. These outcomes will need to be given legal effect in the terms of the Withdrawal Agreement. In parallel, the EU and the UK will work to achieve political agreement on a framework for the future EU-UK relationship, which will be elaborated in a political declaration accompanying and referred to in the Withdrawal Agreement.

The detail of any future agreement can only be finalised and concluded once the UK is no longer a Member State of the EU. There are many questions in relation to the shape that this relationship might take and whether or not detailed negotiations can be concluded before the end of the envisaged transition period. The various terms cited by political actors such as ‘soft’ and ‘hard’ Brexit options only add to the uncertainty. Thus, there is a lack of clarity in regard to what each of these terms might mean and the exact implications that may accompany and flow from them.

4.2 Trade Arrangements Explored in Some Existing Brexit Literature
Existing literature43 highlights a number of potential trade alternatives that may be in place in a post-Brexit environment (Table 4.1). The possible trade arrangements are for illustrative purposes only and

do not seek to forecast the eventual trade arrangements that the UK and EU may agree upon. It is worth noting that some form of non-tariff barriers would apply under all of the potential types of trade arrangements outlined in this section.

<table>
<thead>
<tr>
<th>Trade Agreement Type</th>
<th>Features</th>
<th>Forecasted Economic Impact for Ireland$^{44}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>EEA &amp; EFTA E.g. Norway, Iceland, Liechtenstein type scenario.</td>
<td>Integrated in Single Market (SM) for most goods &amp; services. Excludes most agriculture &amp; fisheries products. Political sensitivities re: ‘Four Freedoms’ in particular, the “Free Movement of People” (FMP). UK would have no role in decision making re SM legislation. UK would make contributions to the EU Budget. UK could negotiate FTA with 3rd countries. Possibly high level of negative implications for the Irish agri-food sector.</td>
<td>Loss of GDP after 10 years: -2.3% (compared to a no Brexit scenario)</td>
</tr>
<tr>
<td>Bilateral Agreement with EU &amp; EFTA membership E.g. Switzerland type scenario.</td>
<td>UK would not be an EU member but would have to accept most SM rules &amp; make considerable contributions to the EU budget. Member of EFTA, including FMP. Access to EU for goods. Existing examples of this type of arrangement include tariffs and customs on agricultural products but some controls are waived. Services are excluded. Noteworthy within an Irish context given the services trade relationship between the UK and Ireland.</td>
<td>Economic impact not quantified in ESRI paper.</td>
</tr>
<tr>
<td>CU E.g. Turkey, Andorra &amp; Monaco.</td>
<td>CU with EU for non-agricultural products. Brexit presents a unique case. While Turkey is seeking to join the EU, the UK is currently undergoing a process to leave the EU. Based on current CU arrangements the UK would have to align trade-related legislation with the EU in certain situations, e.g. health &amp; safety. Under this type of trade scenario, the UK would be outside the SM, ECJ, and would not have to make EU budgetary contributions. Based on current CU arrangements, the UK would not be able to negotiate trade deals with 3rd countries.</td>
<td>Economic impact not quantified in ESRI paper.</td>
</tr>
<tr>
<td>FTA E.g. Canada.</td>
<td>‘A deep and comprehensive’ FTA type arrangement. Free but not frictionless trade. NTBs would remain, e.g. Rules of Origin checks. UK would not be required to allow FMP. UK would be free from much EU regulation and the ECJ. Considerable time to negotiate &amp; complete.</td>
<td>Loss of GDP after 10 years: -2.7% (compared to a no Brexit scenario)</td>
</tr>
<tr>
<td>WTO E.g. UK treated as a third country.</td>
<td>Although the UK is currently a member of the WTO, a revised agreement between the UK and WTO would have to be reached. Tariffs &amp; NTBs would apply. No preferential access for the Irish economy. UK exporters would face EU CET, while the UK would be able to set tariff levels for imports into their economy. Significant implications for a wide range of sectors in the Irish economy.</td>
<td>Loss of GDP after 10 years: -3.8% (compared to a no Brexit scenario)</td>
</tr>
</tbody>
</table>

• Considered worst case scenario compared to other 4 types of trade arrangements described in this table.

Source: Author’s table based on a selection of existing Brexit literature. Possible trade scenarios outlined in Table 4.1 are based on current arrangements between the EU & other partners. Abbreviations referenced in table are described in the section that follows.

The possible trade arrangements outlined in this section are for illustrative purposes only and do not seek to forecast the eventual trade arrangements that the UK and EU may agree upon. Customs administrative procedures would apply under each of the potential scenarios outlined in Table 4.1. Based on existing trade agreements, customs declarations would be required irrespective of any customs or regulatory controls that may apply. Only strict adherence to the rules of the Single Market would lessen the requirements for regulatory controls. Five potential illustrative scenarios, which have been documented within some of the existing economic literature, are explored below:

a) European Economic Area Agreement (EEA) & European Free Trade Agreement (EFTA):

E.g. Norway\(^45\), Iceland & Liechtenstein

Under an EEA style arrangement, the UK would be integrated into the Single Market for most goods and services, excluding agricultural and fisheries. In an EEA context, the UK would have no role in the decision making process on Single Market legislation but would make contributions to the EU budget. These contributions could be similar in magnitude to what the UK currently contributes within the EU on a per person basis.\(^46\)

It should be noted that, most trade in agricultural products is not covered by the EEA agreement\(^47\). Apart from a no-Brexit scenario, this type of option would cause the least disruption to trade, compared to some of the other scenarios outlined in this section, as the UK would be bound by the EU ‘four freedoms’; the movement of goods, services, people and capital.

Furthermore, the UK would be free to negotiate free trade agreements with third countries under this scenario.\(^48\) This would have the potential to adversely affect a number of export orientated sectors, i.e. potentially increased levels of competition from third countries, which would likely have notable implications for the Irish agri-food sector.\(^49\) As an example, the UK may source greater volumes of beef from third countries like Brazil or Argentina who are well known on a global stage for their cheap beef production. If Irish beef farmers were to be displaced in the high priced beef market, this would have


\(^{46}\) The Economist. (Jul 22, 2017). The Six Flavours of Brexit.

\(^{47}\) [http://www.efta.int/eea/policy-areas/goods/agriculture-fish-food/alternative-products](http://www.efta.int/eea/policy-areas/goods/agriculture-fish-food/alternative-products)


\(^{49}\) Increased competition is one of many potential issues such as, food standards, animal welfare, quality etc.
severe ramifications for the sector given that approximately fifty one percent of total beef exports are destined for the UK.\textsuperscript{50}

b) Bilateral Agreement with EU & EFTA Membership:

E.g. Switzerland

Under a Swiss style trade arrangement, the UK would not be in the Single Market but would instead be a member of the European Free Trade Association (EFTA). Current EFTA membership also requires that the free movement of people be observed. This type of arrangement provides special access to the EU market for goods which third countries cannot avail of but similarly to an EEA arrangement, existing examples of such agreement do not cover all agricultural products. Under the current trade arrangement between Switzerland and the EU, Switzerland makes a financial contribution to economic and social cohesion in the EU.\textsuperscript{51}

Agricultural products are excluded from this type of trade arrangement. Trade in agricultural products under a Swiss style arrangement, is subject to full tariffs and customs checks with some waivers. In addition, services are excluded. This is important for Ireland as the UK represents one of the only countries Ireland has a net service surplus with. Irish exports of services to the UK exceeded imports in 2016 leading to a net surplus in services to the UK economy, as illustrated by the following table\textsuperscript{52}:

\begin{table}[h]
\centering
\begin{tabular}{|c|c|c|c|}
\hline
 & UK (£m) & & \\
\hline
2016 & 22,496 & 11,841 & 10,656 \\
\hline
\end{tabular}
\caption{Table 4.2: Irish Net Service Surplus with the UK (£m)}
\end{table}


c) Customs Union (CU):

E.g. Turkey, Andorra & Monaco

The countries mentioned above have formed a CU with the EU for non-agricultural goods. Turkey for example, joined the CU with the aim of eventually acquiring full membership of the EU.\textsuperscript{53} Should the UK decide to favour this type of trade arrangement, the situation would be different given that the UK are leaving the EU while Turkey seeks to become a member.

Based on current CU arrangements between the EU and other countries, the UK would have to align trade-related legislation with the EU in certain situations, e.g. for health and safety. Furthermore,\textsuperscript{50} Bord Bia (2018). Export Performance and Prospects 2017-2018 report.
\textsuperscript{51} http://ec.europa.eu/trade/policy/countries-and-regions/countries/switzerland/
\textsuperscript{53} Under the existing Customs Union between the EU and Turkey, Turkey must abide by EU customs law and must employ the same external tariffs as the EU.
within a CU the UK would be outside the Single Market, European Court of Justice (ECJ)\(^{54}\) and would not have to make EU budgetary contributions.

Under existing examples of this type of trade arrangement (for instance the CU between the EU and Turkey), Turkey is prevented from making bilateral trade deals. In addition, Turkey must negotiate reciprocity with any third country with which the EU forms a trade arrangement with. This trade restriction would be in exchange for trade in goods with the EU, however, proof of origin is still required and customs declarations must be made. This would lessen the potential negative effects on some of Ireland’s export sectors who would face greater competition on a world scale if the UK were allowed to negotiate deals with third countries.

d) Bilateral Free Trade Agreement (FTA):
   E.g. Canada\(^{55}\)

This style of arrangement would likely involve putting together ‘a deep and comprehensive’ FTA. Although this type of trade arrangement would not allow for complete free trade, FTA typically reduce tariffs on most goods. Moreover, FTA type trade arrangements do not allow for frictionless trade, e.g. in relation to Rules of Origin checks. The EU’s new FTA with Canada (the EU-Canada Comprehensive Economic and Trade Agreement (CETA)) is now provisionally in place and will lead to increased trade flows between Canada and the EU. Under a hard Brexit type scenario, a similar trade agreement may represent a potential trade arrangement between the EU and UK.

In addition like a CU, the UK would not have to allow the free movement of people and would be free from much EU regulations and the ECJ. FTAs do take considerable time to negotiate and complete which may act as a disincentive to the UK of pursuing this style of option, especially since the UK export more to EU markets rather than non-EU countries at present. Thus, if a FTA option was favoured it is possible that there would be a lengthy transitional period based on the timeframe that it takes to complete FTAs at present. However, in light of the continuing presence of uncertainty and the close relationship between the UK and EU it is currently difficult to predict how long it would take to agree a FTA between the EU and UK.

e) World Trade Organisation (WTO):

Most Favoured Nation (MFN) Tariffs apply under this arrangement.

\(^{54}\) The CU arbitration panel with Turkey is, however, bound by rulings from the ECJ on matters relating to EU law.

\(^{55}\) The European Parliament voted in favour of the EU-Canada Comprehensive Economic and Trade Agreement (CETA). The trade agreement (CETA) provisionally entered into force on 21 September 2017. National Parliaments (and in some cases regional parliaments) will now need to approve CETA before it can take full effect. See: http://ec.europa.eu/trade/policy/in-focus/ceta/
The UK is already a member of the WTO through the EU. However, revised membership would need to be agreed upon after the conclusion of the Brexit negotiation process. Under a WTO scenario, tariff and non-tariff barriers would apply and there would be no preferential access granted under this type of arrangement. UK exporters would face EU Common External Tariffs while the UK would set tariff levels for imports into their economy. When compared to the other trade arrangements listed above, this would have substantial implications for a wide-range of sectors of the Irish economy and is considered a worst case outcome (i.e. no deal is reached as part of the formal two year negotiation process).

An alternative viewpoint on the implications of WTO tariffs on cross-border trade has been provided by InterTradeIreland. The paper describes three potential trade scenarios involving WTO arrangements that may arise (Table 4.3).

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Type of Arrangement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>WTO tariffs</td>
</tr>
<tr>
<td>2</td>
<td>WTO tariffs + 0.25*(World Bank NTBs)</td>
</tr>
<tr>
<td>3</td>
<td>WTO tariffs + 0.25*(World Bank NTBs) + 10% change in exchange rate</td>
</tr>
</tbody>
</table>


Table 4.4 displays InterTradeIreland’s analysis of the potential worst case scenarios that may arise should WTO rules apply after the Brexit negotiation process concludes, as documented within the InterTradeIreland report. The 8% decline in trade between Ireland and GB under scenario 1 is at an aggregate level and there are likely to be different effects at a sectoral and product level, such as within Ireland’s agri-food sector, e.g. the InterTradeIreland report estimates that meat and fish exports from Ireland to GB could decrease by 36% under scenario 1.

Table 4.4: Implications for Trade under Three Worst Case WTO Scenarios suggested by InterTradeIreland

<table>
<thead>
<tr>
<th></th>
<th>Ireland to GB</th>
<th>GB to Ireland</th>
<th>Ireland to NI</th>
<th>NI to Ireland</th>
<th>Total Cross-Border</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016 Trade (millions)</td>
<td>13,400</td>
<td>15,600</td>
<td>1,646</td>
<td>1,050</td>
<td>2,606</td>
</tr>
<tr>
<td>Percentage Change</td>
<td>-8%</td>
<td>-3%</td>
<td>-8%</td>
<td>-11%</td>
<td>-9%</td>
</tr>
<tr>
<td></td>
<td>-12%</td>
<td>-6%</td>
<td>-14%</td>
<td>-19%</td>
<td>-16%</td>
</tr>
<tr>
<td></td>
<td>-20%</td>
<td>+0.3%</td>
<td>-21%</td>
<td>-11%</td>
<td>-17%</td>
</tr>
<tr>
<td>Change in € millions</td>
<td>-1,016</td>
<td>-486</td>
<td>-132</td>
<td>-115</td>
<td>-247</td>
</tr>
<tr>
<td></td>
<td>-1,803</td>
<td>-996</td>
<td>-200</td>
<td>-200</td>
<td>-430</td>
</tr>
<tr>
<td></td>
<td>-2,872</td>
<td>47</td>
<td>-348</td>
<td>-118</td>
<td>-461</td>
</tr>
</tbody>
</table>


56 NTB: Non-tariff barriers
57 It should be noted that the percentage impact on NTB associated with Brexit could vary significantly from the estimates reported in the InterTradeIreland (2017) study, particularly in the event of a ‘disorderly Brexit’.
While the cross-border trade implications outlined in Table 4.4 may occur, the potential impacts of Brexit on trade to/from GB to Ireland are likely to be much larger (due to larger trade volumes and values). A number of points relating to North South trade are outlined below:

- Trade between the North and South of Ireland has decreased as a percentage of overall trade levels. Goods exports and imports to/from NI decreased from €1,744m in 2015 to €1,649m in 2016. However, given that the population of NI makes up less than three percent of the UK total, this volume of trade underlines the closeness of the economic ties between the two jurisdictions.

- The North has a higher reliance on the South of Ireland than the South has on the North in terms of trade.

- Given the volume of trade conducted between the South of Ireland and NI at present, the proportional impact on the Irish economy overall is expected to be small when viewed as a proportion of overall trade with the UK.

