



# The Economic Impacts of Brexit on the UK, its Regions, its Cities and its Sectors

EN English (United Kingdom) ? Help





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# The Economic Impacts of Brexit on the UK, its Regions, its Cities and its Sectors

## **Welcome Address**

**Professor Raquel Ortega-Argilés, University of Birmingham**

**Professor Anand Menon, The UK in a Changing Europe**

**Simon Fuller, Scottish Government**



The Economic Impacts of Brexit on the UK, its  
Regions, its Cities and its Sectors

## The research team

**Professor Raquel Ortega-Argilés**  
**(Project leader, City-REDI Institute)**

Chloe Billing and Deniz Sevinc (University of Birmingham),  
Wen Chen, Pieter IJtsma and Bart Los (Groningen University),  
Nicola Cortinovis and Frank van Oort (Erasmus University Rotterdam),  
Philip McCann (University of Sheffield),  
Mark Thissen (PBL Dutch Government Environmental Agency)

# The Economic Impacts of Brexit on the UK, its Regions, its Cities and its Sectors

## The partners

CITY  
REDI



UNIVERSITY OF  
BIRMINGHAM



Scottish Government  
Riaghaltas na h-Alba  
gov.scot

E·S·R·C  
ECONOMIC  
& SOCIAL  
RESEARCH  
COUNCIL



university of  
 groningen

Erasmus  
ERASMUS UNIVERSITEIT ROTTERDAM



PBL Netherlands Environmental  
Assessment Agency

Policy Scotland



Sheffield  
University  
Management  
School.



The UK in a  
Changing Europe

# Significance of the research



Funded by the Economic and Social Research Council, “The Economic Impacts of Brexit on the UK, its Regions, its Cities and its Sectors” project started in April 2017 and is part of a series of 25 projects funded by ESRC to support the initiative [The UK in a Changing Europe](#) coordinated by Professor Anand Menon at King’s College London.

The project aims to examine in detail the **likely impacts of Brexit on the UK’s sectors, regions and cities** by using the most detailed **regional-national-international trade** and **competition datasets**

# Interest and engagement at this stage

- [Annual Northern Ireland Economic Conference 2017](#)
- [Regional Studies Association](#)
- **Houses of Parliament**
- **HM Treasury**
- **BEIS Department**
- **Foreign Commonwealth Office**
- [West Midlands All Party Parliamentary Group](#)
- [EU Committee of the Regions](#)
- Birmingham Post-Brexit Commission
- [Managing Partners' Forum](#) – Professional and Business Services lobbying group
- European Parliament

# How the recommendations have been taken up and by whom until now

Report contributions and mentions:

- [Brexit: Local and Devolved Government](#), UKICE
- [EU Referendum: One year on](#), UKICE
- [State of the North 2017: The Millennial Powerhouse](#), IPPR North
- [Will the unit of the 27 crack?](#), Centre for European Reform
- [Preparing for Brexit](#), Cambridge Econometrics
- [Brexit - What We Know Now](#), Tony Blair's Institute for Global Change
- [Wikipedia inclusion: Brexit](#)
- [UK Parliament](#)
- [Assessing the exposure of EU27 regions and cities to the UK's withdrawal from the European Union](#), CoR Committee of the Regions

# The analysis

- **Trade related effects:** Input-Output analysis; intermediate and final goods; global fragmentation of the value chains – local GDP, regional labour income
- **Competitiveness:** FDI, Trade and Knowledge
- **Governance:** regional stakeholder workshops and regional and sectoral case studies
- **Extent:** EU countries, UK and EU regions, sectors, jobs, occupations
- **New indicators and data**



# Regional Stakeholder Participatory Workshops

Devolved Administrations	Scotland, Edinburg, 4 <sup>th</sup> May 2018
West Midlands	Birmingham, 11 <sup>th</sup> May 2018
Greater London	London, 18 <sup>th</sup> May 2018
North of England	Leeds, 21 <sup>st</sup> May 2018

# The Economic Impacts of Brexit on the UK, its Regions, its Cities and its Sectors

## Welcome Address

**Professor Anand Menon, The UK in a Changing Europe**

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# The Economic Impacts of Brexit on the UK, its Regions, its Cities and its Sectors

## Welcome Address

**Simon Fuller**, Scottish Government

**[Simon.Fuller@gov.scot](mailto:Simon.Fuller@gov.scot)**



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## **Regional Impacts of Brexit: Devolved Nations**

**Professor Philip McCann**, University of Sheffield

**Professor Kim Swales**, Strathclyde University

**Jonathan Price**, Chief Economist, Welsh Government

**Shane Murphy**, Chief Economist, Northern Ireland Government

**Professor David Bell**, Stirling University

# The Economic Impacts of Brexit on the UK, its Regions, its Cities and its Sectors

## **Regional Impacts of Brexit: Devolved Nations**

**Professor Philip McCann, University of Sheffield**

[p.mccann@sheffield.ac.uk](mailto:p.mccann@sheffield.ac.uk)



The **UK** in a  
**Changing Europe**

## The Continental Divide? Economic Exposure to Brexit in Regions and Countries on Both Sides of the Channel

Wen Chen, Bart Los, Philip McCann, Raquel Ortega-Argilés, Mark Thissen and Frank van Oort  
*Papers in Regional Science*, 97.1, 25-54

“Exposure to Brexit in Regions on Both Sides of the Channel”, 2017, VoxEU, 19 December, See:

<http://voxeu.org/article/exposure-brexit-regions-both-sides-channel>

# How?

- Simple measures of gross exports and imports tell us very little about the potential impacts of Brexit on a nation or region, because both the **back-and-forth trade in raw materials**, **parts and components** and **business services** (often within the boundaries of multinational enterprises) typical of global value-chains obscures the links between local value-added and trade (Baldwin, 2016).

# Data construction

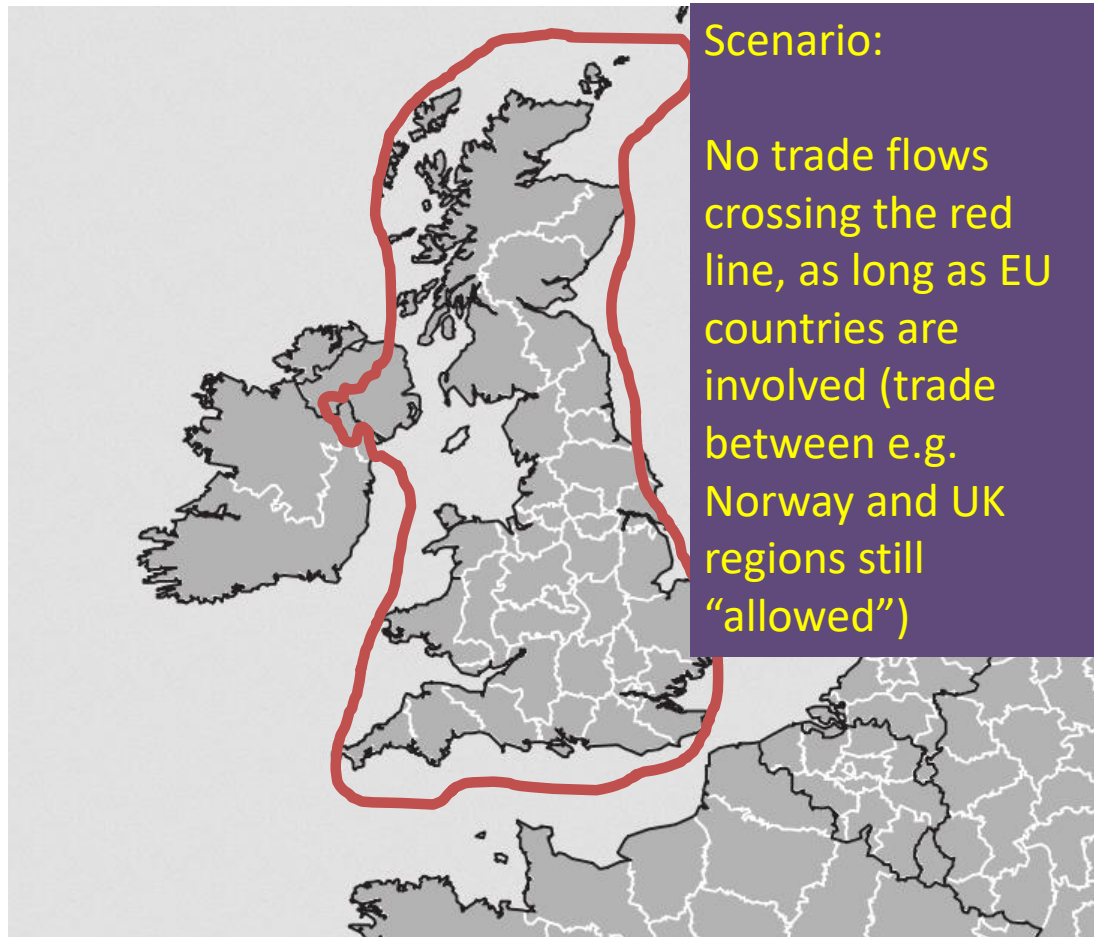
- Two types of sources:
- The World Input-Output tables of the WIOD 2013 release containing 40 countries (accounting for about 85% of world GDP, including all EU27) plus a composite ‘super-country’ labelled 'Rest of the World' are represented (Timmer et al., 2015).
- Second type of data, from regional sources: Eurostat’s regional economic accounts, a number of survey-based regional supply and use tables or input-output tables produced in a subset of countries, and estimates of interregional goods and services trade based on freight and airline business passenger statistics (Thissen et al., 2013).
- The merging of the information contained in these data sources allows us to:
- Incorporate regional details regarding production structure and trade at the NUTS2-level for all major EU-countries in global input-output tables for 2000-2010.
- 245 NUTS2 European regions are represented and 14 industries can be identified for all regions and countries.



# How?

- We develop a measure of regional exposure to Brexit building upon a flourishing strand of literature using global input-output tables to link trade to value-added (Johnson and Noguera, 2012; Timmer et al., 2013; Koopman et al., 2014).
- We use a bilateral version of the Domestic Value Added in Exports (DVAiX) indicator proposed by Koopman et al. (2014).

# Input-Output Data



IO-tables allow for mapping of trade to labor income and value added

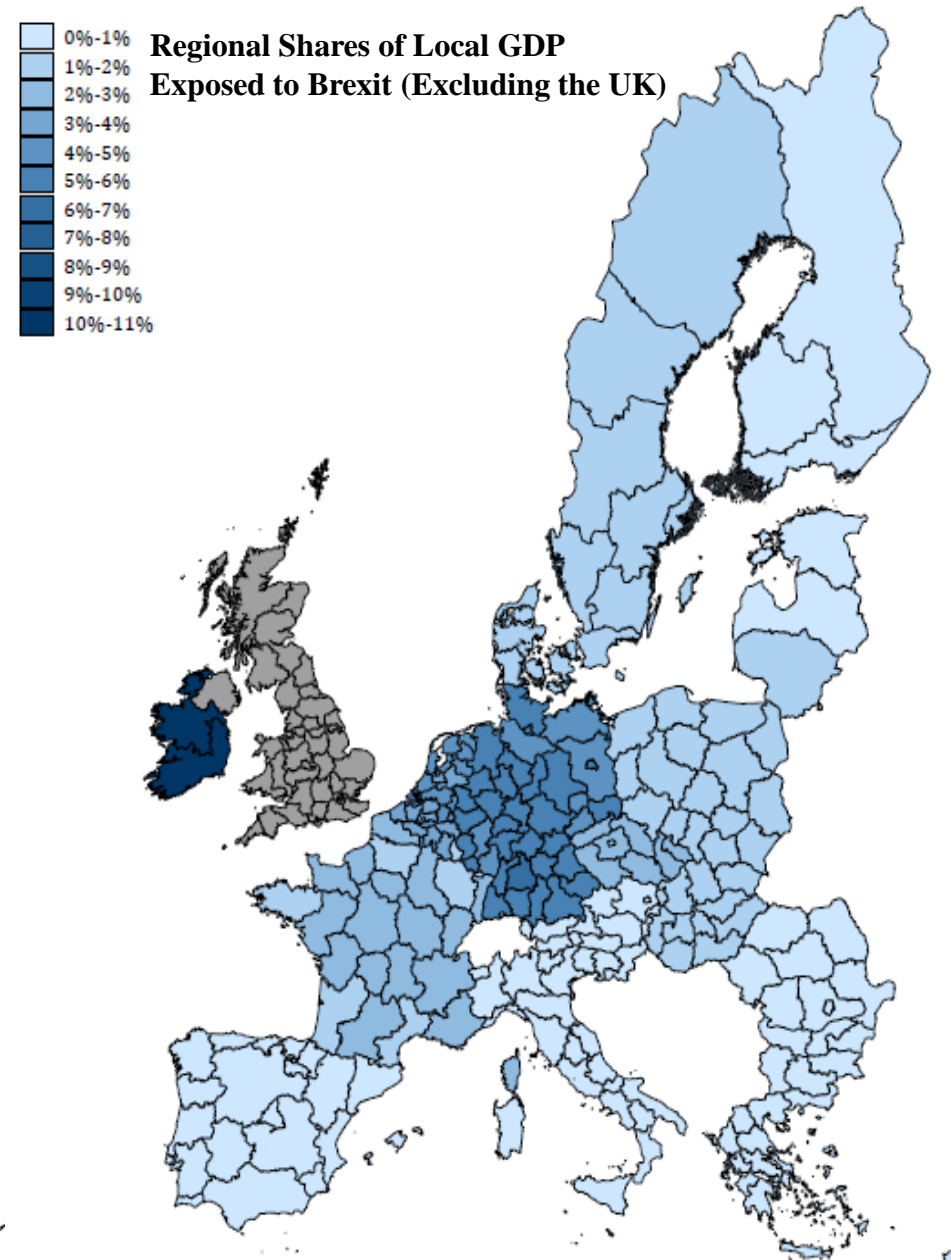
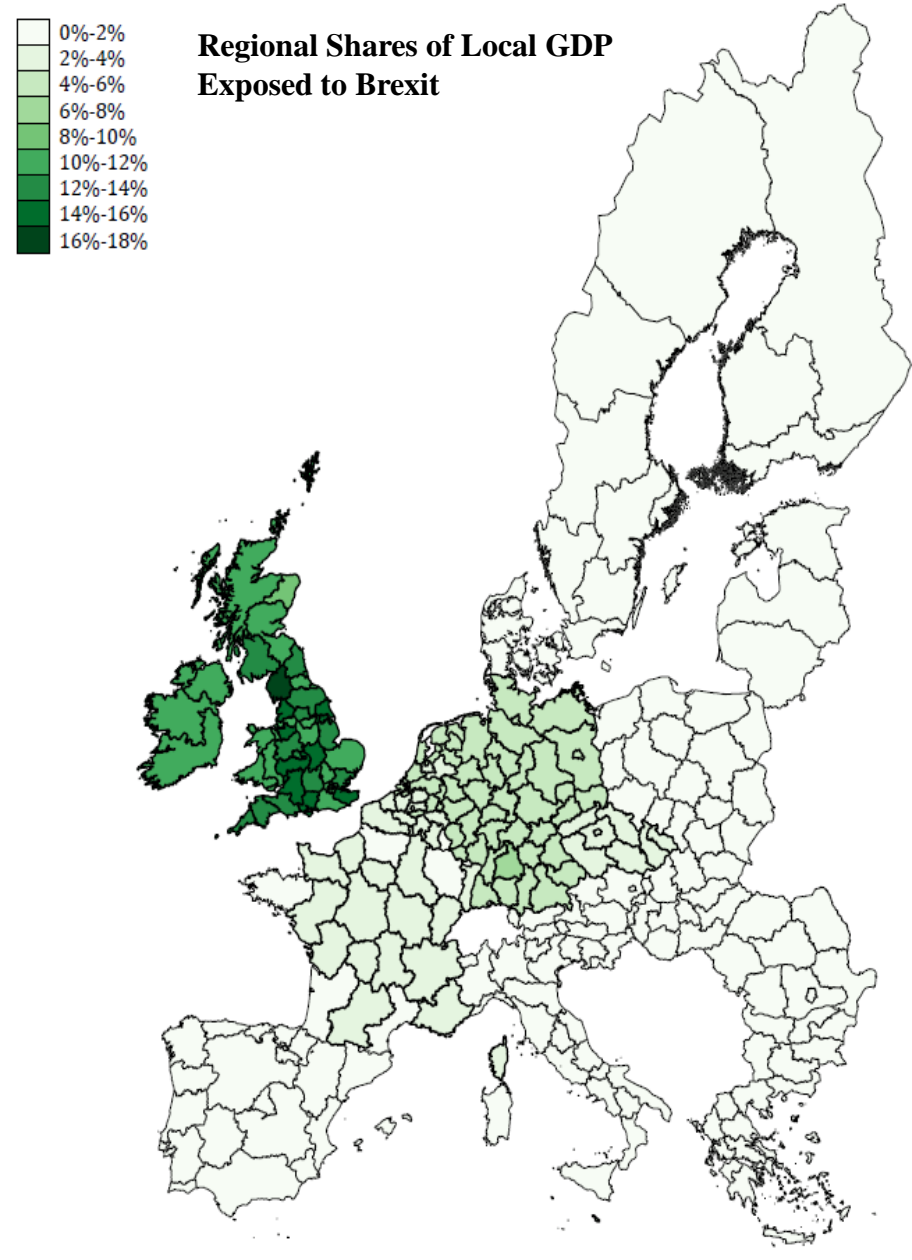
“Regional GDP exposed to Brexit”:  
Difference between actual GDP and GDP without EU-UK trade

