

# Brexit: Analysis of Import Exposures in an EU Context

March 2018



An Roinn Airgeadais  
Department of Finance

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Irish Government Economic & Evaluation Service



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**Key Words:** Brexit, Sectoral Exposure, International Trade, Imports, Exports, Goods, Services

The author **Cliona McDonnell** is an economist in the Department of Finance and members of the Irish Government Economic and Evaluation Service (“IGEES”). This document is part of ongoing Brexit analysis and scenario planning for input into a larger Government deliberative processes. Unless explicitly referenced by Government decision, any proposal contained in this document does not represent Government policy and should not be represented as such. The analysis and views set out in this paper do not necessarily reflect the views of the Minister for Finance. The author would like to thank colleagues Brendan O’Connor, John McCarthy, Mike Fahy, Justin Flannery, the Department of Finance Brexit Unit, and members of the Department of Finance Executive Board Policy Development and Review Group. The author also acknowledges comments received from the Department of Agriculture, Food and the Marine, Georgina Hughes-Elders (Department of Public Expenditure and Reform) and various Interdepartmental Brexit working groups.

## Executive Summary

This paper examines the import exposures to the UK of Ireland and other EU Member States at a sectoral level. The analysis builds on previous work undertaken by the Department of Finance on sector-level export exposures, in the context of the UK's decision to leave the EU.

Overall Ireland has a trade surplus with the UK, and within the overall balance, runs a goods deficit and a significant services surplus. On the imports side, the UK represented a far higher share of Irish goods imports (23 percent) than exports (13 percent) in 2016, although the import share has been declining in recent years. This import exposure is spread across a wide range of sectors, compared to the export exposure which is more concentrated in certain sectors. Once again, Food and Live Animals is the most exposed sector, however the analysis also points to the issues facing sectors such as retail, manufacturing and pharma-chem due to supply chain linkages. It is also shown that SMEs are likely to be disproportionately affected by a shock to supply chains as they comprise the majority of importers in certain sectors.

Taking the results into a wider EU context, Ireland's sectoral imports are substantially the most exposed of the remaining EU-27, across almost all sectors. Furthermore, at a subsectoral level, thirteen of the top fifteen most exposed subsectors across the EU-27 are Irish, and there is considerable overlap between the exposed import and export subsectors, particularly for those in the agri-food sector.

On the services side, Ireland is less exposed to the UK with regard to imports than exports. While on aggregate Ireland is the second most exposed Member State for services exports, it is one of the least exposed for services imports, both at the aggregate and sectoral level.

The results further highlight the disproportionate exposure of both Irish business and consumers to Brexit. The high import exposures show that it is not just Irish exporters that are exposed to Brexit but also firms integrated into supply chains, and disturbances to retail and distribution supply chains could have a direct impact on Irish consumers through reduced competition and higher prices. These issues indicate that Brexit is likely to cause a structural, rather than cyclical, change in the Irish economy. As such, a comprehensive trade agreement between the UK and EU that is as close as possible to the status quo is imperative for Ireland to prevent a rise in the cost of imports for firms across all sectors and minimise the impact on the Irish economy.

## 1. Introduction

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While a sizable body of work now exists on the impact of a UK exit from the EU on exports across the EU, there has been less focus on how Irish and European imports may be affected. This paper aims to address this by analysing the import exposures of the remaining EU-27 at a sectoral level, with a view to identifying which sectors and countries are most reliant on the UK, in particular with respect to goods.

Two previous Department of Finance papers (2017a, 2017b) looked at sectoral export exposures to the UK, firstly within the Irish economy and then in a wider European context, using two measures of trade exposure, *size exposure* and *proportional exposure*. These quantify both the importance of each sector's UK exports in a country's overall exports (size exposure) and the importance of the UK to each sector (proportional exposure). This paper utilises the same methodology to calculate the equivalent import exposures to the UK of each sector in the EU-27, focusing primarily on trade in goods. As trade data for 2016 are now available, the export exposures are also updated, facilitating an examination of whether there is overlap in the sectors that export and import the most to and from the UK.

Looking firstly at the Irish economy on a standalone basis, the results show the considerable extent to which Ireland's imports are sourced from the UK. Ireland records a goods trade deficit with the UK, importing €17bn of goods in 2016, representing 23 percent of total goods imports, compared with 13 percent (€15bn) of goods exports (though Ireland has an overall trade surplus due to a surplus in services trade). It is also apparent, however, that the share of imports from the UK has declined materially in the last three years as Irish imports from other countries have risen. Similar to the results of the export analysis, the Food and Live Animals sector is the most exposed on an import basis, particularly the cereals, dairy products and eggs, and meat subsectors, although Ireland maintains a trade surplus with the UK in the sector. This once again highlights the need to minimise any future disruptions to trade in the agricultural sector with both Northern Ireland, which accounts for 14 percent of the sector's imports, and Great Britain.

An important difference on the imports side, however, is that the UK exposure is spread across a greater variety of sectors, compared to a more concentrated export exposure in certain sectors. The other sectors with particularly significant exposure levels are Chemicals, Machinery and Transport Equipment, Manufactured Goods (manufactured items for intermediate consumption), Miscellaneous Manufactured Articles (essentially consumer goods), and Mineral Fuels. This reflects the importance of the UK as a provider of imports to the wider Irish economy and its essential position in many Irish

supply chains. Any disruption to imports from the UK would be relevant for Irish-based producers importing raw materials, or intermediate input goods, and for consumers purchasing final consumption goods. This issue is especially pressing for SMEs, who are less likely to have capacity to alter supply chains, and who have a particularly large share in the retail and distribution sector. It is also worth noting that this analysis does not consider the use of the UK as a landbridge for goods in transit from the rest of the world, which would increase the exposures of each sector to the UK beyond those estimated in this paper.

In the wider European context, the analysis shows that Ireland's imports are the most exposed, and by a significant distance, of the remaining EU-27 countries, on both measures of trade import exposures. Within the majority of sectors, Ireland has the highest level of dependency on the UK (reflected in the proportional exposures), and Ireland is also the most exposed Member State when the macroeconomic context of a sector's imports is considered (the size exposure). While Ireland is more exposed in terms of imports than for exports in most sectors, the remaining EU-27 countries are relatively less exposed in respect of imports. Disaggregating the data to a subsectoral level shows that thirteen of the top fifteen most exposed national subsectors are Irish.

While services sectors are not the primary focus of this paper, not least because they are less impacted by tariffs, the results for these sectors are also presented in an annex. The results show that Ireland is significantly less exposed to the UK in terms of services imports compared to exports, with 6 percent of services imports coming from the UK, compared to 16 percent of services exports. Furthermore, Ireland's services imports are not the most exposed across the EU-27, in fact, Ireland is one of the lesser-exposed Member States across the majority of services sectors.

The remainder of the paper is structured as follows: firstly, the data sources and methodology used is outlined in section 2. In section 3, the exposures of Irish import sectors will be examined, as well as import trends over time. Section 4 follows by putting these exposures in a European context, presenting the most exposed countries across the key sectors identified. This section also contains a discussion of some of the key issues that Ireland faces regarding imports, and looks at the particular exposure of small businesses. The most exposed subsectors across the EU-27 are also shown in section 4, before section 5 concludes. A summary of services sector exposures is then presented in an annex.

## 2. Data and Methodology

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### 2.1. Data

The data for the primary analysis were obtained from the United Nations Conference on Trade and Development (UNCTAD) database. This dataset contains information on the imports and exports of goods by product and destination.<sup>1</sup> These products are aggregated into sectors according to the SITC reference codes, further detail of which is presented in Appendix Table 1.<sup>2</sup> Central Statistics Office (CSO) External Trade and Balance of Payments data are used to complement the UNCTAD data for the analysis of Irish trade on a standalone basis.

For the services analysis presented in the Annex, OECD EBOPS 2010 data on trade in services by partner country were used, along with CSO and Eurostat Balance of Payments data. The OECD dataset does not include data on Bulgaria, Croatia, Cyprus, Malta or Romania, however, and as such, these are not included in the sectoral analyses.

### 2.2. Methodology

The methodology used to calculate the exposure measures presented here follows that used in Department of Finance (2017b) to measure export exposures. These measures are applied to both imports and exports here and encompass two dimensions of trade exposure to the UK. The sectoral size exposure measure is calculated as the value of the imports in each sector from the UK as a proportion of a country's total imports. The sectoral proportional exposure measure represents the proportion of each individual sector's imports from the UK as a proportion of that sector's global imports. Together, the two dimensions give a measure of both the importance of a sector in a country's overall imports and the importance of the UK to that sector (see Box 1 below).

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<sup>1</sup> Available from UNCTAD (<http://unctadstat.unctad.org/>). Note: all data are in US dollars.

<sup>2</sup> SITC is defined as the Standard International Trade Classification which is a statistical classification of the commodities entering external trade. It is designed to provide the commodity aggregates required for purposes of economic analysis and to facilitate the international comparison of trade-by-commodity data.

**Box 1: Measuring the concepts of *Size* and *Proportional* Exposure (Department of Finance 2017b)**

$$\text{Size Exposure} = \frac{X_j^{i,UK}}{\sum_i X_j^{i,World}} = \frac{\text{Sector's Imports from the UK}}{\text{Total Country Imports from the World}}$$

where  $X_j^{i,UK}$  are imports in sector  $i$  to country  $j$ , imported from the UK. The denominator  $X_j^{i,World}$  represents sum of total imports of all sectors to country  $j$ , imported from the world.

$$\text{Proportional Exposure} = \frac{X_j^{i,UK}}{X_j^{i,World}} = \frac{\text{Sector's Imports from the UK}}{\text{Sector's Total Imports from the World}}$$

where  $X_j^{i,UK}$  are imports in sector  $i$  to country  $j$ , imported from the UK. The denominator  $X_j^{i,World}$  represents total imports of sector  $i$  to country  $j$ , imported from the world.

The equivalent methodology is used to calculate export exposures, replacing imports with exports to the UK and to the world.



### 3. Irish Goods Exposures to the UK

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Previous work has established both the diversity of exposures across export sectors in Ireland and the particularly significant exposure of Irish exports compared to the other remaining EU-27 (Department of Finance 2017b). This paper turns the attention to imports. In this section, we firstly look at the variation in the exposure of the Irish import sectors, and compare the import exposures to the export exposures within each sector, allowing us to identify both which sectors are most exposed and whether those exposures are symmetric across imports and exports.

At an aggregate level, the importance of Ireland's trade relationship with the UK, in terms of goods, is more pronounced from an imports than exports point of view. Ireland imported €17bn in goods from the UK throughout 2016, representing 23 percent of its total goods imports, compared to 13 percent (€15bn) of goods exports.<sup>3</sup> This is comprised of both intermediate inputs (c.€7bn) and final consumption goods (c.€7bn), however, a detailed analysis of this split at the sectoral level is not feasible here; instead, the focus is restricted to an analysis of aggregate import types.<sup>4</sup>

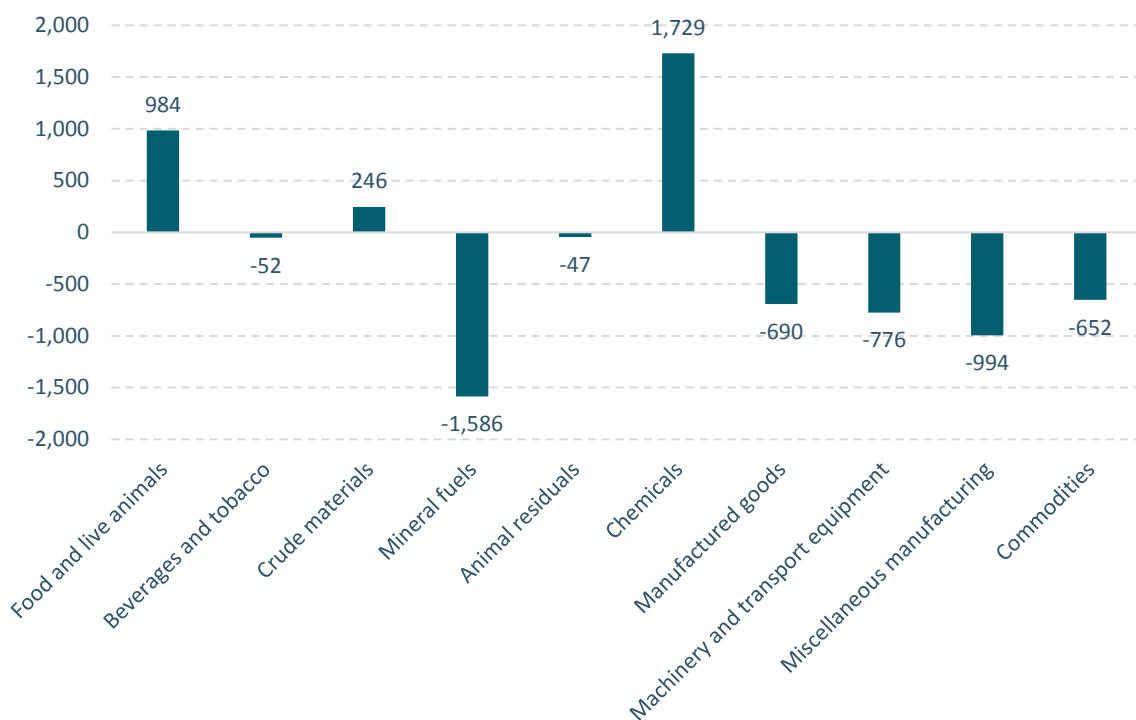
Moving to the sectoral level, Ireland's trade balance with the UK in each goods sector is first presented in Figure 1. There are three sectors in which Ireland records a trade surplus: Chemicals, Food and Live Animals, and Crude Materials. In the remaining sectors, Ireland's imports outweigh exports to the UK, with the largest deficits visible in Mineral Fuels, Machinery and Transport Equipment, and the two Manufacturing sectors.

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<sup>3</sup> As per CSO external trade data.

<sup>4</sup> As per CSO Merchandise Imports by Main Use (external trade) data. A further €1.5bn of imports are classified as producer capital goods, with the remainder undisclosed.

