Discover what's possible

CROSS-BORDER TRADE & SUPPLY CHAIN LINKAGES REPORT

intertradeireland.com

Contents

[1] This research was undertaken by the ESRI as part of a joint research programme commissioned by InterTradeIreland. We wish to acknowledge the cooperation and assistance received from officials in the Department for Business, Enterprise and Innovation, the Department for the Economy and the Central Statistics Office.

Executive Summary

This paper examines the patterns of cross-border trade on the island of Ireland, focusing on the role of supply chain links, measured by the extent of trade in intermediate products and the contribution to overall trade of two-way trading firms (those simultaneously importing and exporting). We use detailed firm-level trade records to examine the composition, specialisation and dynamism of trading firms. This data is provided by the Central Statistics Office (CSO) and is based on detailed statistics on merchandise exports and imports of manufacturing firms. A number of case studies on specific firms are also included to illustrate the empirical patterns. The analysis is motivated by the key role that trade plays in overall economic performance across both parts of the island and, in the more immediate policy context of potential changes in the trading environment posed by the UK exit from the EU, by the importance of understanding and quantifying the cross-border linkages both in terms of direct trade in final products and also in firms' supply chains.

The key findings of the analysis are:

1. **Cross-border trade links show a high degree of integration:** Northern Ireland accounts for between ten and twelve percent of total exports from Ireland to the UK and accounted for seven to eight per cent of imports. Given that the population of Northern Ireland makes up less than three per cent of the UK total, this shows the closeness of the economic ties between the two jurisdictions. Furthermore, previous work by InterTradeIreland (2009, 2011) suggested that the level of trade integration has the potential to be even stronger.
2. **Trade in intermediate products and the large role of two-way traders shows that supply chain links are a major element of cross-border trade.** We find that a very significant share of cross-border trade is accounted for by firms that trade simultaneously in both directions. These two-way traders make up around 18 per cent of firms in our sample but accounted for over 60 percent of exports and over 70 per cent of imports in 2015. The share of intermediates in imports from Northern Ireland to Ireland is higher in almost all sectors than trade in the same sectors from the rest of the UK. Using more detailed firm level data shows that a majority of cross-border trade occurs in intermediate inputs and highlights the considerable level of interconnectedness of cross-border supply chain integration.
3. **Cross-border traders continuously adjust their products, showing evidence of flexibility and innovation.** There is a high level of ongoing product turnover amongst trading firms with regular introductions of new products and considerable levels of product experimentation with many products traded for one year only. This pattern is consistent across firm size categories and between food and non-food firms, although larger firms are more likely to be simultaneously adding, dropping and trying out one-year products in any given year. This shows a high degree of dynamism and innovation amongst cross-border traders which will be particularly important in terms of their adaptability to potential post-Brexit changes in the trading environment.

1. Introduction

The performance of exporting firms is a key driver of overall economic growth. Understanding how enterprises become exporters, the extent of their product coverage or specialisation, how they innovate and introduce new products and the learning effects of trading with near neighbour countries as a stepping stone to broader international engagement all help provide the evidence base that is necessary in order to provide a supportive policy environment for exporters. A key component of how trade might be affected in the face of changes in the costs of crossing borders (whether from tariffs or non-tariff barriers) is how much of this cross-border trade relates to integrated supply chains.

The extent to which products at different levels of processing cross and re-cross the border could affect how tariffs might potentially be levied and also give a deeper insight into the extent of potential disruptions to supply chains. At the same time, information on the dynamics of importing and exporting firms in terms of their product mixes and how these have adapted to other changes in the trading environment over time will aid understanding of how flexible firms can be in response to economic shocks. This paper therefore examines some important aspects of how cross-border trade is structured at a firm level and how flexible firms are in the face of trade shocks.

Trade shocks and how firms might adjust to them has moved to a central position in the policy environment given the considerable uncertainty as to how the trade relationship between the UK and EU might look after Brexit. A number of studies have examined the potential impact of Brexit on the UK economy, generally focusing on the impact of imposing tariffs and increasing barriers to trade (for example, Dhingra et al., 2016 and Ebell et al., 2016). InterTradeIreland (2017) examined how cross-border trade could be affected by increases in trade restrictions and found that the reduction in trade between Northern Ireland and Ireland would be two to three times higher than the impact on trade between Ireland and the rest of Great Britain depending on the scenario and other assumptions.

This was largely driven by the different sectoral composition of trade with a greater share of agri-food products present in cross-border trade. The agri-food sector has been highlighted by a number of studies as being particularly exposed to the effects of Brexit if there is a move to the introduction of WTO tariffs on UK-EU trade as systematically higher tariffs tend to apply in this sector (Barrett et al., 2015; Lawless and Morgenroth, 2016; InterTradeIreland, 2017).

Most of the studies to date have focused on the direct effects of tariffs and non-tariff barriers on the overall trade flows. A number of papers have however raised the importance of supply chain linkages and point out that the integrated production process in many sectors across Europe has the potential for being disrupted in the event of increases in trade costs or customs procedures generating delays along the supply chain (Stojanovic and Rutter, 2017). The implications for the car industry have been the main focus of concern on supply integration (Head and Meyer, 2016) but it is not the only sector where international supply is an important issue. Stojanovic and Rutter (2017) estimate that one-quarter of the UK's export value is derived from imported inputs with this rising to over forty per cent for the car industry.

Internationally, the growth in international supply chain linkages leading to the emergence of "global value chains" has been a topic of increased interest over the past decade. Using trade between subsidiaries of multinational companies located across different countries as a proxy for supply chain integration, Bernard, Jenson, Redding and Schott (2009b) find that 46 per cent of US imports and 30 per cent of US exports are accounted for by this type of trade. This intra-firm trade is particularly important for intermediate goods (Lanz and Miroudot (2011). In terms of exposure to international economic volatility, supply chain inter-connectedness appears to insulate firms somewhat, perhaps because of the greater certainty that comes from dealing with closely linked firms with related-party trade falling less during the financial crisis of 2007-8 than overall trade (Altomonte and Ottaviano, 2009). Whether this resilience crosses over from demand and credit reductions to also apply in the face of changes in trade costs has never been the subject of research as few comparable instances of exiting a free trade area exist.

This paper aims to provide evidence on the extent of cross-border supply chain integration, examining aggregate and firm-level data on trade in intermediate products and the activities of firms active in simultaneously importing and

exporting between Northern Ireland and Ireland. This will help us gauge for the first time the degree of integration overall and how it varies across sectors. In the face of a change to trading links of unknown magnitude, we also look at how specialised firms are in their trade patterns and the levels of flexibility currently exhibited in terms of how frequently changes in product mix are made. Although this is an indirect measure, evidence of innovation and adaptability on an on-going basis can be interpreted as indicative of capacity to adjust to changes in the economic environment that will be of key importance in adjusting to new circumstances after the UK exit from the EU.

More precisely, the key research questions in this topic are:

- How common is cross-border trade in both directions by the same firms?
- Can patterns of intermediate inputs and final products be identified in either/both directions?
- How concentrated is trade in products across firms and has this structure changed over time?
- How frequently are new products introduced and existing products dropped by firms?
- How similar are the product distributions and specialisations for trade in each direction?
- How does the product composition compare to that of Irish exports to other markets?
- What are the potential implications of Brexit on these patterns?

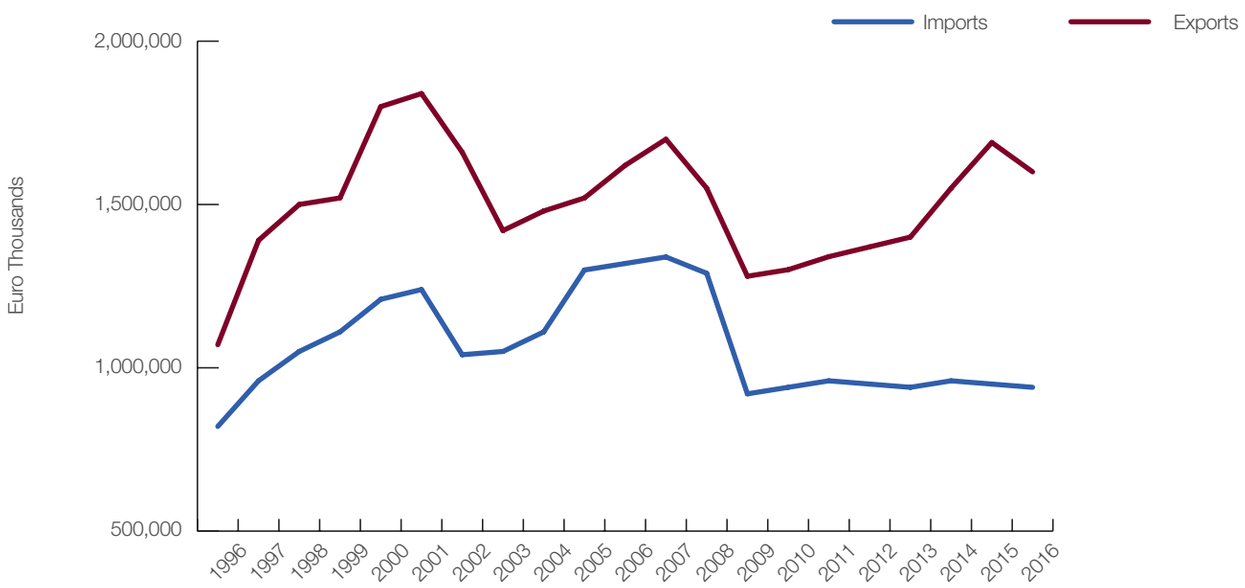
The paper is organised as follows: Section 2 describes some aggregate patterns of cross-border trade and the share of intermediate inputs compared to trade between Ireland and the rest of Britain. Section 3 moves to a more disaggregated description of firm level trade data and section 4 examines the evolution of cross-border trade at the firm level and the contribution to overall trade of two-way traders. Section 5 looks at the evidence on the extent of cross-border supply chain linkages, examining the concentration of trade in intermediates and the composition of trade by two-way traders. Section 6 presents evidence on the level of dynamism amongst cross-border traders by calculating the frequency with which products are introduced and dropped. Section 7 shows some more detailed information on the concentration of individual products. Section 8 reviews the evidence and Section 9 discusses some policy implications.

2. North-South Trade Patterns

Throughout this paper, we use customs level data from the Central Statistics Office to examine trade between Ireland and Northern Ireland. In the following sections, we exploit very detailed information collected at the firm level to explore patterns of trade across the border by different firm types, direction of trade and product composition. As the firm data is not exhaustive (due to smaller firms not always being required to complete full returns) we first present some figures on the aggregate North-South trade (also from the CSO) to place the following sections in context. This section briefly discusses the evolution of overall trade levels and introduces the discussion of supply chain linkages across the island by examining the shares of intermediate inputs in overall trade flows across the border.

It should be mentioned that the measurement of North-South trade flows have been associated with some methodological issues and that these trade values drawn from the CSO data differ somewhat from the North-South trade figures collected by other agencies such as the Regional Trade Statistics from HMRC. However, a detailed examination of the methodological differences in the alternative sources of trade statistics was undertaken by InterTradeIreland (2009) and found that although the differences could be quite large, they were spread across sectors and did not show any systematic bias. As the CSO data allows us to delve further into firm level patterns of trade at a detailed product level, it is the richest source available for examining the trade interconnectedness and dynamics of firm trading patterns and therefore will be used as the focus of this paper.

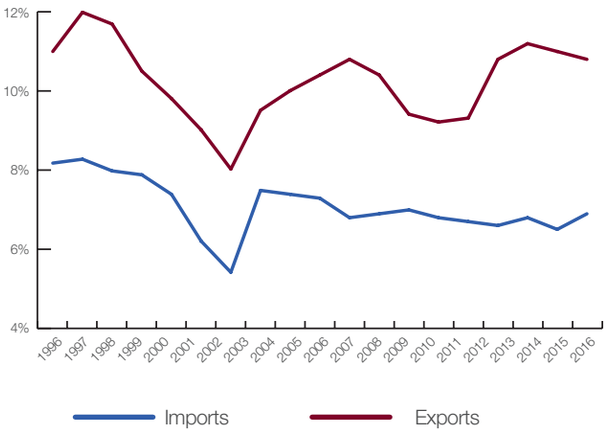
Figure 1: Irish Trade with Northern Ireland, 1996-2016



Source: Central Statistics Office, 2017

Figure 1 shows the pattern of manufacturing trade with Northern Ireland collected by the CSO over the time period from 1996 to 2016. This shows substantial growth in the early part of the period, particularly in exports with the subsequent pattern in line with the overall dynamic of the Irish economy with a peak around 2007 followed by a relatively sharp fall and then gradual recovery. Imports to Ireland from Northern Ireland follow a similar pattern but with smaller swings.

Figure 2: Share of Northern Ireland in Trade with UK



Source: Central Statistics Office, 2017

Given the geographic closeness and common border, most models of trade (such as previous work on the strength of trade linkages by InterTradeIreland in 2009 and 2011 using a gravity model approach) would predict a particularly strong trade connection between Ireland and Northern Ireland. The example of Warrenpoint Harbour in Box 1 emphasises the importance of location in trade and transports. One way to put the level of integration in context is to look at the share accounted for by Northern Ireland in total Irish trade with the UK. Figure 2 shows that over the full time period, Northern Ireland has made up between ten and twelve percent of total exports from Ireland to the UK and accounted for seven to eight per cent of imports. Given that the population of Northern Ireland makes up less than three per cent of the UK total, this shows the closeness of the economic ties between the two jurisdictions. Despite this, the previously cited work by InterTradeIreland (2009, 2011) suggested that the level of trade integration has the potential to be even stronger.

