



University of
Strathclyde
Business
School

Fraser of Allander Institute

Brexit and the sectors of the Scottish economy - Update

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Disclaimer

The analysis in this report has been conducted by the Fraser of Allander Institute (FAI) at the University of Strathclyde. The FAI is a leading academic research centre focused on the Scottish economy.

The report was commissioned in January 2019 by GMB Scotland.

The analysis and writing-up of the results was undertaken independently by the FAI. The FAI is committed to informing and encouraging public debate through the provision of the highest quality analytical advice and analysis. We are therefore happy to respond to requests for factual advice and analysis. Any technical errors or omissions are those of the FAI.



GMB

SCOTLAND

Introduction

Section 1

Leaving the European Union (EU) will represent the most significant change to the Scottish economy in a generation.

It will impact the way we trade and it will alter patterns of investment and the supply of workers. By no longer being tied to EU rules, future economic, social and environmental policy may look quite different.

Many of the impacts are hard to assess. A great many will be relatively subtle but long-lasting.

As with any change, there will be winners and losers. The risks and opportunities could look quite different for individual sectors and companies.

Back in November 2017, we undertook analysis for the GMB Union which was – at the time – the first detailed analysis of the potential sectors of the Scottish economy that could be exposed to a changing economic relationship between the UK and the EU.

This report provides a short update of this work. It summarises the economic links between Scotland and the EU, and provides background information on the links between Scotland and the EU by sector.

It also aims to facilitate a discussion amongst stakeholders and to offer insights on where we recommend businesses and trade unions focus their thinking in the months ahead.

The report is structured as follows.

- Firstly, we provide a quick recap of the current state of play.
- Secondly, we summarise the key channels through which Brexit may have an impact on the Scottish economy, with a particular focus upon the impact by different types of industry and sector.
- Thirdly, we provide an updated estimate of the number of jobs in Scotland currently supported by EU demand for our exports.
- At the end, we offer some conclusions.

We find that nearly 144,000 jobs were linked to EU demand for Scottish exports in 2015.

Of course, this is not to say that post-Brexit these jobs will be lost (or even reduced). It is simply to highlight the current degree of integration that exists between Scotland and Europe in terms of exports.

Potential economic impacts

Section 2

Despite it being over 2 ½ years since the decision by the UK public to leave the EU, there remains little clarity over the economic terms of Brexit.

Many of the impacts of Brexit are hard to assess. A great many will be relatively subtle but long-lasting.

The majority of independent economists believe that Brexit will act as a significant headwind for the Scottish economy over the long-term.

Over 45% of Scotland's international exports are to the EU. At the same time, many firms in Scotland operate in supply chains which rely upon the constant flow of goods and services across the EU.

With Scotland's working age population projected to fall over the next decade, fewer EU migrants could have implications for a number of sectors and the public finances.

On top of this, no-one yet knows the impact on domestic and international investment, productivity or the UK's status in the global economy.

Two significant uncertainties remain:

1. The nature of the UK's long-term economic, financial and social relationship with the EU; and,
2. The specific details of the transition to any such new arrangement.

Long-term economic impacts

The majority of independent economists predict that leaving the EU will act as a headwind for the UK's and Scotland's long-term economic prospects.

Trade barriers – including tariffs and non-tariff measures – have the potential to inhibit growth by locking exporters out of market opportunities. There is also evidence that companies that export and import tend to become more productive over time. At the same time, openness to overseas companies create a climate of innovation and technological diffusion.

Those in favour of Brexit have tended to argue that such concerns are overblown and that new opportunities – including localised policy making, a potential reorientation of international trade agreements, a move to more free-market policies and reducing the (perceived) negative impact of EU migration – could outweigh the risks.

Our own estimates suggest a significant negative hit to Scotland's long-term economic output and jobs compared to a scenario where the UK remained in the EU.

Table 1: Change in Scottish GDP relative to baseline of full EU membership after 15 years

	EEA	FTA	WTO
UK Government (2018)*	-1.4%	-4.9%	-7.7%
Scottish Government (2018)	-2.7%	-6.1%	-8.5%
FAI (2017)	-	-4.9%	-7.5%

* Figures for the UK economy

Source: Fraser of Allander Institute

This analysis is broadly in line with that of the UK Government, Scottish Government and the Bank of England. At the UK level, independent estimates of a WTO scenario range between -1.5% and -18% GDP change, compared to what it otherwise would have been.