# Research Question

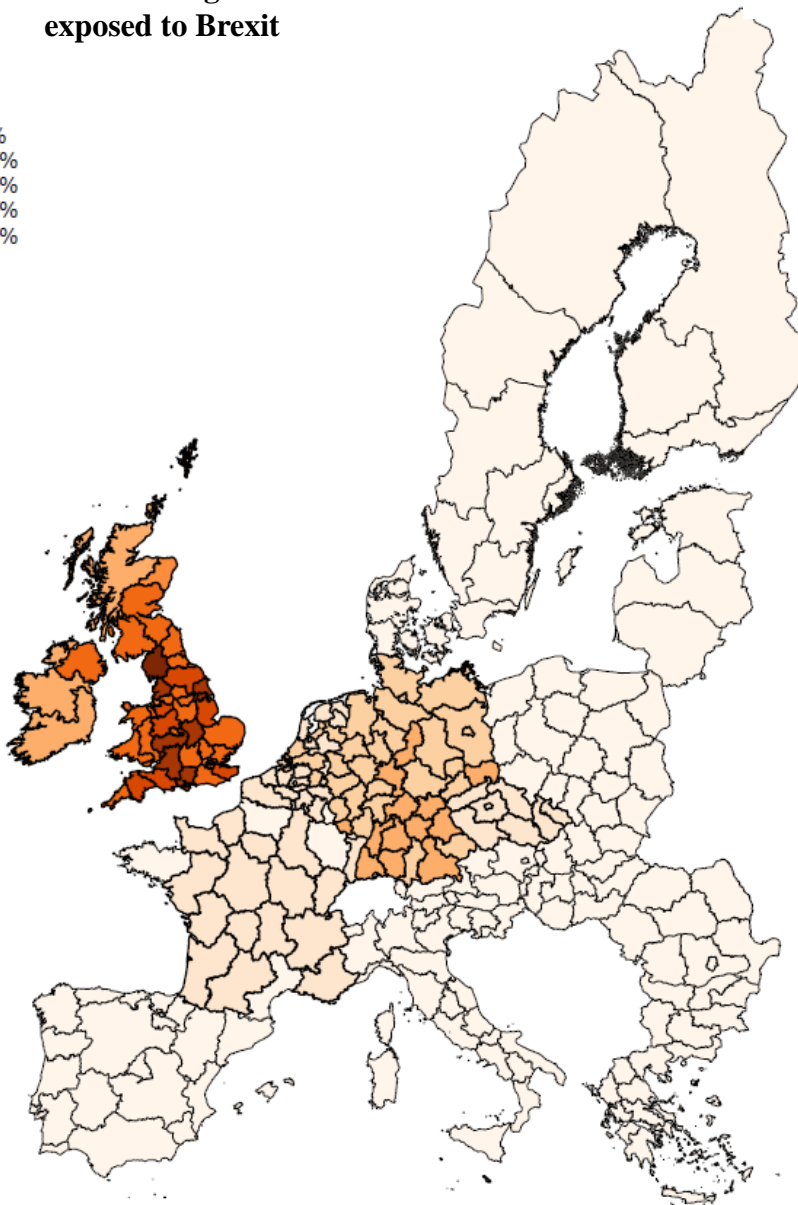
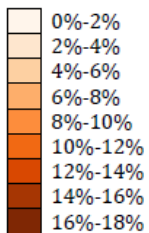
- *“Which shares of regional Labor Income and regional GDP are at risk as a consequence of future Brexit-related trade barriers?”*
- (which is not identical to:
- *“Which shares of regional LI and GDP will be lost as a consequence of Brexit?”*)
- *How big are the required structural and economic adjustments?*

# Brexit Exposure Risk

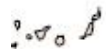
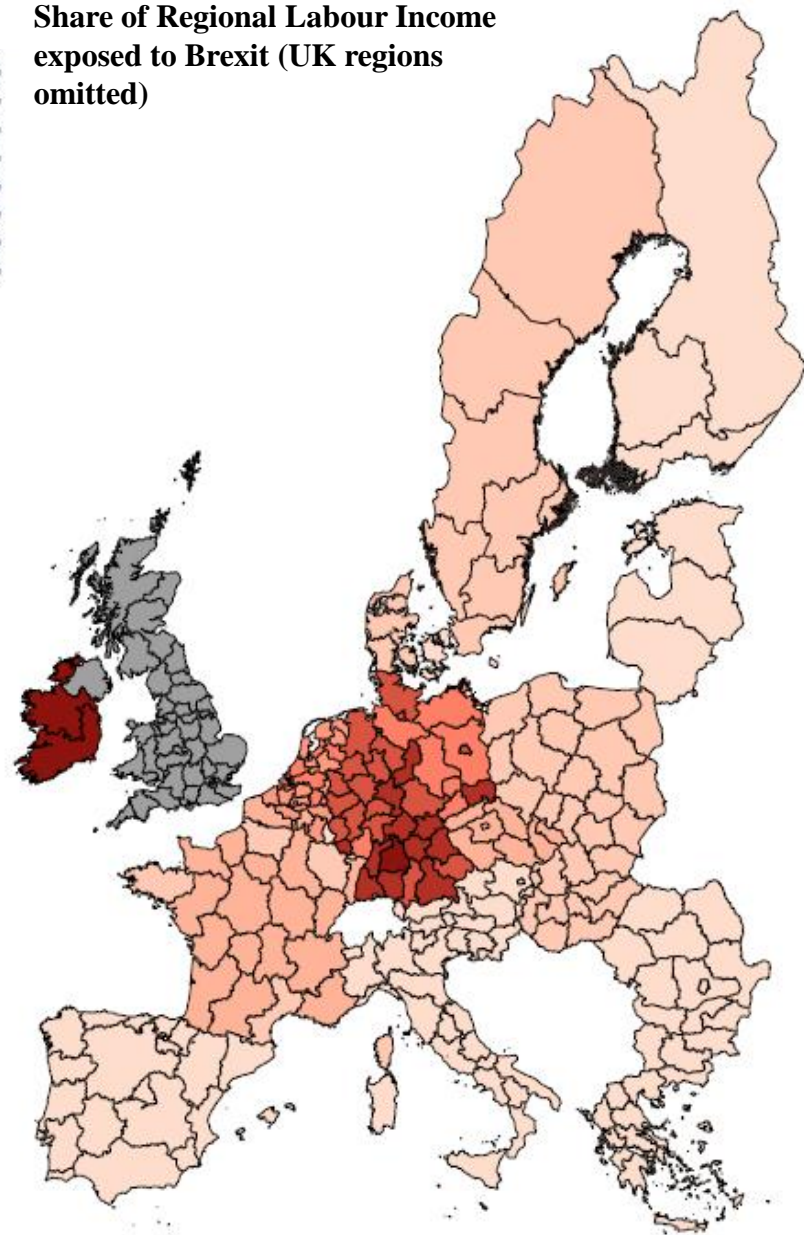
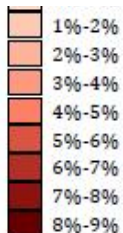
- For UK regions:
  - direct trade linkages (export, import, re-export, re-import)
  - indirect trade linkages via other UK regions
  - third country demand mediated via EU value-chains
- For EU regions:
  - direct trade linkages (export, import, re-export, re-import)
  - indirect trade linkages via other EU regions
  - third country demand mediated via UK value-chains
- Exclude UK-EU and EU-UK demand linkages mediated via third countries



**Share of Regional Labour Income exposed to Brexit**



**Share of Regional Labour Income exposed to Brexit (UK regions omitted)**



# National Brexit Exposure Risk

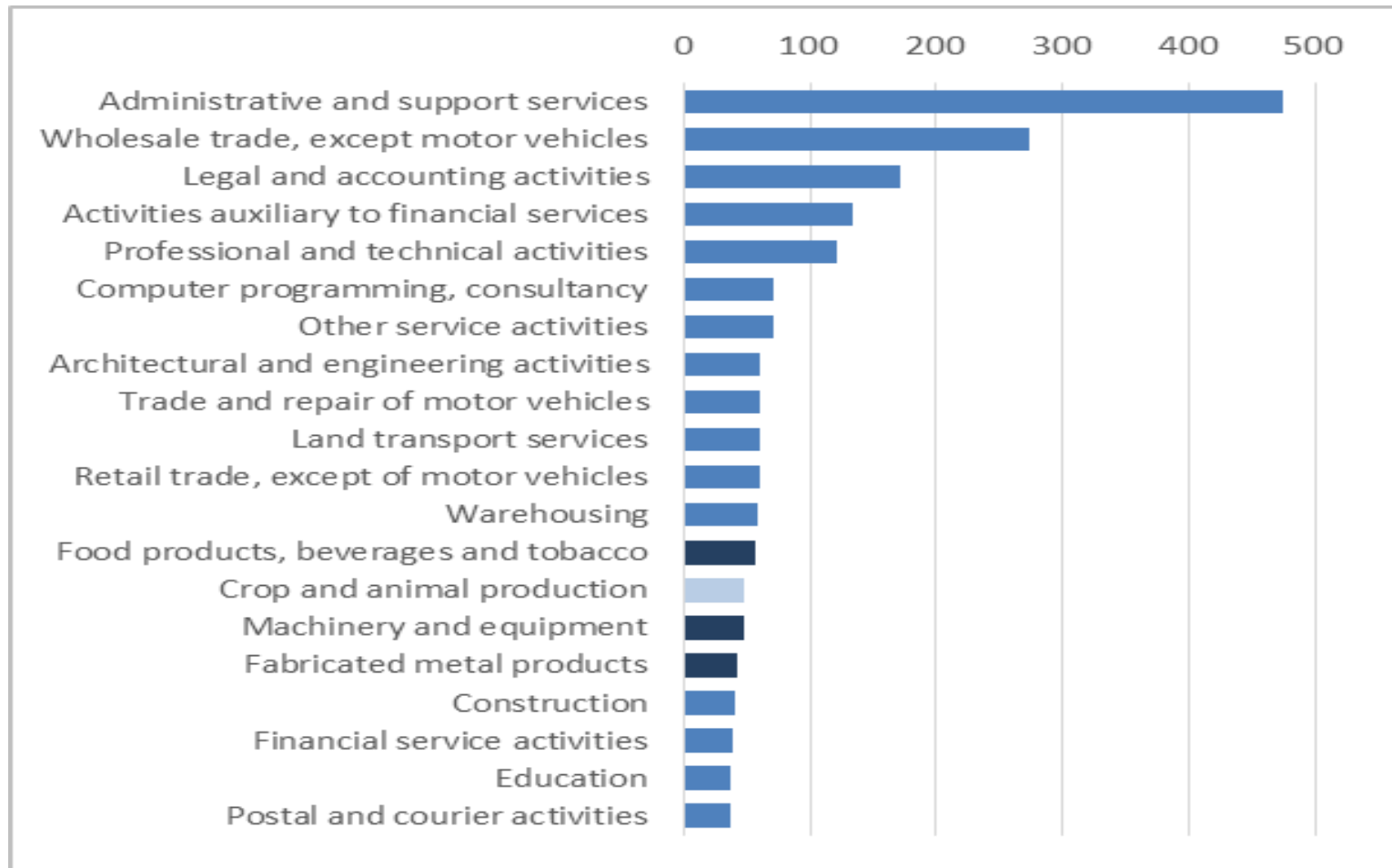
- UK regions → 10%-17% of regional GDP
- Irish regions → 10% of regional GDP
- German regions → 4.5%-6.4% of regional GDP
- Dutch regions → 3.5%-5% of regional GDP
- Belgian regions → 2.8%-4% of regional GDP
- French regions → 1.8%-2.7% of regional GDP
- Italian, Spanish, Greek → < 1% of GDP
- UK Brexit risk exposure = 12.2% of UK GDP
- EU Brexit risk exposure = 2.64% of EU GDP
- UK Brexit exposure risk is 4.6 times higher than the EU

# Sectoral Brexit Exposure Risk

- City-REDI Policy Briefing Series, December 2017
- “An Assessment of Brexit Risks for 54 Industries: Most Services Industries are also Exposed”
- Bart Los, Wen Chen, Philip McCann and Raquel Ortega-Argilés
- [https://blog.bham.ac.uk/cityredi/wp-content/uploads/sites/15/2017/12/City-REDI-Briefing-Template\\_Sectoral-Analysis-2.pdf](https://blog.bham.ac.uk/cityredi/wp-content/uploads/sites/15/2017/12/City-REDI-Briefing-Template_Sectoral-Analysis-2.pdf)



# UK Sectoral Risk Exposure



# UK Sectoral Risk Exposure

- In the UK as a whole, more than 2.5 million jobs are exposed to the trade effects of Brexit
- Annually, almost £140 billion pounds of UK economic activity is directly at risk because of Brexit
- Professional, scientific and technical activities, activities auxiliary to financial services and wholesale trade.
- Financial services are only exposed to 8% of the sector's GDP - consistent with the estimates for City job relocation to rest of the EU – and the aggregate effect on the UK economy of their exposure is only 0.33% of UK GDP

# UK Sectoral Risk Exposure

- Many important manufacturing and primary industries are highly exposed to Brexit, but so are many services industries (and not just the financial services industry)
- These services are not only exported directly to EU countries, but also sell intensively within domestic supply chains to UK manufacturing firms exporting to the EU
- Workers in the jobs at risk are on average slightly more productive than the average British worker – Brexit is likely to exacerbate the UK's productivity problems

# The Economic Impacts of Brexit on the UK, its Regions, its Cities and its Sectors

## **Regional Impacts of Brexit: Devolved Nations**

**Professor Kim Swales, Strathclyde University**

[j.k.swales@strath.ac.uk](mailto:j.k.swales@strath.ac.uk)

# The Long-term Economic Implications of Brexit for Scotland: An Interregional Analysis

*Gioele Figus, Katerina Lisenkova, Peter McGregor,  
Graeme Roy,  
J. Kim Swales*

*Fraser of Allander Institute, University of Strathclyde*

# Outline

- Introduce exogenous shocks to AMOSRUK, a Scotland-RUK multi-sectoral Computable General Equilibrium (CGE) model
- Trade shocks are taken from independent research
  - Two possible post-leave EU trade scenarios
    - Free Trade Area (FTA)
    - WTO rules
  - No change in trade deals with non-EU countries
- Fiscal impacts
  - Calculated from net contribution to the EU budget
    - Allocated to regions on per capital basis
- Don't consider effects of migration, direct productivity changes or endogenous policy responses

# Trade (1)

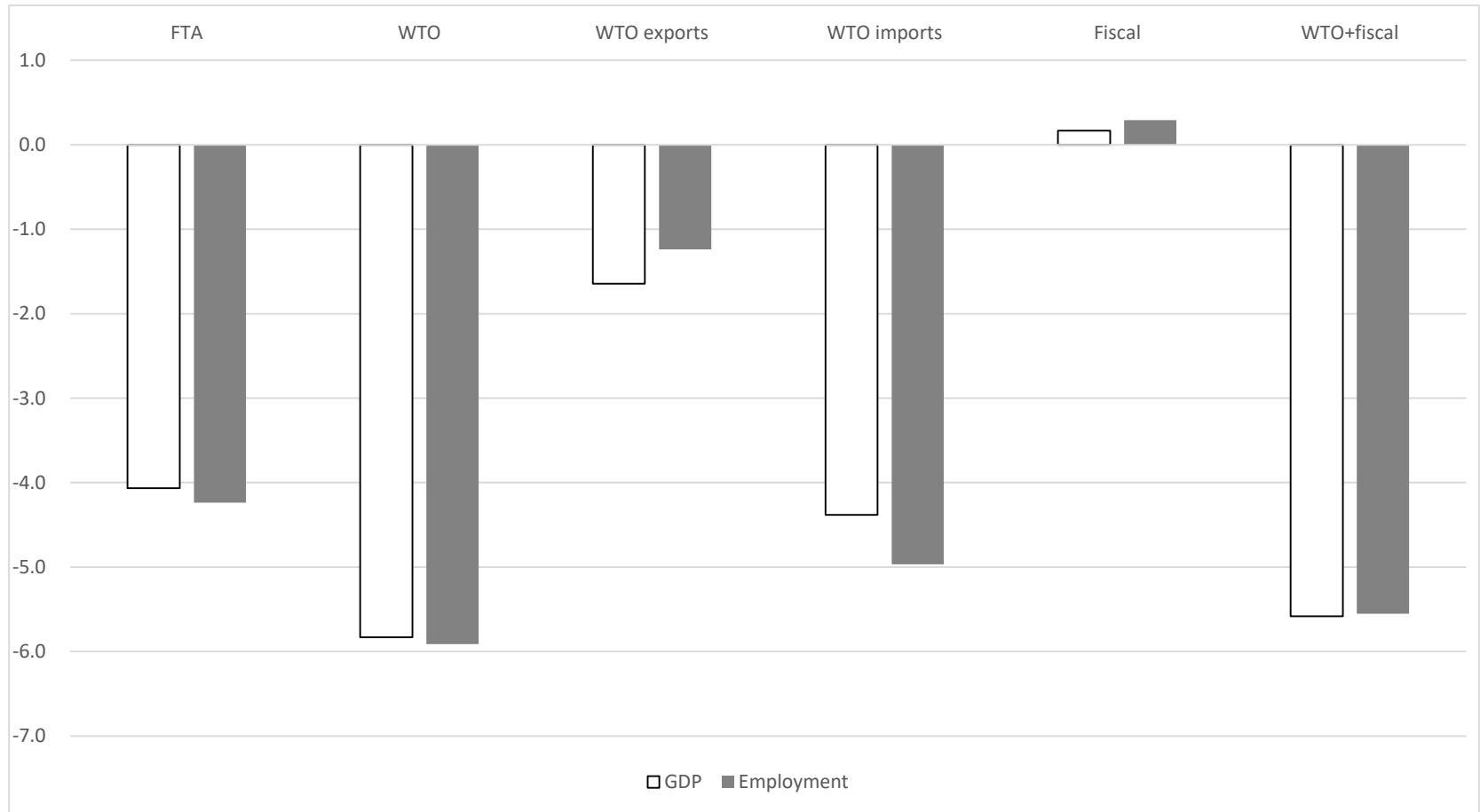
- Academic literature identifies a large impact of any limitation to trade
- Use National Institute estimates made by Ebell (2016)
- Calibrate the shock to our model to replicate these estimated impacts
- Shocks introduced gradually over 10 years
- Important that even though focus is Scotland, both Scotland and RUK modelled.

# Impact of leaving the EU on Scottish EU trade

	Estimated reduction in EU trade	
	Goods	Services
FTA Scenario	-40%	-63%
WTO Scenario	-61%	-63%



# Percentage change in Scottish GDP and employment after 10 years



# Trade (2)

- Import impacts are greater than exports
  - Restricting EU imports has a larger negative effect than reduced EU exports.
  - Only positive impact from protectionism is:
    - If restricted to consumer goods
    - Fix the nominal wage: worker/consumers accept lower real wages
- Impacts on RUK greater because of greater EU export intensity (30% higher)
- Just less than 20% of negative Scottish impact comes from reduced activity in RUK.

