



The Economic Impact of Brexit

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The Brexit Saga:

The End of Europe?

A non-technical book
on the Economics of
Brexit and Beyond !

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The Brexit Saga:

The End of Europe?

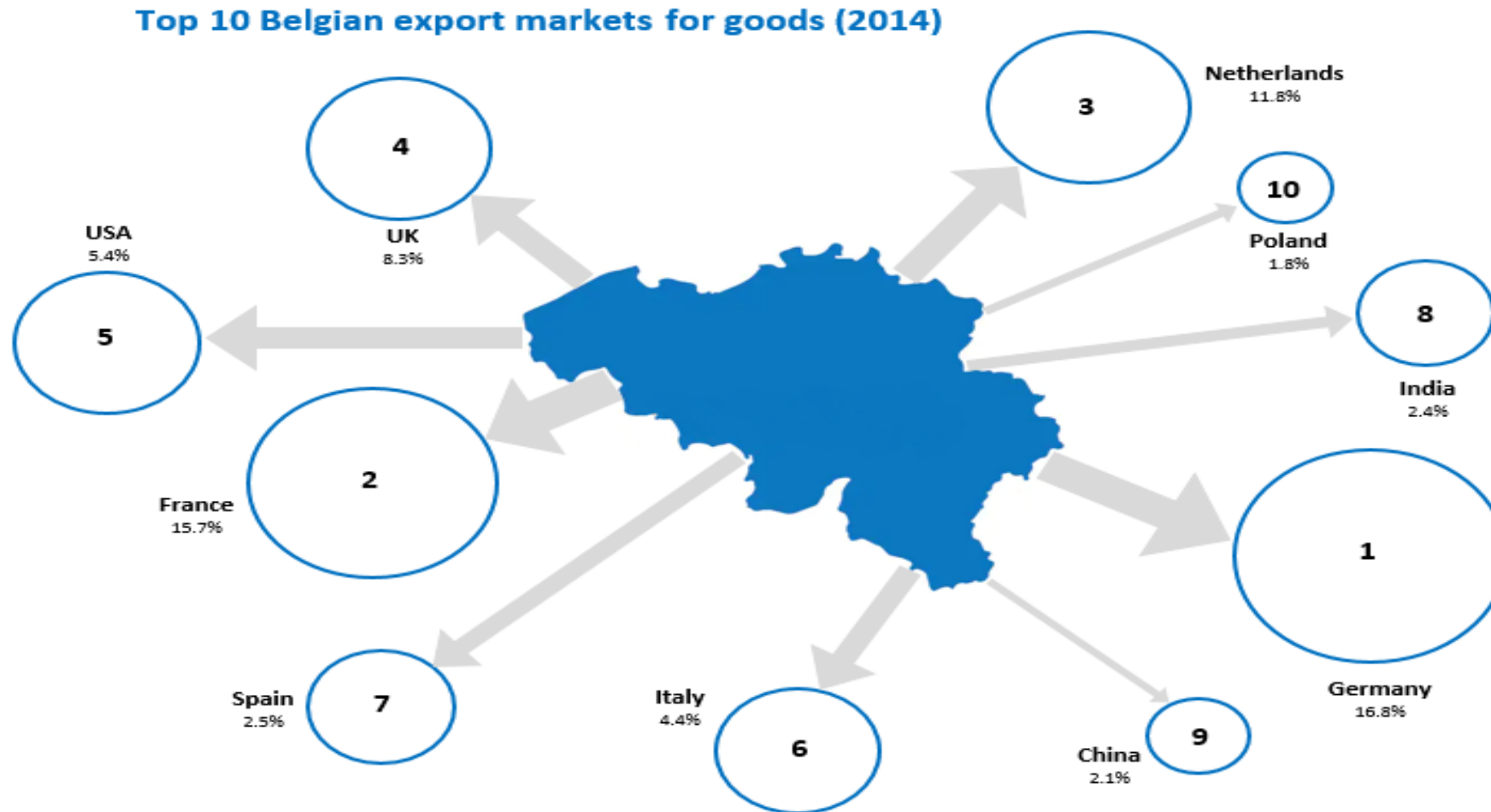




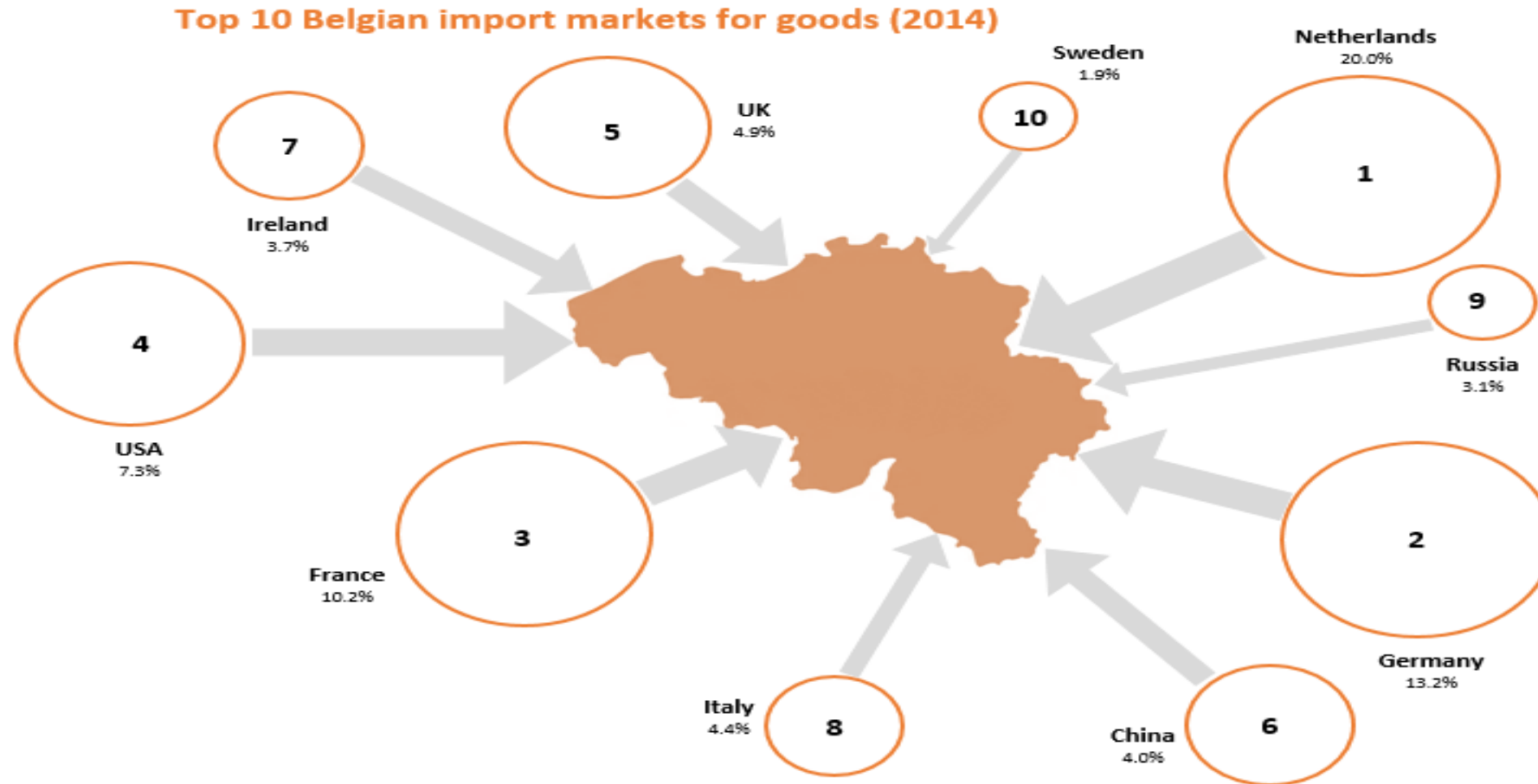
Hylke Vandebussche works and lives in Belgium but studied at the University of Cambridge, UK. Currently she is a professor in International Economics at the University of Leuven, in Belgium near Brussels. At the time of the Brexit referendum in 2016, she worked for the European Commission as a trade expert. Upon her return to the University, she developed a new methodology to assess the economic impact of Brexit by modelling **Europe as a network economy**. This resulted in new and shocking results on job losses for every EU-28 country. By now the model has become the new standard and its results were covered by nearly every newspaper in Europe,