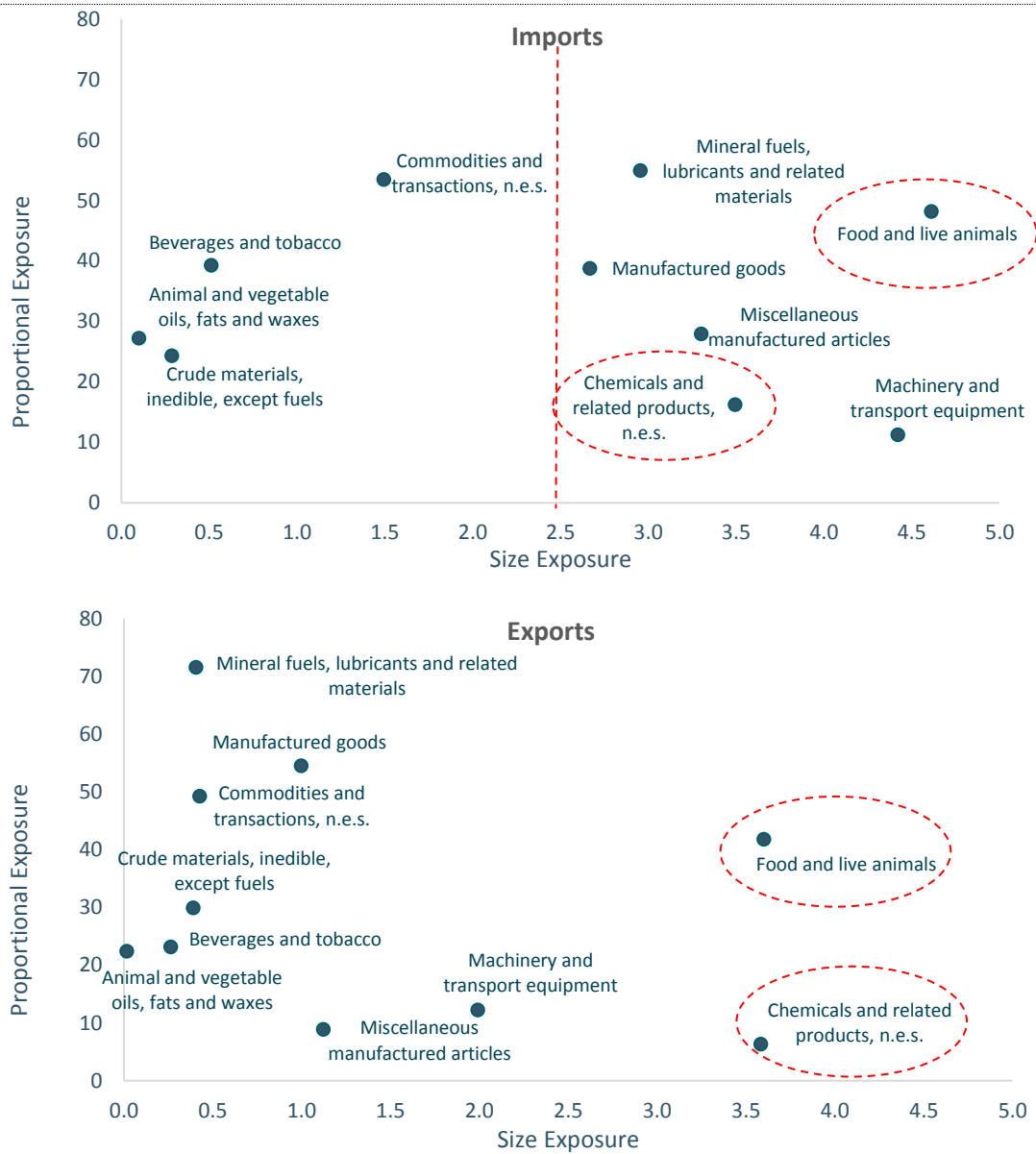
**Figure 1. Ireland's Trade Balance with the UK by Sector, 2016 (€m)**



Source: CSO External Trade goods data. Department of Finance analysis.

This aggregate data does not show the intensity of imports or exports in each sector, however, and as such the trade exposures for both statistics are presented in Figure 2. It is clear that whilst the level of import exposure to the UK varies across sectors, the exposure is more evenly distributed across sectors for imports than for exports. While on the exports side, Food and Live Animals and Chemicals are clearly the two most exposed sectors (on a size exposure basis), on the imports side, these sectors are two of six sectors with significant size exposures, the others being “Machinery and Transport Equipment”, “Manufactured Goods”, “Miscellaneous Manufactured Articles”, and “Mineral Fuels, Lubricants and Related Products”. The implications of these exposures and the differences in the relative positioning of these sectors in terms of imports versus exports, i.e. that some sectors’ imports are more exposed to the UK than their exports, will be discussed further in Section 4.

**Figure 2. Irish Goods Import and Export Exposures to UK, 2016**



Source: UNCTAD Statistics External Trade goods data. Department of Finance analysis.  
See Box 1 for an explanation of Size and Proportional Exposures.

As is the case for exports, Food and Live Animals is the most exposed sector to the UK in terms of imports, on a size exposure basis. Food and Live Animals represents approximately 19 percent of Ireland’s goods imports from the UK (€3.2bn), or 4.6 percent of Ireland’s total global goods imports (the size exposure).<sup>5</sup> As can be seen in Figure 3, Northern Ireland accounts for 14 percent (€453m) of this, indicating that the majority of Ireland’s agricultural imports are from Great Britain rather

<sup>5</sup> This figure is based on CSO external trade data, classified according to SITC codes. Data sources using alternative classification methods may produce differing values for the agri-food sector.

than Northern Ireland, with the same true on the exports side. This is, however, the sector with the highest proportion of UK imports from Northern Ireland, which is generally low across sectors.

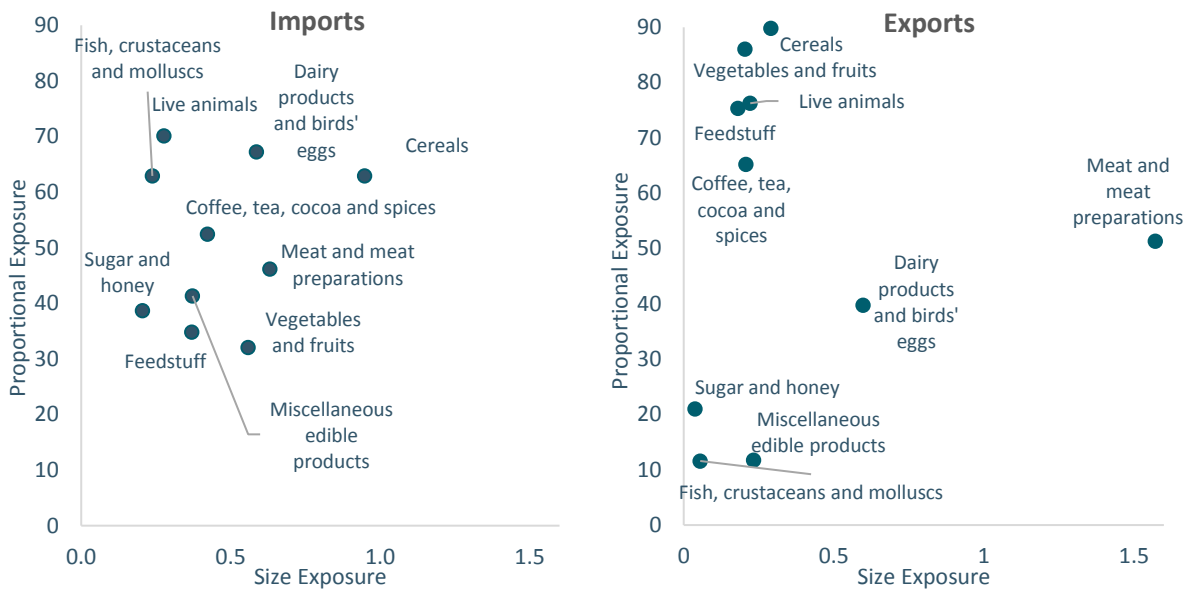
**Figure 3. Proportion of UK Trade with Northern Ireland, 2016 (€m)**



Source: CSO External Trade data. Department of Finance analysis.

Within the Food and Live Animals sector, the proportional exposure shows that 48 percent of imports are from the UK. A breakdown of Ireland’s exposures within this sector can be seen in Figure 4, with “Cereals and Cereal Preparations”, “Meat and Meat Preparations”, and “Dairy Products and Birds’ Eggs” the most exposed subsectors to the UK on a size exposure basis, with Cereals accounting for almost 1 percent of all imported goods. The majority of these imports are from Great Britain, with the main exposure to Northern Ireland coming in Dairy Products, from where 25 percent (€156m) of the subsector’s imports come. Again, on the imports side, there is more diversity in the exposure of subsectors to the UK, whereas on the exports side, the “Meat and Meat Preparations” subsector is substantially the most exposed in terms of size.

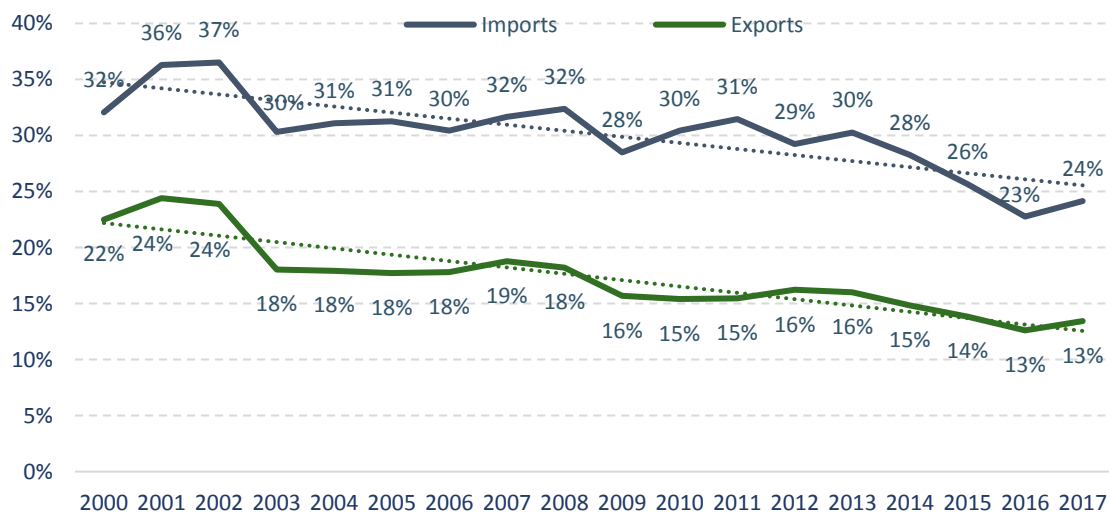
**Figure 4. Breakdown of Irish Food and Live Animals Product Exposures, 2016**



Source: UNCTAD Statistics External Trade goods data. Department of Finance analysis.  
See Box 1 for an explanation of Size and Proportional Exposures.

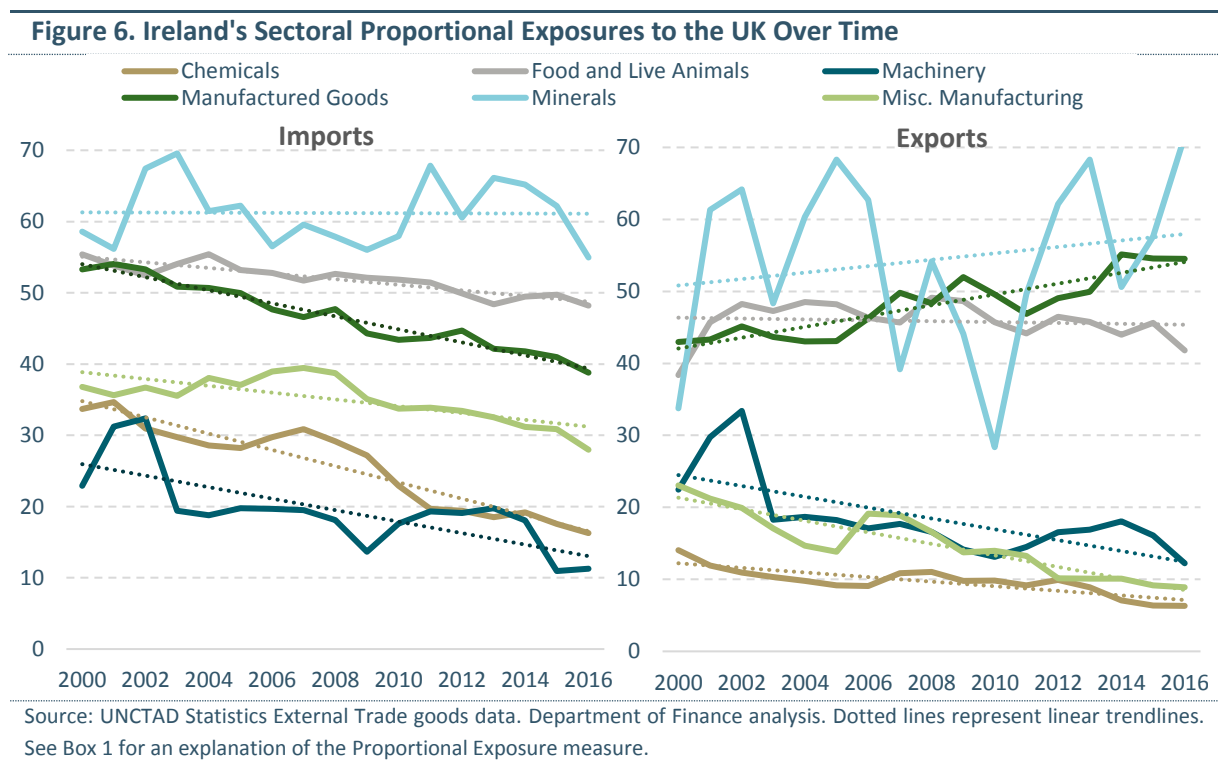
In Department of Finance (2017b), it was shown that despite the aggregate trend of the UK's share of Irish goods exports declining over the last 40 years, some sectors have seen a rise in their exposure in the last 15 years. Here, we examine the evolution of sectoral proportional exposure for both imports and exports since 2000. Firstly, Figure 5 shows that although Ireland's current share of imports from the UK is considerably lower than it was 15 years ago, this figure has been volatile with a material decline only beginning in 2014. This has been driven by strong growth in Irish imports from other countries, with total Irish imports rising from €56bn in 2013 to €77bn in 2017. This compares to the broader downward trend in exports to the UK.