# Fiscal effects

- Positive but very small
- In fact the total tax-take falls as a result of negative effects on activity, so government expenditure falls

# Comments

- Extensive uncertainty about the negotiated post-leave situation
- Given the governments stance, all standard national macro-models predict negative impact.
- Clearly there are also differential regional effect
- In our model extra-regional trade major driver
  - EU intensity of exports and imports
  - Inter-regional demand spill-overs
- Aspects we haven't considered could be equally important
  - Differential regional migration impacts
  - Differential productivity effects

Thanks for listening

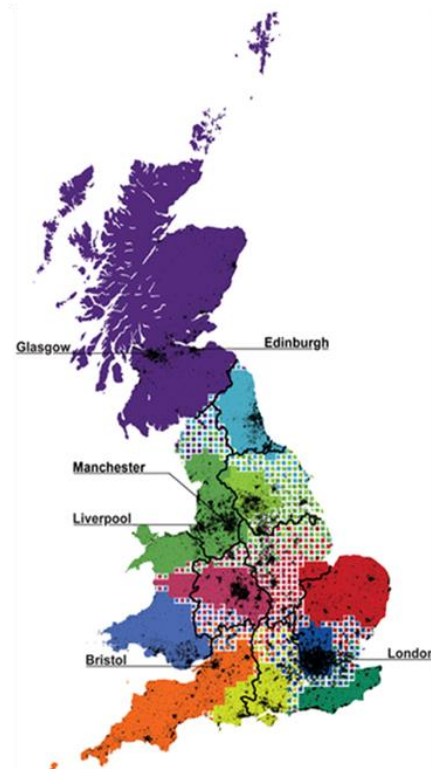
# The Economic Impacts of Brexit on the UK, its Regions, its Cities and its Sectors

## **Regional Impacts of Brexit: Devolved Nations**

**Jonathan Price**, Chief Economist, Welsh Government

[Jonathan.Price@gov.wales](mailto:Jonathan.Price@gov.wales)

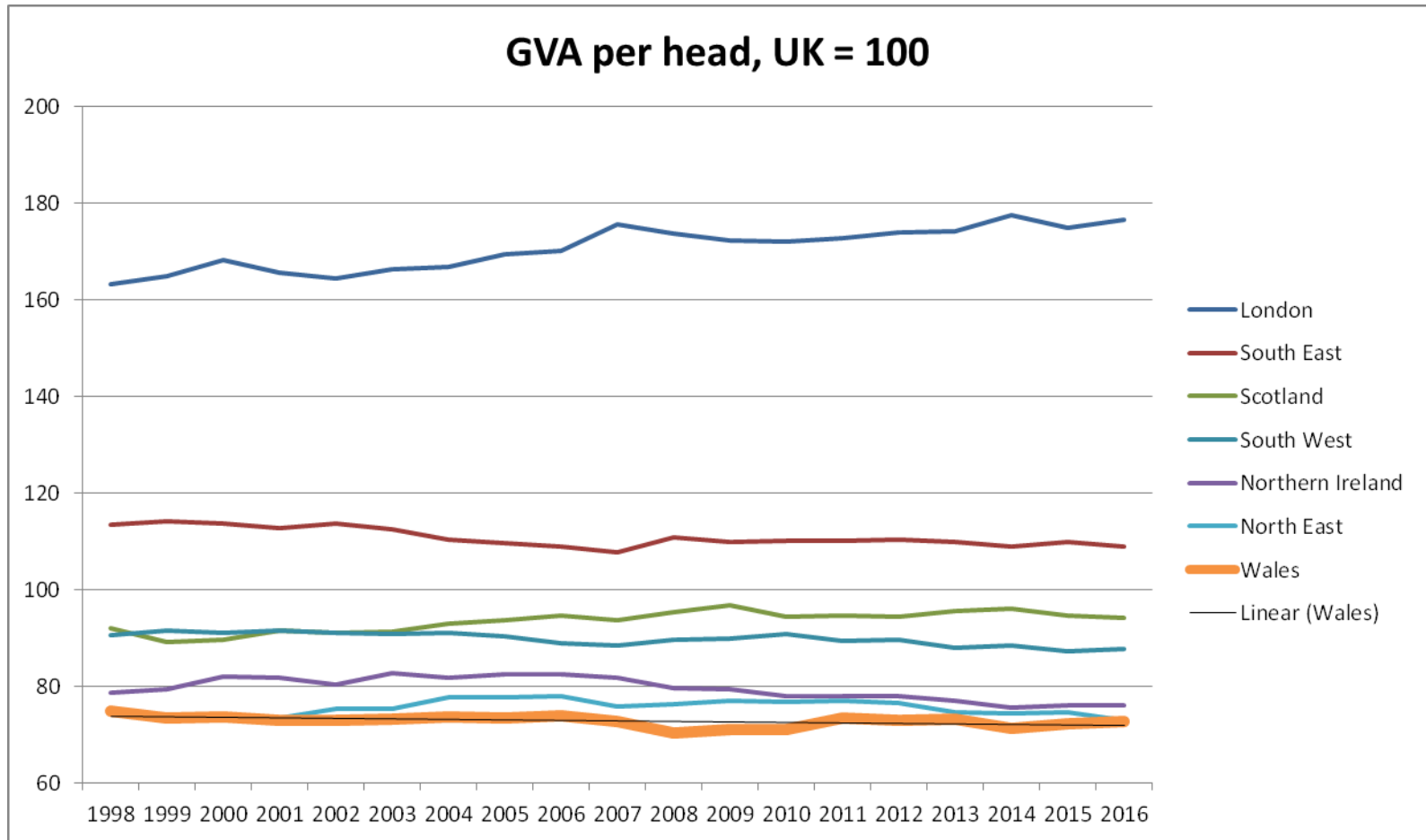
# Telecoms connectivity: Wales (particularly north and mid) closely integrated with adjacent English areas



Source:

Ratti C, Sobolevsky S, Calabrese F, Andris C, et al. (2010) Redrawing the Map of Great Britain from a Network of Human Interactions. PLoS ONE 5(12): e14248. doi:10.1371/journal.pone.0014248  
<http://www.plosone.org/article/info:doi/10.1371/journal.pone.0014248>

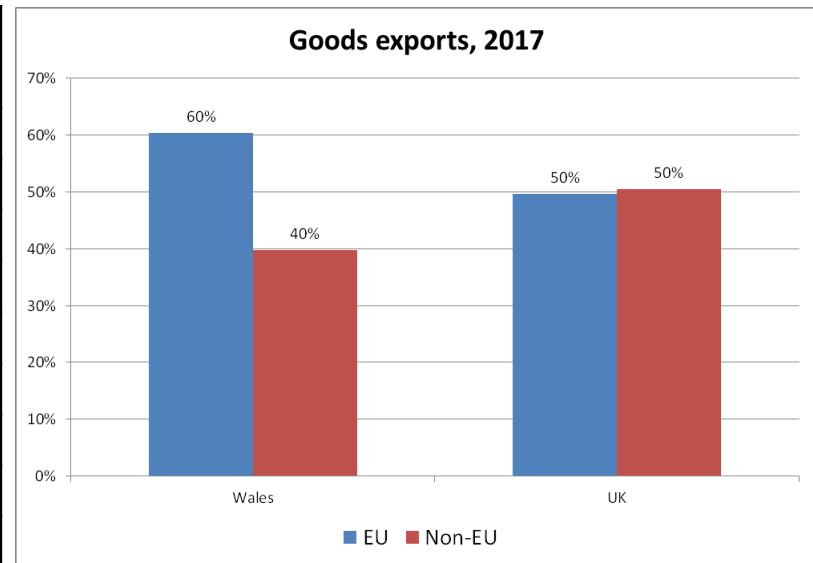
# GVA per head relative to UK: Wales and selected UK countries and regions





# Assessment of 2030 economic impact of Brexit on UK

Scenario	Organisation	Direct (% of GDP)	Total (% of GDP)
EEA membership	LSE	-1.3	
	NIESR	-1.8	
	HM Treasury		-3.8
Free Trade Agreement with EU	LSE		-7.9
	NIESR	-2.1	
	HM Treasury		-6.2
WTO rules	LSE	-2.6	
	NIESR	-3.2	-7.8
	HM Treasury		-7.5



## Welsh Government Publications on Economic Impact of Brexit

1. Overall Impact: “Securing Wales Future”:

[https://beta.gov.wales/sites/default/files/2017-01/30683%20Securing%20Wales%C2%B9%20Future\\_ENGLISH\\_WEB.pdf](https://beta.gov.wales/sites/default/files/2017-01/30683%20Securing%20Wales%C2%B9%20Future_ENGLISH_WEB.pdf)

2. Implications from Migration: “Brexit and the Fair Movement of People”:

[https://beta.gov.wales/sites/default/files/2017-09/Brexit%20and%20Fair%20Movement%20of%20People-%28EN%29main\\_WEB.pdf](https://beta.gov.wales/sites/default/files/2017-09/Brexit%20and%20Fair%20Movement%20of%20People-%28EN%29main_WEB.pdf)

3. Sectoral impacts: “EU Transitions and Prospects for Large and Medium Sized Firms in Wales”

<http://gov.wales/topics/businessandconomy/welsh-economy/eu-transition-and-economic-prospects-for-large-and-medium-sized-firms-in-wales/?lang=en>



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## **Regional Impacts of Brexit: Devolved Nations**

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Department for the  
**Economy**  
[www.economy-ni.gov.uk](http://www.economy-ni.gov.uk)

# EU Exit Analysis in Northern Ireland

**Shane Murphy**

**Chief Economist, Department for the Economy**



Creating a globally competitive economy that works for everyone

## Wider Preparations across NI Departments

- The work being carried out has been building up rapidly and has been a mixture of evidence gathering, analysis, understanding stakeholder issues/aspirations and informing decision makers.
- Working in tandem with other key NI Departments, DfE channels its work through a central a EU Future Relations Team.
- Appetite for information and evidence on NI from decision makers is intense.
- To ensure maximum impact NI focus has been on:
  - engaging with stakeholders to capture concerns and aspirations;
  - building and improving evidence base; and
  - engaging/informing decision makers and influencers.

## Some Key Issues...

- Commitment to avoid a hard border. This could be in one of 3 ways:
  - **Option A:** Agreement of the overall EU - UK relationship
  - **Option B:** In the absence of A above - agreement of specific solutions to address the unique circumstances of the island of Ireland
  - **Option C:** In the absence of an agreed solution - maintenance of the full alignment with those rules of the Internal Market and the Customs Union which, now or in the future, support N/S cooperation, the all-island economy and the protection of the 1998 Agreement (Draft NI Protocol – Withdrawal Agreement)
- A need to understand what avoiding a hard border means for:
  - Common Travel Area
  - Trade
  - Migration and the Labour Market

## Gathering the evidence

- Important to understand the key issues and collate the evidence base to set out NI's (often unique) position.

- Key areas of our analytical focus include:

Common Travel Area

Trade

Migration and Labour Market

- Working closely with UKG, other NI Departments, NISRA, INI, Intertradelreland and capturing stakeholder views.

## Selection of publications to date

### Common Travel Area

- Background Evidence on the movement of people across the Northern Ireland-Ireland Border (March 2018)
- Cross Border Movements: Additional Analysis, Northern Ireland Life and Times Survey (March 2018)

### Trade

- InterTradeIreland: Potential Impact of WTO Tariffs on Cross-Border Trade (June 2017)
- InterTradeIreland: Cross-Border Trade & Supply Chain Linkages (2018)

### Migration and Labour Market

- An Analysis of Migrant Workers from the Northern Ireland Census (March 2018)
- Northern Ireland Migration, Labour and Skills (March 2018)

Source: <https://www.economy-ni.gov.uk/articles/eu-exit-analysis>

# Common Travel Area





## CTA – In just a few figures...

# IRELAND'S FRICTIONLESS BORDER

The scale of North-South movement on the island of Ireland



**118,000**

vehicle crossings daily in May 2017



**900,000**

cross-border coach passenger  
journeys in 2016-2017



**868,500**

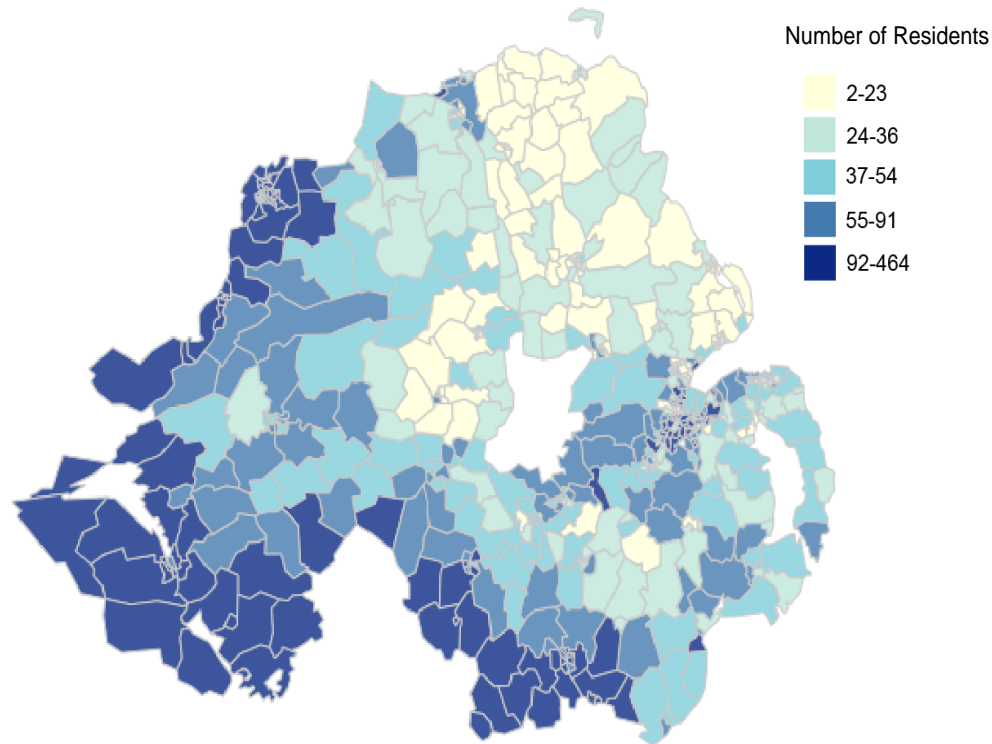
cross-border rail passenger  
journeys in 2016-2017

**110**  
million

Northern Ireland-Republic of Ireland border  
crossings annually, the majority by private vehicle  
Infographic courtesy of Irish Independent

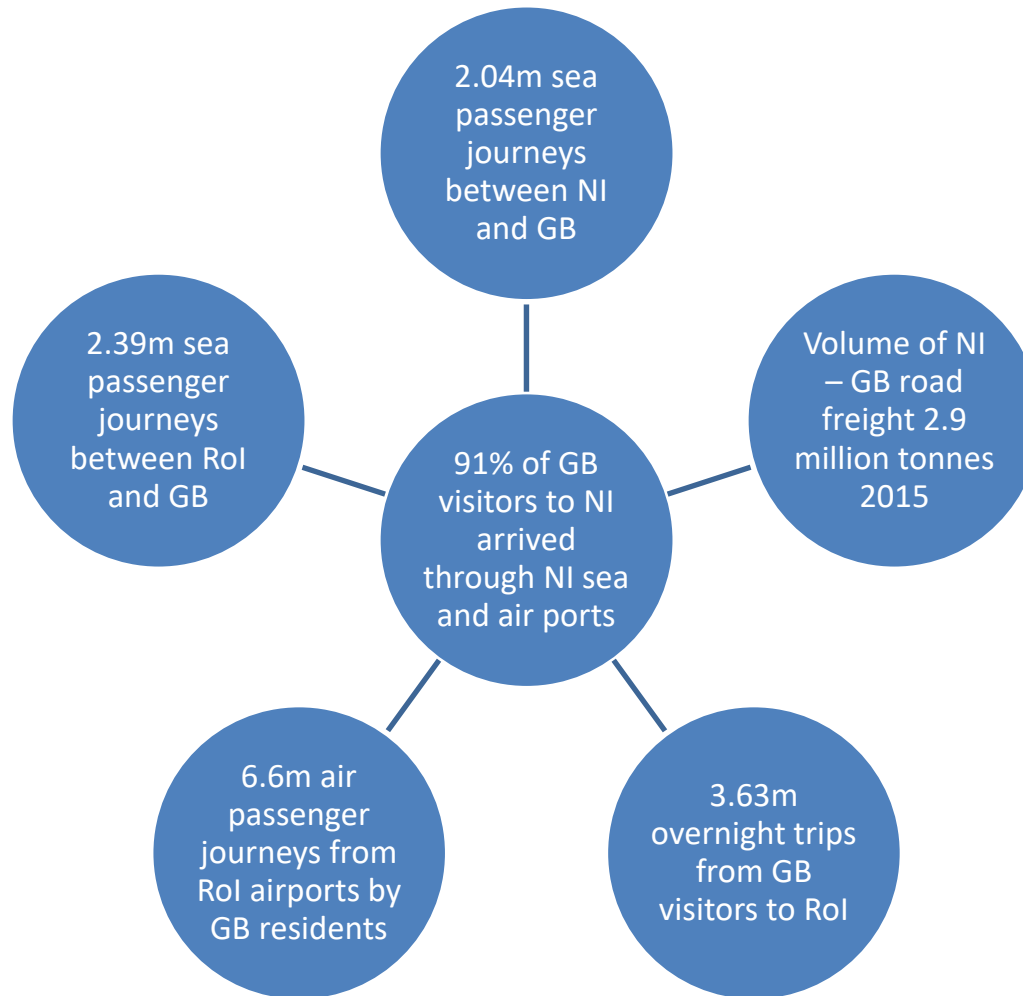
## CTA – In Pictures...