'No-deal'

The above discussion assumes that an agreement of some form is reached between the UK and the EU and that there is an orderly transition.

However, there is another possible scenario where 'no-deal' is reached in the negotiations. Here, there would be no transition period.

As the Bank of England Governor, Chancellor of the Exchequer and head of the IMF have warned, such a 'cliff-edge' scenario could have serious implications for our economy in the short-term.

The Scottish Government have published their own analysis, suggesting that – under certain scenarios – the Scottish economy could enter a sharp recession. Output could fall by between 2.5% and 7%, with a rise in unemployment of around 100,000. It should be noted that such analysis does not take into account any possible policy response. As with similar analysis by the UK Government¹ and the Bank of England, these scenarios should not necessarily be taken as forecasts of what will happen, but rather illustrate the uncertainty of the current business environment.

One of the biggest challenges with a 'no deal' outcome is that businesses remain unprepared. A UK Government report published in February revealed that only 40,000 out of an estimated 240,000 companies have sought the relevant paperwork to trade with the EU if the UK leaves without an agreement.

Most business organisations and trade unions have argued that – whether or not you agree or disagree with the decision to leave the EU (or indeed the nature of the final settlement) – a smooth transition is vital.

¹ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/781768/Implications_for_Business_and_Trade_of_a_No_Deal_Exit_on_29_March_2019.pdf

Brexit: Through what channels could it impact?

Section 3

Information remains scarce on how leaving the EU will actually impact different parts of the Scottish economy. The lack of data and the limited clarity on what a ‘deal’ may look like are the two key reasons for this.

We identify six broad channels through which Brexit could have an impact on the Scottish economy:

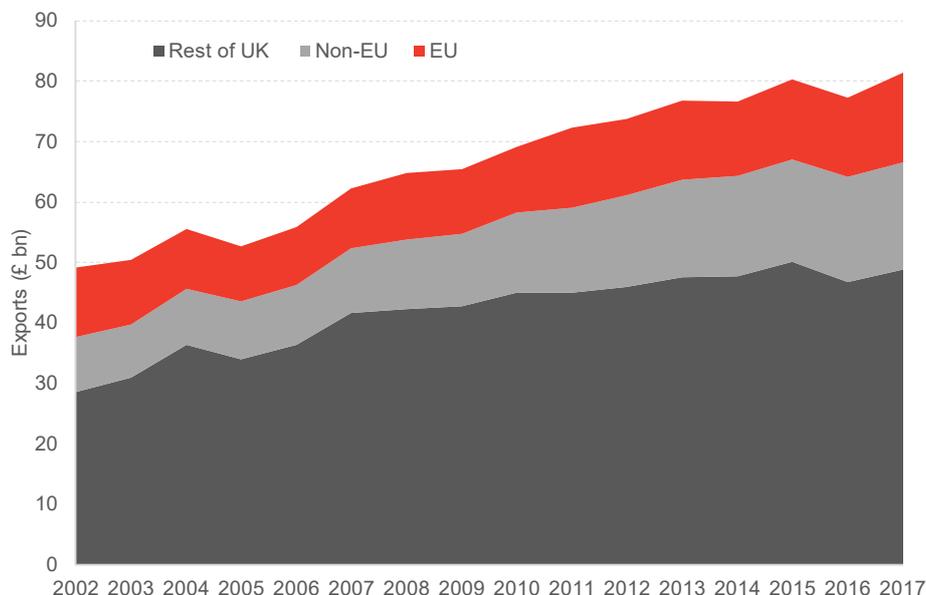
- Exports
- Supply chains, including imports
- International investment
- The labour market (including EU workers and students);
- The policy and regulatory environment; and,
- Short-term uncertainty

Exports

The EU is Scotland’s principal international trading partner.

In 2017, Scotland exported £14.9 billion of goods and services to the EU – equivalent to over 45 per cent of international exports (18 per cent of total exports when rUK exports are included).