The Brexit Saga is the personal story of an economic scientist trying to make sense of Brexit and in search of a better way to assess the Brexit impact. Vandebussche developed a new **Global Network Model** showing that Brexit would not just be a UK problem but an EU wide problem! The book describes a scientific journey and offers a look behind the scenes of the academic world and the EU Commission with many funny anecdotes and personal memories. Why did the British choose this path? Political chaos or well-planned manoeuvring? What does Brexit mean for the UK and for the EU continent? Is Brexit just an economic blip or a true tsunami? Europe: where are you heading?

Top 10 Belgian Export Partners

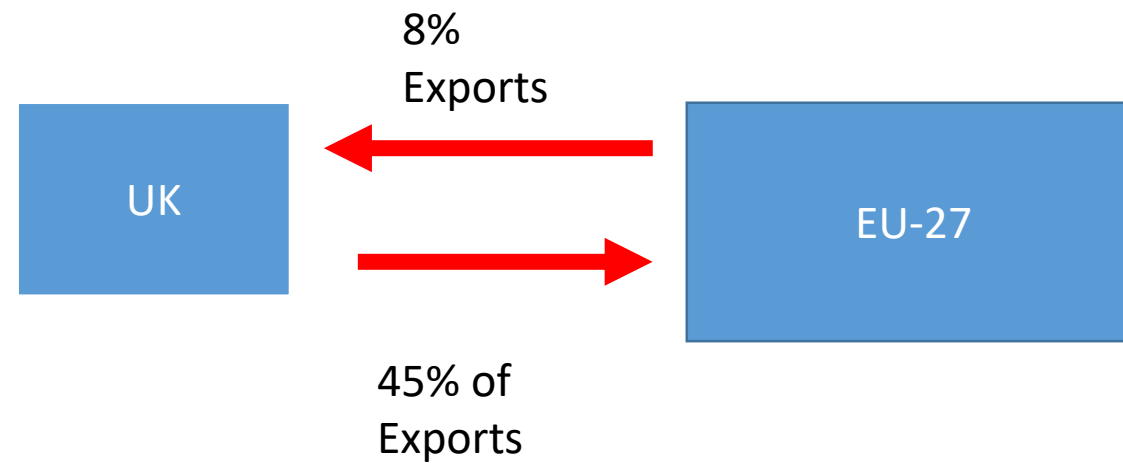


Top 10 Belgian Import Partners



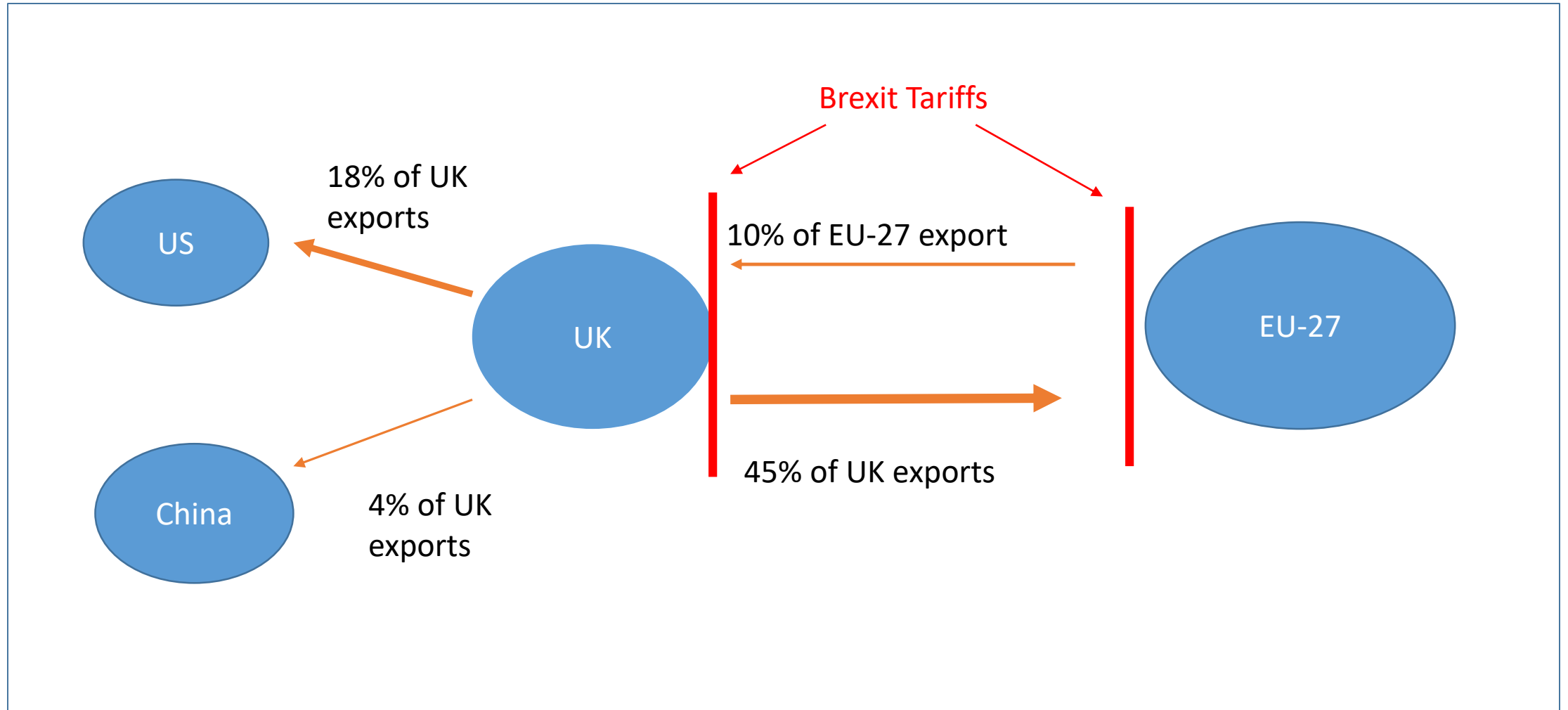
Note: The percentage shares represent how much Belgium trades with each of its partners in terms of overall Belgian imports. The original data report import values in US \$ for all goods imported in 2014 (source: UN Comtrade).

How Important is the UK for the EU and vica versa?