Number of residents living in Northern Ireland who were born in the Republic of Ireland by ward, 2011



Source: Northern Ireland Census 2011, NISRA

## CTA – A glance East and West...



# Trade

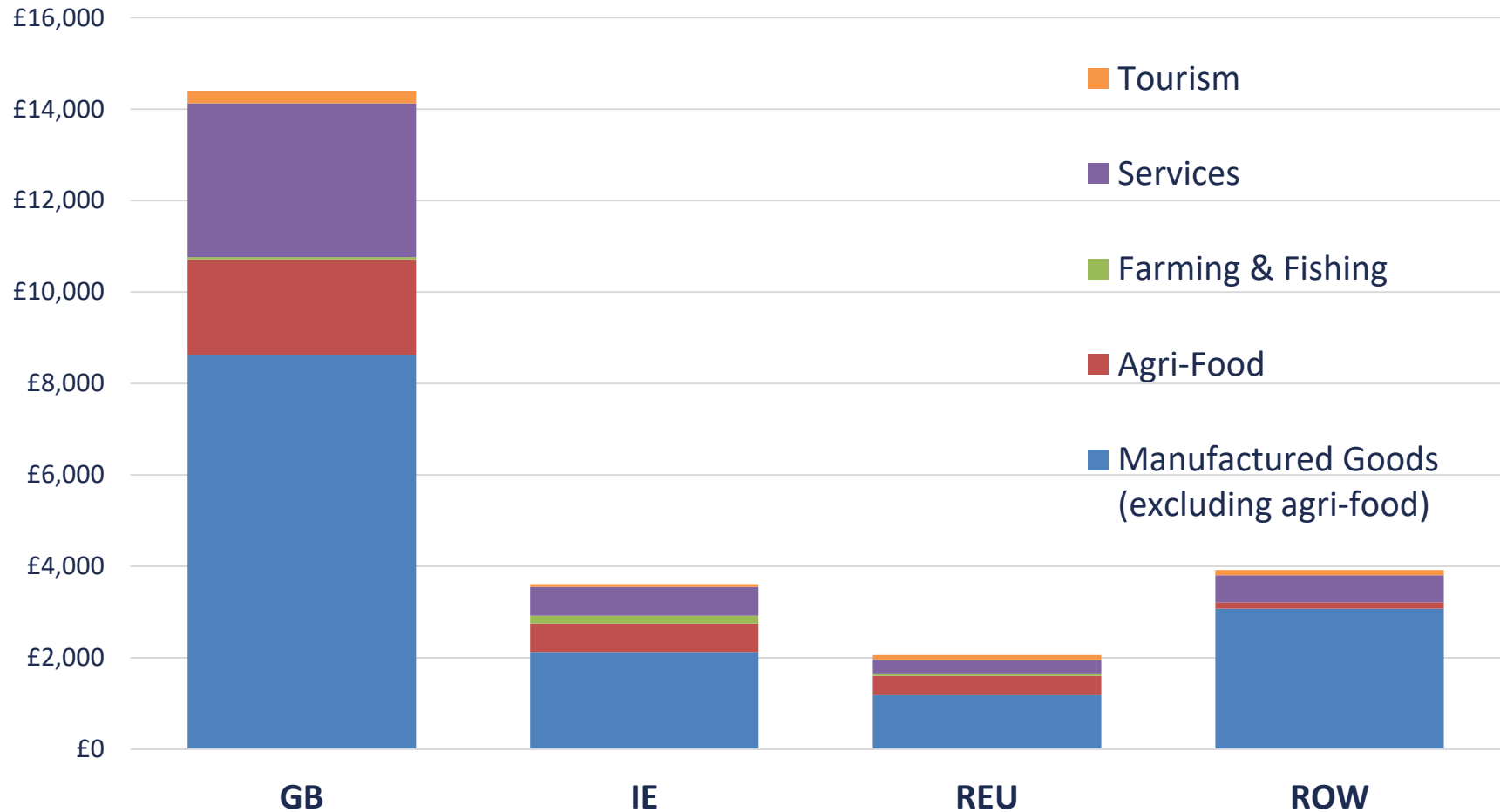
## Trade Analysis

Trade Analysis has been taken forward along the following themes:

- Full Profile of Exports & Exporters
- Trade N-S and E-W
- Implications of a No Deal Scenario for NI
- Understanding Supply Chain Impacts
- Impacts on Existing FDI
- Wider Preparedness / Developing a trade capability

# Key Markets for NI...

Total Value (£million) of NI Sales & Exports by Broad Destination and Activity 2015



## Trade with GB and IE - Key Messages

- GB is the biggest market for businesses in NI – sales to GB were worth 1.5 times the value of all NI exports, and nearly 4 times the value of exports to Ireland in 2015.
- But, over 5,000 businesses in NI exported goods to Ireland in 2015, one and a half times as many as sold goods to GB, most of which are small companies with fewer than 10 people.
- Much of this trade with Ireland has the characteristics of “Local Trade”.
- Also the sale of finished products to GB relies upon cross border trade in raw materials and components within integrated supply chains.
- So trade with both GB and Ireland are vital to NI’s economy.

# Migration and Labour Market

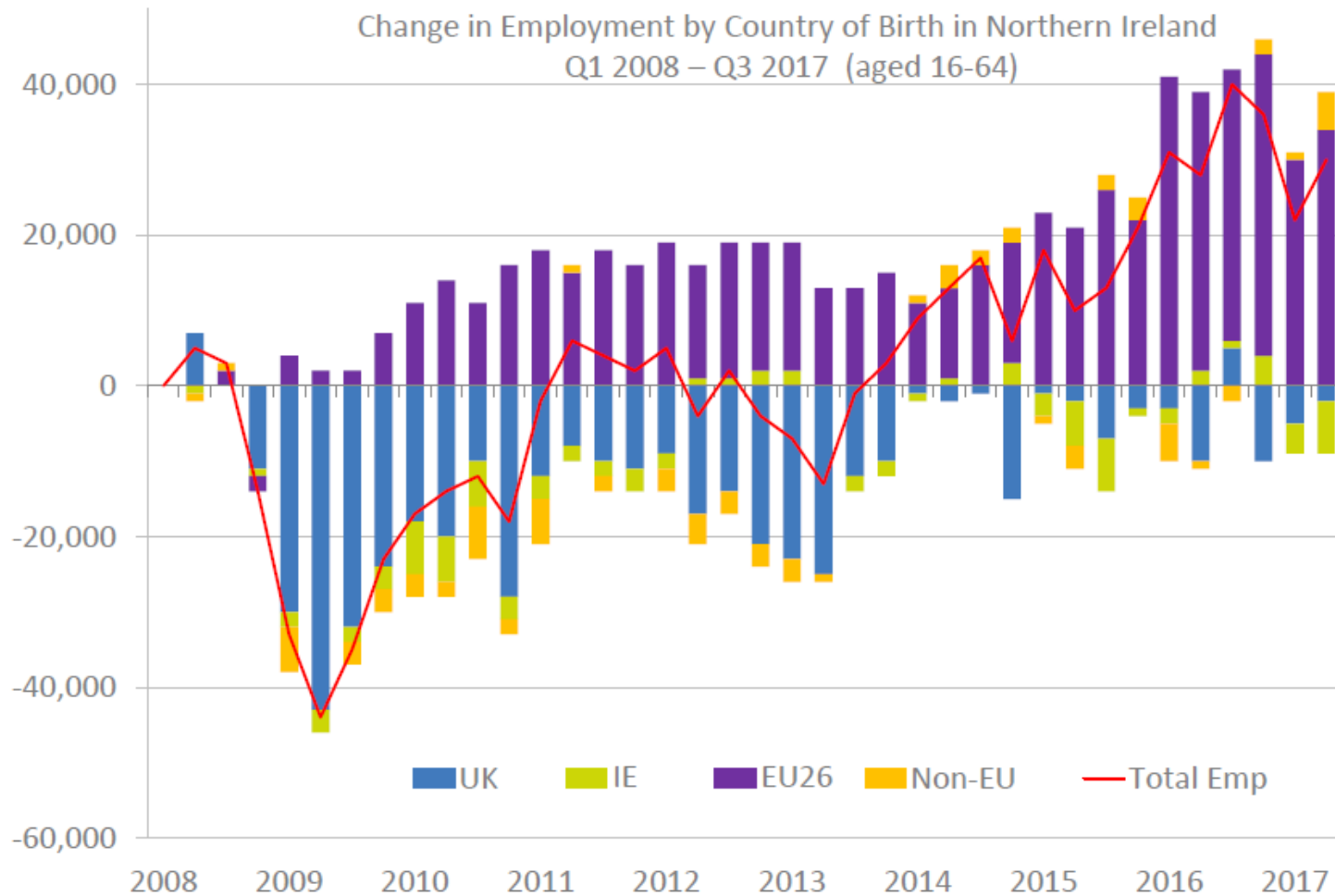
Source: <https://www.economy-ni.gov.uk/articles/eu-exit-analysis>



## Migrant labour – some key statistics

- Migrants in NI are largely EU migrants – 7% EU, 2% Non-EU (NISRA, LFS October – December 2017).
- Key sectors in NI which employ staff from the EU are:
  - **Food and drink** – 22%
  - **Manufacturing** – 11.5% (with a particular reliance in food manufacturing where 24% of the NI workforce was from the EU)
  - **Hospitality** – 9.5%
  - **Scientific, research and development** – 8.5%
  - **Computer programming, ICT consultancy** – 6%
- Migrants less likely to own their own home (EU26 - 22%) and therefore more likely to be highly mobile.
- Of the EU26, 44% from Poland, 17% from Lithuania, 8% from Germany.

# Employment growth – Large migrant labour contribution



## Migrant Labour - Key messages from analysis / stakeholders

- Access to skills/labour a high priority issue for employers.
- Need to retain access to skills at all levels - Public & Private Sectors.
- Border dimension - ability of NI businesses to attract/retain labour vis-à-vis counterparts in RoI.
- Access to skills & market access are closely interlinked – both impacting on long term competitiveness.

# Thank You



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## **Regional Impacts of Brexit: Devolved Nations**

**Professor David Bell, Stirling University**

**[d.n.f.bell@stir.ac.uk](mailto:d.n.f.bell@stir.ac.uk)**

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# Brexit: Policy Challenges for the Devolved Nations

David Bell

# Key Economic Policy Issues for the Devolved Nations

1. Migration
2. Structural Fund Replacement
3. Agricultural Support

# Devolved Governments Response

Extensive Analysis of Implications of Leaving EU  
particularly in Scotland

Some Proposals for Post-Brexit Policies  
particularly in Wales  
also local government  
invariable seeking additional devolution of powers



# The MAC Committee – Interim Report

“Demography does not respect administrative and political borders.” – statement based on ONS projections

Migration only has a small effect on dependency ratios while ..

“Rises in the pension age have a much larger impact on dependency ratios, though face the challenge of increasing employment rates among older workers.”

Sustaining population in remote areas – “The alternative would be to address the factors that make people leave these areas.”

“What is best for an individual employer is not necessarily best for the welfare of the resident population”

Source: [Migration Advisory Committee \(2018\)](#)

# Top 5 sectors by country/region for EEA migrants

Table 2.2. Top 5 sectors (MAC taxonomy) by region for EEA born share of the workforce (3 Year APS 2014-2016)<sup>†</sup>

	NE <sup>†</sup>	NW	York & Humb.	E Mid	W Mid	East	Lond.	SE	SW	Wales	Scot.	N.I. <sup>†</sup>
<b>Manufacture of Food and Beverages</b>		1 18.6%	1 26.2%	1 35.5%	1 26.1%	1 34.9%			1 33.9%	1 25.6%	1 19.9%	1 38.6%
<b>Construction</b>							2 26.8%					
<b>Warehousing</b>		2 14.3%	2 16.1%	2 26.2%	2 24.2%	2 16.6%	4 13.9%	2 11.5%				
<b>Accom. and Hospitality</b>	1 4.2%	3 8.6%	5 4.2%		3 9.6%	3 9.5%	1 32.7%	1 14.9%	2 10.6%	2 5.4%	2 11.5%	
<b>Wholesale and Retail Trade</b>	3 2.5%										4 5.0%	3 7.5%
<b>Non-professional Admin &amp; Support Service Activities</b>			4 5.3%	4 8.1%		4 9.3%	3 19.0%	3 7.7%		3 3.9%	3 7.4%	
<b>Transport</b>		4 5.3%		3 9.1%	5 6.8%				3 7.0%			
<b>Other Manufacturing</b>	2 3.2%	5 5.1%	3 6.5%	5 8.1%	4 7.6%	5 8.3%	5 12.5%	5 6.6%	4 6.8%	4 3.4%	5 4.8%	2 11.4%
<b>Residential and Social Care</b>								4 7.5%	5 6.6%			
<b>Health</b>										5 3.1%		

<sup>†</sup>Only 3 sectors provided due to disclosure control, these are therefore not necessarily the top 3 sectors by EEA migrant share.

“the sectors most dependent on EEA workers do not vary that much between regions”

# Structural Funds and Agriculture

## Average Annual Spending on CAP and on Structural Funds (2014-2020 budget round)

	England	Northern Ireland	Scotland	Wales
CAP total spending (£m)	2,184	317	614	353
CAP spending per capita (£)	31	145	96	96
Structural Funds total spending (£m)	735	54	95	255
Structural Funds spending per capita (£)	13	30	18	83

**Sources:** Alan Matthews, 'The CAP budget in the MFF', capreform. eu;

House of Commons Library, 'CAP Reform 2014-20: EU Agreement and Implementation in the UK and in Ireland', November 2013;

UK Department of Business, Innovation and Skills, 'Making European funding work better for the UK economy', January 2013.

# Structural Funds to be replaced by “Shared Prosperity Fund”

“We will use the structural fund money that comes back to the UK following Brexit to create a United Kingdom Shared Prosperity Fund, specifically designed to **reduce inequalities** between communities across our four nations. The money that is spent will help deliver **sustainable, inclusive growth** based on our modern **industrial strategy**. We will **consult** widely on the design of the fund, including with the devolved administrations, local authorities, businesses and public bodies. The UK Shared Prosperity Fund will be cheap to administer, low in bureaucracy and targeted where it is needed most (Conservative Party, 2017, p. 37).

# Shared Prosperity Fund – How to Allocate?

Reflect need at UK level as EU Funding does (approximately)?

Or fixed allocation to home nations reflecting history – then use Barnett Formula to update, allowing devolved governments to allocate according to their assessment of need

However, rules required to maintain the integrity of the internal market e.g. constraints: on state aid, public procurement etc.

# Agriculture Post-Brexit – England

““Our aim is for public money to buy public goods. In 25 years’ time, we want cleaner air and water, richer habitats for more wildlife and an approach to agriculture and land use which puts the environment first. From 2022 onwards, a new environmental land management system will be the cornerstone of our agricultural policy, achieving improved biodiversity, water, air quality, climate change mitigation, and the safeguarding of our historic landscapes. This will allow us to fulfil our manifesto commitment to become the first generation to leave the environment in a better state than we found it.” ([DEFRA 2018](#))

# CAP Funding

## Agriculture Funding and Population Shares for UK Nations

	Share of EU agricultural funding (direct aids & EAFRD <sup>[8]</sup> )	Population share
England	58.9%	84%
Scotland	18.5%	8%
Wales	13.8%	5%
Northern Ireland	8.8%	3%

Source: Centre for European Reform

# Agriculture Post-Brexit

“Policy for England, however, may not suit conditions in the devolved nations. Around half of farm incomes in England come from the CAP but in Scotland it is three quarters, in Wales it is 80 per cent and in Northern Ireland 87 per cent.”

Source: [Michael Keating, Centre on Constitutional Change](#)



# Tariffs and Tariff-rate Quotas (OMG)

Beef: Ad Valorem Equivalent Tariff Rates on Beef:  
In quota: 0-20%, Out of quota: 49%-53%

**Table 2: The multiplicity and complexity of EU-28 beef and veal TRQs**

Quota Agreement and EU CN - HS 4 /6 Digit Product Codes BOVINE MEAT 0201-0202, 0206	Supplying Country	Quota (tonnes)	AV Tariff %	Fixed duties/t
	<b>High Quality total of which</b>	<b>66,750</b>		
<i>High quality fresh, chilled and frozen bovine meat - Hilton Beef Quota Product Specifications are precise and differ between allocated countries</i>	Australia	7,150		
	N Zealand	1,300		
	Paraguay	1,000	20	
	Argentina	29,500		
	Brazil	10,000		
	Uruguay	6,300		
	USA/Canada grain fed certif	11,500		
<i>Autonomous Beef Quota (grass or grain fed)</i>	Aus., NZ., USA, Can., Arg, Urug.	<b>48,200</b>	0	
<i>Frozen beef 09010-30.90; 020629-91</i>	Erga omnes	<b>53,000</b>	20	
Manufacturing beef quota, frozen boneless and bone-in beef: 022030, 0203010/3050, 0203090	Erga omnes	<b>63,703</b>	20	€994.5, 1554.3, 2138.4
	<b>Association Agreements</b>			
Bone-in fresh chilled and frozen cuts	Chile	<b>2,350</b>	0	
Baby Beef	Balkan Countries	<b>13,125</b>	0	
Fresh chilled and frozen beef and veal	EU Ukraine	<b>12,000</b>	0	

Sources: Annex 7 Commission Implementing Regulation (EU) no 927/2012 and various OJ notices regarding subsequent Agreements.

Source: Brexit and Tariff Rate Quotas on EU Imports: A Complex Problem

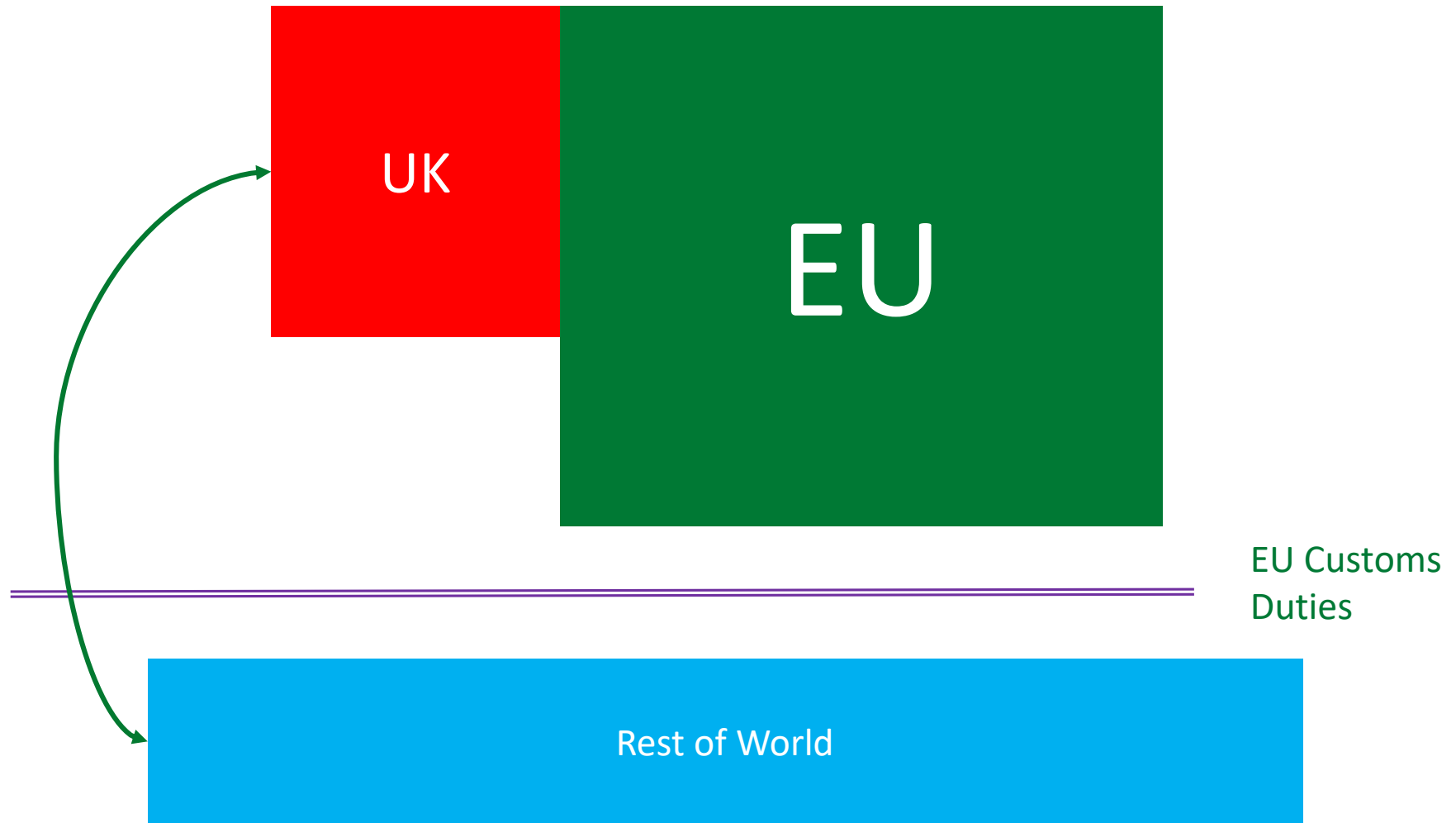
# Proposals?