  - However, given the high levels of employment in the agri-food sector in border regions (see section 12.3), there are likely to be region specific implications. Furthermore, supply chain links are also a major element of cross-border trade.

  - In addition, any disruption to current access arrangements or to movements between Ireland and NI would likely have major implications for Irish operators and businesses, especially in relation to the transportation of goods. According to the D/TTAS, in relation to NI, there are 11 national roads that cross the Irish/NI border on which there were 2 million HGV crossings and 2.6 million Light Commercial vehicle crossings in 2016.

  - Furthermore, scenario 3 includes a 10 percent fall in the value of the Pound Sterling. Given the short term nature of specific episodes of exchange rate volatility and the ever-presence of fluctuations, caution should be exerted when interpreting these results.

The InterTradeIreland paper itself recognises this by stating that the effect of exchange rate volatility is unlikely to fully pass through into prices if the fluctuations are short term in nature. In addition, the paper states that scenario 3 would only be a challenge if the exchange rates were to persist “for a

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59 DTTAS (2017).
considerable period”. Given the uncertain nature of economic activity and a constantly changing world economic outlook, caution should be exerted when interpreting the results of InterTradeIreland’s report. In particular, scenario 3 which makes specific reference to a specific 10 percent fall on the 2016 average Pound Sterling v Euro exchange rate to €1=90p.

4.3 Potential Challenges for Sectors under a WTO Scenario
The following are two illustrative examples of sectors that would face adverse consequences if a WTO hard Brexit scenario became a reality.

It must be noted though, that a WTO type arrangement would have wider economic implications than just the logistical effects in terms of the transportation of goods and services and the adverse impacts on the Irish agri-food sector highlighted in this section.

(a) Methods of Transportation;
(b) Agri-food.

(a) Methods of Transportation:

Core modes of transportation are as follows:

![Figure 4.1: Main Transportation Methods]

Source: Author’s own spider diagram

A WTO scenario would pose a number of significant challenges for the transport sector, which in the absence of alternative arrangements would have adverse implications for the sector in Ireland. In particular, the aviation transport sector would face negative consequences as existing traffic rights between Ireland and the UK and between the UK and the rest of the EU would cease in the absence of alternative arrangements being put in place. There are no traffic rights or permissions under WTO rules.

The transport sector would suffer severe implications under a WTO trade arrangement for a number of reasons such as:
(i) Disruption costs pending alternative arrangements being put in place.

(ii) Finding solutions to export to mainland Europe and non-EU countries, i.e. the landbridge issue.

Figure 4.2: Key Implications for the Transport Sector under WTO Trade Arrangements

Source: Author’s own diagram. The diagram is not intended to be exhaustive in nature, but instead to highlight two of the possible negative effects of Brexit on the transport sector.

(i) Disruption Costs Pending Alternative Arrangements Being Put in Place:

In the absence of a formal agreement being reached, the potential implications for Ireland’s aviation transport sector could be significant. Trade in international air services occurs outside the WTO under the International Civil Aviation Organisation (ICAO)\(^\text{60}\) on a bilateral basis between countries. Thus, a new EU-UK aviation arrangement or bilateral aviation agreements separately by the UK with each EU Member State would need to be agreed, potentially leading to additional trade costs. Thus, should no deal be reached, market access issues represent the greatest medium to long term aviation risk for Ireland, the UK and the EU overall. This could pose challenges for areas such as: the aviation sector, including aviation leasing and aircraft registration\(^\text{61}\), business travel, the tourism sector, high value goods exports and imports and public infrastructure, e.g. port capacity, roads, etc.

(ii) The Landbridge Issue:

Chapter 9 deals explicitly with landbridge issues that may arise for the Irish economy due to Brexit. The chapter refers to the ESRI’s recent working paper which devotes attention to exploring the

\(^\text{60}\) According to the ICAO website their mission is: “To serve as the global forum of States for international civil aviation. ICAO develops policies and standards, undertakes compliance audits, performs studies and analyses, provides assistance and builds aviation capacity through many other activities and the cooperation of its Member States and stakeholders.”

\(^\text{61}\) See: Central Bank of Ireland Quarterly Bulletin 1 (January 2017) for overview of aircraft leasing in Ireland. However, it should be noted that the main challenges for the Irish aircraft leasing sector, identified in section 6.2 of the bulletin, are non-Brexit related.
landbridge challenge. In addition, the survey findings from Bord Bia’s Brexit Barometer 2017 report are also discussed. Given Ireland’s reliance on the UK landbridge for trade, customs procedures, regulatory requirements and questions in relation to driving licences and permits, etc. are challenges that will need to be addressed under any Brexit scenario.

(b) Agri-food:

Should a no-deal situation prevail, there will be a significant increase in barriers to trade through tariff and non-tariff measures\(^62\). These negative effects will be particularly pronounced for the agri-food sector. Given the integrated nature of cross-border supply chains, negative implications for the agri-food sector are likely under any post-Brexit trade scenario, particularly with the imposition of customs and regulatory requirements. The negative consequences would be more so under a WTO style trade arrangement, where the UK would be outside the Single Market and Customs Union. According to the WTO Trade Policy Review\(^63\) there are several reasons why agricultural tariffs are particularly noteworthy (Figure 4.3).

![Figure 4.3: Features of WTO Agricultural Tariffs](source: WTO (May, 2017). Trade Policy Review.)

Table 4.5 which follows shows the EU’s Applied MFN Tariffs for agricultural products. A key tariff category within is dairy products, of particular interest to Ireland given the sector’s strong performance in recent years. The dairy sector represents the most profitable farm system type within an Irish context and the re-introduction of tariffs would adversely affect the sector’s exports to the UK, with a quarter of all dairy exports from Ireland in 2016 destined for this market\(^64\). The sector would

\(^{62}\) See: Matthews, A. (2015), InterTradeIreland (2017), etc.


\(^{64}\) http://www.bordbiavantage.ie/market-information/sector-overviews/dairy/
face several issues, such as timing challenges like the perishability of certain dairy products, e.g. yogurt. Moreover, there would likely be a number of key obstacles in relation to dealing with higher costs due to the potential imposition of tariffs and other non-tariff barriers, along with the necessity to exploit other markets and diversify some export risk to other external markets.

Table 4.5: The EU’s Applied MFN Tariff Summary for Agricultural Products (2016)\textsuperscript{65}

<table>
<thead>
<tr>
<th>Number of lines</th>
<th>Simple average (%)</th>
<th>Tariff range (%)</th>
<th>SD\textsuperscript{a}</th>
<th>Share of duty-free lines (%)</th>
<th>Share of non-ad valorem tariffs (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>9,414</td>
<td>6.3</td>
<td>0-695.5\textsuperscript{b}</td>
<td>12.1</td>
<td>26.1</td>
</tr>
<tr>
<td>HS 01-24</td>
<td>2,456</td>
<td>14.2</td>
<td>0-695.5\textsuperscript{b}</td>
<td>21.7</td>
<td>15.3</td>
</tr>
<tr>
<td>HS 25-97</td>
<td>6,958</td>
<td>3.7</td>
<td>0-35.6</td>
<td>3.7</td>
<td>30.0</td>
</tr>
<tr>
<td>By WTO category</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WTO agricultural products</td>
<td>2,075</td>
<td>14.1</td>
<td>0-695.5\textsuperscript{b}</td>
<td>23.7</td>
<td>19.1</td>
</tr>
<tr>
<td>Animals and products thereof</td>
<td>351</td>
<td>19.4</td>
<td>0-132.5</td>
<td>21.3</td>
<td>15.1</td>
</tr>
<tr>
<td>Dairy products</td>
<td>151</td>
<td>35.6</td>
<td>2.8-695.5\textsuperscript{b}</td>
<td>65.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Fruit, vegetables, and plants</td>
<td>508</td>
<td>13.0</td>
<td>0-169.9</td>
<td>13.9</td>
<td>11.8</td>
</tr>
<tr>
<td>Coffee, tea, and cocoa and cocoa preparations</td>
<td>47</td>
<td>11.3</td>
<td>0-18.7</td>
<td>6.7</td>
<td>14.9</td>
</tr>
<tr>
<td>Cereals and preparations</td>
<td>230</td>
<td>14.9</td>
<td>0-76.9</td>
<td>11.9</td>
<td>8.7</td>
</tr>
<tr>
<td>Oilseeds, fats, oil and their products</td>
<td>174</td>
<td>6.0</td>
<td>0-103.5</td>
<td>10.4</td>
<td>35.6</td>
</tr>
<tr>
<td>Sugars and confectionery</td>
<td>44</td>
<td>26.8</td>
<td>0-172.7</td>
<td>37.5</td>
<td>4.5</td>
</tr>
<tr>
<td>Beverages, spirits and tobacco</td>
<td>305</td>
<td>12.8</td>
<td>0-76.8</td>
<td>15.9</td>
<td>18.0</td>
</tr>
<tr>
<td>Cotton</td>
<td>6</td>
<td>0.0</td>
<td>0-0</td>
<td>0.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Other agricultural products, n.e.s.</td>
<td>259</td>
<td>5.8</td>
<td>0-168.7</td>
<td>16.0</td>
<td>51.0</td>
</tr>
</tbody>
</table>

Source: Extract from WTO EU Trade Policy Review (2017). Table 4.5 data is presented at an aggregated level. Tariffs are applied at 8 digit level on specific products.

\textsuperscript{a} Standard Deviation.

\textsuperscript{b} The tariff peak was calculated by the WTO on a tariff line for which imports in 2015 were 0.1 tonnes. The next tariff peak in the dairy sector was 187.2 percent.

\textsuperscript{65} According to the WTO definition: Tariff lines refer to a product as defined in lists of tariff rates. Products can be subdivided, the level of detail reflected in the number of digits in the Harmonized System (HS) code use to identify the product. Ad Valorem is charged as a percentage of the value of goods being shipped.
4.4 Non-tariff Barrier Costs

Aside from a no-Brexit scenario, additional non-tariff barrier costs have been deemed likely. A selection of some of the potential implications for stakeholders of additional non-tariff barrier costs that may arise are illustrated in Figure 4.4 below.

Figure 4.4: A Selection of Potential Implications for Stakeholders in Relation to Possible Increased Non-tariff Barriers due to Brexit

Source: Author’s illustrative diagram, drawing on Davis, J. et al. (2017), Grainger (2014) and other information gathered in relation to non-tariff barrier costs.

Research by the UK “Agri-Food and Biosciences Institute (2017)” suggests that these costs could range between 5 – 8 percent for the UK. Similarly, increased non-tariff barrier costs would likely arise for the Irish economy, especially within a hard Brexit environment. Davis et al. (2017) indicates that there will be higher trade facilitation costs for the UK under three alternative scenarios. The three trade situations modelled in the paper are as follows:

a) Bespoke FTA with the EU
b) WTO
c) Unilateral Trade Liberalisation

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67 Davis, J., Feng, S., and Patton, M. (2017) assume that “trade facilitation costs” associated with the three trade scenarios outlined in the paper, are caused by increased administrative costs (e.g. RoO checks, etc.) rather than NTBs more broadly.
Implications for Irish Exporters:

Additional non-tariff barrier costs would likely have implications for all exports from Ireland to the UK, other EU Member States and third countries, if goods are exported via the UK. For instance, increased time may be required to get products to market due to potential additional administration requirements and inspections. Given the nature of agri-food products (e.g. animal welfare, perishability of goods, etc.), significant adverse implications may arise should additional time delays be incurred along the supply chain and logistics process. In addition, higher costs borne by exporters would be expected to translate into higher prices paid by the consumer. As a result, Irish exporting firm’s competitiveness (particularly within the SME sector) to the UK market may be affected, which may be compounded by additional inflows to the UK from third countries who can supply at lower prices.
Section 5: Investment Decisions, Employment Effects and Output Growth

5.1 Background

A previously stated, significant Brexit-related uncertainty continues to exist in relation to a number of different Brexit-specific challenges that may arise for the Irish economy. For instance, the form of the EU-UK trade relationship post-Brexit, supply chain and other logistics management matters, issues in relation to firms’ ability to assess Brexit risks (and associated knowledge gaps)\(^{68}\), along with potential sectoral and regional implications. The three main negative channels of uncertainty discussed in this section are: prolonged investment decisions, delayed hiring and lower productivity growth.\(^{69}\)

5.2 Prolonged Investment Decisions

The postponement of investment decisions may arise as investors become more risk averse or the risk premium associated with investment choices rises. Consequently, in order to avoid sunk costs such as feasibility studies and R&D related expenditures, firms wait until the impact of the uncertain outcomes become more apparent\(^{70}\). This leads to total factor productivity shocks, causing business cycles\(^ {71}\).

Given Ireland’s reliance on foreign direct investment (FDI), uncertainty arising from Brexit has the potential to both deter inward investment away from Ireland and attract FDI as the UK economy is

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\(^{68}\) See: chapter 9 for an example of SME knowledge gaps in relation to the outsourcing of logistics requirements when exporting goods to external markets.


facing even greater uncertainty. However, the ESRI have noted that “the expected additional attractiveness of Ireland to FDI projects is likely to be small”.72

The deferral of investment decisions presents obstacles for the Irish economy to overcome. Declines in the level of investment from 2008 onwards (Figure 5.2), during the economic downturn, mean that the economy currently faces capital investment shortfalls, particularly within certain sectors. The Review of the Capital Plan 2016 – 202173, identifies a number of these specific priority areas for increased public investment including; “transport, communications/connectivity, housing, education, energy, health, water & wastewater, flood defences and agriculture”. The prioritisation of additional investment within specifically targeted sectors should help to address some of the challenges associated with lower capital accumulation experienced during the economic recovery. Furthermore, measures to increase the economy’s infrastructural capacity will likely strengthen the economy’s response to Brexit-related challenges.

Figure 5.2: Total Gross Domestic Fixed Capital Formation in the Irish Economy, €m74

Source: CSO Statbank (2017)

To this end, the Government are committed to promoting and supporting infrastructural development within the economy and this is reflected in the Capital Investment Plan 2016 to 2021. Under this


73 Focused on public expenditure on GFCF

74 See http://www.cso.ie/indicators/default.aspx?id=7NOQ33C for definition of GFCF.
investment stimulus, state funding totalling €42bn has been committed over the duration of the Plan\textsuperscript{75}. The Government’s Mid-Term Review of the Capital Plan 2016 – 2021 (August 2017) builds on the Capital Investment Plan 2016 - 2021. Furthermore, the D/PER’s publication of outcomes of the Mid-Term Capital Review has identified Business, Enterprise and Innovation as a key priority in terms of public capital investment. In particular, the Department notes that public investment can act as a mechanism to “strengthen the economy’s resilience to major risks such as Brexit”.\textsuperscript{76} The key themes identified in the review of the Capital Plan, including Brexit, will also inform the forthcoming publication of the Government’s longer term National Development Plan.

5.3 Delayed Hiring

Bloom (2014) refers to the ‘pausing of hiring’ which occurs as uncertainty levels increase. This is a key consideration when reflecting on the impact that Brexit may have on Irish employment, particularly where firms have an exposure to the UK market. The paper argues that halted investment and labour decisions lead to ‘labour attrition and capital depreciation’. Thus, the effects arising from uncertainty have the potential to be significant, especially for exposed indigenous sectors of the economy which are often both labour and capital intensive in nature.

