

Brexit

Potential Implications for the Irish Agri-Food Sector



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April 2016

ISBN: 978-1-84170-624-5

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JEL codes: F15, Q17

Keywords: Brexit, Ireland, UK, agri-food sector, EU single market

Available to download from www.teagasc.ie

ISBN: 978-1-84170-624-5

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Glossary of Terms

AHDB	Agriculture and Horticulture Development Board (UK)
bn	billion
Brexit	Decision of the UK to leave the EU
Bremain	Decision of the UK to remain part of the EU
CN8	Combined Nomenclature, most detailed (8 digit) level of disaggregation
EU28	The current 28 EU member states
EU27	EU28 minus UK
DAFM	Department of Agriculture, Food and the Marine
DEFRA	Department of Environment, Food and Rural Affairs
GATT	General Agreement on Tariffs and Trade
HS	Harmonised Commodity Description and Coding System
HS2 Code	High level (aggregated) HS category
HS6 Code	Lower level (disaggregated) HS category
Import tariffs	Taxes applied at the point of entry on imported goods by an importing country
mn	million
Most Favoured Nation (MFN)	Categorisation given by WTO members to each other for trade purposes (usually inferior terms to that of a customs union)
Multi Annual Financial Framework (MFF)	The seven year EU budget
Net Trade	Exports minus imports (expressed in value or volume terms)
000t	Thousand tonnes
t	Tonnes
Tariff Rate Quota (TRQ)	A trade policy instrument that grants preferential market access for a fixed volume of imports with imports in excess of the quota amount attracting a higher out of quota tariff.
WTO	World Trade Organisation

Executive Summary and Key Findings

Background

- The United Kingdom (UK) government has negotiated concessions from fellow EU members with regard to a number of concerns it has raised. As a result of this agreement the UK government has decided to put the question of continued UK membership of the European Union (EU) to UK voters on June 23rd 2016.
- If the UK votes in favour of leaving the EU, a so called Brexit could take place at some point in the period from mid-2018 at the very earliest. However, it might be mutually beneficial to both the UK and EU to delay further to allow suitable post Brexit arrangements to be negotiated and put in place. It is not inconceivable that Brexit could take a decade to come about.
- It is not possible to perform a rigorous economic modelling assessment of the implications of Brexit at this time, because the terms of Brexit are unknown.
- The UK is second only to Germany in the EU in terms of its population and the size of its economy.
- The UK has a very large trade deficit in agri-food products of the order of €21 billion in 2014.

Existing Anglo-Irish Trade

- The UK is Ireland's largest single trading partner. Total Irish merchandise exports in 2014 were valued at €92 billion (bn), of which almost €13.6 bn were exports to the UK. Ireland also imports a significant amount from the UK. Total Irish merchandise imports were valued at €61 billion in 2014, of which almost €20.6 bn were from the UK.
- Agri-food trade is a relatively small share of Ireland's total trade, valued at about €10.7 bn in 2014. Importantly, Irish agri-food exports to the UK represent about one third of Ireland's total merchandise exports to the UK. Therefore, Brexit is a concern for the Irish agri-food sector.
- In 2014 Ireland exported €4.5 bn in agri-food products to the UK, primarily in the form of beef, dairy products and processed foods. Ireland's imports of agri-food products from the UK are also substantial, amounting to €4.1 bn in 2014, with imports of processed food, raw milk for processing, alcoholic beverages and soft drinks being the most significant. Overall, this means that Ireland had an agri-food trade surplus with the UK of the order of €456 million (mn) in 2014.
- Should the UK choose to leave the EU, ideally it will need to negotiate the terms of its exit. This negotiation will encompass a range of issues, including the movement of goods (trade), people and capital, the terms of which would be important to the Irish economy in the broad sense, given the country's close economic and other connections with the UK.

- The UK is a substantial net importer of agri-food products, particularly primary products or commodities. Over the next 10 to 15 years UK agricultural production is anticipated to remain relatively stable. However, the UK's import dependence is likely to increase, given the strong rate of anticipated growth in its human population, estimated at close to 1 percent per year. Other things being equal, should the UK remain in the EU, it could be expected that Irish agri-food export opportunities to the UK would increase.

Potential Impact of Brexit on EU trade with the UK

- By contrast should the UK vote to leave the EU, this would have adverse consequences for the UK's trade with EU member states, including Ireland. The extent of the impact which Brexit would have on the Irish agri-food sector would depend on a range of factors. Of these, the UK's future trading relationship with the remaining EU members (EU27) is the most important factor for the agri-food sector in Ireland. The UK might negotiate a trading arrangement that closely approximates a Free Trade Agreement (FTA) and this would be the most desirable outcome for Ireland, should a Brexit occur. Administrative costs associated with trade with the UK would increase for Irish exporters even under an FTA, meaning that even the most favourable Brexit outcome would have a negative impact on the Irish agri-food sector. While the volume of trade might be relatively unhindered under an FTA arrangement, the cost of doing business with the UK would increase.
- The most negative outcome for Ireland would result if the UK and EU27 failed to negotiate the terms of the UK's exit. At that point, as World Trade Organisation (WTO) members, the EU27 and UK, would only be obligated to offer each other Most Favoured Nation (MFN) status. This would result in the imposition of MFN tariffs on trade between the UK and the EU27 and would be expected to lead to a reduction in the level of trade between the UK and the EU27.
- Under Brexit the UK would also need to address its trading relationships with other countries around the world. As a non EU member, the UK would be free to negotiate deals with countries that already have a trade deal with the EU and countries that do not yet have a trade deal with the EU.
- From the perspective of the Irish agri-food sector the least desirable outcome would occur should the UK establish liberal trade agreements with agri-food net exporters that do not currently have trade agreements with the EU27. This could increase the supply of agricultural commodities in Europe, with adverse consequences for EU27 commodity prices.
- Even if the UK and EU27 resort to trade relations under MFN terms, agri-food sector trade between the EU and the UK is unlikely to collapse. As a net importer the UK would need to continue to import agri-food products and would not be expected to pursue an agri-food self-sufficiency policy.

- Should the UK leave the EU and if trade takes place on an MFN basis, there would be notable agri-food trade consequences for several EU member states, concentrated in particular sectors. Ireland's beef, dairy and lamb exports would be affected. Denmark's pig and dairy trade and the Netherlands' exports of vegetable products would be affected. In Southern Europe, exports of wine from France, Spain and Italy would be affected, as would exports of olive oil from Greece.
- The extent of the impact on EU27 agri-food exports to the UK would depend on the availability of competitive agri-food exports from countries outside of the EU, and would also depend on consumer country of origin preferences, which are influenced by amongst other things, traceability, animal welfare, human health and sustainability concerns.
- To the extent that some share of the 'normal' level of EU27 exports to the UK are diverted to EU27 markets due to Brexit, there would be a negative impact on EU27 commodity prices. This negative impact would depend on the importance of the UK self-sufficiency and import demand as a determinant of the EU27's net trade position in specific commodity markets and would also depend on the world price of the specific commodity relative to the price in the EU.
- Other things being equal, if the UK is close to self-sufficiency in a particular sector and if world prices are similar to EU prices, then Brexit would not be expected to significantly impact that sector. This would characterise the likely outcome of Brexit for the EU cereals sector.
- Conversely, other things being equal, if the UK has a substantial deficit in a particular commodity area and if world prices are considerably below the EU level, then the greater the potential for an impact on EU prices. This would characterise the likely outcome of Brexit for the EU beef sector.

Specific Implications of Brexit for the Irish Agri-Food sector

- Irish agri-food exports to the UK would decline as a result of Brexit, but this reduction would be partially offset by an increase in the value of exports to other destinations, where prices are not likely to be as high as those achieved on the UK market.
- The magnitude of the loss in Irish agri-food export value would depend on the UK's future trading relationship with the EU27 (and Ireland) and the direction of UK agricultural policy, both of which remain unknown.
- Four scenarios, described in the paper, were analysed under which Irish-UK agri-food exports decline by differing amounts, with exports diverted to other markets at varying discounts as compared to their value under the status quo ante.
- The largest impact showed a reduction in total Irish agri-food exports of 8 percent or €800 m.

- The smallest impact of Brexit is an annual loss of agri-food export value of circa €150 m or 1.4 percent of agri-food export value.
- The potential impact of Brexit on the Irish agri-food sector in aggregate should not be seen as an indication of the potential impact on any individual Irish food business exporting to the UK. There is likely to be a higher degree of risk associated with Brexit for those Irish food businesses with a substantial dependence on the UK market.

Potential Impact of Brexit on UK agri food exports to Ireland

- It is difficult to envisage the implications which impediments to free trade would have on Ireland's considerable agri-food imports from the UK. Were UK exports to Ireland to decrease it is possible that some of the gap could be filled by indigenous Irish food producers, particularly if access to the UK market has become more limited for these Irish firms. Alternatively, products could be sourced from elsewhere in the EU and imported into Ireland. This is particularly likely in the case of international brands with a food manufacturing presence throughout the EU.
- The precise outcome would depend on the capacity of indigenous Irish producers to scale up production to meet the increased domestic market opportunities, supplier decisions taken by food retailers in Ireland and Irish consumer preferences for product from Ireland over products produced elsewhere in the EU27.
- It could be argued that Irish agri-food businesses with no exposure or very limited exposure to the UK market at present could actually benefit from Brexit, due to reduced competition on the Irish market from UK based food businesses.

Requirement for further analysis

- Should the UK choose to leave the EU, then in the coming years there will be a requirement for detailed sectoral analysis of the implications for Irish agricultural and wider Irish agri-food industry, based on the most realistic set of post Brexit agricultural and trade policy assumptions. The accuracy of any assessment on the impact of Brexit will increase as the terms of Brexit become clearer.

1 Introduction

The UK has a population of 64 million and a GDP of €3,000 billion (bn) making it the second largest EU member state in both population and economic terms (Eurostat, 2016). The UK is Ireland's single most important trading partner. Irish exports to the UK are relatively wide ranging, with the pharmaceutical, chemical, computing and agri-food sectors most prominent.

The Irish labour market is heavily integrated with the UK labour market, much more so than in the case of continental European countries. Factors such as historical ties, including a common language, ease of travel, social networks reflecting emigration by earlier generations and enterprise integration between Ireland and the UK, facilitate this movement of labour.

Examining the impact on Ireland of a UK decision to leave the European Union (EU) is extremely challenging at this point, given that very little is known as to the terms under which Brexit would take place. Should the UK leave the EU, the future trading relationship the UK would have with the EU27 is unknown, since it would become the subject of a political negotiation under Article 50 of the Treaty on the Functioning of the EU (TFEU). That negotiation could result in a range of outcomes that at one extreme might have a significant impact on the trade policy between the UK and the EU and at the other extreme might have only a minimal impact. A further complication is that the evolution of UK agricultural policy after Brexit takes place is also unknown.

It is inevitable however, even under a trade policy outcome that introduced minimal impediments to trade, that the impact will be negative from the perspective of the Irish economy. The extent to which the outcome would be negative would increase should the UK fail to negotiate an outcome that allows it a free trade relationship with the EU.

In the event of a vote in favour of the UK leaving the EU, the timing of the UK's departure is also an unknown. The more time between the finalisation of the terms of the UK's departure from the EU and the actual date on which it ceases to be part of the EU, the more time there would be for the Irish (and UK) economy to take strategic actions to minimise the effect on trade and economic growth. After a UK departure from the EU, the short term negative impact on the Irish economy would be likely to be greater than the impact over the medium and long term. This is because economic adjustment processes would take place that would lead to a reduced impact over the longer term.

Unlike other large EU MS such as France, Spain, Germany or Italy, the UK is a substantial net importer of agri-food products. Ireland is the single most important source for the UK's agri-food imports in sectors such as beef and dairy.

In the event that the UK were to leave the EU, the Irish agri-food sector would need to rebalance to some degree its trade in agri-food products with the UK, the EU and the Rest of the World (ROW). This adjustment process could affect the relative profitability of different agricultural sectors in Ireland. It is possible that this in turn this would lead to changes in the future composition of Irish agricultural production.

Structure of the report: Chapter 2 contains some background details relating to the evolving Brexit debate and outlines the implications of a vote to remain in the EU and a vote to leave. Chapter 3 look at the structure of the UK's agri-food trade by sector and by trading partner and also examines the UK supply and use balance for the main agricultural commodity categories. Chapter 4 focuses more closely on the trade between Ireland and the UK. Chapter 5 assesses the implications for the Irish agri-food sector of a decision by the UK to leave the EU. Important caveats with respect to the analysis are highlighted in Chapter 6. The final chapter of the report presents conclusions.

2 Background

On February 19th 2016, EU member states reached an agreement in Brussels that addressed four key UK concerns which British Prime Minister Mr. David Cameron had previously detailed in a letter to the President of the European Council. These four UK concerns related to governance, competitiveness, immigration and sovereignty. Specifically, the agreement grants the UK guarantees that it would not have to join the euro, nor would it be required to participate in any future EU Eurozone bailout. The UK also secured a commitment towards greater measures to increase EU competitiveness. Restrictions on access to in-work and out-of-work benefits for EU migrants living in the UK were also agreed. Finally, Britain was given a guarantee that it would not be required to become part of a European federal state, an opt-out on so called 'ever greater union'.

Mr Cameron then announced that the question of continuing UK membership would be put to UK voters in a referendum on June 23rd 2016. Based on the agreement that had been reached on February 19th, he stated that he would be campaigning for Britain's continued membership of the EU. A minority of UK government cabinet members subsequently publicly declared their support for the so called Brexit campaign. More generally a significant minority of Tory MPs, over 100, publicly declared support for Brexit. The Brexit campaign also enjoys the support of the Mayor of London, Mr. Boris Johnson, a significant figure of influence in the British Conservative party.

By contrast the main British opposition party, the Labour Party is opposed to Brexit, as is the third largest party, the Scottish National Party. In Northern Ireland, only the Democratic Unionist Party has indicated support for the Brexit campaign. Outside of politics many leaders of large businesses based in the UK have declared their opposition to Brexit, including a significant number of those in the FSTE100, the largest public owned companies

on the London stock exchange. The Confederation of British Industry (CBI) commissioned a report which suggests the impact of Brexit on the UK economy would be quite negative (PwC, 2016).

Of greatest importance, public opinion in the UK is relatively evenly divided between those in favour and those against the UK's continuing membership of the EU. However, the extent of the volatility in polled opinions over time, suggests that a significant share of the public may be swayed in either direction by the time the vote takes place. Most recent polls show a relatively small majority in favour of continued UK membership of the EU. In these polls the number of 'Don't knows' and 'Will not vote' is substantial. It is thought that the level of voter turnout could have a significant effect on both the outcome and the winning margin.

2.1 Bremain: A Vote in Favour of Continued UK Membership of the EU

The implications of a vote in favour of the UK remaining in the EU are very clear. In theory such an outcome would put the question of Brexit to bed, although there are those on the Brexit side who claim that the February 2016 Brussels agreement can be unpicked by the European Court of Justice. Brexit campaigners similarly claim that the February 2016 agreement may also run into difficulties in EU members state national parliaments, especially in those where a change of government occurs. Such considerations are left for others to ponder. For the purposes of this study it is assumed that a vote in favour of the UK remaining in the EU has no effect on the UK's future EU membership status, its EU budgetary contribution or its trading relationship with the rest of the EU. Life would continue as normal.

2.2 Brexit: A Vote to Favour of Ending UK Membership of the EU

The focus of this study is on the implications of the other possible outcome; i.e. a vote for Brexit which results in the UK leaving the EU. This would be an outcome that would produce considerable uncertainty. It could set the UK on an immediate path towards exit from the EU or it could trigger a further round of negotiations among the EU member states, with a view to a second referendum offering the UK more favourable terms than those obtained in February 2016. While Mr Cameron has publicly declared that a second referendum would not happen, it is worth remembering that the EU has developed a reputation in this regard. Citizens of countries have voted to reject proposed EU Treaty changes in the past, for example, Ireland (Nice Treaty, 2001; Lisbon Treaty, 2008), Denmark (Eurozone Membership, 2000), Sweden (Eurozone Membership, 2003), France (European Constitution, 2005) and the Netherlands (European Constitution, 2005; EU-Ukraine Deep and Comprehensive Free Trade Area, 2016). In some cases an initial 'No' vote has been dealt with through further negotiation and a subsequent referendum.

As others have pointed out (Matthews, 2015; Buckwell, 2016), the timeline for a UK exit in the event of a vote in favour of Brexit, is not clear. The preferred Brexit path would be an amicable separation, the end product of an agreement between the UK and the remaining

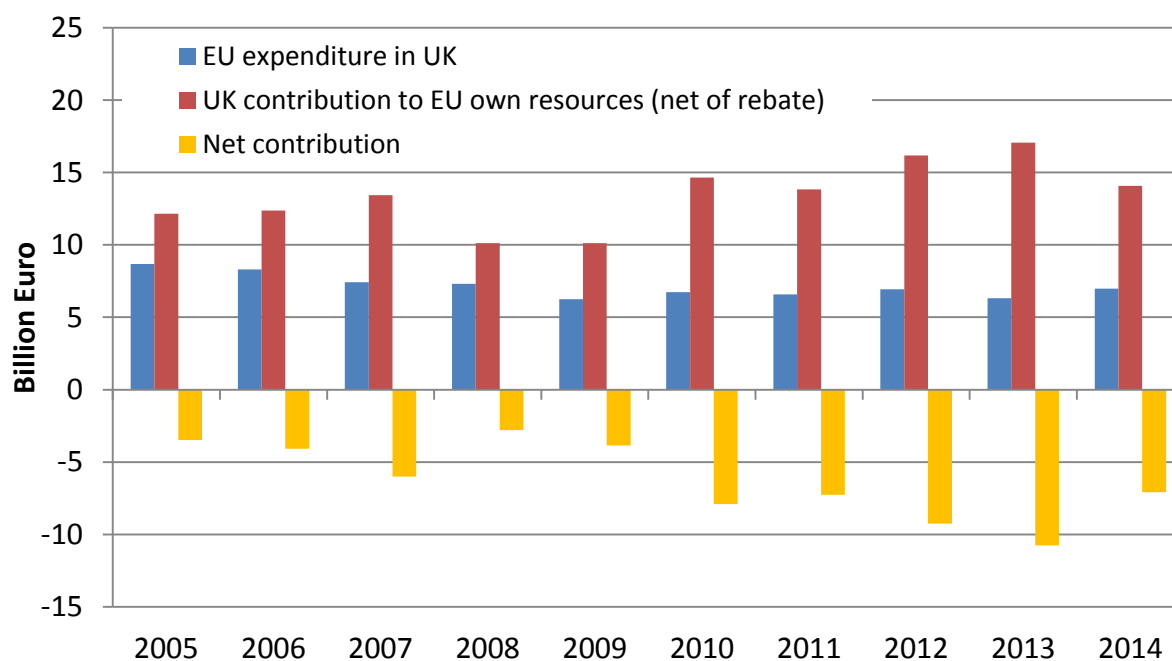
27 EU member states (EU27). However, if such an agreement cannot be reached, a bad parting, with no agreement in place cannot be ruled out. This would place the UK outside the EU and without any preferential agreement in place for the movement of goods, people or capital between the UK and the EU. The UK would then be treated just like any other country that has no free trade arrangement in place with the EU.

In terms of timing, under Article 50 of the TFEU, the UK must give a minimum period of 2 year's notice of its intention to leave the EU and a more extended time period of 5 or even ten years might well be required to facilitate an orderly exit. Some have suggested that a logical break point would be the end of the current Multi Annual Financial Framework (MFF) in 2020 (Gardner, 2015). In the event of a vote to leave, Eurosceptics may press for an exit within the life of the current UK parliament.

A UK exit could have important implications for trade and labour mobility within the EU. The UK is one of Europe's most open markets for good and services and is also one of the EU's least regulated labour markets, with strong in-migration of workers from around the EU.

Despite some suggestions to the contrary by Eurosceptics, the UK is an influential political force within the EU and is a significant net contributor to the EU budget, as illustrated in Figure 2.1. Its absence would have implications for the financing of the EU and would also have an influence on the future direction of EU policy. Again these are matter for detailed consideration in another study.

Figure 2-1: The UK Net Budget Contribution (2005 to 2014)



Source: Matthews (2016)

2.3 Focus of the Study

The focus of this study will be on the more immediate trade implications of a UK exit from the EU and the associated consequences for Irish agri-food trade. The UK's trade with the EU extends across many economic sectors, but this study will focus on the implications for agri-food trade alone. It should be understood that the analysis in the study is necessarily partial in nature, since it will not consider the wider economy implications of a UK exit from the EU. These wider economy impacts would feed into the impact of Brexit on the agri-food sector and vice versa.

In a best case scenario, the UK's trade with the EU would largely continue in the form that it has to date. There are strong reasons to assume that this should be considered a desirable outcome from both a British and EU perspective. For many centuries the UK has been a trading nation that has emphasised its non-agricultural exports. As a net food importer, it has not been particularly concerned about promoting the self-sufficiency of its agriculture sector.

In general the UK has perceived low agricultural commodity prices as a desirable economic objective. For the UK economy over the last few hundred years, commodities have been seen as a raw material to which value can be added through further processing, some of which can then be re-exported. This is evident even today in the UK agri-food sector. While the UK is a net importer of meats, dairy and grains, it has a positive net trade in certain agri-food product categories. UK exports of processed and branded food items are significant, valued at €25 billion in 2014.

The departure of the UK from the EU would be unlikely to foster a food self-sufficiency policy within the UK. The UK would likely continue to import food stuffs in categories where it has historically been a deficit producer. Total UK agri-food trade may not decrease following an exit from the EU. In fact agri-food trade is likely to increase due to the UK's strongly growing population and the likelihood that UK agricultural production may be relatively unchanged in the short term at least. Depending on how UK agricultural policy evolves, a reduction in the level of support for the sector could result at some point after Brexit.

Of greatest significance, and most likely to be subject to change, post Brexit is the share of trade held by the UK's trading partners. Depending on the outcome of the negotiations surrounding Brexit, some (non EU countries) may gain increased trade with the UK, while others (EU member states) lose some of their trade share with the UK.

Economists refer to this as trade diversion, where products from one country displace products from another country in a particular market due to the imposition of tariffs. In the short term at least trade diversion does not necessarily lead to a change in the total volume of trade. However, it may affect the volume and value of bilateral trade flows.