Chart 1: Scottish exports destined for the rest of UK, Non-EU countries and EU countries, £ billion, 2002 – 2017



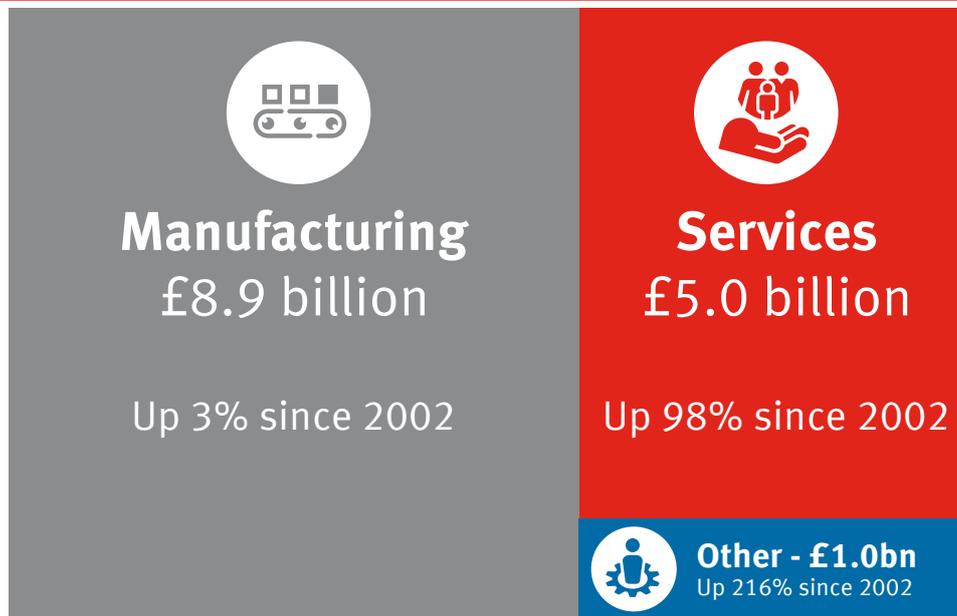
Source: Scottish Government

The EU is therefore an important international market for Scottish firms.

Chart 2 shows the value of EU exports based upon the Export Statistics Scotland data.

Manufacturing makes up the majority of Scottish trade with the EU. In 2017, just over 59 per cent of Scottish trade with the EU was from manufacturing.

Chart 2: Scottish exports destined for EU, 2017



Source: Scottish Government

The most significant sectors are those associated with refined petroleum and chemical activities and food and drink (of which whisky and linked products are the largest).

Although goods make up the majority of trade, there are some important sectors in services including wholesale and retail and professional service activities.

Table 2: Top 10 Scottish sectors for exports to the EU, 2017

Rank	Sector	EU exports (£m)
1	Refined petroleum, coke & chemical products	2,870
2	Food & beverages	2,235
3	Professional, scientific and technical activities	1,225
4	Wholesale, retail & repair of vehicles	1,135
5	Computer, electronic and optical products	990
6	Transportation and storage	335
7	Financial and insurance activities	640
8	Machinery and equipment n.e.c	615
9	Mining and Quarrying	530
10	Rubber, plastic & non-metallic mineral products	520

Source: Scottish Government

How different is Scotland to the UK?

Overall, there are not many significant differences between Scotland and the rest of the UK. But there are some subtle variations.

Table 3 lists the top ten Scottish exports to the EU and then compares where the sector ranks for the UK. It also shows the proportion of total exports in the sector that are accounted for by EU sales.

Table 3: Scotland's top 10 product group exports destined for the EU, Q4 2017 – Q3 2018

Scotland Rank	Product group	EU exports (£m)	% of exports destined for EU	UK Rank
1	Petroleum & related materials	7281	81%	1
2	Beverages	1295	31%	20
3	Fish, crustaceans & molluscs	686	76%	33
4	Natural & manufactured gas	490	90%	22
5	General industrial machinery	473	38%	6
6	Electrical machinery & appliances.	438	52%	7
7	Miscellaneous manufactured articles	371	57%	5
8	Chemical materials	342	49%	19
9	Power generating machinery & equipment	311	13%	8
10	Office & adp machines	292	69%	15

Source: FAI analysis & HMRC

The table highlights some differences in terms of ranking by sector in terms of value over the year Q4 2017 to Q3 2018. For example, the relative importance of Scotland's beverages and fishing products are clearly evident.

Supply chains

Many Scottish businesses are part of a wider supply chain, very few design and make all their own products from scratch.

This means that they often buy in materials, services etc. from elsewhere to help them make their own product. Similarly, many will service other companies further along the value chain.

Membership of the Single Market and Customs Union has enabled firms to expand their participation in global supply (or value) chains. This leads to a network of producers across Europe, each contributing inputs in the form of goods and services to a production process. Some of these operate on a just-in-time basis, so any time delay could be a challenge if there is disruption.