Warrenpoint Harbour Case Study

Warrenpoint Harbour is the second largest port in Northern Ireland and fifth biggest on the island with twice daily shipments between Warrenpoint and Heysham. Trade is mainly in cement, steel, timber and grain, and success has been reflected in a 7.4% increase in tonnage during 2016. In total Warrenpoint dealt with 3.48 million tonnes of imported and exported product in 2016.

Over the last decade the port has generated over €61m of Gross Value Added (GVA) and sustained over 1550 full time equivalent job years for the local economy. GVA also grew at a compound rate of 4.1% in this same period compared to a NI average of 0.27% highlighting the growing resilience and importance of the port to the region. It is the biggest timber importer on the island with the Republic taking 70% of imports and 30% staying in Northern Ireland.

The Port believes its advantage is that it is situated roughly halfway between Belfast and Dublin. However a post Brexit threat to the business comes from importers potentially going to southern ports, though it has identified a Brexit opportunity from potentially greater traffic if there are delay implications on a land border.

2. North-South Trade Patterns (cont...)

One aspect of global trade patterns that have been the subject of increasing attention in recent years is the extent to which trade in intermediate products has expanded and global production and supply chains have become more closely integrated (Antràs and Chor, 2013). We will look in detail in the firm level analysis to follow on the role of firms that actively both import and export to explore this topic further (Section 3). Firstly however we use the aggregate data to gauge some indication of the importance of supply links across sectors by looking at the shares of trade in each broad sector accounted for by intermediate products. Stojanovic and Rutter (2017) used this approach to show that the UK's supply chains are more integrated with the rest of the EU than they are with non-EU countries. Here we show that, by this measure, the links between Northern Ireland and Ireland are closer than those between Ireland and the rest of Britain.

We use the United Nations Classification by Broad Economic Categories (BEC) to divide all traded products into consumption goods, intermediates, capital goods and others.[2] Table 1 presents the shares across sectors of those goods classed as intermediate inputs for imports from Northern Ireland and the rest of Britain to Ireland for exports. The table also reports the share of trade accounted for by each sector to give context to the importance of the intermediates in overall trade flows.

Sectors differ quite dramatically in terms of the shares of intermediates in overall trade according to this classification.[3] Metals, mineral products and plastics for example all have intermediate goods accounting for the majority of trade within each of the sectors. The key finding from this table is that it shows that the share of intermediates in imports from Northern Ireland to Ireland is higher in the majority of sectors compared to trade in the same sectors from the rest of Great Britain. The share of intermediates in exports from Ireland has a less consistent pattern but likewise there are several sectors where the share of intermediates to Northern Ireland is considerably higher than to the rest of Britain (mineral products for example) whereas the sectors where the British intermediates share is higher tend to show fairly modest differences.

These aggregate figures are therefore suggestive of a strong level of interconnectedness in terms of the levels of trade and, to the extent that it can be estimated from trade in intermediate inputs, of the supply chain integration on an all-island basis. Despite this, the BEC classification is likely to under-estimate the supply chain links between Ireland and Northern Ireland as it categorises much of the trade in food sectors, particularly dairy and meat, as final consumption whereas these sectors have significant cross-border processing and supply chain linkages as we will see when we use the firm level information on cross-border trade in a later section to examine this issue in more detail.

[2] https://unstats.un.org/unsd/cr/registry/regcst.asp?Cl=10

[3] One item to note in terms of the large difference in the share of intermediates for the live animals sector for British trade as compared to that with Northern Ireland is that the GB flows have a large percentage accounted for by trade in pure-bred horses which are classified as “other” in the BEC categories.

Table 1: Share of intermediates in trade by sector

	Sector share of total exports from Ireland		Intermediates as a share of sector exports from Ireland		Sector share of total imports to Ireland		Intermediates as a share of sector imports to Ireland	
	NI	GB	NI	GB	NI	GB	NI	GB
Beverages	5.4%	1.7%	3%	2%	3.7%	2.1%	0%	9%
Chemicals & pharma	2.6%	20.7%	64%	31%	1.9%	5.1%	31%	55%
Clothes & footwear	2.7%	1.1%	9%	12%	1.8%	4.6%	5%	4%
Dairy	3.2%	4.8%	3%	5%	14.8%	1.5%	1%	13%
Foodstuffs	4.9%	6.2%	3%	1%	6.3%	8.4%	5%	5%
Hides, leather, furs	0.3%	0.4%	0%	4%	0.1%	0.3%	0%	0%
Live animals	4.2%	1.4%	79%	7%	0.7%	1.2%	46%	2%
Machinery & electrical	7.3%	12.8%	31%	25%	6.3%	14.3%	40%	31%
Meat & fish	10.6%	13.0%	0%	1%	6.0%	3.5%	0%	1%
Metals	5.0%	2.9%	86%	90%	4.1%	5.7%	91%	80%
Milled products, fats, oils	2.8%	0.3%	43%	54%	4.7%	1.1%	83%	74%
Mineral products	6.5%	3.9%	82%	34%	3.8%	13.5%	98%	38%
Miscellaneous	15.3%	7.0%	6%	26%	12.8%	11.7%	5%	9%
Other chemicals	2.1%	2.4%	86%	92%	0.6%	1.8%	88%	79%
Other organic chemicals	3.7%	5.4%	76%	80%	1.5%	6.2%	80%	26%
Plastic & rubber	5.9%	3.5%	72%	73%	5.6%	4.8%	88%	74%
Stone, glass products	1.8%	1.8%	71%	81%	1.6%	1.4%	56%	53%
Textiles	0.1%	0.4%	100%	99%	0.2%	0.2%	100%	98%
Tobacco & food residues	3.8%	1.2%	95%	96%	8.8%	1.2%	94%	87%
Transport equipment	3.0%	4.5%	50%	30%	4.0%	5.3%	22%	31%
Vegetable products	2.5%	1.1%	13%	6%	4.6%	1.6%	34%	16%
Wood products	6.2%	3.4%	68%	55%	6.0%	4.6%	82%	36%

Source: Author calculations based on Central Statistics Office, 2017

3. Importer and Exporter Patterns

This section moves from the aggregate trade data to introduce the more detailed information available from firm level customs returns. This allows us to explore at a much more granular level the extent to which firms trade across the border, how much of this trade is done by the same firms both importing and exporting (hence allowing inference of supply chain integration), how concentrated it is and how dynamic.

The data used to answer these questions is provided by the Central Statistics Office (CSO) and is based on detailed statistics on merchandise exports and imports of manufacturing enterprises in Ireland broken down by product and market destinations. As discussed in the previous section, Northern Ireland is identified separately from the rest of the UK as a trading partner and the data can therefore be used to examine at a very granular level the products and firm characteristics for enterprises located in the Republic of Ireland that are either exporting or importing from Northern Ireland. This source allows us to examine bilateral trade flows by focusing on the pattern of products being exported from the South to the North and to use the import records of firms in the South to identify the North-South flows at the level of product detail. The availability of data at the enterprise-product-country level provides a significant degree of additional information on export activity and performance which has not been available in the past.

In common with other European countries, the Irish trade data are collected through two different systems. The Extrastat survey collects extra-European trade and the Intrastat survey gathers data for intra-European trade. The threshold for reporting of exports differs between the two systems, with Intrastat requiring an exporting volume of above €635,000 per annum whereas the Extrastat threshold is considerably lower and collects information on all transactions above €254. Customs data is collected on a monthly basis, but were aggregated to annual amounts by the Central Statistics Office. The data collected include the VAT registration number of the firm, the product-level code at HS-6 level, the destination of the exports, and the value and weight of the goods being exported. Changes in HS-6 codes over time were corrected for using the concordance files made available by Eurostat. This ensures that the codes and product counts are consistent over time, although it may therefore underestimate the level of innovation in new product categories. This is because products will be classified as belonging to the long-established code rather than a newly introduced separate category. The customs data is then supplemented with some enterprise characteristics such as size taken from the Census of Industrial Production. This generates an extremely rich data source which allows analysis at a much greater degree of detail than has been previously possible.

As noted above, to reduce reporting burdens on smaller firms, the source does not cover all export transactions but represents detailed information covering approximately 48% of exports from Ireland to Northern Ireland and 38% of North-South trade. Lawless, Siedschlag and Studnicka (2017) use the export portion of this customs data to examine overall Irish export patterns and calculate that although the reporting threshold removes very little trade volume, it does exclude a large number of small exporters and this may be particularly the case for North-South trade as other sources such as the Broad Economy Sales and Export Survey (BESES) in Northern Ireland would suggest that many small firms are engaged in some cross-border sales.

In terms of numbers of firms, there are on average around 880 firms trading with Northern Ireland over the data coverage period for which we have detailed information on products and destinations. These are likely to be somewhat larger firms given the issue of the reporting thresholds. The BESES data for comparison estimates that slightly over 2000 manufacturing firms export from Northern Ireland and the majority of these would most likely be exporting to Ireland (NISRA, 2017). Over time, there has been a slight but fairly steady downward trend in the numbers of firms trading with Northern Ireland, particularly in terms of the numbers of importer-only firms.

Of the firms for whom we have full product import and export detail for, 270 are exporters only and 456 are importers only. The remaining 156 firms both export and import – giving a total number of 426 exporters and 612 importers. Table 2 shows how the firms are distributed across these three categories of exporter-only, importer-only and two-way traders over time. Overall, the relative shares are very stable over time.

Table 2: Irish firms trading with Northern Ireland

Year	Export only	Import only	Two-way
1999	29%	52%	19%
2000	30%	52%	17%
2001	31%	51%	18%
2002	30%	52%	18%
2003	31%	52%	17%
2004	31%	51%	18%
2005	31%	52%	17%
2006	31%	52%	17%
2007	31%	54%	16%
2008	31%	53%	17%
2009	31%	52%	17%
2010	31%	51%	18%
2011	30%	51%	19%
2012	30%	51%	19%
2013	30%	50%	19%
2014	30%	51%	19%
2015	30%	52%	18%

Source: Author calculations based on trade micro-data from CSO

Table 3: Trade Share of Two-way Traders

Year	Export only	Exports of two-way firms	Import only	Imports of two-way firms
1999	15%	85%	36%	64%
2000	34%	66%	46%	54%
2001	28%	72%	35%	65%
2002	21%	79%	35%	65%
2003	36%	64%	42%	58%
2004	22%	78%	46%	54%
2005	14%	86%	43%	57%
2006	30%	70%	36%	64%
2007	39%	61%	28%	72%
2008	16%	84%	28%	72%
2009	29%	71%	31%	69%
2010	24%	76%	27%	73%
2011	22%	78%	26%	74%
2012	21%	79%	26%	74%
2013	36%	64%	23%	77%
2014	33%	67%	19%	81%
2015	38%	62%	29%	71%

Source: Author calculations based on trade micro-data from CSO

The higher proportion of importer-only relative to exporters suggests that it is less costly for firms to engage in international trade by sourcing inputs then it is to launch their own products in a new market. The significant percentage of two-way traders (i.e. those both importing and exporting) shows the importance of inter-connectedness of supply chains across the border. This is reinforced by the calculations of Table 3, which show that these two-way traders are the drivers of the majority of trade flows. For both directions of trade, the exports and imports of the two-way traders account for a majority of the totals. This importance of two-way traders in overall trade flows gives a further indication that supply chain and processing links play an important role in cross-border trade.

Turning to some of the characteristics of these cross-border trading firms shown in the sample data, Table 4 shows that average employment in Irish-owned two-way traders is higher than for export-only firms, and they in turn tend to be larger than import-only firms. For foreign-owned firms on the other hand there is little difference in size across the different types of trader status. The average employment numbers for the sample of firms for which we have detailed trade information are relatively high, suggesting that there is some under-representation of small traders most likely due to the presence of the reporting threshold which means the detailed information we use is not collected from smaller firms.

Table 4: Average employment for firms in trade sample

Year	Exporters	Importers	Two-way
All firms	117	96	125
Irish-owned	102	78	111
Foreign-owned	163	179	177

Source: Author calculations based on trade micro-data from CSO

4. Distribution and Composition of Cross-Border Trade

This section looks at some patterns of cross-border trade, beginning with the pattern across firms for the strength of their link to Northern Ireland in terms of how large a share it accounts for in the overall imports and exports of the firm. We then look at the levels of product concentration and compare the number of products traded on a cross-border basis with the product distributions of total trade by Irish firms. We also look at the other markets firms trading with Northern Ireland are active in. Previous research across a range of countries has tended to find that exporting is highly concentrated. For example, evidence from the US provided by Bernard et al. (2009a) indicates that the top 1 per cent of exporters account for 90 per cent of the value of US total exports. Looking in detail at Irish-owned firms, Lawless, Siedschlag and Studnicka (2017) found that eleven per cent of firms were very internationally diversified (exporting more than 20 products to over 20 destinations) and that they accounted for a disproportionate 45 per cent of export values.