Trade Diversion in Simple Terms

Take the example of country I which has a history of exporting to country B as part of a customs union (Ireland's current relationship with the UK). Country B now exits the customs union. Due to the imposition of tariffs by country B, some exports from country I are diverted to other markets within the customs union (countries C, D and E). Similarly countries C, D and E, find that some of their exports to country B are diverted to other markets in the customs union. Meanwhile country B now sources its imports from country Z, another country outside of the customs union.

If prices in all markets were the same and transport costs were zero, then the overall effect on country I would be minimal. But such assumptions are not valid in the real world. Country I may have to accept a lower price for its products in country C, D and E than it did when exporting to country B. If this is the case then country I will be worse off and the adverse impact for country I would be greater if transport and other costs necessary to supply markets in countries C, D and E are higher than they previously were when exporting to country B.

In this study we begin by examining the trade flows that currently exist between the UK and other EU member states. This analysis will identify which agri-food products and which EU countries' agri-food sectors are most likely to be affected by Brexit.

3 The UK's Agri-Food Trade

In considering the implications of Brexit it is important to understand the extent to which the UK trades with particular countries at present, in order to determine how that trade might change. The current principal beneficiaries of agri-food trade with the UK vary across the component elements of the agri-food sector. In this chapter the existing level of trade between the UK and its trade partners, including Ireland is examined by reference to the available official trade data. In turn the importance of the UK market as a determinant of the overall EU trade balance with the ROW is examined by reference to commodity supply and use balance data for the UK and the EU. The existing role of the UK in influencing the overall EU trade balance is an important indicator of the likely trade effect of Brexit on EU member states.

3.1 Post Brexit Trade Policy

In the event that the UK votes to leave the UK the rules that would govern agri-food trade between the UK and the remainder of the EU (including Ireland) are unknown. Commentators and politicians in the UK Brexit debate have set out various possible options ranging:

- from the Norwegian model where, post-Brexit, the UK remains part of a free trade zone with the EU;
- to various options that involve the UK becoming “just another” WTO member in terms of its trade relationship with the EU

Under the second option UK agri-food exports could face the current EU WTO Most Favoured Nation (MFN) tariff, while exports to the UK from the EU and elsewhere would face some, as yet unknown, level of tariffs. Under the second of these options the UK could still choose to unilaterally liberalise all agri-food tariffs, or the UK could choose some point along the interval between current levels of agri-food tariff protection prevailing within the EU and a version of the world where it fully liberalises agri-food trade.

Post Brexit, the level of tariffs British exporters of agri-food products to the EU would face and the level of tariffs EU exporters would face when exporting agri-food products to the UK will have an important influence on how a Brexit will economically affect agri-food markets in the UK and in Ireland and the other remaining EU member states. In the absence of knowledge of the exact terms of post-Brexit trade rules, it is impossible to provide definitive guidance on what the impact of Brexit would be. However, knowledge of existing agri-food trade flows involving the UK is useful in understanding the magnitude of the economic activity that could potentially be affected by a Brexit.

Data on Production, Consumption and Trade

We use data on agricultural commodity supply and use balances and data on UK agri-food trade to illustrate the magnitude of the trade flows between the UK and the rest of the EU, to identify how these vary across different elements of agri-food trade and how important trade with Ireland is within UK agri-food trade. The objective is to provide information on the potential impact of a Brexit on EU agricultural commodity markets in general and on Irish agricultural commodity markets specifically and to illustrate the importance of Ireland-UK bilateral trade relationships.

All of the bilateral trade data presented are based on extractions from the Eurostat trade statistics database that were undertaken at different levels of aggregation (HS2, HS6 and CN8). These data demonstrate the nature and importance of UK agri-food trade not alone with Ireland, but also with EU and non-EU countries. The well-known Rotterdam effect, wherein the role of entrepôts such as Rotterdam and Antwerp leads to the overstatement of trade flows to the Netherlands and Belgium (and their understatement to other destinations) should however be recalled when considering these data.

Data on agricultural commodity supply and use balances in the UK have been taken from the Department of the Environment, Food and Rural Affairs (DEFRA) publication "Agriculture in the UK" (DEFRA, 2015). Where commodity supply and use data are not publicly available from DEFRA, they have been obtained from the Agriculture and Horticulture Development Board (AHDB, 2015). These data are indicative of the importance of trade (imports and exports) to agricultural commodity markets in the UK. The European Commission publishes supply and use balance sheets for the EU28 for most of the major temperate agricultural commodities. Supply and use balance sheets for individual EU MS were previously published by Eurostat, but these data series were discontinued in recent years.

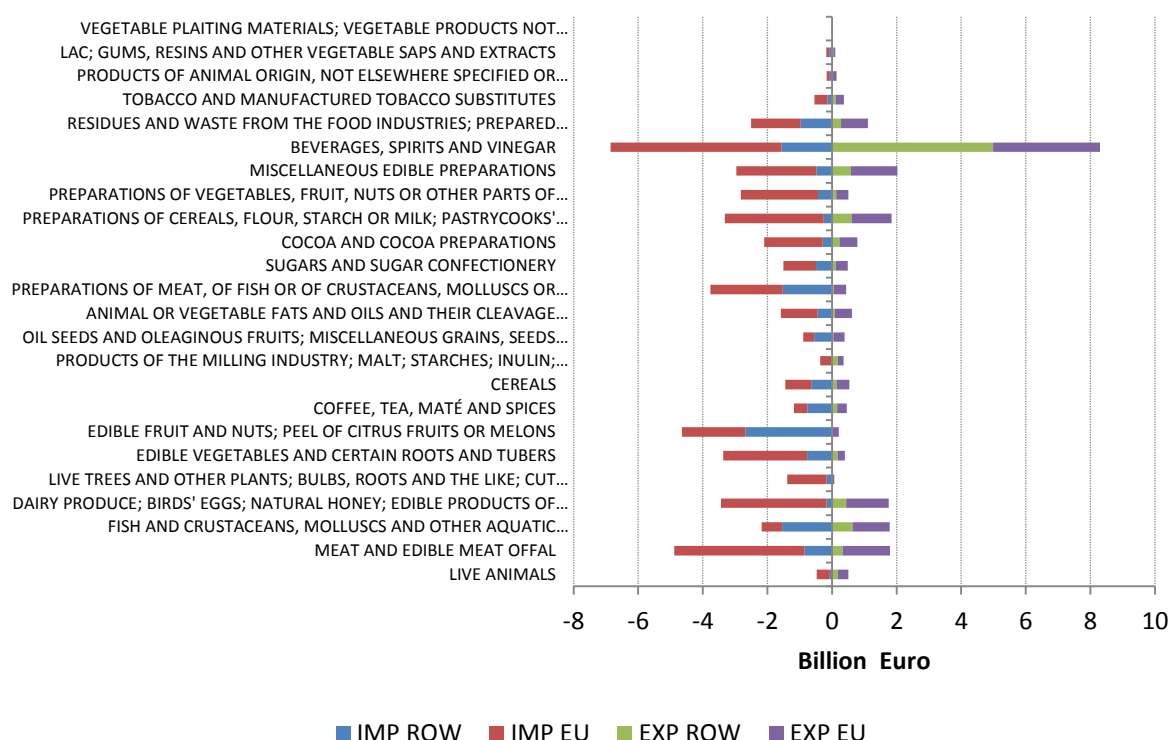
Trade data can be examined at different levels of disaggregation, according to an international tariff nomenclature known as the Harmonized Commodity Description and Coding System, commonly referred to as the HS system. Trade is divided in high level categories known as sections. Each section has a number of chapters which are referred to by a 2 digit code that can in turn be disaggregated into higher levels of detail at HS4,

3.2 UK Agri Food Exports and Imports

The UK is a large economy in both a global and EU context. However, its size, both in terms of its share of aggregate EU production or domestic use and its prominence in intra and extra EU trade, varies across different agricultural commodities and agri-food products. For those commodities where the UK is close to self-sufficient and where imports and/or

exports are not important at either a UK or EU scale, the impact of the exit of the EU on trade flows and the supply and use balance within the remaining EU (hereafter EU27) are likely to be smaller than where the UK is a large deficit market or where the UK is an important exporter of agricultural commodities to other EU markets. Figure 3.1 shows how the UK agri-food trade (in value terms) is distributed across the 24 HS chapters.

Figure 3-1: Composition of UK Agri-Food Trade (HS2 level) in value terms (2014)



Source: Eurostat COMEXT

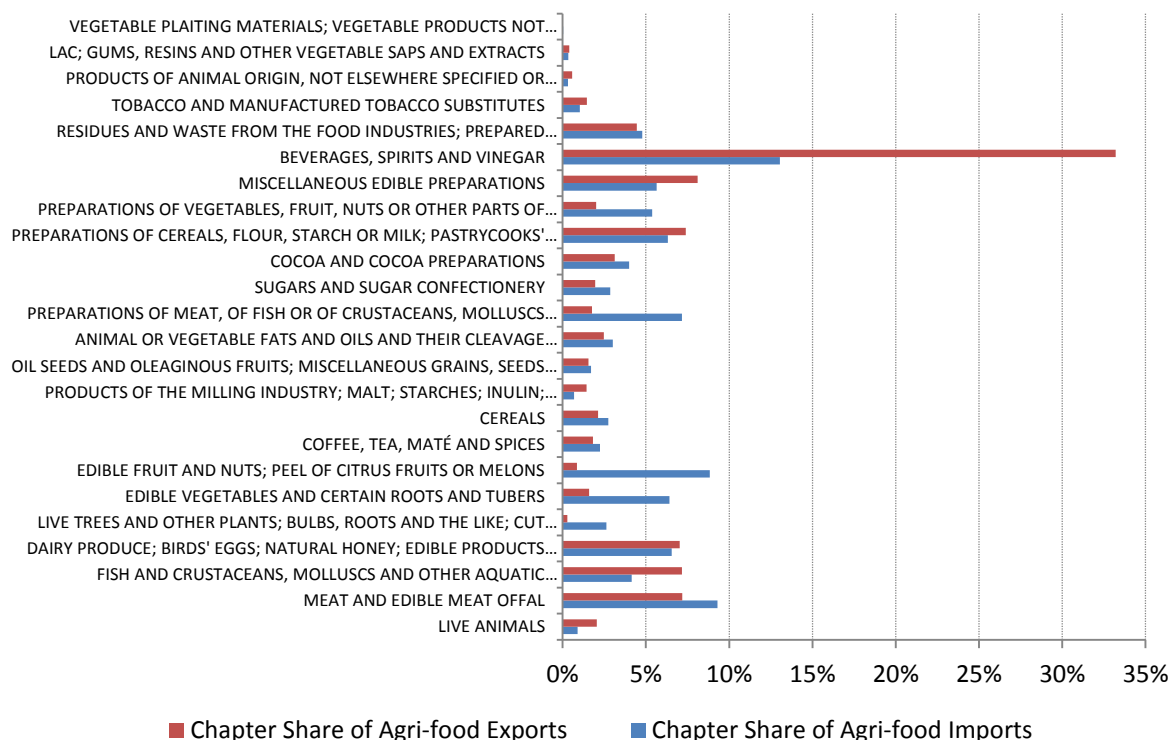
Using data at this 2 digit level of aggregation the value of UK agri-food imports in 2014 (expressed in euro) across these first 24 chapters of the HS2 was €52.6 bn, while the value of UK agri-food exports to other EU MS and the ROW in 2014 was €25 bn. Overall, this means that the UK is a net importer of agri-food products, running a trade deficit in agri-food of circa €27.6 bn in 2014.

What is clear from Figure 3.1 is that both UK agri-food imports and exports are dominated by trade with the EU. The only significant exceptions to this at the 2 digit level of aggregation is the importance of ROW markets for UK exports of beverages and UK imports of edible fruits.

Figure 3.2 illustrates the importance of each of the 24 agri-food chapters in overall UK agri-food trade. It shows that the UK agri-food trade (imports and exports) is dominated by trade in meat, dairy commodities, fruit, vegetables, prepared food of meat and vegetable bases and beverages. Beverages are the largest component (when measured by value) of both UK

agri-food exports and imports, accounting for over 30 percent of UK export value and close to 15 percent of UK agri-food imports value in 2014.

Figure 3-2: Chapter Share of Total UK Agri-Food Trade (HS2 level) in value terms (2014)



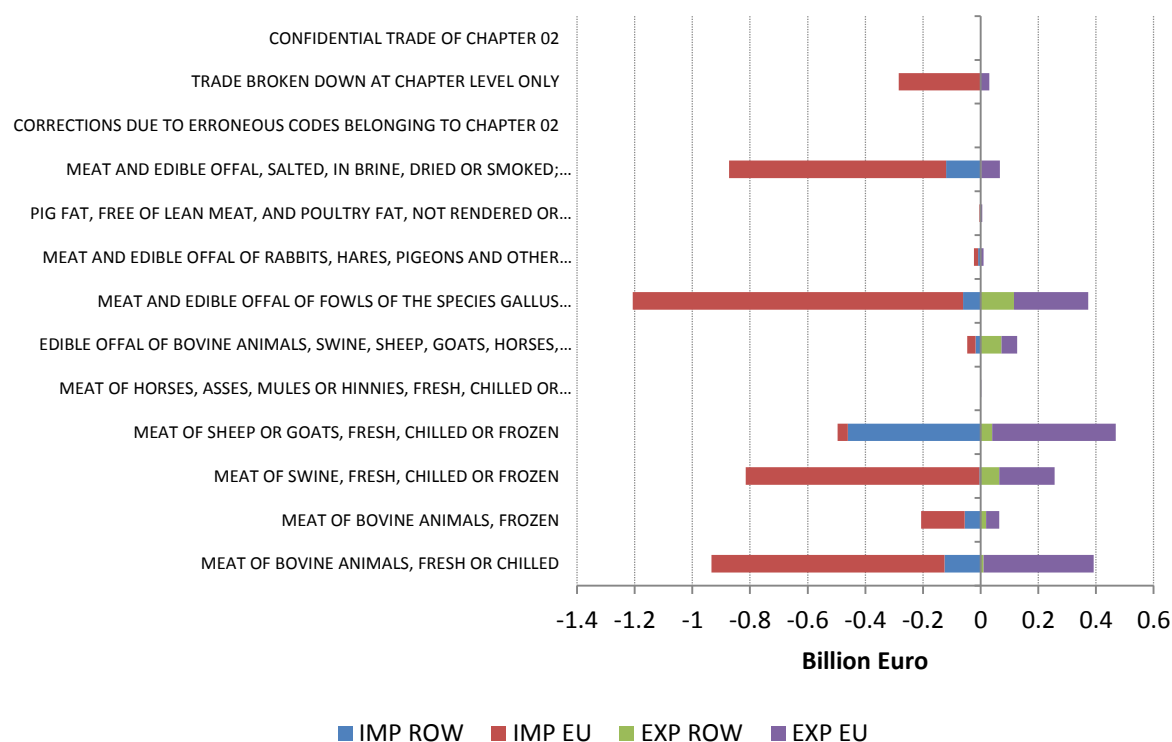
Source: Eurostat COMEXT

3.2.1 UK Meat Exports and Imports

UK trade in meat and dairy commodities as well as trade in preparations of meat and preparations of cereals, flour starch and milk are of particular importance for the Irish agri-food sector. In Figure 3.3 data for HS Chapter 2 (trade in meat and edible offals) are disaggregated to the 6 digit level that allows us to distinguish between beef, pig meat, poultry and sheep meat trade.

What is clear from Figure 3.3 is that the UK is a significant net importer across all categories of meat, with the exception of sheep meat. Trade is in general dominated by imports from other EU countries, except in the case of imports of sheep meat where imports from non-EU countries - specifically New Zealand and Australia are dominant. Of note here is that while that the UK is a large importer of lamb (from NZ and Australia) it is also a very large exporter of lamb to other EU countries, principally France.

For trade in all other categories of meat and edible offals the UK is an overwhelming net importer, with trade dominated by trade with the EU. Overall meat and edible offals imports are dominated by trade in beef, pig meat, sheep meat and poultry meat.

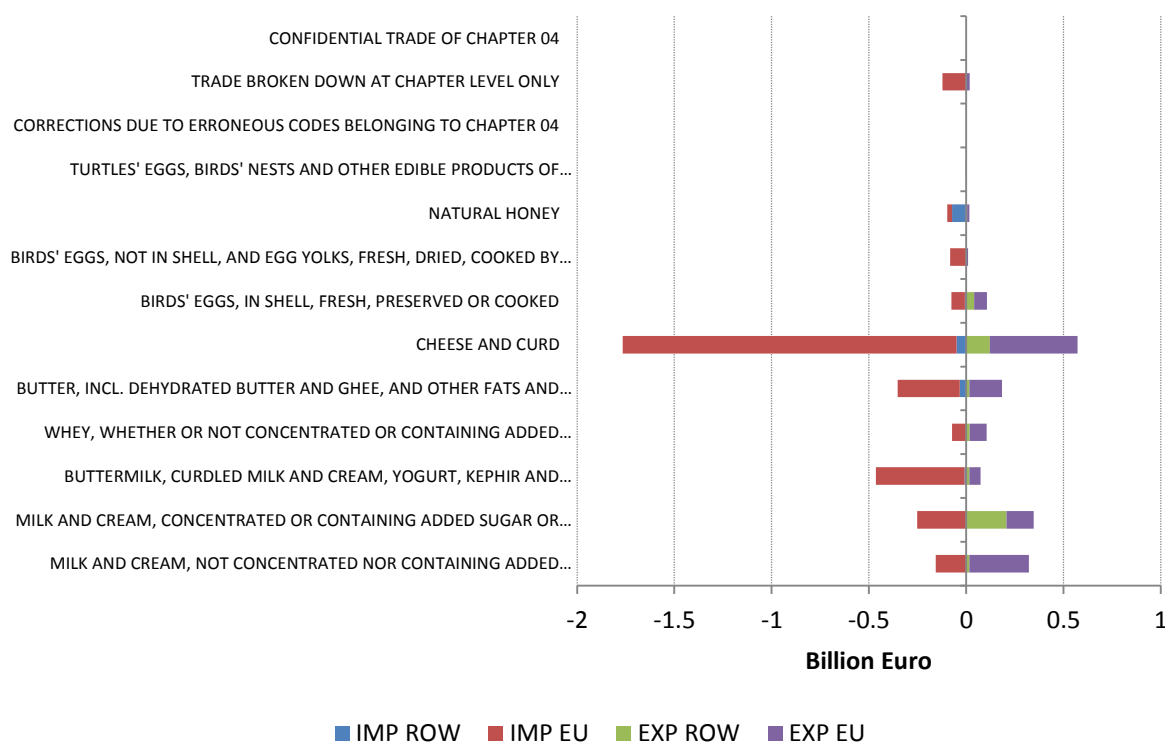
Figure 3-3: UK Trade in Meat and Edible Offals (HS2 02) in value terms (2014)

Source: Eurostat COMEXT

Ireland is particularly important as a source of UK beef imports. In 2014 Ireland accounted for 54 percent (by value) of UK imports of Frozen Beef and close to 70 percent of UK imports of Fresh and Chilled Beef. UK imports of pig meat are dominated by Denmark, the Netherlands and Germany, though Ireland's share at 9 percent is still important. As noted earlier, UK imports of sheep meat are dominated by non-EU sources. New Zealand in 2014 accounted for 75 percent of UK imports (by value) with Australia accounting for 15 percent; in 2014 Ireland accounted for circa 4 percent of total UK sheep meat imports. UK poultry meat imports are dominated by trade with EU member states – though the so-called Rotterdam effect may be important here.

3.2.2 UK Dairy Exports and Imports

The value of UK trade in various dairy products (HS Chapter 4) in 2014 is illustrated in Figure 3.4. It is evident that the value of UK dairy trade is dominated by trade in cheese, butter, fresh dairy products and raw milk for processing.

Figure 3-4: UK Trade in Dairy and Other Livestock products (HS2 04) in value terms (2014)

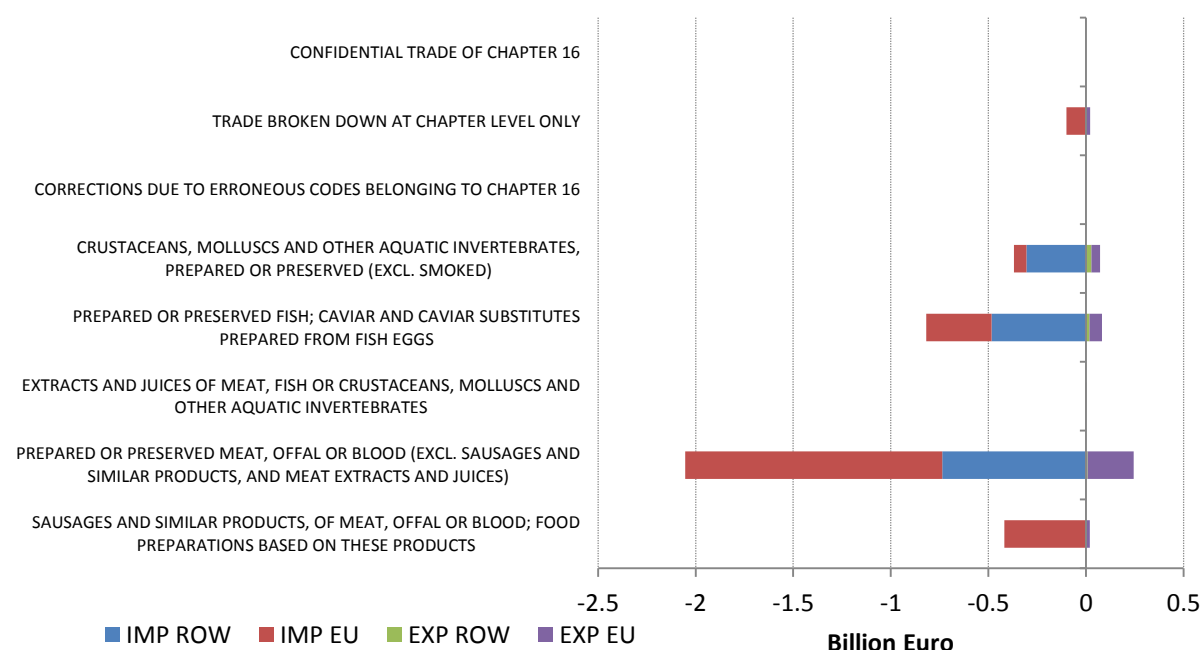
Source: Eurostat COMEXT

Ireland in 2014 accounted for 28 percent of the value of UK cheese imports, while France, Germany and Italy accounted for 17 percent, 11 percent and 10 percent respectively. The UK exports of cheese are also of significant value (circa €500 mn in 2014). Ireland accounted for 26 percent of the value of all UK cheese exports in 2014. UK butter imports are also dominated by trade with Ireland. Ireland accounted for over 50 percent of the value of UK butter imports in 2014.