Uncertainty arising from the UK withdrawal from the EU has the potential to delay the hiring of new workers, especially given that the UK-EU negotiations are currently in progress. Firms become more cautious as the level of risk associated with hiring new workers rises. This leads to a decrease in hiring until uncertainty dissipates. Bloom graphically represents this below as inaction causing an outward shift where cautious behaviour by firms causes them to delay expansion of their workforces (Figure 5.3).


\textsuperscript{76} Following on from the Mid Term Review of the Capital Plan, DBEI has been allocated an additional €310m in capital expenditure between 2018 and 2021. The majority of the additional capital will be used to deliver on the Government’s target to deliver an additional 200,000 jobs during the period, including 135,000 in regional areas. One of the three key priority areas to achieve this is to “provide transformational supports for indigenous enterprise to respond to Brexit challenges”.

36
Given the large number of small enterprises operating within the agri-food and certain manufacturing sectors of the Irish economy, Brexit-focused uncertainty has the potential to result in decreased hiring intentions in exposed sectors. Analysis by the Department of Finance (DoF) (2017) shows that the food and beverage and the materials manufacturing sectors have a very high share of employment outside of Dublin. Delayed hiring of workers in these sectors may pose challenges for the economy in achieving a balance of regional development as set out in the National Planning Framework.


5.4 Effect on Output

Bloom (2014) also notes that uncertain times are accompanied by lower growth rates in output. Bloom models the impact of uncertainty using a Dynamic Stochastic General Equilibrium (DSGE) model and finds that shocks to productivity are potentially large when uncertainty in the economy is high. This has been echoed by the ESRI who have recognised the effect of Brexit on potential output growth in the coming years. Lower output growth is likely to be felt most strongly within the traded sectors, with lower capital accumulation and higher labour market adjustments than would otherwise have been the case if the UK remained within the EU.

Despite the presence of uncertainty, Ireland represents an attractive location for FDI seeking to establish an EU base following Brexit. There may be opportunities for Ireland to attract FDI that might have otherwise been destined for the UK if Brexit did not occur. This has been demonstrated by a number of recent announcements in relation to possible Brexit-related re-locations. However, any potential gains are likely to be small when compared to the negative implications of Brexit on the Irish economy.

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79 According to Eurostat, NACE codes are “the statistical classification of economic activity in the European Community”.
80 DSGE models are the benchmark tool used in macroeconomic analysis. The dynamic component relates to time, decisions today depend on expectation relating to the future. The Stochastic element is seen through business cycles. Finally the General Equilibrium aspect refers to simultaneous determination of endogenous variables, markets clearing, and Walras law. See Appendix X for a longer description.
Section 6: Exchange Rate Volatility

6.1 Brexit - Short Term Shocks

One of the potential and perhaps more visible challenges, which has been modelled as a possible short term impact of Brexit is fluctuations in exchange rates.\(^84\) The Irish economy has experienced exchange rate volatility during periods of economic and political uncertainty in the past. This section discusses the potential effects of exchange rate volatility as identified in some of the current Brexit literature.\(^85\)

6.2 Lessons from the Global Recession

"The shocks that produced the recession were primarily associated with financial disruptions and heightened uncertainty"  
Stock and Watson (2012)

Heightened uncertainty and exchange rate fluctuations were common features present in the world economy during the economic downturn (2008 onwards). Ireland was in a stronger position than most to mitigate the trade implications of these shocks due to the stronger position of the Euro vis-à-vis the currency of Ireland’s main trading partners which supported export growth during the downturn and subsequent recovery. It is unclear at this stage if exchange rate volatility associated with Brexit represents a more permanent level shift although, as noted in section 3, the Pound Sterling has remained 15 to 20 percent below its 2015 peak since Brexit.\(^86\)

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\(^84\) For instance, Baker et al. 2016.
\(^85\) For example; Baker, J., Carreras, O., Ebell, M., Hurst, I., Kirby, S., Meaning, J. Piggott, R., and J. Warren. (2016). The Short-Term Economic Impact of Leaving the EU. London; National Institute of Economic and Social Research.
6.3 Exchange Rate Volatility

**Figure 6.2: Potential Issues Arising from Exchange Rate Volatility**

The depreciation of the Pound Sterling vis-à-vis the Euro may lead to challenges for the Irish economy, for instance competitiveness issues and implications for Ireland’s trade with the UK. An illustration of how exchange rate volatility may pose challenges for the Irish economy is presented as follows.

**Competitiveness:** the depreciation of the Pound Sterling against the Euro means that it is now more expensive for UK residents to travel to Ireland. The decline in visitor numbers from GB to Ireland since the referendum represents an adverse short term impact of Brexit on the Irish tourism sector.
Implications for Trade: Exchange rate volatility has already had implications for certain indigenous sub-sectors of the Irish economy. This has been noted by Bord Bia (2018), with the report stating that “euro exchange rates remained strong against sterling impacting adversely on Irish exports to the UK”.

6.4 Characteristics of Exporting Irish SMEs

Hedging:

Hedging against currency risk does not seem to be a feature of many Irish SME exporting firms. A key contributing factor to this is the small scale of many indigenous Irish exporters who have no treasury role and is therefore unlikely to be an option open to them to mitigate against any exchange rate fluctuations associated with Brexit.

(a) The Irish Exporters Association’s “Brexit Member Survey 2016” provides interesting survey results seemingly indicating many Irish exporting firms do not hedge and highlights the increased desire by some firms to hedge some of their currency exposure as a result of Brexit.

68%: Did not plan to hedge Pound Sterling before the Brexit referendum took place.
49%: Did not plan to hedge Pound Sterling after the Brexit referendum was held.

(b) Enterprise Ireland have a guide (“Managing Currency Risk”) for exporting to the UK which contains a number of suggested actions that could be taken by Irish exporting firms such as calculating the exchange rates where sales to the UK market are no longer profitable and the need to conduct sensitivity analysis in light of Brexit.

Section 7: Existing Supports to Sectors

7.1 Introduction

A number of Government supports are currently available to SMEs through various Departments and authorities\(^{88}\). In light of Brexit challenges likely to be faced by a significant number of Irish indigenous SMEs operating within exposed sectors (e.g. the Irish agri-food sector and certain manufacturing sub-sectors), this chapter focuses on SMEs and some of the supports available to this sector of the Irish economy. Two examples are provided which map some of the supports available to SMEs. Following on from this, a table outlining expenditure on supports by State Agencies will be reproduced from a 2017 D/PER spending review paper, along with exploring agency activities that could be re-directed/help to deal with some Brexit-related challenges are presented. The section concludes by highlighting a number of Brexit-specific supports introduced in Budgets 2017 and 2018 respectively, which are intended to help to mitigate against some Brexit-related challenges.

7.2 Small to Medium Enterprises

Small and Medium Enterprises (SMEs)\(^{89}\) are a key sector of the Irish economy, especially since this sector accounted for 99.8 percent of the total enterprise population in 2015. Despite the fact that large companies make up such a minute share of active firms (2015: 0.2 percent), they employ approximately 30.9 percent of total persons engaged in the economy.\(^{90}\) In terms of employment and the regional dimensions of the economy SMEs are an integral sector, having a significant direct and indirect impact on Ireland’s economic performance. From an employment perspective micro, small and medium enterprises sum to roughly 69.1 percent of total persons engaged in the economy. As a result, an exploration of the sector and the supports currently available to SMEs, is valuable given the

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\(^{89}\) SME definitions are based on the definitions used in the Central Bank of Ireland SME Market Report 2016 H2 (Appendix 2). Large enterprises are defined as employing +250 employees.

sheer scale of the sector and a number of Brexit-specific challenges that may arise for the sector as outlined in some of the existing Brexit literature.\textsuperscript{91}

The Local Enterprise Authorities (LEO) “Supporting SMEs Campaign” is one of these initiatives and offers information to individual firms about the initiatives that they may be able to access in order to help their business to succeed. The online toolkit, available on the LEO website, invites companies to answer eight questions and the toolkit outputs a list of supports related to the sector. The following are sector-specific examples of the supports that exporting SMEs could potentially be eligible to avail of, according to the toolkit results.

7.3 Illustrative Sectoral Level Examples\textsuperscript{92}

Example 1: the Irish agri-food sector

Overview of the Sector:

The agri-food sector is a key driver of economic activity in Ireland. A significant level of employment within the sector is outside Dublin, with a wide dispersion of employment across regions. These characteristics help the Irish economy in pursuing its balanced regional development targets. This objective has several far-reaching economic benefits that include reducing pressure from urban centres, such as Dublin, Cork and Galway, which are currently facing fundamental demand and supply based challenges. Additionally, the Irish agri-food sector is characterised by many inter-linkages with other sectors of the economy such as manufacturing, machinery, processing, marketing, tourism and logistics, etc. Therefore there is a relatively high multiplier effect tied to this sector of the economy, as DoF research illustrates (Figure 7.1).

\textsuperscript{91} See: Smith, D., Fahy, M., Corcoran, B. and B. O’ Connor. (2017). UK EU Exit – An Exposure Analysis of Sectors of the Irish Economy. Dublin; Department of Finance, for example.

\textsuperscript{92} Information obtained through Local Enterprise Office Supporting SMEs Online Tool.
Figure 7.1: Output Multipliers of the Top Five Manufacturing Sectors Exposed to the UK

Output Multipliers of the Top Five Manufacturing Sectors Exposed to the UK

- Traditional Manufacturing (Sector C NACE 12-17)*
- Printing (Sector C NACE 18)
- Pharmachem (Sector C NACE 20, 21)*
- Materials Manufacturing (Sector C NACE 22-25)*
- Food & Beverage (Sector C NACE 10-11)*

Source: Based on DoF UK EU Exit - An exposure analysis of sectors of the Irish Economy (2017). *Average output multiplier for combined sectors (*) DoF calculations.

The Irish agri-food sector is a driving force in terms economic activity, accounting for 7.9 percent of total employment.93

The following example outlines some of the supports available to a farmer operating within the agri-food sector of the economy.

Figure 7.2: LEO Online toolkit inputs - Agri-food sector:

Company location: Cork North/West

2. Buying Fixed Assets

1. Working Capital for business (overdraft, purchasing, initial stock)

3. Growing your business, including hiring

4. Developing a business plan

Exporting: Yes

Applied for Banking funding: Yes, loan refused/ received insufficient funding

Source: Author’s diagram based on LEO Supporting SMEs Online Toolkit

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93 CSO Labour Force Survey.
The outputs illustrated below capture a variety of supports that an SME operating within the agri-food sector, e.g. a farmer, may be eligible to avail of.

**Figure 7.3: Agri-food Sector Specific LEO and Banking Supports:**

Source: Author’s diagrams based on LEO Supporting SMEs Online Toolkit

**Figure 7.4: Selection of Other Supports for Agri-food Businesses**

Source: Author’s diagram based on LEO Supporting SMEs Online Toolkit
Farmer Schemes & Payments:
Primary producers can “access a range of supports, payments and other forms of assistance” from the D/AFM. These include the Basic Payment Scheme (BPS), the Green, Low-Carbon Agri-Environment Scheme (GLAS), Targeted Agricultural Modernisation Scheme (TAMS) and other supports under the Common Agricultural Policy (CAP) and the Farm Advisory System, etc. 94

Example 2: Irish manufacturing sector
There are a significant number of persons employed within the manufacturing sector in Ireland. In particular there are a large number of individuals engaged in Irish manufacturing SMEs, as shown in Figure 7.5.

![Figure 7.5: Persons engaged in Manufacturing Enterprises NACE (10 – 33), 2012](https://example.com/image)

Given that there were more persons engaged in Irish SMEs than foreign, large manufacturing companies, an outline of some of the supports available to SME manufacturing firms are outlined in this section.

Overview of the Sector:
There is a large number of SMEs operating within Ireland’s manufacturing sector with a wide number of sub-categories under the overall manufacturing umbrella – with employment dispersed across a broad range of skill levels.

There are two key sub-categories within the manufacturing sector in Ireland;

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94 See: [https://www.agriculture.gov.ie/farmerschemespayments/](https://www.agriculture.gov.ie/farmerschemespayments/)
1. Domestic manufacturing firms

2. Foreign manufacturing firms

Many Irish-owned manufacturing firms operate within more labour-intensive sub-categories, while many foreign firms operate within the high-skilled manufacturing sector. Furthermore, similar to the agri-food sector, the manufacturing sector has a high volume of employment outside of Dublin. Thus, the sector makes a significant contribution to regional economic development of the Irish economy and the sustainability of smaller economic regions.

Example 2 seeks to capture a selection of Government supports available to an Irish owned manufacturing SME.

The diagram below shows the sector-specific inputs for a manufacturing SME located in the West of Ireland, based on the LEO Supporting SMEs Online Toolkit:

![Figure 7.6: LEO Online toolkit inputs - Manufacturing Sector](image)

Source: Author’s diagram based on LEO Supporting SMEs Online Toolkit.

The LEO, credit supports and other resources through various SME programmes and payment schemes are outlined below:
Figure 7.7: Manufacturing Sector Specific LEO and Banking Supports

Source: Author’s diagrams based on LEO Supporting SMEs Online Toolkit.

Figure 7.8: Selection of Other Supports for Manufacturing SME firms

Source: Author’s diagram based on LEO Supporting SMEs Online Toolkit.
7.4 The IDA

The role of IDA Ireland is the responsibility for “the attraction and development of foreign investment in Ireland”. Consequently, foreign-owned manufacturing firms may be able to avail of grants and funding through one of the three key channels outlined below (Table 7.1).

<table>
<thead>
<tr>
<th>No.</th>
<th>Main Grant/Funding Streams:</th>
<th>Detail:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Capital and Employment</td>
<td>Depends on location and size of company.</td>
</tr>
<tr>
<td>2</td>
<td>Training</td>
<td>This form of assistance helps FDI firms already located in Ireland.</td>
</tr>
<tr>
<td>3</td>
<td>R&amp;D</td>
<td>Either in-house initiatives or collaborations with external institutions, e.g. third level institutes or industrial partners.</td>
</tr>
</tbody>
</table>

Table 7.1: IDA Support Grants

Source: Author’s own table based on information available on the IDA Ireland website.

1. Capital and Employment:

IDA Capital and Employment Grants are targeted at multi-national enterprises who are either new investors to Ireland or already established within the economy.

2. Training:

The IDA offers assistance to firms in the form of training grants. The level of grant aid depends on the size of the company and the type of training involved. Training grants are available for specific and general training purposes.

