

# *Ask the Expert*

## **Brexit, trade and the spatial economy**

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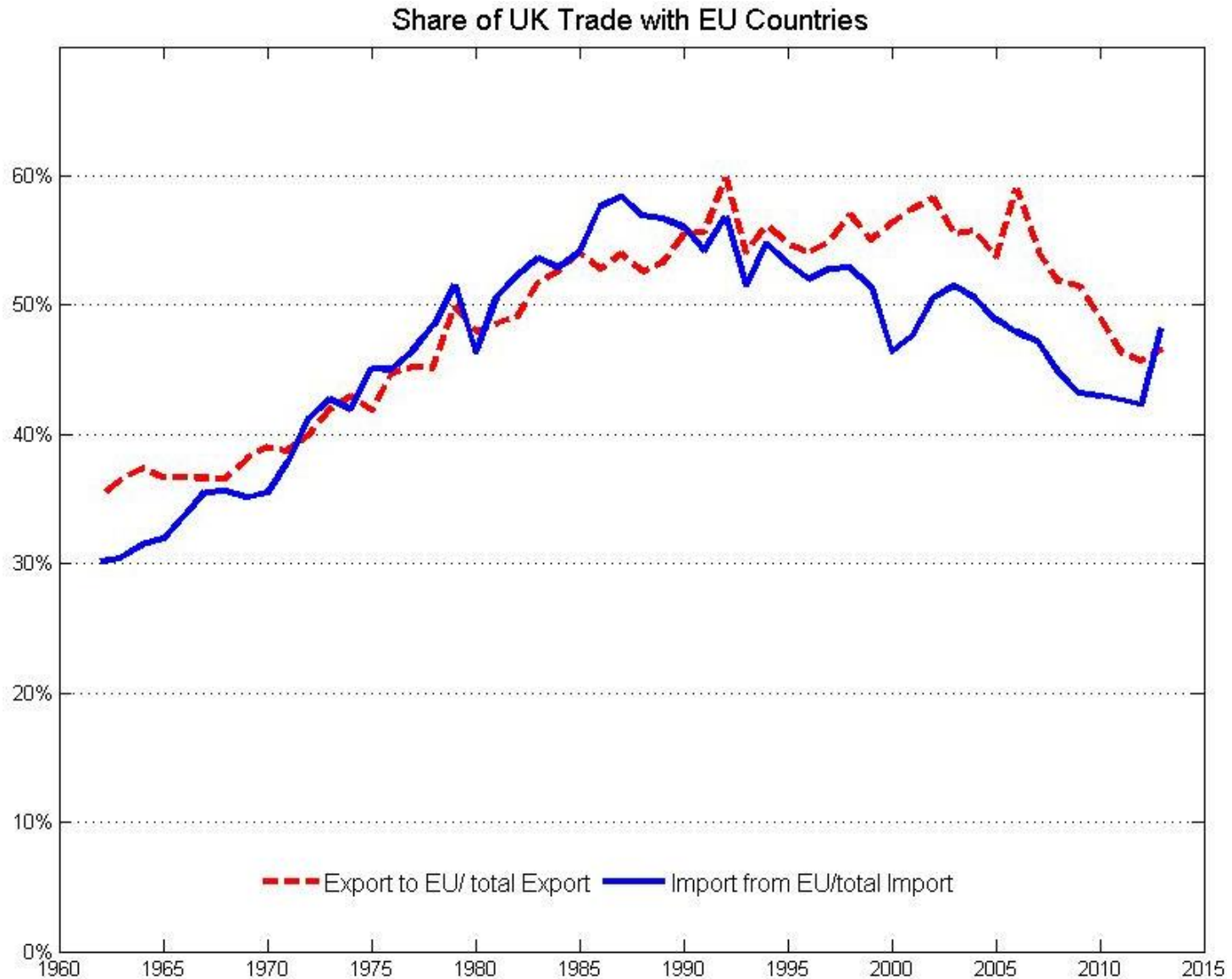
**@jameskirkup**



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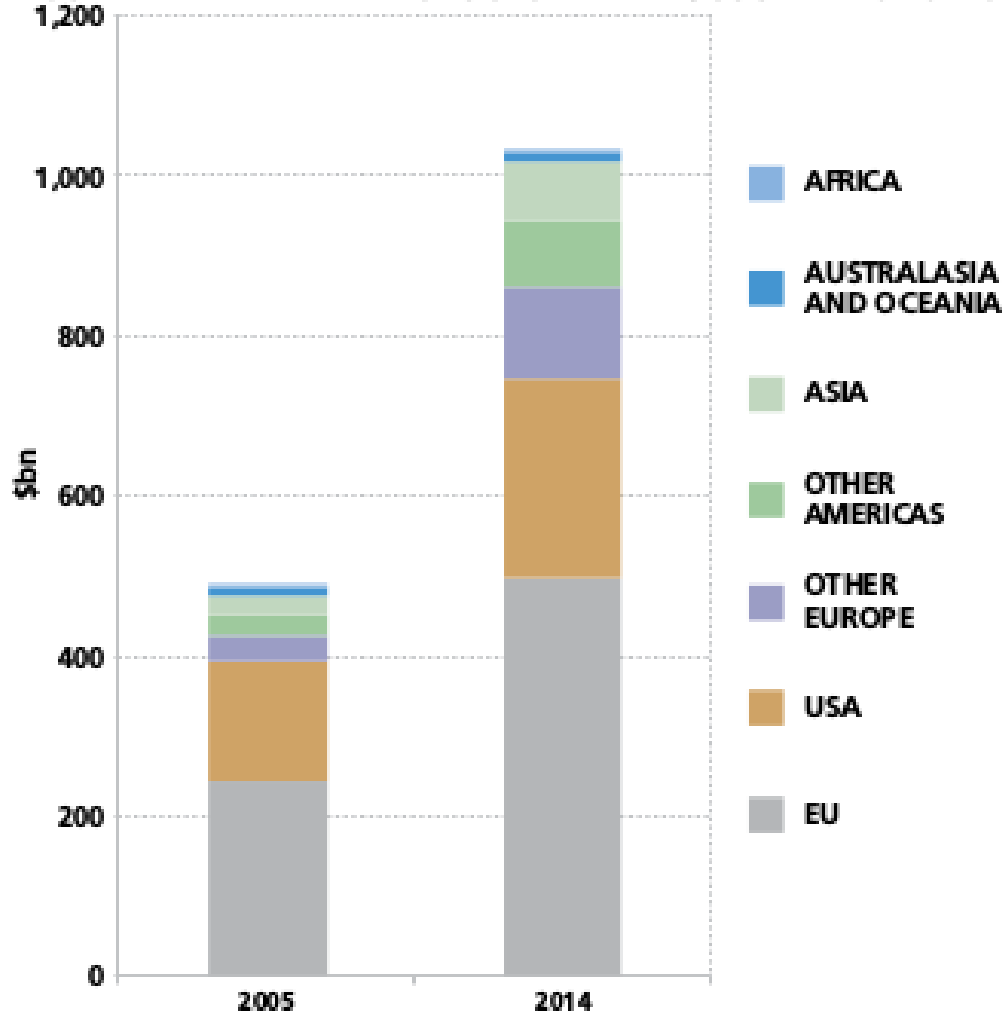
# **An Economic Shake Up**