3.2.3 Other UK Agri-Food Exports and Imports

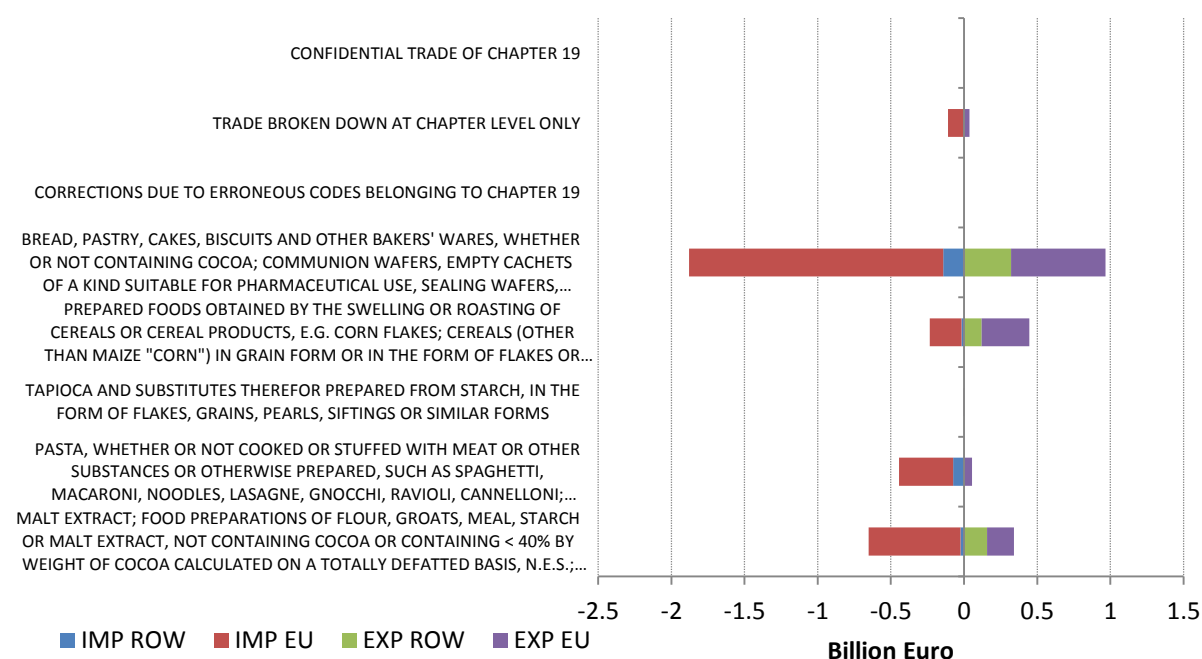
UK imports of prepared foods (HS Chapters 16, 19, 20 and 21) in aggregate had a value of close to €2.1 bn in 2014, while UK exports of the prepared foods had a value of circa €3.4 bn. Ireland's share of UK imports of meat preparations (Figure 3.5) and preparations of cereals, flour, starch or milk (Figure 3.6) was over 14 percent. Unsurprisingly Ireland's share of preparations of vegetables (Figure 3.7), fruits and nuts (Figure 3.8) was smaller at closer to 2 percent of total UK imports.

Figure 3-5: UK Trade in Preparations of Meat (HS2 16) in value terms (2014)



Source: Eurostat COMEXT

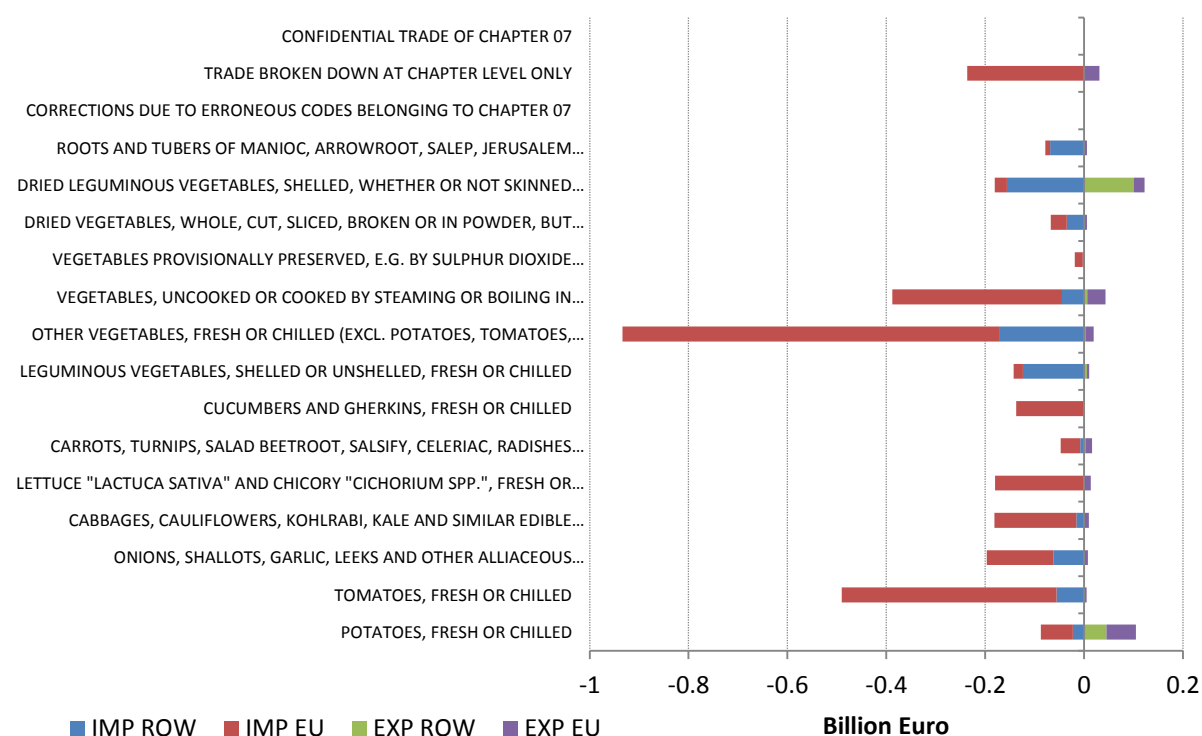
Figure 3-6: UK Trade in Preparations of Vegetables (HS2 19) in value terms (2014)



Source: Eurostat COMEXT

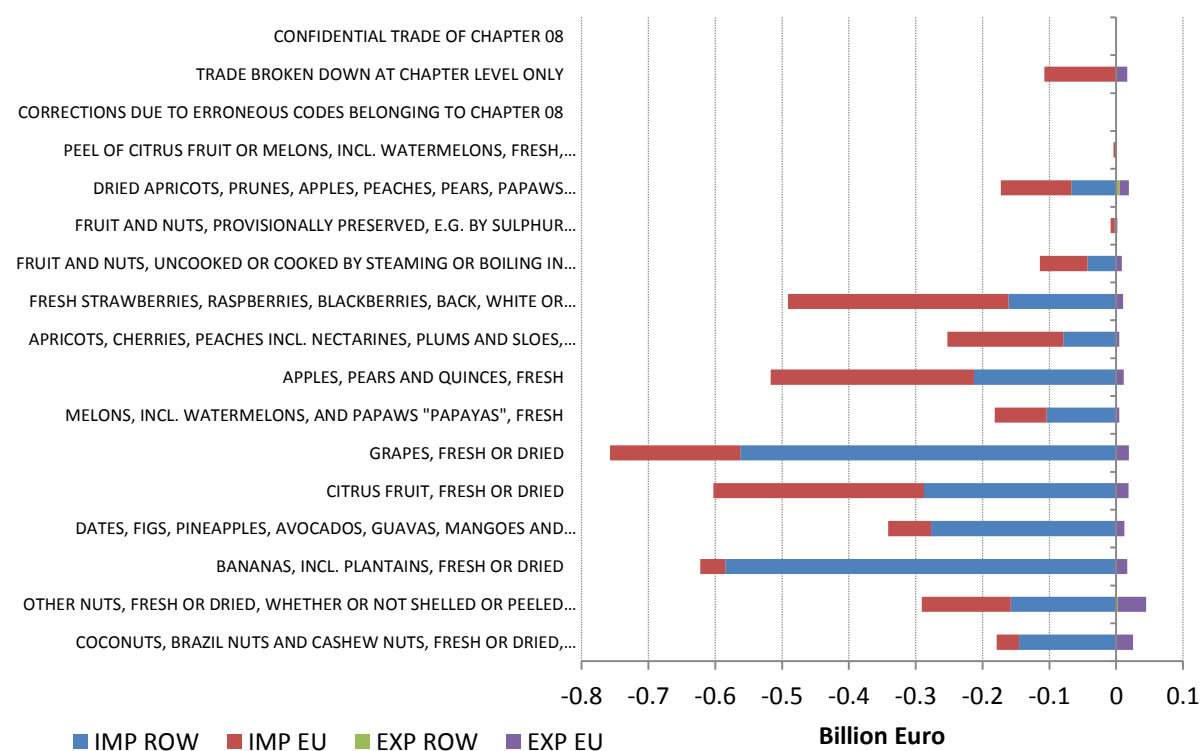
The UK's trade in vegetables is illustrated in Figure 3.7. UK vegetable imports are dominated by imports from EU sources and dwarf UK exports of vegetables. UK vegetables exports are largely limited to dried peas and potatoes. UK fruit trade is illustrated in Figure 3.8, which shows that UK fruit imports dwarf UK fruit exports. The EU dominates as the source of the UK's vegetable imports, but the ROW is more dominant in the case of the UK's fruit imports.

Figure 3-7: UK Trade in Vegetables (HS2 07) in value terms (2014)



Source: Eurostat COMEXT

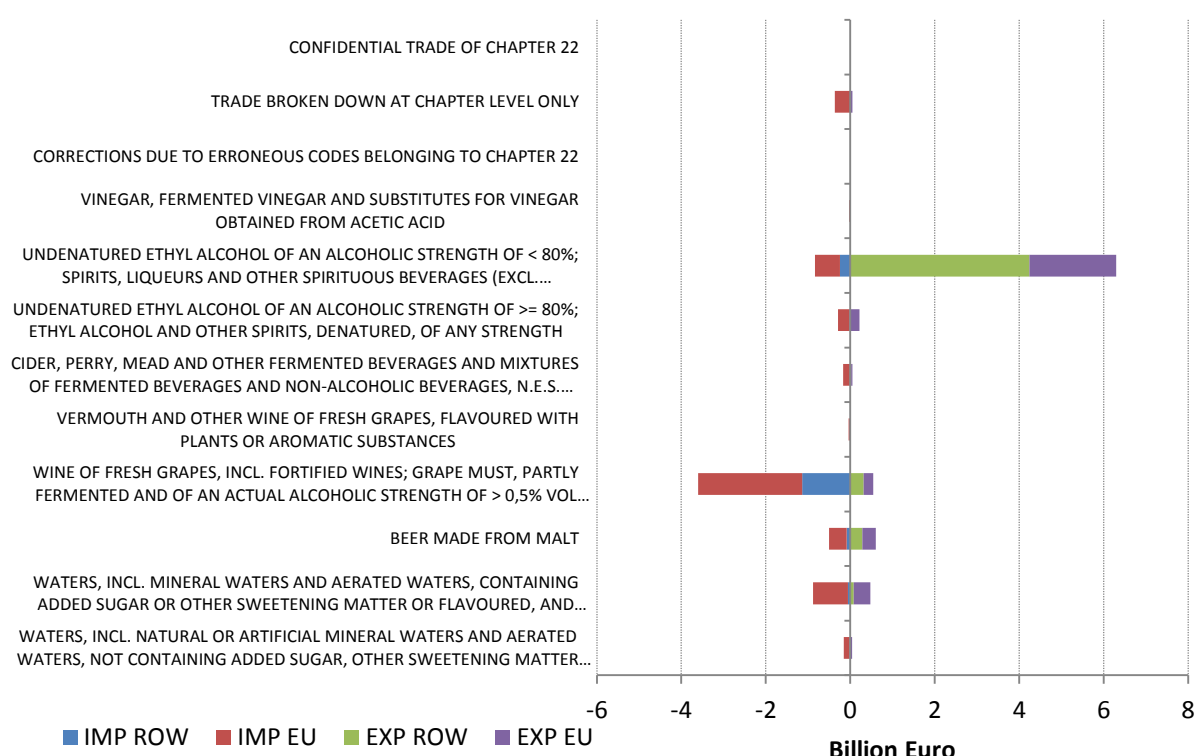
Figure 3-8: UK Trade in Fruit (HS2 08) in value terms (2014)



Source: Eurostat COMEXT

The beverage sector is the principal net export category within UK agri-food trade. Figure 3.9 disaggregates HS Chapter 22 into its HS6 subheadings. Figure 3.9 shows that UK beverage exports are dominated by exports of spirits (such as whisky and gin), while UK beverage imports are dominated by wine. The destination of UK exports are mostly to non-EU destinations, while imports of beverages are dominated by EU countries, though it should be noted that UK wine imports also have a significant non-EU component. Brexit has the potential to have a big impact on the UK and EU wine markets. The UK's trade in spirits is dominated by exports to the ROW and therefore Brexit might be expected to have a lesser impact on the spirits sector.

Figure 3-9: UK Trade in Beverages (HS2 22) in value terms (2014)



Source: Eurostat COMEXT

3.3 EU and UK Agri Food Supply and Use Balances

Trade data provides information on the sources and destinations of agri-food trade flows, but on its own it cannot provide information on the importance of these trade flows relative to production and domestic use of agri-food products. In the event of Brexit what would be the impact of additional barriers to trade on agricultural commodity markets in Ireland, the EU and the UK? To begin assessing the possible importance of such shocks one needs to have a measure of the importance of these trade flows in the context of the respective overall commodity supply and use balance of the UK, Ireland and the EU.

Each year the DEFRA publishes details on “overseas trade” as well as supply and use balances for all of the major crops and meats (DEFRA 2015). The AHDB (2016) also produces

similar supply and use balances for the major dairy commodities. These supply and use balance data allow us to illustrate the importance of imports and exports within the overall supply and use balance for agricultural commodities produced and consumed in the UK. The importance of UK production, use and trade for different agricultural commodities within the overall EU agricultural commodity supply and use balance can also be assessed by combining information from the UK supply and use balance sheets with equivalent EU level supply and uses tables produced by the European Commission (European Commission, 2016).

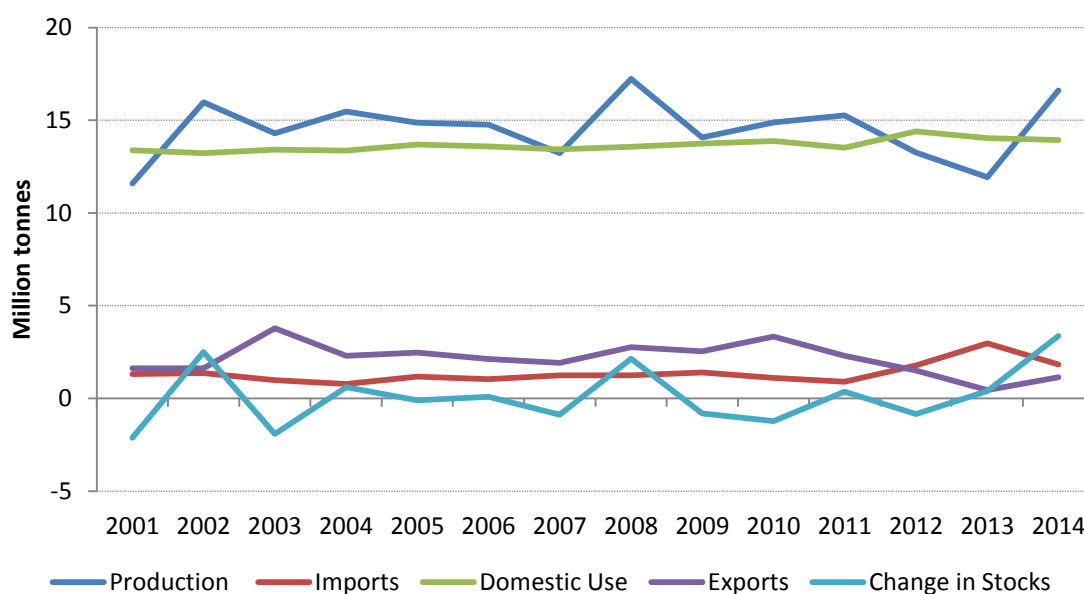
The definition of agricultural production and trade used in constructing agricultural commodity supply and use tables is not identical to that used to report agri-food and general merchandise trade. Nevertheless there is a close correspondence between the trade flows (value and volume) measured in trade statistics for agricultural commodities, since in general supply and use balance sheet trade data are based on the aggregation of statistics on bilateral trade flows.

The importance of imports and export flows to the agricultural commodity supply and use balances of the UK varies by commodity. In general the pattern revealed by the agri-food trade data discussed earlier is reflected in the agricultural commodity supply and use balance sheets for the UK.

3.3.1 UK Cereals Supply and Use Balance

The UK's wheat, barley and oats supply and use balances are illustrated in Figure 3.10, Figure 3.11 and Figure 3.12 respectively.

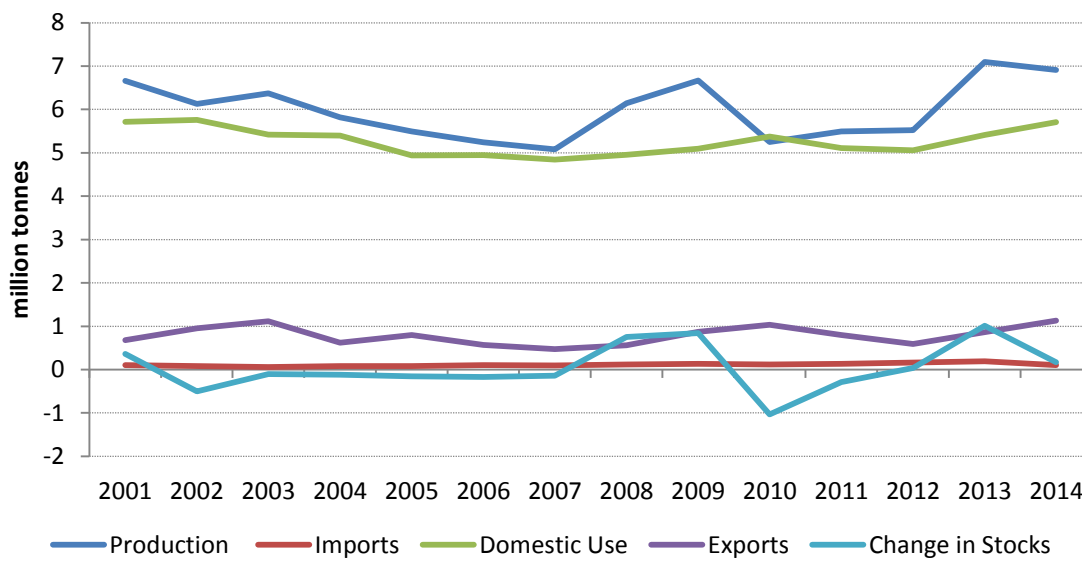
Figure 3-10: UK Wheat Supply and Use (2001 – 2014)



Source: DEFRA Agriculture in the UK

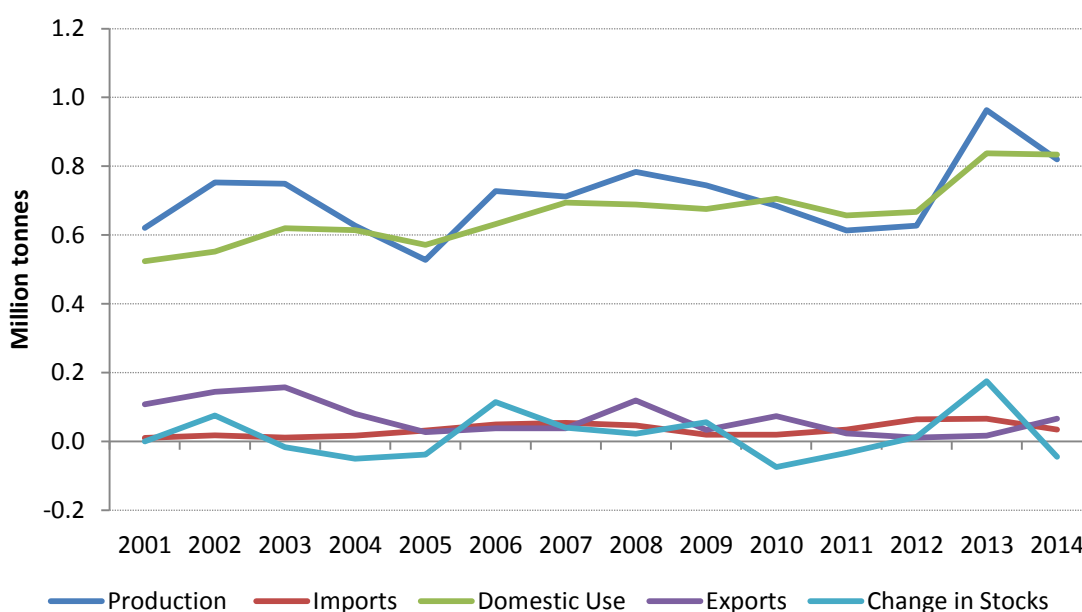
For cereals the UK is close to self-sufficient, with domestic use and total production of wheat, barley and oats very closely aligned. With the possible exception of soft wheat, UK trade volumes are not large relative to either UK production or consumption. Despite the UK accounting for a significant share of EU production (and use) of cereals, the small net export position means that it is unlikely that Brexit would have a dramatic impact on the EU cereal supply and use balance or EU cereal prices.