**Figure 5. Evolution of UK Share of Irish Goods Trade**



Source: CSO External Trade goods data. Department of Finance analysis. Dotted lines represent linear trendlines.

A breakdown of proportional exposures at the sectoral level (for the six import sectors with the largest size exposures) can be seen in Figure 6. With regard to imports, these sectors' dependence on the UK has broadly been declining, with some sectors, notably Mineral Fuels and Machinery and Transport, more volatile than others. However, the importance of UK imports in certain sectors to the wider economy has also increased, with the size exposure of Food and Live Animals and Mineral Fuels trending upwards since 2000. On the exports side, while the proportional exposure in most sectors has declined, as noted above, certain sectors have risen or remained flat (Manufactured Goods, Food and Live Animals).



**Box 2: Ireland's Current Account with the UK (2016)**

Ireland maintained a trade surplus of €9.6bn with the UK in 2016, with deficit of €1.1bn in goods trade and a surplus of €10.7bn in services. Ireland's Current Account balance with the UK, however, shows a deficit of €1.1bn, when the negative income balance is taken into account.

While the 2016 Current Account deficit was unchanged from the previous year, the balance has turned positive in 2017. In the first three quarters of 2017, Ireland recorded a Current Account surplus with the UK of €2.3bn.

At a sectoral level, Ireland's services surplus with the UK is driven by a notable surplus in computer and financial services, as well as in transport. The main services deficit is seen in the business services sector.

€m	Exports / Inflows	Imports / Outflows	Balance
Goods	20,386	21,474	(1,089)
Services	22,497	11,840	10,656
<b>Total trade balance</b>	<b>42,882</b>	<b>33,315</b>	<b>9,567</b>
Primary income	13,644	23,943	(10,300)
Secondary income	1,857	2,245	(388)
<b>Income balance</b>	<b>15,500</b>	<b>26,188</b>	<b>(10,687)</b>
<b>Current Account - Total</b>	<b>58,383</b>	<b>59,503</b>	<b>(1,120)</b>
<b>Services sectoral breakdown:</b>			
Transport	2,355	505	1,850
Tourism and Travel	828	1,177	(348)
Insurance	2,393	1,603	790
Financial services	4,238	632	3,606
Royalties/Licences	858	595	263
Computer services	6,932	200	6,731
Business services	3,713	6,435	(2,722)
Other	1,179	693	486

Source: CSO Balance of Payments data.

Note: a breakdown of goods sectors is not provided in Balance of Payments data as goods trade here includes contract manufacturing and merchanting, not included in the External Trade data. For this reason, the Current Account goods figures do not match those used elsewhere in the paper.

## 4. EU-27 Goods Exposures to the UK

### 4.1 National Exposures

In this section, the analysis considers Ireland's import exposures to the UK in a wider European context, with the sectoral trade exposures of the other EU-27 also included. Ireland imports considerably more from the UK than any of the other EU-27, as can be seen in Table 1, with this difference more explicit for imports than for exports. At \$18.4bn, or 24 percent of total goods imports, Ireland's UK share of imports is four times higher than the second most-exposed nation, Cyprus, which imports 6 percent of its goods from the UK.<sup>6</sup> Whilst Germany, the Netherlands, and France have a higher value of UK imports than Ireland, these represent a much lower share of their total goods imports.

**Table 1: Import and Export Exposure of EU-27 to UK**

Rank	Country	Total Imports from UK (\$m)	UK Share of Total Imports	Total Exports to UK (\$m)	UK Share of Total Exports
1	Ireland	18,360	24%	16,541	13%
2	Cyprus	427	6%	147	8%
3	Netherlands	26,179	5%	55,175	10%
4	Sweden	7,275	5%	8,179	6%
5	Belgium	17,776	5%	35,417	9%
6	Malta	265	4%	116	4%
7	Denmark	3,520	4%	5,651	6%
8	Spain	12,382	4%	21,204	8%
9	France	21,536	4%	34,446	7%
10	Germany	39,421	4%	94,076	7%
11	Portugal	2,089	3%	3,917	7%
12	Italy	12,169	3%	24,875	5%
13	Finland	1,818	3%	2,585	5%
14	Lithuania	748	3%	1,064	4%
15	Greece	1,293	3%	1,178	4%
16	Rest of EU-27	18,392	2%	40,236	5%

Note: Countries ranked by UK share of total imports. Source: UNCTAD

### 4.2 Sectoral Exposures

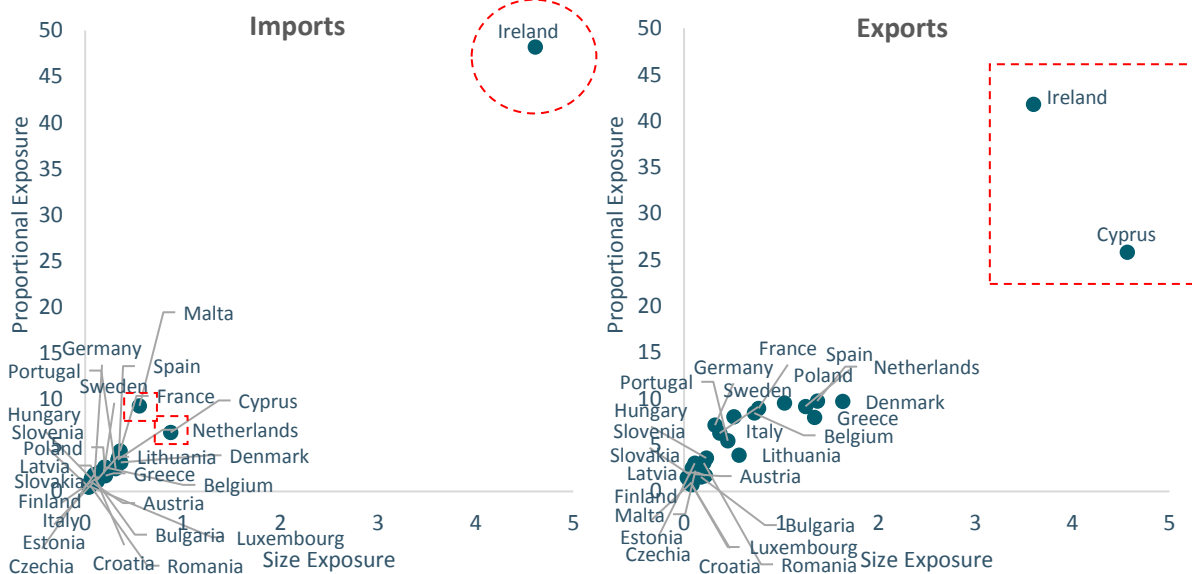
Next, the sectoral exposures across the EU-27 are compared to discern if the relative aggregate exposure differences are also evident at the sectoral level. The analysis here focuses on those sectors in which Ireland's goods imports are most reliant on the UK, as identified in Section 3.

<sup>6</sup> This figure differs slightly to the CSO figure for Irish imports, however for the purposes of international comparison, UNCTAD figures are used in this section.



Firstly, Figure 7 details the cross-country import exposures in the Food and Live Animals sector, highlighting that Ireland is a clear outlier across the EU in this sector. With the exception of Cyprus, whose exports are also substantially exposed to the UK, and Malta, all of the other EU nations have negligible import shares from the UK, with size exposures of less than 0.5 percent and proportional exposures less than 5 percent. The Appendix contains further detail on Food and Live Animals subsectors in a wider European context, which indicates again that Ireland is a substantial outlier amongst the EU-27 in terms of UK import exposures for its three largest Food and Live Animals import subsectors, namely Cereals and Cereal Preparations, Meat and Meat Preparations, and Dairy Products and Birds' Eggs. With the agricultural sector facing among the highest tariffs under WTO rules, as well as potential non-tariff barriers, Irish agriculture and its supply chains could face substantial disruption if there is a significant departure from the status quo trade arrangements.

**Figure 7. Food and Live Animals Trade Exposures to the UK (2016)**



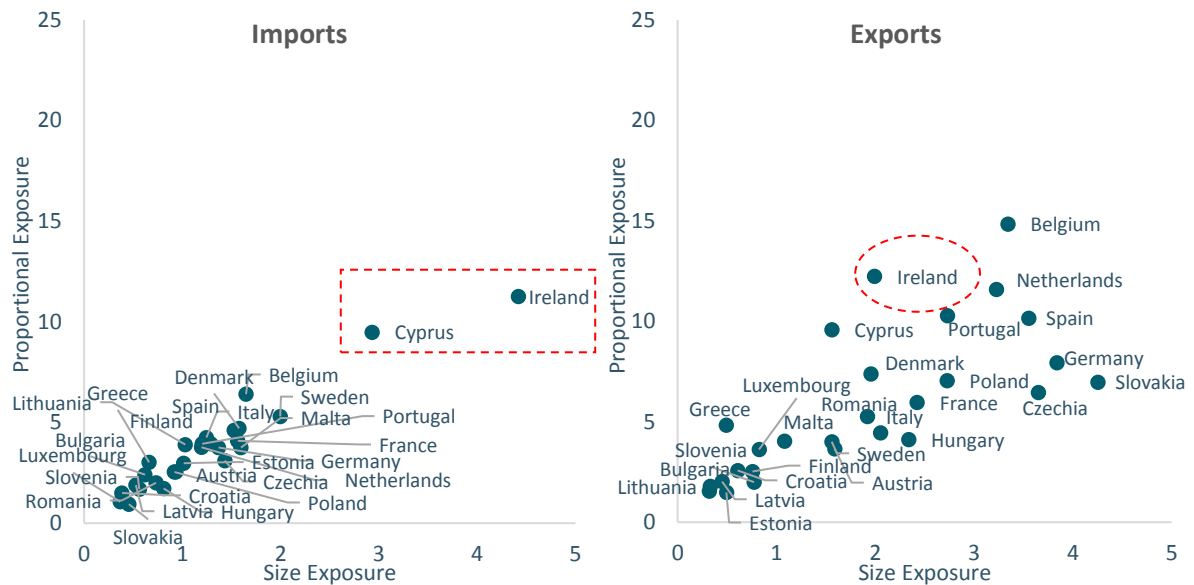
Source: UNCTAD Statistics External Trade goods data. Department of Finance analysis.

See Box 1 for an explanation of Size and Proportional Exposures.

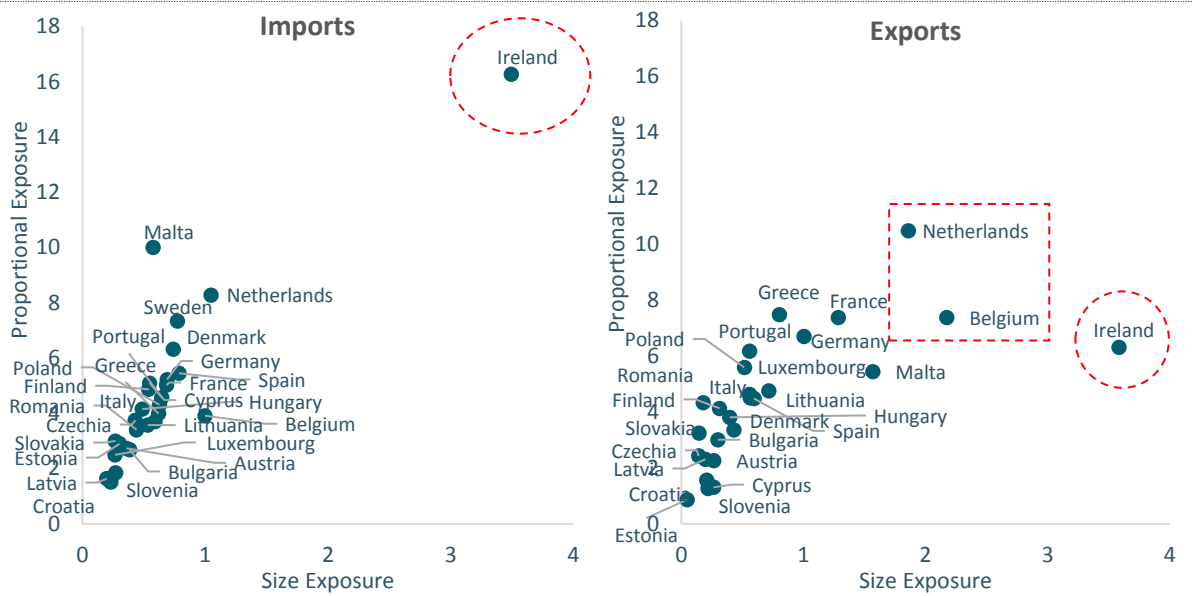
Turning the analysis to Ireland's other most exposed sectors yields similar results. Figure 8 shows the UK exposures of the Machinery and Transport Equipment sector. While exports to the UK in this sector are relatively diversified across a number of EU-27 countries, Ireland is clearly the most exposed in terms of imports, with Cyprus the other notable exposure. Machinery and Transport Equipment includes the aircraft leasing subsector (within "Other transport equipment"), which often comprises a substantial portion of Ireland's trade due to the purchase or sale of aircraft by Irish resident

companies.<sup>7</sup> We also perform the same analysis excluding aircraft, and find the size exposure results broadly unchanged for all countries, though the proportional exposure increases for Ireland and Cyprus. This occurs because Ireland generally does not import such aircraft from the UK, thus excluding this subsector increases the UK's share of other Machinery and Transport Equipment imports (see Appendix Figure 4).

**Figure 8. Machinery and Transport Equipment Trade Exposures to the UK (2016)**



**Figure 9. Chemicals and Related Products Trade Exposures to the UK (2016)**



Source: UNCTAD Statistics External Trade goods data. Department of Finance analysis.