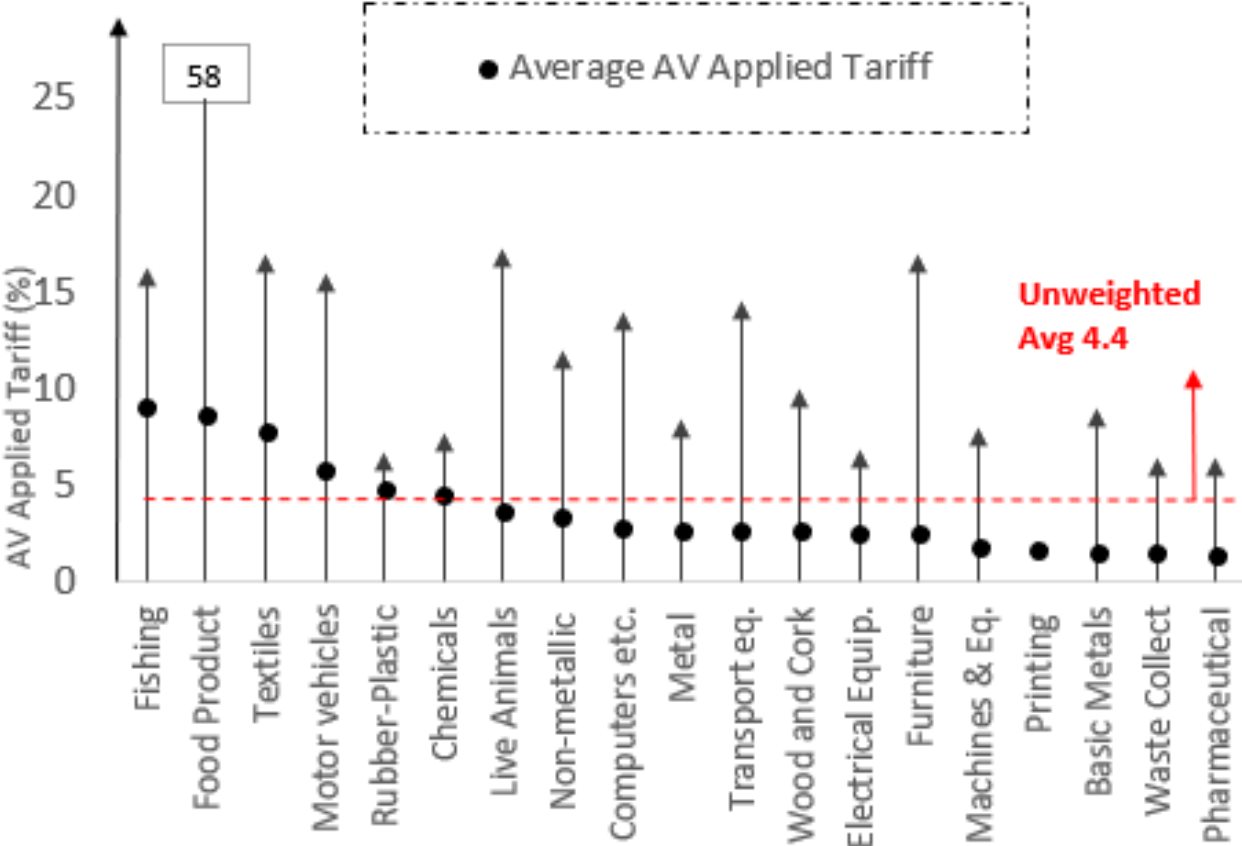
This is extra-EU exports in Gross Values.

UK Trade Relations



Hard Brexit WTO Tariffs

Figure 3: World Trade Organization (WTO) Tariffs⁴

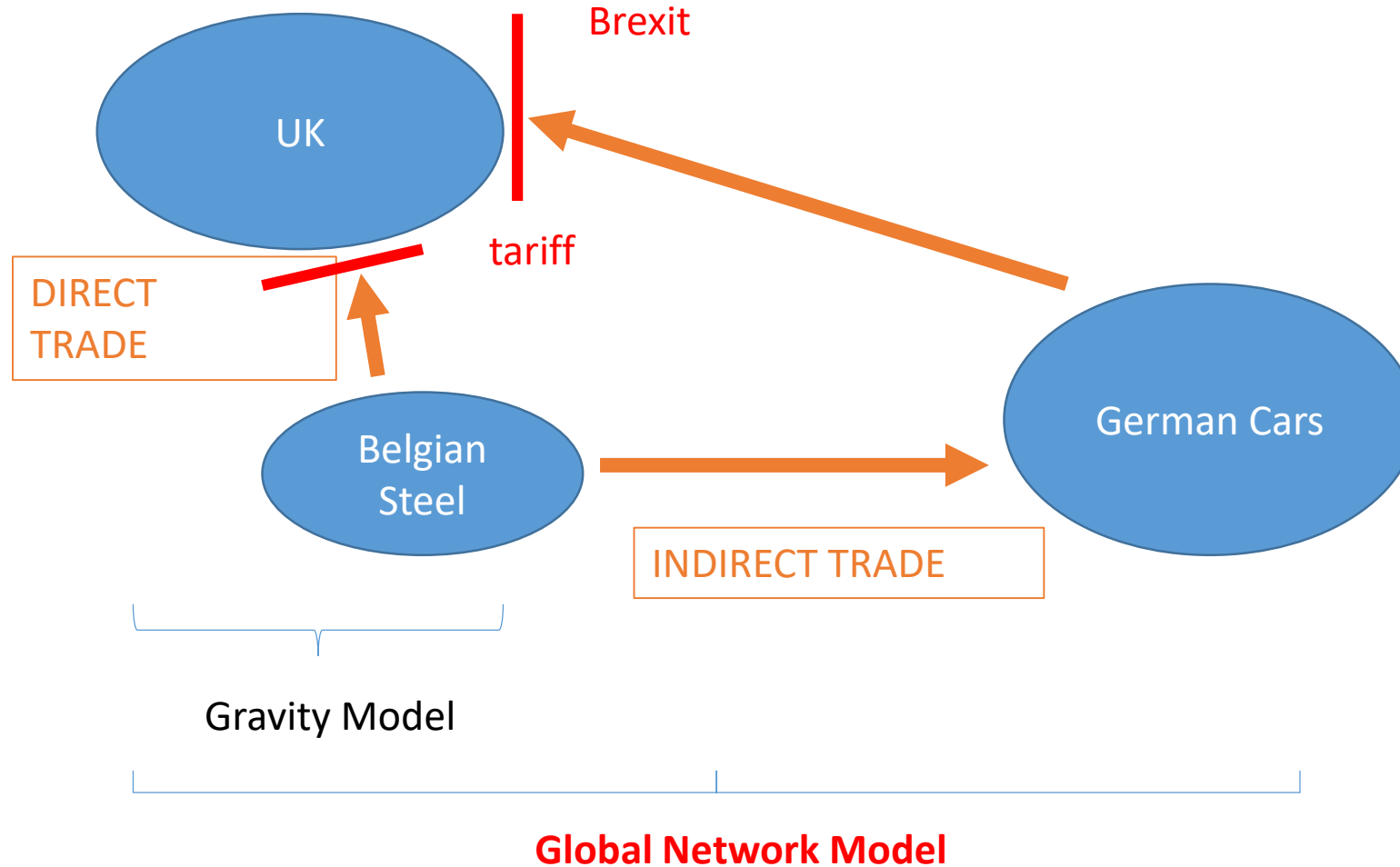


Vandenbussche, Connell and Simons (2019), "Global Value Chains, Trade Shocks and Jobs: An application to Brexit), CES-IFO working paper

How to measure the Effects of Brexit for a country like Belgium?