Figure 3-11: UK Barley Supply and Use (2001-2014)



Source: DEFRA Agriculture in the UK

Figure 3-12: UK Oats Supply and Use (2001-2014)

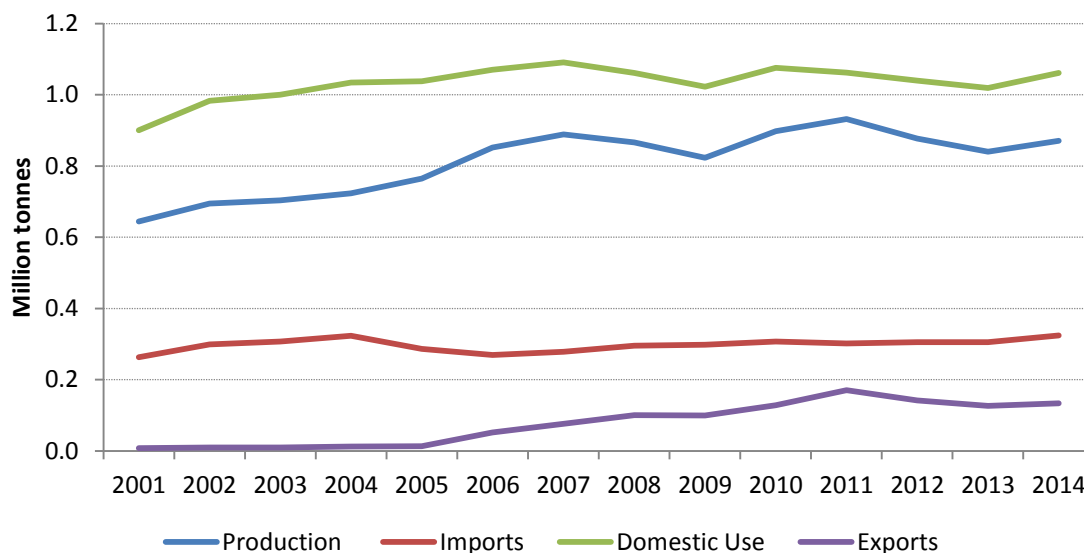


Source: DEFRA Agriculture in the UK

3.3.2 Beef Supply and Use Balance

For meats the UK dependence on imports is considerably greater than its dependence on imports for cereals. The UK's beef supply and use balance is illustrated in Figure 3.13. Over the last 14 years, UK imports of beef have accounted for between 25 and 30 percent of UK domestic use.

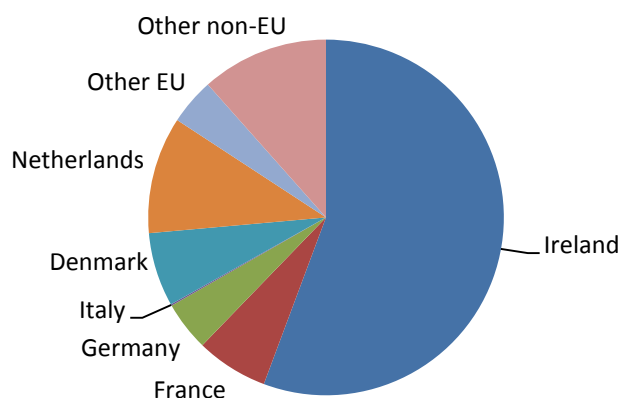
Figure 3-13: UK Beef Supply and Use (2001-2014)



Source: DEFRA Agriculture in the UK

Restrictions on UK beef exports following the BSE crises of the late 1990s constrained the ability of the UK to export beef in the early years of this century, but in more recent years UK beef exports have accounted for circa 15 percent of UK beef production. The destination of UK exports of beef is almost exclusively to other EU member states. As the trade statistics presented earlier clearly illustrated, the vast majority of UK beef imports are from other EU markets. As Figure 3.14 shows Ireland is the dominant import supplier.

Figure 3-14: UK Fresh Beef Imports in volume terms (2014)



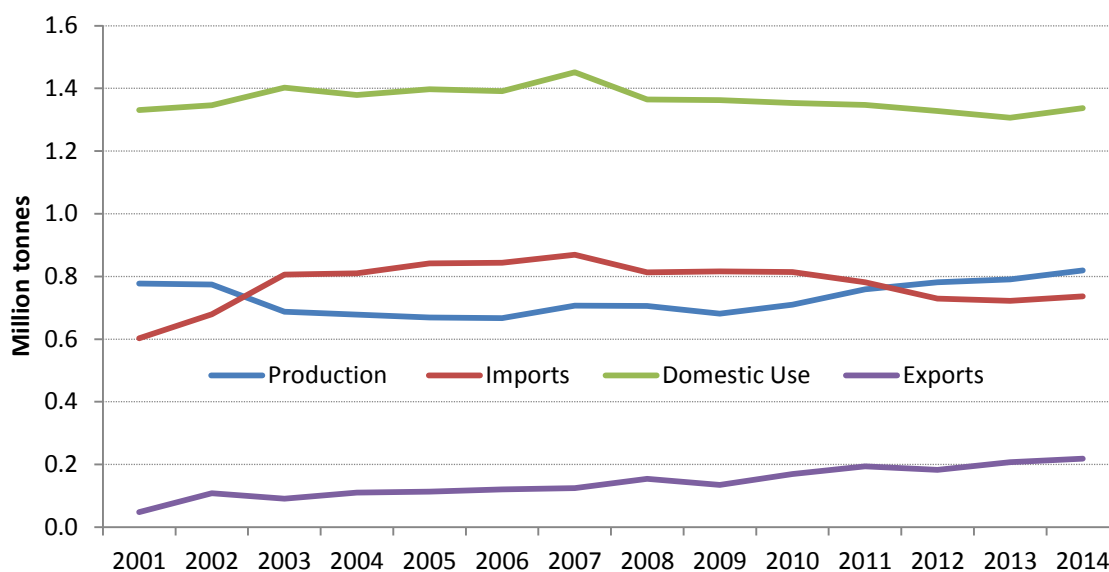
Source: DEFRA Agriculture in the UK

What impact would Brexit have on the EU supply and use balance for beef and on EU beef markets? The UK accounted in 2014 for roughly 11 percent of EU28 beef production and 14 percent of EU consumption of beef. The gap between the UK production and consumption shares reflects the negative net export position of the UK. The EU28 in recent years has been a net importer of beef. If UK beef production is subtracted from EU28 beef production and if UK consumption of beef is subtracted from EU28 beef consumption, this provides an assessment of the impact of Brexit on the EU net export position for beef. Using 2014 data as a reference, the EU27 (EU28 minus UK) would be a net exporter of about 200kt of beef, rather than a net importer if the UK remained part of the block. This suggests that the exit of the UK from the EU would loosen the EU supply and use balance. In all likelihood this development would have a negative impact on EU prices for cattle.

3.3.3 Pig Meat Supply and Use Balance

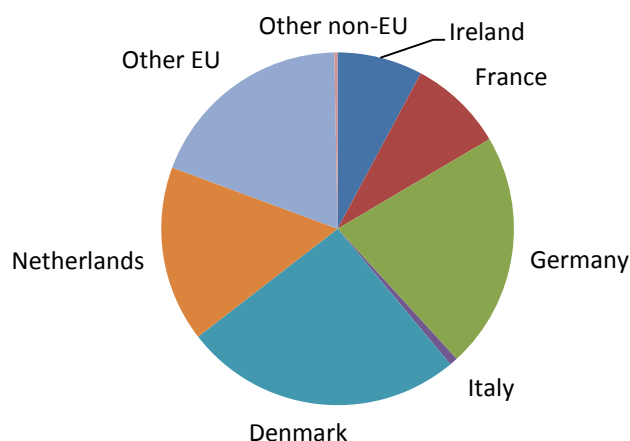
The dependence of the UK on imports is even greater for pig meat than is the case of beef. The UK's pig meat supply and use balance is illustrated in Figure 3.15.

Figure 3-15: UK Pig meat Supply and Use (2001-2014)



Source: DEFRA Agriculture in the UK

Domestic use of pig meat is close to 100 percent greater than indigenous production of pig meat, with the deficit made up by imports of pig meat. Most of these imports are from other EU markets. Figure 3.16 shows that Ireland accounted in 2014 for circa 9 percent of the volume of pig meat imported by the UK, with pig meat imports coming mainly from Denmark, Germany and the Netherlands.

Figure 3-16: UK Pig meat Imports in volume terms (2014)

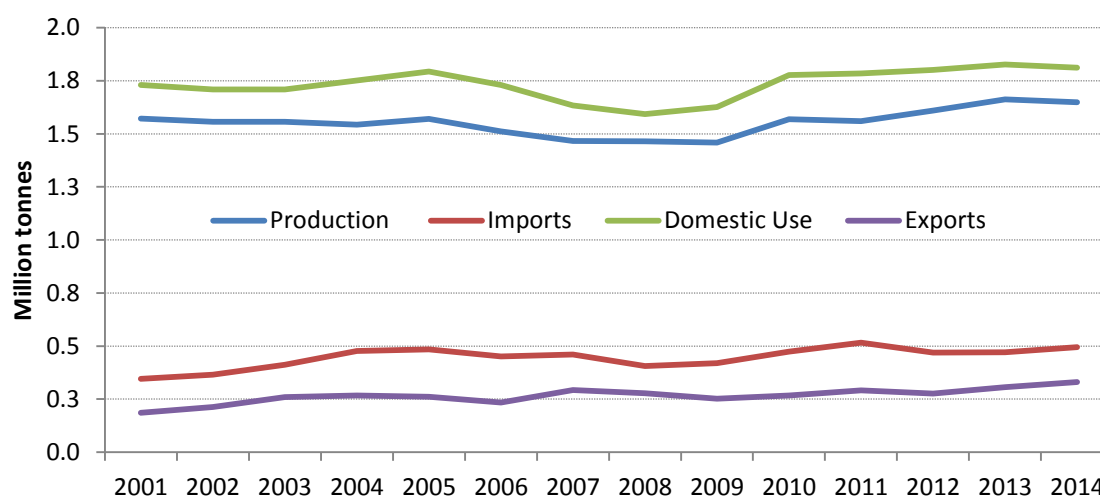
Source: DEFRA Agriculture in the UK

In 2014 the UK accounted for approximately 3.6 percent of EU production of pig meat and 6.4 percent of EU pig meat consumption. The UK status as a large net importer of pig meat means that the removal of the UK from the EU pig meat supply and use balance would loosen the EU pig meat supply and use balance, just as in the case of beef. The EU is a net exporter of pig meat with net exports in 2014 of just over 1,900 kt. If the exports of pig meat from countries such as Ireland, Denmark, Germany and the Netherlands to the UK could no longer take place and EU domestic use did not change, the net export position of the EU would increase by circa 500 kt or roughly 25 percent. In all likelihood Brexit would lead to lower prices for pig meat in the EU.

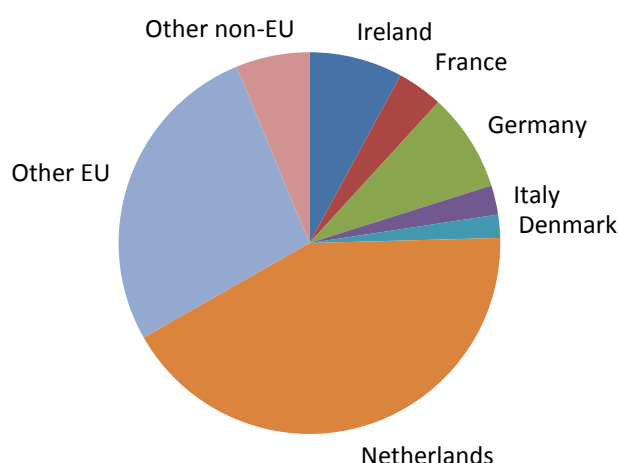
3.3.4 Poultry Supply and Use Balance

The dependence of the UK on poultry meat imports is less than its dependence on beef and pig meat imports. While historic data shows that UK domestic use exceeds UK domestic production and UK imports exceed UK exports (in volume terms) the magnitude of UK poultry trade relative to both UK poultry production and UK poultry domestic use is much smaller than for UK beef and pig meat. The UK's poultry supply and use balance is illustrated in Figure 3.17.

In 2014 the UK accounted for roughly 12 percent of EU28 poultry production and 14 percent of UK consumption. This implies that other things being equal, under Brexit the supply and use balance on EU27 poultry markets would be looser than on EU28 markets. The EU was a net exporter of poultry meat in 2014 and if UK production and consumption of poultry meat are deducted from EU28 production and use the implicit net export total would increase. Other things being equal, Brexit would put downward pressure on the EU poultry price.

Figure 3-17: UK Poultry Meat Supply and Use (2001-2014)

Source: DEFRA Agriculture in the UK

Figure 3-18: UK Poultry Imports in volume terms (2014)

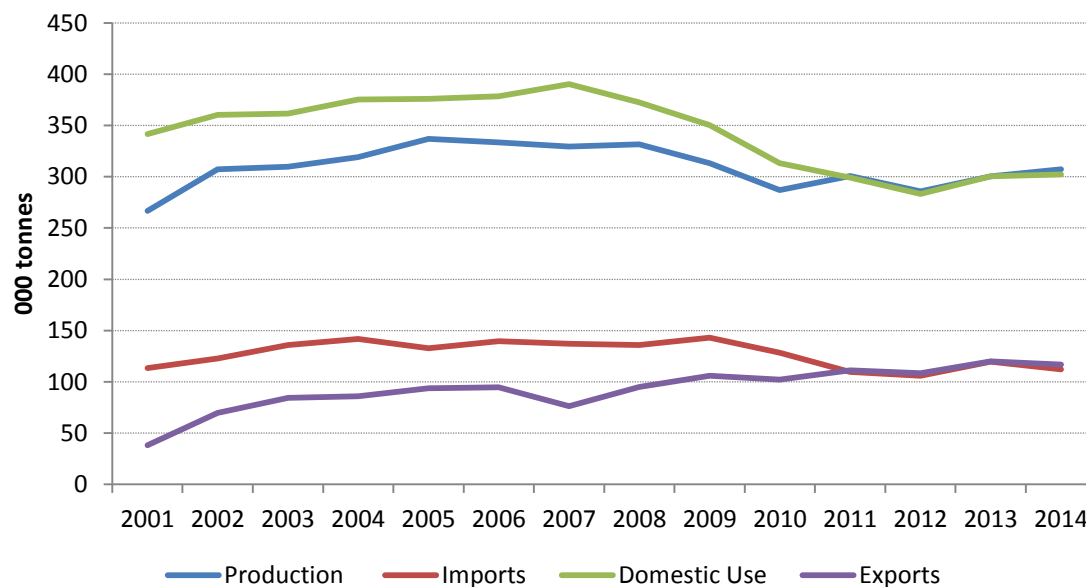
Source: DEFRA Agriculture in the UK

3.3.5 Sheep Meat Supply and Use Balance

The importance of trade in the UK supply and use balance for sheep meat is unusual in a number of respects, when compared with the other meat sectors. Firstly, while sheep meat imports are an important element of the UK supply and use balance (in 2014 imports accounted for close to 40 percent of UK domestic use), UK exports were close to the same level as a share of production. The source of UK imports of sheep meat also differs qualitatively from other meats. Imports from non-EU sources account for the vast majority of UK imports of sheep meat. In recent years UK sheep meat exports have been near equal in volume terms to sheep meat imports. The UK is the largest exporter by volume of sheep meat in the EU. This means that if Brexit led to changes in the level of access to the UK for sheep meat imports from the ROW and changes in the level of access of UK sheep meat to

other EU markets, there could be significant impacts on the EU sheep meat supply and use balance.

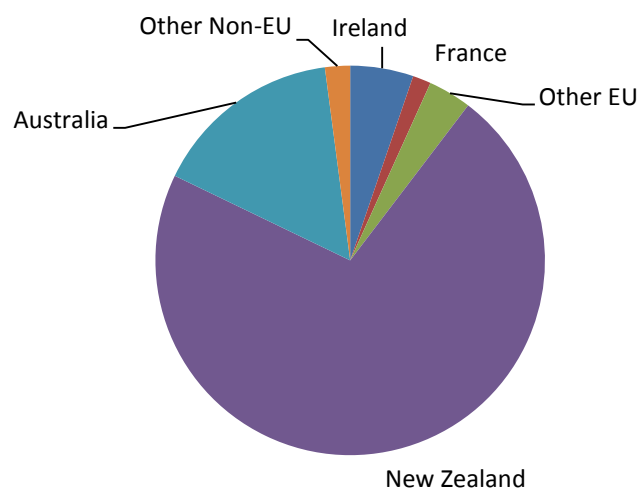
Figure 3-19: UK Sheep meat Supply and Use Balance (2001-2014)



Source: DEFRA Agriculture in the UK

Following Brexit, the sheep meat “deficit” in the EU27 markets would be likely to tighten as compared to a world where the UK remains part of the EU28. The trade rules that will govern a post-Brexit world are, as noted earlier, unknown at this time, but in the event that UK lamb exports faced non-zero tariff barriers on entry to the EU27, it is likely that the current volume of UK exports to other EU markets would decline and would have to be absorbed on the UK or rest of world markets.

Figure 3-20: UK Sheep meat Imports in volume terms (2014)

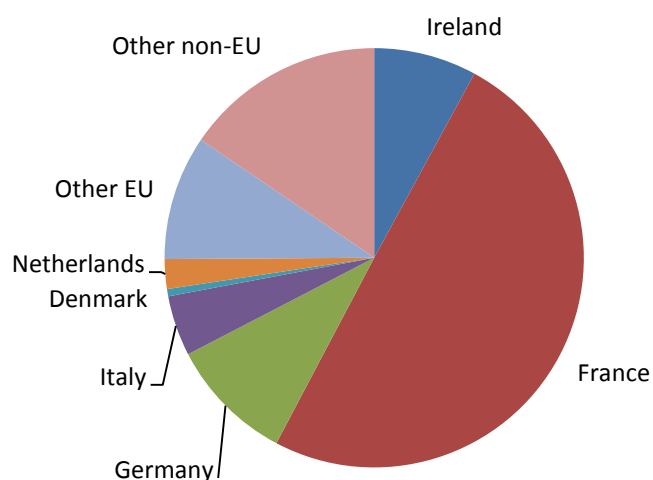


Source: Eurostat COMEXT

This would likely drive a wedge between UK and EU27 prices, with EU27 prices likely to increase and UK prices likely to fall. EU27 imports from NZ and Australia would also fall with the exit of the UK from the EU. In turn lower UK prices could lead to a contraction in UK sheep meat production.

Close to 90 percent of UK lamb exports are shipped to EU markets. France alone took 50 percent of British exports in 2014. In the event of a Brexit resulting in increased barriers to trade faced by UK exporters of lamb, this would result in reduced competition for Irish lamb exports (from UK lamb exports) on the French and other continental EU markets.

Figure 3-21: UK Sheep meat Exports in volume terms (2014)



Source: Eurostat COMEXT

3.3.6 Dairy Supply and Use Balance

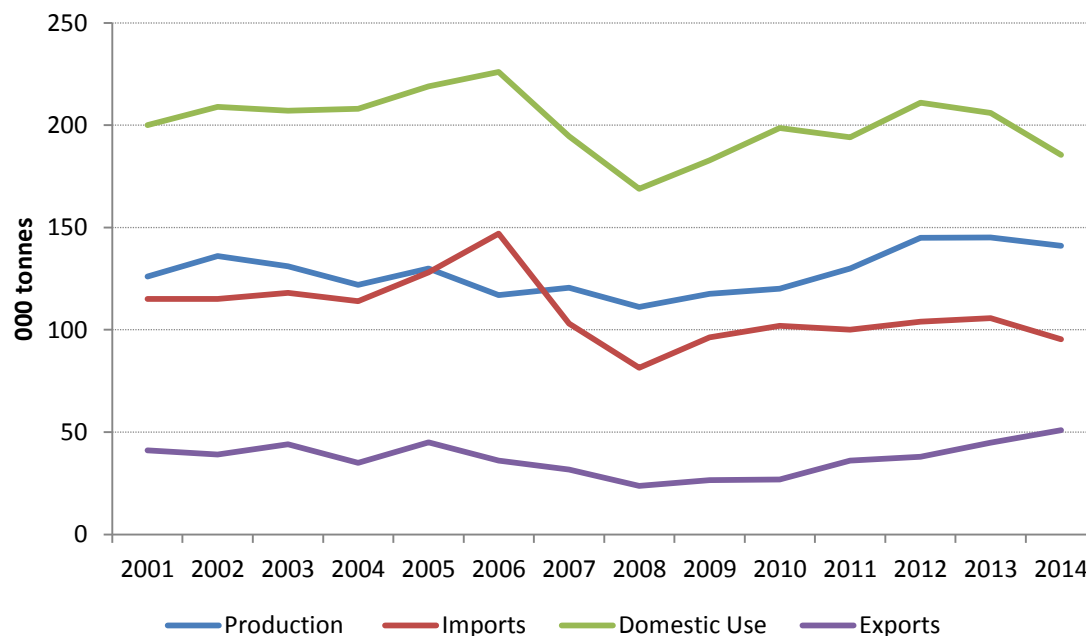
UK supply and use data for dairy commodities are provided by AHDB (2016). The dependence of UK supply and use on trade flows varies from one dairy commodity to another.

The supply and use balance for butter is illustrated in Figure 3-22. Imports are twice as large as exports and account for close to 50 percent of UK domestic use of butter. UK imports of butter are predominantly sourced from the EU, with circa 11 percent from non-EU sources (almost exclusively New Zealand). Ireland accounted for close to 56 percent of all UK imports of butter in 2014. The loss of this market would require that more than 50kt of Irish butter exports be absorbed on either EU27 markets or ROW markets.

Given the importance of the UK butter market for the Irish dairy industry and of butter generally within the Irish dairy product mix, the barriers to EU27 exports to the UK post Brexit will be important in determining the extent of any disruption to dairy trade, dairy commodity prices and ultimately milk prices. If the UK imposes tariff barriers to trade with

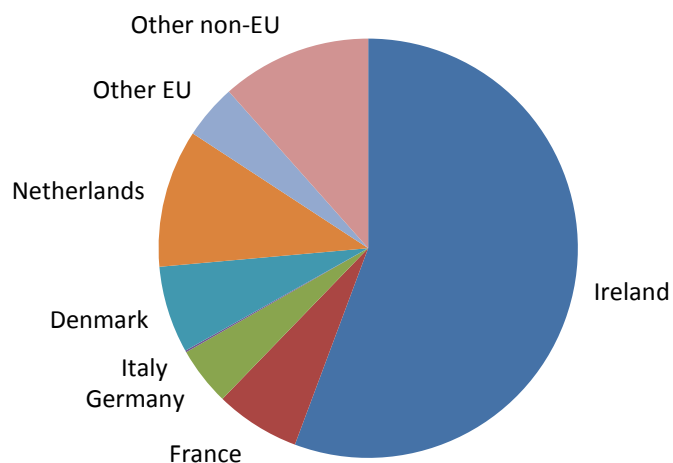
EU27 member states this would be likely to negatively affect the volume and/or price of Irish butter exports to Britain and be reflected in lower butter and milk prices in Ireland.