# EU is UK's biggest trade partner



# EU is UK's biggest foreign investor

FIGURE 4.14: INWARD FDI STOCKS BY AREA/COUNTRY OF ORIGIN

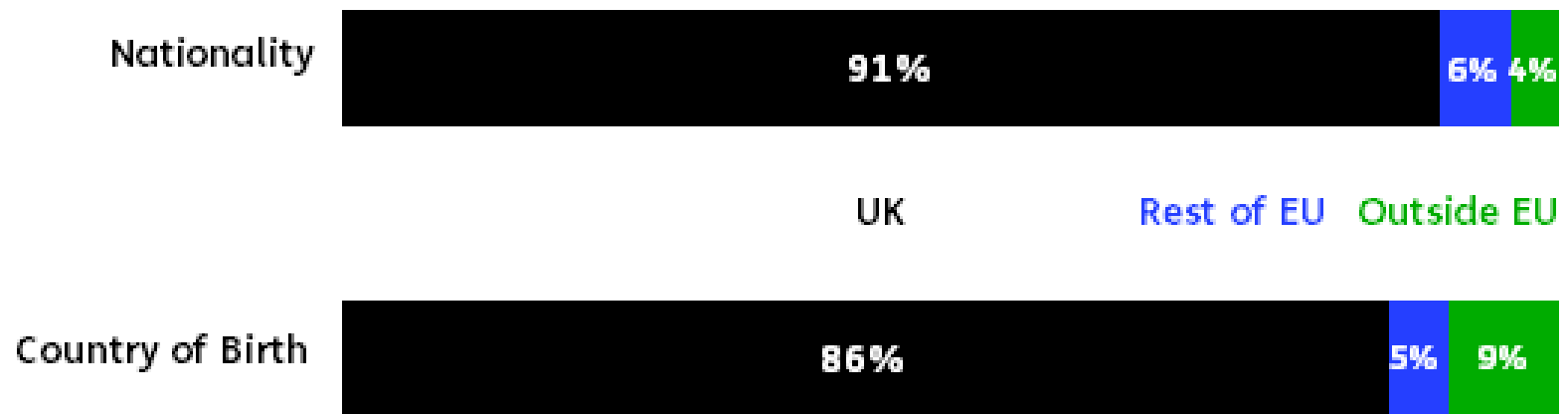


Source: ONS, Inward Foreign Direct Investment (FDI) Involving UK Companies, 2014 (Directional Principle).

# Immigration

## The UK population: broken down

UK population by broad country of birth and nationality, 2016



\*Figures may not add exactly due to rounding

Source: ONS population by country of birth and nationality: 2016, table 1

# **National Impact**

# Modelling Brexit: Trade

- Gravity
  - Size and distance matter
  - Distance matters far more than size
- Computed using trade volumes & trade elasticities
  - $\text{Trade Elasticity} = \frac{\% \Delta \left( \frac{\text{imports}}{\text{domestic demand}} \right)}{\% \Delta \text{ bilateral trade cost}}$
- Data- WIOD, trade flows, Inter country sectoral IO links

# Modelling Brexit: Trade

- What does Brexit look like?
  - Soft Brexit: Single Market; some increase in NTB; get some, but not all, benefits from future integration
  - Hard Brexit: MFN; bigger increases in NTB; get smaller share benefits from future integration
  - Include fiscal savings in both setups



# Summary of National Impacts

- Soft ‘Norway’ Brexit: -1.3% GDP
  - Reduced trade from Non-tariff barriers (2% current, 5.7% slower reduction than within EU over 10 years) + fiscal savings 0.09%
- Hard ‘no deal’ Brexit: -2.7% GDP
  - Reduced trade from WTO tariffs + NTBs (6% current, 12.8% slower future) + fiscal savings 0.31%

# Illuminating the Black Box

- Tariffs-
  - Average tariff low ~1.5%
  - Automotives 10%
  - Agricultural: meat up to 84%, dairy up to 74%, grains up to 63%
  - Unilaterally drop tariffs?
    - Mitigate losses by 0.3%

# Illuminating the Black Box

- Regulation-
  - Disharmonisation
  - Why? Certification and playing by the same rules, to create large “single market”
  - Product lines
  - Large risk to services
    - EU aviation market, “location policies”
    - Financial passporting rights
    - Legal professions- cross-border practising rights
  - Deep trade deals- provisions for services, investment and competition account 50% of trade flows from integration
    - E.g Mutual recognition of qualifications, investment protection commitments.

# Illuminating the Black Box

- Customs-
  - Rules of Origin compliance ~8%
  - “Incredibly cumbersome”- Sweden and Norway’s experience
  - Border checks, 2 minute ~ 10miles, 3 minute ~ 20 miles, 4 minute ~ 30miles of traffic on M20 & A20
  - Demands on HMRC