- We present a **new** approach that is comprehensive e.g.
 - it includes **direct** trade to the UK (gravity type of analysis)
 - It includes **indirect** trade (via “third” countries) to the UK
- The model thus also includes Brexit effects on the **indirect** trade from Belgium to the UK Example: exports of Belgian steel to the UK that travels via the German car producers that use Belgian Steel to produce cars which they sell to the UK consumer
- The model incorporates **input-output** linkages between every country-sector (including the UK) that are involved in a bilateral Brexit breakup.
- This is an approach that takes into account **Global Value Chains (GVC)** between any country-sector in Europe
- This allows us to generate predictions in every **country-sector** in Europe in terms of **value added** and **employment**
- Other models (Dhingra et al 2017; Caliendo Parro, 2010; Yotov et al. 2016; Griffith et al. 2020) are more aggregate and long-run. They take the share of total intermediates in sector-level direct trade to the UK in order to account for GVCs, but do not differentiate between the international origin nor the type of intermediate inputs. There is no unemployment in their model.
- Our approach is **new**: it is **short-run** in nature, thus allowing for unemployment effects to occur and it captures the IO relationship between every country-of-origin-sector to every other country-destination-sector in the EU-28

What is the loss in value added due to Brexit, in a sector like Belgian Steel?



Vandenbussche et al (2017), Global Network Model, KU Leuven

Direct and Indirect Effects of Brexit

- **Direct** Effects: have been well-studied in other Brexit studies
- **Indirect** Effects: rely on network structure and IO linkages.

How important are the indirect trade effects resulting from Brexit? E.g. does most of Brexit effect comes from direct trade between Belgian steel and UK? Or is all the Belgian steel shipped via third countries to the UK a more important source of Brexit effects?

Brexit Scenarios that we consider:

Soft Brexit:

- no tariffs
- Transaction costs (border controls, and behind the border measures e.g. different safety and environmental standards etc.)

Hard Brexit:

- WTO tariffs (on both sides of the channel)
- Transaction costs increase (non-tariff barriers) (Berden et al. EU commission study, 2009)

Global Network Model (GNM)

- To separate the direct from the indirect Network effects of Brexit, we constructed a **new model: The Global Network Model !**
- The network model relies on **input - output linkages** between sectors and is analytically solvable
- The model incorporates all **INDIRECT Effects** in Trade with the UK and generates a mathematical prediction of **short-run job losses** for every **country-sector** in Europe
- The predicted job losses per sector in the model depend on these parameters:
 - A function of **tariffs**
 - A function of **Transaction costs**
 - A function of **Trade Elasticities**
 - A function of **Employment elasticities**

Global Network Model (GNM)

- Results are obtained Ceteris Paribus all other effects (migration, FDI flows, exchange rate)
- Empirically we use the World **Input-Output** Tables (WIOD) to estimate the number of jobs that would be lost under hard Brexit
- We examine the **network** tissue that is lost in the short run, not the trade diversion effects that will occur in longer run
- Our model is not dynamic and cannot give year to year predictions, it compares a drop in GDP under Brexit to the **counterfactual** of no Brexit

Global Network Model (GNM)

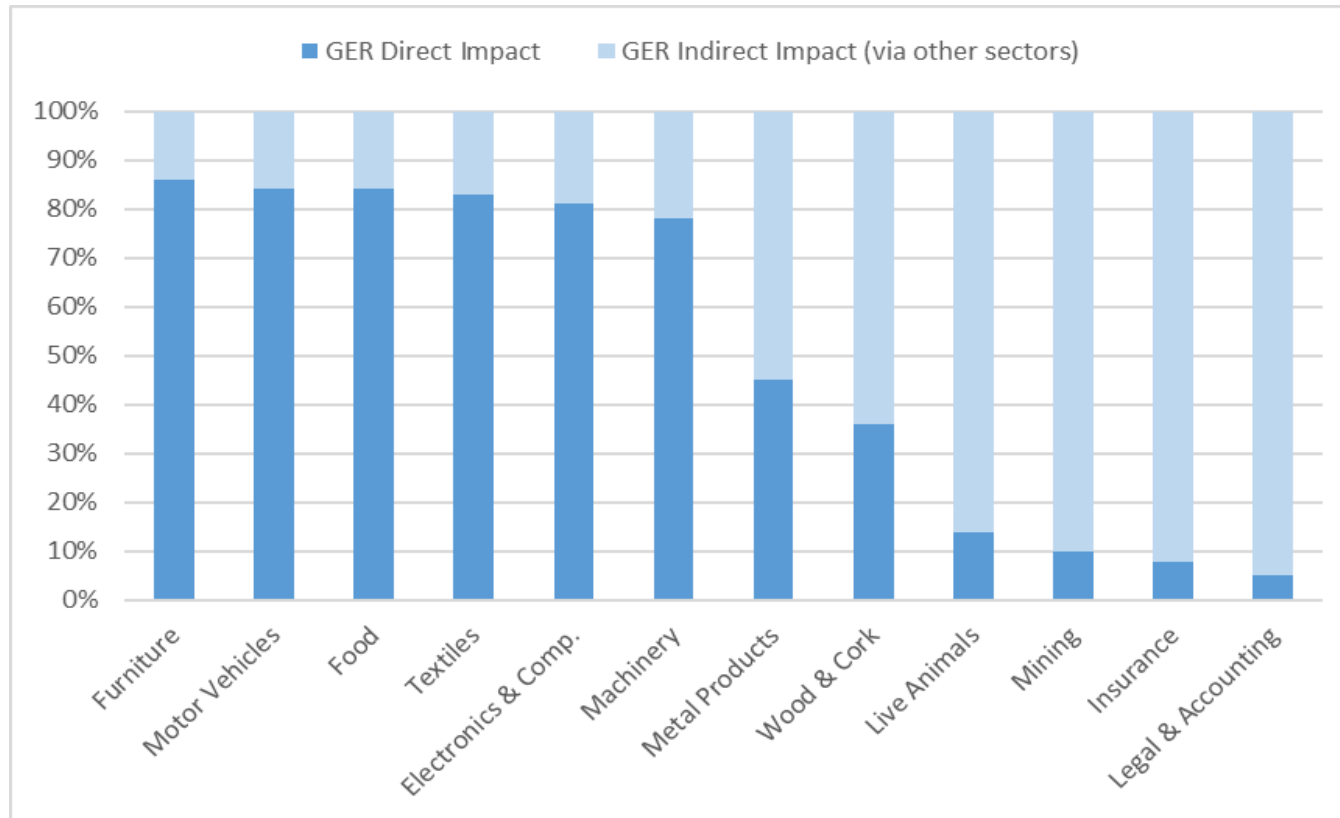
- GNM includes both trade in **goods** and in **services**
- Tariffs on service trade do NOT exist, but services are embedded in goods
- The Global network model takes into account **all upstream** input-output relationships when calculating a Brexit impact
- Our model predicts similar effects for the UK than other models, BUT predicts much stronger effects for the EU-27 than other models, BECAUSE of the network effects and **INDIRECT EFFECTS**

Global Network Model (GNM)

In Sum:

- Global Network Model is the only one to consider **job cost** of Brexit
- GNM is the only one to provide **country- sector** level results
- GNM is the only one to measure effects on **Service** sectors
- GNM is the only one to consider all upstream and downstream effects of the Brexit trade shock with higher tariffs and non-tariff barriers (**Leontief coefficients**)

How important are the Indirect Effects? For Germany we show direct and indirect Brexit effects per sector...