Figure 3-22: UK Butter Supply and Use Balance (2001-2014)



Source: AHDB

Figure 3-23: UK Butter Imports in volume terms (2014)

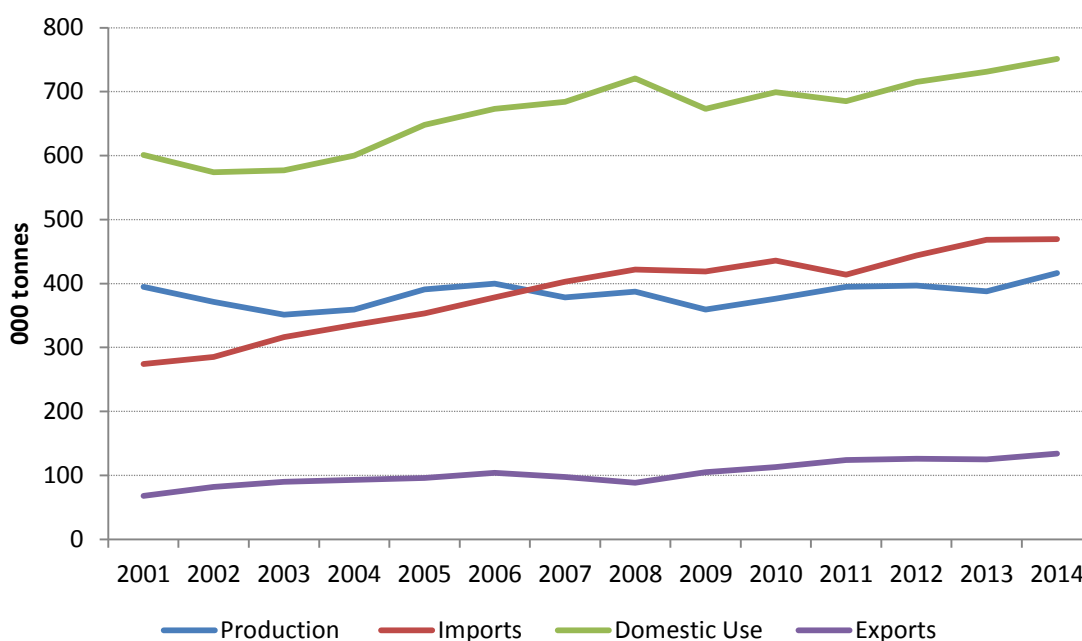


Source: Eurostat COMEXT

The dependence of the UK on cheese imports is similar to that for butter – though it should be noted that cheese is a more heterogeneous commodity than butter and the nature of the cheese product exported and imported from the UK is likely to differ.

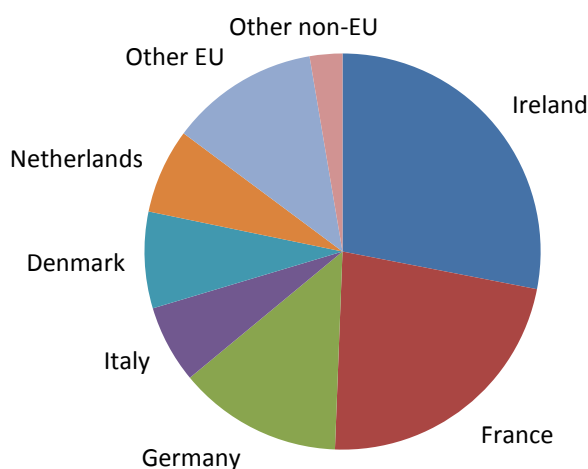
Recent growth in domestic use of cheese in the UK has been largely met by growth in the volume of cheese imports, while domestic cheese production and exports have remained largely stable. In 2014 imports of cheese accounted for over 60 percent of UK domestic use of cheese. UK cheese imports, as with butter, are almost exclusively sourced from EU member states. Less than 3 percent of the total volume of cheese imported into the UK in 2014 was from non-EU sources. Irish cheese exports accounted for 28 percent (by volume) of UK cheese imports, the other major suppliers to the UK markets were France, Germany, Italy and the Netherlands.

Figure 3-24: UK Cheese Supply and Use Balance (2001-2014)



Source: AHDB

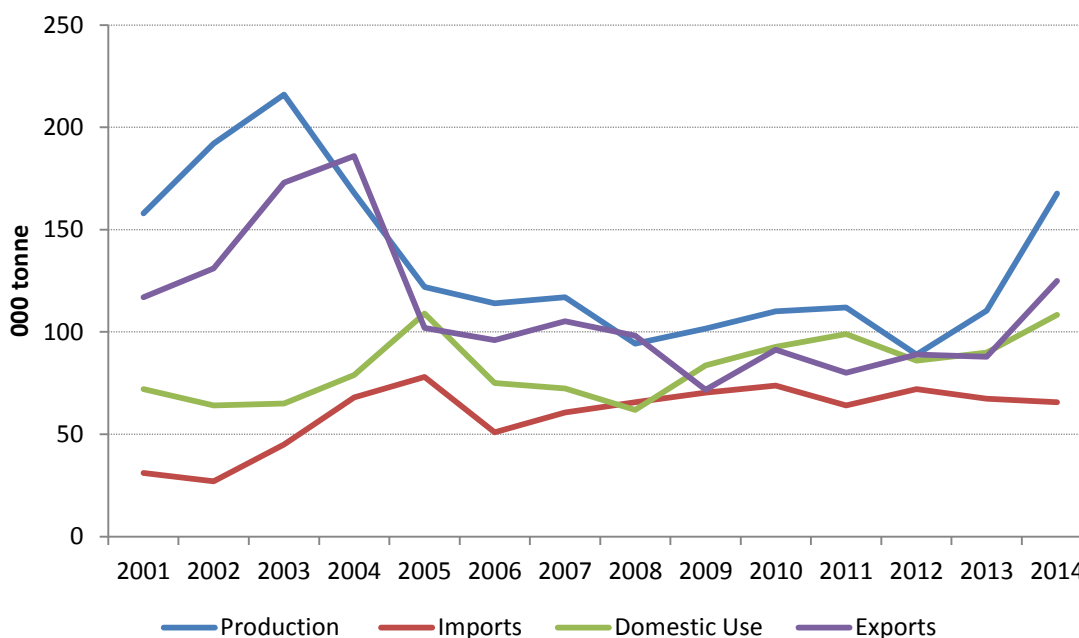
Figure 3-25: UK Cheese Imports in volume terms (2014)



Source: Eurostat COMEXT

AHDB do not report skimmed and whole milk powder supply and use separately. In aggregate the UK is a net exporter of milk powders and aggregate domestic use is very close to aggregate milk powder production.

Figure 3-26: Milk Powders Supply and Use Balance (2001-2014)



Source: AHDB

3.4 Conclusions

Across most agri-food product categories the UK is currently a net importer. Sheep meat and beverages are the main exceptions in this regard. For those commodities where the UK is a large net importer, meats (other than sheep meat) and most dairy commodities, the exit of the UK from the EU would be expected to loosen the supply and use balance at an EU level. This conclusion assumes that following Brexit the barriers to trade between the EU27 and the UK would be such that bilateral trade flows were reduced as compared to the status quo ante. In effect, some of the EU export volumes previously absorbed by the UK market would now have to find alternative markets, either elsewhere in the EU27 or on world markets. In all likelihood the impact of Brexit on the magnitude of agri-food trade flows between the UK and the EU27 would be negative. For most agri-food commodities Brexit would likely lead to lower EU prices.

The magnitude of the supply and use balance shock caused by Brexit would depend on a number of factors. One is the post-Brexit trade rule dispensation: how large would the new barriers to trade be between the UK and the EU27 as compared with the status quo ante? Another factor in determining the magnitude of the EU supply and use balance shock and concomitant price shock would be the extent to which a Brexit alters the EU supply and use

balance for agricultural commodities. These two factors are obviously related to one another and are at this point in the realm of known unknowns.

What the analysis in this chapter has shown, however, is that for some agri-food commodities of importance to Ireland (notably beef and dairy commodities) the UK accounts for an important share of EU consumption and production, and is a large net importer. Any increase in the barriers to trade between Ireland and the UK that reduces Irish exports to the UK would require that the product be diverted to other, most likely lower value markets, either in the EU27 or the ROW. The impact on Irish and EU prices of such a development would be negative. The one exception to this general conclusion is sheep meat. The likely impact of a Brexit on EU and Irish sheep meat markets would be positive since, it would result in a reduction in UK exports of sheep meat to the EU27.

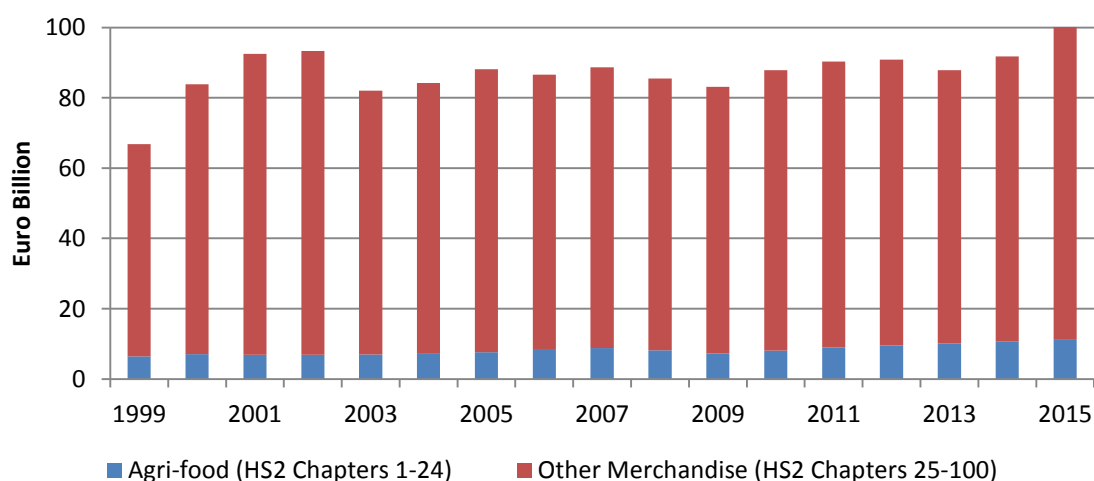
4 Ireland's Agri-Food Trade

In this chapter we use trade data extracted from Eurostat's COMEXT database to illustrate the nature of Ireland's agri-food trade including its composition across different commodities and agri-food products and the importance of different geographic destinations (UK, Other EU and ROW) in Ireland's agri-food exports.

4.1 Ireland's Agri Food Trade as a Share of Ireland's Total Trade

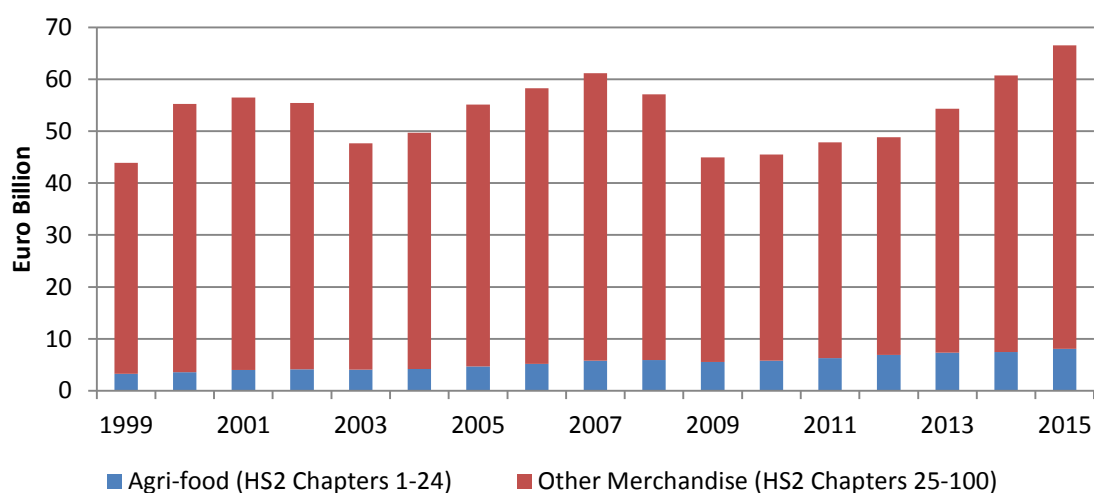
Ireland's trade in agri-food products (HS2 Chapter 1-24) is part of Ireland's broader merchandise trade. Statistics from Eurostat COMEXT can be used to examine the origin/destination of imports/exports as well as the nature of the products traded. In Figure 4.1 and Figure 4.2 the evolution over time in agri-food and other (non-agri-food) merchandise exports and imports are shown.

Figure 4-1: Ireland Merchandise Exports (1999-2015)



Source: Eurostat COMEXT

Figure 4-2: Ireland Merchandise Imports (1999-2015)



Source: Eurostat COMEXT

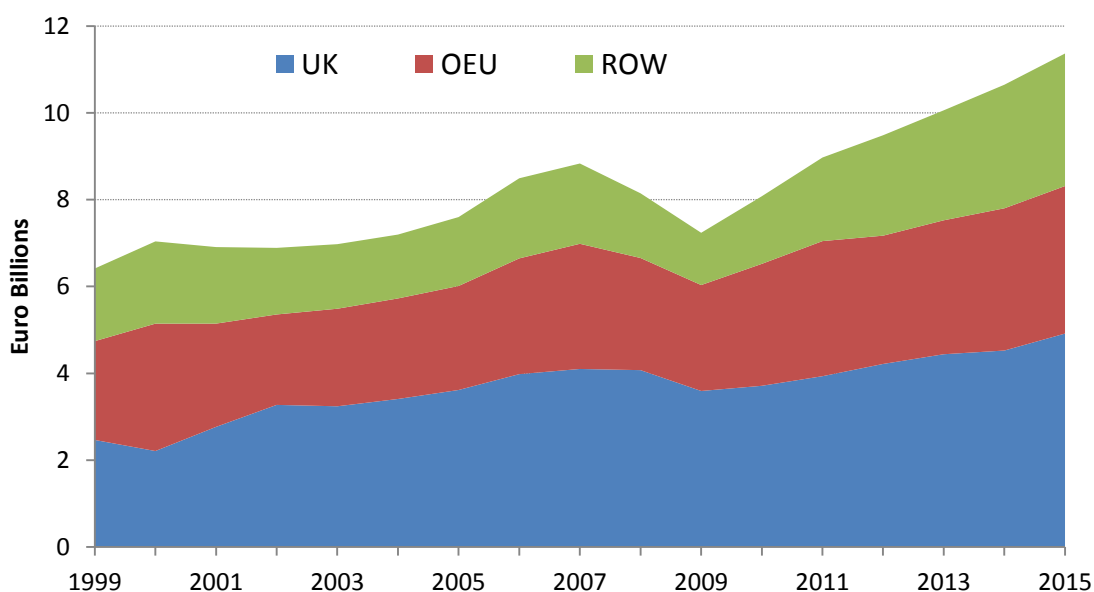
Figure 4.1 and Figure 4.2 show that Ireland's agri-food trade is dwarfed by trade in other (non-agri-food) goods.

4.2 Agri-Food Trade between Ireland and the UK

While Irish agri-food exports are small relative to other non-agricultural merchandise exports, agricultural exports from Ireland account in general for very large proportions of agricultural production in various product categories. The CSO publishes annual supply and use balance tables for a limited number of agricultural commodities produced by Irish agriculture (CSO 2012; CSO 2013; CSO 2015). These tables show that for all meats other than poultry, and all dairy commodities Ireland exported over 80 percent of production. Thus developments in export markets are central to the economic prospects of Irish agricultural and food production.

In Figure 4.3 Ireland's agri-food exports, expressed in value terms, are decomposed according to their destination. Ireland's agri-food exports to the UK, Other EU member States (OEU) and the ROW have grown over time. The growth in the value of exports has occurred in all three regions, with the value of exports to the UK exhibiting the largest percentage and absolute increase.

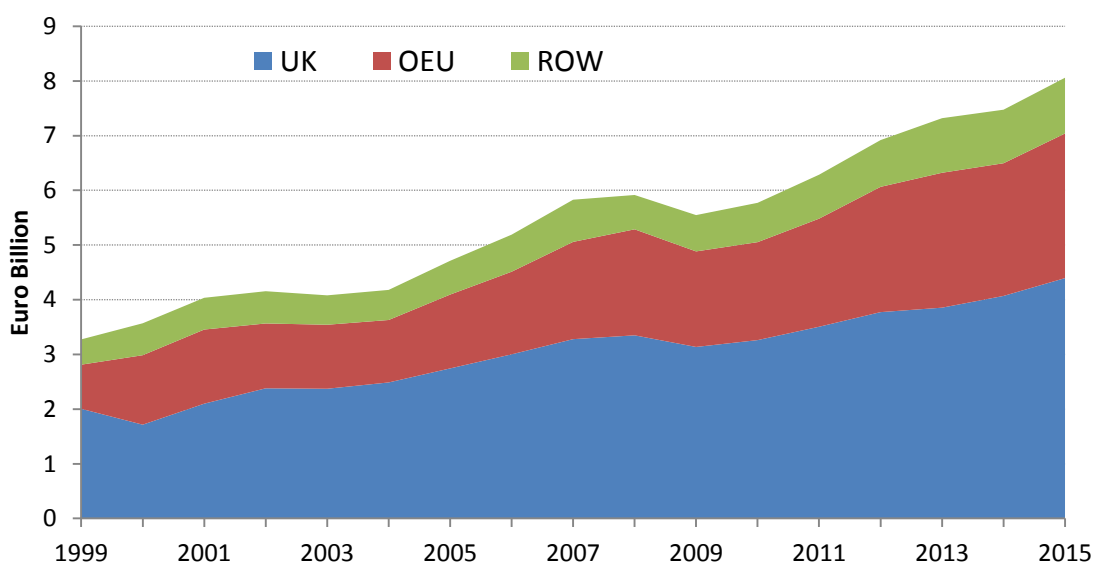
Figure 4-3: Irish Agri-Food Exports by Destination (1999-2015)



Source: Eurostat COMEXT

Figure 4.4 shows Irish agri-food imports, in value terms, decomposed by their country of origin. As agri-food exports have grown in value, so too have agri-food imports. Again the UK dominates in terms of its share of Ireland's imports of agri-food products, with close to 50 percent of Ireland's agri-food imports coming from the UK.

Figure 4-4: Irish Agri-Food Imports by Origin (1999-2015)

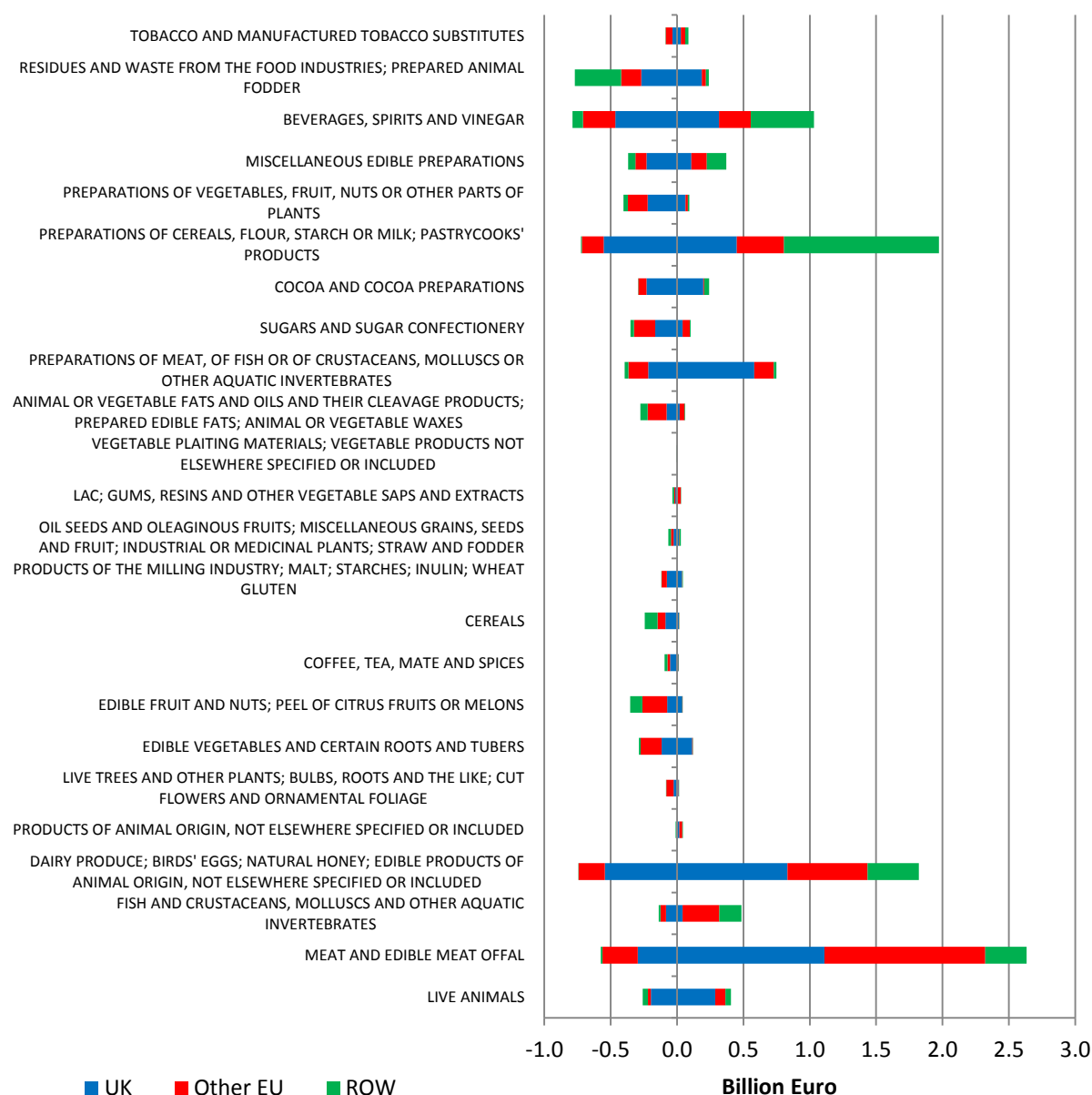


Source: Eurostat COMEXT

While the value of Irish agri-food trade has grown dramatically over time, the volume of agri-food trade has not changed by as much. We know that the physical volume of Irish meat and dairy commodities exported has not increased significantly over the last 15 years. The increase in the value of agri-food exports has been largely driven by increases in the “unit value” or price of goods imported and exported. This increase in the unit value of the different elements of Irish agri-food trade reflects both the general inflation in agri-food product prices over time, as well as the increased value-added component of Irish agri-food trade. For example, over the last 15 years the proportion of Irish beef exports shipped as fresh deboned cuts has increased, while the proportion shipped as frozen carcass has declined. In the absence of any increase in the “price of beef” this process alone would bring about an increase in the value of Irish beef exports.