# **From National to Local**

# Sectoral impact

| ID | WIOD Industry  | Soft Brexit (%) | Hard Brexit (%) |
|----|--|-----------------|-----------------|
| 1  | Agriculture, Hunting, Forestry and Fishing   | 3.3             | 4.2             |
| 2  | Mining and Quarrying   | -7.3            | -12.5           |
| 3  | Food, Beverages and Tobacco  | 1.4             | 2.8             |
| 4  | Textiles and Textile Products; Leather, Leather and Footwear                                   | -6.8            | -5.2            |
| 5  | Wood and Products of Wood and Cork   | 9.9             | 15.9            |
| 6  | Pulp, Paper, Paper , Printing and Publishing   | 3.5             | 6.3             |
| 7  | Coke, Refined Petroleum and Nuclear Fuel   | -0.5            | -0.8            |
| 8  | Chemicals and Chemical Products  | -8.9            | -15.1           |
| 9  | Rubber and Plastics  | -0.4            | -0.7            |
| 10 | Other Non-Metallic Mineral   | 0.2             | 0.2             |
| 11 | Basic Metals and Fabricated Metal  | 0.5             | 5.1             |
| 12 | Machinery, nec   | -0.1            | -0.2            |
| 13 | Electrical and Optical Equipment   | -9.5            | -6.3            |
| 14 | Transport Equipment  | -0.5            | -0.9            |
| 15 | Manufacturing, nec; Recycling  | 0.9             | 2.5             |
| 16 | Electricity, Gas and Water Supply  | -1.1            | -2.1            |
| 17 | Construction   | -1.4            | -2.6            |
| 18 | Retail Sale of Fuel; Wholesale Trade, Commission Trade, including Motor Vehicles & Motorcycles | -0.8            | -1.6            |
| 19 | Retail Trade, Except of Motor Vehicles & Motorcycles; Repair of Household Goods                | -1.2            | -2.3            |
| 20 | Hotels and Restaurants   | 0.0             | -0.2            |
| 21 | Inland Transport   | -0.6            | -1.2            |
| 22 | Water Transport  | 4.7             | 9.1             |
| 23 | Air Transport  | 5.2             | 10.4            |
| 24 | Other Supporting and Auxiliary Transport Activities; Activities of Travel Agencies             | -1.3            | -2.5            |
| 25 | Post and Telecommunications  | -1.8            | -3.9            |
| 26 | Financial Intermediation   | -2.8            | -6.2            |
| 27 | Real Estate Activities   | -1.4            | -2.6            |
| 28 | Renting of M&Eq and Other Business Activities  | -1.7            | -4.0            |
| 29 | Education  | -1.2            | -2.2            |
| 30 | Health and Social Work   | -1.3            | -2.4            |
| 31 | Public Admin, Defence, Soc. Security & other Public Svc  | -1.1            | -2.3            |

# How we did it

National Sectoral Impacts from data on trade flows of goods and services, input-output linkages, sensitivity of trade flows to trade costs, trade costs and a gravity model

Employment Shares of areas from data on local authorities and urban areas

# Caveat 1

- Caution with sectoral impacts
- Model dependent- focuses on trade only
  - FDI dependent sectors underestimated (e.g. air transport)
- Area level impact should “wash-out” sector specific errors
  - Therefore more accurate

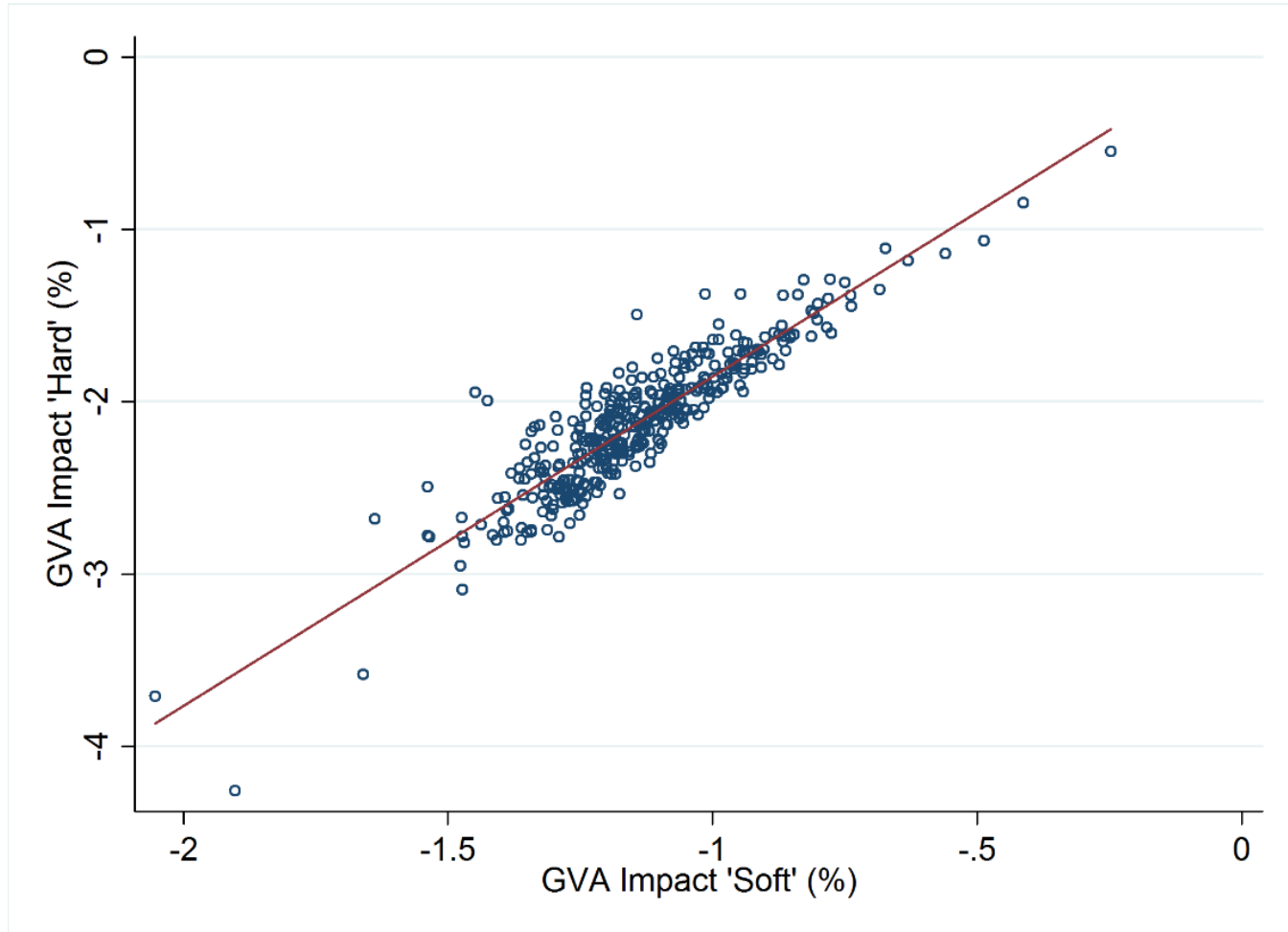


# **Local Impacts**

# Variation higher under Hard Brexit

|  | Soft Brexit<br>(%) | Hard Brexit<br>(%) |
|--|--------------------|--------------------|
| <b>Mean</b>  | -1.14              | -2.12              |
| <b>50<sup>th</sup> Percentile<br/>(Median)</b>                     | -1.16              | -2.11              |
| <b>Standard Deviation</b>  | 0.19               | 0.40               |
| <b>90<sup>th</sup>-10<sup>th</sup> percentile<br/>Differential</b> | 0.43               | 0.92               |