Downstream sectors

Upstream sectors

Results:

- On average across all sectors: **indirect effects account for 70%** of Brexit Impact
- **Indirect** Effects are much most important in **Upstream** Sectors !

Results of GNM: Job Loss Absolute Numbers :

Brexit scenario	Job Losses (absolute numbers)		
	Belgium	EU-27	UK
Soft Brexit	10 000	284 000	140 000
Hard Brexit	42 000	1 200 000	526 000

Results of GNM of Brexit Impact

Output Loss

	UK	EU-27	Belgium
Soft Brexit	-1.2 %	-0.38 %	-0.58 %
Hard Brexit	-4.4 %	-1.5 %	-2.35 %

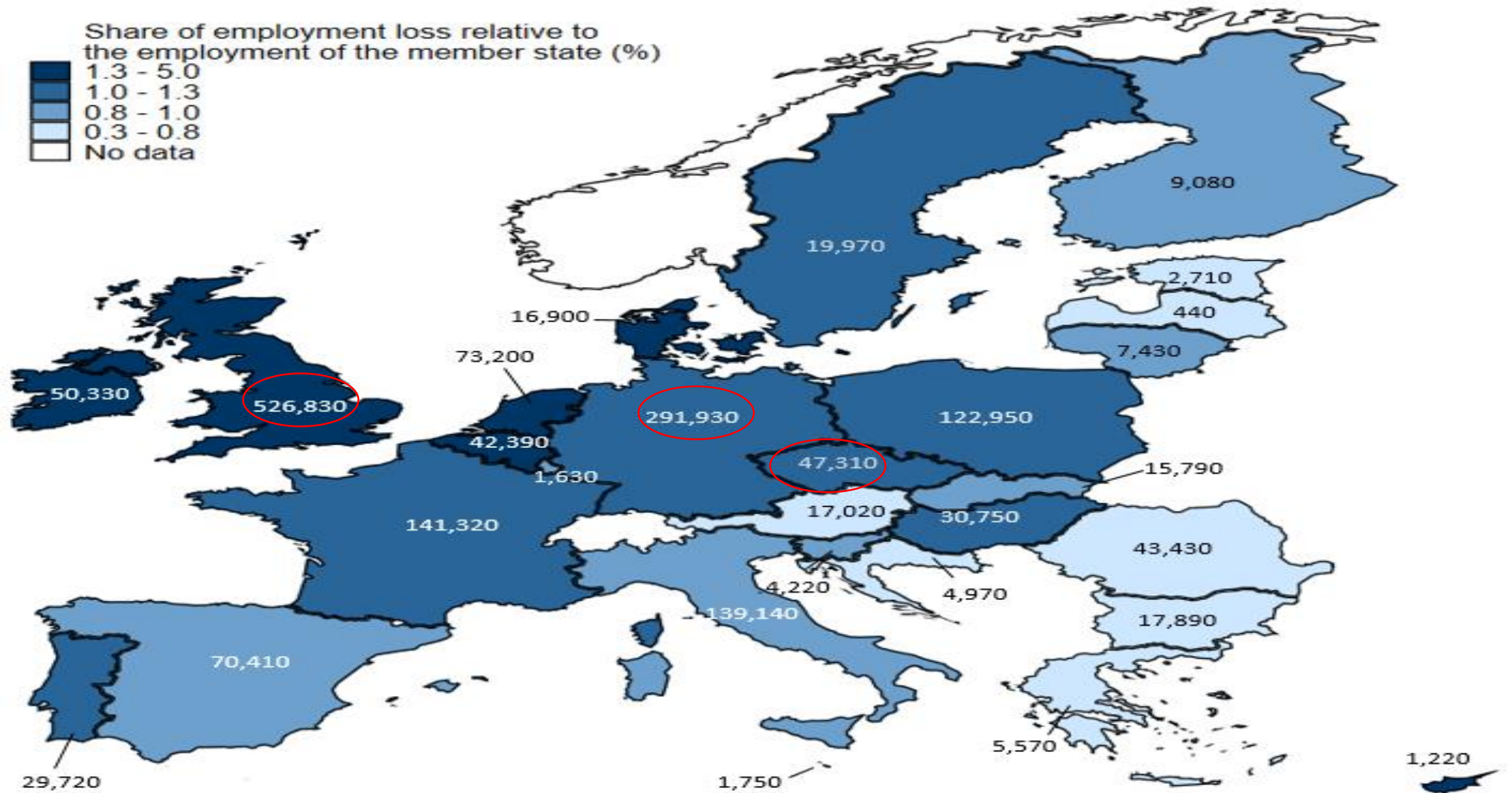
Vandenbussche, Connell and Simons (2017), **Global Value Chains, Trade Shocks and Job Losses**, CES-IFO, University of Munich, Germany