In work for the Scottish Parliament, we found that many of the sectors that could be exposed to any downturn in trade with the EU might not just be those sectors directly exporting to Europe. For example, there may be second order effects on companies that supply other companies who do support EU demand (e.g. other producers in the UK who in-turn depend upon EU trade).

Instead, it is likely to include sectors which support the wider economy such as in wholesale & retail; transportation and storage; and professional services. These are all areas where Scotland has significant strengths.

International investment

According to OECD and EY's Global Investment Monitor data, the UK has been a significant recipient of international investment since the establishment of the EU Single Market.

There are of course debates about the benefits of such investment, and the overall value it brings to the Scottish economy.

However, setting aside such debate for just now, in 2017, Scotland was ranked 2nd in the UK in terms of projects secured during the last five years. But in terms of jobs supported, it was only ranked fourth out of twelve. How important is EU membership to such investment?

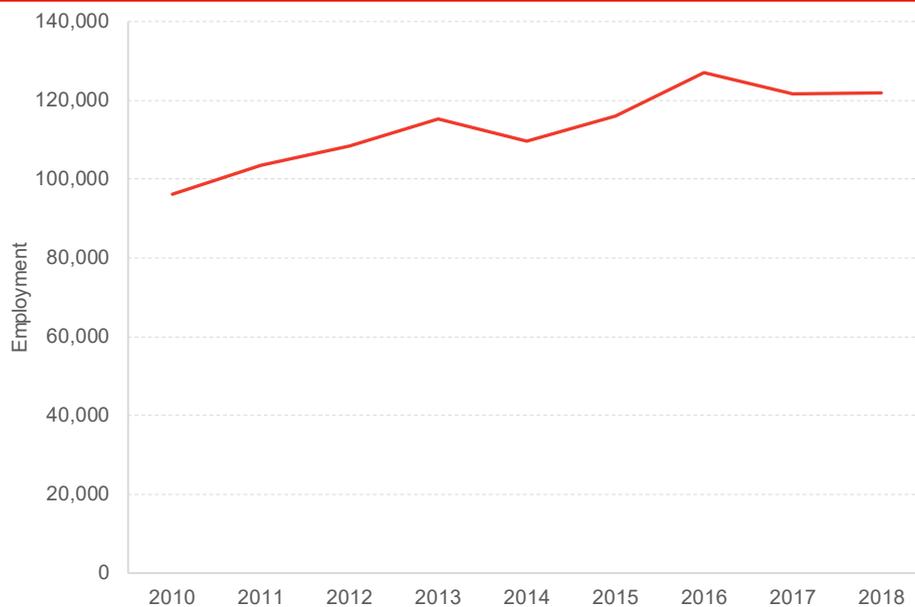
Some of the Scotland's advantages have little to do with the EU. Scotland's skilled workforce, infrastructure and business networks are seen as vital assets. That English is the language of commerce is also clearly an advantage. The UK's legal and regulatory system makes it relatively attractive for investors as is the wider economic development environment created by the Scottish Government, Scottish Enterprise and local government.

But the EU is believed to have been at least part of the story, with many firms choosing to locate here so that they can freely export across the continent. How leaving the EU will impact on such flows is uncertain.

What is clear however, is that a number of businesses operate in Scotland where their head operations are based elsewhere in the EU.

There are around 1,000 enterprises in Scotland where the parent company is from another EU country – employing around 120,000 people.

Chart 3: Scottish employment from EU owned enterprises, 2010 – 2018



Source: Scottish Government

Labour market and migration

Net migration to Scotland has meant an inflow of working age migrants in recent years.

There were around 223,000 EU nationals living in Scotland in June 2017 – June 2018. This was equivalent to around 4.2 per cent of the total population.

The employment rate for non-UK EU nationals (79.3 per cent in June 2017 – June 2018) is higher than for Scotland as a whole (75 per cent).

From a macroeconomic perspective, boosting the population through migration can have a number of advantages, particularly in places – like Scotland – where there is a shrinking working age population amongst existing residents.