# Correlation different scenarios



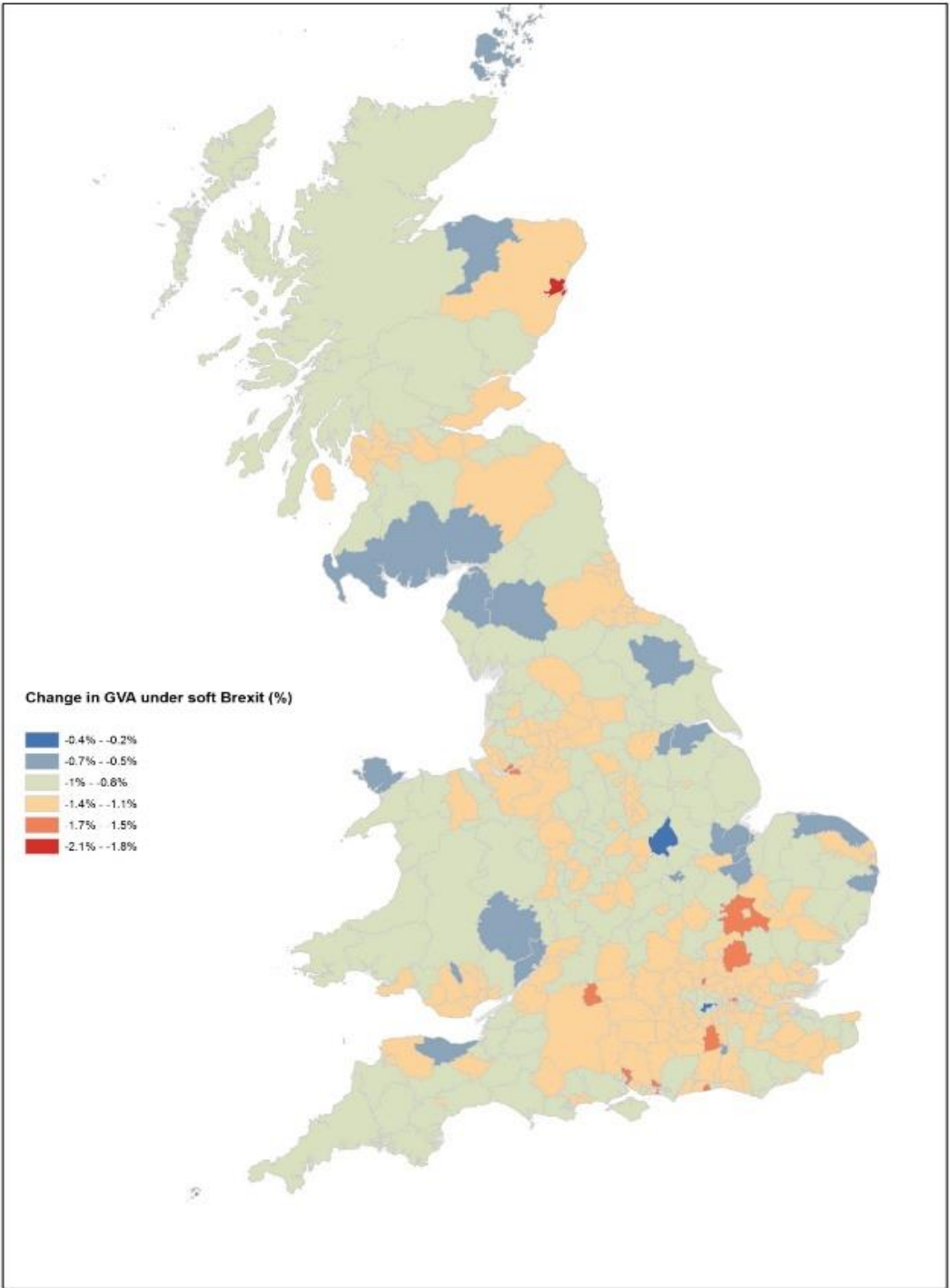
# Top ten

| <b>Top 10</b>               | <b>Soft Brexit (%)</b> | <b>Hard Brexit (%)</b> |
|-----------------------------|------------------------|------------------------|
| <b>City of London</b>       | -1.9                   | -4.3                   |
| <b>Aberdeen City</b>        | -2.1                   | -3.7                   |
| <b>Tower Hamlets</b>        | -1.7                   | -3.6                   |
| <b>Watford</b>              | -1.5                   | -3.1                   |
| <b>Mole Valley</b>          | -1.5                   | -3.0                   |
| <b>East Hertfordshire</b>   | -1.5                   | -2.8                   |
| <b>Reading</b>              | -1.4                   | -2.8                   |
| <b>Reigate and Banstead</b> | -1.4                   | -2.8                   |
| <b>Worthing</b>             | -1.5                   | -2.8                   |
| <b>Islington</b>            | -1.3                   | -2.8                   |