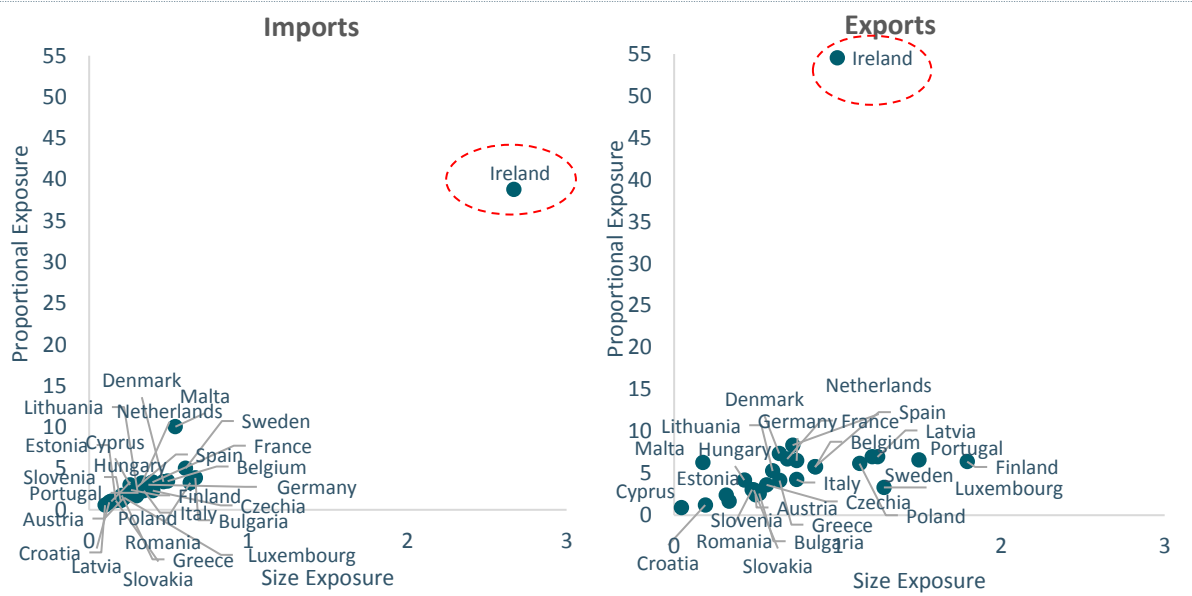
See Box 1 for an explanation of Size and Proportional Exposures.

The manufacturing sector is of particular importance in Ireland’s trading relationship with the UK, in terms of both intermediate inputs and final goods. The “Manufactured Goods” sector, shown in Figure 10, is primarily comprised of intermediate inputs, such as paper or manufactures of metals, while the “Miscellaneous Manufactured Articles” sector in Figure 11 consists primarily of final consumption goods, such as clothing apparel or articles of plastics. In both sectors, Ireland’s imports are by far the most exposed in the EU-27. Ireland’s Manufactured Goods are more exposed to the UK, with a proportional exposure of 39 percent, compared to 28 percent for Miscellaneous Manufactured Articles. However, from a wider-economy viewpoint, the UK’s share of Miscellaneous Manufactured Articles is more important, with a size exposure of 3.3 percent, versus 2.7 percent for Manufactured Goods. These sectoral imports contrast somewhat with their equivalent exports, whereby Ireland’s Manufactured Goods are the most exposed on a proportional basis, however a number of other EU-27 countries have a higher size exposure to the UK. Furthermore, in the Miscellaneous Manufactured Articles sector, exports to the UK come from a range of EU-27 countries, with no one Member State considerably more exposed.

These exposures in particular highlight the threat to Irish supply chains from Brexit. The UK is important not only in the provision of intermediate inputs to Ireland’s manufacturing sector, but also in the delivery of final consumption goods, despite the fact that, relatively, the UK is not a large manufacturing economy. These consumer goods are in general not produced in the UK but rather in

third countries before being transported to retail parent companies in the UK and subsequently distributed in Ireland. This supply chain involves goods being held or warehoused in the UK and, as such, is reflected in Irish imports from the UK (and is a separate issue to the landbridge whereby goods are transported directly through the UK to Ireland from third countries). Any disruption to this supply chain after Brexit would, firstly, raise costs for retailers operating in Ireland. As well as directly leading to higher prices, this could also cause some firms to simply exit the Irish market, reducing competition ultimately making Irish consumers worse off. The ESRI has estimated the impact of Brexit on consumer prices in Ireland will cost the average Irish household between €892 and €1,360 per annum, based solely on changes in tariff and non-tariff barriers on goods and assuming no change in consumer or producer behaviour.<sup>8</sup>

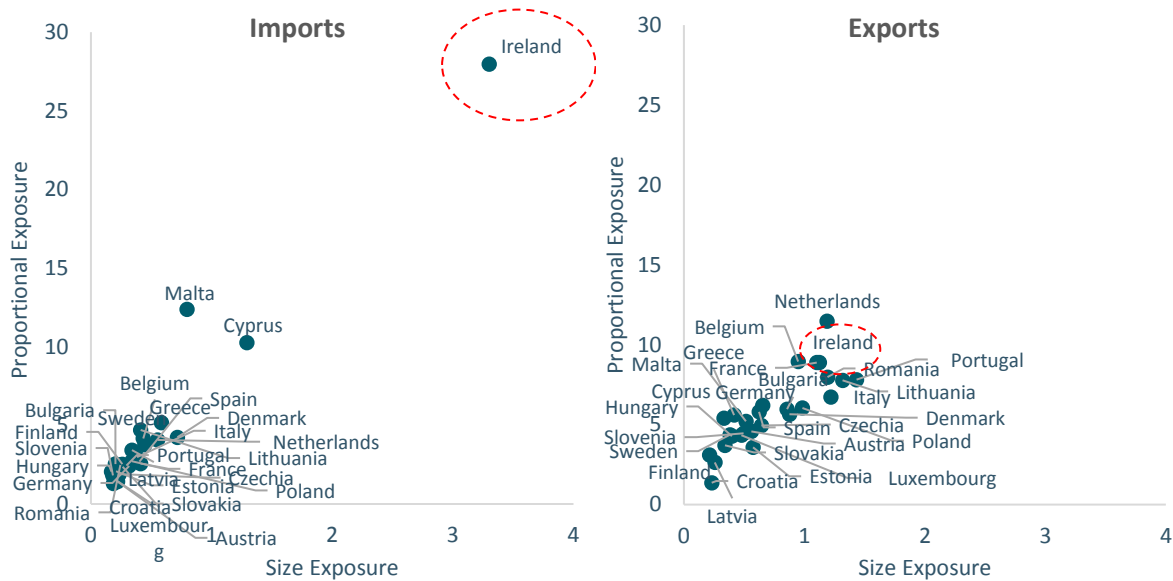
**Figure 10. Manufactured Goods Trade Exposures to the UK (2016)**



Source: UNCTAD Statistics External Trade goods data. Department of Finance analysis.  
See Box 1 for an explanation of Size and Proportional Exposures.

<sup>8</sup> Brexit and Irish Consumers (Lawless and Morgenroth, 2018).

**Figure 11. Miscellaneous Manufactured Articles Trade Exposures to the UK (2016)**

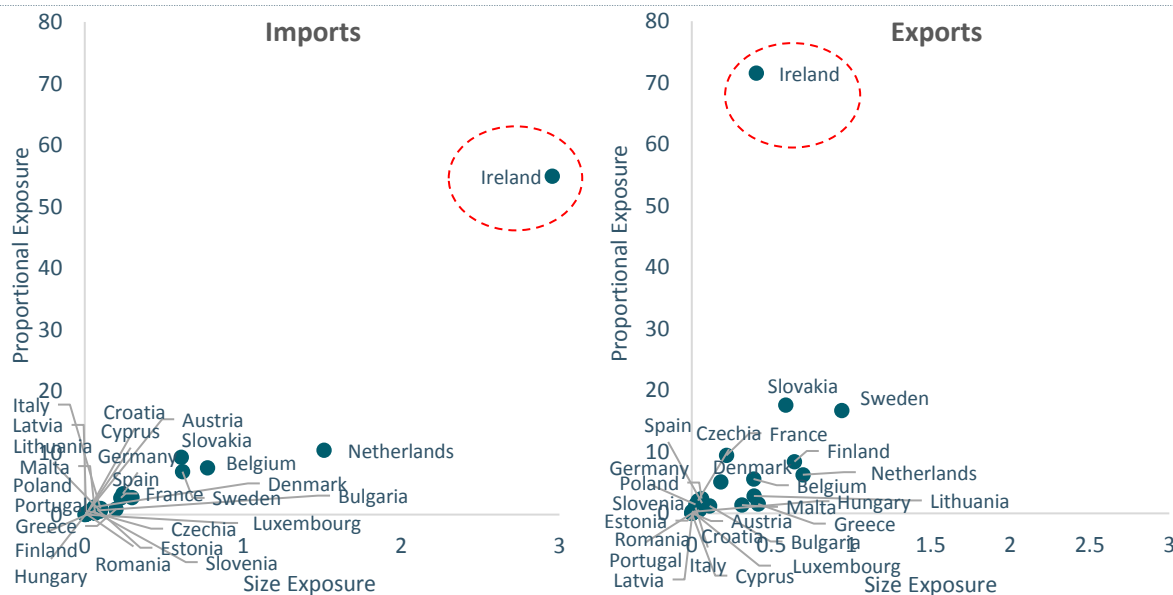


Source: UNCTAD Statistics External Trade goods data. Department of Finance analysis.

See Box 1 for an explanation of Size and Proportional Exposures.

The final sector in which Ireland imports a significant portion of goods from the UK is Mineral Fuels, wherein Ireland primarily imports petroleum and gas products from the UK. Again, Ireland is an outlier amongst the EU-27 on this front, with a proportional exposure of 55 percent within the sector and a size exposure of 3 percent. This differs to the exports side, where Ireland’s proportional exposure is very high, however other countries have higher size exposures.

**Figure 12. Mineral Fuels Trade Exposures to the UK (2016)**



Source: UNCTAD Statistics External Trade goods data. Department of Finance analysis.

See Box 1 for an explanation of Size and Proportional Exposures.

The exposures presented above highlight both the extent to which Ireland’s imports are markedly dependent on the UK and the uniqueness of Ireland’s importing relationship with the UK within the EU. This directly poses a particular problem to Irish businesses for whom UK imports form a key link in their supply chains, with knock-on effects on households. Disruption to supply chains could impact both exporting and non-exporting firms, raising costs and requiring considerable resources to modify current supply chains or establish new ones. The retail, agriculture, and pharmaceuticals sectors are among those most likely to be affected by this.

**Box 3: Impact on SMEs: Trade by Enterprise Characteristics Data**

The issue of supply chain disruption is particularly pronounced for SMEs, who are less likely to have capacity to source imports from elsewhere in the EU or to deal with customs procedures for goods travelling from Great Britain or Northern Ireland. The SME sector represented 93 percent of the c.31k firms importing goods to Ireland in 2016, or 62 percent (€45bn) of the total value of imports.<sup>9</sup> This is substantially more than is the case for Irish exports, where large enterprises, including multinationals, dominate, with SMEs accounting for 31 percent (€ 36bn) of total exports.

This issue is most salient within the wholesale and retail sector, where 78 percent (11,000) of importing firms are micro enterprises, with 96 percent being either micro or small sized firms.<sup>10</sup> With €13bn in goods imported, these firms represent a considerable share of the total value of wholesale and retail imports (53 percent). Including medium enterprises, this figure rises to €18bn (75%). In the agri-food and manufacturing sectors, micro and small enterprises also comprise the vast majority of importers, at 89 percent and 92 percent respectively, however the value share of their imports is markedly less at 19 percent and 17 percent, respectively. In comparison, pharmaceuticals imports are largely attributed to large firms, with micro and small enterprises representing 68 percent of the number of firms but just 8 percent of the value of imports.

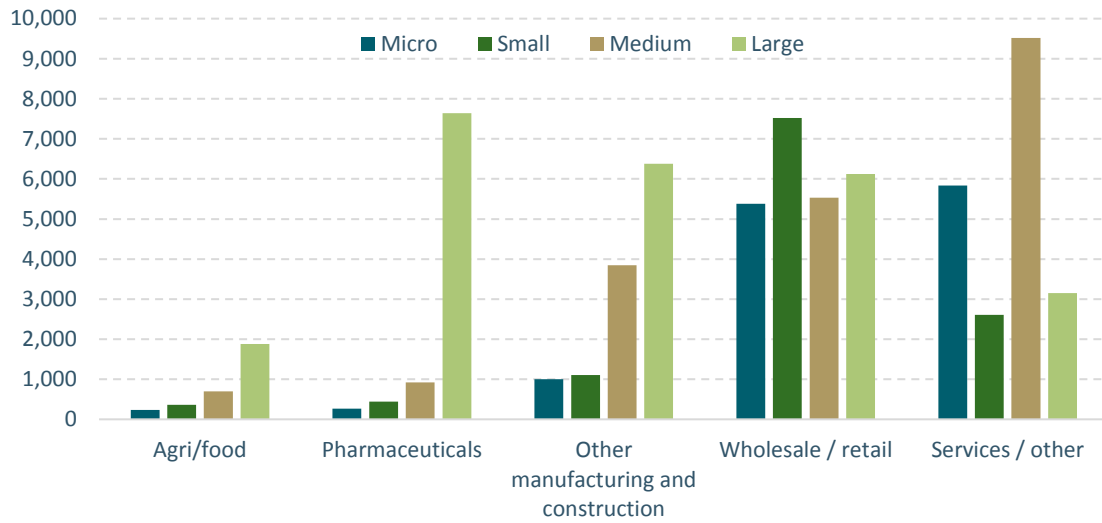
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<sup>9</sup> CSO Trade by Enterprise Characteristics 2016 data. The data represents businesses whose value of exports or imports exceeds €5,000 in a calendar year.

<sup>10</sup> Micro enterprises are defined here as having less than 10 employees, while small enterprises have 10-49 employees. Medium enterprises have 50-249 employees.