3. R&D:

The IDA helps support FDI firms to engage in R&D activities. An example of a R&D related support available to some firms under the IDA is “the IDA Ireland grant for Research, Development and Innovation (RD&I)”. This support mechanism seeks to encourage

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95 It should be noted that “foreign-owned firms” located in Ireland are by and large better equipped to deal with the risks associated with Brexit. See: Lawless, M., Siedschlag, I. Z. Studnicka. (2017). Expanding and Diversifying the Manufactured Exports of Irish-Owned Enterprises. Jointly published by; Economic and Social Research Institute, Department of Business, Enterprise and Innovation and Enterprise Ireland.
97 http://www.idaireland.com/how-we-help/services/
increased RD&I activity in line with the objectives set out in the D/BEI’s Action Plan for Jobs.¹⁰⁰

7.5 Select Summary of Existing Supports from a Government Perspective

The Irish Government offer substantial financial support to a number of State Agencies including (but not exclusive to); IDA Ireland, Enterprise Ireland, InterTradeIreland, Bord Bia, Bord Iascaigh Mhara, Marine Institute, Sea Fisheries Protection Authority (SFPA) and Teagasc. Figure 7.9 below reproduces the percentage breakdown in expenditure on supports by State Agency between 2005 and 2017 described in a D/PER spending review paper 2017.¹⁰¹ In light of Brexit, and in addition to the Brexit proofing measures announced in Budget 2017 and Budget 2018, there may be a potential need to re-direct some existing agency resources to support clients, firms and individuals to respond to Brexit-specific challenges within existing Exchequer Allocations. This would ensure an efficient response to Brexit through the continued sustainable management of public expenditure.

![Figure 7.9: Expenditure on Supports by State Agency (%), 2005 - 2017](image)


7.6 Map of State Agency Activities

A Comprehensive Review of Enterprise Expenditure was conducted in 2011 within the Central Expenditure Evaluation Unit (CEEU)\textsuperscript{102}. As part of this paper, a map of state agency activities was provided. This provides valuable insights into the roles and functions of the various state agencies/bodies. The paper outlines the main agency activities which include, providing policy advice, promoting regional enterprise, R&D and promotion of market, etc. Some existing supports offered by State Agencies have the potential to help alleviate some of the Brexit issues that Irish firms may face due to this externally driven challenge.

7.7 Brexit-specific Responses by State Agencies

The level of Government spending on state agencies is significant, with Exchequer Allocations of €1bn in 2016 “to 12 key agencies/areas” across a number of Government Departments.”\textsuperscript{103} State Agencies have put in place a number of Brexit-specific responses, such as additional staffing resources and specific Brexit programmes. These measures should help Irish businesses to prepare for the unprecedented challenges that may arise due to Brexit. A selection of the state agency responses are outlined in Table 7.2 below.

<table>
<thead>
<tr>
<th>Agency</th>
<th>Illustrative Examples of Existing Brexit Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>EI</td>
<td>• Brexit SME scorecard</td>
</tr>
<tr>
<td></td>
<td>• Be Prepared grant</td>
</tr>
<tr>
<td></td>
<td>• Additional posts for Brexit</td>
</tr>
<tr>
<td>IDA</td>
<td>• Additional posts for Brexit</td>
</tr>
<tr>
<td>LEOs</td>
<td>• Supporting SMEs online toolkit</td>
</tr>
<tr>
<td>InterTradeIreland</td>
<td>• Brexit advisory service</td>
</tr>
<tr>
<td></td>
<td>• Start to Plan voucher scheme</td>
</tr>
<tr>
<td>Bord Bia</td>
<td>• Brexit barometer</td>
</tr>
<tr>
<td></td>
<td>• Additional Brexit-related promotion and development</td>
</tr>
<tr>
<td>Fáilte Ireland</td>
<td>• “Get Brexit Ready” Programme and website for Tourism Enterprises - including Brexit Readiness Check for tourism businesses, insights and market intelligence.</td>
</tr>
<tr>
<td>Tourism Ireland</td>
<td>• Market diversification</td>
</tr>
<tr>
<td></td>
<td>• Marketing Ireland in the UK through a Brexit lens.</td>
</tr>
</tbody>
</table>

Source: Author’s own table.

\textsuperscript{102} Now under the Irish Governmental Economic and Evaluation Service.

More broadly, the Irish Government is committed to the sustained Exchequer Capital investment of the State’s development agencies (EI, IDA, LEOs).

Tourism Agencies Responses:
Marketing:
Tourism Ireland is targeting the marketing effort in GB through a Brexit lens, whilst at the same time seeking to build on the successful strategy of market diversification implemented since 2014. Specific measures include:

- Tourism Ireland is targeting key consumer segments in the British market.
- An additional €2m Capital is being provided in 2018 for capital investment in tourism marketing. This will facilitate digital investment in tourism marketing, both to help restore Ireland’s share of voice vis-à-vis its competitors and also to develop growth from alternative markets. This is critical in the context of Brexit and the decline in visitors from Britain.
- Increase focus and investment in the short to medium term in Mainland Europe and Northern America;
- Continuing the roll out of its market diversification strategy. This strategy has seen Mainland Europe become the largest contributor of overseas tourism revenue, delivering €1.8bn in 2016; and, in the first half of 2017, the revenue generated by visitors from North America outpaced British visitor spend.

Product/Business Development:
Fáilte Ireland is seeking to enhance and develop visitor experiences and events, whilst supporting tourism businesses in dealing with the implications of Brexit.

In September 2017, Fáilte Ireland launched the ‘Get Brexit Ready’ Programme. This is based on four key pillars, positioning tourism businesses to be:

- Brexit ready – working with businesses to assess their exposure to market uncertainty and their current competitiveness (including the Brexit Readiness Check, as well as revenue and sales channel management);
- Battling for Britain – assisting businesses to target best prospects in the UK and identify new opportunities there (including tactical pricing initiatives and bundled offerings, the identification of best prospects and aligning with Tourism Ireland’s marketing and promotions in the British market);
- Spreading the risk – working with businesses which are over-exposed to the British market to diversify their trade and win business in Europe, North America and new and growing markets like China;
• **Fighting fit** – providing the training and skills supports for tourism professionals to succeed in a Brexit environment (including a dedicated international sales development programme, a series of Brexit focussed executive management programmes, training for service excellence and the ongoing sharing of the necessary research, trends and insights to inform business plans).

'Get Brexit Ready' Website:

The "Get Brexit Ready" programme launch was accompanied by the unveiling of a dedicated ‘Get Brexit Ready’ website, which is Fáilte Ireland’s platform for all the relevant information and insights that businesses will need – from development supports and training programmes to insights and market intelligence. The website includes a ‘Brexit-check’ an online tool whereby an individual business can input their own data to determine how Brexit ready they are as well as ‘Brexit Bytes’, a series of market insights and research to help tourism operators to recalibrate their businesses appropriately to navigate through Brexit related uncertainty.

### 7.8 Recent Budgetary Measures (Budget 2017 and Budget 2018)

As part of the whole-of-Government response to Brexit, a number of measures were put in place in Budget 2017 and Budget 2018 to help firms deal with existing and potential Brexit-related challenges.

The DoF published a document, “Getting Ireland Brexit Ready” which outlined a number of Brexit-related tax measures to help domestically exposed sectors of the Irish economy to deal with challenges arising from Brexit as part of Budget 2017.104 These measures included; the retention of the 9 percent VAT rate for the hospitality sector, reduced capital gains tax, increase in earned income tax credit for self-employed taxpayers, income average “step out” for the agricultural sector105, extension of the foreign earnings deduction to help Irish exporters diversify export and import markets and the extension of the special assignee relief programme to assist businesses to relocate key staff to Ireland. In addition, a key Brexit measure announced in Budget 2017 was the Department of Agriculture, Food and Marine Agriculture Cashflow Support Loan Scheme.106 The scheme alleviated

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105 According to the Department of Finance “Getting Ireland Brexit Ready” document, the income average “step out” “allows farmers a reduced tax liability in a year when their income is low to allow for a period of recovery”.

106 The Agriculture Cashflow Support Loan Scheme, announced in Budget 2017, has been fully subscribed.
some of the pressures being caused by market difficulties, which were compounded by the uncertainty around Brexit.\textsuperscript{107}

Furthermore, a number of Brexit proofing measures were included in Budget 2018. Table 7.3 below provides a summary of the key Brexit-specific measures that were announced in October 2017, as part of Budget 2018.

Table 7.3: Brexit Measures – Budget 2018

<table>
<thead>
<tr>
<th>Budget 2018 – Brexit Proofing Measures:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dept. of Agriculture, Food and the Marine (D/AFM):</td>
</tr>
<tr>
<td>• €25m Brexit Response Loan Scheme for farmers, fishermen and food businesses.</td>
</tr>
<tr>
<td>• Additional funding (€4.5m in Budget 2018) provided to Bord Bia to enhance market diversification plans.</td>
</tr>
<tr>
<td>• Additional funding provided to Teagasc for the development of a national food innovation hub.</td>
</tr>
<tr>
<td>D/AFM &amp; Dept. of Business Enterprise and Innovation (D/BEI):</td>
</tr>
<tr>
<td>• Brexit Working Capital Loan Scheme for impacted businesses providing up to €300m working capital to SMEs and small Mid-caps (&lt;499 employees), of which at least 40 percent will be available to food businesses.</td>
</tr>
<tr>
<td>D/BEI:</td>
</tr>
<tr>
<td>• Global Footprint 2025 Initiative.</td>
</tr>
<tr>
<td>• Additional Brexit funding.</td>
</tr>
<tr>
<td>• Extra staffing within the Department specifically to deal with Brexit issues.</td>
</tr>
<tr>
<td>• Development of a business advisory hub in 2018.</td>
</tr>
<tr>
<td>Dept. of Foreign Affairs and Trade:</td>
</tr>
<tr>
<td>• Passport Demands</td>
</tr>
<tr>
<td>• Global Footprint 2025 Initiative</td>
</tr>
<tr>
<td>• Brexit Co-ordination &amp; Public Engagement</td>
</tr>
<tr>
<td>• Consular Services</td>
</tr>
<tr>
<td>Dept. of Transport Tourism and Sport:</td>
</tr>
<tr>
<td>• D/Finance decision to retain 9 percent VAT rate for Tourism sector.</td>
</tr>
<tr>
<td>• Fáilte Ireland – Get Brexit Ready Programme for tourism enterprises.</td>
</tr>
<tr>
<td>• Tourism Ireland – Investment in tourism marketing digital infrastructure.</td>
</tr>
</tbody>
</table>

Source: Author’s own table.

\textsuperscript{107} \url{https://www.agriculture.gov.ie/agri-foodindustry/agri-foodandtheeconomy/agri-foodbusiness/agriculturecashflowsupportloanscheme/}
Section 8: Trade

8.1 Introduction

According to research conducted by the DoF, “the main transmission channel” through which the macroeconomic impact of Brexit will be felt is trade. Existing literature emphasises Ireland’s vulnerability to Brexit, compared to other EU countries. Literature also suggests that the Irish economy is heavily exposed to external shocks, such as the depreciation of the Pound Sterling and shocks to UK output\(^{108}\).

8.2 Trade and the Irish Economy

Whilst the positive performance of the Irish economy has been based on strong export-led growth (Figure 8.1) and inward investment by foreign multinationals, risks and exposure are leading to uncertainty in relation to future EU-UK trade arrangements and the subsequent prolonging of investment decisions. Some of the existing literature suggests that Brexit will put negative pressure on trade and investment growth when compared to a no-Brexit scenario.\(^{109}\) Consequently, although the economic outlook for the economy remains positive overall there are global challenges outside of the country’s direct control. These challenges must be acknowledged and dealt with in the most efficient and effective manner possible in order to limit the negative effects on the Irish economy.

Figure 8.1: Ireland’s Goods Exports and Imports and Trade Surplus (in Value terms)


In light of the above, the European Commission (EC) has noted that Ireland’s GDP growth is set to decelerate due to global uncertainty and heightened risks. The shift towards more protectionist policies in the UK and US (Ireland’s two largest trading partners) have marked changing economic and political times. In addition to meeting the continued rise in domestic consumption demand, Ireland will face pressure to sustain trade volumes in existing markets as well as seeking to diversify into new regions. Thus, macroeconomic uncertainties are presenting fiscal challenges that must be addressed.

Looking ahead, although Irish international trade is expected to grow, the rate of this growth is expected to be less than a no-Brexit scenario. The presence of large, FDI firms in the economy, e.g. pharmaceutical and IT firms helped to promote service exports during 2016. However, goods exports are forecasted to be lower than in previous years as import growth continues to rise. In addition, 2017 ESRI forecasts predict weaker export growth while the percentage of real annual growth in imports increases. Although measurement issues with GDP and trade statistics should not be ignored, the current shift in trade dynamics, along with potential effects of Brexit on the value and volume of trade are worth noting.

8.3 Outlook

Irish export growth is beginning to moderate from the record high export volumes recorded since the economic downturn with forecasts from the ESRI (2017) stating that the rate of import growth is set to outpace that of export growth in 2018.110

Moreover, domestic demand is increasing apace, particularly in sectors such as construction, and Brexit may have the potential to adversely affect the construction industry from an inputs perspective, e.g. materials used in the building process sourced from the UK market or goods that are imported into Ireland through the UK from other external markets. This would have the potential to lead to additional costs for the Irish construction sector.

Given Ireland’s position as one of the most globalised small, open countries in the world, exports will continue to be an important source of economic activity. Brexit requires that UK market share is maintained and sustained while opportunities to diversify exports are exploited. D/FAT and D/BEI have stated that 80 percent of indigenous export growth will be focused on markets outside the UK by 2020, while efforts will be concentrated on maintaining existing volumes to Ireland’s nearest external market111.

111 Department of Business, Enterprise and Innovation and Department of Foreign Affairs and Trade. (March 2017). Ireland Connected: Trading and Investing in a Dynamic World.
8.4: Trade Exposure to the UK Market

The UK represents a key trade partner for the Irish economy. While dependence on the UK market has declined in certain sectors of the Irish economy over time, exposure to the UK remains significant with some sectors of the Irish economy remaining particularly exposed. In particular, exposure to the UK market has increased for certain sectors such as food and live animals and manufacturing goods over the fifteen year period between 2000 and 2015.\(^\text{112}\) While chemical and beverage exports have become more internationally diversified, the UK remains a key market for the agri-food and some manufacturing sectors of the Irish economy.

Goods Trade between Ireland and the UK from a UK Perspective:

The Office of National Statistics UK (ONS) provides information on goods export and import sources\(^\text{113}\). From a UK perspective, Ireland is the fifth most important export market and tenth most important import source (2016). However, as an import source (in aggregate terms), the UK is not as highly reliant on Ireland as Ireland is on the UK. Germany, China, US, Netherlands, France, Belgium & Luxemburg, Italy, Spain and Norway were more important import sources in terms of the percentage of total imports sourced from these markets in 2016. Ireland on the other hand, has a greater reliance on the UK market which leaves the country susceptible to Brexit-related risks.

<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>UK EXPORT SOURCES</th>
<th>UK IMPORT SOURCES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Rank</td>
<td>% of Total UK Exports</td>
</tr>
<tr>
<td>Ireland</td>
<td>5</td>
<td>5.7</td>
</tr>
</tbody>
</table>


Consequently, given Ireland’s reliance on the UK as a trading partner, there may be significant implications for East-West trade between the UK and Ireland particularly under a hard Brexit type scenario.