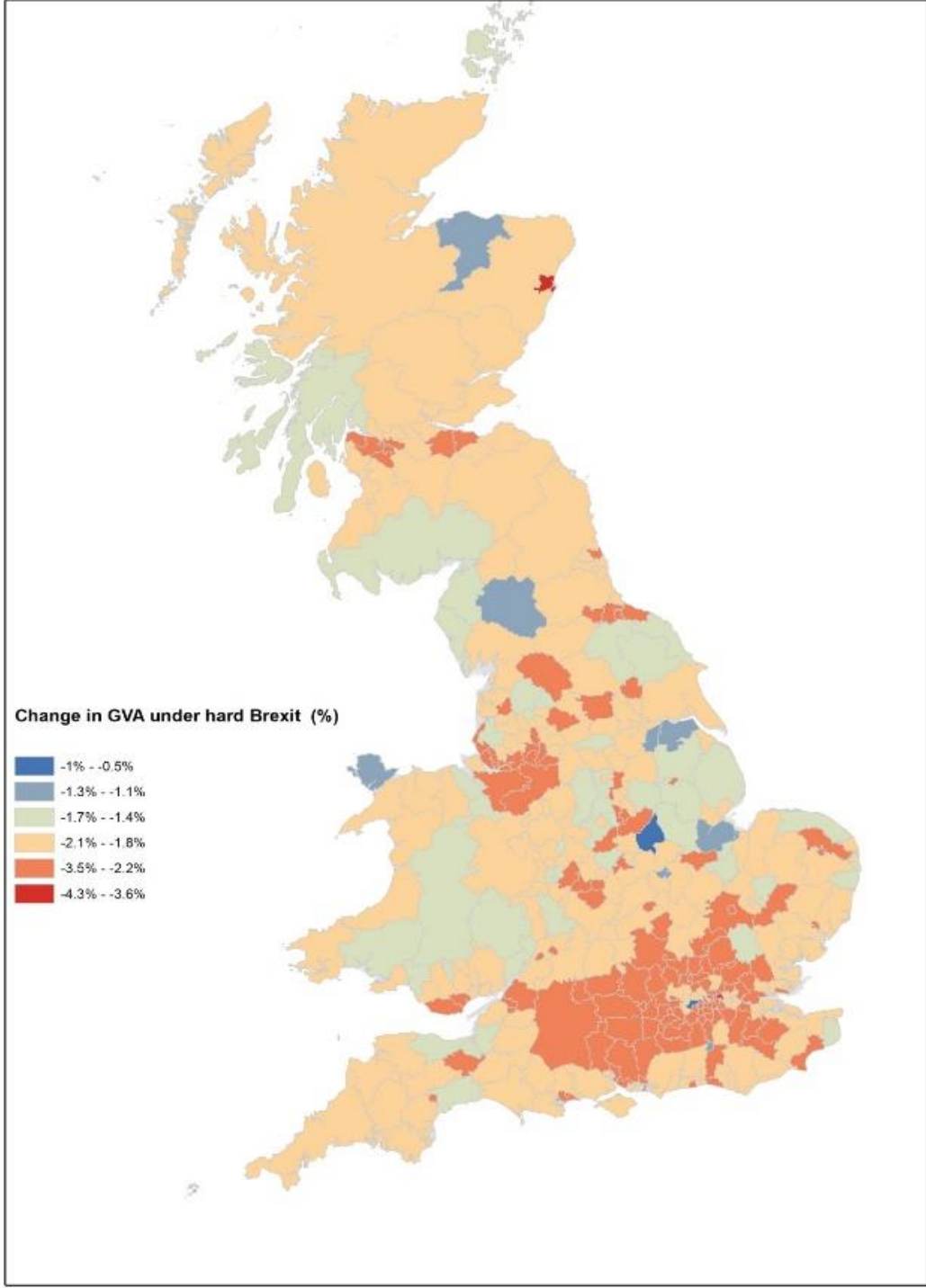
# Bottom ten

| <b>Bottom 10</b>              | <b>Soft Brexit<br/>(%)</b> | <b>Hard Brexit<br/>(%)</b> |
|-------------------------------|----------------------------|----------------------------|
| <b>Eden</b>                   | -0.7                       | -1.3                       |
| <b>Moray</b>                  | -0.7                       | -1.3                       |
| <b>North<br/>Lincolnshire</b> | -0.8                       | -1.3                       |
| <b>Corby</b>                  | -0.8                       | -1.3                       |
| <b>Anglesey</b>               | -0.6                       | -1.2                       |
| <b>South Holland</b>          | -0.6                       | -1.1                       |
| <b>Crawley</b>                | -0.7                       | -1.1                       |
| <b>Isles of Scilly</b>        | -0.5                       | -1.1                       |
| <b>Melton</b>                 | -0.4                       | -0.8                       |
| <b>Hounslow</b>               | -0.2                       | -0.5                       |