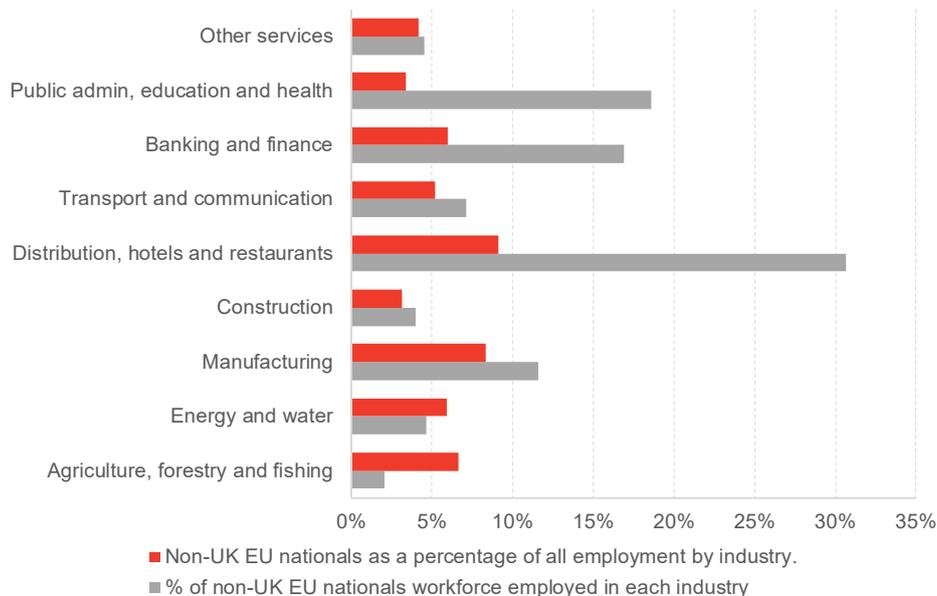
For some sectors, it is the potential implications for the labour market issues that are most important in considering the potential impacts of Brexit.

Even before considering the effects of Brexit, Scottish businesses have faced challenges in attracting labour with the right skills. If the decision to leave the EU was indeed motivated, in part, by a wish by some in the electorate to reduce the flow of immigration, this may lead to formal restrictions on the free movement of labour.

This could have a number of implications for particular sectors. The chart shows two things –

- The percentage of all non-UK EU nationals employed by industry;
- Non-UK EU nationals as a percentage of all employment by industry.

Chart 4: Non-UK EU national employment in Scotland, April 2017 – May 2018



Source: ONS

In total, non-UK EU nationals account for around 6% of all employment in Scotland in April 2017 – May 2018. For non-UK EU nationals (aged 16 and over), the main industries of employment are in distribution, hotels and restaurants where 31 per cent of all non-UK EU nationals were employed – equivalent to 9 per cent of Scotland’s overall employment in that sector.

There are a noticeable number of non-UK EU nationals in public administration, education and health – around 27,000 – but this only equates to around 3 per cent of employment in that sector.

Policy and regulatory environment

The EU Single Market is underpinned by a suite of rules and regulations covering diverse areas such as employee rights, environmental standards, procurement and state aid.

What happens once the UK leaves the EU is uncertain. Initially, the plan is that all existing EU-derived law will be automatically transferred into UK domestic law.

As we highlighted in our first report, a number of issues are worthy of note.

As highlighted above, non-tariff barriers can be a significant impediment to trade in many sectors. If the UK takes a different path to the EU – e.g. in product safety standards – this would come at the expense of access to EU markets.

Brexit might remove constraints imposed by State Aid rules, enabling government to support industries in ways in which they currently cannot. Any trade deal with the EU is, however, likely to require some agreement to coordinate – at least in part – State Aid rules.

Finally, the scope for the UK to take a radically different path is open to question. The UK is already estimated to have one of the lowest levels of product regulation in the OECD and be only behind New Zealand, the US and Canada in terms of how flexible (or lax depending upon your viewpoint) employment protection rights are.

Taking a ‘different path’ is certainly an option. But this clearly opens up a host of significant social justice, environmental and wider economic questions.

Short-term uncertainty

As we have outlined above, irrespective of particular views on Brexit – or the shape of the final agreement – a smooth transition is vital.

As the Chancellor, Governor of the Bank of England and head of the IMF have cautioned, a ‘cliff-edge’ scenario could have serious implications for our economy in the short-term.

Should a ‘no-deal’ outcome become an eventuality, then growth is likely to slow sharply. Much will depend upon how markets, government and the Bank of England react. We will, however, be in unprecedented times with no real certainty on how the economy, markets and investors might react.