One way to examine the importance of trade with Northern Ireland for our sample of Irish firms is to measure how large a share of the firm's total imports and exports are accounted for by their trade with Northern Ireland. To do this, we look at how the share of imports and exports accounted for by Northern Ireland is distributed across firms. The share of Northern Ireland imports and exports are divided into 20 groups (from 0-5 %, 5-15% and so on) and we then measure the share of Irish firms that have imports or exports to Northern Ireland within each range. The distribution of imports is graphed in Figure 3 and the distribution of exports in Figure 4.

Along the bottom of each graph are the trade buckets and the vertical axis then shows the percentage of firms for whose trade with Northern Ireland falls into each share category. Figure 3 shows that for around 45 per cent of firms importing from Northern Ireland, the imported amount make up less than ten per cent of the firm's total imports and for a minority (7 to 8 per cent) of firms Northern Ireland is the origin of over ninety per cent of imports.

For exports, Figure 4 shows that the pattern looks quite different with large clusters of firms at each extreme. In particular, we see that Northern Ireland accounts for the vast majority of exports for slightly over one-quarter of firms. The next largest group, around 23 per cent, on the other hand send relatively little – less than ten per cent - of their export output to Northern Ireland. This shows considerable heterogeneity across firms in terms of the size of their overall trade flows accounted for by trade with Northern Ireland. The large spike at the highest bucket of the export graph demonstrates that for a considerable percentage of Irish exporters, Northern Ireland is their most important destination. Although we do not have the same level of detail at the firm level from Northern Ireland, there is little reason to think that very similar patterns would not also observed if a direct comparison could be made.

Figure 3: Distribution of NI imports in total firm imports

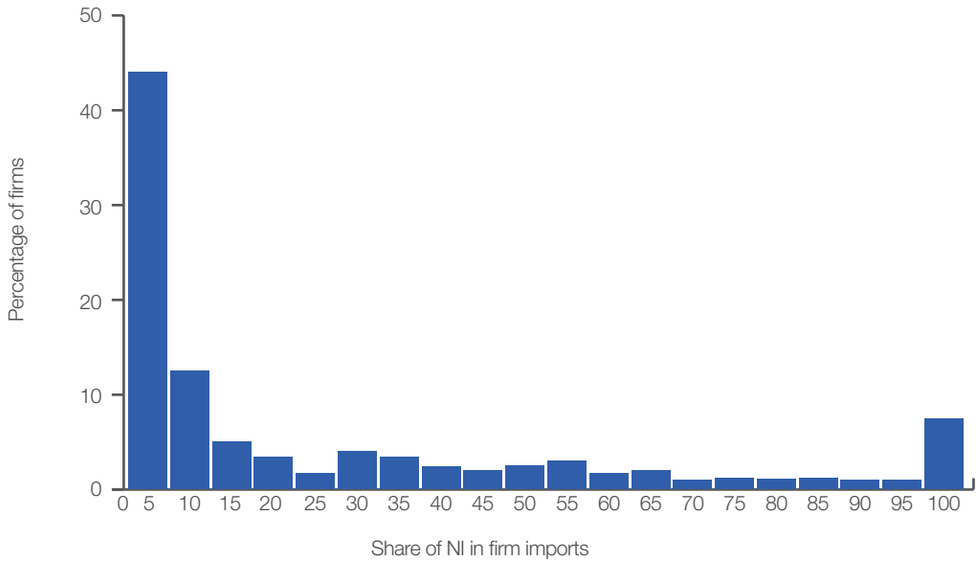
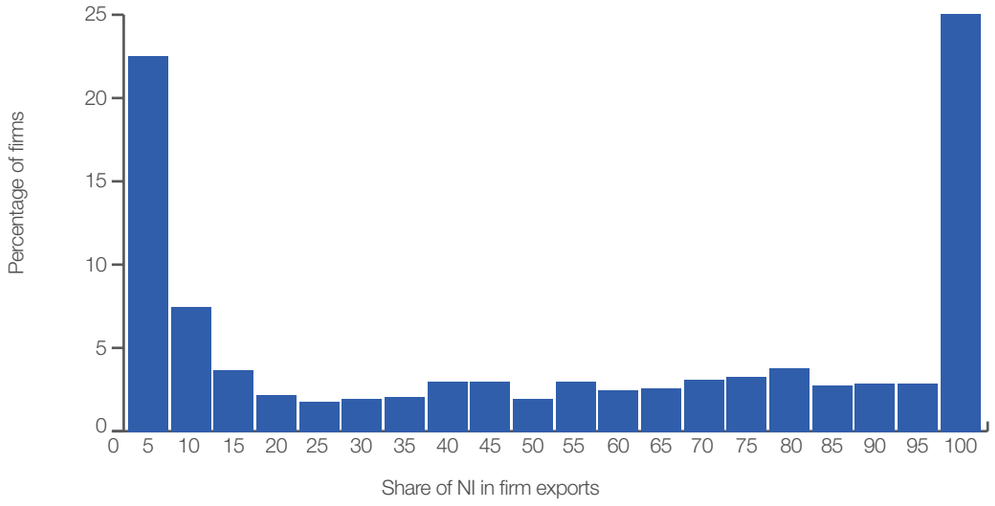


Figure 4: Distribution of NI exports in total firm exports



Source: Author calculations based on trade micro-data from CSO

O'Neills All-island Manufacturing Case Study

O'Neills is the largest sportswear manufacturing company in Ireland, employing over 700 people. They have extensive manufacturing plants in Strabane, Co. Tyrone, Northern Ireland and in Dublin, Ireland. Its sales are roughly 45% in Northern Ireland and 40% in the Republic of Ireland.

The company imports yarn from outside the EU, knits it into fabric in Strabane and sends it to Dublin for dyeing. That coloured fabric is then sent back across the border to Strabane where it is made into sports clothing. Some of the stock is then sent back again to Dublin for storage, but it could come back north again for branding and finishing with a further trip back to the south for onward sales.

The possible reintroduction of customs control would have significant implications for a company that has a significant production facilities on either side of the border; given the extent to which company vehicles cross and re-cross the border in the process of arriving at a finished product.

We next look at the level of diversification of manufactured products exported to examine how specialised are the trade flows across the border and, in particular, if cross-border trade is more specialised than overall trade for Irish firms. This is useful from a policy perspective as diversification across a wide range of products can be a way of insulating against risks that individual product trade flows get hit by changes in demand or cost. Relating this to Brexit, InterTradeIreland (2017) showed how potential tariff exposures differ very significantly across products and sectors so concentration in a narrow product range may affect how exposed firms are to any tariff introduction.

We measure product diversification using a count of firm products (as defined at the HS-6 level customs classification). Figure 5 shows the concentration of firm exports for all products by the firms trading with Northern Ireland and Figure 6 then shows the concentration in products traded directly with Northern Ireland. Figures 7 and 8 then do the same respectively for imports. For each number of products (across the bottom axis), the graph shows the percentage of firms exporting or importing that amount (with the percentages read off the vertical axis).

Both for exports and for imports, the graphs show a much greater concentration of trade in a small number of products for trade with Northern Ireland when compared to their overall product concentration. Taking exports first, Figure 5 shows the percentages for overall exports with nine per cent of firms exporting a single product, 14 per cent exporting two products and then a gradual reduction in the share of firms exporting larger numbers of products with a tail showing a small percentage of more highly diversified firms.