The Scottish government has done a lot of analysis of the potential impact of Brexit. Now it needs to open serious debates on post-Brexit policy options for Scotland such as:

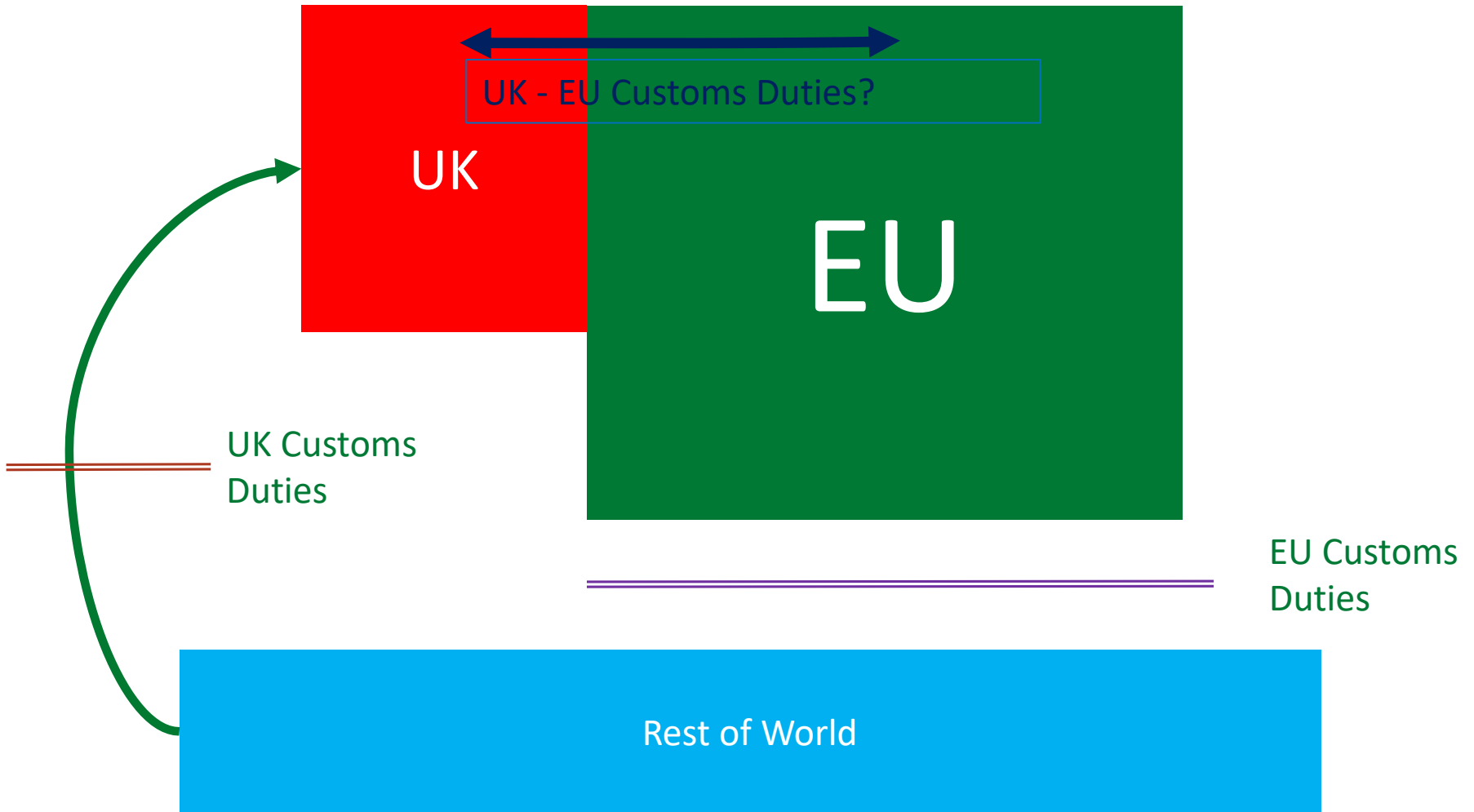
- How to change agricultural support systems
- What role Scotland plays in the Shared Prosperity Fund
- How powers derived from the EU will be funded

There is also a clear need for improvement in intergovernmental mechanisms to support these changes – including the Joint Ministerial Committee

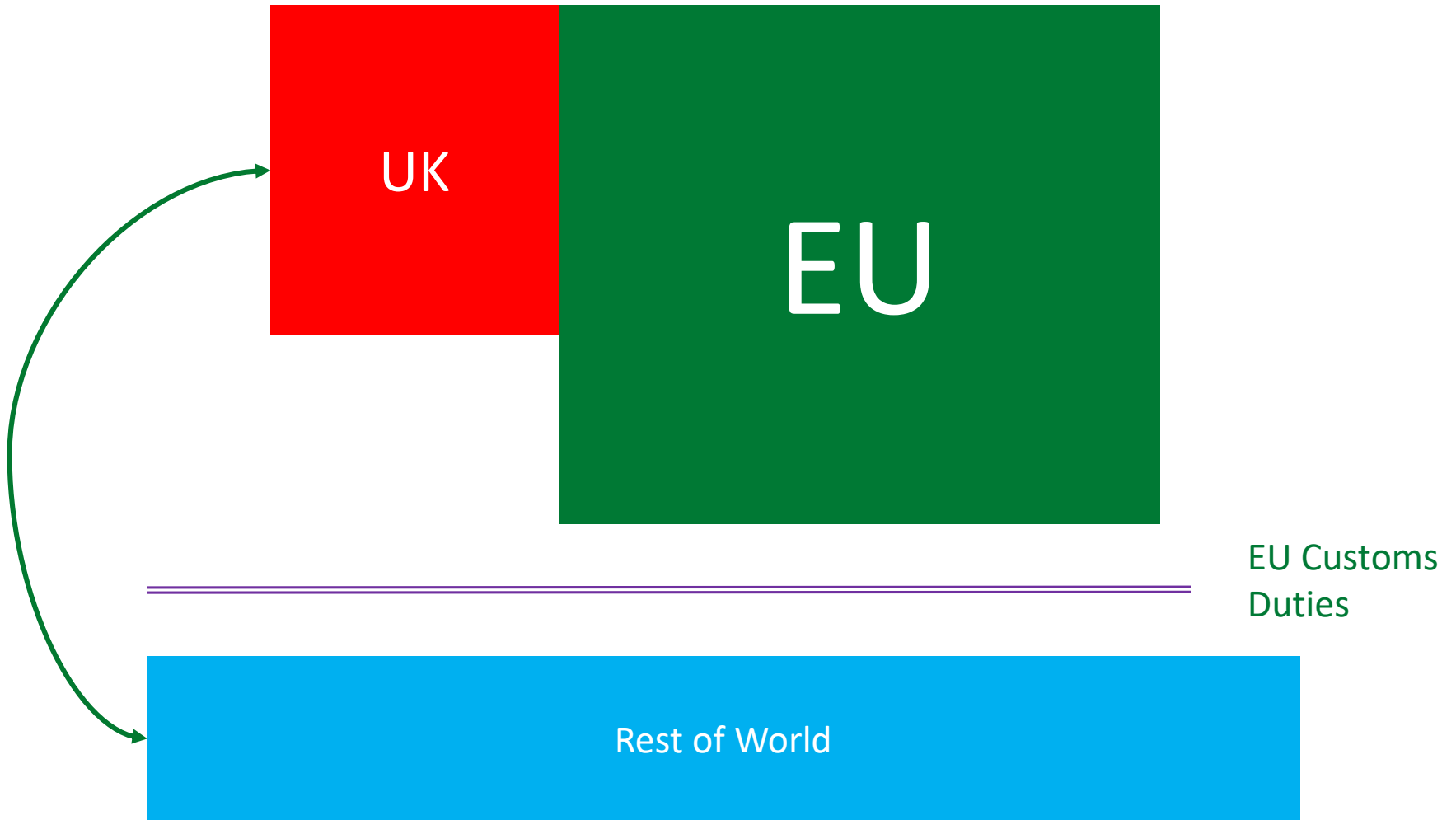
# Customs Union - applies to Goods, not Services



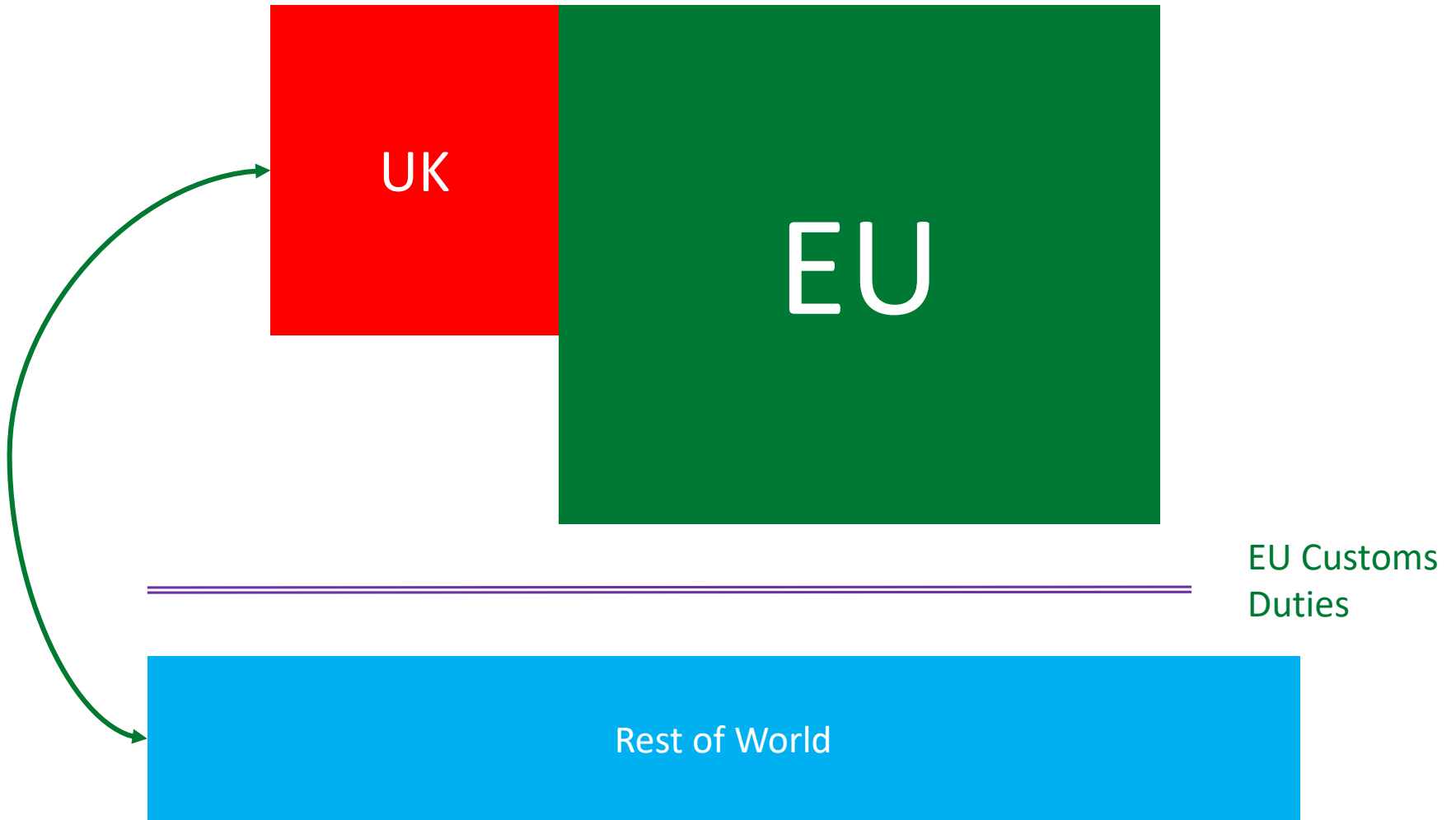
# Customs Union –



# Customs Union



# Customs Union





The Economic Impacts of Brexit on the UK, its  
Regions, its Cities and its Sectors

Jonathan.Price@gov.wales

## **Devolved nations: competitiveness challenges**

**Dr. Mark Thissen**, PBL Dutch Environmental Assessment Agency

**Professor Frank van Oort**, Erasmus University of Rotterdam

**Dr. Andrew Moxey**, Pareto Consulting

**Professor Aileen Stockdale**, Queen's University of Belfast

**Dr. Crispian Fuller**, Cardiff University



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[mark.thissen@pbl.nl](mailto:mark.thissen@pbl.nl)





PBL Netherlands Environmental  
Assessment Agency

# Brexit and Regional Economic Competitiveness

Impact on production costs due to  
tariff and non-tariff barriers to trade

**Mark Thissen (PBL),  
Frank van Oort (EUR) and  
Nicola Cortinovis (EUR)**

Thissen & Van Oort | The Economic Impacts of Brexit on  
the UK, its Regions, its Cities and its Sectors | 4-5-2018

Towards an integrated regional economic development strategy

Home Region report Interactive policy pages

This site is developed by PBL Netherlands Environmental Assessment Agency. It introduces a policy concept in which three types of regional economic policies (industry-, innovation- and competitiveness policies) are combined in order to enable the development of a comprehensive regional economic development strategy. This concept is the starting point to develop a regional economic policy strategy of Eastern Scotland. The website does not present such a ready-made regional development strategy but combines tailor made regional economic information into an integral view on the state of the regional economy which should be the starting point of the development of any such regional development strategy.

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Open the region report >

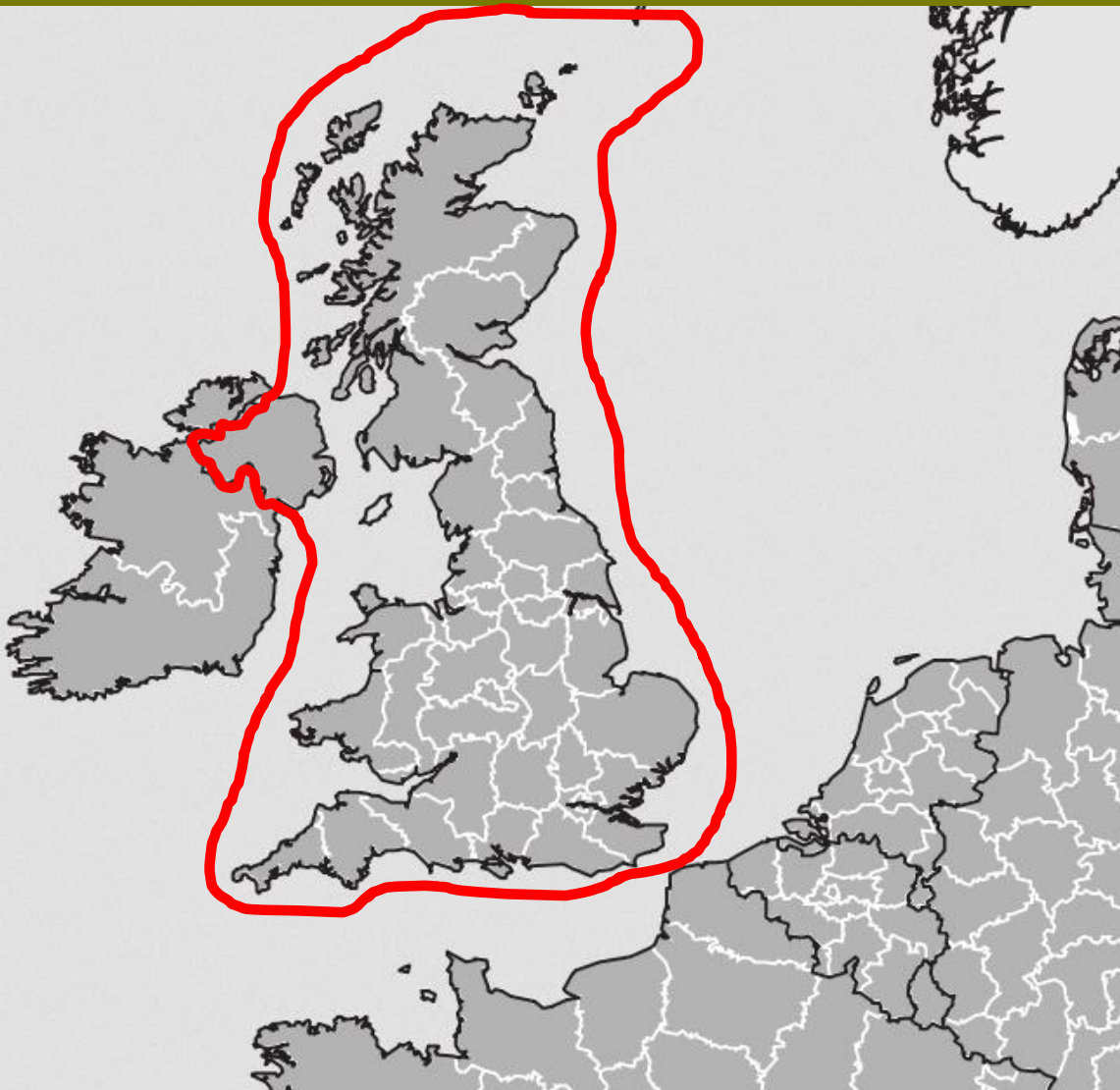
<http://themasites.pbl.nl/winnaars-verliezers-regionale-concurrentie/>

<http://www.torre.nl/eugrowth/bilingual4/>

# Exposure analysis versus Regional and sectoral production cost analysis of Brexit



PBL Netherlands Environmental  
Assessment Agency



Scenario Exposure analysis:

No trade flows crossing the red line, as long as EU countries are involved

Interregional Value chain IO-model for mapping of trade changes to labor income and value added:

$$x = Ax + F \longrightarrow x = (I - A)^{-1} F$$

Scenario production costs analysis:

Barriers (non tariff and tariff) to trade following the red line and based on Dhingra et al. (2017).