Absolute Job Loss by Region within Belgium

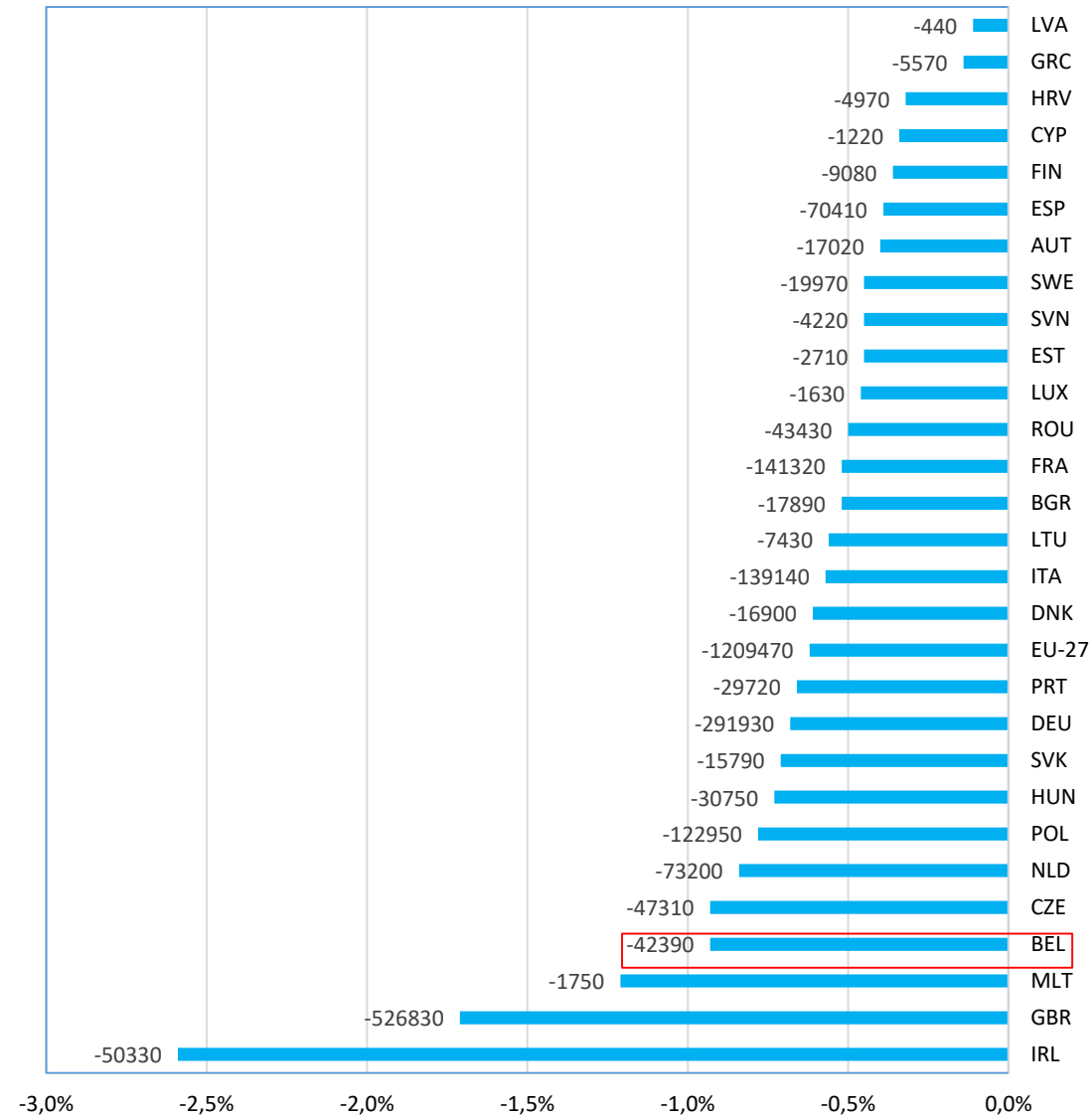
	Soft Brexit	Hard Brexit
Flanders	- 6 500	- 28 000
Wallonia	- 2 500	- 10 000
Brussels	- 1000	- 4 000

Vandenbussche, Connel and Simons (2018), "De Impact van Brexit op de Vlaamse Economie", VIVES working paper, KULeuven

Hard Brexit: Absolute Job Losses



Hard Brexit: Job losses (% of active population)



Source: Global Network Model, Vandenbussche et al. KU Leuven (2017), own calculations

H. Vandebussche (2019),
Sector-Level Analysis of
the Impact of Brexit on
the EU-28, Report
prepared for Flanders
Department of Foreign
Affairs, Belgium
June 2019

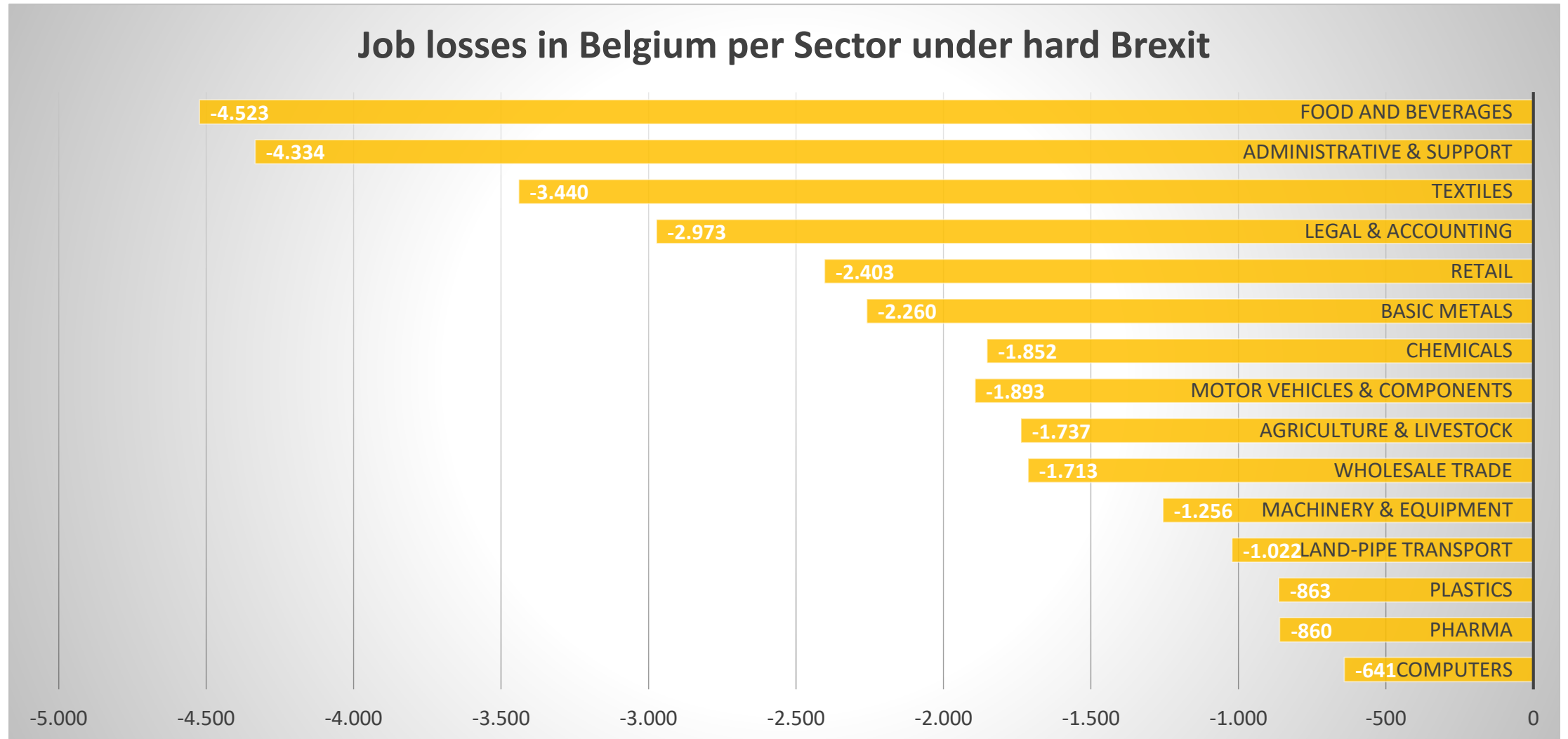
Figure 8.a: Soft Brexit – Job Loss

Member state	% of total Jobs	EU-27 MS relative to EU-27 total
IRL	-0.58%	3.87
MLT	-0.38%	2.53
BEL	-0.22%	1.47
CZE	-0.22%	1.47
NLD	-0.21%	1.40
POL	-0.18%	1.20
HUN	-0.18%	1.20
SVK	-0.17%	1.13
DEU	-0.16%	1.07
PRT	-0.15%	1.00
EU-27	-0.15%	1.00
DNK	-0.14%	0.93
ITA	-0.13%	0.87
LTU	-0.13%	0.87
BGR	-0.13%	0.87
FRA	-0.12%	0.80
ROU	-0.12%	0.80
LUX	-0.11%	0.73
EST	-0.11%	0.73
SVN	-0.11%	0.73
SWE	-0.11%	0.73
AUT	-0.10%	0.67
ESP	-0.10%	0.67
FIN	-0.10%	0.67
CYP	-0.09%	0.60
HRV	-0.08%	0.53
GRC	-0.04%	0.27
LVA	-0.03%	0.20