Figure 5: Distribution of exported products by firm

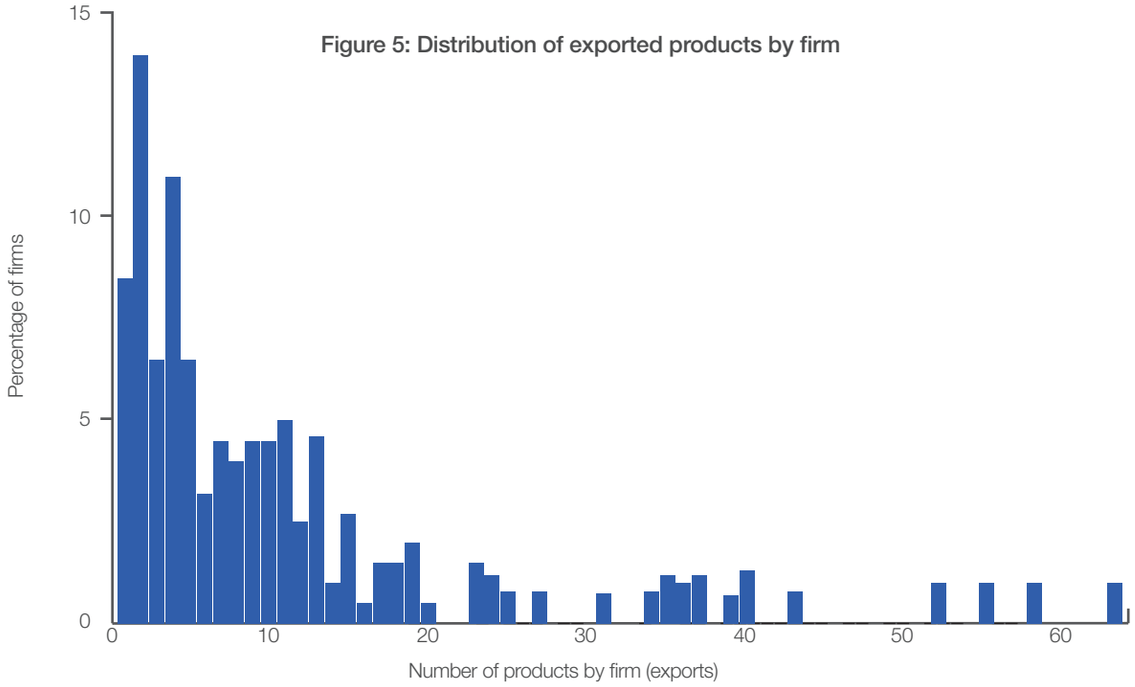


Figure 6: Distribution of products exported to Northern Ireland by firm

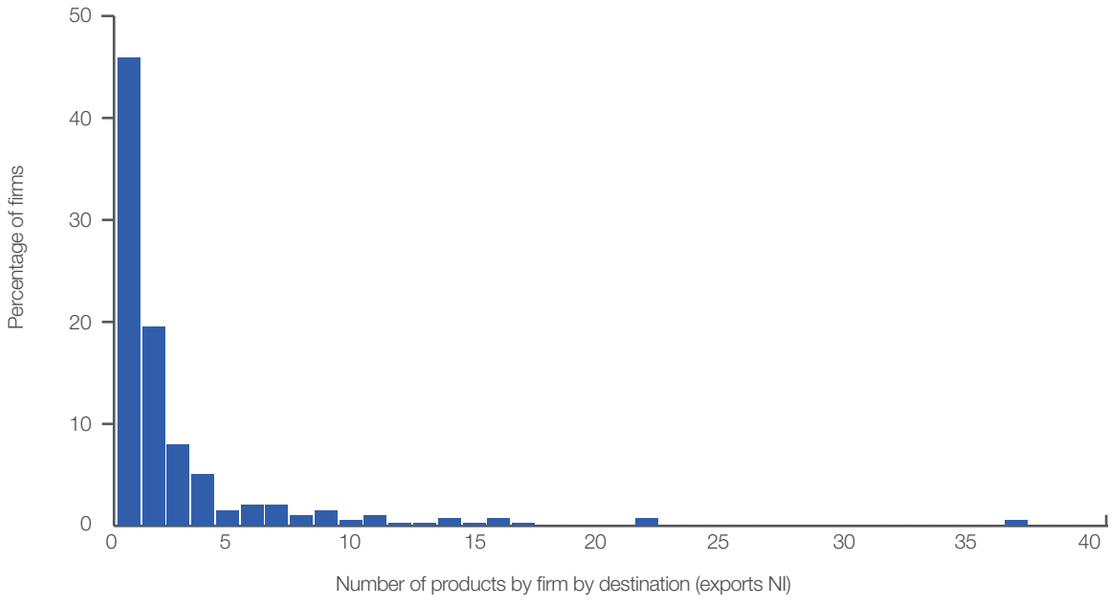


Figure 7: Distribution of imported products by firm

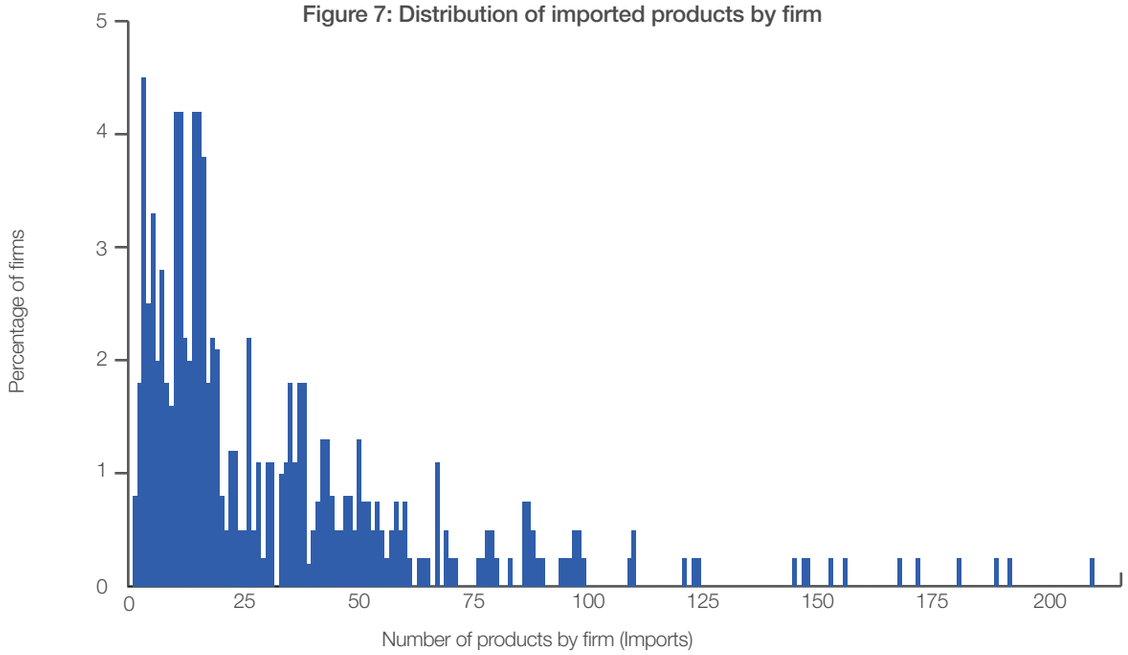
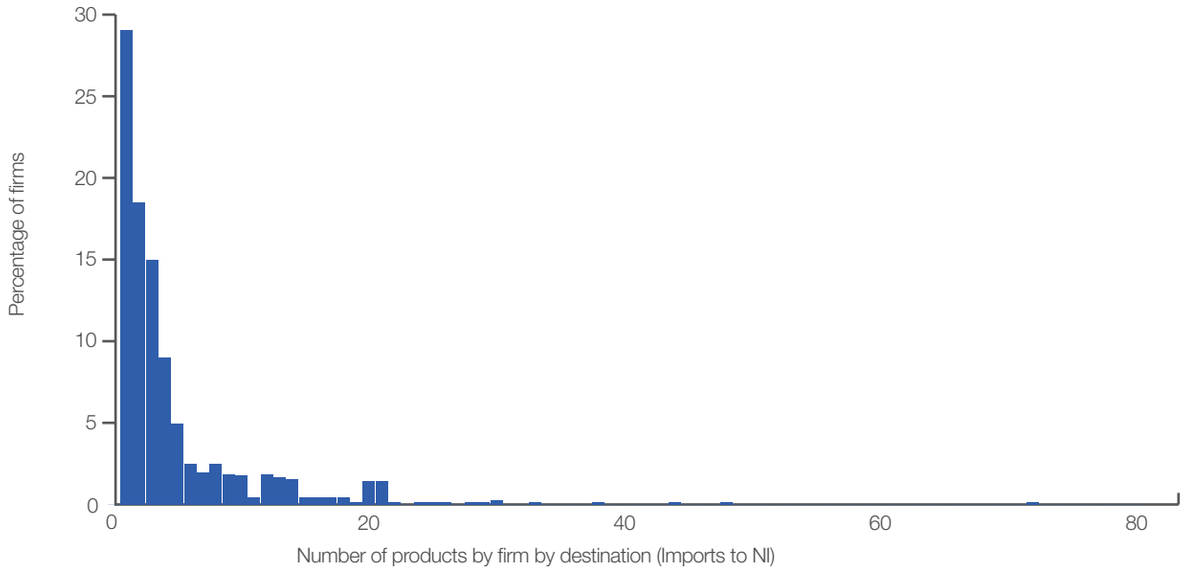


Figure 8: Distribution of products imported to Northern Ireland by firm

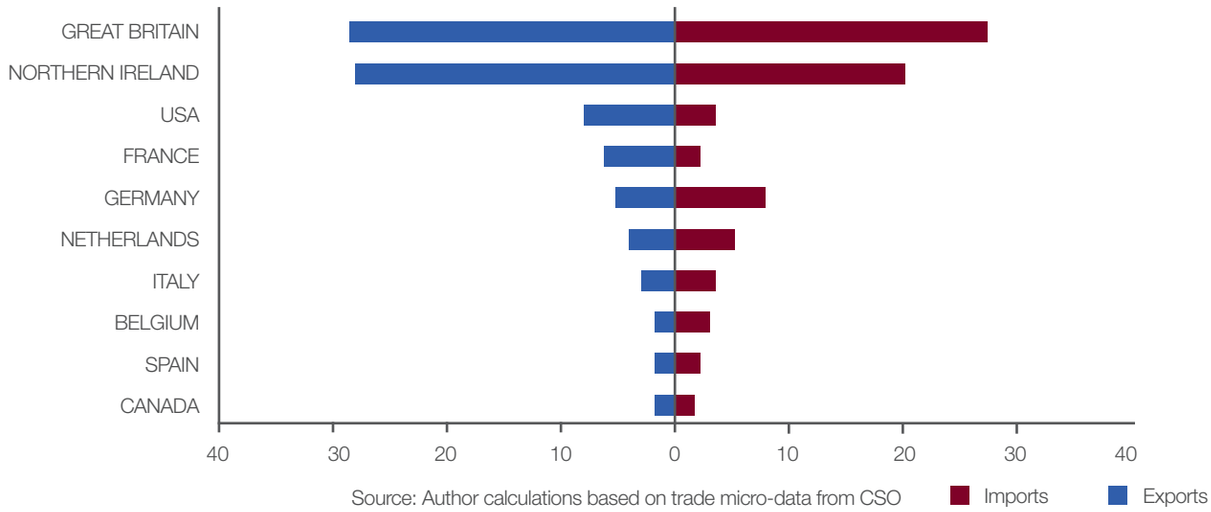


Source: Author calculations based on trade micro-data from CSO

This strongly skewed distribution is commonly found in analysis of firm export patterns (Wagner, 2016 gives an overview across a range of countries). Figure 6 presents the same type of distribution, focusing on exports to Northern Ireland only. While the shape is similar, the magnitude of the concentration is many times higher with 46 per cent of firms exporting a single product to Northern Ireland and another twenty per cent exporting two products. There is more dispersion in the overall import shares graphed in Figures 7 and 8 by firm compared to exports but the contrast with Northern Ireland remains similar with a much more concentrated product mix.

Figure 9 shows the share of trade with Northern Ireland of the firms in the detailed sample and compares this to the other major trading partners of these firms. Most trade is with either Northern Ireland or Great Britain, consistent with the finding of strong concentration in a small number of export destinations by Irish firms from Lawless, Siedschag and Studnicka (2017). In the current policy environment of uncertainty generated by potential post-Brexit changes in the trading relationships between the UK and EU, this shows the exposure for many firms where the main (if not only) international engagement is on a cross-border basis. Although the analysis in this paper is based on data for firms located in Ireland, there is little reason to think that the patterns described would not be mirrored if comparable data were available for firms located in Northern Ireland.

Figure 9: Major other destination shares of Exports and Imports for firms trading with Northern Ireland



McAree Engineering Export Destination Case Study

McAree Engineering (Monaghan, Ireland) sells 35% of its output in Northern Ireland and 5% in Britain, but since it is a second-tier component manufacturer, sales in the home market can also end up in the UK market. Some of its biggest customers are in the Dungannon area (Co. Tyrone, Northern Ireland), particularly suppliers of machinery to the quarrying trade. Tariffs are low in its sector: a much greater concern is border delays or customs clearance problems which could weaken its position in relation to its competitors immediately north of the border. If necessary, the company would consider relocation to Northern Ireland.

5. Supply Chain

This section returns to the issue of the level of integration of cross-border supply chains as distinct from trade in final products. To do this we look at the distribution of the firm trade statistics by product type and present some more detailed description of the patterns of two-way traders.

We showed in Section 2 that the types of products traded can be combined into some broad categories using the international classification known as BEC (Broad Economic Categories) compiled by the UN. This divides products into consumption goods, intermediate inputs, capital goods and others. Figures 10 and 11 present these breakdowns for the firms reporting full product detail for imports (Northern Ireland to Ireland) and exports (Ireland to Northern Ireland).[4] Very little cross-border trade falls into the two categories of capital or "other" products with the bulk being divided between intermediates and consumption goods. The split between these two categories is fairly equal for exports but with a larger contribution for intermediates in imports (approximately a 60-40 split).

However, this international breakdown does not necessarily fully capture the level of integration of cross-border trade because it classifies almost all dairy and beef products as being for final consumption. This would very much underestimate the level of cross-border supply chain linkages, as cross-border processing of these product categories is likely to be substantial and the evidence from two-way traders that we turn to next supports this strongly. The figures here therefore separate out dairy and beef from consumption products, giving a much more dramatic share of intermediate trade in the total and reducing pure consumption trade to a minority.

LacPatrick Cross Border Dairy Case Study

Milk tankers cross the border between Ireland and Northern Ireland about 33,000 times a year. Northern Ireland produces around 2.2 billion litres of milk a year, of which some 30% is processed in the Republic. Milk and dairy products move in both directions, sometimes several times: cream from Northern milk is removed in Virginia, Co.Cavan, Ireland and sent back to the Baileys Irish Cream plant in Mallusk, Co. Antrim, Northern Ireland.

This complex cross-border supply chain, which is heavily dependent on Irish exports of milk powder and baby formula to markets in West Africa, the Caribbean and Asia, is exposed on two fronts. First, in the event of a hard Brexit, the north-south milk trade would become unprofitable due to tariffs ranging from 40% to as much as 64% depending on fat content.

LacPatrick in Monaghan for example currently takes about 100 million litres from a cooperative in Ballyrashane (Co. Antrim) with which it merged in 2015. The introduction of tariffs could make LacPatrick change its processing operations, possibly by processing milk from Northern Ireland within Northern Ireland —the company has recently invested in its plant in Artigarvan, Co. Tyrone, Northern Ireland, where investment of €45m has provided the capacity to spray-dry 2.5 million litres a day.

The second concern, is the fact that milk powder is exported under EU export agreements. When the UK exits the EU it will no longer be included with the EU export agreement with China (the main destination of LacPatrick powdered milk), and it could take a period of years to put new export agreements in place in key milk powder markets.

[4] Tables 8 and 9 in Annex 1 give more detail on the components of these graphs.

Figure 10: Imports by Product class to Ireland

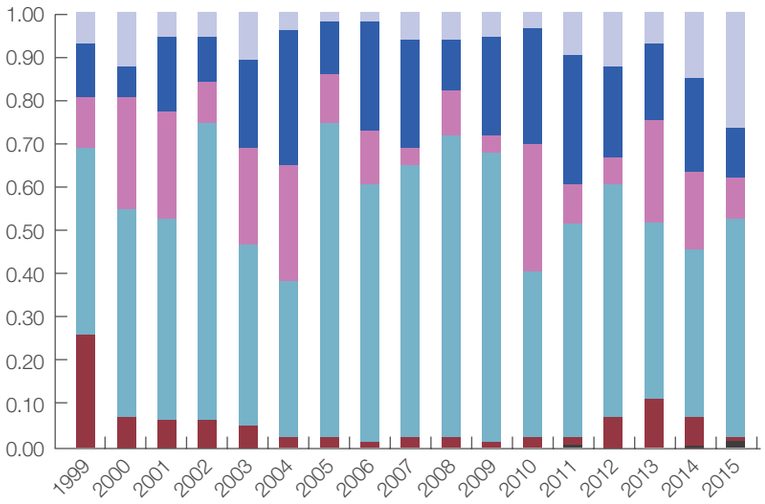
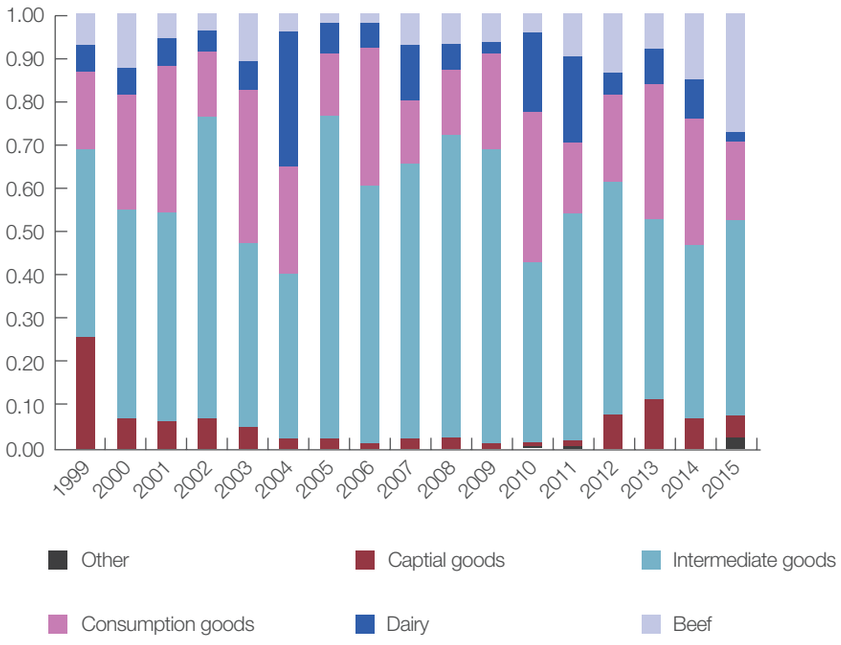