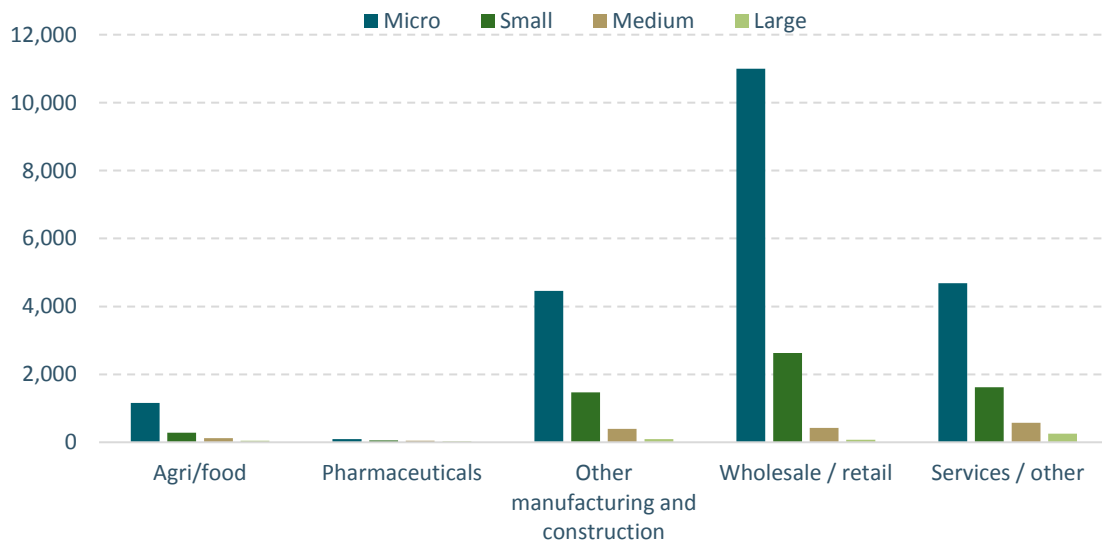
**Box 3 (cont'd): Impact on SMEs: Trade by Enterprise Characteristics Data**

**Figure 13. Value of Import Trade by Sector, 2016 (€m)**



Source: CSO Trade by Enterprise Characteristics 2016 data. Department of Finance analysis.

**Figure 14. No. of Importing Enterprises by Sector, 2016 (€m)**



Source: CSO Trade by Enterprise Characteristics 2016 data. Department of Finance analysis.

### 4.3 Subsectoral Exposures

The analysis now turns to the next level of sectoral disaggregation, namely the SITC 2-digit level, to examine where exposures to the UK are most concentrated. The thirty most exposed subsectors, in terms of the proportional exposure, across the EU-27 by country and subsector are presented here for imports and exports.<sup>11</sup> Subsectors whose imports from the UK comprise less than 1 percent of their country's total imports from the UK are excluded in order to add an element of economic size and remove small niche sectors which may have a high proportional exposure to the UK but may be less economically significant to the broader economy.

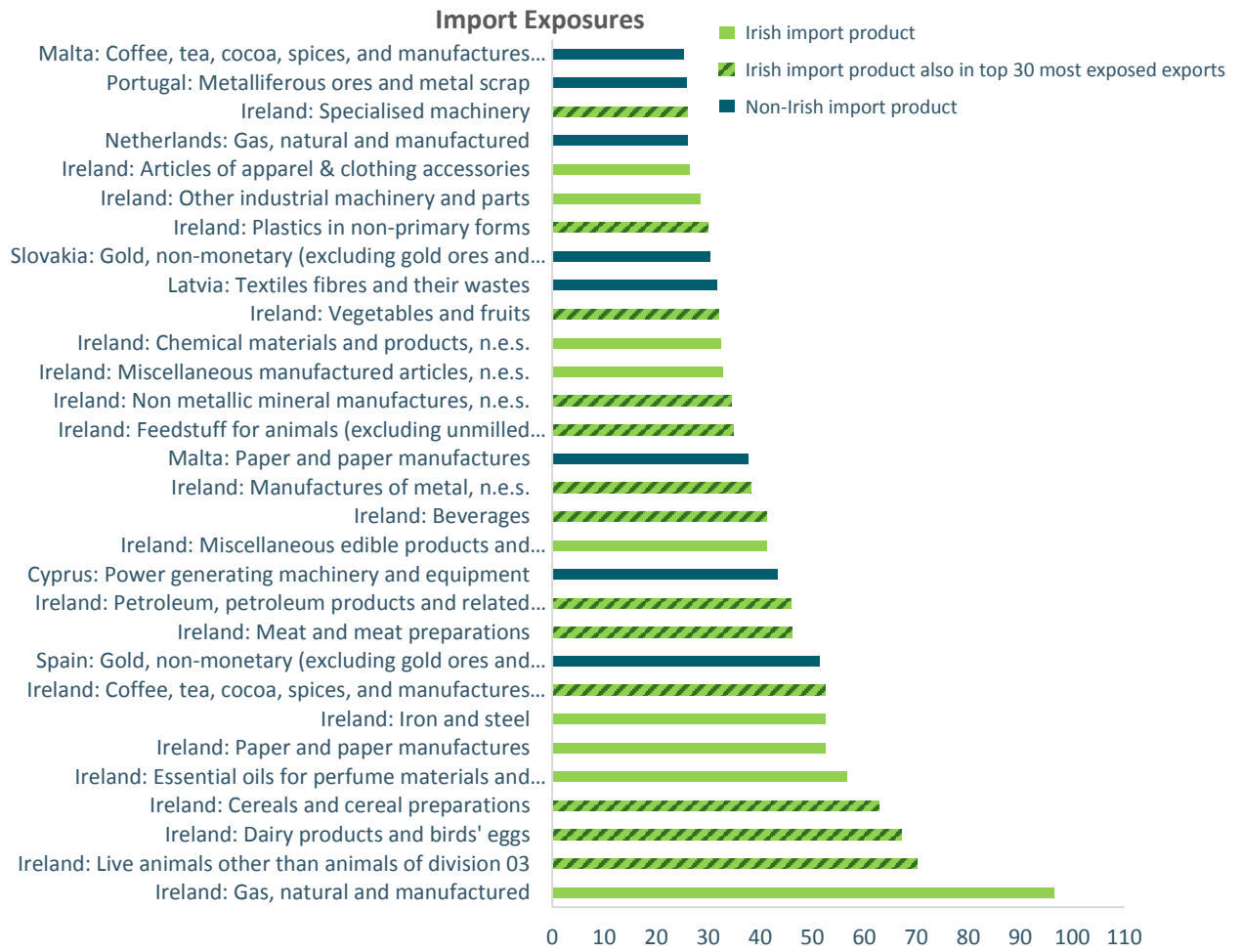
The results in Figure 15 show that Irish import exposures are even more prominent than export exposures in the subsector rankings, with thirteen of the EU 27's top fifteen most exposed import subsectors to the UK being Irish. Furthermore, eight of these are also in the top fifteen most exposed export subsectors, indicating the considerable overlap in the trade direction of the exposures across subsectors. Gas is the most exposed subsector, with almost 100 percent of Ireland's gas imports coming from the UK. Three of the top five are in the Agri-food sector (Live Animals, Dairy Products and Vegetables and Fruit), and are also among the most exposed export subsectors, further highlighting the vulnerability of this sector to Brexit, particularly if WTO tariffs were to be introduced. The other Irish product groups that dominate are in the Mineral Fuels, Chemicals, Manufactured Goods and Miscellaneous Manufactured Articles sectors, and as such are in line with the exposures identified in Section 3. On the exports side, updating the analysis with 2016 data leaves the results largely unchanged: eleven of the EU-27's top fifteen export subsectors most exposed to the UK are Irish, as can be seen in Figure 16.

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<sup>11</sup> This replicates the Department of Finance (2017b) analysis of 2015 exports. Note that paper uses the term "product" rather than "subsector" to describe the 2-digit SITC codes.

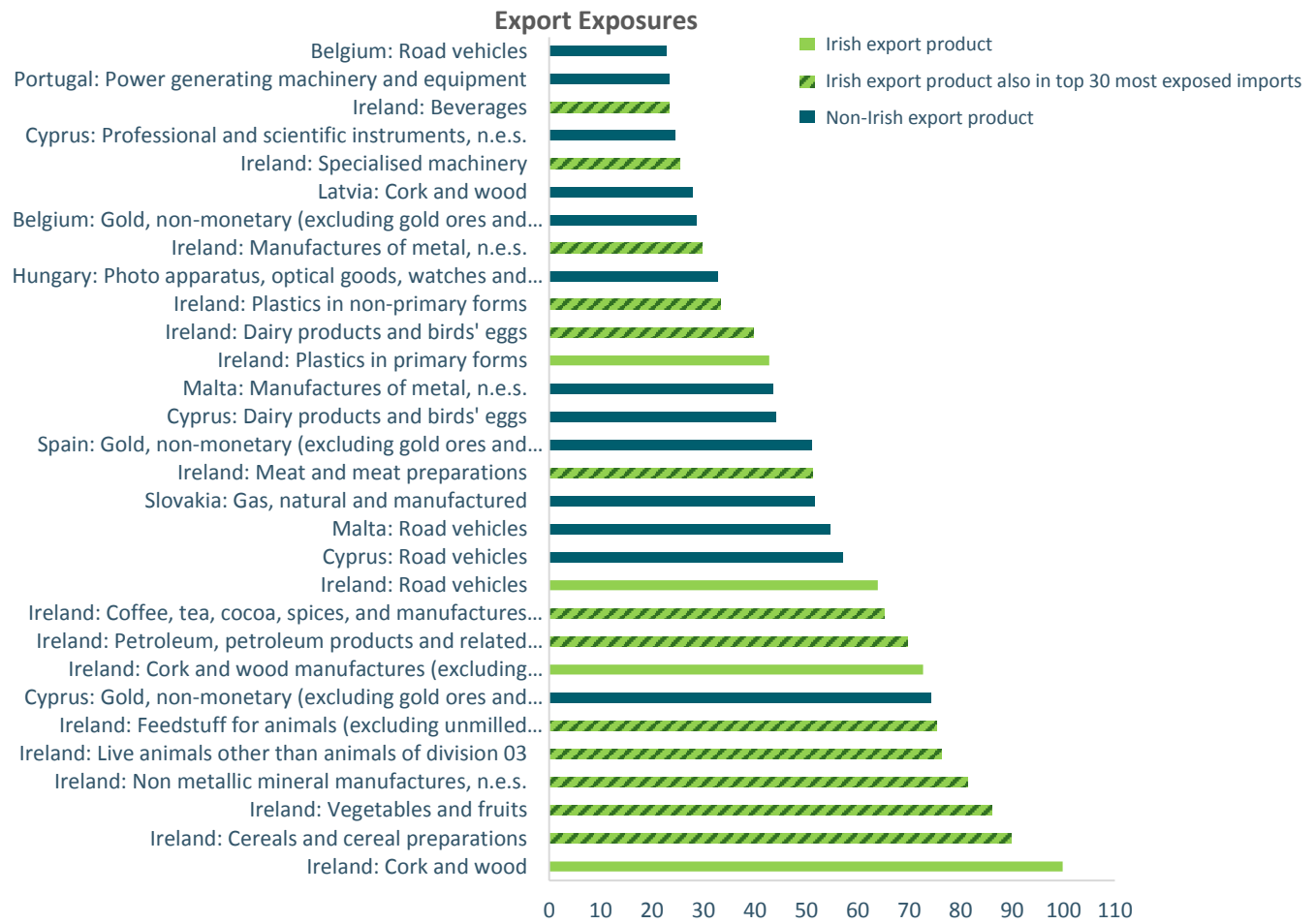


**Figure 15. Top 30 Proportional Import Exposures to the UK, by Country and Product (2016)**



Source: UNCTAD Statistics External Trade goods data. Department of Finance analysis. Note: products under 1 percent of UK size exposure are not included in analysis.

**Figure 16. Top 30 Proportional Export Exposures to the UK, by Country and Product (2016)**



Source: UNCTAD Statistics External Trade goods data. Department of Finance analysis. Note: products under 1 percent of UK size exposure are not included in analysis.

## 5. Conclusion

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The results outlined in this paper highlight the substantial exposures of Irish imports to the UK, which could face disruption after Brexit. While Department of Finance (2017b) found certain export sectors are more exposed than others, in particular Food and Live Animals and Chemicals, it has been shown here that the high exposure of Irish imports to the UK is spread across numerous sectors. In particular, the Machinery and Transport Equipment, Manufactured Goods, Miscellaneous Manufactured Articles, and Mineral Fuels sectors are also heavily exposed, although it has also been shown that the share of imports from the UK has fallen substantially in recent years. These substantial exposures highlight the potential impact not just on the cost of importing goods but also on Irish supply chains, which will be particularly relevant for the retail, pharmaceuticals and agri-food sectors.

Ireland's deep linkages with the UK economy on both the exports and imports sides make it clear that Brexit is likely to cause a structural change in the Irish economy, not simply a cyclical variation in trade. A permanent shift in trade could have implications for the economy's production function, with potential negative impacts on productivity, labour supply and capital investment. Any such changes will require close monitoring, given the role of potential output in the fiscal framework.

One of the most striking results obtained in this paper has been the significantly greater exposure of Irish imports to the UK compared to the remainder of the EU-27 across almost all sectors, further evidence that Ireland is likely to be disproportionately impacted by Brexit. It is therefore imperative for Ireland that an agreement is reached to ensure the future trading relationship between the EU and the UK is as close to the status quo as possible.

## 6. References

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- 1) Department of Finance. (2017a). “UK EU Exit – An Exposure Analysis of Sectors of the Irish Economy”. Department of Finance Research Working Papers.<sup>12</sup>
- 2) Department of Finance. (2017b). “UK EU Exit: Trade Exposures of Sectors of the Irish Economy in a European Context”. Department of Finance Research Working Papers.
- 3) Lawless, M., and Morgenroth, E. (2018). “Brexit and Irish Consumers”. ESRI Quarterly Economic Commentary Special Article.

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<sup>12</sup> This paper is a March 2017 update of a previous version published in October 2016.

## 7. Annex: Services Trade Exposures

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An analysis of the data on services imports shows a contrast to goods imports. While Ireland is the second most exposed Member State when it comes to services exports, it is one of the least exposed for imports, as can be seen in Annex Figure 1. The UK comprises 6 percent of services imports, compared to 16 percent of services exports, with the majority of Irish sectors not significantly exposed to the UK. As per Annex Figure 2, Other Business Services is the only sector with a notable size exposure of 3.5 percent, importing €6.4bn from the UK. This is driven by imports of trade-related services and ‘other business services’, which includes inter-affiliate management fees and agricultural services, amongst others.<sup>13</sup> Insurance has the next largest size exposure of 0.9 percent, however this is substantially smaller than its export size exposure of 1.7 percent. Tourism and Travel is the only other sector importing over €1bn in services from the UK.