Research:

Since the UK’s referendum to leave the EU, some research on trade flows between Ireland and the UK has been conducted. The DoF have published an exposure analysis, which looks at the implications of


\(^\text{113}\) https://www.ons.gov.uk/economy/nationalaccounts/balanceofpayments/datasets.publicationtablesuktrade
Brexit on trade at a sectoral level. In addition, an InterTradeIreland paper explores the potential impacts of Brexit on trade with a focus on North – South trade flows. Furthermore, the Office of the Revenue Commissioners published a paper prepared by the Irish Governmental Economic Evaluation Unit in July 2017, which focuses on the possible tax and customs implications arising from Brexit.

Trade between Ireland and the UK:

Until negotiations on the future EU-UK trading relationship are concluded, uncertainty in relation to the implications for Irish exporters and importers, logistics firms, etc. will remain. Existing literature suggests that Brexit will likely have an impact for trade between NI and Ireland, along with impacts for trade between GB and Ireland. In light of the potential adverse implications that may arise for trade, this section briefly provides a broad overview of trade between Ireland and GB and Ireland and NI and some possible Brexit challenges.

Goods Trade:

Figure 8.2: Irish Exports and Imports of Goods (2016)

![Graph showing Irish Exports and Imports of Goods (2016)]


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Between NI and Ireland

The sharing of a land border is likely to present challenges for firms who export to/from Ireland from/to NI. Maintaining current integrated cross-border supply chain will be difficult should customs and regulatory rules be required. In particular, InterTradeIreland and the Office of the Revenue Commissioners note the significant challenges that may be encountered within the agri-food sector. Brexit may have implications for Irish firms in NI who trade in the South of Ireland and vice versa, in regard to transport and logistical issues. Given that eleven national roads cross the Irish/NI border on which there were 2m Heavy Goods Vehicle crossings and 2.6m Light Commercial vehicle crossings in 2016, any disruptions to current arrangements would likely have cost implications. In addition, there are a plethora of other trade related challenges that may arise, which are beyond the scope of this paper, including possibly larger exposure in certain regions like Cavan and Monaghan under a hard Brexit type scenario.

Between the UK and Ireland

The UK Parliament’s “Agriculture, Animal Health and Food and Drink Manufacturing (including Catering, Retail and Wholesale) Sector Report” highlights the high level of exposure faced by Irish agri-food exporters to the UK market. The report estimates the average percentage share of Member State’s agri-food exports destined for the UK between 2013 and 2015, in value terms. The paper estimates that the average percentage share of Irish agri-food exports to the UK over the three year period to be 42.3 percent. After Ireland, the Netherlands faces the greatest exposure, with the percentage of the Netherlands agri-food exports to the UK estimated to average at 10.2 percent. Therefore, the potential challenges that may arise for the Irish agri-food sector are particularly pronounced when compared to other EU Member States.

Other sectors of the Irish economy also face significant vulnerability to the UK market, for example the Irish tourism sector (see section 11). Although the UK still represents Ireland’s largest market, as measured in terms of trips to Ireland, the number of visits from GB declined by 5 percent in 2017. Furthermore, as noted in section 9 of this paper, landbridge issues may also arise which would have negative implications for a number of sectors, including the Irish manufacturing sector.

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117 Statistics provided by D/TTAS in January 2018.
120 CSO (2018).
Services Trade

Between the UK and Ireland:

Although Ireland has a deficit in service trade in overall terms, the economy has a net trade service surplus with the UK. Over the period from 2012 to 2015, this net service surplus with the UK rose substantially to almost €11.5bn (see Table 8.2).

<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>NET SERVICE SURPLUS (€m)</th>
<th>NET SERVICE SURPLUS (€m)</th>
<th>NET SERVICE SURPLUS (€m)</th>
<th>NET SERVICE SURPLUS (€m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>YEAR</td>
<td>2012</td>
<td>2013</td>
<td>2014</td>
<td>2015</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>5,136</td>
<td>7,796</td>
<td>7,847</td>
<td>11,482</td>
</tr>
</tbody>
</table>


Any adverse changes to the trade relationship between the EU and the UK could pose challenges for the Irish service sector. As noted by DoF, computer services make a significant contribution to Irish service exports, in value terms, along with insurance and financial services. However, the majority of Brexit literature finds that the potential negative implications for Ireland’s good sector are larger when compared to the Irish services sector. This has informed the decision to concentrate on exploring the potential Brexit impact on the goods sector of the Irish economy in this paper.
Section 9: Landbridge Issues

9.1 Introduction
Irish exporters and importers seeking to transport goods to and from the EU (i.e. where the UK is not a final destination) have two choices

1. Ship to/from Ireland to the continent via the UK landbridge.
2. Ship direct to the continent without passing through the UK.

Brexit has led to discussion on the potential landbridge challenges that may arise for Irish trade if additional barriers to trade (tariff and NTB) between the UK and EU come into effect post-Brexit.

There are three key situations which may prevail post-Brexit:

1. No change to the current situation
2. Increased costs
3. No access or restrictive barriers associated with using the UK landbridge

In light of the importance of the UK landbridge for Irish importers and exporters to transport goods, particularly valuable or time-sensitive/perishable goods through European ports, it is essential that the least disruptive arrangements are implemented post-Brexit. This has been expressly acknowledged in the EU’s negotiating position as one of the unique issues that Ireland faces within the context of Brexit, which will be addressed within the context of the EU-UK negotiations. The alternative to the UK landbridge is to use direct Ro/Ro or Lo/Lo services to continental Europe, but both options would be expected to add significantly to journey times. Furthermore, any additional administrative costs or customs procedures would further add to journey times and costs at ports and airports.

This section will explore some of the implications that may arise. This will be achieved by discussing;

(a) ESRI working paper: “Ireland’s international trade and transport connections” (2017).

123 There are a wide range of implications that may arise in relation to the UK landbridge in addition to the transport of goods via the UK landbridge, e.g. possible Ro-Ro and Lo-Lo logistics costs, journey times for imports and exports whose origins and destinations are confined within an Ireland-NI-UK context and customs procedures.
124 Goods may be shipped from Ireland to the UK where they are transported to UK airfreight hubs and transported onto other EU and non-EU countries. This is known as “air trucking”.

61
9.2 Existing Research

a) ESRI Research:

A paper by the ESRI explores the relationship between trade and transport within an Irish context.\textsuperscript{125} The composition of Ireland’s trade is examined, with the paper finding that the UK accounts for a higher volume share of Ireland’s overall trade relative to value shares. In addition, the research signals the potential impact of Brexit on transport modes. It finds that there may be significant trade impacts on refrigerated and live animal transport. The link between refrigerated transport and the agri-food sector is shown by estimating the possible declines in Irish-UK trade under a WTO tariff scenario, along with also estimating the potential reductions under a WTO tariff and NTB scenario (see Table 9.1). In addition, the results indicate the potential significant trade reductions in the “meat, fish and dairy trades”. Therefore, the implications of Brexit are likely to vary depending on the sector – with a potentially large adverse impact on Ireland’s agri-food sector in particular, should changes to transportation costs arise post-Brexit.

<table>
<thead>
<tr>
<th>W0T tariffs scenario</th>
<th>Exports NI</th>
<th>Imports NI</th>
<th>Exports GB</th>
<th>Imports GB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unitised</td>
<td>3%</td>
<td>5%</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>Bulk</td>
<td>3%</td>
<td>2%</td>
<td>0%</td>
<td>6%</td>
</tr>
<tr>
<td>Refrigerated</td>
<td>50%</td>
<td>35%</td>
<td>32%</td>
<td>14%</td>
</tr>
<tr>
<td>Special</td>
<td>1%</td>
<td>3%</td>
<td>2%</td>
<td>4%</td>
</tr>
<tr>
<td>Live Animals</td>
<td>14%</td>
<td>10%</td>
<td>9%</td>
<td>4%</td>
</tr>
<tr>
<td>Total</td>
<td>9%</td>
<td>12%</td>
<td>5%</td>
<td>3%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WTO tariffs + NTB scenario</th>
<th>Exports NI</th>
<th>Imports NI</th>
<th>Exports GB</th>
<th>Imports GB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unitised</td>
<td>6%</td>
<td>10%</td>
<td>4%</td>
<td>4%</td>
</tr>
<tr>
<td>Bulk</td>
<td>5%</td>
<td>5%</td>
<td>1%</td>
<td>11%</td>
</tr>
<tr>
<td>Refrigerated</td>
<td>64%</td>
<td>59%</td>
<td>48%</td>
<td>27%</td>
</tr>
<tr>
<td>Special</td>
<td>2%</td>
<td>3%</td>
<td>2%</td>
<td>4%</td>
</tr>
<tr>
<td>Live Animals</td>
<td>20%</td>
<td>14%</td>
<td>16%</td>
<td>9%</td>
</tr>
<tr>
<td>Total</td>
<td>12%</td>
<td>20%</td>
<td>8%</td>
<td>5%</td>
</tr>
</tbody>
</table>


The paper devotes specific attention to exploring the UK landbridge, given the considerable importance of the UK in terms of Ireland’s trade (especially in volume terms). The paper notes that post-Brexit, “transport of goods through the UK may be subject to some new requirements”. Moreover, similar to the data gaps in relation to the UK landbridge noted in this paper, the ESRI also state that information “on how products travel and what other countries they pass through is rarely captured”. Therefore, the paper seeks to estimate the importance of the UK landbridge for Irish trade.

Given the uncertainty in relation to the future trade relationship between the UK and EU this is an important contribution to the research on the UK landbridge which currently exists.

The results estimate that the UK landbridge as a share of Irish exports exceeds 50 percent. In addition, the research finds that the landbridge estimates are significantly higher for Irish exports compared to Irish imports travelling through GB. The paper concludes by flagging the potential for the UK landbridge to increase in importance as a result of Brexit, “where Ireland may seek to diversify markets” over the coming years.

b) Bord Bia Brexit Barometer Survey Findings:

Bord Bia have highlighted the importance of the UK landbridge in their Brexit Barometer Industry Findings Report 2017. Although statistics on the volume and value of exports and imports that travel through the UK en-route to other markets are difficult to estimate\(^\text{126}\), the survey results of this report add to the limited information on the UK landbridge and help to confirm that this is a Brexit challenge for Ireland.

*Findings from 139 Irish food, beverage and horticulture companies who undertook the Bord Bia Brexit Barometer (Between 22 March – 3 May 2017).*

\(^{126}\) Lawless, M. and E. L. W. Morgenroth (2017) note that “international trade statistics are based on accurately capturing the origin and final destination of products but information on how products travel and what other countries they pass through on route is rarely captured.

There are two important points arising from the analysis of the UK landbridge within the “Customs and Trade” section of this report. Firstly, the report highlights that access to continental Europe may be hindered given the large throughput of goods from Ireland to the UK en-route to other external markets. Secondly, this report shows that landbridge challenges are a concern for Irish manufacturers operating within the agri-food sectors of the economy.

There are also two caveats in relation to the 2017 survey findings. First, the results are based on a survey of 139 Irish food, beverage and horticulture companies. This represents a small sample size given the scale of the agri-food sector in Ireland. Furthermore, selection bias cannot be ruled out given that the survey was based on companies that undertook the Brexit Barometer toolkit over a six week period (22 March and 3 May 2017). Thus, companies who did not avail of this service were not factored into the findings. As a result, it cannot be ruled out that the importance of the UK landbridge is greater or less than the percentages stated in the report by a significant amount.

Second, many SMEs may not be aware of the specific route that their products take and may only be informed about the final end destination. This may occur due to the outsourcing of transportation and logistics related matters. The difficulty with this lack of knowledge or awareness about the importance of the UK for access to continental Europe is that it may skew the findings in the Bord Bia report. In particular, companies were asked to respond either Yes or No. Thus, a breakdown by product was not possible. Additionally, many companies may answer no as they only know the final destination of their goods, e.g. to France. If a company outsources transport matters only hauliers or freight forwarders have this information. Thus, a company might answer incorrectly based on the only available

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**Companies were asked the following question:**

**Q. Are the goods (including ingredients that you source) which you purchase from non-UK countries, transhipped through the UK?**

**A. Companies were asked to respond by stating either:**

Yes or No

**Responses**

The selected Irish food, beverage and horticulture companies’ responses were as follows:

- **31%**: Companies that ship EU purchases directly to Ireland
- **69%**: Companies that ship EU purchases through the UK

The 69 percent refers to the UK landbridge for purchased goods imported by Irish manufacturers.
information that it has. Consequently, information gaps for Irish SMEs represent a key Brexit specific issue.

9.3 Data Limitations
Collecting data on entry and exit of Irish goods through the UK to and from other external markets is difficult. This is understandable given the free movement of goods within the EU. However, the potential challenges for Irish trade as a result of Brexit mean that the need for statistical data on the percentages of products travelling through the UK landbridge has increased.

As mentioned in section 4, the ESRI have recently published a working paper which looks at the transport patterns of Ireland’s trade flows and estimates the UK landbridge in volume terms in order to address some of the knowledge gaps regarding the UK land frontier. In addition, the Irish Maritime Development Office (IMDO) has commenced research for the D/TTAS into the use of the UK landbridge for importing, exporting from/to continental Europe and beyond, including the identification of possible alternatives to the UK landbridge. The purpose of this research is to establish the volume of traffic using the UK landbridge at present, the likely consequences that Brexit will have on landbridge usage and the various alternative options that may be viable.

A reluctance to disclose potentially commercially sensitive information regarding distribution channels poses constraints on accessing quality statistics on the reliance on the UK landbridge for Irish exports and imports, especially at a product level. What is clear is that the need for reliable data on the UK landbridge has increased due to Brexit. This will be particularly important as firms assess the reliability of this transport channel in a post-Brexit environment and seek to remain competitive from an international point of view.

9.4 SME Landbridge Trade Exposure
Landbridge issues are expected to be higher for Irish owned SMEs when compared to FDI located in Ireland. Many SMEs outsource transportation and logistics matters to external hauliers and freight forwarders. Therefore, Irish SMEs may be unaware of the reliance on the UK landbridge for their export goods. This is noteworthy as it highlights that SMEs may not be in a position to identify the extent of their exposure, especially if they are only aware of the final destination of their goods exports and intermediate imports. For instance, if an SME’s final exports are to France and their inputs are sourced in Germany they may regard their exposure to the UK market as limited. However, the firm might be unaware that their goods exports and imports travel through the UK, adding to the Brexit-

related exposure faced by SMEs. On the other hand, large FDI firms are more involved in the transport decision-making process. Therefore, these firms may be in a better position to track their exposure to the UK landbridge when compared to SMEs who outsource this activity\textsuperscript{130}.

Under a WTO type arrangement this would be an important consideration from a market access perspective, given that the highest export growth overall for Ireland is currently to non-EU countries. In addition, international markets account for a sizeable share of some sector’s exports, e.g. beverage exports. Therefore, there may be high levels of risk for companies who export to international markets through the UK or who are seeking to become more internationally diversified due to Brexit.