Interregional Cost chain price-model to determine the effect on the costs:

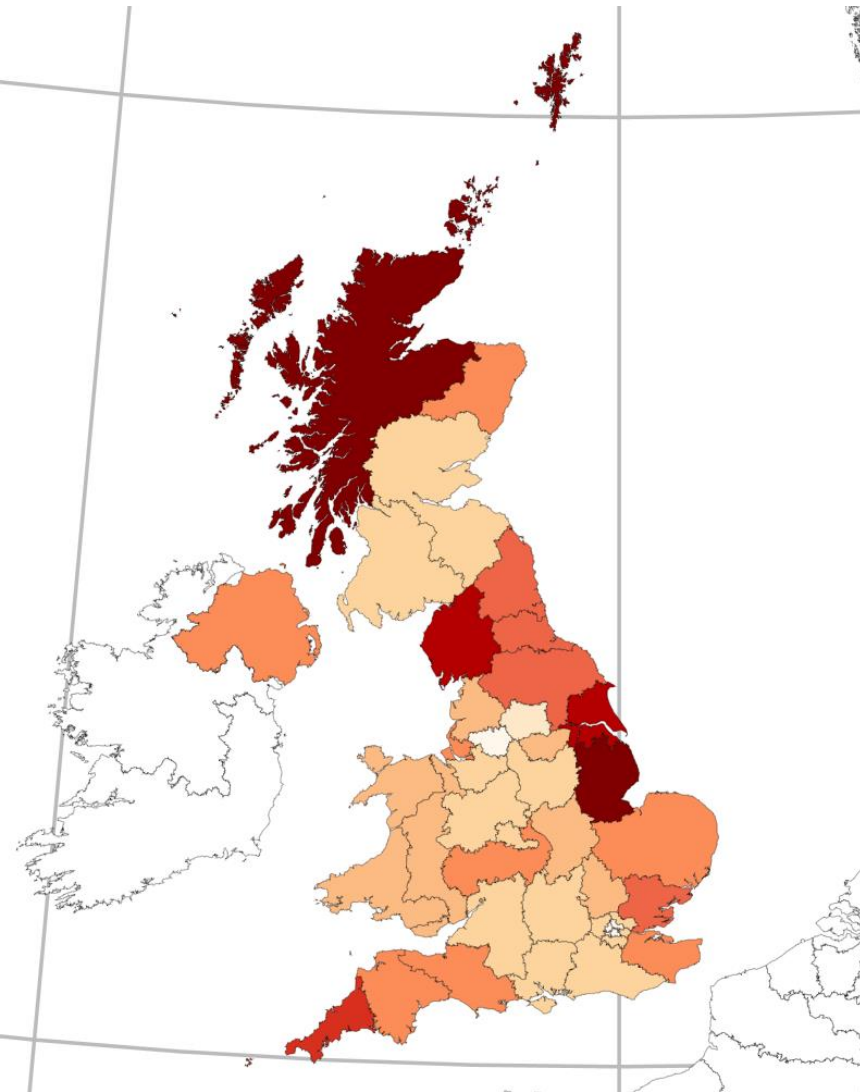
$$p' = p' A + v' \longrightarrow p = (I - A')^{-1} v$$

$v$  are prices for labor and capital; tariffs on the  $A$  matrix.

# Competitiveness loss: Production cost increase



PBL Netherlands Environmental  
Assessment Agency



## production cost increase:

Large regional variation with:

- Minimum of 0.46% (Inner London)
- Maximum of 1.33% (Highlands and Islands)

## Reason for regional variation:

- Production structure (indirect dependence\exposure to trade with the continent)
- Sector composition (higher impact on agriculture and manufacturing than on services)

- We use measure of interregional dependence introduced by Johnson and Noguera (JIntE, 2012)
- Data: Regionally disaggregated global input-output tables for **2013**

# Region and sector specific production cost increases (preliminary results)



PBL Netherlands Environmental Assessment Agency

	UKM2 Eastern Scotland	UKM3 South Western Scotland	UKM5 North Eastern Scotland	UKM6 Highlands and Islands
Average regional cost Increase	0,69%	0,70%	0,87%	1,33%
Crop and animal production, hunting and related service activities	4,8%	6,5%	5,5%	5,7%
Forestry and logging	4,3%	4,3%	5,5%	4,9%
Fishing and aquaculture	3,3%	3,2%	4,2%	4,0%
Mining of coal and lignite	3,2%	2,9%	2,7%	4,1%
Manufacture of food products	3,2%	2,8%	2,4%	4,0%
Manufacture of textiles	2,9%	2,7%	3,3%	3,9%
Manufacture of wood and of products of wood and cork, except furniture; manufa	2,4%	2,3%	2,4%	3,2%
Manufacture of paper and paper products	2,3%	2,3%	2,9%	3,1%
Printing and reproduction of recorded media	2,2%	2,3%	2,6%	2,9%
Manufacture of coke and refined petroleum products	1,6%	1,6%	2,1%	2,9%
Manufacture of chemicals and chemical products	1,6%	1,8%	2,0%	2,3%
Manufacture of basic pharmaceutical products and pharmaceutical preparations	1,5%	1,5%	1,8%	2,0%
Manufacture of rubber and plastic products	1,5%	1,5%	2,2%	2,7%
Manufacture of other non-metallic mineral products	1,5%	2,1%	1,6%	1,7%
Manufacture of basic metals	1,4%	1,4%	2,3%	3,1%
Manufacture of fabricated metal products, except machinery and equipment	1,3%	1,3%	1,9%	2,2%
Manufacture of computer, electronic and optical products	1,3%	1,2%	1,5%	2,2%
Manufacture of electrical equipment	1,2%	1,2%	1,7%	1,7%
Manufacture of machinery and equipment n.e.c.	1,2%	1,2%	1,6%	1,7%
Manufacture of motor vehicles, trailers and semi-trailers	1,1%	1,1%	1,7%	2,0%
Manufacture of other transport equipment	1,0%	1,1%	1,3%	1,4%
Manufacture of furniture	1,0%	0,9%	1,5%	1,7%
Repair and installation of machinery and equipment	1,0%	1,1%	0,9%	1,1%
Electricity, gas, steam and air conditioning supply	0,9%	1,0%	1,3%	2,0%
Water collection, treatment and supply	0,8%	0,8%	1,1%	1,5%
Sewerage	0,8%	1,0%	1,1%	1,3%
Construction of buildings	0,8%	1,2%	0,9%	1,0%
Wholesale and retail trade and repair of motor vehicles and motorcycles	0,8%	1,1%	0,7%	1,0%

# Region and sector specific production cost increases (preliminary results - continued)



PBL Netherlands Environmental Assessment Agency

	UKM2	UKM3	UKM5	UKM6
	Eastern Scotland	South Western Scotland	North Eastern Scotland	Highlands and Islands
Average regional cost Increase	0,69%	0,70%	0,87%	1,33%
Wholesale trade, except of motor vehicles and motorcycles	0,7%	0,7%	0,7%	0,9%
Retail trade, except of motor vehicles and motorcycles	0,7%	0,7%	0,7%	0,9%
Land transport and transport via pipelines	0,7%	0,7%	0,7%	0,9%
Water transport	0,7%	0,8%	0,7%	1,0%
Air transport	0,6%	0,6%	0,9%	1,2%
Warehousing and support activities for transportation	0,6%	0,6%	0,9%	1,1%
Postal and courier activities	0,6%	0,5%	0,8%	0,9%
Food and beverage service activities	0,5%	0,6%	0,6%	0,7%
Publishing activities	0,5%	0,5%	0,6%	0,7%
Motion picture, video and television programme production, sound recording and	0,5%	0,6%	0,5%	0,7%
Telecommunications	0,5%	0,5%	0,5%	0,6%
Computer programming, consultancy and related activities	0,5%	0,5%	0,4%	0,5%
Financial service activities, except insurance and pension funding	0,5%	0,4%	0,4%	0,5%
Insurance, reinsurance and pension funding, except compulsory social security	0,5%	0,5%	0,5%	0,6%
Activities auxiliary to financial services and insurance activities	0,5%	0,5%	0,6%	0,6%
Real estate activities	0,4%	0,4%	0,5%	0,6%
Legal and accounting activities	0,4%	0,5%	0,5%	0,6%
Architectural and engineering activities; technical testing and analysis	0,4%	0,4%	0,4%	0,6%
Scientific research and development	0,4%	0,4%	0,4%	0,5%
Advertising and market research	0,4%	0,4%	0,3%	0,5%
Other professional, scientific and technical activities	0,4%	0,4%	0,5%	0,6%
Rental and leasing activities	0,3%	0,4%	0,4%	0,5%
Employment activities	0,3%	0,4%	0,4%	0,5%
Travel agency, tour operator and other reservation service and related activities	0,3%	0,3%	0,4%	0,5%
Security and investigation activities	0,3%	0,4%	0,3%	0,4%
Public administration and defence; compulsory social security	0,3%	0,3%	0,3%	0,4%
Education	0,3%	0,3%	0,3%	0,4%
Human health activities	0,3%	0,3%	0,3%	0,4%
Residential care activities	0,2%	0,3%	0,3%	0,3%
Creative, arts and entertainment activities	0,2%	0,3%	0,3%	0,3%
Sports activities and amusement and recreation activities	0,2%	0,3%	0,2%	0,3%
Activities of membership organisations	0,2%	0,2%	0,2%	0,3%
Repair of computers and personal and household goods	0,2%	0,2%	0,2%	0,3%
Other personal service activities	0,2%	0,2%	0,2%	0,3%



- A large regional variation in competitiveness loss,
- Which is sector specific,
- And which may induce a need for place based sector specific competitiveness policies...



# Towards an integrated regional economic development strategy

About this publication

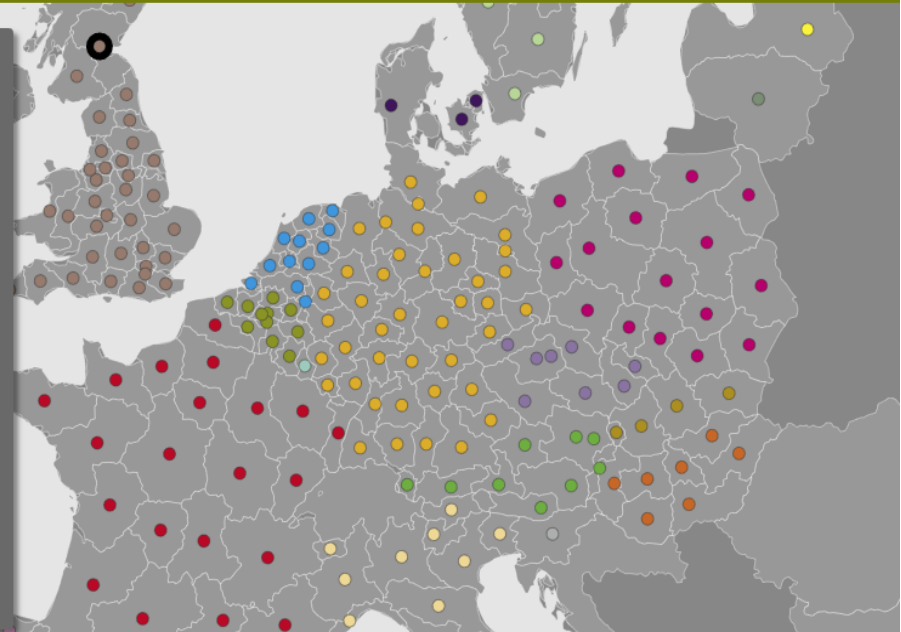
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Open the region report >

Go to the interactive policy pages >

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The interactive pages are presented in a logical sequence to better enable the development of an economic development strategy. First, the economic performance of the distinguished economic sectors in the region are **evaluated**. Second, the options for **industry policy**, **innovation policy** and the overarching **competitiveness policies** are discussed. The strong dynamics of economic **winners and losers** over time illustrates the importance of analysing a longer time period of growth.



The Economic Impacts of Brexit on the UK, its  
Regions, its Cities and its Sectors

Jonathan.Price@gov.wales

## **Devolved nations: competitiveness challenges**

**Professor Frank van Oort**, Erasmus University of Rotterdam

[vanoort@ese.eur.nl](mailto:vanoort@ese.eur.nl)



# Devolved administrations competitiveness challenges

*Regional competitive positioning in  
(international) economic networks*

Mark Thissen, Frank van Oort & Nicola Cortinovis



Planbureau voor de Leefomgeving



Universiteit Utrecht

## Recap McCann & Thissen:

- Levels of exposure to Brexit differ across regions; more exposed in UK and Ireland than in mainland Europe, more in industrial regions.
- From exposure to cost increase and competitiveness loss (given scenario's on tariffs in Brexit); arguably more in agricultural and industrial regions; region and sector specific, focused policies expedient.

# Questions:

- Measure competitiveness region and sector specific?
- Who do firms in UK regions compete with?
- In which sectoral and geographical markets?
- Nationally and (European) internationally?
- Who operates in similar markets as local UK firms?
- Who wins market shares from local UK firms?
- What regional-economic factors are related to competitive advantage?
- What factors may be mitigating Brexit impacts on competitiveness and are relevant for local policies?

# Ingredients needed for our competitiveness analysis

- Market overlap: potential competitors
- Gaining market shares: winning competitors
  - Sector and region specific (niches)
  - Regional-economic factors (of winners)

•

Edinburgh as an example.

# Who do local UK firms compete with?

- The *European Regional Competitive Index* answers:
- Potentially with all other regions in Europe
- On basic, efficiency and innovation dimensions
- Benchmarked with a large number of indicators.

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- For years, all regions looked at: Utrecht (NL).

# Utrecht?

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*Qualities that count*

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## Utrecht most competitive EU Region

### New regional competitiveness index demonstrates Utrecht strenghts.

To improve the understanding of competitiveness at the regional level, the JRC's Institute for the Protection and Security of the Citizen (IPSC), together with the Commission's Directorate-General for Regional Policy, has developed a new index to demonstrate the strengths and weaknesses of each of the 271 EU regions.

Utrecht ranked number one on the competitiveness index which incorporates a wide range of issues related to competitiveness including innovation, quality of institutions, infrastructure (including digital networks) and measures of health and human capital, and will be a crucial tool in assisting EU regions to set the right priorities to further increase their competitiveness. [Read more.](#)

### The province of Utrecht

Population: 1.2 million  
Size: 524 square miles  
Major cities: Utrecht and Amersfoort  
Distance: 30 minutes to Amsterdam International airport

Invest in Utrecht: Unique quality



# Who do local UK firms compete with?

- The *European Regional Competitive Index* answers:
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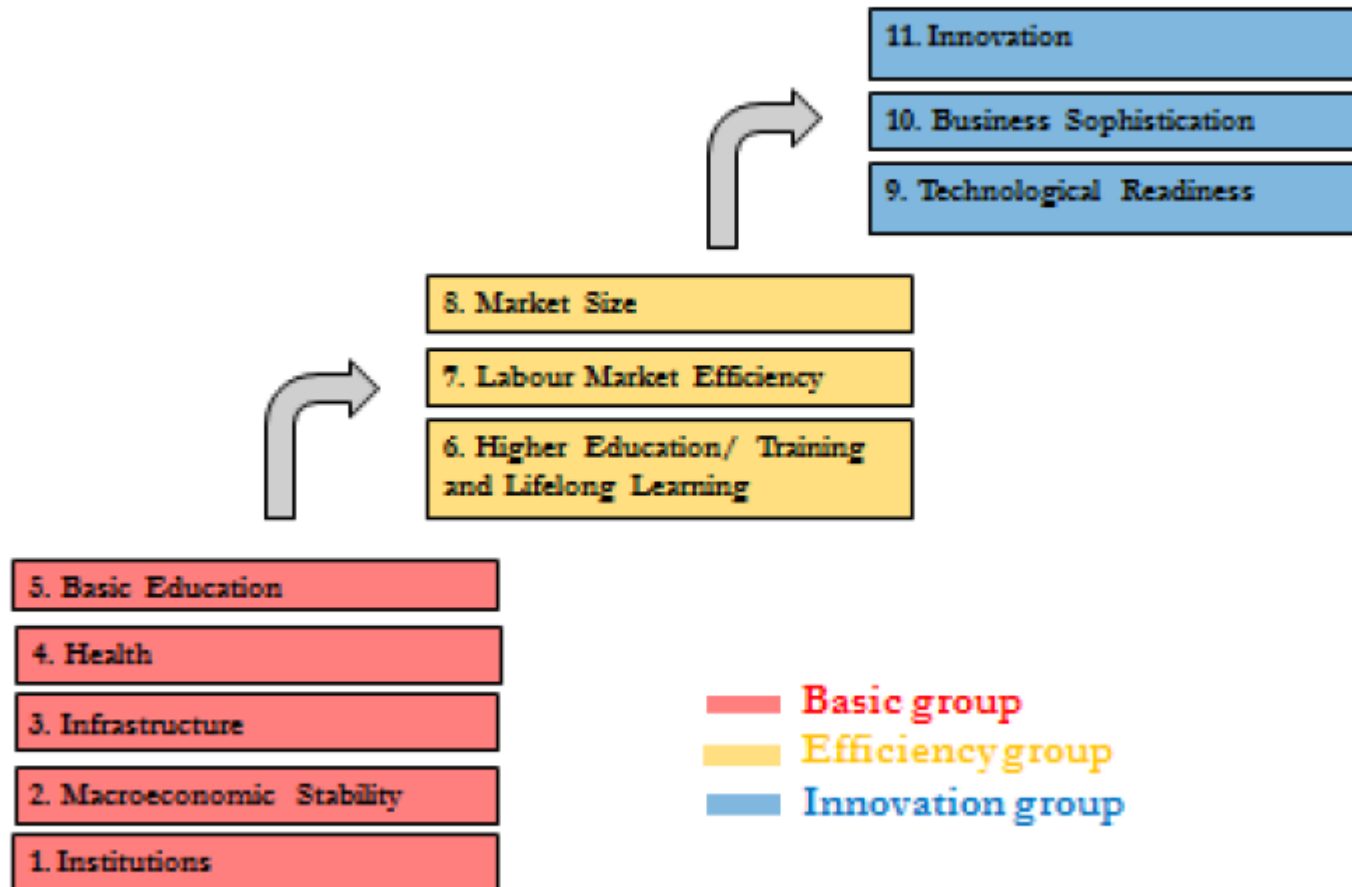




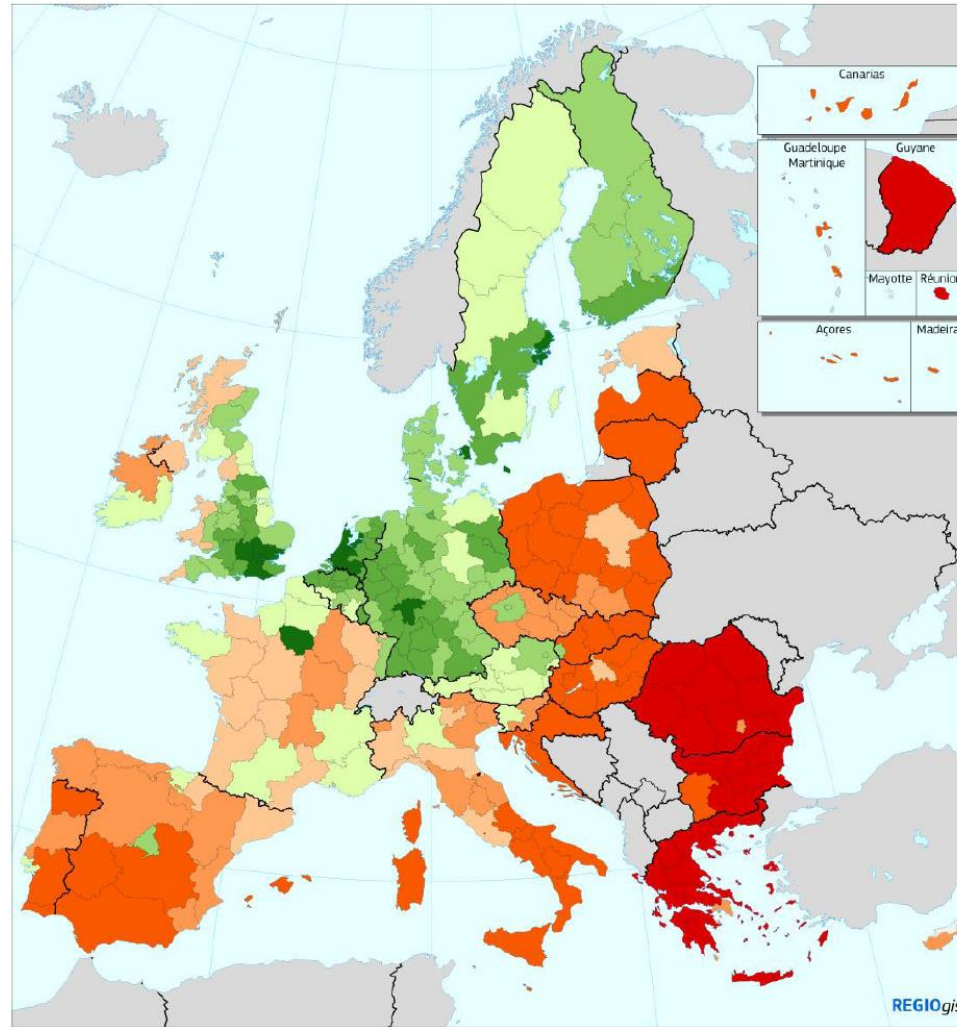
# Utrecht ahead of?