On the exports side however, as illustrated in Department of Finance (2017b), a number of sectors are substantially exposed, with size exposures above 1.5 percent, namely Computer Services, Financial Services, Other Business Services, Insurance and Transport. With regard to exports, the Other Business Services sector is again primarily comprised of exports of ‘other business services’ as described above.

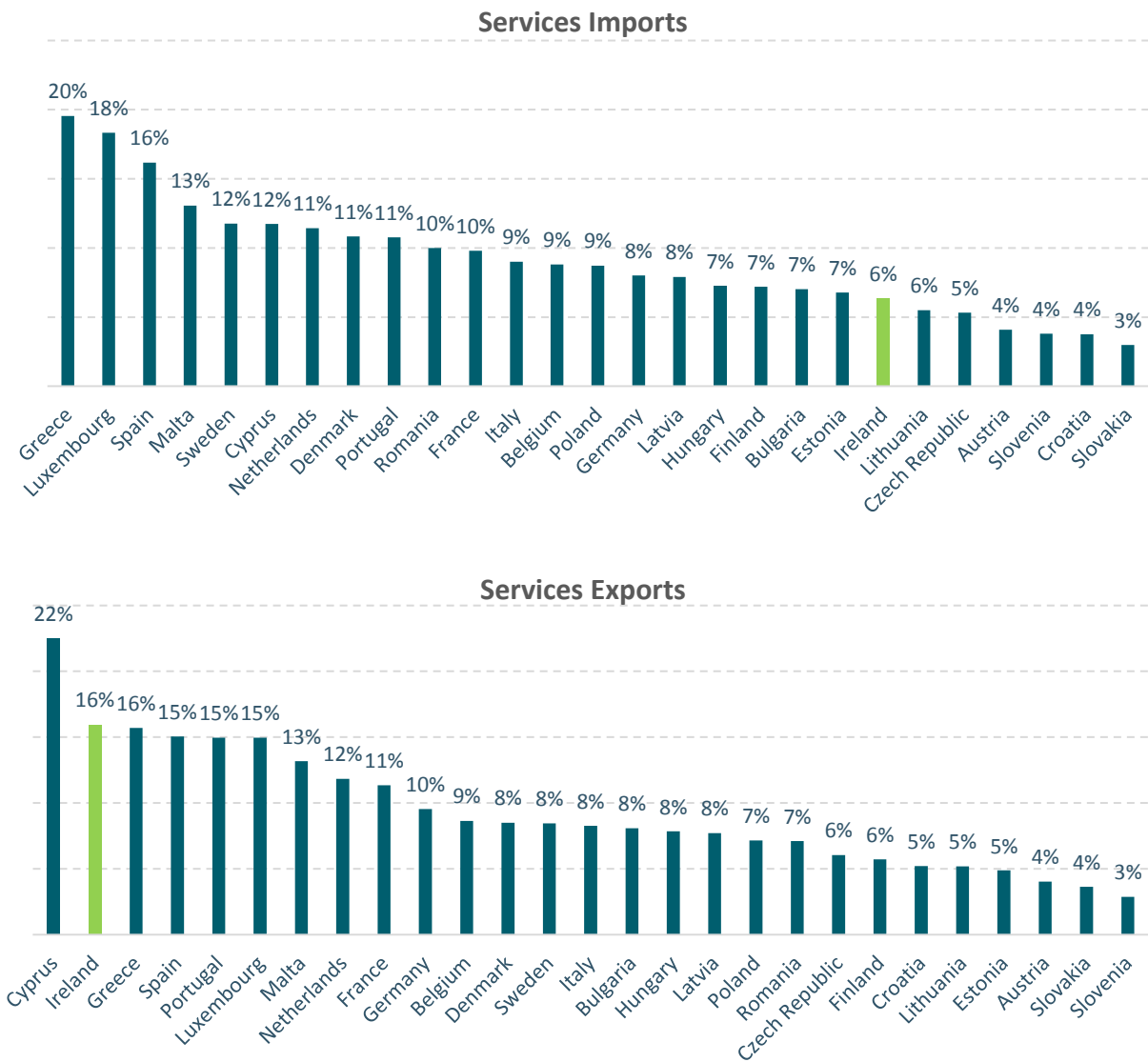
This paper has shown how Ireland is an outlier across the EU-27 in terms of import exposure in the majority of goods sectors, however the sectoral breakdowns across Member States illustrate that this is not the case for services. The remaining figures present the cross-country exposure comparisons for the services imports sectors in which Ireland is most exposed. Ireland has a high proportional exposure relative to other Member States in Transport, Tourism and Travel, Insurance and Telecommunications, Computer and Information Services, however the relatively low size exposure in these sectors suggests that these exposures are of less significance in a macroeconomic sense.<sup>14</sup> In Other Business Services, the sector with the highest size exposure, Ireland is only the 6<sup>th</sup> most exposed Member State of those included from a size point of view and one of the least exposed on a proportional basis. In relation to Financial Services, Ireland’s relatively high export exposure to the UK is not replicated in imports, with Ireland’s import exposure negligible compared to EU peers.

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<sup>13</sup> According to the CSO, other services covers “inter-affiliate management fees and waste treatment, agricultural & mining services as well as any other business services that cannot be classified to any of the business services listed above.”

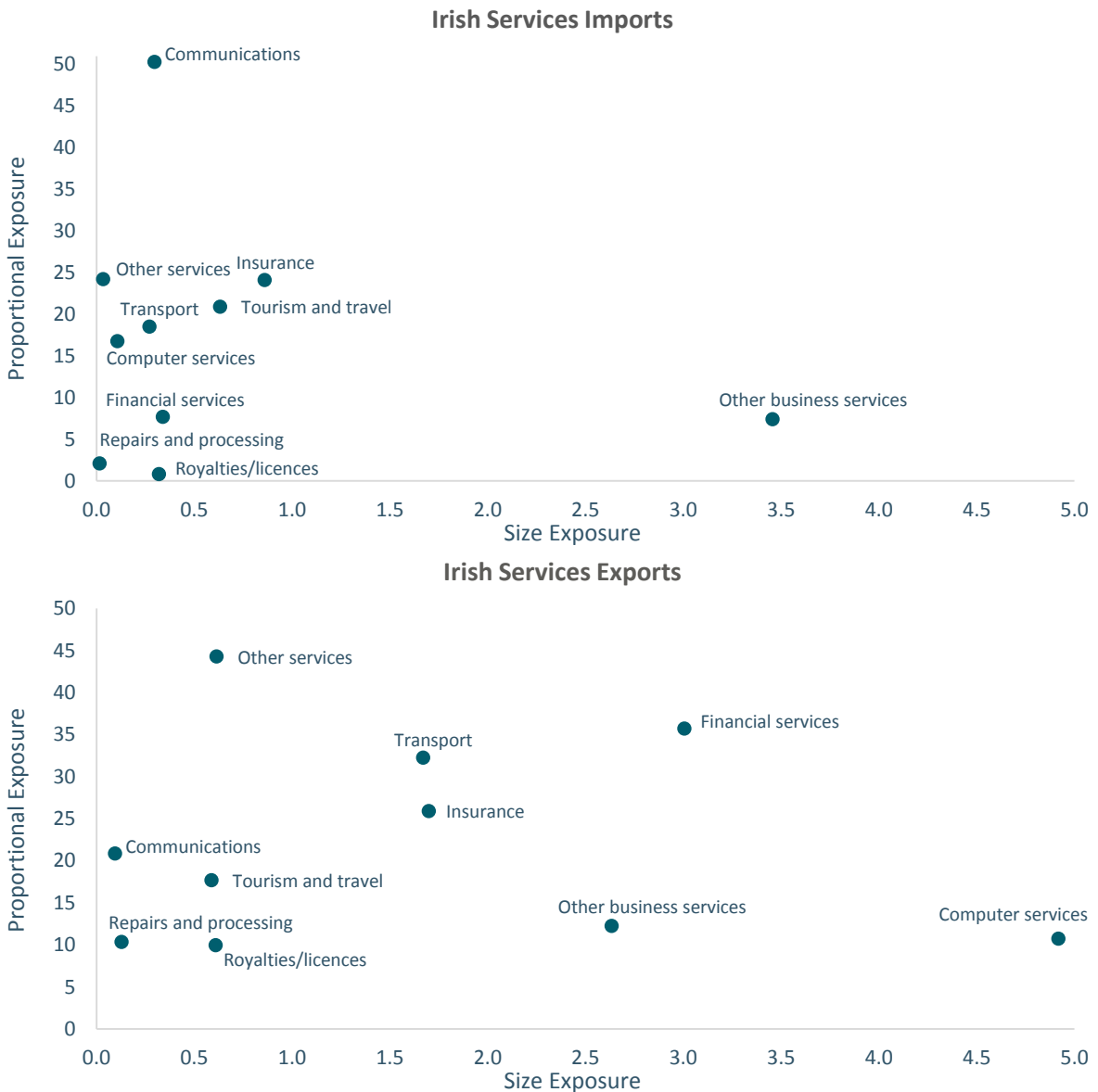
<sup>14</sup> The CSO separates the Telecommunications, Computer and Information Services sector into ‘Communications’ and ‘Computer Services’, however for international comparison purposes, OECD nomenclature is used.

**Annex Figure 1. UK Share of EU-27 Services Trade**



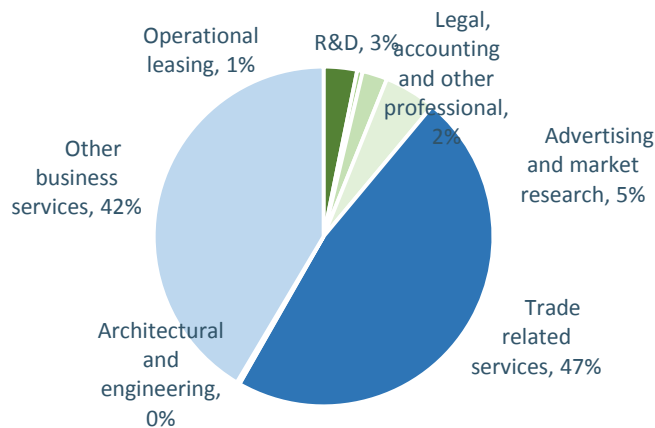
Source: Eurostat Balance of Payments.

**Annex Figure 2. Irish Services Import and Export Exposures to UK, 2016**



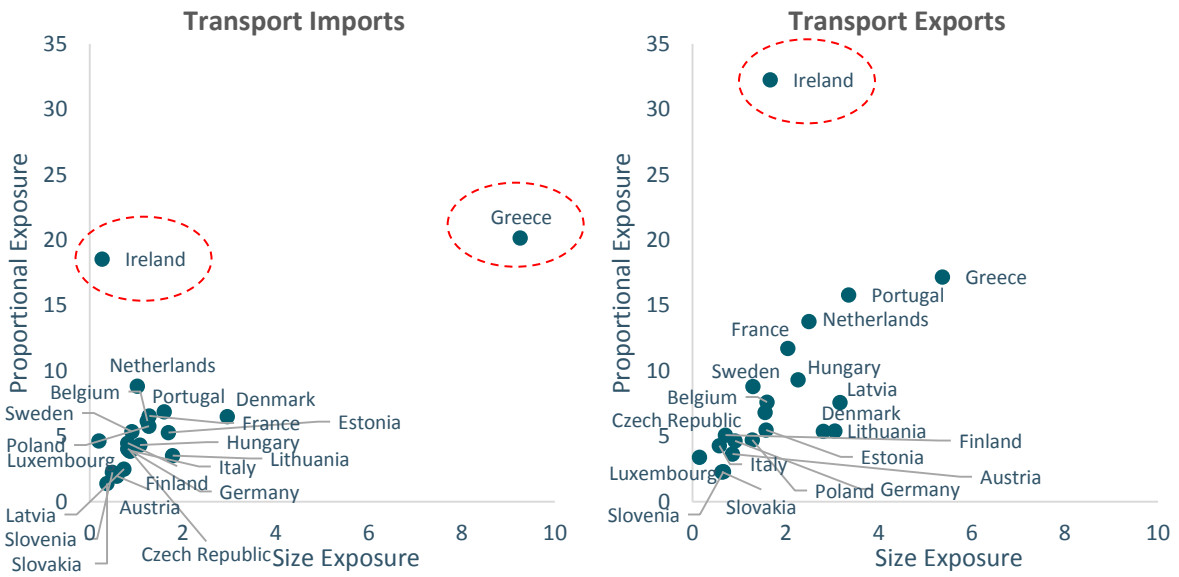
Source: CSO Balance of Payments. Department of Finance analysis. Note OECD EBOPS 2010 data is used to calculate services imports for Communications and Repairs and Processing. See Box 1 for an explanation of Size and Proportional Exposures.

**Annex Figure 3. Breakdown of Other Business Services Imports from UK (2016)**



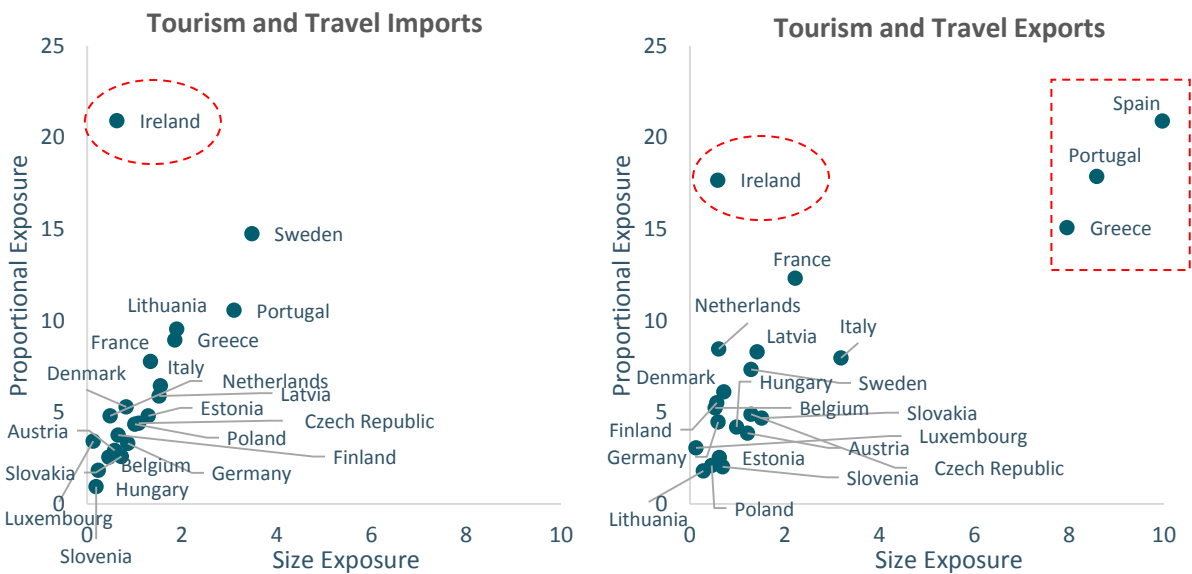
Source: CSO Balance of Payments. Department of Finance analysis.