This point can be highlighted by contrasting the beverage and dairy sectors in Ireland. The Irish drinks industry exports large volumes to third countries. In contrast, the 2016 – 2017 Annual Review & Outlook by the D/AFM states “by 2026 more than 85% of EU milk and dairy products will be consumed within the EU”, with the increase being driven by consumption of dairy products. This illustrates some of the demand based trends and consumer preferences within the global economy as the demand for products, such as whiskey continues to grow from a global perspective, while consumer tastes for dairy products predominantly centre on the EU market. As noted by the ESRI’s paper on Ireland’s international trade and transport, the use of the UK as a landbridge may become even more important if Irish firms seek to diversify to other markets.

Therefore, ensuring a stable and reliable supply chain process remains in place will be of key importance for the Irish economy. Brexit may present additional challenges for Ireland’s infrastructure, as well as potentially large consequences for firms exporting perishable goods with a short shelf life, especially agri-food exports. Non-EU countries trading with the EU must comply with customs procedures as well as regulatory controls irrespective of the nature of the trading agreement. Thus, at a firm level, Irish exporter’s route to market should be considered regardless of the situation that prevails post-Brexit.

Section 10: Regional Dimension

10.1 Introduction
There are a number of adverse consequences resulting from Brexit that are region specific in nature. In particular, indigenous sectors of the economy, e.g. manufacturing and agri-food make up a considerable proportion of employment in regional areas of the country. Furthermore, the IMF (2017) notes that there will be a large impact for traditional sectors and the regional economy.

The CSO’s Census of Industrial Production 2014 states that the ratio of home to foreign owned manufacturing firms increased from 2013 to 2014, with a greater amount of Irish manufacturing enterprises than foreign (ratio: 56:44). This implies that there are a significant amount of Irish owned enterprises operating within this sector of the economy.

The large presence of indigenous SMEs who provide considerable employment in regions outside of Dublin mean that particular consideration of the regional ramifications resulting from Brexit is essential. In assessing the regional composition of employment and the extent to which these enterprises engage in international trade, a broader understanding of the exposure of the sector will be reached.

10.2 Foreign v Domestic Implications
The share of employment in the Pharmachem industry outside of Dublin is approximately 77 percent. Despite the substantial concentration of employment in regional areas, this sector is dominated by large multinational companies with high profit levels. Additionally, this sector is the largest contributor to corporation tax within the goods sector of the economy. Excluding the Pharmachem sub-sector, the exposed manufacturing industries are dominated by Irish owned SMEs operating in relatively low profit environments.

Three possible issues for FDI firms due to Brexit are outlined below. The three challenges mentioned are for illustrative purposes only and do not seek to cover all of the possible obstacles that FDI firms may face in the wake of Brexit.

Three possible negative challenges are as follows:

1. The possibility of additional corporation tax volatility has been flagged by the Irish Fiscal Advisory Council (2017).

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2. Competition to attract firms re-locating from the UK due to Brexit. Other EU countries are seeking to attract FDI companies currently located in the UK who are seeking to hedge their exposure by establishing a new EU base.

3. Prolonging of investment decisions due to Brexit specific uncertainty. For instance, due to uncertainty in relation to future relationship issues, including trade between the EU and UK post-Brexit.

10.3 Government Commitments

The Government is actively committed to the regional development of the Irish economy. As a result, a number of regional development goals have been set out in a number of documents, for instance (i) The Action Plans for Jobs, (ii) The National Planning Framework and (iii) The Action Plan for Rural Development. Many of the objectives set out in these publications may help to address some of the Brexit-related challenges facing the Irish economy, at present or over the coming years when the true extent of the impact of Brexit becomes clear. This is particularly relevant given the potential adverse implications for regional areas of the Irish economy due to Brexit.

10.4 Distribution of Employment outside Urban Areas

Table 10.1 below provides the employment in Ireland (000s) by sector and region in 2015. The Table is an extract from the Regional Labour Markets Bulletin (2016) prepared by Solas, the Further Education and Training Authority. The Table provides a number of key insights with regard to employment and the regional composition of jobs within an Irish context. Table 10.1 is important from a Brexit perspective as it highlights exposed sectors and regions, with high concentrations of employment.

Barrett and Morgenroth (2016) note that the UK has been an integral method for easing out labour market challenges in the past, for example during the economic recession. Moreover, the authors point out that Brexit could result in more domestic adjustments in the labour market to “economic shocks” in the future. Therefore, a breakdown of employment by region and sector (Table 10.1) is valuable in order to gain a better understanding of the geographic spread of key sectors in the Irish economy, including some sectors with high exposure to Brexit.

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Table 10.1: Employment in Ireland by Region & Sector (2015)

<table>
<thead>
<tr>
<th>Sector</th>
<th>Border (000s)</th>
<th>Dublin (000s)</th>
<th>Mid-East (000s)</th>
<th>Midland (000s)</th>
<th>Mid-West (000s)</th>
<th>South-East (000s)</th>
<th>South-West (000s)</th>
<th>West (000s)</th>
<th>Ireland (000s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture</td>
<td>20.1</td>
<td>2.4</td>
<td>9.9</td>
<td>9.6</td>
<td>10.3</td>
<td>17.7</td>
<td>20.7</td>
<td>15.7</td>
<td>106.4</td>
</tr>
<tr>
<td>Industry</td>
<td>25.3</td>
<td>47.1</td>
<td>30.6</td>
<td>18.4</td>
<td>25.7</td>
<td>27</td>
<td>44.4</td>
<td>29.7</td>
<td>248.4</td>
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<tr>
<td>Construction</td>
<td>13.7</td>
<td>27.3</td>
<td>17.5</td>
<td>7.6</td>
<td>10.9</td>
<td>18.7</td>
<td>14.2</td>
<td>126.7</td>
<td></td>
</tr>
<tr>
<td>Wholesale &amp; Retail</td>
<td>29.6</td>
<td>83.4</td>
<td>32.8</td>
<td>19.8</td>
<td>20.4</td>
<td>31.4</td>
<td>40.7</td>
<td>21.2</td>
<td>279.4</td>
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<td>Transport</td>
<td>8.4</td>
<td>32.9</td>
<td>12.9</td>
<td>5.1</td>
<td>8.6</td>
<td>7.8</td>
<td>11.3</td>
<td>6.7</td>
<td>93.8</td>
</tr>
<tr>
<td>Accommodation &amp; Food</td>
<td>14.8</td>
<td>49.8</td>
<td>14.7</td>
<td>8.6</td>
<td>9.7</td>
<td>14.5</td>
<td>19.8</td>
<td>11.2</td>
<td>143.1</td>
</tr>
<tr>
<td>Information &amp; Comm.</td>
<td>3.3</td>
<td>47.1</td>
<td>9.7</td>
<td>**</td>
<td>3.5</td>
<td>5</td>
<td>9.2</td>
<td>5.4</td>
<td>85.4</td>
</tr>
<tr>
<td>Financial, Insurance</td>
<td>6.7</td>
<td>51.6</td>
<td>13.3</td>
<td>3.9</td>
<td>4.7</td>
<td>6.2</td>
<td>7.7</td>
<td>3.9</td>
<td>97.8</td>
</tr>
<tr>
<td>Professional Activities</td>
<td>7.7</td>
<td>47.8</td>
<td>16.2</td>
<td>5.6</td>
<td>7.9</td>
<td>9.4</td>
<td>15.4</td>
<td>9.3</td>
<td>119.3</td>
</tr>
<tr>
<td>Administration &amp; Support</td>
<td>4.6</td>
<td>27.1</td>
<td>6.7</td>
<td>**</td>
<td>5.2</td>
<td>5.9</td>
<td>12.2</td>
<td>4.3</td>
<td>67.1</td>
</tr>
<tr>
<td>Public Admin. &amp; Defence</td>
<td>10.3</td>
<td>31.3</td>
<td>12</td>
<td>7.2</td>
<td>6.4</td>
<td>11.4</td>
<td>11.7</td>
<td>8.8</td>
<td>99.1</td>
</tr>
<tr>
<td>Education</td>
<td>14.4</td>
<td>45.5</td>
<td>18.8</td>
<td>7.6</td>
<td>12.9</td>
<td>16.9</td>
<td>23.4</td>
<td>14</td>
<td>153.5</td>
</tr>
<tr>
<td>Health &amp; Social Work</td>
<td>26.6</td>
<td>76.5</td>
<td>29.8</td>
<td>16.5</td>
<td>20</td>
<td>24.6</td>
<td>34.3</td>
<td>25.4</td>
<td>253.6</td>
</tr>
<tr>
<td>Other NACE activities</td>
<td>8.8</td>
<td>37.2</td>
<td>10.3</td>
<td>7</td>
<td>6.2</td>
<td>10.5</td>
<td>14</td>
<td>8.8</td>
<td>102.7</td>
</tr>
<tr>
<td>Total*</td>
<td>194.3</td>
<td>606.7</td>
<td>235.3</td>
<td>120.3</td>
<td>152.6</td>
<td>205</td>
<td>283.5</td>
<td>178.6</td>
<td>1,576.30</td>
</tr>
</tbody>
</table>

Source: Regional Labour Markets Bulletin (October 2016). *Excludes 'Not stated' category which totalled 6,600 persons in the State. When this category is included, the total number in employment in 2015 is 1,983,000. All rows/columns do not sum to subtotals due to rounding. **Too small to report.

While certain sectors have a high concentration of employment in the Dublin region, e.g. wholesale and retail, health and social work, financial insurance, etc. other sectors represent a large share of employment in regional areas. In particular, Table 10.1 estimates that approximately 2,400 were employed in the ‘Agriculture’ sector in Dublin, while approximately 104,000 were employed in the other regions of the economy in 2015. Other related sectors also exhibit high concentrations of employment in regional areas, e.g. food and drink manufacturing, with stakeholder reports estimating high regional exposure within the sector. Therefore, Brexit challenges may be more acute in regional areas of the Irish economy given the composition of employment in these regions and exposure due to the use of the UK as a trading partner.

136 See: IBEC 2017 Brexit report. The report states that “80% of food and drink manufacturing employment is outside Dublin”.

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Section 11: Identification & Illustration of Exposed Sectors

11.1 Introduction

This section explores sectors of the Irish economy that are most at risk to the challenges posed by Brexit. Irish indigenous SMEs who significantly contribute to employment within the Irish economy and are generally less diversified compared to large multinational companies are focused on.

A broad overview of the role of Irish indigenous SMEs is given before discussing current SME credit conditions. This is relevant due to the importance of SMEs within an Irish context and their requirements to access credit streams in order to sustain and/or grow their business activities\textsuperscript{137}. The broad sectoral outlook for SMEs within the Irish economy is summarised in section 11.4. Following on from this, sectors facing particular exposure are discussed namely; the Irish agri-food sector, the Irish tourism sector and the Irish manufacturing sector.

11.2 Irish Indigenous SMEs

Although domestic demand is integral in sustaining SMEs within the Irish economy (see section 7), the UK is the most important external market for Irish indigenous SMEs.\textsuperscript{138} Thus, in terms of Brexit-specific exposure, SMEs who are currently reliant on the UK market are most at risk. In particular, the level of vulnerability depends on the specific sub-sector and region in which they operate. For instance, the business service sector is more export-orientated, while construction and distribution sectors are more domestically driven\textsuperscript{139}.

11.3 SME Credit Conditions

In light of the many challenges facing Irish SMEs, maintaining a sustainable credit flow is important, particularly amidst Brexit uncertainty, and other related issues. SMEs play a vital role within the Irish economy, especially given the significant volume of indigenous SMEs who make a positive contribution to the Irish economy through a number of streams, e.g. to domestic retained earnings, employment, positive contributions to the regional economy, etc.

\textsuperscript{137} Investment and working capital are the two most commonly cited reasons for financing applications by SMEs, according to the Central Bank of Ireland SME Market Report 2017 H1.

\textsuperscript{138} See: \url{https://dbei.gov.ie/en/Publications/Publication-files/Brexit-the-view-of-Irish-SMEs.pdf}. According to this survey of 1045 SMEs, 20 percent of firms surveyed export (with 18\% of those surveyed exporting to the UK market).

\textsuperscript{139} Philip R. Lane, Central Bank of Ireland. (2016). SME Association Conference.
Market:

There are a number of key features of the Irish SME credit market which are worth noting. For example, average interest rates for loans held by SMEs in Ireland are higher than averages within the Euro area.\textsuperscript{140} This indicates that the cost of borrowing is higher for SMEs in Ireland than the Euro averages. Further, the sector faces high investment risk. In addition, the SME credit market is particularly concentrated with the three main lenders accounting for 82 percent of new lending flows within the Irish market\textsuperscript{141} (see Figure 11.1).

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{Figure11_1.png}
\caption{Herfindahl-Hirschman index\textsuperscript{142} for non-financial, non-real estate SME lending, Q4 2010 – Q1 2017\textsuperscript{143}}
\end{figure}


Trends:

The Central Bank of Ireland’s ‘SME Market Report’ 2017 H1 provides a number of interesting findings.\textsuperscript{144} In particular, the report makes reference to the DoF’s “SME Credit Demand Survey”, which notes that application rates for financing for all company types has decreased since 2015. This may indicate that SMEs’ appetite for accessing credit in the aftermath of financial credit constraints,

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\textsuperscript{140} Central Bank of Ireland SME Market Report 2017 H1.
\textsuperscript{141} Central Bank of Ireland SME Market Report 2017 H1.
\textsuperscript{142} The Herfindahl-Hirschman index is calculated as the sum of the squared market shares. Higher values indicate higher market concentration or lower levels of competition. The index is created using data from 17 banks.
\textsuperscript{143} WRTR is an abbreviation for the “Wholesale, Retail Trade and Repairs” sector. According to the report, WRTR is “presented as an additional measure of flow concentration which is not biased downwards by the unprecedented amount of short term lending by specialist finance providers in the WRTR sector in recent quarters.”
\textsuperscript{144} https://www.centralbank.ie/docs/default-source/publications/sme-market-reports/sme-market-report-2017h1.pdf?sfvrsn=6
imposed from the latter end of 2008 onwards, remains weak. Furthermore, Ireland has one of the highest shares of non-performing SME loans within the EU.\textsuperscript{145}

The Government have put a number of measures in place to improve the accessibility to credit for viable SMEs in light of Brexit. For instance, the Agri Cash Flow Support Loan Scheme, which was announced in Budget 2017. This scheme reduces the cost of finance within the agricultural sector in order to strengthen the competitive position of farmers who are often credit constrained, especially drystock farmers. Following on from the Agri Cashflow Support Scheme, the development of new Brexit Response Loan Schemes during 2018 for farmers, fishermen and food businesses were announced in Budget 2018. In addition, Budget 2018 included the announcement of a joint D/BEI and D/AFM “Brexit working capital loan scheme for impacted businesses” to support Irish businesses affected by Brexit\textsuperscript{146}.

11.4 Broad Sectoral Outlook for SMEs

Although the depreciation of the Pound Sterling presents challenges for exporting SMEs, there may also be opportunities for some firms to benefit from this development in the short term. In particular, the weaker value of the Sterling translates into cheaper imports of goods and services used as part of firm’s intermediate production processes. This is especially relevant in light of the ESRI’s forecasted real annual import growth, which is expected to outpace export growth over the coming years.