Whatever is uncertain, it is likely to be some time yet before the fog of uncertainty that has hung over the UK economy for the last 2 ½ years lifts.

Employment supported by EU export demand

Section 4

In our first report for the GMB Union, we provided an estimate of the number of jobs tied to export demand from different countries.

Here we provide an update of this analysis.

To undertake this analysis, we use data published by the Scottish Government in their most recent input output tables – for 2015 – and the export information published in Export Statistics Scotland.

The annex sets out the methodology.

Table 4 summarises the headline results.

Table 4: Employment in Scotland supported by sources of external demand, 2015

	Non-resident households	rUK exports	EU exports	ROW exports	Total
Direct employment	59,400	325,300	87,300	113,600	586,300
Indirect employment	8,300	136,700	33,700	43,800	222,800
Induced employment	7,800	83,300	22,900	29,300	143,500
Total	75,500	545,200	143,900	186,600	952,600

* Rounded to the nearest 100. Row and column sums may not equal totals due to rounding.

Source: Fraser of Allander Institute

According to the methodology set out in Annex A, it is estimated that around 545,000 jobs in Scotland are supported by demand for our goods and services from the rest of the UK.

Around 144,000 jobs are supported by export demand from the rest of the EU, and over 186,000 jobs are supported by export demand from the rest of the world (ROW).

Table 5 below shows the number of jobs supported in Scotland by each sector's exports.

Table 5: Breakdown of jobs supported by each sector's exports, 2015

	Non-resident households	rUK exports	EU exports	ROW exports	Total
Agriculture & Mining	1,000	51,300	6,200	8,200	66,700
Manufacturing, Utilities & Construction	1,700	145,800	55,800	64,400	267,700
Services	72,800	348,200	81,900	114,000	617,000

* Rounded to the nearest 100. Row and column sums may not equal totals due to rounding.

Source: Fraser of Allander Institute

We find that EU demand for Scottish services exports supports around 82,000 jobs in Scotland. A further 56,000 are linked to EU demand for Scottish manufacturing, utilities and construction exports.

Table 6 provides a more detailed breakdown by sector.

Table 6: Breakdown of jobs supported by each sector's exports, 2015

	Non-resident households	rUK	EU	Non-EU
Agriculture, Forestry & Fishing	900	17,300	4,500	3,700
Mining & Quarrying	200	33,900	1,700	4,500
Manufacturing				
Food, Beverages & Tobacco	400	39,600	12,000	19,400
Textiles, Clothing & Leather Products	300	3,000	2,200	1,400
Refined Petroleum, Chemical & Pharmaceutical	100	6,000	6,300	1,600
Metals, Metal Products & Machinery n.e.c.	200	15,700	10,900	14,200
Computer, Electrical & Optical Products	0	5,500	5,900	5,800
Transport Equipment	0	11,000	2,100	7,800
Other Manufacturing Industries; Repair & Installation	400	25,500	10,500	10,000
Total Manufacturing	1,400	106,100	49,900	60,300
Utilities	100	18,700	1,700	1,600
Construction	200	21,000	4,200	2,500
Services				
Wholesale, Retail & Repair of Vehicles	11,700	34,300	21,100	14,100
Accommodation & Food Services	49,800	500	100	100
Transport, Storage & Communication	6,100	64,300	15,100	15,900
Business Services & Finance	1,500	216,300	33,400	63,900
Government & Other Services	3,800	32,800	12,300	20,000
Total Services	72,800	348,200	81,900	114,000
Scotland Total	75,500	545,200	143,900	186,600

* Rounded to the nearest 100. Row and column sums may not equal totals due to rounding.

Source: Fraser of Allander Institute

Looking at direct demand only – i.e. not the ongoing spill-over effects on the economy – we can examine the share of each sector's employment which is directly supported by exports destined for the EU.