**Annex Figure 4. Transport Trade Exposures to the UK (2016)**



Source: OECD EBOPS 2010. Department of Finance analysis. See Box 1 for an explanation of Size and Proportional Exposures.

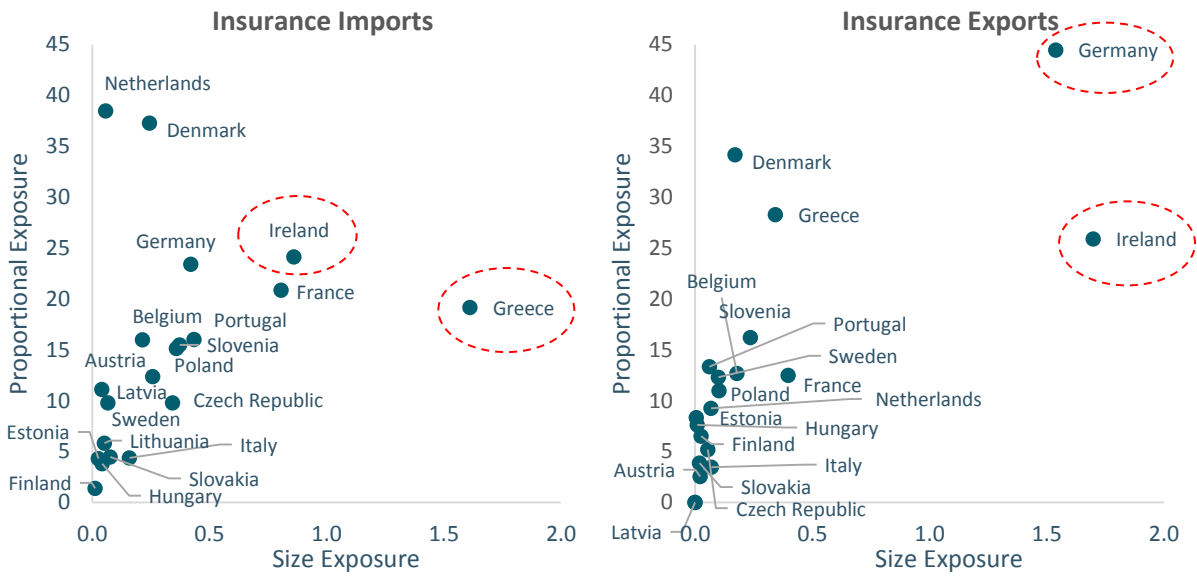
**Annex Figure 5. Tourism and Travel Trade Exposures to the UK (2016)**



Source: OECD EBOPS 2010. Department of Finance analysis. Note CSO sector name used; OECD refers to the sector as "Travel". See Box 1 for an explanation of Size and Proportional Exposures.

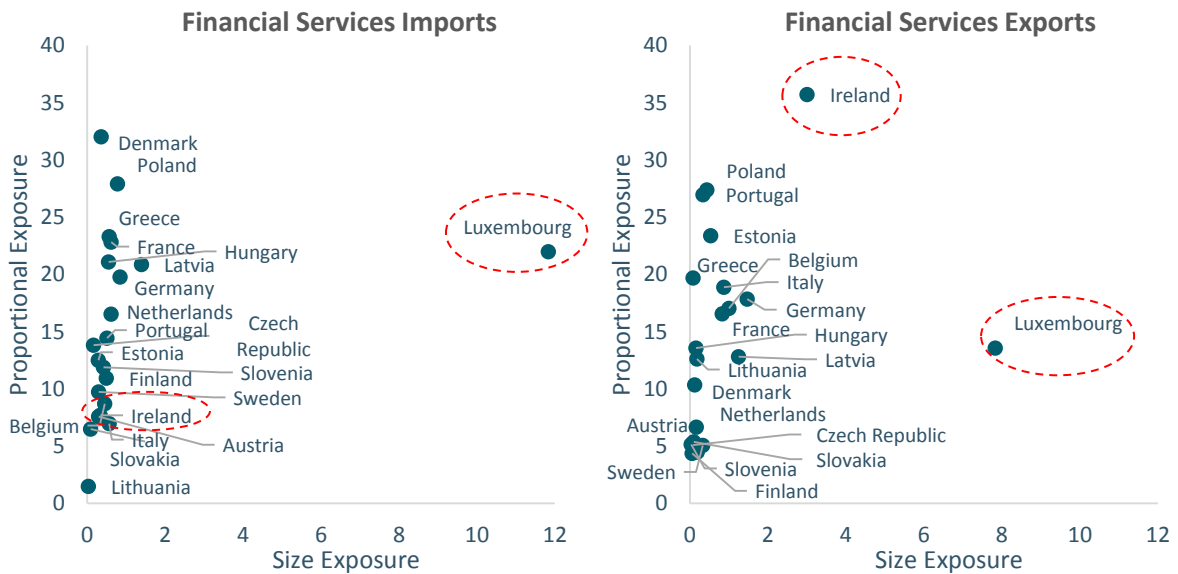


**Annex Figure 6. Insurance Trade Exposures to the UK (2016)**



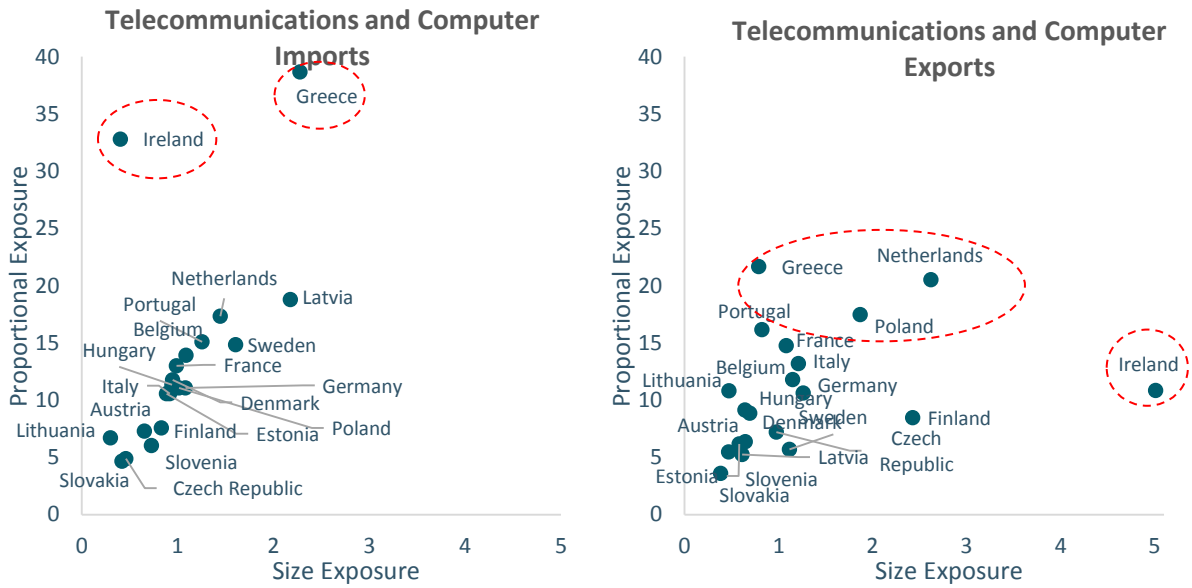
Source: OECD EBOPS 2010. Department of Finance analysis. Note CSO sector name used; OECD refers to the sector as 'Insurance and Pension Services'. Export data not available for Lithuania. See Box 1 for an explanation of Size and Proportional Exposures.

**Annex Figure 7. Financial Services Trade Exposures to the UK (2016)**



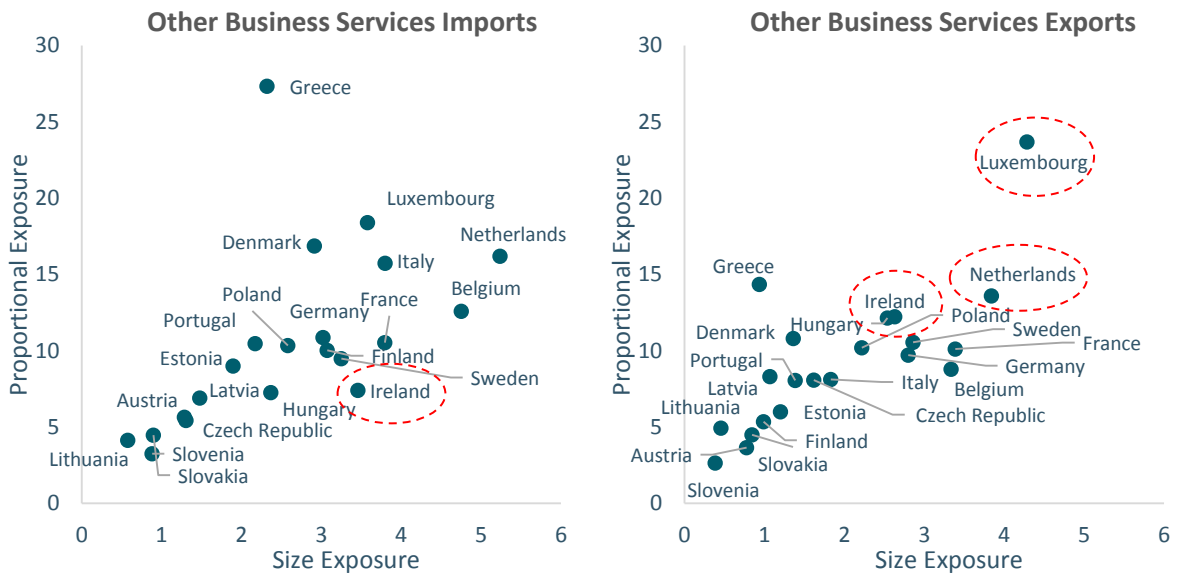
Source: OECD EBOPS 2010. Department of Finance analysis. See Box 1 for an explanation of Size and Proportional Exposures.

**Annex Figure 8. Telecommunications, Computer and Information Services Trade Exposures to the UK (2016)**



Source: OECD EBOPS 2010. Department of Finance analysis. Note CSO data separates this sector into 'Communications' and 'Computer Services', however for international comparison purposes the OECD Balance of Payments sectors are used. See Box 1 for an explanation of Size and Proportional Exposures.

**Annex Figure 9. Other Business Services Trade Exposures to the UK (2016)**



Source: OECD EBOPS 2010. Department of Finance analysis. Note this sector includes research & development, operational leasing, and miscellaneous business services. See Box 1 for an explanation of Size and Proportional Exposures.

## 8. Appendix

Appendix Table 1. SITC Codes and Division Descriptions

SITC Division Codes	SITC Economic Division Descriptions
<b>(0) Food and Live Animals</b>	00 Live animals other than animals of Division 03 01 Meat & meat preparations 02 Dairy products & birds' eggs 03 Fish, crustaceans, molluscs and preparations thereof 04 Cereals & cereal preparations 05 Vegetables & fruit 06 Sugar, sugar preparation & honey 07 Coffee, tea cocoa, spices & manufactures thereof 08 Feeding stuff for animals (excl. unmilled cereals) 09 Miscellaneous edible products & preparations
<b>(1) Beverages and tobacco a.k.a. "Beverages/Tobacco"</b>	11 Beverages 12 Tobacco & tobacco manufactures
<b>(2) Crude Materials Manufacturing, inedible, except fuels a.k.a. "Crude Materials Manufacturing"</b>	21 Hides, skins & fur skins, raw 22 Oil seeds & oleaginous fruits 23 Crude rubber (include synthetic & reclaimed) 24 Cork & wood 25 Pulp & waste paper 26 Textile fibres & their wastes 27 Crude fertilisers & minerals, excl. coal, petroleum etc. 28 Metalliferous ores & metal scrap 29 Crude animal & vegetable materials nes
<b>(3) Mineral fuels, lubricants and related products a.k.a. "Minerals"</b>	32 Coal, coke & briquettes 33 Petroleum, petroleum products & related materials 34 Gas, natural & manufactured 35 Electric current
<b>(4) Animal and vegetable oils, fats and waxes a.k.a. "Agricultural Residuals"</b>	41 Animal oils & fats 42 Fixed vegetable fats & oils 43 Processed animal and vegetable oils and fats
<b>(5) Chemicals and related products nes a.k.a. "Chemicals"</b>	51 Organic chemicals 52 Inorganic chemicals 53 Dyeing, tanning & colouring materials 54 Medical & pharmaceutical products 55 Essential oils for perfume materials and cleaning preparations 56 Fertilisers (other than those of Division 27) 57 Plastics in primary forms 58 Plastics in non-primary forms 59 Chemical materials & products nes
<b>(6) Manufactured Goods classified chiefly by material a.k.a. "Manufactured Goods"</b>	61 Leather, leather manufactures and dressed furskins 62 Rubber manufactures nes 63 Cork & wood manufactures (excl. furniture) 64 Paper and paper manufactures 65 Textile yarn & related products 66 Non-metallic mineral manufactures nes 67 Iron & steel 68 Non-ferrous metals 69 Manufactures of metals nes
<b>(7) Machinery &amp; transport equipment a.k.a. "Machinery"</b>	71 Power generating machinery & equipment 72 Machinery specialised for particular industries 73 Metalworking machinery 74 Other industrial machinery and parts 75 Office machines & automatic data processing machines 76 Telecommunications & sound equipment 77 Electrical machinery, apparatus & appliances nes

	78 Road vehicles (include. air-cushion vehicles) 79 Other transport equipment
<b>(8) Miscellaneous manufactured articles a.k.a. "Misc. Manufactured"</b>	81 Prefab buildings, plumbing & electrical fixtures & fittings 82 Furniture & parts thereof; bedding, cushions etc 83 Travel goods, handbags & similar containers 84 Articles of apparel; clothing accessories 85 Footwear 87 Professional and scientific instruments nes 88 Photographic apparatus. optical goods, watches & clocks 89 Miscellaneous manufactured articles nes
<b>(9) Commodities and transactions not classified elsewhere a.k.a. "Commodities n.e.s."</b>	91 Postal packages not classified according to kind 93 Special transactions and commodities not classified according to kind 96 Coin (other than gold coin), not being legal tender 97 Gold, non-monetary ( excluding gold ores and concentrates ) 98 Gold coin and monetary gold 99 All other commodities and transactions
Source: UNCTAD Statistics External Trade Goods data.	