The following bullet points provide an overview of the broad sectoral outlook for SMEs within an Irish context:

- New lending to SMEs has increased by 32 percent between Q1 2016 and Q1 2017.\textsuperscript{147}
- Positive and negative issues exist, e.g. improved labour market developments and negative external issues, especially Brexit.
- SMEs are likely to continue to play an integral role in the Irish economy, e.g. in relation to employment and trade.

\textsuperscript{146}Irish businesses that are currently impacted by Brexit or will be in the future.  
\textsuperscript{147}https://www.centralbank.ie/docs/default-source/publications/sme-market-reports/sme-market-report-2017h1.pdf?sfvrsn=6
11.5 Vulnerability

Some sectors of the economy are likely to be more sensitive to the negative implications of Brexit than others. Indigenous manufacturers, the agri-food sector and other SMEs who export to the UK face particular vulnerability. The following section outlines a selection of Brexit-related challenges that may face two sectors of the Irish economy; the Irish agri-food and Irish tourism sectors.

A Selection of Brexit-related Issues that may arise for the Agri-food Sector:

There are a number of Brexit-related challenges facing the Irish agri-food sector. Some of the overarching potential adverse consequences that may arise are outlined below:

<table>
<thead>
<tr>
<th>Challenges</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Potential Trade Barriers</td>
<td>Under WTO arrangements, tariffs on agricultural goods are high, particularly when compared to tariffs for non-agricultural merchandise goods. Thus, a hard Brexit may put significant adverse pressure on the Irish agri-food sector. Furthermore, a number of NTBs place the agri-food sector in a particularly vulnerable position compared to other sectors of the economy, e.g. sanitary checks, additional lead times and the implications this may have for perishable goods, etc.</td>
</tr>
<tr>
<td>b. Exchange Rate Volatility</td>
<td>Ireland’s agri-food sectors high reliance on the UK market, makes the sector vulnerable to exchange rate movements. The depreciation of the Pound Sterling since the UK’s referendum to leave the EU, represents a significant risk to the sector.</td>
</tr>
<tr>
<td>c. EU Funding</td>
<td>The UK is a net contributor to the EU Common Agricultural Policy. Brexit could potentially have implications for CAP funding. This may have implications for primary producers who are heavily reliant on EU direct payments.</td>
</tr>
<tr>
<td>d. Competitiveness Issues</td>
<td>Should the UK choose to liberalise trade, the Irish agri-sector would likely face greater competition from third countries.</td>
</tr>
<tr>
<td>e. Regulatory Implications</td>
<td>There are a number of unique challenges that the Irish agri-food sector may face, especially when compared to other sectors of the Irish economy. Additional regulatory implications may arise, e.g. possible new labelling requirements, additional inspections and checks on live animals, etc. (See Figure 4.4 for other illustrative examples).</td>
</tr>
</tbody>
</table>

Source: Author’s own table.

The Irish agri-food sector accounts for 7.9 percent of employment within the Irish economy\(^{148}\), mainly in regions outside Dublin. The potential Brexit-related challenges that may face the Irish agri-food sector vary depending on a number of factors, including trade exposure to the UK market and the

\(^{148}\) CSO Labour Force Survey.
regional composition of employment etc. By way of an illustrative example, the Irish poultry sector exhibits high Brexit related vulnerability. An exploration of the potential Brexit vulnerabilities facing this sub-sector is provided below. It is worth noting that a number of other sub-sectors of the Irish agri-food sector exhibit significant exposure due to Brexit, as highlighted in existing Brexit literature and reports.\footnote{For example, Bord Bia (2017). Brexit Barometer Industry Findings report.}

**Illustrative example: The Irish Poultry Sector\footnote{This example is for illustrative purposes only and is not exhaustive.}**

**Poultry\footnote{Poultry and eggs are categorised by the CSO under a number of Standard International Trade Classification (SITC) codes.}

The Irish poultry sector is heavily reliant on the UK market, with approximately 80 percent of poultry exports destined for the UK – as a final destination or on route to other markets through the UK landbridge.\footnote{Bord Bia’s Export Performance and Prospects 2017 – 2018 report states “The majority of Irish poultry exports continue to go to the UK which records almost 80 percent market share for 2017… a certain amount of which is destined for markets further afield.”} The poultry sector is low value and volume compared to other agri-food sub-sectors, however, in light of the high level of exposure to the UK market the following illustrative example highlights the vulnerability of the Poultry sector.

There are a number of vulnerabilities faced by the sector. Overall market and Brexit-related trends provide evidence to support the exposure this agri-food sub-sector is likely to face. Figure 11.2 outlines some of the potential exposures that may arise for the Irish poultry sector.
The Irish poultry sector is low value and low volume, compared to other sub-sectors of the Irish agri-food industry. However, given the high concentration of trade with the UK market, vulnerabilities are worth noting. The Irish poultry is not diversified especially when compared to other sub-sectors of the Irish economy, e.g. chemical and pharmaceutical exports, beverage sector, etc. Irish poultry exports to EU and international markets are low in value and volume terms. The value of Irish poultry exports to these markets was estimated at approximately 20 percent in 2017. Therefore, Brexit presents significant challenges for the sector and this has been noted in Bord Bia’s latest export performance and prospects report 2017 – 2018. In addition, the use of the UK landbridge for exports represents another form of exposure faced by the sector. This vulnerability is likely to be faced by a large number of sectors of the Irish economy in addition to direct import and export challenges that may arise, depending on the future trade relationship between the EU and the UK post-Brexit.

A Selection of Brexit-related Issues that may arise for the Tourism Sector:

There are also a number of Brexit-related issues facing the Irish tourism sector. Some of the potential adverse consequences that may arise are outlined below:

---

Table 11.2: A Selection of Challenges facing the Irish Tourism Sector due to Brexit

<table>
<thead>
<tr>
<th>Challenges</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Possible Border Controls:</td>
<td>From an Irish perspective, the Common Travel Area is an area of key focus in terms of Brexit.</td>
</tr>
<tr>
<td>b. Aviation Issues:</td>
<td>Connectivity challenges may arise due to Brexit. The dependency of the Irish tourism sector on UK passenger traffic may pose issues if individual bilateral aviation agreements have to be agreed should a hard Brexit arise.</td>
</tr>
<tr>
<td>c. Currency differences:</td>
<td>The weakening of the Pound Sterling against the Euro mean that it is now more expensive for UK residents to travel to Ireland. This acts as a disincentive to travel to the ROI and makes the UK a cheaper competitor destination vs ROI.</td>
</tr>
<tr>
<td>d. Competitiveness Issues:</td>
<td>A key challenge, for the Irish tourism sector is the need to maintain competitiveness. This issue is coming from domestic and international pressures. The 9 percent VAT rate for the sector is helpful in this regard.</td>
</tr>
<tr>
<td>e. Potential Consequences for Overnight Business Travel:</td>
<td>Business travel may suffer negative implications due to Brexit, especially if a hard Brexit comes into effect. Irish firms seeking to travel to the UK could see increased regulation and restrictions. The same would likely apply to UK business people seeking to travel to Ireland along with increased costs arising from the weaker value of the Pound Sterling.</td>
</tr>
</tbody>
</table>

Source: Author’s own table.

The Irish Tourism Sector:

According to the D/TTAS, the Irish tourism sector “supports 148,300 jobs in the accommodation and food sector alone”. The sector also makes a significant contribution to employment indirectly, with total tourism employment of approximately 220,000.\(^{154}\) In addition, there is a strong regional importance of the sector within an Irish context. Therefore, the tourism sector and the importance of visitors from the UK is provided below.

Whilst the Irish tourism sector has experienced a number of years of strong growth, the short-term impact of the Brexit referendum for tourism has seen a reduction in British visitors in 2017 on foot of the depreciation of Sterling. In the short term, market diversification is offsetting this decline. In the medium term, other Brexit associated risks will threaten tourism. Aviation related risks will reduce air access if they materialise. Ireland could potentially lose market share to GB for third country markets. Outcomes in respect of the Common Travel Area and visas could also impact on tourism.

\(^{154}\) http://www.dttas.ie/tourism
Statistical data on the number of overseas trips from GB to Ireland show a decline from January to September 2016 when compared with the same period in 2017\(^{155}\), as illustrated below:

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Great Britain</td>
<td>3,013</td>
<td>2,810</td>
</tr>
</tbody>
</table>

Table 11.3: Trips from GB to the Republic of Ireland (2016 compared to 2017)

Source: CSO Tourism and Travel Statistical Release December 2017 (Table 1).

In the immediate aftermath of Brexit, passenger numbers from GB to Ireland have declined slightly. The weaker value of the Pound Sterling may represent one reason for this decline in visitor numbers, however it is impossible to predict whether this pattern will continue going forward especially given the continuing presence of uncertainty in relation to the outcome of the EU-UK negotiations.

Reliance on the UK market:

The UK represents more than 40 percent of the volume of overseas trips made to Ireland (Table 11.4). Therefore, the Irish tourism sector is highly reliant on the UK market.

<table>
<thead>
<tr>
<th>Year</th>
<th>Months</th>
<th>Irish Residents’ Trips Overseas</th>
<th>Trips to Ireland</th>
<th>Great Britain</th>
<th>Other Europe</th>
<th>North America</th>
<th>Other Areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>Jan - Dec</td>
<td>6,965,000</td>
<td>8,643,100</td>
<td>3,546,900</td>
<td>3,043,400</td>
<td>1,514,200</td>
<td>538,600</td>
</tr>
<tr>
<td>2016</td>
<td>Jan - Dec</td>
<td>7,404,600</td>
<td>9,584,400</td>
<td>3,924,100</td>
<td>3,302,100</td>
<td>1,808,000</td>
<td>550,200</td>
</tr>
<tr>
<td>2017</td>
<td>Jan - Dec</td>
<td>7,939,000</td>
<td>9,932,100</td>
<td>3,728,900</td>
<td>3,482,400</td>
<td>2,101,500</td>
<td>619,300</td>
</tr>
</tbody>
</table>

Source: Extract from CSO Overseas Travel October – December 2017.

Despite an increase in visits from GB during the first half of 2016 (January – June up to and just after the Brexit referendum), numbers declined during the same period this year and continued over the period described in Table 11.4, although it will be some time before a more robust trend can emerge.

On a positive note, other key markets namely; “Other Europe”, “North America” and “Other Areas” grew in 2017. The most notable increase in trips was from North America to Ireland (increase of 587,300 visitors between Jan-Dec 2015 and Jan-Dec 2017).

\(^{155}\) [http://www.cso.ie/en/releasesandpublications/er/tt/tourismandtravelquarter122017/]
11.6 Manufacturing Sector Overall

Employment within the sector is spread across a broad base of skill levels, as well as being “regionally dispersed, providing employment opportunities throughout Ireland.”

A number of Brexit challenges may arise for the sector. However, the extent of Brexit-related issues facing the sector will not become clear until the outcome of the EU-UK negotiations, especially in regard to future relationship issues, including trade.

Brexit-related concerns may range from input issues (as import sourcing is not well diversified) and supply chain issues (including issues relating to intermediate goods sourced from the UK). Furthermore, landbridge issues may arise for the Irish manufacturing sector with transport associated with manufactured products estimated to decrease by between 2 to 3 percent in volume terms, due to Brexit.

There are two key types of firms operating within Ireland’s manufacturing sector; domestic and foreign. A brief exploration of some of the reasons why domestic manufacturing firms (e.g. food processing firms) are more susceptible to Brexit risks when compared to larger, more internationally diversified firms is provided below. Following on from this, some of the characteristics of foreign manufacturing firms operating in Ireland are described.

Domestic (e.g. food processing firms):

Domestic manufacturing (which includes a large number of Irish SMEs) is more exposed to Brexit-related risks, compared to large foreign-owned manufacturing firms. There are a number of reasons for this, including the following:

1. This sector relies heavily on the UK market for exports.
2. Many SMEs outsource their distribution requirements to external hauliers etc. Therefore, many Irish firms operating within the manufacturing space may be unaware of the true extent of the landbridge implications arising from Brexit or possible increases in transportation costs.

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3. Maintaining existing integrated cross-border supply chains will be challenging should timing delays, due to customs procedures and regulatory rules be required. DoF analysis suggests that 17.1 percent of inputs in the traditional manufacturing sector are sourced from the UK.¹⁵⁹

4. As a high proportion of employment in the sector is outside Dublin, regional implications are expected to be pronounced within the sector, (see Table 5.1 for regional breakdown).

Foreign (e.g. technology driven manufacturing firms/pharmaceutical MNCs):

1. Foreign-owned manufacturing companies are less exposed to the challenges posed by Brexit. In general, large firms tend to benefit from a number of geographical bases, economies of scale, greater product and market diversification and higher productivity.

2. As many of these companies price in US Dollars¹⁶⁰ they are less exposed to Pound Sterling volatility.

3. These firms tend to have greater market power and do not experience the price-taker vulnerability faced by small domestic manufacturing firms to the same extent.

4. Access to finance is more readily available due to internal sources, external credit rating, publicly available information, etc.


¹⁶⁰ Davy Research Irish Economy (March 31, 2016). The Economic Impact of Brexit on Ireland.
Section 12: Conclusion

12.1 Overall

The Irish economy faces significant exposure to Brexit. The implications that may arise are many and varied, with existing literature highlighting a number of key issues. In light of this, this paper reviews a selection of existing Brexit literature and other relevant sources to establish a clearer understanding of the Brexit challenges that are either currently facing the Irish economy, e.g. uncertainty, or will likely impact the economy in the medium to long term, e.g. potential changes to the existing EU-UK trade relationship post-Brexit.

The paper provides a broad exploration of the following implications of Brexit for the Irish economy;

**Trade:**

- Challenges are likely to include; possible tariff and non-tariff barriers, issues in regard to intermediate goods sourced from the UK, the use of the UK landbridge (and possible SME knowledge gaps), potential changes to the EU-UK trading environment post-Brexit (modelled in existing literature under various potential scenarios ranging from ‘soft’ to ‘hard’ type trade arrangements), etc.

**Uncertainty:**

- Brexit-related uncertainty has a wide-range of implications at a firm and economy level, e.g. in relation to the prolonging of investment decisions due to heightened uncertainty.
- In addition, the negative impacts of Brexit are expected to exceed any potential positive investment gains that may be leveraged over the coming years.

**Exchange rate volatility:**

The depreciation of the Pound Sterling and the associated implications for Irish consumers and producers:

- The fall in the value of the Pound Sterling has resulted in cheaper import prices for Irish consumers and for Irish firms who source intermediate goods in the UK, which are used as part of the production process.
- From a producer point of view, however, the depreciation of the Pound vis-à-vis the Euro also raises issues regarding the competitiveness of Irish exports to the UK market.
Sector and sub-sector vulnerabilities:

- The paper notes three indigenous sectors facing Brexit exposure; the Irish tourism, agri-food and domestic manufacturing sectors.
- While the implications of Brexit are likely to span across the Irish economy, these sectors face significant trade exposure to the UK market. For example, the UK represents over 40 percent of the volume of overseas trips made to Ireland, more than 40 percent of agri-food exports are to the UK and many domestic manufacturing firms rely on the UK market as a source of intermediate goods.