# The ERC Index 2013 / 2017

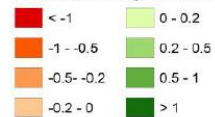


# The ERC Index 2013 & 2017



Regional Competitiveness Index - RCI 2013

Index: values range for low (negative) to high (positive)



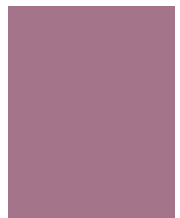
Source: Joint Research Centre and DG for Regional and Urban Policy

# Measuring\_competition

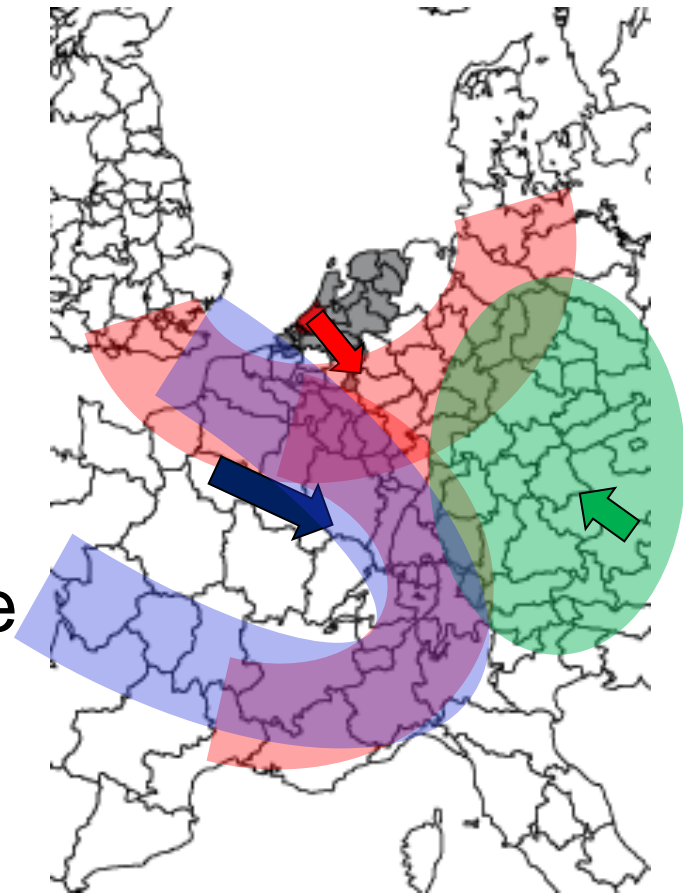
Utrecht exports

Paris exports

Vienna exports

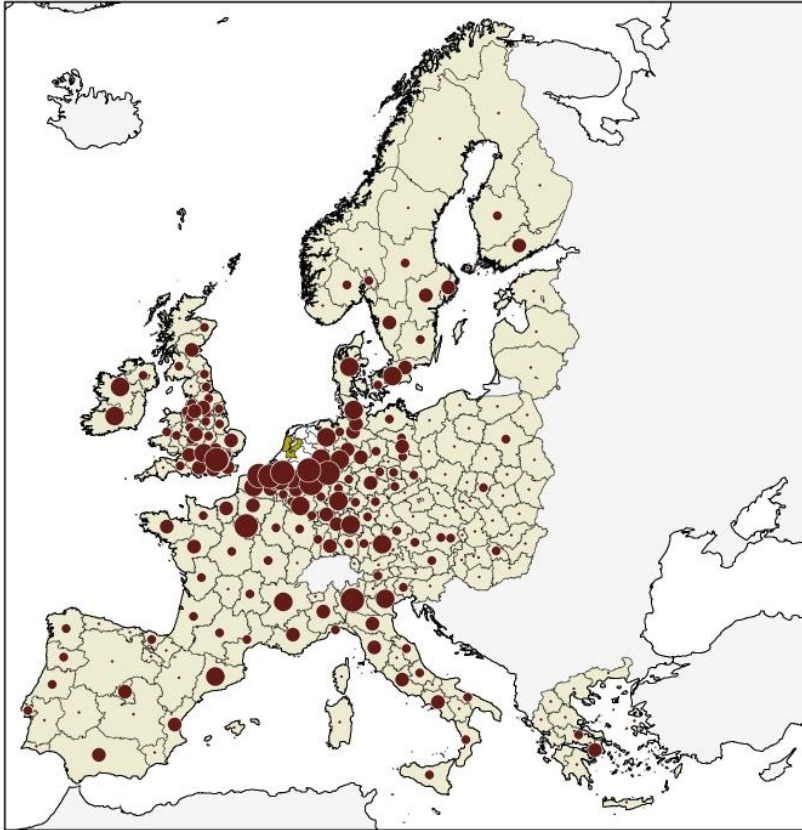


Utrecht and Paris have largest market overlap in export: competition

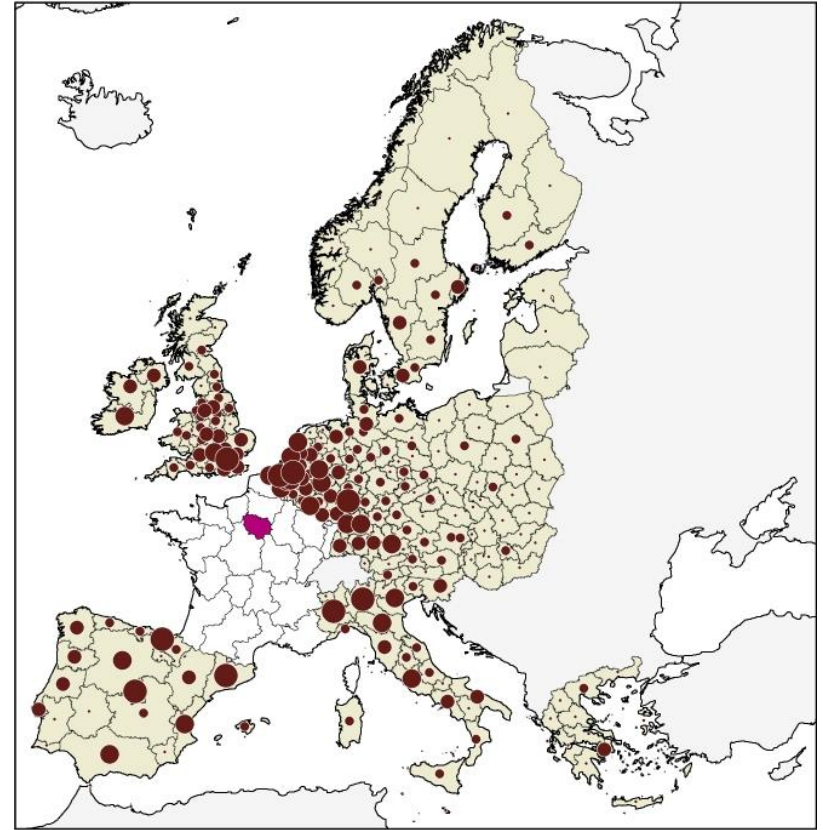


# European trade competition

**Exports Utrecht**



**and Paris**



# Measuring competition

- Competitors can also be national
- Cf. competition in attracting foreign direct investment
- Cf. competition in knowledge intensive collaborations (of firms and research institutes) and attraction of talent
- Such network relations are not symmetrical
- And indeed, network relations are sector and region specific, type specific (trade, FDI, knowledge), and probably also period specific (pre/post Brexit?)
- Regional growth is dependent on network positions.

# Still, growth is no guarantee...

Growth of region i: more products sold in region j

# Still, growth is no guarantee...

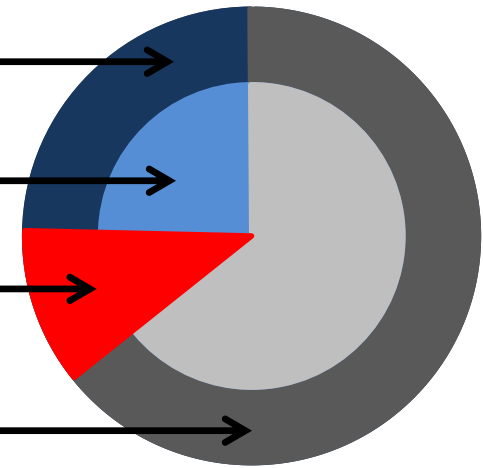
Growth of region i: more products sold in region j

Growth of region i due to demand-led growth in market j

Marketshare of region i in market j

Growth of region i due to structural growth  
(gain in market share in market j)

Growth of region j (the Market)



Market j

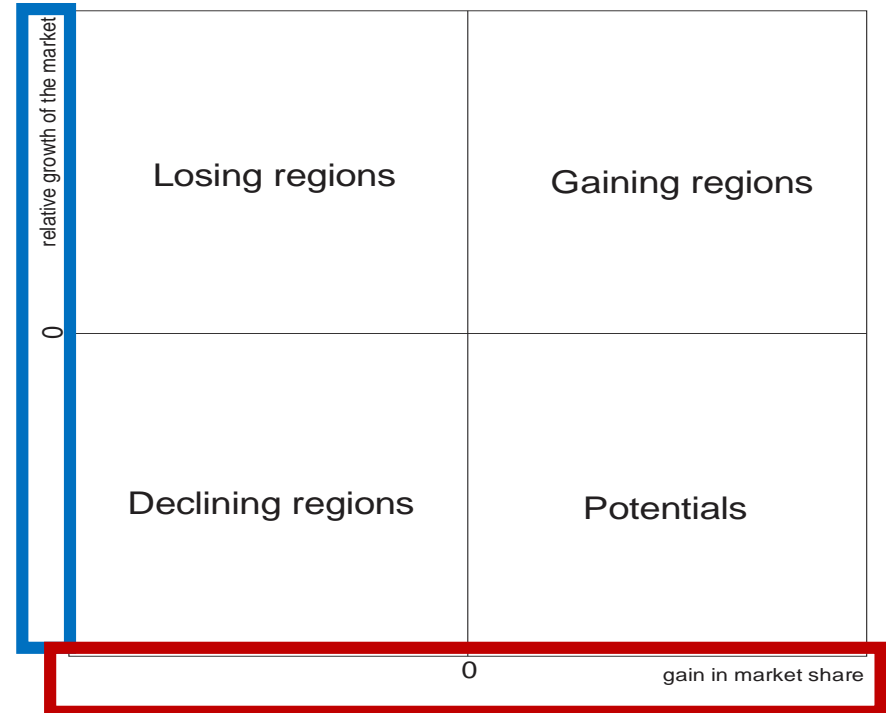


# “Good growth, bad growth”:

- 75% of regional growth in GDP is demand-led (GVC)
- 25% of growth is structural growth: source of local competitiveness
- Even specialized and growing regions may be losing competitive strength (“masked losing”)!
- It is all about niche strengths (again)
- Who exactly wins market share from your specialized local industries becomes important.

# “Good growth, bad growth”:

1. **Demand-led growth** (External factors):  
Growth by increased demand from **sales markets**



2. **Structural growth** (regional policy):  
Growth by increased competitiveness and gaining **market share**

# This gives the ingredients for our competitiveness analysis

- Market overlap: potential competitors
- Gaining market shares: winning competitors
  - Sector and region specific
  - Regional-economic factors winners  
(basic/efficiency/innovation)

•

Edinburgh as an example.





# Weights

		Total	Traditional production	Modern production	Energy	Distribution	KIBS	Fin	Oth. Serv.
<b>Location factors compared to competitors:</b>									
Macro-economy	GDP/capita	++	+	++	++	++	+++	++	+++
	Total factor productivity	+++	+	+++	+	+	+++	+++	0
Agglomeration	Total Population	++	+	++	+	++	++	++	+++
	Population density	+++	+	+	++	++	+++	++	+++
Connectivity	Connectivity road	++	++	++	+	+++	++	++	+
	Connectivity air	+++	+	+++	0	+++	+++	+++	0
	Congestion*	+	+++	++	+	+++	+	+	0
	Internet	+++	0	+++	+	+	+++	+++	++
Knowledge economy	High educated	+++	+	+++	+	+	+++	+++	+
	Public R&D	+++	++	++	+++	++	+	+	0
	Private R&D	+++	++	+++	++	+	++	+	0
	Patents	+++	++	+++	+++	+	++	0	0
Labour market	Participation	+	++	+	0	++	++	0	+++
	Unemployment*	++	++	+	++	++	+++	+	+++
	Education quality	+++	++	+++	+	+	+++	+++	++
	Education quantity	+++	+++	+++	++	++	++	+++	+++
Institutions	Government effectiveness	+	+	+	++	+	++	++	++
	Cost of Living*	+++	+	++	0	0	+++	+++	++
	Housing affordability	+++	++	+++	0	0	+++	+++	++
	Environmental quality	++	+	++	0	0	++	++	+
	Income taxes	+	0	++	0	+	+++	+++	+
	Total taxes	+	0	++	+	+	+	++	+
Amenities	Housing quality	+++	0	++	0	+	+++	+++	+++
	Housing environment	++	+	+	0	0	+++	+++	++
	Culture & restaurants	+++	0	++	0	0	+++	+++	++
	Recreation	+	+	+	0	0	++	++	++
	Nature	+	0	+	0	0	++	++	++



East-Scotland (Edinburgh)							
		Total	Total	Modern production	Finance	KIBS	Other services*
EU Competitors are:		Potential	Winning	Winning	Winning	Winning	Winning
		Dublin	London	Dublin	Aberdeen	Aberdeen	Vienna
		Paris	Glasgow	Glasgow	Barcelona	London	Utrecht
		Milan	Aberdeen	Leeds	Amsterdam	Athens	London
		MW Ireland	Dublin	MW Ireland	London	Madrid	Madrid
		Barcelona	Munich	Feiburg	Madrid	Gothenborg	Munich
		Amsterdam	Reading	Milan	Manchester	Barcelona	Leuven
		Madrid	Düsseldorf	Budapest	Leeds	Düsseldorf	Cardiff
		Rotterdam	Barcelona	Munich	Bristol	Seville	Paris
		Frankfurt	Amsterdam	Tübingen	Bologna	Stockholm	Barcelona
		Eindhoven	Athens	Karlsruhe	Seville	Luxemburg	Manchester
<b>Location factors compared to competitors:</b>							
Macro-economy	GDP/capita	o	-	o	o	-	-
	Total factor productivity	o	o	o	o	o	o
Agglomeration	Total Population	--	-	-	-	-	-
	Population density	--	--	-	--	--	---
Connectivity	Connectivity road	--	-	--	-	-	--
	Connectivity air	-	-	o	-	-	--
	Congestion*	o	+	o	+	o	+
	Internet	+	+	+	+	+	o
Knowledge economy	High educated	o	o	o	o	o	o
	Public R&D	+	o	o	o	o	o
	Private R&D	-	-	--	o	-	-
	Patents	-	o	-	o	o	o
Labour market	Participation	o	o	o	o	o	o
	Unemployment	o	o	o	-	-	o
	Education quality	o	o	o	o	o	o
	Education quantity	o	o	o	o	+	o
Institutions	Government effectiveness	+	+	+	+	+	+
	Cost of Living*	o	o	o	o	+	+
	Housing affordability	-	-	--	o	-	-
	Environmental quality	o	o	+	+	o	o
	Income taxes	+	o	o	o	+	+
	Total taxes	o	o	o	o	+	o
Amenities	Housing quality	o	o	+	o	o	o
	Housing environment	+	+	o	o	+	o
	Culture & restaurants	o	o	o	o	o	o
	Recreation	+	+	++	+	+	o
	Nature	++	++	++	++	++	++
		-	+	High importance		+++/-	Scores Edinburgh vis-à-vis competitors
		-	+			++/-	
		-	+	Low importance		+/-	
		o		Distinguishing (potential)		o	



East-Scotland (Edinburgh)		Total	Total	Modern production	Finance	KIBS	Other services*
EU Competitors are:		Potential	Winning	Winning	Winning	Winning	Winning
		Dublin	London	Dublin	Aberdeen	Aberdeen	Vienna
		Paris	Glasgow	Glasgow	Barcelona	London	Utrecht
		Milan	Aberdeen	Leeds	Amsterdam	Athens	London
		MW Ireland	Dublin	MW Ireland	London	Madrid	Madrid
		Barcelona	Munich	Feiburg	Madrid	Gothenborg	Munich
		Amsterdam	Reading	Milan	Manchester	Barcelona	Leuven
		Madrid	Düsseldorf	Budapest	Leeds	Düsseldorf	Cardiff
		Rotterdam	Barcelona	Munich	Bristol	Seville	Paris
		Frankfurt	Amsterdam	Tübingen	Bologna	Stockholm	Barcelona
		Eindhoven	Athens	Karlsruhe	Seville	Luxemburg	Manchester
<b>Location factors compared to competitors:</b>							
<b>Macro-economy</b>	GDP/capita	o	-	o	o	-	-
	Total factor productivity	o	o	o	o	o	o
<b>Agglomeration</b>	Total Population	--	-	-	-	-	--
	Population density	--	--	-	--	--	--
<b>Connectivity</b>	Connectivity road	--	-	--	-	-	--
	Connectivity air	--	--	o	-	--	--
	Congestion*	o	+	o	+	o	+
	Internet	+	+	+	+	+	o
<b>Knowledge economy</b>	High educated	o	o	o	o	o	o
	Public R&D	+	o	o	o	o	o
	Private R&D	-	-	--	o	-	-
	Patents	-	o	--	o	o	o
<b>Labour market</b>	Participation	o	o	o	o	o	o
	Unemployment	o	o	o	-	-	o
	Education quality	o	o	o	o	o	o
	Education quantity	o	o	o	o	+	o
<b>Institutions</b>	Government effectiveness	+	+	+	+	+	+
	Cost of Living*	o	o	o	o	+	+
	Housing affordability	-	--	--	o	-	-
	Environmental quality	o	o	+	+	o	o
	Income taxes	+	o	o	o	+	+
	Total taxes	o	o	o	o	+	o
<b>Amenities</b>	Housing quality	o	o	+	o	o	o
	Housing environment	+	+	o	o	+	o
	Culture & restaurants	o	o	o	o	o	o
	Recreation	+	+	++	+	+	o
	Nature	++	++	++	++	++	++
		-	+	High importance		+++/-	Scores Edinburgh vis-à-vis competitors
		-	+			++/-	
		-	+	Low importance		+/-	
		o		Distinguishing (potential)		o	