**Appendix Table 2. Value of Irish Goods Imports and Exports by Sector from and to the UK (2017)**

Goods Sectors (SITC Categories)	Imports			Exports		
	Total (€m)	UK (€m)	% of Total Irish Goods Imports from UK	Total (€m)	UK (€m)	% of Total Irish Goods Exports to UK
Food and live animals	7,156	3,592	19.3%	11,354	4,611	28.1%
Machinery & transport equipment	30,033	3,176	17.1%	20,501	2,292	14.0%
Chemicals	17,423	3,058	16.5%	67,767	5,218	31.8%
Mineral fuels	4,679	2,725	14.7%	1,025	455	2.8%
Miscellaneous manufactured articles	8,261	2,278	12.3%	14,834	1,356	8.3%
Manufactured goods	5,036	1,952	10.5%	2,266	1,212	7.4%
Commodities and transactions n.e.s.	2,241	1,137	6.1%	1,135	503	3.1%
Beverages and tobacco	900	345	1.9%	1,360	293	1.8%
Crude materials, inedible, except fuels	897	238	1.3%	1,803	456	2.8%
Animal and vegetable oils, fats and waxes	263	70	0.4%	93	20	0.1%
<b>Total</b>	<b>76,889</b>	<b>18,571</b>	<b>100.0%</b>	<b>122,139</b>	<b>16,416</b>	<b>100.0%</b>

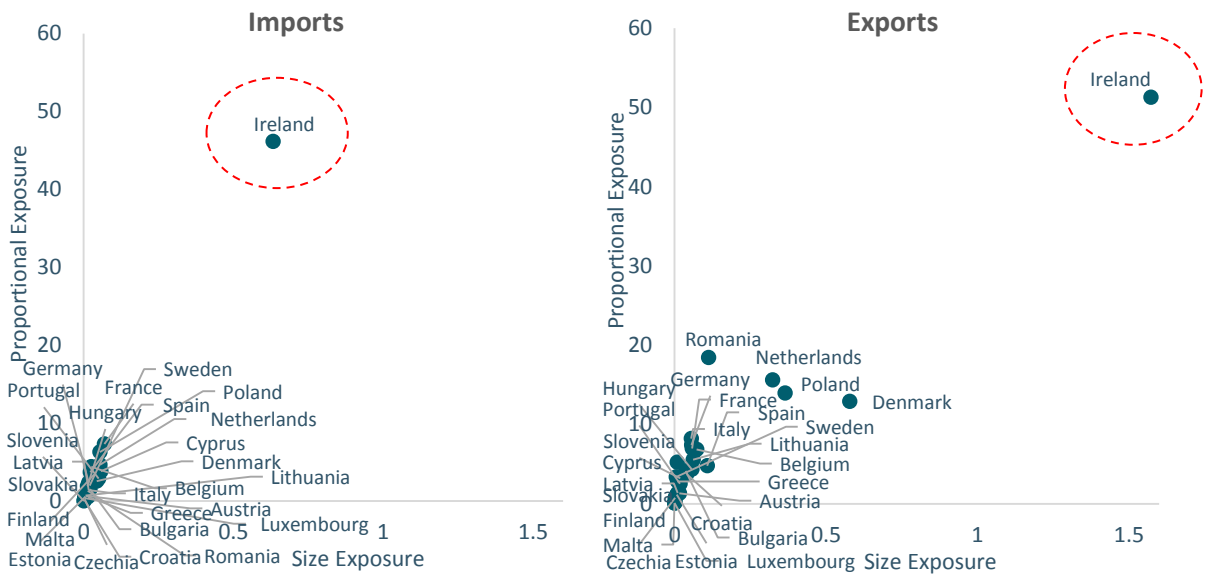
Source: CSO External Trade data. Ranked by value of UK imports.

**Appendix Table 3. Value of Irish Goods Imports and Exports by Sector from and to the UK (2016)**

Goods Sectors (SITC Categories)	Imports			Exports		
	Total (€m)	UK (€m)	% of Total Irish Goods Imports from UK	Total (€m)	UK (€m)	% of Total Irish Goods Exports to UK
Food and live animals	6,689	3,240	19.2%	10,096	4,224	28.1%
Machinery & transport equipment	31,581	3,140	18.6%	21,420	2,364	15.7%
Chemicals and related products	14,963	2,445	14.5%	66,385	4,174	27.8%
Miscellaneous manufactured articles	8,253	2,312	13.7%	14,645	1,318	8.8%
Mineral fuels	3,776	2,089	12.4%	691	503	3.3%
Manufactured goods	4,751	1,859	11.0%	2,144	1,169	7.8%
Commodities and transactions n.e.s.	2,135	1,155	6.8%	969	503	3.3%
Beverages and tobacco	914	361	2.1%	1,333	309	2.1%
Crude materials, inedible, except fuels	824	206	1.2%	1,529	452	3.0%
Animal and vegetable oils, fats and waxes	245	65	0.4%	78	18	0.1%
<b>Total</b>	<b>74,131</b>	<b>16,872</b>	<b>100.0%</b>	<b>119,292</b>	<b>15,034</b>	<b>100.0%</b>

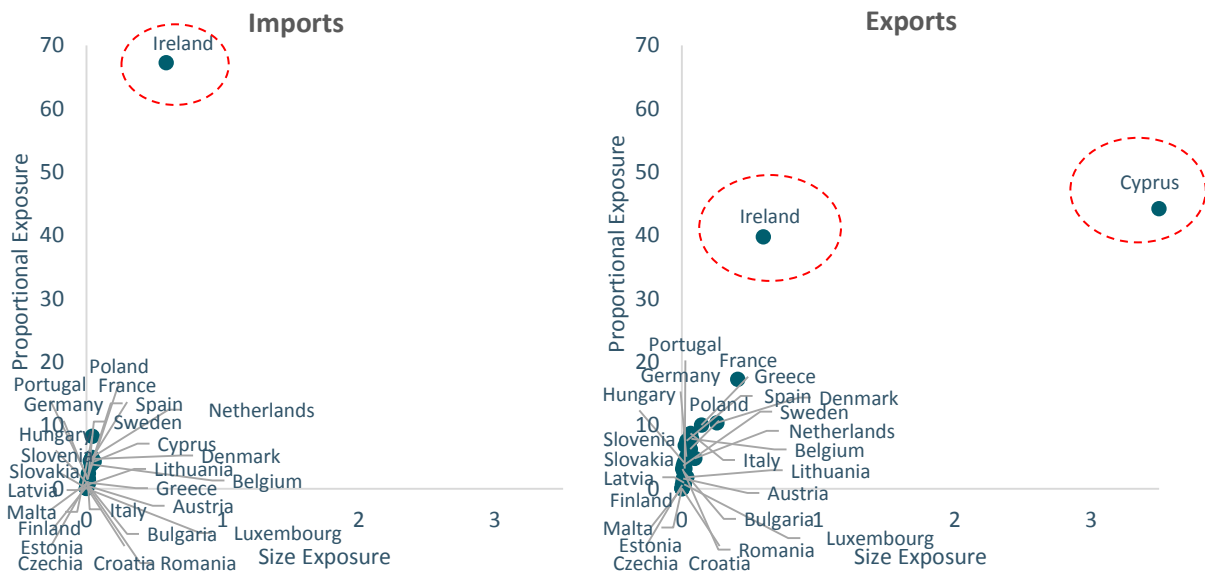
Source: CSO External Trade data. Ranked by value of UK imports.

**Appendix Figure 1. Meat and Meat Preparations Trade Exposures to the UK (2016)**



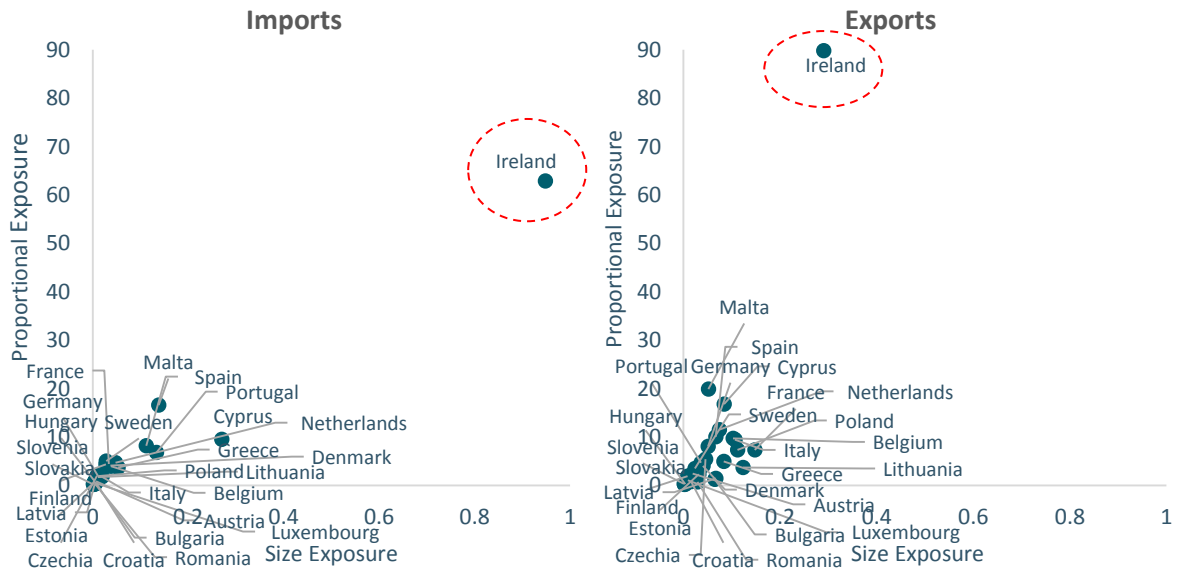
Source: UNCTAD Statistics External Trade Goods data. Department of Finance analysis. See Box 1 for an explanation of Size and Proportional Exposures.

**Appendix Figure 2. Dairy Products and Birds' Eggs Trade Exposures to the UK (2016)**



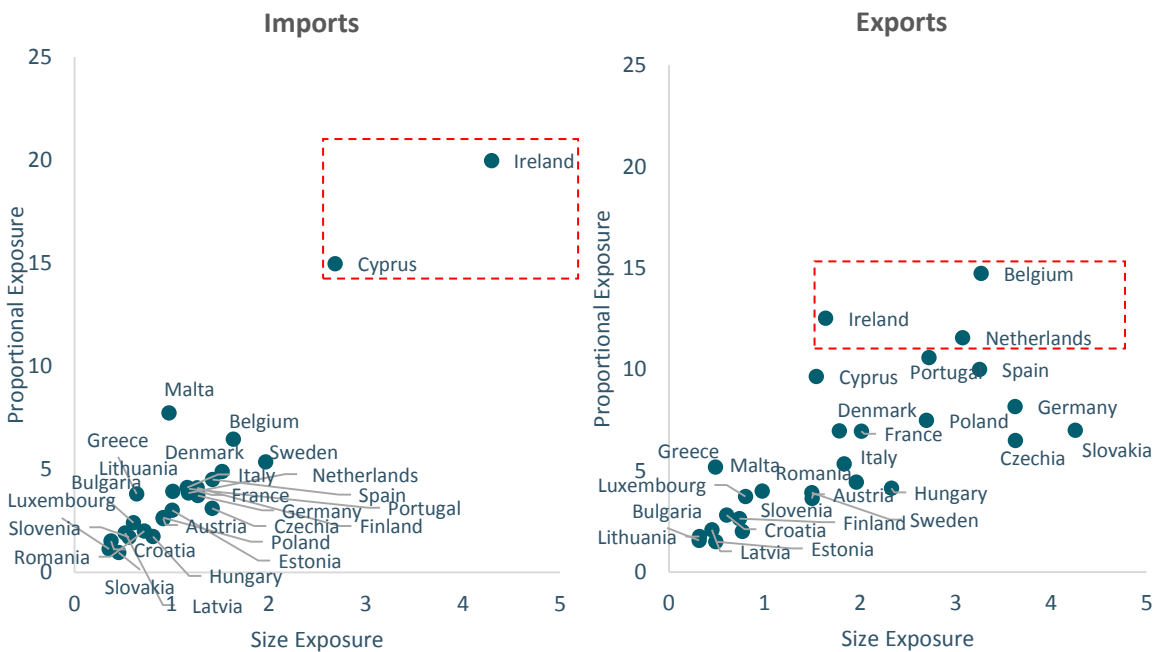
Source: UNCTAD Statistics External Trade Goods data. Department of Finance analysis. See Box 1 for an explanation of Size and Proportional Exposures.

**Appendix Figure 3. Cereals and Cereal Preparations Trade Exposures to the UK (2016)**



Source: UNCTAD Statistics External Trade Goods data. Department of Finance analysis. See Box 1 for an explanation of Size and Proportional Exposures.

**Appendix Figure 4. Machinery and Transport Equipment excl. Aircraft Exposures to the UK (2016)**



Source: UNCTAD Statistics External Trade Goods data. Department of Finance analysis. See Box 1 for an explanation of Size and Proportional Exposures.



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