Figure 11: Exports by Product class to Northern Ireland

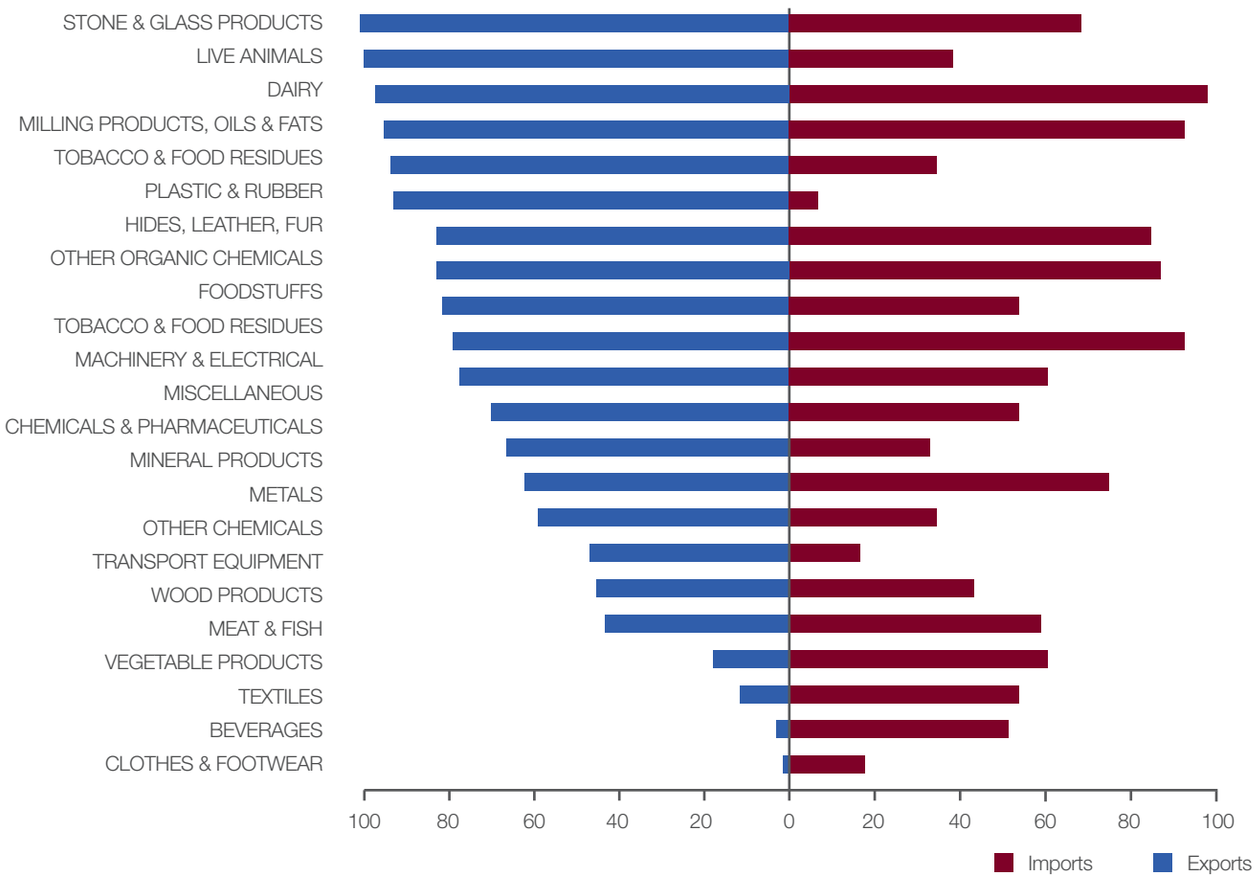


Source: Author calculations based on trade micro-data from CSO

An alternative way to examine the level of integration of supply chains in cross-border trade is to look at firms that are simultaneously engaged in trading in both directions and particularly those that are trading in both directions in products that are closely aligned to one another. Figure 12 shows the shares across sectors accounted for two-way traders. In contrast to the definitions used by the UN BEC classification, here we see that the dairy sector has an extremely high degree of cross-border integration with most of the sector's trade being driven by firms trading in both directions.

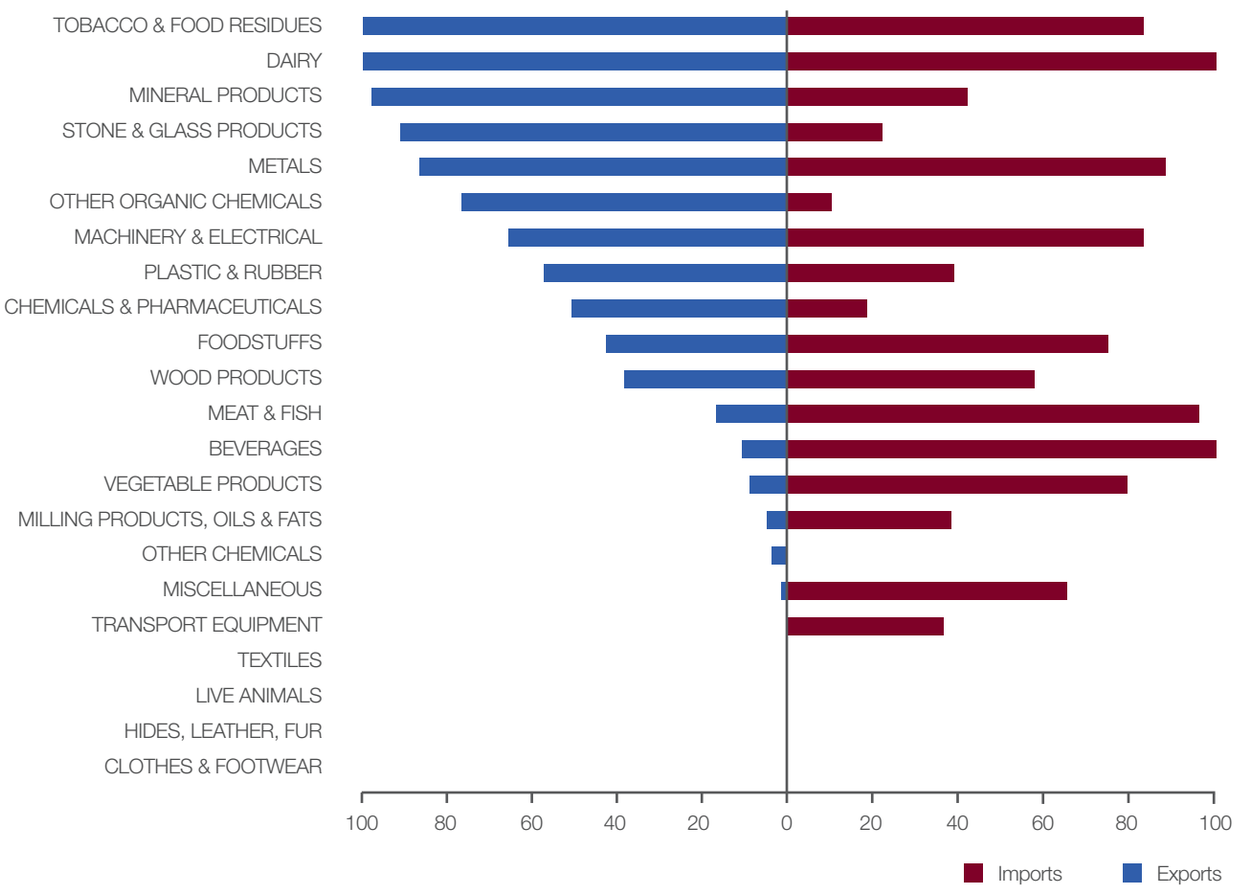
This is further demonstrated by the finding in Figure 13 that this two-way trade within the dairy sector comes largely from firms that are trading in both directions in products in the same sector, suggesting a strong supply chain link. Mineral products, metals and machinery show a similar pattern.

Figure 12: Share of two-way trader by sector



Source: Author calculations based on trade micro-data from CSO

Figure 13: Share of trade within same sector by two-way traders



Source: Author calculations based on trade micro-data from CSO

6. Trade Dynamics

The pattern of concentration of trade identified earlier with a sizable share of firms trading a small number of products suggests that there are on-going barriers or fixed costs associated with each new product introduced to the international market. From a policy perspective this can be taken as an indicator of a need for on-going support for firms beyond their initial move into exporting. International evidence now shows that there are potentially significant costs to be encountered even for established exporters if they wish to expand and the chances of new products being successfully exported are frequently found to be low. In the context of potential trade disruption coming from Brexit, consideration also needs to be given to the level of flexibility that firms exhibit in changing the composition of their trade, particularly in terms of adjustments to their product mix that might be driven by adaptations to cope with new tariff or non-tariff barriers that were shown in InterTradeIreland (2017) to vary considerably by product type. Examining the dynamism of firms along the product dimensions can indicate the extent to which they are likely to prove resilient to economic shocks.

International evidence suggests that firms adjust their basket of internationally traded products and destinations on a regular basis. Wagner (2016) provides a comprehensive review of much of this literature describing evidence from a range of countries that frequent product switching by firms is quite a common occurrence. Examples from across EU countries include France (Buono and Fadinger, 2012), Hungary (Békés and Muraközy, 2012) and Portugal (Amador and Opromolla, 2013).

This section therefore looks at the dynamics of the trade relationships with Northern Ireland in terms of changes/ switching at firms, product and destinations levels. Looking first at firm patterns, we calculate for each year t a decomposition of the total number of exporters and importers into four categories (defined following Eaton et al., 2007):

- Entrants: those firms that traded in year t and did not trade in the previous year, t-1;
- Exiters: those firms that traded in year t, traded in the previous year, t-1, but did not trade in the next year, t+1;
- One-year traders: those firms that traded in year t, did not trade in the previous year, t-1, and did not trade in the next year, t+1.
- Continuers: those firms that traded in year t, traded in the previous year, t-1, and traded in the next year, t+1.

Table 5 presents the averages over time of these entry, exit, one-year and continuing exporters and importers (the variation over time is quite limited). We also examine if the patterns of exporter and importer turnover vary systematically by firm size. The firm size categories are based on employment numbers with micro firms being those employing fewer than ten people, small firms having between ten and fifty employees, medium firms having between 50 and 250 and large firms having more than 250 employees.

This gives an average over the sample period for exporters of a 10 per cent entry rate, a 13 per cent exit rate and a 2.3 per cent one-year rate. These are consistently slightly higher (1 to 2 per cent) than the dynamic rates found for overall Irish exports again suggesting an important role for trade with Northern Ireland as a first introduction to exporting. The turnover rate for importers is broadly similar to that for exporters.

Continuing exporters account for the bulk of traders in any given year and across all categories, consistent with the international evidence on the persistence of exporting status. Entry and exit rates are reasonably considerable even so, especially for the micro firms. As there is a threshold level of exporting that needs to be reached before being included in the detailed customs data, some of these high turnover levels for smaller firms may reflect increases or decreases in their traded amounts rather than complete withdrawal from trading.

Table 5: Dynamics of Firms Trading with Northern Ireland

	Exporters				Importers			
	Entry	Exit	1-year	Continuer	Entry	Exit	1-year	Continuer
Overall	10%	13%	2%	74%	10%	14%	3%	74%
By firm size								
Micro	24%	23%	4%	50%	18%	21%	5%	55%
Small	12%	13%	3%	73%	11%	14%	3%	73%
Medium	8%	12%	2%	79%	8%	11%	2%	80%
Large	6%	13%	2%	80%	6%	11%	1%	83%

Source: Author calculations based on trade micro-data from CSO

Next, Table 6 shows for each year t the decomposition of the total number of products either exported or imported into four categories defined similarly as for the case of numbers of trading firms above:

- New products: products traded in year t and not traded in the previous year, t-1;
- Dropped products: products traded in year t, traded in the previous year, t-1, but not traded in the next year, t+1;
- Continued products: products traded in year t, traded in the previous year, t-1, and traded in the next year, t+1;
- One-year traded products: those products traded in year t, not traded in the previous year, t-1, and not traded in the next year, t+1.

These numbers show a very high level of turnover as firms combine exports and imports of existing products with new products and considerable levels of product experimentation with many products traded for one year only. We find surprisingly little variation across firm size categories in the levels of product experimentation.

Table 6: Product turnover - number of 6-digit products

	Exporters				Importers			
	New	Dropped	1-year	Continuing	New	Dropped	1-year	Continuing
Overall	14%	16%	35%	35%	17%	17%	35%	33%
By firm size								
Micro	21%	14%	34%	31%	17%	21%	31%	31%
Small	16%	18%	32%	33%	16%	18%	29%	37%
Medium	14%	19%	32%	36%	16%	19%	30%	35%
Large	11%	18%	30%	40%	15%	22%	32%	32%
By type								
Food	16%	20%	23%	41%	16%	20%	31%	34%
Non-food	17%	22%	39%	22%	11%	19%	20%	45%

Source: Author calculations based on trade micro-data from CSO

Another way to look at the level of product churn is in terms of the number of firms that are changing their product mix, as the same firm may be introducing and dropping multiple products. Table 7 therefore calculates the share of firms changing the product mix following a similar classification of firms in four categories:

- Firms adding new products: products traded in year t and not traded in the previous year, t-1;
- Firms dropping products: products traded in year t, traded in the previous year, t-1, but not traded in the next year, t+1;
- Firms with continued products: products traded in year t, traded in the previous year, t-1, and traded in the next year, t+1;
- Firms with single year traded products: those products traded in year t, not traded in the previous year, t-1, and not traded in the next year, t+1.