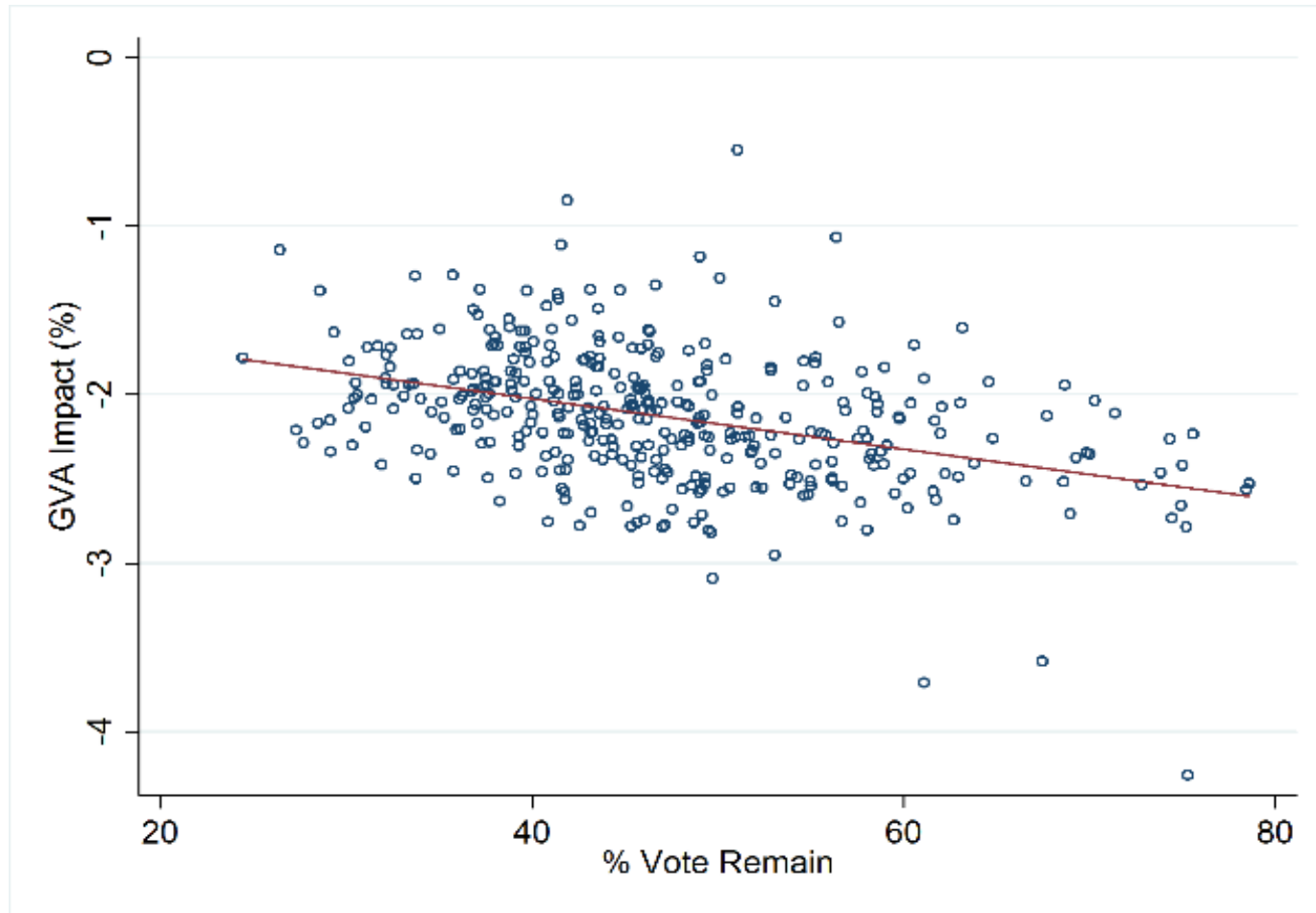
# Soft Brexit



# Hard Brexit

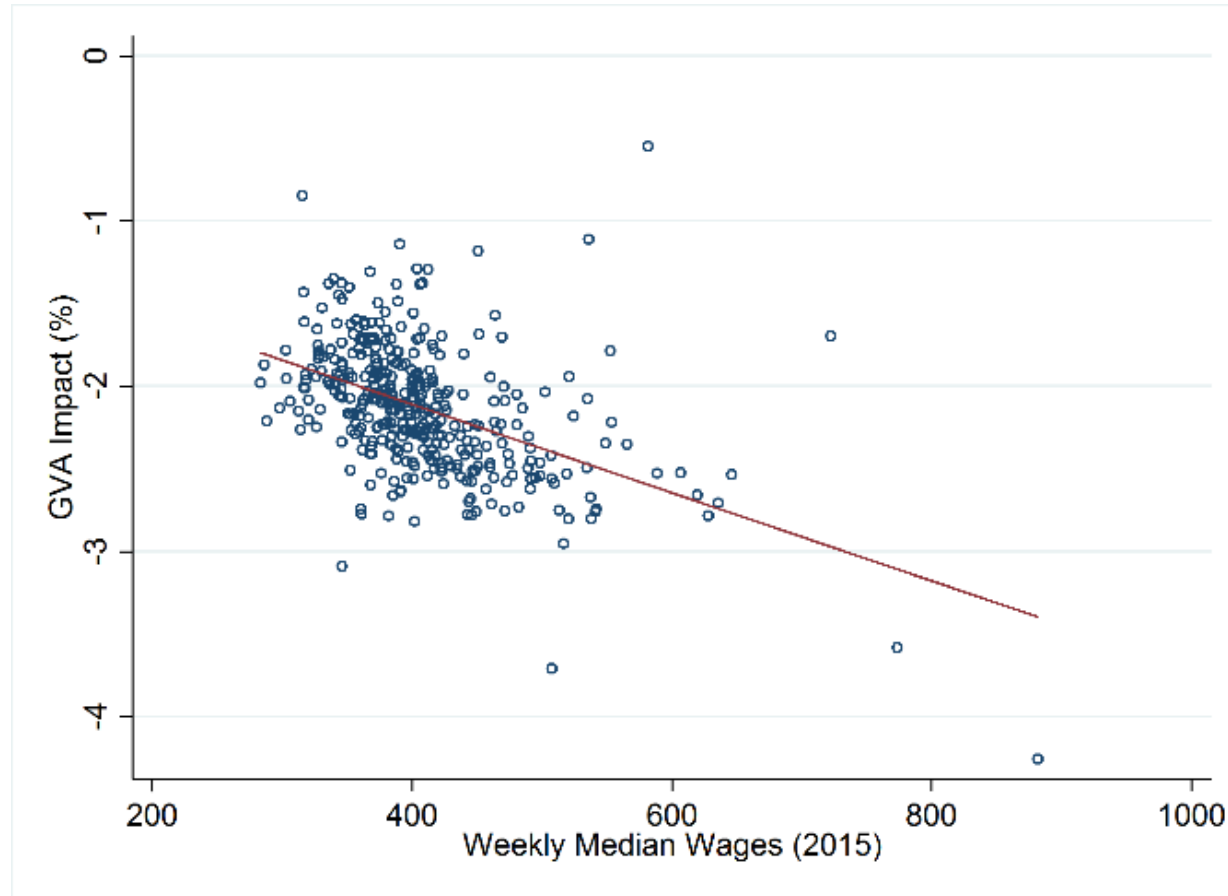


# Referendum – not so ‘stupid’?





# Initial shock hits richest regions hardest

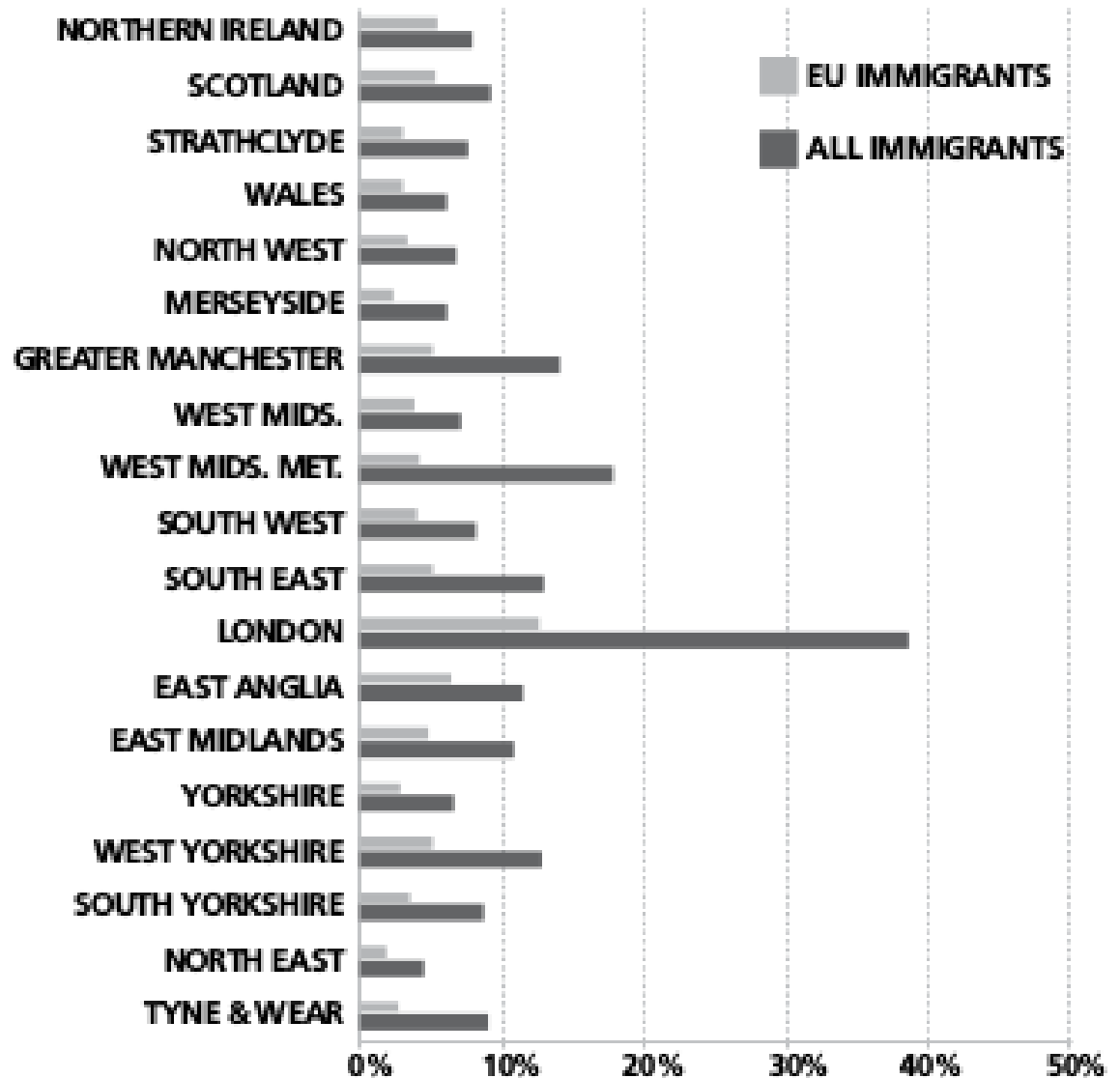