Table 7: Share of total employment accounted for by direct EU export employment, 2015

	Direct EU Export Employment	Total Sector Employment	%
Agriculture, Forestry & Fishing	2,700	47,500	5.7%
Mining & Quarrying	900	28,000	3.3%
Manufacturing			
Food, Beverages & Tobacco	5,400	46,000	11.7%
Textiles, Clothing & Leather Products	1,400	8,100	17.4%
Refined Petroleum, Chemical & Pharmaceutical	3,000	10,600	28.8%
Metals, Metal Products & Machinery n.e.c.	6,400	39,500	16.3%
Computer, Electrical & Optical Products	3,400	14,600	23.4%
Transport Equipment	900	13,600	6.8%
Other Manufacturing Industries; Repair & Installation	6,000	52,900	11.4%
Total Manufacturing	26,700	185,200	14.4%
Utilities	700	31,400	2.4%
Construction	2,300	145,000	1.6%
Services			
Wholesale, Retail & Repair of Vehicles	13,700	307,900	4.5%
Accommodation & Food Services	100	153,500	0.1%
Transport, Storage & Communication	9,700	166,900	5.8%
Business Services & Finance	20,700	429,800	4.8%
Government & Other Services	9,700	780,100	1.2%
Total Services	54,000	1,838,300	2.9%
Scotland Total	87,300	2,275,400	3.8%

* Rounded to the nearest 100. Row and column sums may not equal totals due to rounding.

Source: Fraser of Allander Institute

Putting this all together shows that in 2015, nearly 4 per cent of Scotland's employment (excluding public sector administration and defence) was supported by trade with the EU. By sector the number varies significantly. For example, in manufacturing the ratio is much higher with over 14% of total direct jobs currently linked directly to EU export demand. In computer, electrical and optical products the figure is even higher at over 23% and in refined petroleum, chemical and pharmaceutical products the figure is nearly 30%.

Conclusions

Section 5

The UK remains on track to leave the European Union although the exact date of departure remains uncertain.

This has the potential to mark the most significant economic structural upheaval since the financial crisis and the greatest shift in the policy environment in over 40 years.

This analysis has once again confirmed that Scotland's economy currently benefits in a number of ways from its integration with the European Union Single Market.

Goods make up the bulk of Scottish trade with the EU. In 2017, over 59 per cent of Scottish exports with the EU were from manufacturing. The most significant sectors are those associated with refined petroleum and chemicals activities, and food and drink (of which whisky and linked products are key).

It is estimated that around 144,000 jobs are currently supported by export demand from the EU, and over 186,000 from the rest of the world.

Of the jobs estimated to be supported by demand from the EU, around 56,000 were tied to manufacturing, utilities and construction exports and 82,000 tied to services exports. The higher number in services reflects the impact of spill-over effects from trade into the wider Scottish economy.

In terms of the relative importance of EU demand to sectors, there are some important differences between Scotland and the rest of the UK. For example, the drinks sector is Scotland's 2nd most important sector in terms of goods trade to the EU, but it ranks 20th for the UK as a whole. Similarly, fish exports are third for Scotland but do not even feature in the top twenty for the UK.

Ultimately, the full impact on Scottish industries and individual companies will depend upon a number of factors – not just exposure to EU markets – but also the type of tariff and non-tariff barriers that may exist post-Brexit. The importance of EU migrants as a source of skilled labour may also be significant for some individual firms and sectors.

Of course, much will depend upon the future policy responses of government and the opportunities to export to new markets.

With so much uncertainty around it can be difficult to plan ahead for such a momentous change. But it is vital that businesses, trade unions and government develop contingencies for different outcomes and put in place plans to respond to any short or long-term challenges.

At the same time, it is important to remember that our economy has come through upheaval before and there will be economic opportunities in the months and years ahead. Identifying such opportunities and being flexible enough to respond as they emerge will be just as important.

Modelling methodology

Annex

This analysis builds upon the latest input-output tables from the Scottish Government, relating to the year 2015. Economic input-output tables provide a complete picture of the flows of goods and services (products) in the economy. They detail the relationship between producers and consumers and track the interdependencies of industries. They are constructed from survey and other data sources and provide the most accurate and comprehensive picture of the national economy available.

Using the input-output tables, we can examine how much each sector trades with the rest of the UK and internationally. Data from the Scottish Government's latest publication Exports Statistics Scotland 2017 (ESS) is used to ascertain the amount of exports destined for the EU by sector. To do this, the input-output table is aggregated to the same level as ESS (2017). We then use the sectoral shares of export demand based on 2015 in ESS 2017, and constrain the totals to the 2015 Scottish input-output data.

The result of this is export demand sources disaggregated into rest of UK, rest of EU and rest of world. Finally, we apply sectoral employment effects from the input-output tables to each of these export demand sources.

As with all such estimates and methodologies, different assumptions will affect the final estimates. Two important notes are that 'rest of world' exports in the input-output tables are different from those in ESS and that there is no export information on 'public administration & defence' and so this sector has been excluded from the analysis.

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