The value of Irish agri-food trade exports and imports in 2014 are shown in Figure 4.5. In 2014 agri-food exports from Ireland were worth €10.65 bn, while imports of agri-food products were worth €7.5 bn. From Figure 4.5 Ireland’s net export status across most of the 24 HS2 chapters is evident, as is the dominance within Ireland’s agri-food exports of meat and dairy exports. In 2014 meat (mostly beef) and dairy products as traditionally defined (i.e. exclusive of processed food exports), accounted for 46 percent of the value of Irish agri-food exports. Processed foods (HS2 16, 17, 18, 19, 20 and 21) accounted for 33 percent of agri-food export value. Imports of processed food products as well as imports of fresh fruit and vegetables (HS2 7 and 8) dominate Ireland’s agri-food imports. Beverages are a significant component of both Irish agri-food exports and imports. Beverage exports accounted for 10 percent of the value of Ireland’s agri-food exports in 2014 and 11 percent of Ireland’s agri-food imports.

Figure 4-5: Irish Agri-Food Trade by HS Chapter (2014)

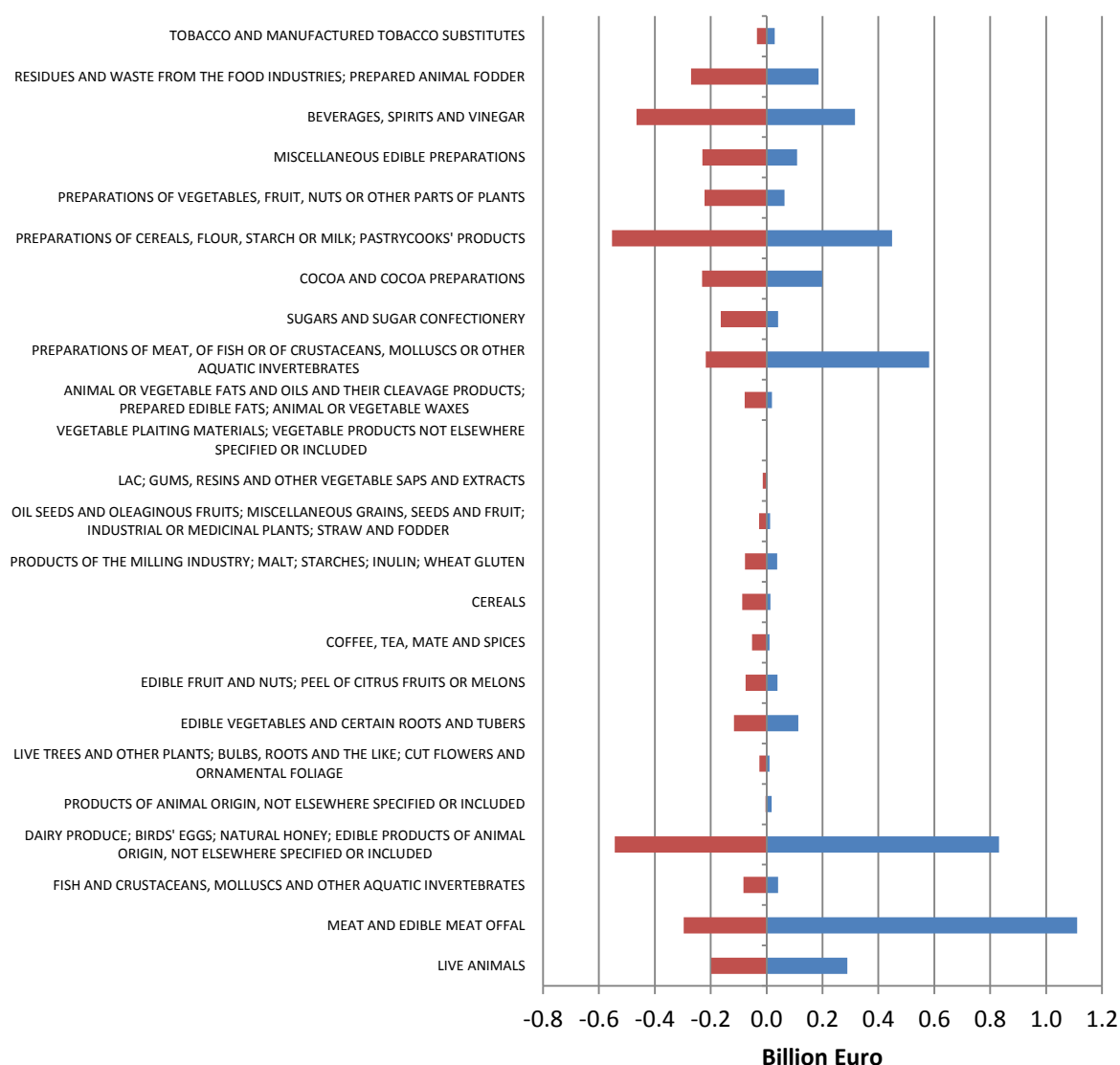


Source: Eurostat COMEXT

The dominance within Ireland's agri-food trade (both imports and exports) of trade with the UK and the EU is clear from Figure 4.5. Trade flows between Ireland and the UK in general are larger than trade flows between Ireland and other EU member states. In 2014 the UK accounted for 42 percent of Irish agri-food exports and 54 percent of Irish agri-food imports (in value terms). OEU member states accounted for 31 percent and 32 percent of Irish agri-food exports and imports respectively. Exports under two HS2 headings (16 and 22) to non-EU markets are important. Exports to non-EU markets dominate Irish beverage exports (HS2 22) and exports of processed food products based on cereals, flour, starch and milk (HS2 16). The latter category includes food preparations for infants based on milk.

Focusing on Ireland's agri-food trade with the UK, Figure 4.6 decomposes this trade across a range of agri-food subcategories. The overall balance of trade in 2014 showed that Ireland's agri-food exports to the UK were some €460 million higher than the value of imports. Ireland's agri-food exports to the UK are dominated by trade in dairy commodities and meats.

Figure 4-6: Decomposition of the Agri-Food Trade Balance between Ireland & UK (2014)



Source: Eurostat COMEXT

Note: Irish exports to the UK are shown as positive values, while Irish imports from the UK are shown as negative values

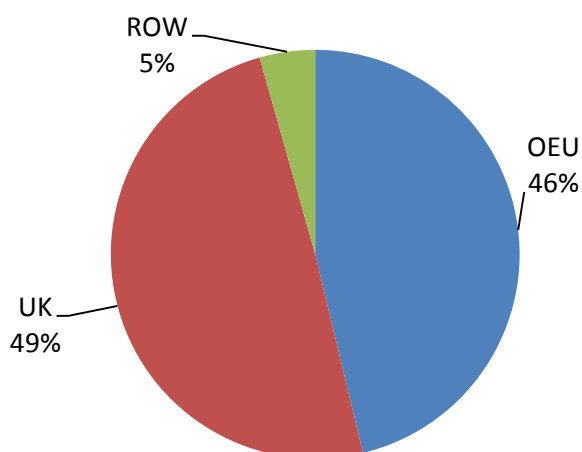
Live animals, meat and dairy exports accounted for 49 percent of agri-food exports to the UK in 2014. As is clear from Figure 4.6, Ireland's large trade surplus in live animals, meats and dairy commodities (€1.2 bn) is partially offset by deficits in trade in other agri-food commodities (primarily processed/branded food retail items). The significant value of dairy imports from the UK reflects both cross-border trade in milk for processing as well as

exports of some dairy commodities to the UK for packaging (such as cheese) and the subsequent re-importation of these commodities.

4.2.1 Meat Trade between Ireland and the UK

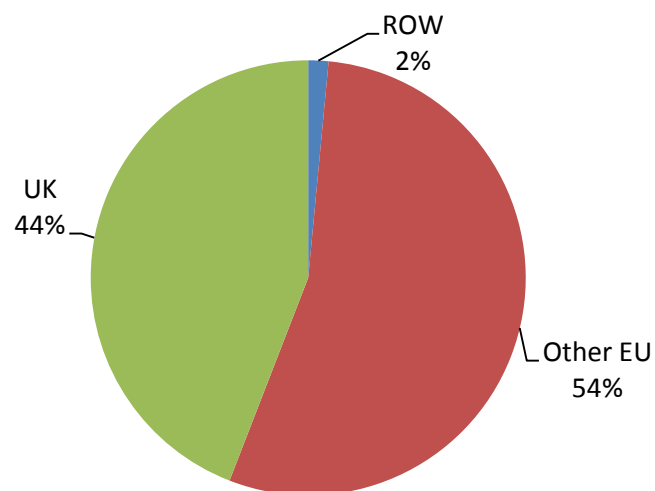
Figure 4-7 shows the distribution of Irish beef exports (in volume terms) across the UK, other EU and ROW markets. The aggregate beef volume is calculated by adjusting boneless beef exports to carcass weight equivalent and adding these to bone-in beef volumes. The UK is the dominant market accounting for just under one half of all beef exported from Ireland in 2014 destined for the UK, other EU markets account for 46 percent of exports with the ROW absorbing 4 percent of Irish beef. When beef exports are examined at the CN8 level of disaggregation four codes dominate shipments of beef from Ireland. These codes are fresh and chilled boneless beef (0201300), frozen boneless meat (02023000), fresh or chilled carcass or half carcasses (02011000), and Fresh or chilled bovine cuts with bone-in (02012000).

Figure 4-7: Ireland Beef Exports by Destination in volume terms (2014)

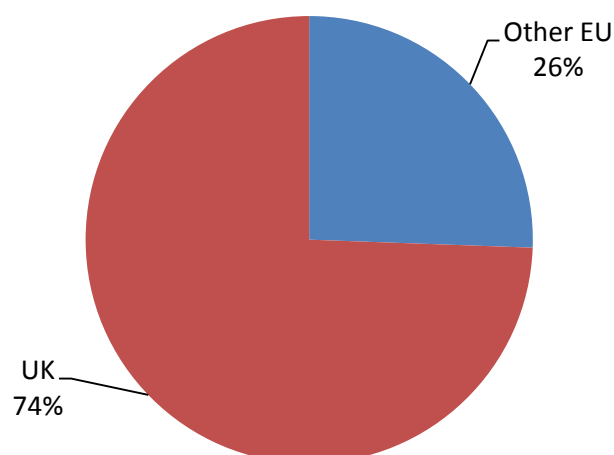


Source: Eurostat COMEXT

In Figure 4-8 the share of Irish fresh boneless beef exports destined for the UK, other EU member states and the ROW are shown. This value added product has gradually become more dominant within Ireland's beef trade, accounting for close to 60 percent of Irish beef exports in 2014. In 2014 the UK accounted for 44 percent of fresh boneless beef exports with other EU member states accounting for 54 percent of exports. By contrast, as Figure 4-9 shows exports of fresh carcasses and half carcasses of beef (that account for circa 10 percent of Ireland's beef exports) are heavily dominated by exports to the UK.

Figure 4-8: Irish Fresh Boneless Beef Exports by Destination in volume terms (2014)

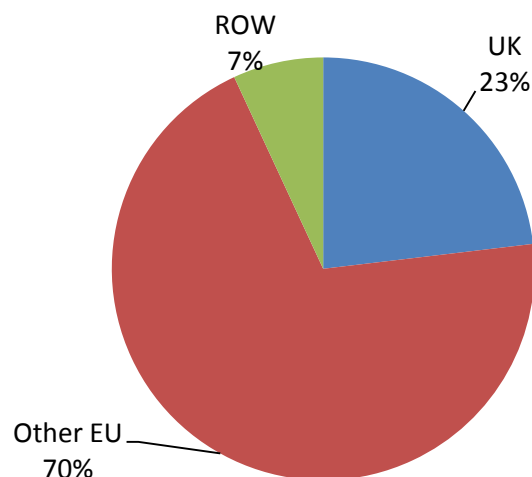
Source: Eurostat COMEXT

Figure 4-9: Irish Fresh or Chilled Carcass and Half Carcass Beef Exports by Destination in volume terms (2014)

Source: Eurostat COMEXT

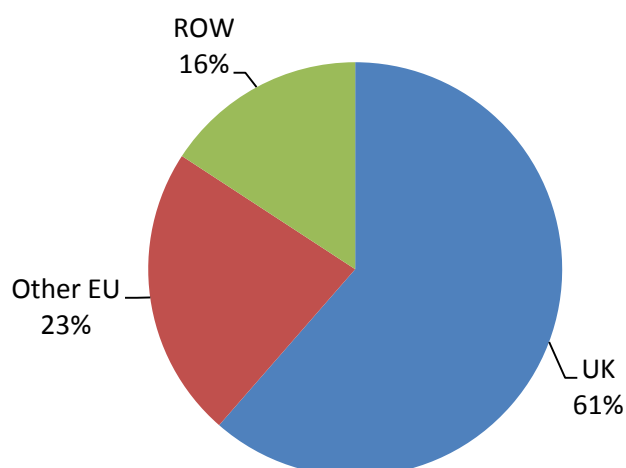
4.2.2 Dairy Trade between Ireland and the UK

Ireland's exports of lamb are dominated by shipments to continental EU markets. The UK accounts for roughly one quarter of Irish sheep meat exports, with 70 percent of sheep meat exports destined for continental EU markets, where Irish lamb competes with locally produced sheep meat, sheep meat from the UK and sheep meat from outside the EU (New Zealand and Australia).

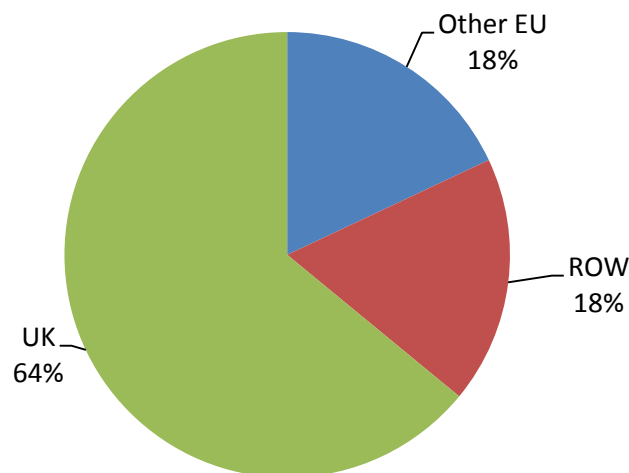
Figure 4-10: Irish Sheep Meat Export by Destinations in volume terms (2014)

Source: Eurostat COMEXT

Ireland exports of dairy commodities are dominated by exports of cheese, butter and milk powders. The destinations of Ireland's exports of cheese in 2014 are shown in Figure 4-11. The UK is by far the largest export market for Irish cheese. Markets in the rest of the EU and outside of the EU are roughly equivalent in volume terms. Trade data at the CN8 level allows us to examine trade flows of particular cheese types. The data show that Irish cheese exports are dominated by exports of cheddar. Figure 4-12 shows the destinations of Irish cheddar cheese exports, with the UK accounting for 64 percent of Irish exports.

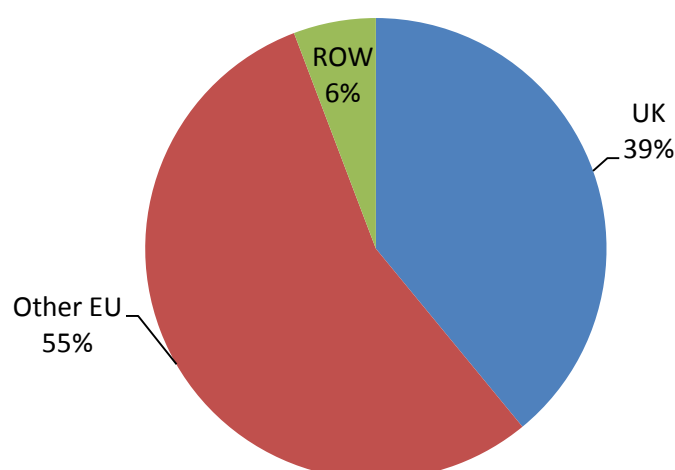
Figure 4-11: Ireland Cheese Export by Destination in value terms (2014)

Source: Eurostat COMEXT

Figure 4-12: Irish Cheddar Cheese Exports by Destination in value terms (2014)

Source: Eurostat COMEXT

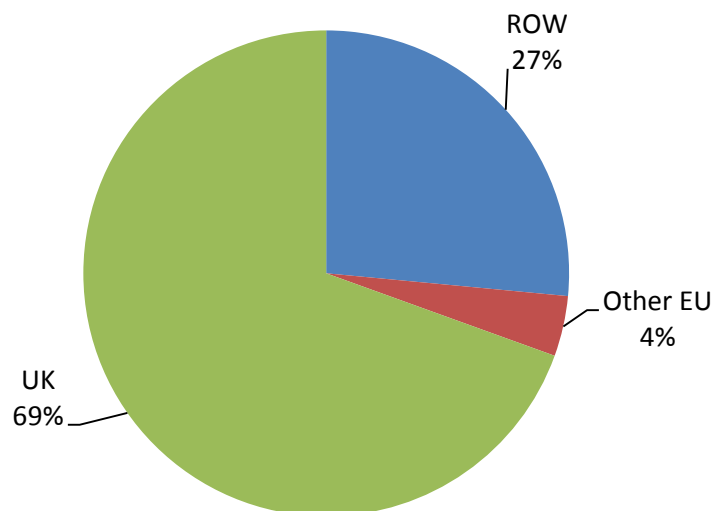
Irish butter exports are shown in Figure 4-13. While the UK market is very important, when measured by volume, exports to other EU destinations account for the largest share. Trade in Irish butter is dominated by three CN8 codes, exports of packaged butter with a fat content of less than 85 percent, exports of unpackaged butter with a fat content of less than 85 percent, and exports of butter and butteroil of fat content greater than 85 percent but less than 90 percent.

Figure 4-13: Irish Butter Exports by Destination in value terms (2014)

Source: Eurostat COMEXT

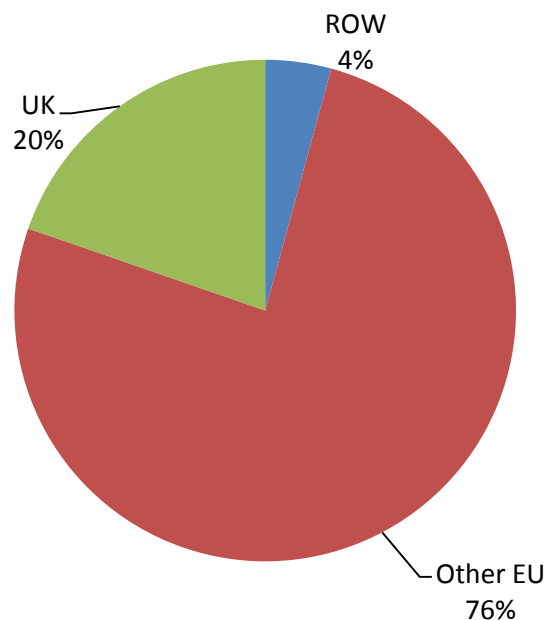
Figure 4-14 and 4-15 show the share of packaged and unpackaged butter exports from Ireland across the UK, other EU and ROW markets. What is clear is that the packaged butter export market is dominated by the UK, while exports of unpackaged butter are dominated by shipments to other EU member states.