# Caveat 2

- Immediate impacts
  - Long run adjustment of spatial economy?
  - E.g. Financial crisis.

# Other factors- Immigration?

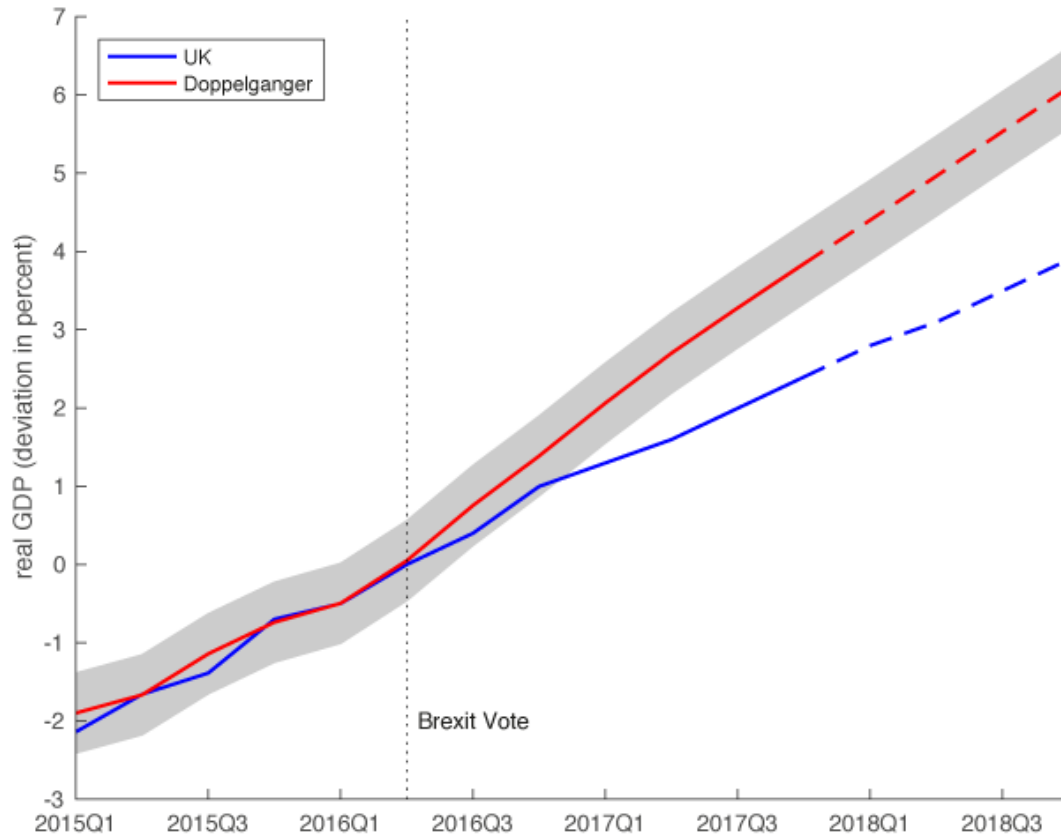
FIGURE 4.20: IMMIGRATION – SHARES OF UK LOCAL POPULATION



Source: ONS LFS.