Figure 8.b: Hard Brexit

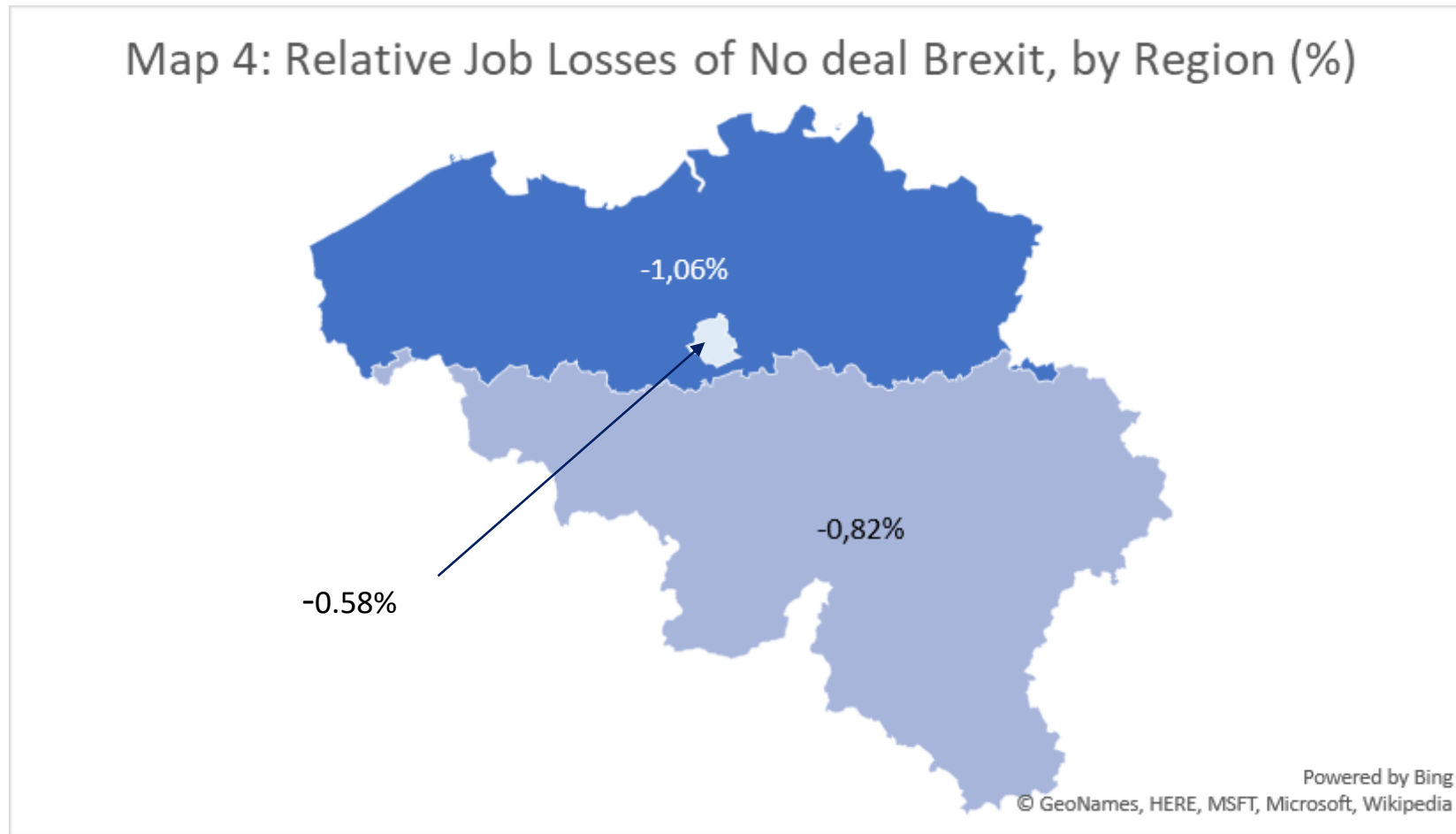
Member state	% of total Jobs	EU-27 MS relative to EU-27 total
IRL	-2.59%	4.18
MLT	-1.21%	1.95
BEL	-0.93%	1.50
CZE	-0.93%	1.50
NLD	-0.84%	1.35
POL	-0.78%	1.26
HUN	-0.73%	1.18
SVK	-0.71%	1.15
DEU	-0.68%	1.10
PRT	-0.66%	1.06
EU-27	-0.62%	1.00
DNK	-0.61%	0.98
ITA	-0.57%	0.92
LTU	-0.56%	0.90
BGR	-0.52%	0.84
FRA	-0.52%	0.84
ROU	-0.50%	0.81
LUX	-0.46%	0.74
EST	-0.45%	0.73
SVN	-0.45%	0.73
SWE	-0.45%	0.73
AUT	-0.40%	0.65
ESP	-0.39%	0.63
FIN	-0.36%	0.58
CYP	-0.34%	0.55
HRV	-0.32%	0.52
GRC	-0.14%	0.23
LVA	-0.11%	0.18

Belgium: Job Losses per Sector (numbers)



Vandenbussche, Connell and Simons (2017), "Global Value Chains, Trade Shocks and Jobs: An application to Brexit), CES-IFO working paper, University of Munich

For Belgium we dig deeper: Relative Job Losses by Region ! (Hard Brexit case)