Figure 4-14: Irish Packaged Butter Exports by Destination in value terms (2014)



Source: Eurostat COMEXT

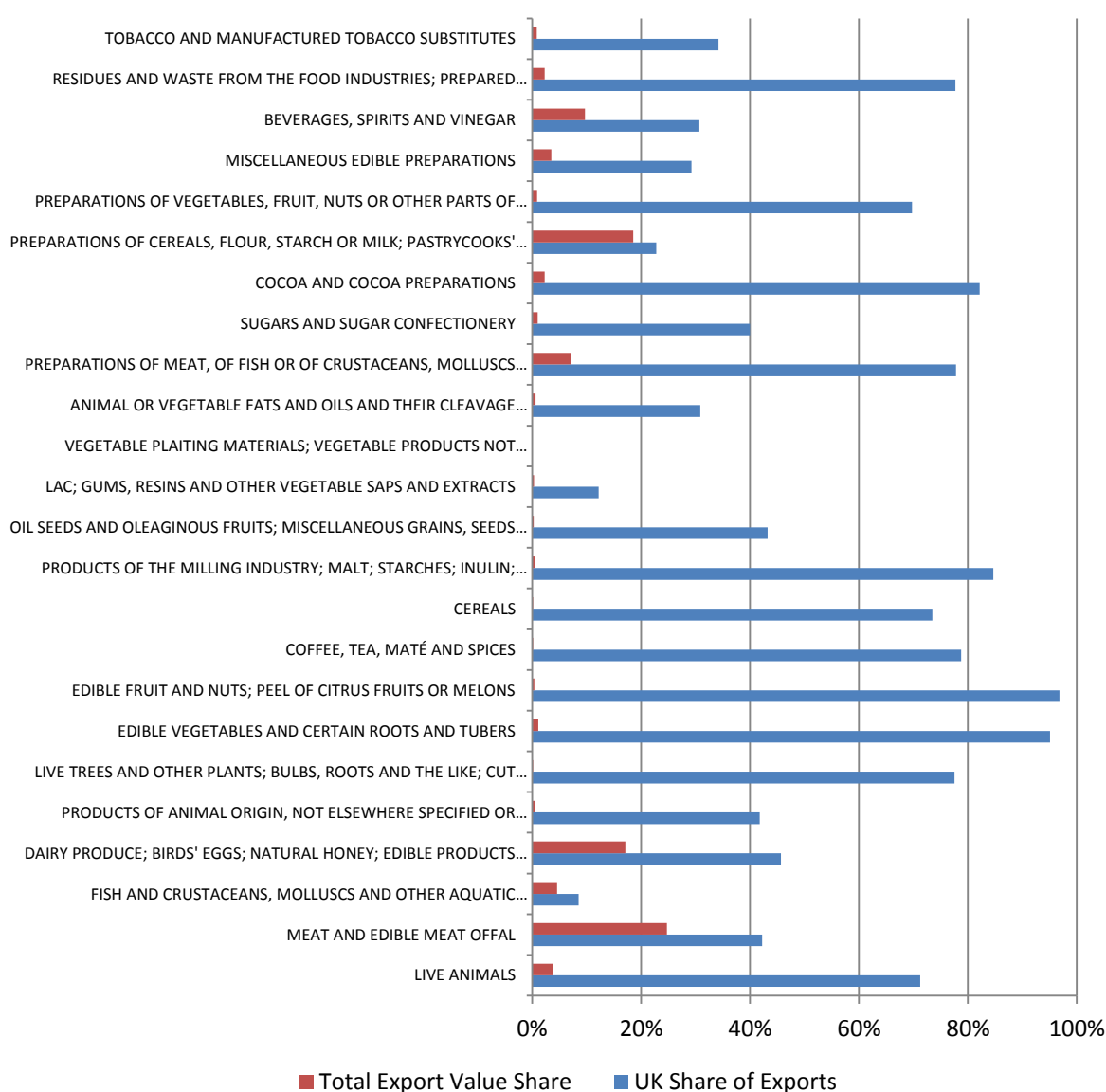
Figure 4-15: Irish Unpackaged Butter Exports by Destination in value terms (2014)



Source: Eurostat COMEXT

Figure 4.16 shows the share of exports to the UK across the 24 HS2 chapters of Ireland's agri-food trade and the importance of each of these 24 chapters in total Irish agri-food exports. Six HS2 chapters account for over 80 percent of Ireland's agri-food exports, these are live animals, meat and edible offals, dairy exports, processed meats and processed foods based on cereals, flour starch and milk and beverages. The share of the UK in 4 of these 6 chapters is in excess of 40 percent, while the share of the UK in exports of beverages and processed foods based on cereals, flour, starch and milk are both in excess of 20 percent. The differing levels of dependence on the UK of different elements of Ireland's agri-food trade will likely be reflected in the varying degrees to which farms and firms in different parts of the agri-food industry are affected by Brexit.

Figure 4-16: Irish Agri-Food Exports by HS2 Chapter and Share of Exports to UK (2014)



Source: Eurostat COMEXT

5 Bremain or Brexit: Assessing the Implications

In this chapter we examine the implications for the UK agri-food sector of a decision to remain in the EU (Bremain) and a decision to leave the EU (Brexit).

5.1 Bremain: General Implications

Future EU policy decisions that would affect the agriculture sector of the EU28 are not known with certainty. The FAPRI-Ireland Baseline assumes that EU agricultural policy (CAP), as well as EU trade policy, remain unchanged over the 10 year projection period. The UK remains within the EU28. In those circumstances what is the outlook for UK agriculture and in particular UK import demand? In this section we briefly discuss the baseline outlook for UK agriculture. This will demonstrate whether Irish export opportunities to the UK, would remain unchanged at their current level, increase or decrease in the coming years. In the next section this Bremain outcome can be compared with the Brexit outcome to assess the impact of a Brexit decision from an Irish perspective.

Key Baseline Assumptions

- The UK remains within the EU28
- The CAP remains unchanged
- No new trade deals are entered into by the EU28

In Chapter 3 we reviewed the UK agri-food bilateral trade data as well as historical data on commodity supply and use balance sheets for the four meats (beef, pig meat, poultry meat and sheep meat) and dairy commodities (Butter, Cheese and Milk Powders). The FAPRI modelling system can be used to provide forward looking projections for how these balances and equivalent balances for Ireland and the other remaining EU MS would evolve in the absence of any changes from current agricultural and trade policies. The Baseline assumes that agricultural policy as well as trade policy remains unchanged over the projection period. Brexit would obviously represent a significant change from the Baseline's policy setting and would also be likely to affect the macroeconomic outlook for the UK, Ireland and the EU27. In this section we first briefly discuss the baseline outlook for UK agriculture. This outlook can be used to assess the extent to which post-Brexit the outlook for trade with the UK in agricultural commodities would be affected and impact on Irish agriculture and the wider agri-food sector.

The data reviewed in Chapters 3 and 4 have highlighted the agri-food import dependence of UK and the export dependence of the Irish agri-food sector. Ireland's agri-food exports (and imports) are dominated by trade with the UK. Chapter 4 highlighted the importance of trade in meat (primarily beef) and dairy commodities as well as processed foods in Irish-British agri-food trade. Under the Baseline what is the outlook for the UK production, use and trade

in the meat and dairy commodities that are central to the Irish agricultural and agri-food economy?

5.1.1 UK Baseline Agricultural Outlook

The UK is a mature economy and under the Baseline no significant developments in either production or per capita use of agricultural commodities are expected. The primary driver of changes in the UK supply and use balances for agricultural commodities is the Baseline outlook for the development of the UK population over the next ten years. Under the Baseline the UK population is projected to grow almost 7 percent to 69 million by 2025. This growth in population (in part driven by on-going net immigration from the EU) is projected to lead to increases in the level of domestic use (aggregate consumption) of most agricultural commodities. While UK agricultural output is expected to grow over the Baseline projection period, this growth is expected to be outpaced by growth in aggregate demand for agricultural commodities and consequently the net import position of the UK for most agricultural commodities and for processed agri-food products is expected to increase over the next ten years.

Under the Baseline, UK milk output is projected to be relatively stable. With projected growth in the UK population domestic use of cheese, butter and liquid milk is expected to grow and UK net imports of cheese and butter in particular are expected to grow modestly, while the UK net exports of milk powders are projected to decline.

With aggregate milk deliveries in the UK expected to remain relatively stable over the baseline, increases in milk yields are projected to lead to a contraction in the UK dairy cow herd over the next ten years. The extent to which this projected development leads to lower UK beef production is dependent on the expected development in UK suckler cow inventories. Under the Baseline, UK suckler cow numbers are expected to increase modestly and offset the impact of declining dairy cow numbers on numbers of cattle slaughtered in the UK and UK production of beef. Overall, under the Baseline, the outlook for UK beef production is stable, with increasing domestic use of beef driving increased net imports of beef into the UK. By 2025 UK beef imports are expected to grow from circa 250 kt in 2015 to 300 kt.

Under the Baseline, UK production of sheep meat is projected to grow due to both increased ewe numbers, but also increased ewe productivity. Projected growth in sheep meat production under the Baseline is projected to not fully keep pace with growth in total domestic use of sheep meat in the UK with the result that under the Baseline the UK net exports of sheep meat are expected to contract.

Under the Baseline the UK net import position in pig meat is not projected to change. UK net imports of pig meat are currently close to 500 kt and, over the Baseline, growth in

domestic use that exceeds growth in production is projected to lead to growth in the level of net imports. By 2025 UK net imports of pig meat are projected to increase towards 600kt per annum by 2025.

Overall, the Baseline outlook is suggestive of modest increases in UK import demand for agricultural commodities where the UK is currently a net exporter. Given Ireland's current status as one of the largest suppliers of UK agri-food imports, the Baseline outlook for the UK suggests that Irish agri-food exports to the UK could increase.

5.2 Brexit: Trade and Agricultural Policy Uncertainty for the UK

Swinbank (2016) points out that Brexit creates at least 11 possible outcomes in terms of how the future UK agri-food trade policy relationship with the EU could be defined, as illustrated in Table 5.1. He notes that even if the UK were to reach a general trade agreement with the EU under either a customs union, as part of the European Economic area, or as part of a simple free trade area, there is still the question as to whether agricultural trade would be covered by such an agreement. If agriculture were to remain outside such an agreement then the UK could apply WTO MFN tariffs on imports from the EU or it could unilaterally decide to reduce or eliminate those tariffs.

Table 5-1: Possible trade policy outcome for the UK under Brexit

The UK's relationship with the EU	Agriculture 'in' an agreement	Agriculture 'out'	
		Existing most-favoured-nation (MFN) tariffs	Unilateral tariff reduction by the UK
Customs Union	1	2	3
European Economic Area	4	5	6
Simple Free Trade Area	7	8	9
No formal link	Not applicable	10	11

Source: Swinbank (2016)

From an Irish perspective it would be preferable for agriculture to be integral to the any future trade agreement between the UK and the EU. The least preferable outcome would be an arrangement where agriculture is not part of a trade agreement or if no trade agreement is reached. In that circumstance Irish (and other EU) exports to the UK face MFN tariffs and vice versa. A further option that would arise if agriculture remained outside an

agreement (or if no agreement were reached) would be that the UK would unilaterally reduce its agricultural tariffs. This would deliver a lopsided outcome whereby the UK would have liberalised its own import tariffs while it would still potentially face MFN tariffs on its exports to the EU. While unilateral tariff liberalisation of this kind is seen as an ideal by some free trade advocates, this outcome is somewhat unlikely given that a unilateral UK import tariff reduction would need to apply not just to the EU, but to all WTO members. This would leave the UK agri-food sector exposed to increased competition from low cost exporters, particularly in the area of livestock and livestock products, which could have adverse consequences for UK dairy, beef and sheep production

5.3 Brexit: General Implications for Irish Agri-Food Exports

Should the UK leave the EU, an outcome with a relatively benign impact would emerge if an FTA agreement can be put in place between the UK and the remaining EU27 that includes agriculture and food and if the UK successfully negotiates FTA agreements with third countries on similar terms to those established by the EU. Since this outcome is not anticipated to have any significant impact on the agri-food sector in Ireland, it is not explored further. Instead the focus of the Brexit scenario analysis is on the more difficult and more extreme outcome that involves tariffs being levied on trade between the UK and EU27.

The most negative outcome for Ireland would result if the UK and EU27 failed to negotiate the terms of the UK's exit. At that point, as WTO members, the EU27 and UK, would only be obligated to offer each other the default WTO MFN status. This would result in the imposition of tariffs on trade between the UK and the EU and would be expected to lead to a reduction in the level of trade between the UK and the EU27.

The imposition of tariffs on trade can be expected to reduce, but not eliminate the agri-food trade between the UK and the EU27. Complete elimination of agri-food trade between the UK and EU27 would entail an offsetting substantial increase in UK agri-food trade with the ROW, or a massive increase in the UK's agri-food self-sufficiency, neither of which is plausible in the short or medium term (and arguably even in the long term).

Key Brexit Assumptions

- The UK leaves the EU
- The CAP remains unchanged
- UK agricultural policy mimics the CAP – at least for a transitional period
- No new trade deals are entered into by the EU
- The UK and EU do not enter an FTA arrangement and Most Favoured Nation (MFN) tariffs apply

The UK would also need to address its trading relationships with other countries around the world. As a non EU member, the UK would be free to negotiate deals with those countries

that have and do not have specific trade deals with the EU. Resultant trade deals struck by the UK with third countries could mean increased competition from third countries for EU27 exporters to the UK market. From the perspective of the Irish agri-food sector the most adverse outcome would occur if the UK, following Brexit, establishes liberal trade agreements with agri-food net exporters that do not currently have trade agreements with EU27. This could increase the supply of agricultural commodities in Europe, with adverse consequences for EU27 commodity prices.

Should the UK leave the EU and if trade takes place on an MFN basis, there could be notable agri-food trade consequences for several EU member states. These effects would be concentrated in particular sectors. Ireland's beef, dairy and sheep meat exports would be affected, as would Denmark's pig and dairy exports. The Netherlands' exports of vegetable products would suffer, as would exports of wine from France, Spain and Italy and exports of olive oil from Greece.

The extent of the impact on EU27 agri-food exports to the UK would depend on the availability of competitive agri-food exports from countries outside of the EU, and would also depend on consumer country of origin preferences, which are influenced by among other things, traceability, animal welfare, human health and sustainability concerns.

To the extent that the existing level of EU27 exports to the UK is not maintained and exports are instead diverted to EU27 markets, there would be a negative impact on EU27 commodity prices. This negative impact would depend on the importance of the UK self-sufficiency and import demand as a determinant of the EU27 net trade position in specific commodity markets and would also depend on the world price level in the specific commodity area. Other things being equal the lower the world price relative to the EU27 internal prices the more likely it would be that non-EU exporters would be competitive with EU27 exporters on the UK market.

Other things being equal, if the UK is close to self-sufficiency in a particular sector and if world prices are similar to EU prices, then Brexit would not be expected to significantly impact that market. This would characterise the likely outcome of Brexit for the EU cereals sector.

Conversely, other things being equal, if the UK has a substantial deficit in a particular commodity area and if world prices are considerably below the EU level, then the greater the potential for a more pronounced impact on EU prices. This would characterise the likely outcome of Brexit for the EU beef sector.

5.4 Brexit: Specific Implications for Irish Agri-Food Exports

A Brexit that increases barriers to trade would drive a wedge between Irish and UK prices and most likely reduce the volume of agri-food exports from Ireland to the UK. These products would have to be absorbed on domestic markets or exported to other markets

inside and outside of the EU. Given the extreme export dependence that characterises Irish agricultural and agri-food supply balances, the capacity of the Irish market to absorb products previously exported to the UK would be very limited and the majority of agri-food output which, under the Baseline, would have been exported to the UK would be diverted to other EU markets and where possible world markets.

What would we expect the impact of such a development to be? As noted in earlier discussions in Chapter 4 the magnitude of the shock to the value of Irish agri-food export and output value would depend on the degree to which following Brexit, Irish agri-food exports are lower than they would otherwise have been. For many reasons it is very difficult to know what the magnitude of such a change would be. Recent ESRI analysis of the impact of Brexit on Irish merchandise trade (Barrett et al. 2015) found, using work by Hufbauer and Schott (2009), that the reduction in bilateral merchandise trade between Ireland and the UK could be as large as -21.5 percent. Hufbauer and Schott's paper also provides equivalent estimates for the impact of EU membership and membership of an EU FTA on bilateral agri-food trade. Using the same approach as the ESRI (in its Hufbauer and Schott based trade analysis) the estimated effect of Brexit on Irish-UK bilateral trade in agri-food products is a reduction of -56.6 percent in the value of agri-food exports. For reasons, outlined in Appendix 1, it is possible that the negative impact on Irish-UK agri-food trade is likely to be lower than this estimate.

In what follows we assume that following a Brexit trade barriers between Ireland and the UK are sufficient to reduce the volume of Irish agri-food exports to the UK by 21.5 percent (the ESRI estimate for all merchandise trade) as compared to their level in 2014. We assume that the volume of agri-food output previously exported to the UK post-Brexit is diverted from the UK market to another EU market, but that the unit value of these diverted exports is lower than the unit value of the products exported in 2014. We have chosen to reduce the value of exports that are diverted to other EU markets by 15 percent as compared to their value when shipped to the UK. We have not assumed that any of the diverted trade is diverted to world markets.

That agri-food trade is in large measure diverted rather than "destroyed" under a Brexit scenario is a key assumption in this analysis. The headline figure of reducing bilateral trade between Ireland and the UK by 21.5 percent does not, given our assumptions regarding the degree of trade destruction, imply a reduction in total trade value of 21.5 percent. To account for the fact that we are "forcing" product that currently finds its most profitable outlet on the UK market to find another EU market we reduce the value of the diverted product under the Brexit scenario by 15 percent.

For some agri-food products plausible arguments can be made for why the discount applied could be greater or less than 15 percent; cheese is an example where the discount required may be more than 15 percent. Most Irish cheese exports are of cheddar and are shipped to the UK. To absorb diverted Irish cheddar exports on the remaining EU27 cheese market may

take more than a 15 percent discount relative to the 2014 unit value. Alternatively it may require the production of other cheese varieties which we assume would also be sold at a discount to the price level achieved for cheddar on the UK market. For some other commodities the 2014 (and earlier years) trade data suggest that exports to the UK have a lower unit value than exports to other EU markets and a discount of 15 percent may be too high.

To examine the sensitivity of the estimated impact of Brexit on the value of Irish agri-food export we also undertake three alternative scenarios in which we i) increase the proportion of Irish-UK agri-food trade that is diverted and ii) increase the discount at which we value the trade diverted from the UK to other export markets. The greater the proportion of base year agri-food trade diverted from the UK to other markets and the greater the discount we assume that this diverted trade occurs at relative to trade with the UK, the larger the negative impact on total Irish agri-food trade. The core scenario described above (Scenario 1) and the three alternative scenarios examined are outlined in Table 5.2.

Table 5-2: Brexit Trade Agri-food Trade Impact Scenarios

	Share of Irish-UK trade diverted (%)	Reduction in value of diverted trade vs. Irish UK trade (%)
Scenario 1	21.5%	-15%
Scenario 2	56.6%	-15%
Scenario 3	21.5%	-30%
Scenario 4	56.6%	-30%

In the analysis conducted data on Ireland's bilateral agri-food trade with the UK, other EU member states and with non-EU countries for 2014 from Eurostat's COMEXT database are used. In 2014 the aggregate value of Irish agri-food exports was €10.65 bn. In 2014 the UK accounted for 42 percent of this export value, OEU member states accounted for 31 percent and the ROW accounted for 27 percent. The export shares of the UK, other EU27 and ROW markets vary across the different sub-components of Ireland's agri-food exports. For beverages (Chapter 22) the share of exports to the ROW is much larger than the agri-food sector average of 27 percent, while for processed meats the share of exports destined for the UK is much higher than 42 percent average UK export share.

Table 5.3 shows that a 21.5 percent reduction in the value of agri-food exports to the UK would be equivalent to a reduction of almost €1 bn per annum in bilateral Ireland-UK export value, however, as noted above this loss of export value from the UK would, in large part, be compensated by an increase in the value of exports to destinations other than the UK. Trade flows in this analysis are in large measure diverted rather than destroyed. The reduction in the unit value of exports that are diverted from the UK to other markets is equivalent to export value destruction as compared to the Breman status quo ante; nevertheless, the

overwhelming majority of the value associated with exports diverted from the UK is retained.

Under Scenario 1 despite the approximately €1 bn reduction in the value of agri-food exports to the UK the increase in the value of exports to other EU markets gives rise to a relatively small loss in aggregate agri-food export value of -1.4 percent or circa €150 million per annum. The sensitivity of the estimated impact of Brexit on agri-food trade to our assumptions regarding trade diverting and trade destroying impacts of higher trade barriers between the UK and Ireland are assessed using Scenarios 2, 3 and 4 outlined in Table 5.2.

Table 5-3: Annual Impact of Brexit on the Value of Irish Agri-Food Trade

	Share of exports to UK diverted (%)	Reduction in value of diverted trade (%)	Value of Exports in 2014 € billion	Value of Exports Under Brexit € billion	Change in Value of Exports € billion	% Change percentage
Scenario 1: Trade Diversion based on ESRI/Hufbauer and Schott estimate & assumed 15% reduction in value of diverted trade						
UK	21.5	-15	4.52	3.55	-0.97	-21.5
Other EU	21.5	-15	3.28	4.10	+0.83	+24.5
Rest of World	21.5	-15	2.85	2.85	0	0
Total			10.65	10.50	-0.15	-1.4%
Scenario 2: Larger Trade Diversion based on Hufbauer and Schott (estimate for agri-food trade & assumed 15% reduction in value of diverted trade)						
UK	56.6	-15	4.52	1.96	-2.56	-56.6%
Other EU	56.6	-15	3.28	5.45	2.18	66.4%
Rest of World	56.6	-15	2.85	2.85	0.00	0.0%
Total			10.65	10.26	-0.38	-3.61%
Scenario 3: Trade diversion based on ESRI/Hufbauer and Schott estimate and assumed 30% reduction in value of diverted trade						
UK	21.5	-30	4.52	3.55	-0.97	-21.5%
Other EU	21.5	-30	3.28	3.96	0.68	20.8%
Rest of World	21.5	-30	2.85	2.85	0.00	0.0%
Total			10.65	10.35	-0.29	-2.74%
Scenario 4: Larger Trade Diversion based on Hufbauer and Schott estimate for agri-food trade & assumed 30% reduction in value of diverted trade						
UK	56.6	-30	4.52	1.96	-2.56	-56.6%
Other EU	56.6	-30	3.28	5.07	1.79	54.7%
Rest of World	56.6	-30	2.85	2.85	0.00	0.0%
Total			10.65	9.88	-0.77	-7.22%

Source: Author Estimates

The Hufbauer and Schott (2009) gravity model run that disaggregates merchandise trade into agri-food and what they term “manufactures” finds that the effect of EU membership on bilateral trade in agri-food products is greater than the impact on manufactures. If we reduce UK trade by the 56.6 percent implied by the Hufbauer and Schott disaggregated gravity model of trade and continue to assume that the agri-food trade diverted to other EU markets trades at a 15 percent discount to its value if exported to the UK (Scenario 2), the magnitude of the loss in agri-food export value increases to 3.6 percent of total exports or €384 mn per annum.

Increasing only the magnitude of the discount imposed on diverted trade from 15 percent to 30 percent and using the ESRI estimate of the trade diverting impact of a Brexit on Irish-UK merchandise trade of 21.5 percent (Scenario 3), leads to an increase in the magnitude of the reduction in agri-food export value to 2.74 percent or €290 million per annum.