# Competitiveness East Scotland

- [Agglomeration]
- [Accessibility]
- Diversification: services (“Small London”), less X-overs
- Research base (for current small part economy, but also for societal challenges not yet in data?)
  - Labour market (flexibility, resilience)
    - Education (skills potential)
    - Housing (environment)
  - Amenities (for larger part economy)

# Not one size fits all

- Not the same recommendations for all regions
  - Edinburgh is aware of things in their regional development strategies:
    - CEC Economic Strategy
    - Edinburgh Economic Review (2016)
  - Edinburgh Science and Innovation Audit
    - Invest Edinburgh
    - Academic literature (Turok etc.)
- Out analysis shows urgency of policies in times of Brexit

SW Scotland (Glasgow)								
		Total	Total	Traditional production	Modern production	Energy	Distribution*	KIBS
EU Competitors are:		Potential	Winning	Winning	Winning	Winning	Winning	Winning
		Dublin	London	Dublin	Dublin	Rotterdam	Milan	Aberdeen
		Paris	Munich	Manchester	MW Ireland	Reading	London	London
		Milan	Dublin	Dortmund	Toulouse	Stockholm	Reading	Madrid
		MW Ireland	Reading	Leeds	Vienna	Eindhoven	Birmingham	Düsseldorf
		Barcelona	Stuttgart	Newcastle	Valencia	Liverpool	Düsseldorf	Gothenborg
		Munich	Düsseldorf	Durham	Milan	Leeds	Cheshire	Barcelona
		Madrid	Köln	Magdeburg	Budapest	Utrecht	Leeds	Sheffield
		Düsseldorf	Frankfurt	Leicester	Barcelona	Düsseldorf	Warsaw	Edinburgh
		Lyon	Berlin	Namur	Bologna	Brighton	Toulouse	Leeds
		Veneto	Paris	Leipzig	Helsinki	Paris	Manchester	Newcastle
<b>Location factors compared to competitors:</b>								
<b>Macro-economy</b>	GDP/capita	-	--	o	o	-	-	-
	Total factor productivity	o	-	o	o	o	o	o
<b>Agglomeration</b>	Total Population	--	--	o	-	o	-	o
	Population density	-	--	-	o	--	--	--
<b>Connectivity</b>	Connectivity road	--	--	--	o	--	--	-
	Connectivity air	--	--	o	o	-	-	o
	Congestion*	o	+	+	o	+	++	+
	Internet	++	o	o	++	o	o	o
<b>Knowledge economy</b>	High educated	o	-	o	o	-	o	o
	Public R&D	+	o	+	+	o	o	o
	Private R&D	--	--	o	o	--	-	-
	Patents	--	--	o	-	--	-	-
<b>Labour market</b>	Participation	++	+	+	+++	+	++	++
	Unemployment	o	o	-	o	o	o	o
	Education quality	o	o	o	+	o	o	o
	Education quantity	o	-	o	o	-	o	o
<b>Institutions</b>	Government effectiveness	++	o	o	++	o	+	o
	Cost of Living*	+	++	o	o	+	+	o
	Housing affordability	o	o	o	o	o	o	o
	Environmental quality	o	o	o	+	o	+	o
	Income taxes	+	+	o	+	o	o	+
Total taxes	+	o	o	o	-	o	o	
<b>Amenities</b>	Housing quality	--	-	o	-	-	o	-
	Housing environment	++	++	+	++	+	+	+
	Culture & restaurants	o	o	+	o	o	o	o
	Recreation	+	+	+	++	o	++	+
	Nature	++	++	++	++	++	++	+
		-	+	High importance		+++/-	Scores Glasgow vis-à-vis competitors	
		-	+			+/--		
		-	+	Low importance		+/-		
		o		Distinguishing (potential)		o		

East-Midlands (Birmingham)		Total	Total	Materials & production	Modern production	Energy	Finance	KIBS	Distribution*
EU Competitors are:	Potential	Winning	Winning	Winning	Winning	Winning	Winning	Winning	Winning
	Dublin	London	Stuttgart	Dublin	Rotterdam	Edinburgh	London	Milan	
	Paris	Cardiff	Munich	MW Ireland	Eindhoven	Sheffield	Glasgow	Utrecht	
	Milan	Dublin	Köln	Tübingen	Gothenborg	Bristol	Edinburgh	reading	
	Düsseldorf	Düsseldorf	Düsseldorf	Milan	Stockholm	Manchester	Cardiff	Glasgow	
	Barcelona	Munich	Dortmund	Wurzburg	Paris	Cardiff	Madrid	Düsseldorf	
	Frankfurt	Stuttgart	Cardiff	Budapest	Liverpool	London	Rome	Cheshire	
	MW Ireland	Reading	Karlsruhe	Thuringen	Dublin	Gent	N-Ireland	Kent	
	Luxemburg	Barcelona	Tübingen	Dresden	Düsseldorf	Aberdeen	Manchester	Warsaw	
	Stuttgart	Paris	Freinburg	Stuttgart	Leeds	Barcelona	Barcelona	Toulouse	
	Munich	Glasgow	Berlin	Lyon	Copenhagen	Kent	Düsseldorf	Manchester	
<b>Location factors compared to competitors:</b>									
<b>Macro-economy</b>	GDP/capita	-	--	o	o	-	-	o	o
	Total factor productivity	o	o	o	o	o	o	o	o
<b>Agglomeration</b>	Total Population	-	-	o	o	o	o	o	o
	Population density	+++	+++	+++	+++	++	+++	+++	+++
<b>Connectivity</b>	Connectivity road	o	o	-	o	o	+	+	o
	Connectivity air	o	o	o	+	o	+	o	o
	Congestion*	--	-	--	--	-	-	--	-
	Internet	+	o	o	+	o	o	o	o
<b>Knowledge economy</b>	High educated	--	--	--	-	--	-	--	--
	Public R&D	+	o	-	o	o	o	o	o
	Private R&D	--	--	--	--	--	o	o	-
	Patents	--	--	--	--	--	o	o	-
<b>Labour market</b>	Participation	o	-	-	o	o	o	o	o
	Unemployment	++	++	+	+	++	++	+	++
	Education quality	o	o	o	o	o	o	o	o
	Education quantity	o	o	o	+	o	o	o	o
<b>Institutions</b>	Government effectiveness	o	o	o	o	o	o	o	o
	Cost of Living*	+++	+++	++	++	++	++	++	+++
	Housing affordability	o	o	--	--	o	o	o	-
	Environmental quality	+	o	o	+	-	o	o	o
	Income taxes	+	o	+	o	o	o	o	o
	Total taxes	+	o	o	o	-	o	o	o
<b>Amenities</b>	Housing quality	--	-	o	o	-	-	-	o
	Housing environment	o	o	o	o	o	o	o	o
	Culture & restaurants	o	-	o	o	-	o	o	o
	Recreation	-	--	-	o	--	--	--	-
	Nature	o	o	o	o	o	o	o	o
		-	+	High importance		+++/-	Scores Birmingham vis-à-vis competitors		
		-	+			++/-			
		-	+	Low importance		+/-			
		o		Distinguishing (potential)		o			

London (inner & outer)							
		Total	Total	Financial services	KIBS	Distribution*	Other services
EU Competitors are:		Potential	Winning	Winning	Winning	Winning	Winning
		Dublin	Düsseldorf	Cardiff	Cardiff	Milan	Athens
		Amsterdam	Valencia	Sheffield	Madrid	Düsseldorf	Vienna
		Paris	Athens	Aberdeen	Amsterdam	Reading	Aberdeen
		Milan	Barcelona	Edinburgh	Barcelona	Rotterdam	Münster
		Düsseldorf	Madrid	Madrid	Athens	Toulouse	Düsseldorf
		Luxemburg	Rotterdam	Leeds	Düsseldorf	Birmingham	Linz
		Frankfurt	Eindhoven	Barcelona	Seville	Manchester	Salzburg
		MW Ireland	Warsaw	Bristol	Firenze	Warsaw	Berlin
		Copenhagen	Luxemburg	Newcastle	Berlin	Prague	Hamburg
		Oslo	Amsterdam	Manchester	Munich	Paris	Budapest
<b>Location factors compared to competitors:</b>							
<b>Macro-economy</b>	GDP/capita	++	+++	+++	+++	+++	+++
	Total factor productivity	+	+	++	+	+	++
<b>Agglomeration</b>	Total Population	o	o	+	o	o	++
	Population density	+++	+++	+++	+++	+++	+++
<b>Connectivity</b>	Connectivity road	+	+	++	+	o	o
	Connectivity air	++	++	++	++	+	++
	Congestion*	---	---	---	---	---	--
	Internet	++	++	+	++	++	++
<b>Knowledge economy</b>	High educated	+	++	++	++	++	++
	Public R&D	o	o	-	-	-	-
	Private R&D	---	---	o	-	-	-
	Patents	---	o	o	o	o	-
<b>Labour market</b>	Participation	o	o	o	+	o	o
	Unemployment	o	o	o	-	o	o
	Education quality	o	+	o	+	o	+
	Education quantity	++	++	+	++	+	++
<b>Institutions</b>	Government effectiveness	o	+	o	+	+	o
	Cost of Living*	-	o	---	-	-	-
	Housing affordability	o	o	---	o	o	-
	Environmental quality	o	-	-	o	o	o
	Income taxes	+	++	+	++	++	+
	Total taxes	o	+	o	+	o	o
<b>Amenities</b>	Housing quality	o	o	o	o	+	++
	Housing environment	+	++	o	++	+	+
	Culture & restaurants	+	++	+	+	+	+
	Recreation	o	+	o	+	+	+
	Nature	o	o	-	o	o	o
		-	+	High importance		+++/-	Scores London vis-à-vis competitors
		-	+		++/-		
		-	+	Low importance		+/-	
		o		Distinguishing (potential)		o	

West Yorkshire (Leeds)								
Sectors:		Total	Total	Traditional production	Modern production	Finance	KIBS	Distribution*
EU Competitors are: (order of importance)		Potential	Winning	Winning	Winning	Winning	Winning	Winning
		Dublin	London	Dublin	Dublin	London	Madrid	Milan
		Paris	Barcelona	MW Ireland	Münster	Sheffield	Düsseldorf	Utrecht
		Milan	Dublin	Düsseldorf	Tübingen	Lancaster	Barcelona	Reading
		Barcelona	Amsterdam	Stuttgart	Budapest	Hull	Amsterdam	Glasgow
		MW Ireland	Valencia	Munich	Dresden	Barcelona	Berlin	Düsseldorf
		Eindhoven	Aberdeen	Köln	Thuringen	Newcastle	Athens	Cheshire
		Madrid	Madrid	Glasgow	Lyon	East Wales	Seville	Kent
		Luxemburg	Düsseldorf	Dortmund	Milan	Kent	Stuttgart	Warsaw
		Düsseldorf	Munich	Münster	Weser-Ems	Bristol	Münster	Toulouse
		Lyon	Bilbao	Cardiff	Prague	Manchester	London	Manchester
<b>Location factors compared to competitors:</b>								
Macro-economy	GDP/capita	-	-	o	o	o	o	o
	Total factor productivity	o	o	o	o	o	o	o
Agglomeration	Total Population	--	-	-	-	o	--	o
	Population density	++	++	++	++	+	o	++
Connectivity	Connectivity road	o	o	-	-	o	o	o
	Connectivity air	o	o	o	o	o	o	o
	Congestion*	--	--	--	--	-	--	-
	Internet	+	+	o	+	o	+	+
Knowledge economy	High educated	-	--	-	-	o	--	-
	Public R&D	o	-	o	-	o	-	-
	Private R&D	--	-	--	-	o	-	-
	Patents	-	o	--	-	o	o	o
Labour market	Participation	+	o	o	o	o	o	o
	Unemployment	o	o	o	o	o	-	o
	Education quality	o	o	+	+	o	+	o
	Education quantity	o	o	o	+	o	+	o
Institutions	Government effectiveness	o	o	o	o	o	+	o
	Cost of Living*	++	++	+	++	+	++	++
	Housing affordability	o	o	-	--	o	o	-
	Environmental quality	o	-	o	o	o	o	o
	Income taxes	+	+	o	o	o	+	o
	Total taxes	o	o	o	o	o	o	o
Amenities	Housing quality	--	--	o	o	o	-	o
	Housing environment	++	++	++	++	+	+++	++
	Culture & restaurants	o	o	o	o	o	o	o
	Recreation	o	o	+	++	o	+	+
	Nature	o	--	--	-	--	o	-
		-	+	High importance		+++/-	Scores Leeds vis-à-vis competitors	
		-	+			+/--		
		-	+	Low importance		+/-		
		o		Distinguishing (potential)		o		

# The questions were:

- Measure competitiveness region and sector specific?
- Who do firms in UK regions compete with?
- In which sectoral and geographical markets?
- Nationally and (European) internationally?
- Who operates in similar markets as local UK firms?
- Who wins market shares from local UK firms?
- What regional-economic factors are related to competitive advantage?
- What factors may be mitigating Brexit impacts on competitiveness and are relevant for local policies, when UK local firms face asymmetrical cost increases?





The Economic Impacts of Brexit on the UK, its  
Regions, its Cities and its Sectors

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## **Devolved nations: competitiveness challenges**

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# Brexit: How might UK Agriculture Thrive or Survive?

presentation to

**Brexit Devolved Administrations, 4<sup>th</sup> May 2018**

**Victoria Quay, Edinburgh**

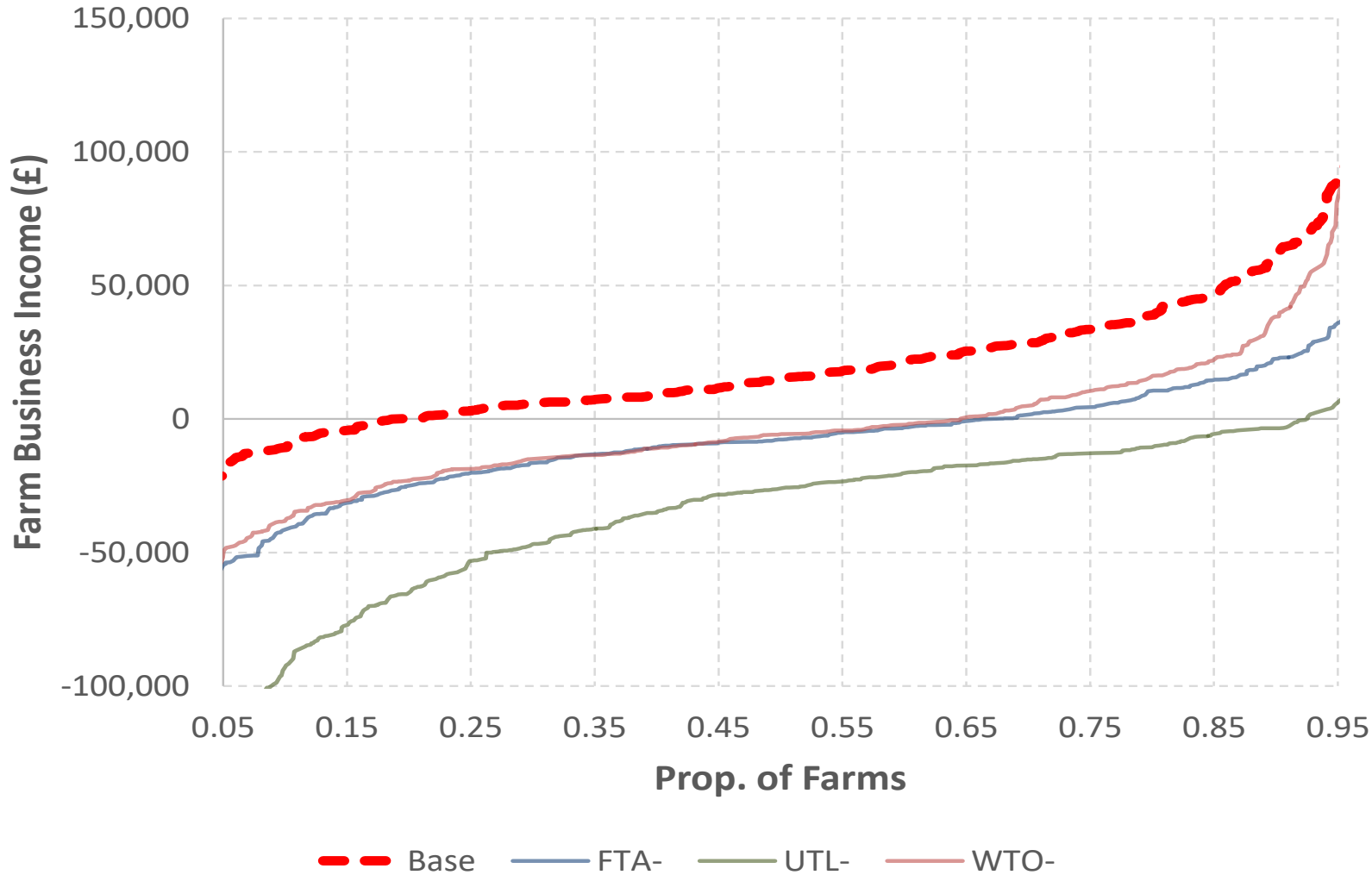
Carmen Hubbard (PI), John Davis, Siyi Feng, David Harvey,  
Anne Liddon, Mercy Ojo, Myles Patton, George Philippidis,  
**Andrew Moxey**, Charles Scott, Shailesh Shrestha & Michael Wallace

Further details from: [carmen.hubbard@ncl.ac.uk](mailto:carmen.hubbard@ncl.ac.uk)  
or <https://research.ncl.ac.uk/esrcbrexitproject/>

# Average Farm Income (2026) by Country & Scenario



# Farm Income Distributions, by Scenario – Scotland



# Conclusions

- Brexit impact depends on trade arrangements **and** domestic policy
- Farming composition and characteristics vary across UK
- Impacts vary by farm type (and size and efficiency), and so by country
- Extensive livestock (more common in DAs) highly dependent on support
- Significant pressure for structural change (aided by factor markets?)
- Implications for employment, land use (environment) and food sector
- How devolved will agricultural policy be?



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## Devolved administrations' Brexit policy challenges

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## **Closing Speech**

**Professor Raquel Ortega-Argilés, University of Birmingham**

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