In this case the rows add up to well over 100 as most firms appear in multiple categories, combining trading existing products with new, dropped and one-year trade flows occurring in parallel. The vast majority of firms have steady products continuing to be exported or imported over time (around 70 per cent for exporters and 85 per cent for importers) but a majority also make some change to their product mix on an annual basis.

Here we see some more variation across firm characteristics with larger firms more likely to be adding, dropping and trying out one-year products, while also having the most continuing products. As the larger firms are more likely to have multiple products, they are also more in a position to make adjustments across many dimensions at the same time.

Table 7: Product turnover - share of firms adjusting product mix

	Exporters				Importers			
	New	Dropped	1-year	Continuing	New	Dropped	1-year	Continuing
Overall	58%	43%	46%	72%	62%	62%	65%	85%
By firm size								
Micro	41%	35%	32%	50%	47%	40%	48%	60%
Small	57%	40%	43%	61%	62%	55%	61%	73%
Medium	61%	41%	49%	66%	67%	64%	70%	80%
Large	68%	51%	60%	60%	68%	65%	74%	83%

Source: Author calculations based on trade micro-data from CSO

7. Product Detail

The tables in Annex 2 (Tables 10 to 13) look in more detail at the product composition of trade, distinguishing between firms that trade in one direction only (either exporting or importing) and the products traded by those firms that are simultaneously importing and exporting.

The tables compare the products being exported to Northern Ireland and the products the firms sell across all of their destination markets. For exporters the ranking and associated contributions to total trade of the top products are similar across each of the data breakdowns. For imports, on the other hand, there is a markedly higher concentration in a smaller range of products – with 80 per cent of imports for import-only firms and 91 per cent of imports for two-way traders coming from the top 50 products. The share of dairy dominates the import structure, accounting for close to one-quarter of imports by import-only firms and one-third for two-way traders.

8. Summary of results

As referred to throughout the paper, there has been a shift in research focus in recent years away from country-level analysis of international trade patterns towards more empirical analysis of how firms engage in trade. This work has uncovered the extremely concentrated nature of trade, driven by a small number of firms who are typically larger, more capital-intensive, more skills-intensive, more productive and pay higher wages than firms that do not either export or import. With a small percentage of firms dominating overall export sales, the distribution across the remaining firms is a pattern of specialisation in a small number of goods and a small number of destinations.

This paper aimed to look in depth at cross-border trade on the island of Ireland, using detailed firm-level trade records to examine the patterns of trade specialisation (in terms both of firms and products) and dynamism. The key research questions laid out in the introduction are revisited here and the evidence on each reviewed.

We find that a very significant share of cross-border trade is accounted for by firms that trade simultaneously in both directions. These two-way traders make up around 18 per cent of firms in our sample but accounted for over 60 per cent of exports and over 70 of imports in 2015. To examine the level of supply chain integration we used both aggregate and firm level evidence on the share of trade in intermediate products and the shares of trade (particularly within the same sector) by two-way traders. The aggregate trade flow data showed that the share of intermediates in imports from Northern Ireland to Ireland is higher in almost all sectors than trade in the same sectors from the rest of the UK. For trade from Ireland to Northern Ireland there are also several sectors where the share of intermediates to Northern Ireland is considerably higher than to the rest of Britain with the sectors where the British intermediates share is higher tending to be by only small margins.

Calculations building on the firm level data show a **majority of cross-border trade occurring in intermediate inputs** when using international classifications of products but that this is increased considerably when account is taken of the cross-border processing elements of the dairy and meat sectors. Support for including these sectors as intermediates comes from the extent to which trade in these sectors contains an extremely high percentage of two-way traders. All of this evidence points towards a strong level of interconnectedness in terms of cross-border supply chain integration.

Product concentration is found to be very strong with the share of firms importing and exporting small numbers of products being higher for trade with Northern Ireland compared to product numbers traded internationally by the same firms. For example, 46 per cent of firms export a single product to Northern Ireland whereas only nine per cent of firms export a single product to destinations outside Northern Ireland. For firms trading across the border, the share of their overall trade accounted for by Northern Ireland varies considerably but is relatively much more substantial for exporters than for importers. For example, we see that Northern Ireland accounts for over ninety per cent of exports for around one-quarter of firms but that for some others their markets are more dispersed with Northern Ireland accounting for under ten per cent. These patterns are found to be fairly stable over time.

Continuing exporters account for the bulk of traders in any given year and across all categories, consistent with the international evidence on the persistence of exporting status. However, we find a **high level of product turnover** as firms combine exports and imports of existing products with new products and considerable levels of product experimentation with many products traded for one year only. This pattern is consistent across firm size categories and between food and non-food firms. Larger firms are more likely to be simultaneously adding, dropping and trying out one-year products, while also having the most continuing products in any given year. This shows a high degree of dynamism and innovation amongst cross-border traders but also highlights the riskiness of launching new products as a not insignificant percentage of new products are withdrawn by the next year.

Overall, most of the patterns identified are relatively similar in both trade directions with a strong concentration of trade within a small number of markets and considerable proportions of trade being driven by two-way traders and intermediate inputs. This provides **evidence of the level of integration and local market connectedness across the border.** To the extent that there are some differences in patterns across the different trade directions, the considerable contribution of the dairy sector to total North-South trade means there is greater concentration in that trade flow.

9. Policy implications

The level of interconnectedness of cross-border trade has the potential to heighten the exposure to a "hard" Brexit. While direct trade links may be exposed to potential costs from tariffs or increased administration costs, two-way trade also risks disruption from delays, particularly where supply chain links are concentrated in goods where timeliness is an important factor as is the case with perishable food products. The importance of these links are highlighted in the individual firm case studies included throughout this paper.

In terms of firm capabilities for adjusting to changes in trade costs or shifts in the attractiveness of trading some products relative to others (for example due to possible tariffs varying across products) the extent to which firms are already regularly changing their product mix shows a high degree of flexibility and innovation on a continuous basis. This suggests a considerable degree of flexibility and ability to adapt to changing conditions that will enable many (although perhaps not all) firms to adjust to new trading requirements in the post-Brexit landscape.

From a policy perspective, minimising the extent to which new barriers get put in place and avoiding disruption to these supply chains should be the preferred option. In the event that the introduction of some new requirements is unavoidable, firms will need to examine how exposed they are and if adaptations can be made to their products to minimise the effects. Access to information and assistance with administrative changes are likely to be important in the initial phases in particular so firms can understand and familiarise themselves with any new procedures or costs.

If some degree of product adaptation is the most practical course for a firm to take, then access to financing will become a key issue to allow firms to undertake reworking of their product lines or changes in their production processes.

References

Altomonte, C. and G. I. P. Otatviano (2009). “Resilient to the Crisis? Global Supply Chains and Trade Flows”, in Richard Baldwin (ed.), The Great Trade Collapse: Causes, Consequences and Prospects, VoxEU.org.

Antràs, Paul and Davin Chor (2013) “Organising the Global Value Chain”, Econometrica, 81(6), 2127-2204.

Amador, J. and L.D. Opromolla (2013). ‘Product and destination mix in export markets’, Review of World Economics 149: 23-53.

Barrett, A., Bergin, A., FitzGerald, J., Lambert, D., McCoy, D., Morgenroth, E., Siedschlag and Z. Studnicka (2015), Scoping the Possible Economic Implications of Brexit on Ireland. Research Series No. 48. Dublin; Economic and Social Research Institute.

Békés, G. and B. Muraközy (2012). ‘Temporary trade and heterogeneous firms’, Journal of international Economics, 87: 232-246.

Bernard, A.B., J.B. Jensen and P.K. Schott (2009a). ‘Importers, Exporters and Multinationals: A Portrait of Firms in the US that Trade Goods’ in T. Dunne, J.B. Jensen and M.J. Roberts (eds.) Producer Dynamics: New Evidence from Micro Data. Chicago and London: University of Chicago Press.

Bernard, A. B., J. B. Jensen, S. J. Redding and P. K. Schott (2009b). “The Margins of US Trade”, American Economic Review: Papers and Proceedings 99(2):487-493.

Buono, I. and H. Fadinger (2012). ‘The micro dynamics of exporting: Evidence from French firms’, Banca d’Italia Temi di Discussione No. 880.

Dhingra, S., Ottaciano, G., Sampson, T., and J. Van Reenen (2016) “The consequences of Brexit for UK trade and living standards”, London School of Economics, Centre for Economic Performance Brexit Paper No. 2.

Eaton, J., M. Eslava, M. Kugler and J. Tybout (2007). Export dynamics in Colombia: Firm-level evidence, NBER Working Paper No. 13531, Cambridge, MA: National Bureau of Economic Research.

Ebell, M., Hurst, I., and J. Warren (2016), “Modelling the long-run economic impact of leaving the European Union”, Economic Modelling, Vol. 59, pp. 196–209

Head, Keith and Tierry Meyer (2016) “Reversal of regional trade agreements: Consequences of Brexit and Trumpit for the multinational car industry” available at VoxEU http://voxeu.org/article/consequences-brexit-and-trumpit-multinational-car-industry

InterTradeIreland (2009) “Investigation into North/South Trade Statistics: Methodological Profile and Time-Series Comparisons”, available at: http://www.intertradeireland.com/media/intertradeirelandcom/researchandstatistics/publications/tradeandbusinessdevelopment/InvestigationintoNorthSouthTradeStatistics.pdf

InterTradeIreland (2009) “A gravity model approach to estimating the expected volume of North-South trade”, available at http://www.intertradeireland.com/media/intertradeirelandcom/researchandstatistics/publications/tradeandbusinessdevelopment/AGravityModelApproachtoEstimatingtheExpectedVolumeofNorthSouthTrade.pdf

InterTradeIreland (2011) “Exploration of factors that might explain the level of North-South trade”, available at: http://www.intertradeireland.com/media/intertradeirelandcom/researchandstatistics/publications/tradeandbusinessdevelopment/GravityModelExplanatoryPDFforweb.pdf

Lanz, R. and S. Miroudot (2011). “Intra-Firm Trade: Patterns, Determinants and Policy Implications”, OECD Trade Policy Working Paper No. 114.

Lawless, Martina and Edgar Morgenroth (2016). "The Product and Sector Level impact of a Hard Brexit across the EU", ESRI Working Paper No.550.

Lawless, Martina, Iulia Siedschlag and Zuzanna Studnicka (2017) Expanding and Diversifying the Manufactured Exports of Irish-Owned Enterprises ESRI, Dublin.

NISRA (2017). Northern Ireland Broad Economy Sales and Exports Statistics 2015, www.nisra.gov.uk

Stojanovic, Alex and Jill Rutter (2017). "Frictionless trade? What Brexit means for cross-border trade in goods", Institute for Government

Wagner, J. (2016). 'A survey of empirical studies using transaction level data on exports and imports', Review of World Economics 152: 215-225.

Warrenpoint Harbour Authority (2017) "Warrenpoint Harbour Authority Economic Impact Statement", available at http://warrenpointport.com/wp-content/uploads/2017/10/The-Economic-Impact-of-Warrenpoint-Harbour-2-2.pdf

Annex 1: Firm level product shares by BEC category

Table 8: Imports by BEC category

	Other	Capital goods	Intermediate goods	Consumption goods	Dairy	Beef
1999	0.00	0.25	0.43	0.12	0.12	0.08
2000	0.00	0.06	0.48	0.11	0.22	0.13
2001	0.01	0.06	0.46	0.24	0.18	0.06
2002	0.00	0.07	0.67	0.10	0.13	0.03
2003	0.00	0.05	0.41	0.22	0.21	0.11
2004	0.00	0.02	0.36	0.26	0.31	0.05
2005	0.00	0.02	0.73	0.11	0.12	0.02
2006	0.00	0.01	0.58	0.13	0.25	0.02
2007	0.00	0.02	0.61	0.05	0.25	0.07
2008	0.00	0.02	0.69	0.11	0.11	0.07
2009	0.00	0.01	0.65	0.04	0.23	0.06
2010	0.01	0.01	0.38	0.30	0.26	0.04
2011	0.01	0.01	0.49	0.09	0.30	0.10
2012	0.00	0.07	0.52	0.06	0.20	0.14
2013	0.00	0.10	0.40	0.24	0.18	0.07
2014	0.00	0.06	0.38	0.18	0.22	0.15
2015	0.02	0.06	0.44	0.10	0.12	0.27

Table 9: Exports by BEC category

	Other	Capital goods	Intermediate goods	Consumption goods	Dairy	Beef
1999	0.00	0.25	0.43	0.17	0.06	0.08
2000	0.00	0.06	0.49	0.27	0.05	0.13
2001	0.01	0.06	0.47	0.35	0.06	0.06
2002	0.00	0.07	0.69	0.16	0.05	0.03
2003	0.00	0.05	0.42	0.35	0.06	0.11
2004	0.00	0.02	0.38	0.44	0.12	0.05
2005	0.00	0.02	0.74	0.15	0.06	0.02
2006	0.00	0.01	0.59	0.32	0.05	0.02
2007	0.00	0.02	0.63	0.14	0.13	0.07
2008	0.00	0.02	0.71	0.15	0.05	0.07
2009	0.00	0.01	0.66	0.22	0.04	0.06
2010	0.01	0.01	0.41	0.35	0.18	0.04
2011	0.01	0.01	0.52	0.16	0.19	0.10
2012	0.00	0.07	0.53	0.20	0.05	0.14
2013	0.00	0.10	0.42	0.31	0.09	0.07
2014	0.00	0.07	0.40	0.30	0.08	0.15
2015	0.02	0.06	0.46	0.18	0.02	0.27