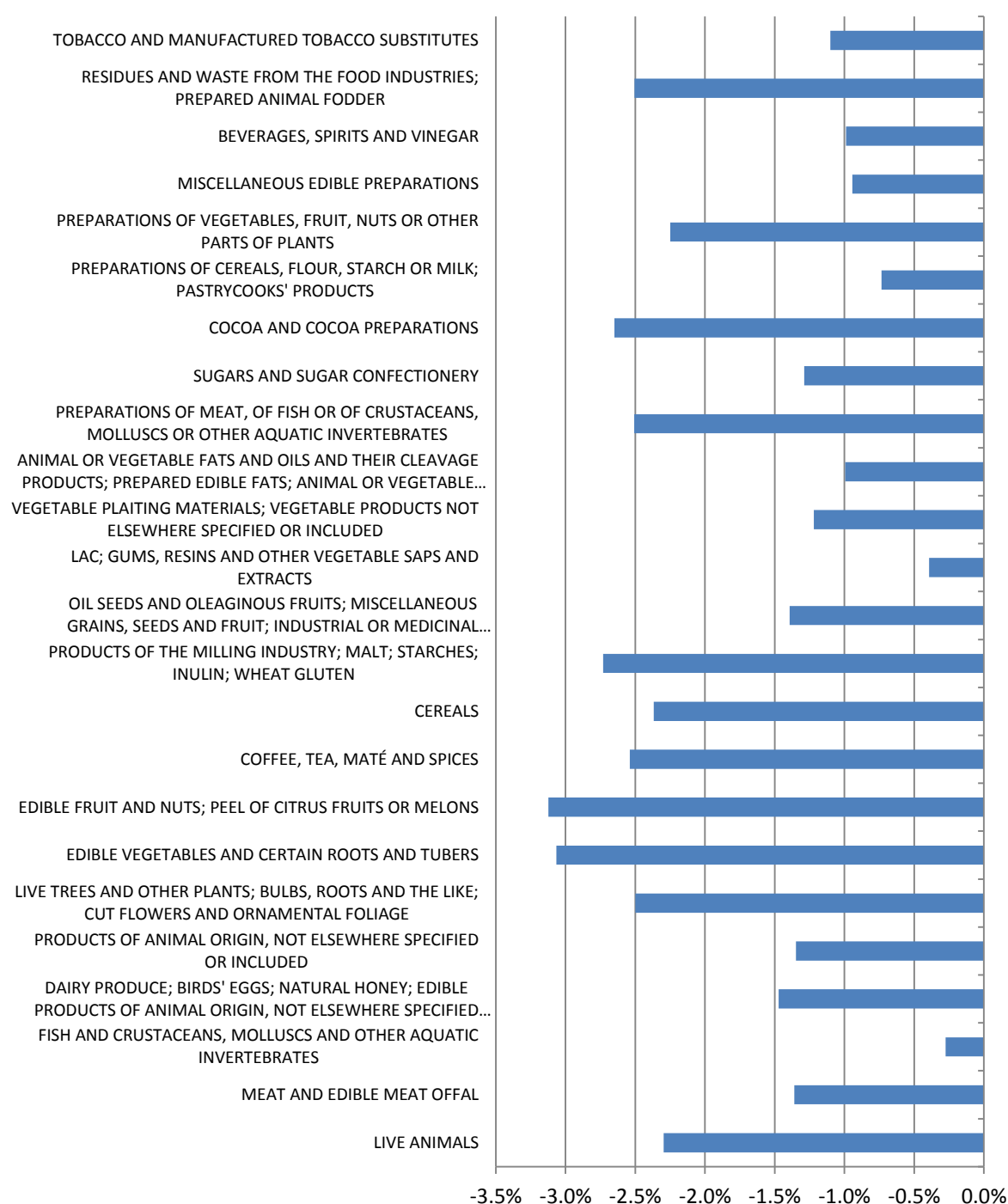
If the magnitude of the trade diversion imposed is increased to 56.6 percent and the discount in the value of diverted trade is increased to 30 percent, then the loss in total agri-food export earnings increases to 7.2 percent or €768 million per annum.

The relatively small percentage impact of trade diversion, even when the magnitude of that diversion is increased to over 50 percent, is due the fact that agri-food exports to non-UK markets account for close to 60 percent of the value of Irish agri-food exports and the assumption that trade diverted from the UK, post-Brexit due to increased barriers to trade, find another market at lower prices.

In all likelihood the trade destroying impact of Brexit will vary across the different elements of Ireland agri-food exports. As noted key determinants of the magnitude of the trade destruction will be the current dependence on the UK and the ease with which trade with the UK can be diverted to other EU or world markets.

Figure 5.1 shows the percentage impact on agri-food exports across the 24 HS2 Chapter headings under our central assumptions that trade with the UK falls by 21.5 percent and the value of that diverted trade is 15 percent lower than it would have been if exported to the UK. The largest (smallest) percentage impacts are on those elements of the agri-food trade where dependence on the UK is greatest (least). Brexit is found to have a relatively small impact on the value of Irish fish exports – reflecting the relative unimportance of the UK as an export market for the Irish fish industry while the impact on processed meat exports of close to 2.5 percent reflects the much greater dependence on the UK market.

Figure 5-1: Impact of Brexit on Value of Ireland-UK Agri-Food Exports



Source: Author Estimates

5.5 Brexit: Implications for UK Agri Food Exports to Ireland

It is difficult to envisage the implications which impediments to free trade would have on Ireland's considerable agri-food imports from the UK. It is possible that some of the reduction in UK exports to Ireland could be filled by indigenous Irish producers over time, particularly where access to the UK market has been reduced following a Brexit. Alternatively, products could be sourced from elsewhere in the EU, particularly likely in the

case of international brands with a presence across the EU. The precise outcome would depend on the capacity of indigenous Irish food producers to scale up production to meet the increased domestic market opportunities, decisions taken by Irish retailers in relation to development of non UK suppliers and the preferences of Irish consumers for product from Ireland over products produced elsewhere in the EU 27. It could be argued that Irish agri-food businesses with no exposure or very limited exposure to the UK market could actually benefit from Brexit, due to reduced competition on the Irish market from UK based food businesses.

The nature of Irish agri-food imports differs qualitatively from Irish agri-food exports. A large share of Irish agri-food imports from the UK are processed and/or branded goods, while Irish agri-food exports are more dominated by trade in agricultural commodities and unbranded agri-food products. Depending on the extent to which post-Brexit tariffs escalate on value added content, the impact of Brexit on the trade in agricultural commodities and more added value agri-food products could be very different. Consumer preferences regarding branded products could also mitigate, at least in the short run, the impact of post-Brexit trade barriers on Irish agri-food imports from the UK.

5.6 Conclusions

Irish agri-food exports to the UK would decline as a result of Brexit, but this reduction would be partially offset by an increase in the value of exports to other destinations, where prices are not likely to be as high as those achieved on the UK market. The magnitude of the loss in Irish agri-food export value is highly uncertain and would depend on the UK's future trading relationship with the EU (and Ireland) and the direction of UK agricultural policy post Brexit, both of which remain unknown. Of the four scenarios described in the paper the largest impact showed a reduction in total Irish agri-food exports of over 7 percent or €800 mn per annum., while the smallest impact of Brexit on Irish agri-food export value was a reduction of 1.4 percent or circa €150 mn per annum.

6 Caveats and Uncertainties

The analysis that has been undertaken for this paper is subject to a number of caveats and uncertainties. Some of these concerns relate to the assumptions surround the circumstances and timing of a UK exit from the EU. Others relate to the limitations of our understanding of the nature of trade and the factors that motivate it.

Data can only tell us so much

The available data can only reveal so much. Data measures the value and volume of trade. Trade data explains the trade that takes place, but does not explain trade that does not take place. A richer analysis could be gained from a detailed examination of individual subsectors that goes beyond an examination of the trade data. Should the UK vote to leave then a more detailed analysis of this kind may be required for specific sectors.

Post Brexit UK Agri-Food Policy

The UK's post Brexit agri-food policy is an unknown. It is not clear how much financial support the sector would continue to receive in the aftermath of Brexit. Nor is it clear how this support would be delivered as a decoupled income support payment. It might be reasonable to conclude that the short term future beyond Brexit would see the UK adopt agri-food policies that are little different to those in the EU prevailing at the time of exit. Maintaining agricultural support in a form similar to the CAP, for some period following Brexit, would limit the negative impact on UK agriculture of some of the policy related disruptive consequences of Brexit.

However, over time the UK's agricultural policies could begin to deviate from those of the EU27 given the UK government stated preference for agricultural policies that are less interventionist than the current CAP. The UK Treasury/DEFRA vision for a reduced level of expenditure on decoupled direct income supports (Treasury/DEFRA 2005) may be reflected over the medium term in post-Brexit UK agricultural policy.

Nevertheless, following a Brexit the value of the repatriated net contributions to the EU would be more than sufficient to fund a continuation of the CAP in the UK. However, a UK Exchequer funded agricultural support system analogous to the current CAP would be unlikely to pass a UK Treasury value for money assessment. However, a dramatic, New Zealand style ending of government support to agriculture in the UK is unlikely. The devolved administrations in the UK are likely to favour the retention of decoupled direct income supports, given the greater dependence on agriculture on subsidies in these regions. It seems likely that following Brexit increased emphasis would be placed on targeted agri-environmental payments schemes. Overall, if the level of income support provided currently is dramatically reduced, this could lead to significant changes to the structure of UK agriculture and to the level of UK agri-food self-sufficiency that would have more significant implication for UK agri-food trade.

TRQ and Preferential access to importers

The EU currently imports significant volumes of agricultural goods at very low to zero tariffs under the terms of preferential trade agreements with many developing countries and under terms of Tariff Rate Quota (multilateral *ergo omnes* TRQ, as well as bilateral TRQ) with developed and developing countries. For many of the import flows associated with these arrangements, that is imports into the EU at very low or zero tariffs, the UK accounts for more than proportionate shares of these trade flows. It is not clear whether on exiting the EU, the UK would be granted some share of the EU *ergo omnes* TRQ or whether non-EU countries would be willing to exchange bilateral TRQ with the EU for bilateral TRQ with the UK. Matthews (2016) outlines the complications that arise in relation to preferential access and concludes that some disruption of global supply chains is likely.

If the external trade regime that the UK chooses to adopt post-Brexit is one in which UK tariff levels remain close to current EU tariff levels and the UK does not receive a share of existing EU TRQ that covers existing trade flows between the UK and the ROW, it is likely that UK imports of agricultural commodities such as sugar, lamb and butter would decline relative to current levels. In the event that the UK liberalises its tariff regime, imports from the ROW would likely increase and in some instances this would see imports that previously came under preferential access agreements with African, Caribbean and Pacific (ACP) countries displaced by lower priced exports from elsewhere.

Macroeconomic uncertainty, exchange rates and competitiveness

The pound sterling has recently lost value vis à vis other major currencies including the euro. One of the drivers of this decline in value, it is argued, is the political and economic uncertainty engendered by the Brexit debate/process. The macroeconomic impact of Brexit is uncertain and model based analyses of the impact of a Brexit on the UK economy, the EU economy and the Irish economy should be treated with caution – nevertheless most assessments of the possible impacts of Brexit suggest that the impact on GDP growth will be negative. One of the likely consequences of the lower growth rate of the UK economy as compared to a world where Brexit does not take place, is a weaker exchange rate. From the perspective of the UK a weaker currency is one of the mechanisms through which an economy copes/responds to weaker growth and ideally recovers some of the “lost” growth.

From the perspective of the Irish agri-food sector the macroeconomic uncertainty and the lower rates of economic growth and a weaker pound sterling are likely to be associated with weaker import demand for Irish agri-food products and a loss in competitiveness with respect to UK products on the UK market.

Trade liberalisation ... unilateral but not necessarily uniform

Post Brexit, if the UK lowers the level of tariffs it imposes on agricultural trade from their current level, this would be expected to lead to increased market access to the UK market for agricultural and agri-food exports from non-EU suppliers, and as a consequence reduce

UK prices towards world price levels. It should not be assumed that the reduction in tariff protection in such a scenario would be uniform. There is every possibility that the UK would treat its red meat (beef and sheep) and dairy sectors as deserving of “sensitive product” status as a result of the lack of competitiveness in world market terms and their socio-economic importance particularly in the peripheral regions of the UK.

If the UK treats red meat and dairy commodities as sensitive products, this would limit the extent to which imports from South American and Australasia would gain access to the UK market. However, outside of the UK concluding an FTA with the EU, it is hard to envisage how Irish beef and dairy commodity prices could escape being negatively affected by a Brexit given the dependence of Irish beef exports on the UK market. The reduced dependence of Irish dairy exports on EU (including UK markets) over the medium term as Irish milk and dairy commodity production expand following the abolition of milk quota may mitigate the magnitude of the negative impact of Brexit on the Irish dairy industry.

All Island Agri-Food Processing Sector Integration

There is already a high degree of integration of the processing sector in Ireland and Northern Ireland. For example, almost one fifth of the pigs produced in Ireland are slaughtered in Northern Ireland and about one third of the milk produced on Northern Ireland’s farms is exported for processing in Ireland. Brexit would leave Northern Ireland outside the EU and would lead to the introduction of some level of border measures between Ireland and Northern Ireland. This could have implications for the processing industry’s capacity to continue to operate on an all Island basis. It would be in the interests of these sectors that the UK retains a trading relationship with the EU that is as close as possible to the terms that would apply under EU membership.

Consumer Preferences

Absolute and relative prices are major determinants of purchasing decisions, but they are not the only factors that businesses and consumers take account of in a purchasing decision. Factors such as branding, perceived quality, food safety, sustainability and other ethical considerations are also important, even where products from different sources might appear to be relatively homogeneous. It is not possible to determine the extent to which barriers to trade such as import tariffs, would affect UK export demand or UK import demand. If the UK discontinues its free trade relationship with the EU27, trade between the EU27 and the UK will be affected, but it would be highly unlikely to cease. The extent of the decline in trade will to some degree be determined by consumers’ preferences for particular product attributes and whether products sourced outside of the EU are deemed have those attributes. These attributes may be sufficiently valued by UK consumers to cause them to continue to buy products from the EU27 rather than cheaper products from elsewhere.

7 Overall Conclusions

If the UK votes to leave the EU in the Brexit referendum, it will be some time, possibly several years, before the terms of the future trading relationship between the UK and the EU will be fully known. Brexit would result in some reduction in Irish trade with the UK, but even with knowledge of the terms of Brexit, it would be difficult to assess the extent of the reduction in trade. It is possible that there could be tariff free trade between the EU and the UK, or MFN tariffs could apply to UK-EU trade, or the UK could unilaterally eliminate its import tariffs, while at the same time the EU would retain its tariffs. However, there is a low probability that the UK would opt to unilaterally remove all tariffs, since this would expose its sensitive livestock and dairy sectors to competition from non-EU imports, which would damage the UK livestock sector.

The effect of Brexit on the agri-food sector would also depend crucially on future UK agricultural policy. The UK would be unlikely to strive for increased self-sufficiency and would therefore continue to import food. UK agricultural policy would be likely to be closely aligned with the CAP for some period after Brexit. At a later stage it is conceivable that UK exchequer support for UK agriculture might be reduced. How exactly support would evolve is a matter of political economy and would depend on the perspective of future UK governments and UK public opinion.

After Brexit, trade between Ireland and the UK would continue at a lower level than would be the case if the UK remained in the EU. Some diversion of Irish exports, towards the EU or ROW markets, could take place. The value of diverted exports would likely be lower than would have been achieved on the UK market. Some level of trade destruction might also occur, where no alternative market could be found for particular Irish agri-food exports. Overall, the value of exports to the UK would decline, while the value of exports to other destinations would increase, although not by a fully offsetting amount. Brexit would be less of a concern to the Irish crop and sheep sectors, indeed the Irish sheep sector might actually benefit from Brexit. By contrast, Brexit would almost certainly have negative implications for the Irish dairy and beef sectors.

As described in Chapter 5, four scenarios were examined in this report. The trade impact of Brexit is highly uncertain, given the lack of clarity on the terms of Brexit and the inherent uncertainty in the impact of any such policy change on trade. The four scenarios analysed examine the implications of different levels of Irish-UK agri-food trade diversion and reductions in the value of diverted agri-food trade.

The core scenario uses the ESRI estimate of the impact of Brexit on Irish-UK merchandise trade under Brexit (a decline of 21.5 percent), augmented by a 15 percent reduction in the value of diverted trade. Under this scenario the value of total Irish agri-food exports declines by circa €150 m per annum (a decline of 1.4 percent).

The alternative Brexit scenarios that were analysed highlight the sensitivity of our results to our assumptions concerning the magnitude of trade diversion and reduction in value of diverted trade. The largest reduction in Irish agri-food exports, of circa €800 m per annum (a decline of over 7 percent), occurs under the scenario where Irish-UK trade declines by 56.6 percent and this diverted trade takes place at a 30 percent discount relative to the value of that trade if it were destined for the UK.

The effect of Brexit on individual items within the Irish agri-food export portfolio will vary for a number of reasons, the most important of which are the dependency on the UK market for trade in that item and the suitability of that item for export to other markets. The potential impact of Brexit on the Irish agri-food sector in aggregate should not be seen as an indication of the potential impact on any individual Irish food business exporting to the UK. There is likely to be a higher degree of risk associated with Brexit for Irish food businesses whose only current export market is the UK.

The impact of Brexit on the domestic Irish food retail sector is also uncertain. If exports of processed food from the UK to Ireland decline, this could open up opportunities for Irish food businesses to service the gap in the Irish market. Alternatively, food imports from continental Europe might replace UK imports on the Irish market. Much will depend on the reaction of the retail sector in Ireland to Brexit and the preferences of Irish consumers for branded products of UK origin.

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Appendix A: Hufbauer and Schott Gravity Model based estimates of the impact of Brexit on merchandise trade

Within the economics literature gravity model based analyses of bilateral trade have been very successful at explaining the influence of economic and other factors on bilateral trade flows in a range of economic sectors (Anderson, 2010; Deardoff, 1995; Feenstra et al., 2001; Greenaway and Milner, 2002; Obstfeld and Rogoff, 2000). Recent papers that have analysed the impact of regional trade agreements on bilateral trade using gravity models (Hufbauer and Schott, 2009) have been used to simulate the possible impact of Brexit on Irish merchandise trade (Morgenroth, 2015; Barret et al., 2015.). ESRI analysis (Barrett et al. 2015) found that (assuming post-Brexit UK membership of EFTA) Brexit could reduce Irish exports to the UK by 21.5 percent. The trade analysis component of the ERSI study is based on gravity model estimates from Hufbauer and Schott that aggregated agricultural and non-agricultural trade flows together. The ESRI study did not look at Ireland-UK trade relations in isolation and the gravity model estimates of Hufbauer and Schott that disaggregated trade into agricultural and non-agricultural components were not used.

The process of trade liberalisation (under the GATT and latterly the WTO) during the post-WWII era has seen the progressive liberalisation of tariffs on non-agricultural merchandise trade. Among WTO members current tariffs prevailing on non-agricultural merchandise trade (manufactures) are in general very low to non-existent. Agriculture by contrast was only incorporated within the GATT/WTO trade liberalisation process during the most recently concluded multilateral trade round (the Uruguay Round that concluded in 1994). As a result most WTO members (and non-members) retain significant levels of tariff protection for at least some agri-food tariff lines. Thus, there is a qualitative difference between levels of tariff (and non-tariff) protection accorded to agri-food industries and that accorded to non-agricultural merchandise trade. This means that the impact of membership of a Customs Union (such as the EU) and the impact of bilateral Free Trade agreements (FTA) on trade flows can be expected to differ between agricultural (agri-food) trade and non-agricultural trade.

Hufbauer and Schott (2009) in their gravity model analysis of the determinants of international trade and the impact of customs union membership on trade estimated gravity models that aggregated agricultural and non-agricultural trade together ("All Merchandise Trade"), but they also estimated gravity models that disaggregated merchandise trade flows into agricultural and non-agricultural ("Manufactures") components.

The differences between the results of the alternative model run specifications in terms of the impact of EU membership on trade are dramatic. Membership of the EU (and of FTA with the EU) is found not to have a large impact on the trade flows of non-agricultural goods. This finding is reflected in the broader results of the Hufbauer and Schott analysis

which finds that FTA do not affect trade in manufactures very much. These results reflect the existing low levels of tariff protection on non-agricultural trade that have evolved over the post-war period. In contrast, the Hufbauer and Schott analysis find that the impact of EU membership on agricultural trade has been very large, with bilateral trade between EU members 64.9% higher than between non-members, when other factors such as included in their gravity model specification are held constant.

A result showing that EU membership affected agricultural trade more than trade in manufactures is not surprising considering the high levels of tariffs imposed on agri-food trade in general and on agri-food trade with the EU in particular. Hufbauer and Schott's analysis, where agricultural and non-agricultural (manufactures) trade are aggregated, finds that EU membership leads to a level of bilateral trade between EU members that is 30.9% higher than that between non-members other things equal. Thus the estimated impact of EU membership on bilateral trade between members in the gravity model specification that aggregate agricultural and non-agricultural trade is found to be between the impact where trade is disaggregated into agricultural and manufactures. Membership of a FTA with the EU is found to boost bilateral trade. When "all Merchandise" trade is the dependent variable in the gravity model this effect is +9.4%, whereas, when agricultural trade and trade in manufactures are considered separately, the impact is lower at +8.3%. Morgenroth (2015) and Barrett et al. (2015) uses Hufbauer and Schott's estimated impacts of EU membership and EU FTA to calculate an impact of Brexit on Irish-UK trade as the impact of an EU FTA less the impact of EU membership. This leads to an estimated impact when all merchandise trade is the regressand of -21.5% (9.4% - 30.9% +).

Table A 1: Hufbauer and Schott Gravity Model Estimates and implied percentage impacts on trade of EU and EU FTA membership

	SITC 0-9 All Merc. Trade	$100 * (e^{\beta} - 1)$	SITC 0-1 Agri Trade	$100 * (e^{\beta} - 1)$	SITC 5-8 Manufactures Trade	$100 * (e^{\beta} - 1)$
EU (A)	0.27	1.309	0.5	1.649	0.06	1.062
EU FTAs (B)	0.09	1.094	0.08	1.083	0.08	1.083
Implied percentage impact on trade [B – A] as per Morgenroth (2015) and Barrett et al. (2015)						
Brexit & UK-EU FTA		-21.5%		-56.6%		+2.1%

Source: Based on Hufbauer and Schott (2009) Table S.8. β is parameter associated with the EU customs union or EU FTA dummy variable parameter in the Gravity Model Equation.

The analytical question for Ireland is whether one expects the impact of EU membership and non-membership to have such a dramatic impact on agri-food trade between Ireland and the UK. The use of the Hufbauer and Schott's gravity model estimates is of course made on a *ceteris paribus* basis. Within the Hufbauer and Schott gravity model other standard gravity model drivers of trade integration between countries are taken into

account and all of the standard gravity model covariates that positively affect trade (in agricultural and non-agricultural merchandise) are ones that characterise the Irish-UK trade relationship. In this very important respect it can be reasonably argued that Ireland is not like other EU member states. Ireland shares a common language with the UK, it is adjacent and shares a land border with the UK and Ireland is a former British “colony”. For all of these reasons and others the impact of EU membership on Irish-UK agri-food trade may be smaller than the estimates in Table A.1..