Local Employment Effects for Belgium

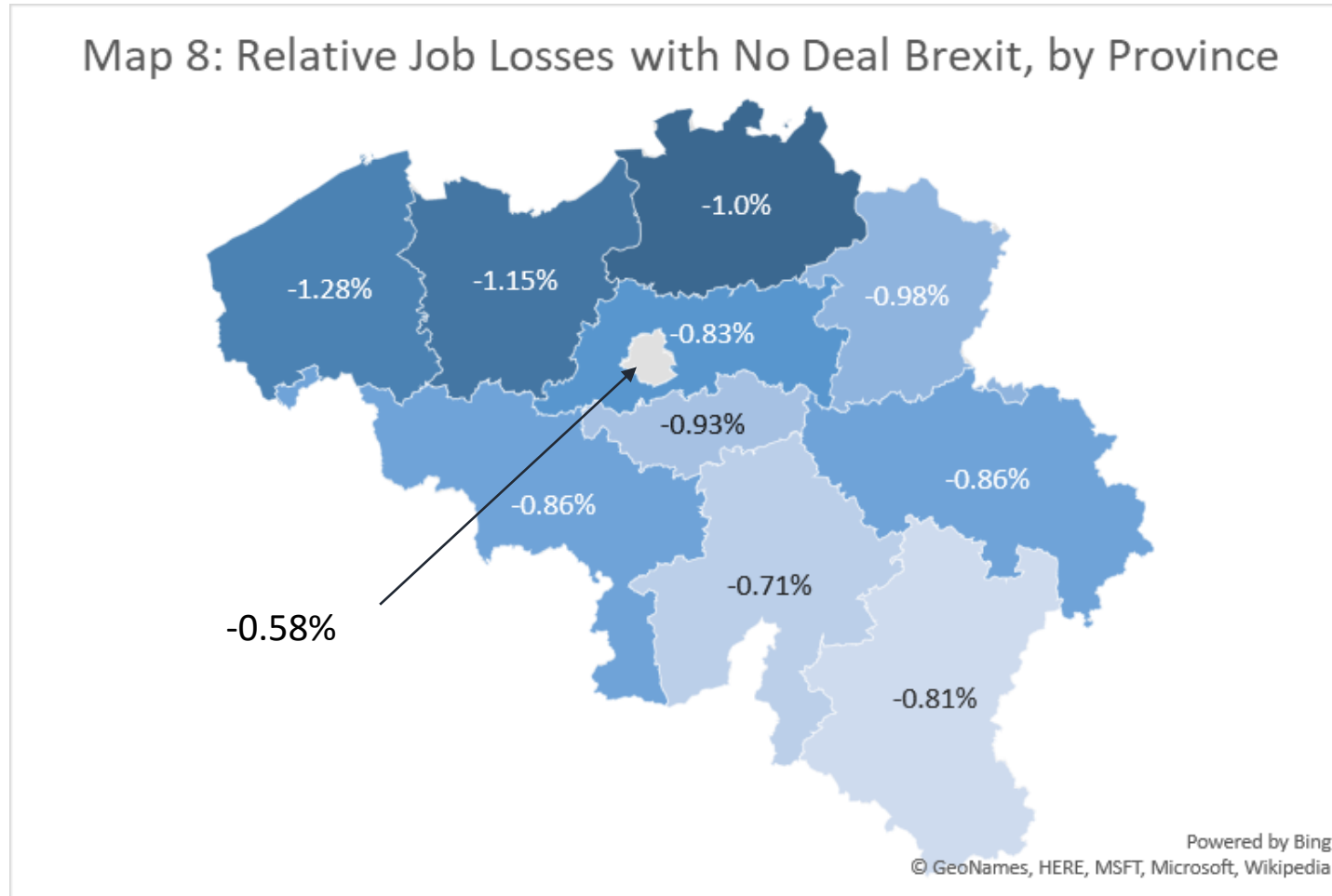
- How does Brexit affect Belgian **Provinces, Municipalities**?
- This mainly depends on sector composition
- Confidential **Social security data** from Flanders Investment and Trade (FIT) on employment at sector level in municipalities, allowed us to predict local employment losses notwithstanding some methodological difficulties
- Our findings could be an underestimation of the true Brexit impact for those municipalities that have a strong export orientation towards the UK such as in the **municipalities** closest to the UK
- If Brexit would deter future access to UK fishing zones, job losses in Belgian coastal areas could be substantially larger than what we currently predict.

Hard Brexit: Absolute Job Losses by Province



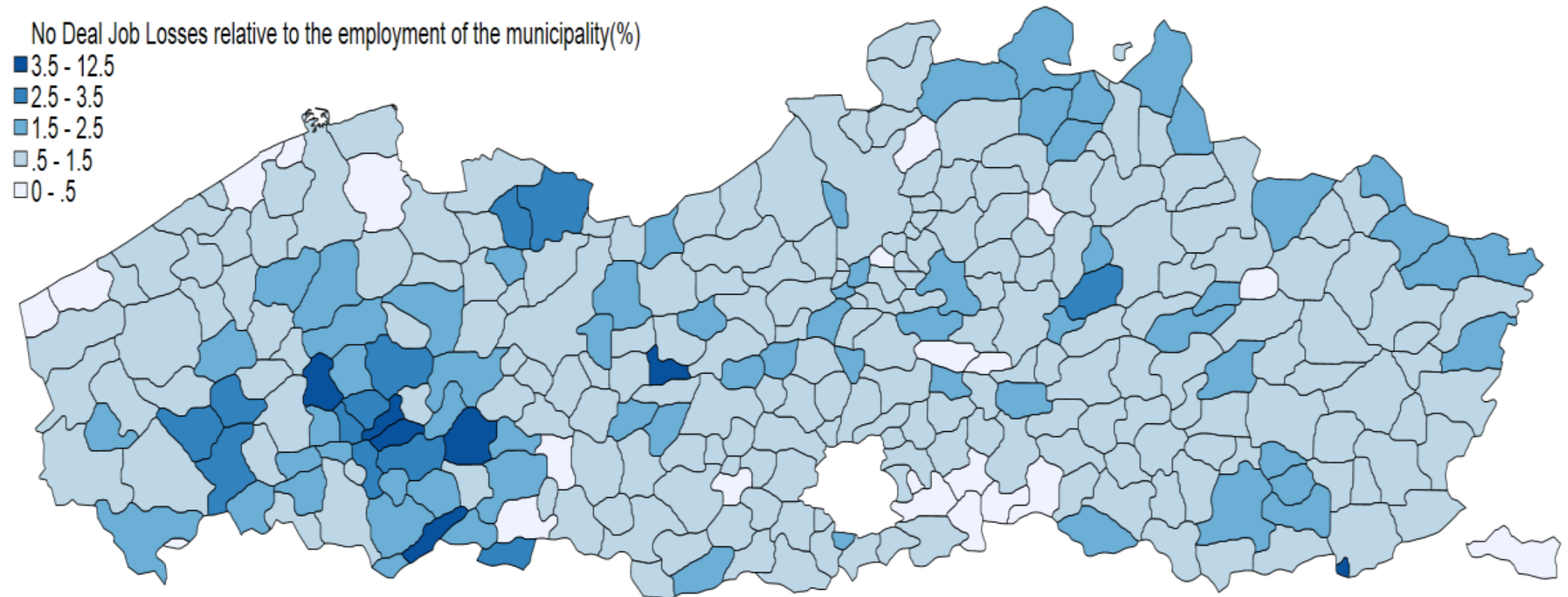
Vandenbussche et al. (2019) study prepared for Flanders Department of Foreign Affairs

Hard Brexit: Relative Job Losses by Province



Vandenbussche et al. (2019) study prepared for Flanders Department of Foreign Affairs

Hard Brexit: Local Employment Effects in Flanders



Main Conclusions:

- The Brexit Impact comes from **Direct and Indirect** Trade Effects via GVC
- **Indirect Effects** account on average for 70% of Brexit impact at country-sector level
- **Brexit** is a European wide story not just of countries closest to UK
- **Soft** Brexit (no tariffs) is by far **preferable** to a **Hard** Brexit scenario
- **Industrial Sectors** particularly affected for Belgium : Food & Beverages, Textiles and Pharmaceuticals, Chemical and Petroleum products
- **Service sectors** particularly affected for Belgium: Administrative & support activities, Legal & Accounting services and Retail activities.
- In almost **every sector**, Belgium is in the **top 3** of most affected member states. The region of Flanders is hit relatively most.
- In **Flanders**, Province Antwerp is most affected in absolute Job Losses
- In **Flanders**, Province West-Flanders is most affected in relative Job losses
- In **Flanders**, Municipalities on the axis Brugge- Kortrijk are most affected by Brexit and the cities Antwerp and Ghent
- **SMEs** could be the victim of Brexit and might be the least well prepared

Questions that remain

- Despite a lose-lose situation, why is Brexit happening?
(technology, industrial revolution etc.)
- What will be the broader impact on EU-27 once the UK leaves:
 - 1) Industrial Policy ?
 - 2) Military and Security ?
 - 3) Competition Policy ?
- Will Europe further disintegrate? Lessons to be drawn for Europe?
- Europe's biggest strength?

THANK YOU !!!

Questions ??