Source: Author calculations based on trade micro-data from CSO

Annex 2: Detail of product shares by direction and firm trading type

Table 10: Top Export Products by Trader Type – All Destinations

Export only firms	
Bovine meat; boneless cuts, fresh or chilled	14.5%
Liqueurs and cordials	9.0%
Trucks fitted with lifting or handling equipment, not electric	4.3%
Portland cement (excl. white)	2.6%
Crispbread	2.5%
Butter (excl. dehydrated butter and ghee)	2.1%
Coniferous wood sawn or chipped lengthwise, of a thickness of > 6 mm	2.1%
Straw or fodder balers, incl. pick-up balers	2.0%
Preparations of a kind used in animal feeding (excl. dog or cat food put up for retail sale)	1.9%
Frozen, boneless meat of bovine animals	1.7%
Carcases or half-carcases of bovine animals, fresh or chilled	1.7%
White portland cement	1.7%
Insecticides, rodenticides, fungicides	1.6%
Bread, pastry, cakes, biscuits	1.4%
Structures and parts of structures, of iron or steel	1.4%
Central heating boilers, non-electric	1.2%
Prepared or preserved meat or offal of bovine animals (excl. sausages)	1.2%
Fresh or chilled bovine cuts, with bone in (excl. carcases and 1/2 carcases)	1.2%
Electric space-heating and soil-heating apparatus (excl. storage heating radiators)	1.1%
Fresh or chilled meat of swine	1.0%
Carboys, bottles, flasks and similar articles for the conveyance or packaging of goods	1.0%
Particle board of wood	0.9%
Polyurethanes, in primary forms	0.9%

Export and import firms	
Liqueurs and cordials	12.2%
Bovine meat; boneless cuts, fresh or chilled	11.8%
Trucks fitted with lifting or handling equipment, not electric	5.8%
Crispbread	3.3%
Butter (excl. dehydrated butter and ghee)	2.8%
Straw or fodder balers, incl. pick-up balers	2.7%
Preparations of a kind used in animal feeding (excl. dog or cat food put up for retail sale)	2.3%
White portland cement	2.3%
Insecticides, rodenticides, fungicides	2.1%
Frozen, boneless meat of bovine animals	1.7%
Central heating boilers, non-electric	1.7%
Prepared or preserved meat or offal of bovine animals (excl. sausages)	1.7%
Structures and parts of structures, of iron or steel	1.6%
Coniferous wood sawn or chipped lengthwise, of a thickness of > 6 mm	1.6%
Electric space-heating and soil-heating apparatus (excl. storage heating radiators)	1.5%
Carboys, bottles, flasks and similar articles for the conveyance or packaging of goods	1.3%
Portland cement (excl. white)	1.2%
Self-propelled trucks fitted with lifting or handling equipment, with electric motor	1.2%
Malt extract; food preparations of flour, groats, meal, starch or malt extract	1.1%
Fresh or chilled hams, shoulders and cuts thereof of swine, with bone in	1.1%
Bread, pastry, cakes, biscuits	1.1%
Polyurethanes, in primary forms	1.0%
Lead sheets, strip and foil, of a thickness "excl. any backing" of <= 0,2 mm	0.9%

Table 10 (Continued)

Export only firms		Export and import firms	
Fresh or chilled boneless cuts of sheep	0.9%	Frozen edible bovine offal (excl. tongues and livers)	0.8%
Self-propelled trucks fitted with lifting or handling equipment, with electric motor	0.9%	Casein	0.8%
Hydraulic power engines and motors, linear acting "cylinders"	0.8%	Building elements for the manufacture of floors, walls, partition walls, ceilings, roofs	0.7%
Fresh or chilled hams, shoulders and cuts thereof of swine, with bone in	0.8%	Milk and cream of a fat content by weight of > 1% but <= 6%, not concentrated nor containing sweetening matter	0.7%
Malt extract; food preparations of flour, groats, meal, starch or malt extract	0.8%	Milk albumin "lactalbumin"	0.7%
Lead sheets, strip and foil, of a thickness "excl. any backing" of <= 0,2 mm	0.7%	Parts of seats	0.7%
Frozen edible bovine offal (excl. tongues and livers)	0.6%	Milk and cream in solid forms, of a fat content by weight of <= 1,5%	0.6%
Casein	0.6%	Vacuum cleaners	0.6%
Fresh or chilled edible offal of bovine animals	0.6%	Other food preparations	0.6%
Prepared or preserved meat or meat offal of ducks, geese and guinea fowl	0.6%	Cellulose fibre-cement	0.6%
Building elements for the manufacture of floors, walls, partition walls, ceilings, roofs	0.6%	Orange juice,	0.6%
Milk and cream of a fat content by weight of > 1% but <= 6%	0.5%	Mattress supports for bed frames	0.6%
Milk albumin "lactalbumin"	0.5%	Parts of fork-lift trucks	0.5%
Miscellaneous manufactured products	0.5%	Mobile lifting frames on tyres and straddle carriers	0.5%
Parts of seats	0.5%	Syringes, with or without needles	0.5%
Fresh or chilled sheep carcases and half-carcases (excl. lambs)	0.5%	Plates, sheets, film, foil and strip, of cellular polyurethanes, unworked	0.5%
Vacuum cleaners	0.5%	Prepared or preserved meat or meat offal of ducks, geese and guinea fowl	0.5%
Frozen meat of swine	0.5%	Insecticides	0.5%

Table 10 (Continued)

Export only firms	
Milk and cream in solid forms, of a fat content by weight of <= 1,5%	0.5%
Food preparations	0.5%
Sausages and similar products	0.4%
Cellulose fibre-cement	0.4%
Orange juice	0.4%
Raw hides and skins	0.4%
Mattress supports for bed frames	0.4%
Parts of fork-lift trucks	0.4%
Mobile lifting frames on tyres and straddle carriers	0.4%
Contribution of Top 50 products	**74.3%**

Export and import firms	
Raw hides and skins	0.4%
Cereal pellets	0.4%
Milk and cream in solid forms, of a fat content by weight of > 1,5%, unsweetened	0.4%
Fresh or chilled edible offal of bovine animals	0.4%
Milk and cream of a fat content by weight of <= 1%	0.4%
Fresh or chilled bovine cuts, with bone in (excl. carcases and 1/2 carcases)	0.4%
Peat, incl. peat litter	0.4%
Articles of bedding and similar furnishing, fitted with springs or stuffed	0.4%
Fresh or chilled meat of swine	0.4%
Contribution of Top 50 products	**78.6%**

Table 11: Top Export Products by Trader Type - Exported to Northern Ireland

Export only firms	
Bovine meat; boneless cuts, fresh or chilled	16.1%
Self-propelled trucks fitted with lifting or handling equipment, not electric	5.7%
Butter (excl. dehydrated butter and ghee)	2.7%
Coniferous wood sawn or chipped lengthwise, of a thickness of > 6 mm	2.7%
Straw or fodder balers, incl. pick-up balers	2.6%
Preparations of a kind used in animal feeding (excl. dog or cat food put up for retail sale)	2.3%
Portland cement (excl. white)	2.2%
Carcases or half-carcases of bovine animals, fresh or chilled	2.2%
Insecticides, rodenticides, fungicides, herbicides	2.1%
Structures and parts of structures, of iron or steel	1.8%
Central heating boilers, not electric	1.6%
Prepared or preserved meat or offal of bovine animals (excl. sausages)	1.6%
Fresh or chilled bovine cuts, with bone in (excl. carcases and 1/2 carcases)	1.6%
Frozen, boneless meat of bovine animals	1.4%
Electric space-heating and soil-heating apparatus (excl. storage heating radiators)	1.4%
Fresh or chilled meat of swine	1.3%
Particle board of wood	1.2%
Fresh or chilled boneless cuts of sheep	1.1%
Self-propelled trucks fitted with lifting or handling equipment with electric motor	1.1%
Hydraulic power engines and motors, linear acting "cylinders"	1.1%
Fresh or chilled hams, shoulders and cuts thereof of swine, with bone in	1.1%

Export and import firms	
Bovine meat; boneless cuts, fresh or chilled	12.3%
Self-propelled trucks fitted with lifting or handling equipment, not electric	8.1%
Butter (excl. dehydrated butter and ghee)	3.9%
Straw or fodder balers, incl. pick-up balers	3.7%
Preparations for animal feeding (excl. dog or cat food put up for retail sale)	3.2%
Insecticides, rodenticides, fungicides, herbicides	3.0%
Central heating boilers, not electric	2.3%
Prepared or preserved meat or offal of bovine animals (excl. sausages)	2.3%
Structures and parts of structures, of iron or steel	2.3%
Coniferous wood sawn or chipped lengthwise, of a thickness of > 6 mm	2.3%
Electric space-heating and soil-heating apparatus (excl. storage heating radiators)	2.0%
Self-propelled trucks fitted with lifting or handling equipment with electric motor	1.6%
Malt extract; food preparations of flour, groats, meal, starch or malt extract	1.5%
Carboys, bottles, flasks and similar articles for the conveyance or packaging of goods	1.5%
Fresh or chilled hams, shoulders and cuts thereof of swine, with bone in	1.5%
Polyurethanes, in primary forms	1.4%
Frozen, boneless meat of bovine animals	1.2%
Frozen edible bovine offal (excl. tongues and livers)	1.1%
Casein	1.1%
Building elements for the manufacture of floors, walls, partition walls, ceilings, roofs	1.0%
Milk and cream of a fat content by weight of > 1% but <= 6%	1.0%

Table 11 (Continued)

Export only firms		Export and import firms	
Malt extract; food preparations of flour, groats, meal, starch or malt extract	1.1%	Milk albumin "lactalbumin"	1.0%
Bread, pastry, cakes, biscuits	1.1%	Parts of seats	1.0%
Carboys, bottles, flasks and similar articles for the conveyance or packaging of goods	1.0%	Milk and cream in solid forms, of a fat content by weight of <= 1,5%	0.9%
Polyurethanes, in primary forms	1.0%	Vacuum cleaners	0.8%
Frozen edible bovine offal (excl. tongues and livers)	0.9%	Liqueurs and cordials	0.8%
Casein	0.8%	Orange juice	0.8%
Prepared or preserved meat or meat offal of ducks, geese and guinea fowl	0.7%	Mattress supports for bed frames	0.8%
Building elements for the manufacture of floors, walls, partition walls, ceilings, roofs	0.7%	Parts of fork-lift trucks and works trucks fitted with lifting or handling equipment	0.8%
Milk and cream of a fat content by weight of > 1% but <= 6%matter	0.7%	Mobile lifting frames on tyres and straddle carriers	0.7%
Milk albumin "lactalbumin"	0.7%	Other food preparations	0.7%
Parts of seats	0.7%	Plates, sheets, film, foil and strip, of cellular polyurethanes, unworked	0.7%
Miscellaneous manufactured products	0.7%	Prepared or preserved meat or meat offal of ducks, geese and guinea fowl	0.6%
Fresh or chilled sheep carcases and half-carcases (excl. lambs)	0.7%	Insecticides	0.6%
Fresh or chilled edible offal of bovine animals	0.6%	Syringes, with or without needles	0.6%
Frozen meat of swine	0.6%	Cereal pellets	0.6%
Milk and cream in solid forms, of a fat content by weight of <= 1.5%	0.6%	Milk and cream in solid forms, of a fat content by weight of > 1,5%, unsweetened	0.6%
Vacuum cleaners	0.6%	Milk and cream of a fat content by weight of <= 1%	0.6%
Liqueurs and cordials	0.6%	Peat, incl. peat litter	0.6%
Orange juice	0.5%	Fresh or chilled bovine cuts, with bone in (excl. carcases and 1/2 carcases)	0.5%
Mattress supports for bed frames	0.5%	Articles of bedding and similar furnishing, fitted with springs or stuffed	0.5%
Parts of fork-lift trucks and works trucks fitted with lifting or handling equipment	0.5%	Fresh or chilled meat of swine	0.5%
Mobile lifting frames on tyres and straddle carriers	0.5%	Whole bovine hides	0.5%

Table 11 (Continued)

Export only firms	
Other food preparations	0.5%
Waferboard and similar board, of wood	0.5%
Parts of trailers and semi-trailers and other vehicles not mechanically propelled	0.5%
Plates, sheets, film, foil and strip, of cellular polyurethanes, unworked	0.5%
Plates, sheets, film, foil and strip, of non-cellular polymers of ethylene	0.5%
Insecticides	0.5%
Syringes, with or without needles	0.4%
Contribution of Top 50 products	**74.3%**

Export and import firms	
Reservoirs, tanks etc, of plastics, with a capacity of > 300 l	0.5%
Chocolate and other preparations containing cocoa	0.5%
Pneumatic power engines and motors, linear-acting, "cylinders"	0.5%
Tiles, flagstones, bricks and similar articles, of cement, concrete or artificial stone	0.5%
Milk and cream of a fat content by weight of >= 6%	0.5%
Ice cream and other edible ice	0.5%
Parts of harvesting machinery	0.5%
Contribution of Top 50 products	**76.9%**