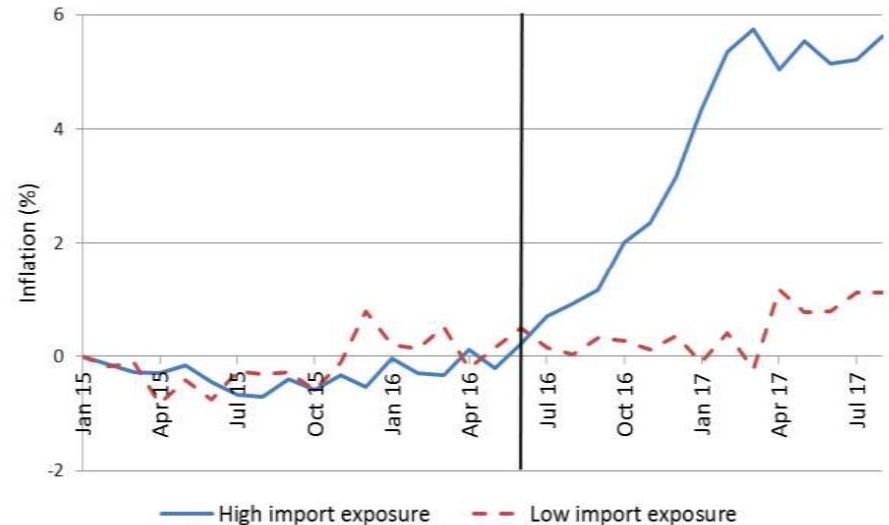
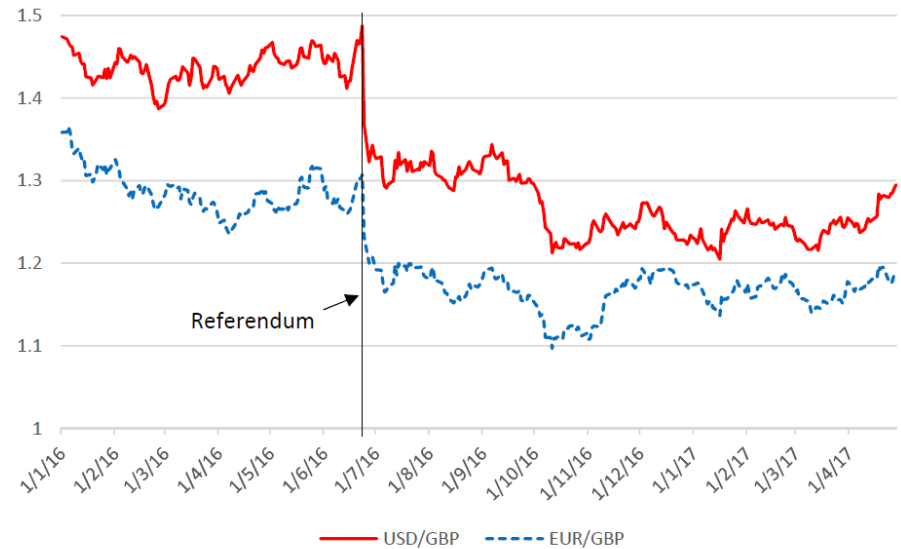
# Other Factors- Uncertainty

- Born et al., (2017)
  - Doppleganger matches back till 1995
  - 3<sup>rd</sup> quarter 2017 costs of Brexit at 1.3%.
  - ~£19.3bn
  - Causes?
    - Increased uncertainty, depressing consumption & investment.



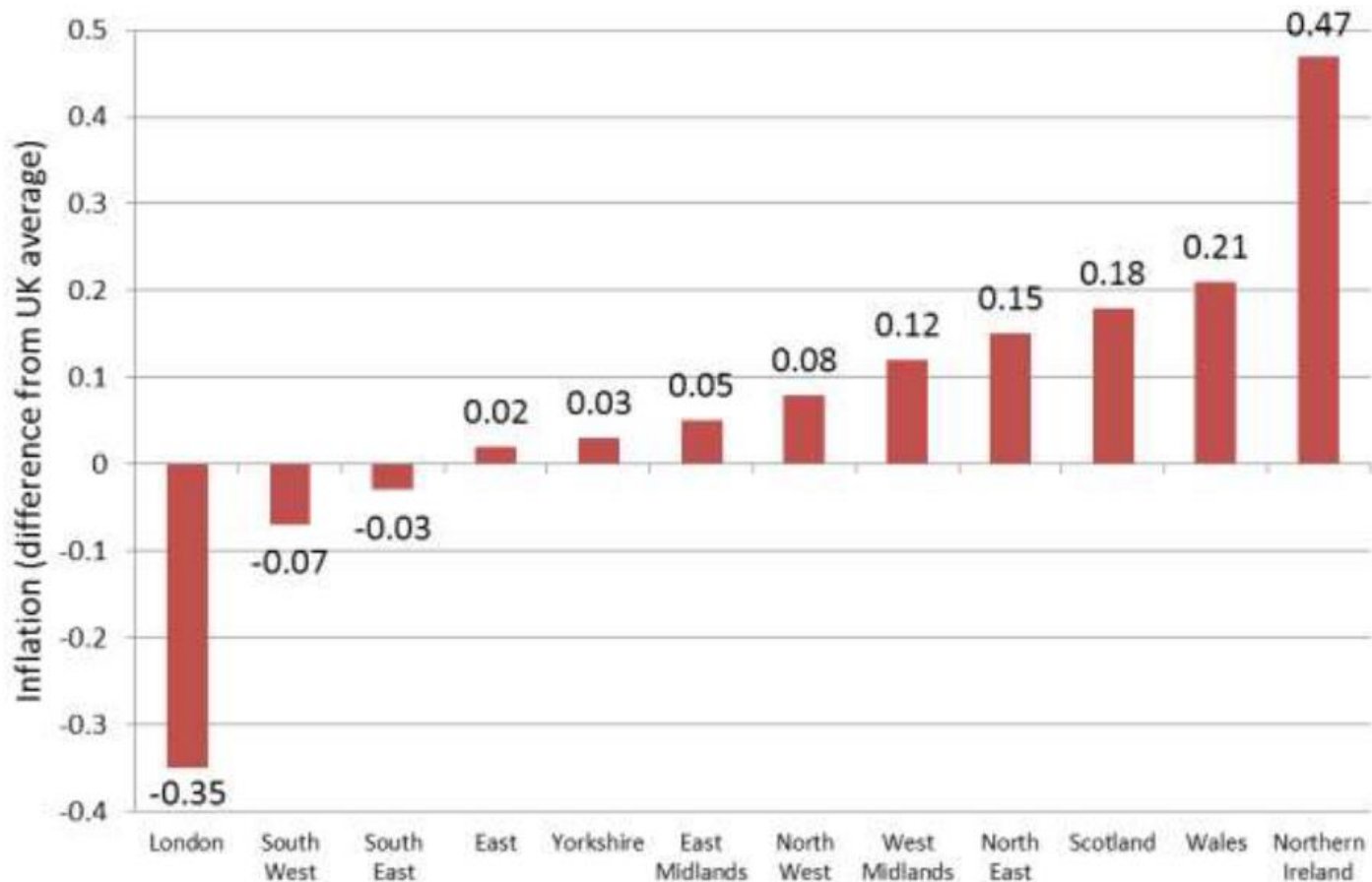
# Other Factors- Exchange rate

- Inflationary Pressures (Breinlich et al., 2017)
  - Increased inflation by around 1.7% year after referendum.
  - ~£404 per household



# Other Factors- Exchange rate

- Hits Scotland, Wales & NI hardest- higher expenditure on food, drink & fuel. Lower expenditure on rent.



# Conclusions

- Initial shock uniformly negative ...
- ... and hits richest regions hardest
- Many other factors matter
  - FDI
  - Prices
  - Distribution of immigrants
  - EU funds, etc
- Migration impact might re-inforce initial shock
- But longer run?

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