Regional impacts:

- Brexit challenges are likely to be more acute in regional areas of the economy, where there is a high concentration of enterprises operating within exposed, indigenous sectors of the Irish economy.

Along with discussing a number of issues arising from Brexit, the paper highlights Brexit-specific measures introduced in Budget 2017 and Budget 2018 to help mitigate against some Brexit challenges.

Budget responses:

Some of the key measures put in place include;

- State Agency responses, e.g. EI’s SME Support Scorecard and InterTradeIreland Brexit Advisory Service.
- Measures to support Department responses to Brexit, e.g. additional funding for D/FAT for issues such as Brexit co-ordination and public engagement in Budget 2018.
- Brexit Loan schemes, e.g. €300m D/BEI and D/AFM Brexit Working Capital Loan Scheme for Impacted Businesses, which is expected to launch in March 2018.

The paper also draws attention to existing supports that are already available to Irish SMEs. In particular, the paper provides illustrative examples of some of the supports available to enterprises by using the LEO Supporting SME Online Toolkit. The paper details some of the existing supports offered by State Agencies and suggests that some of these existing forms of assistant may help mitigate against some Brexit challenges, e.g. R&D and promotion of market supports.

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12.2 Concluding Remarks

To conclude, the UK decision to leave the EU will have adverse consequences for the Irish economy, compared to a no-Brexit scenario.

This paper notes that uncertainty and exchange rate volatility are currently posing particular challenges for the Irish economy. The paper highlights that certain sectors and regions (with high concentrations of SMEs) exhibit significant vulnerability to Brexit-related issues compared to foreign owned firms. In particular, the paper highlights challenges that the Irish agri-food sector is likely to face given the plethora of unique concerns that the sector may face due to Brexit.

Brexit-related vulnerabilities vary at a sector, sub-sector and regional level. Therefore future Brexit-related supports should be targeted at firms facing exposure caused by this externally driven economic shock. This is particularly important in light of the potential trade\textsuperscript{164} and employment\textsuperscript{165} issues that may arise post-Brexit.

A significant level of uncertainty still remains in relation to the future relationship that will be in place between the EU and the UK post-Brexit and this has been noted by much of the literature reviewed. Moreover, given that the EU-UK Article 50 negotiations are still in progress, it is impossible to capture the true extent of the potential challenges that the Irish economy may face. A timeline of key dates in relation to the UK exit from the EU, is provided overleaf.

\textsuperscript{164} Possible tariff and NTBs, landbridge implications and issues regarding the sourcing of intermediate goods from the UK, etc.

\textsuperscript{165} Potential sector-specific labour adjustments
12.3 Key Dates

23rd June 2016: UK vote to leave the European Union.

29th March 2017: UK triggered Article 50 of the treaty on European Union.

8th December 2017: EU and UK Government agreed “in principle” on the following areas of the first phase of the negotiations; citizen’s rights (EU and UK), Ireland and Northern Ireland and the financial settlement.

15th December 2017: At the European Council, Heads of State agreed that “sufficient progress” had been achieved in order to progress to phase two of the negotiations.

20th December 2017: European Commission recommended draft negotiating directives for the next phase of the Article 50 negotiations.166

29th January 2018: European Commission receives mandate to begin negotiations with the UK on transitional arrangements.

EU Summits: February, March, May, June, October and December 2018.

October 2018: Period flagged by Michel Barnier for concluding negotiations on the Withdrawal Agreement (which will include provisions on transition) and on a political declaration on the framework for the future relationship.

October 2018: Ratification of the Withdrawal Agreement by the UK, as well as by the European Parliament and the Council (Article 50), must be completed before 29 March 2019.

30th March 2019: UK will be a third country to the EU.167 Negotiations on the detail of the future EU-UK relationship may commence after this date.

31st December 2020: The European Commission recommends that a transitional period should not last beyond this date.168

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reports/sme-market-report-2016h2.pdf?sfvrsn=4


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Analyses using the FAPRI-UK Model. Belfast; Agri-Food and Biosciences Institute.


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Department of Business Enterprise and Innovation and Department of Foreign Affairs and Trade. (2017). Ireland Connected: Trading and Investing in a Dynamic World. Dublin; Department Business, Enterprise and Innovation & Department of Foreign Affairs and Trade.


### Appendix

#### Appendix 1: Data Source Description

<table>
<thead>
<tr>
<th>DATA</th>
<th>SOURCE</th>
<th>INFORMATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medium to long run economic implications of Brexit</td>
<td>ESRI</td>
<td>Gross Value Added (GVA) at basic prices, GVA at basic prices (traded sector), GVA at basic prices (non-traded sector), export of goods and services, personal consumption of goods &amp; services, employed persons, average wage, personal consumption deflator, GDP deflator, personal savings rate, unemployment rate, general Government balance as a % of GDP.</td>
</tr>
<tr>
<td>Trade</td>
<td>CSO/ UK Office of National Statistics Publication Tables</td>
<td>Goods and Service exports and imports to/from the UK/Great Britain (GB)/Northern Ireland (NI) for various years. Tables by commodity. Merchandise trade with GB and NI.</td>
</tr>
<tr>
<td></td>
<td>OECD</td>
<td>Import and Exports of goods as a % of Gross Domestic Product (GDP) 2016.</td>
</tr>
<tr>
<td></td>
<td>DoF</td>
<td>% change in export growth.</td>
</tr>
<tr>
<td>Land bridge</td>
<td>IMDO, Bord Bia, ESRI</td>
<td>Trade that travels through the UK to/from Ireland as part of the supply chain process.</td>
</tr>
<tr>
<td>Tariffs</td>
<td>WTO</td>
<td>EU’s Applied Most Favoured Nation (MFN) tariff summary for agricultural products.</td>
</tr>
<tr>
<td>Cross-border Trade</td>
<td>InterTradeIreland</td>
<td>Possible trade impact from Ireland to GB, GB to Ireland, Ireland to NI, NI to Ireland and Cross-border trade due to Brexit under three possible trade scenarios.</td>
</tr>
<tr>
<td>-------------</td>
<td>--------------</td>
<td>------------------------------------------------------------------</td>
</tr>
<tr>
<td>Employment</td>
<td>DoF</td>
<td>Persons employed in regions as a % of total employment by sector.</td>
</tr>
</tbody>
</table>
| D/AFM       | Factsheet on Irish Agriculture – January 2017. Breakdown of agri-food sector employment under the following categories:
|             | 1. Agri, forestry and fishing
|             | 2. Food
|             | 3. Beverage
|             | 4. Wood processing |
| CSO Quicktables | Employment by NACE Rev. 2 economic sector. |
| Sectoral Output Multipliers for the manufacturing sector | Output Multipliers of the top 5 manufacturing sectors exposed to the UK. |
| Number of Geographic destinations for Irish food and non-food firms. | Number of destinations for Irish food and non-food firms 1996 to 2015. |
| Government Supports | Government financial supports to selected agencies including; |
|             | The number employed (on a full time basis) in quarter four. |
|             | The Exchequer Allocations between 2012 and 2016. |
| GDP         | ESRI | % change in GDP between 1990 and 2017 during the following periods:
|             |   - Export-led growth
|             |   - Domestic-led growth
<p>|             |   - Recession and recovery |
| Farm systems | National Farm Survey (NFS) | Main types of farm system in Ireland and the approximate numbers engaged in each, according to the NFS 2016. |</p>
<table>
<thead>
<tr>
<th>Source</th>
<th>Data Source</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tourism</td>
<td>CSO Tourism &amp; Travel Statistical Release</td>
<td>Trips from GB to Ireland January to September 2016 and 2017.</td>
</tr>
<tr>
<td></td>
<td>CSO Overseas Travel</td>
<td>Volumes of trips to Ireland from GB.</td>
</tr>
<tr>
<td>Trade</td>
<td>DoF</td>
<td>Goods exports to the UK by sector, as a % of total goods exports to the UK.</td>
</tr>
<tr>
<td>SME requests for Finance</td>
<td>DoF</td>
<td>SME credit demand survey % of small SMEs requesting bank finance Sept. 2011 to Sept. 2016.</td>
</tr>
<tr>
<td>Real Output Levels</td>
<td>ESRI</td>
<td>Graphical illustration extracted from working paper “Modelling the Medium to Long Term Potential Macroeconomic Impact of Brexit on Ireland.” Impact of Brexit on Real Output levels in the Irish Economy under 3 potential trade scenarios: - EEA - FTA - WTO</td>
</tr>
</tbody>
</table>

Source: Author’s own table.
Appendix 2: Definitions

Definitions of some of the economic terms referred to in this paper:

<table>
<thead>
<tr>
<th>TERM</th>
<th>DEFINITION</th>
<th>SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ad valorem rates</td>
<td>The customs duty is calculated as a percentage of the value of the product.</td>
<td>World Bank</td>
</tr>
<tr>
<td>Agri-food sector</td>
<td>Primary production (agriculture, fishing and forestry) along with food and beverages and the wood processing sector.</td>
<td>Bord Bia (2018)</td>
</tr>
<tr>
<td>DSGE model</td>
<td>The dependence of current choices on future uncertain outcomes makes the models dynamic and assigns a central role to agents’ expectations in the determination of current macroeconomic outcomes. In addition, the models’ general equilibrium nature captures the interaction between policy actions and agents’ behaviour. Furthermore, a more detailed specification of the stochastic shocks that give rise to economic fluctuations allows one to trace more clearly the shocks’ transmission to the economy.</td>
<td>Sbordone, A. M., Tambalotti, A., Rao, K. and K. Walsh. (2010). Policy Analysis Using DSGE Models: An Introduction. Federal Reserve Bank of New York Economic Policy Review.</td>
</tr>
<tr>
<td>Herfindahl-Hirschman Index</td>
<td>A measure of market concentration, it depends on the number of firms and their size relative to the market. It is calculated by summing up the squares of market shares of each firm.</td>
<td>NASDAQ. See: <a href="http://www.nasdaq.com/investing/glossary/h/herfindahl-Hirschman-index">http://www.nasdaq.com/investing/glossary/h/herfindahl-Hirschman-index</a></td>
</tr>
<tr>
<td>Sustainable</td>
<td>If the farm business is not viable the household is still considered sustainable if the farmer or spouse has an off-farm income.</td>
<td>NFS 2016 results (published July 2017).</td>
</tr>
<tr>
<td>Tariff lines</td>
<td>Tariff lines refer to a product as defined in lists of tariff rates. Products can be sub-divided, the level of detail reflected in the number of digits in the Harmonized System (HS) code use to identify the product.</td>
<td>WTO</td>
</tr>
<tr>
<td>Tariff rate quotas</td>
<td>Comprised of a low tariff rate on an initial increment of imports (the within-quota quantity) and a very high tariff rate on imports entering above that initial amount.</td>
<td>World Bank</td>
</tr>
<tr>
<td>Viable</td>
<td>A farm business is viable if the farm income can remunerate family labour at the minimum agricultural wage and provide a 5% return on the capital invested in non-land assets.</td>
<td>NFS 2016 results (published July 2017).</td>
</tr>
<tr>
<td>Vulnerable</td>
<td>A farm household is considered to be economically vulnerable if the farm business is not viable and if neither the farmer nor spouse work off the farm.</td>
<td>NFS 2016 results (published July 2017).</td>
</tr>
</tbody>
</table>

Source: Author’s own table.
### Appendix 3: Some existing Brexit Literature published by Departments, State Agencies and the ESRI.

<table>
<thead>
<tr>
<th>AUTHOR</th>
<th>TITLE</th>
<th>DATE OF PUBLICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dept. of Finance &amp; ESRI</td>
<td>Scoping the Possible Economic Implications of Brexit on Ireland.</td>
<td>November 2015</td>
</tr>
<tr>
<td>Teagasc</td>
<td>Brexit: Potential Implications for the Irish Agri-Food Sector.</td>
<td>April 2016</td>
</tr>
<tr>
<td>Dept. of Finance</td>
<td>Getting Ireland Brexit Ready</td>
<td>October 2016</td>
</tr>
<tr>
<td>ESRI</td>
<td>The Product and Sector Level Impact of a Hard Brexit Across the EU</td>
<td>October 2016</td>
</tr>
<tr>
<td>Dept. of Taoiseach</td>
<td>Brexit: Ireland’s Priorities.</td>
<td>March 2017</td>
</tr>
<tr>
<td>Dept. of Finance</td>
<td>UK EU Exit: An Exposure Analysis of Sectors of the Irish Economy.</td>
<td>March 2017</td>
</tr>
<tr>
<td>Dept. of Taoiseach</td>
<td>Ireland and the Negotiations on the UK’s Withdrawal from the European Union: The Government’s Approach.</td>
<td>May 2017</td>
</tr>
<tr>
<td>InterTradeIreland</td>
<td>Potential Impact of WTO tariffs on Cross-Border Trade.</td>
<td>June 2017</td>
</tr>
<tr>
<td>Dept. of Finance</td>
<td>UK EU Exit: Trade Exposures of Sectors of the Irish Economy in a European Context.</td>
<td>September 2017</td>
</tr>
<tr>
<td>Author</td>
<td>Title</td>
<td>Date</td>
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<tr>
<td>ESRI</td>
<td>Ireland’s International Trade and Transport Connections.</td>
<td>October 2017</td>
</tr>
<tr>
<td>Dept. of Business, Enterprise &amp; Innovation</td>
<td>Building Stronger Business: Responding to Brexit by competing, innovating and trading.</td>
<td>November 2017</td>
</tr>
<tr>
<td>Dept. of Business, Enterprise &amp; Innovation</td>
<td>Brexit Views of Irish SMEs.</td>
<td>January 2018</td>
</tr>
<tr>
<td>Dept. of Business, Enterprise &amp; Innovation</td>
<td>Strategic Implications for Ireland arising from Changing EU-UK Trade Relations.</td>
<td>February 2018</td>
</tr>
<tr>
<td>InterTradeIreland</td>
<td>Cross-Border Trade and Supply Chain Linkages Report.</td>
<td>March 2018</td>
</tr>
<tr>
<td>ESRI</td>
<td>Special Article: Brexit and Irish Consumers.</td>
<td>March 2018</td>
</tr>
<tr>
<td>Dept. of Finance</td>
<td>Brexit: An Analysis of Import Exposures in an EU context.</td>
<td>March 2018</td>
</tr>
</tbody>
</table>

Source: Author’s own table. Literature in order of publication date.
**Quality Assurance Process**

To ensure accuracy and methodological rigour, the author engaged in the following quality assurance process (*list only relevant items and include appropriate details for each; delete items that do not apply*).

- **Internal/Departmental**
  - Line management
  - Other divisions/sections

- **External**
  - Other Government Departments
  - Quality Assurance Group (QAG)
  - Peer review (IGEES network, seminars, conferences etc.)