Table 12: Top Import Products by Trader Type - All Destinations

Import only firms		Export and import firms	
Milk and cream of a fat content by weight of > 1% but <= 6%	7.1%	Milk and cream of a fat content by weight of > 1% but <= 6%	11.4%
Parts of fork-lift trucks and works trucks fitted with lifting or handling equipment	3.9%	Parts of fork-lift trucks and works trucks fitted with lifting or handling equipment	6.3%
Preparations of a kind used in animal feeding (excl. dog or cat food put up for retail sale)	2.0%	Centrifuges, incl. centrifugal dryers	2.9%
Centrifuges, incl. centrifugal dryers	1.8%	Milk and cream in solid forms, of a fat content by weight of <= 1,5%	2.7%
Milk and cream in solid forms, of a fat content by weight of <= 1,5%	1.7%	Preparations of a kind used in animal feeding (excl. dog or cat food put up for retail sale)	2.3%
Amino-resins, in primary forms	1.4%	Straw or fodder balers, incl. pick-up balers	2.1%
Mixtures of ammonium nitrate with calcium carbonate for use as fertilisers	1.4%	Other organo-inorganic compounds	1.9%
Straw or fodder balers, incl. pick-up balers	1.3%	Flat-rolled products of iron or non-alloy steel, of a width of >= 600 mm	1.9%
Saturated polyesters in primary forms	1.3%	Orange juice	1.8%
Flat-rolled products of iron or non-alloy steel, of a width of >= 600 mm	1.2%	Parts of cranes	1.5%
Other organo-inorganic compounds	1.2%	Building elements for the manufacture of floors, walls, partition walls, ceilings, roofs	1.4%
Orange juice	1.1%	Instruments and appliances used in medical, surgical or veterinary sciences	1.4%
Parts of cranes	1.1%	Coniferous wood in the rough	1.4%
Building elements for the manufacture of floors, walls, partition walls, ceilings, roofs	1.0%	Fresh or chilled meat of swine	1.3%
Instruments and appliances used in medical, surgical or veterinary sciences	0.9%	Parts of harvesting machinery	1.3%
Coniferous wood in the rough	0.9%	Polyethylene with a specific gravity of > 0,94	1.2%
Aluminium foil, backed, of a thickness < 0,2 m	0.9%	Amino-resins, in primary forms	1.2%
Frozen cuts and edible offal of fowls	0.9%	Fresh or chilled cuts and edible offal of fowls	1.1%
Parts of trailers and semi-trailers and other vehicles not mechanically propelled	0.9%	Insecticides, rodenticides, fungicides, herbicides	1.1%
Fresh or chilled meat of swine	0.8%	Furnace burners for liquid fuel	1.1%
Parts of harvesting machinery	0.8%	Saturated polyesters in primary forms	1.0%
Potassium chloride for use as fertiliser	0.8%	Polypropylene, in primary forms	1.0%
Polyethylene with a specific gravity of >= 0,94,	0.8%	Whey and modified whey	0.9%

Table 12 (Continued)

Import only firms		Export and import firms	
Parts of pumps for liquids	0.7%	Mixes and doughs of flour, groats, meal, starch or malt extract	0.8%
Fresh or chilled cuts and edible offal of fowls	0.7%	Soya bean flour and meal	0.8%
Insecticides, rodenticides, fungicides	0.7%	Miscellaneous manufactured products	0.8%
Bitumen and asphalt, natural; asphaltites and asphaltic rocks	0.7%	Milk and cream, concentrated but unsweetened (excl. in solid forms)	0.8%
Furnace burners for liquid fuel	0.7%	Plates, sheets, film, foil and strip, of non-cellular polymers of ethylene	0.7%
Interchangeable tools for hand tools, whether or not power-operated	0.7%	Fatty acids, industrial, monocarboxylic; acid oils from refining	0.7%
Stoppers, lids, caps and other closures	0.7%	Buttermilk, curdled milk and cream	0.7%
Polypropylene, in primary forms	0.6%	Waters, incl. mineral and aerated, with added sugar, sweetener or flavour	0.6%
Whey and modified whey	0.6%	Phenolic resins, in primary forms	0.6%
Black fermented tea and partly fermented tea, in immediate packings of > 3 kg	0.6%	Parts of agricultural, horticultural or forestry machinery	0.6%
Miscellaneous manufactured products	0.6%	Maize (excl. seed for sowing)	0.6%
Soya bean flour and meal	0.6%	Aluminium foil, backed, of a thickness (excl. any backing) of <= 0,2 mm	0.6%
Fatty acids, industrial, monocarboxylic; acid oils from refining	0.6%	Cranes designed for mounting on road vehicles	0.6%
Plates, sheets, film, foil and strip, of non-cellular polymers of ethylene	0.5%	Crude palm oil	0.6%
Mixes and doughs of flour, groats, meal, starch or malt extract	0.5%	Urea, whether or not in aqueous solution	0.6%
Cartons, boxes and cases, of corrugated paper or paperboard	0.5%	Chemical products and preparations of the chemical or allied industries	0.6%
Serum bottles, vials and other pharmaceutical containers	0.5%	Cartons, boxes and cases, of corrugated paper or paperboard	0.5%
Carboys, bottles, flasks and similar articles for the conveyance or packaging of goods, of plastics	0.5%	Coal; briquettes	0.5%
Mineral or chemical fertilisers containing the three fertilising elements nitrogen, phosphorus and potassium	0.5%	Parts of electric water heaters, immersion heaters, space-heating apparatus and soil-heating apparatus, hairdressing apparatus and hand dryers	0.5%
Urea, whether or not in aqueous solution	0.5%	Folding cartons, boxes and cases, of non-corrugated paper or paperboard	0.5%

Table 12 (Continued)

Import only firms	
Beer made from malt	0.5%
Boxes, cases, crates and similar articles for the conveyance or packaging of goods, of plastics	0.5%
Milk and cream, concentrated but unsweetened (excl. in solid forms)	0.5%
Medicaments consisting of mixed or unmixed products for therapeutic or prophylactic purposes, put up in measured doses	0.5%
Coniferous wood sawn or chipped lengthwise of a thickness of > 6 mm	0.4%
Parts of agricultural, horticultural or forestry machinery for soil preparation	0.4%
Buttermilk, curdled milk and cream	0.4%
Contribution of Top 50 products	**50.3%**

Export and import firms	
Plates, sheets, film, foil and strip, of cellular polyurethanes, unworked	0.5%
Vacuum cleaners	0.4%
Mixtures of odoriferous substances and mixtures, incl. alcoholic solutions for the manufacture of beverages	0.4%
Spark-ignition reciprocating or rotary internal combustion piston engine (excl. those for aircraft or marine propulsion)	0.4%
Apple juice	0.4%
Nonwovens of man-made filaments, weighing > 70 g/m^2 but <= 150 g/m^2	0.4%
Staple fibres of polyesters	0.4%
Contribution of Top 50 products	**65.9%**

Table 13: Top Import Products from Northern Ireland by Trader Type

Import only firms		Export and import firms	
Milk and cream of a fat content by weight of > 1% but <= 6%	23.4%	Milk and cream of a fat content by weight of > 1% but <= 6%	33.1%
Preparations of a kind used in animal feeding (excl. dog or cat food)	7.5%	Parts of fork-lift trucks and works trucks fitted with lifting or handling equipment	9.7%
Parts of fork-lift trucks and works trucks fitted with lifting or handling equipment	6.9%	Lead waste and scrap	6.5%
Lead waste and scrap	4.6%	Preparations of a kind used in animal feeding (excl. dog or cat food put up for retail sale)	5.7%
Bovine meat; boneless cuts, fresh or chilled	3.7%	Bovine meat; boneless cuts, fresh or chilled	5.2%
Propane, liquefied	3.2%	Soya bean flour and meal	2.2%
Folding cartons, boxes and cases, of non-corrugated paper or paperboard	2.2%	Milk and cream, concentrated but unsweetened (excl. in solid forms)	2.2%
Frozen cuts and edible offal of fowls	2.1%	Coniferous wood in the rough	1.9%
Soya bean flour and meal	1.6%	Whey and modified whey	1.9%
Milk and cream, concentrated but unsweetened (excl. in solid forms)	1.5%	Maize (excl. seed for sowing)	1.8%
Coniferous wood in the rough	1.4%	Urea, whether or not in aqueous solution	1.4%
Whey and modified whey	1.3%	Pebbles, gravel, broken or crushed stone, for concrete aggregates, for road metalling	1.2%
Maize (excl. seed for sowing)	1.3%	Frozen, boneless meat of bovine animals	0.9%
Frozen crustaceans	1.2%	Pharmaceutical containers of volume < 1 litre	0.9%
Urea, whether or not in aqueous solution	1.0%	Fresh or chilled cuts and edible offal of fowls	0.9%
Pebbles, gravel, broken or crushed stone, for concrete aggregates, for road metalling	0.8%	Fruit and other edible parts of plants, prepared or preserved,	0.8%
Cartons, boxes and cases, of corrugated paper or paperboard	0.8%	Briquettes, ovoids and similar solid fuels manufactured from coal	0.8%
Boxes, cases, crates and similar articles for the conveyance or packaging of goods	0.7%	Mixtures of odoriferous substances and mixtures for the manufacture of beverages	0.7%
Oilcake and other solid residues	0.7%	Oilcake and other solid residues	0.7%
Frozen, boneless meat of bovine animals	0.7%	Sacks and bags of polymers of ethylene	0.6%
Sacks and bags of polymers of ethylene	0.7%	Parts of agricultural, horticultural or forestry machinery for soil preparation	0.6%
Pharmaceutical containers of volume < 1 litre	0.6%	Soya-bean oil and its fractions	0.5%
Fresh or chilled cuts and edible offal of fowls	0.6%	Parts of harvesting machinery, threshing machinery, mowers	0.5%
Paper or paperboard labels of all kinds, printed	0.6%	Cane molasses resulting from the extraction or refining of sugar	0.5%

Table 13 (Continued)

Import only firms		Export and import firms	
Briquettes, ovoids and similar solid fuels manufactured from coal	0.6%	Wheat or meslin flour	0.5%
Fruit and other edible parts of plants, prepared or preserved	0.6%	Lead sheets, strip foil, of thickness < 0,2mm	0.5%
Bran, sharps and other residues of wheat,	0.5%	Apple juice	0.5%
Methionine	0.5%	Cartons, boxes and cases, of corrugated paper or paperboard	0.5%
Carboys, bottles, flasks and similar articles for the conveyance or packaging of goods	0.5%	Malt (excl. roasted)	0.5%
Miscellaneous manufactured products	0.5%	Paper or paperboard labels of all kinds, printed	0.5%
Durum wheat	0.5%	Residues of starch manufacture	0.4%
Mixtures of odoriferous substances and mixtures used for beverages	0.5%	Shrimps and prawns	0.4%
Live fowls of the species Gallus domesticus, weighing <= 185 g (excl. turkeys)	0.5%	Milk and cream in solid forms, of a fat content by weight of <= 1,5%	0.4%
Oilcake and other solid residues	0.5%	Pure-bred breeding swine	0.4%
Structures and parts of structures, of iron or steel	0.5%	Crude palm oil	0.4%
Lysine and its esters; salts thereof	0.5%	Tubes, pipes and hollow profiles, seamless, of circular cross-section, of stainless steel, cold-drawn or cold-rolled "cold-reduced"	0.4%
Parts of agricultural, horticultural or forestry machinery for soil preparation	0.4%	Pallets, box pallets and other load boards, of wood; pallet collars of wood	0.4%
Petroleum coke, non-calcined	0.4%	Folding cartons, boxes and cases, of non-corrugated paper or paperboard	0.3%
H sections of iron or non-alloy steel	0.4%	Waters, incl. mineral and aerated, with added sugar, sweetener or flavour	0.3%
Wheat or meslin flour	0.4%	Sacks and bags, incl. cones, of paper, paperboard, cellulose wadding or webs of cellulose fibres	0.3%
Soya-bean oil and its fractions, whether or not refined	0.4%	Beet molasses resulting from the extraction or refining of sugar	0.3%
Parts of harvesting machinery, threshing machinery	0.4%	Boards, cabinets and apparatus for electric control or the distribution of electricity, for a voltage <= 1.000 V	0.3%
Cane molasses from the refining of sugar	0.4%	Barley	0.3%
Parts of trailers and semi-trailers and other vehicles not mechanically propelled	0.4%	Parts of machinery for working mineral substances	0.3%

Table 13 (Continued)

Import only firms		Export and import firms	
Lead sheets, strip and foil, of a thickness "excl. any backing" of <= 0,2 mm	0.3%	Pig fat	0.3%
Apple juice	0.3%	Lysine and its esters; salts thereof	0.3%
Malt (excl. roasted)	0.3%	Dog or cat food, put up for retail sale	0.3%
Shrimps and prawns	0.3%	Plates, cylinders and other printing components	0.3%
Residues of starch manufacture and similar residues	0.3%	Parts of seats	0.3%
Live, fresh or chilled, scallops	0.3%	Parts of cranes	0.2%
Contribution of Top 50 products	**80.5%**	**Contribution of Top 50 products**	**90.9%**

InterTrade Ireland
The Trade and Business Development Body
The Old Gasworks Business Park
Kilmorey Street, Newry,
Co. Down, BT34 2DE

Tel: 028 3083 4100 (048 from Ireland)
Fax: 028 3083 4155 (048 from Ireland)
Textphone: 028 3083 4169 (048 from Ireland)
Email: info@intertradeireland.com
Web: intertradeireland.com

intertradeireland.com