

On some underexplored aspects of **BREXIT**

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Motivation

We argue that 3 important aspects of Brexit have been underexplored:

1) The role of services multinationals

2) Productivity

3) Consumption varieties

Services multinationals

- **The world economy is a services economy: services account for 65% of global GDP**
- **UK's specialization in services stands out: services explain 70% of its GDP**
- **Since services cannot be easily traded! Does this mean they will be unaffected by Brexit?**
- **This aspect has been underexplored (Fernández-Pacheco et al., 2018a; 2018b)**

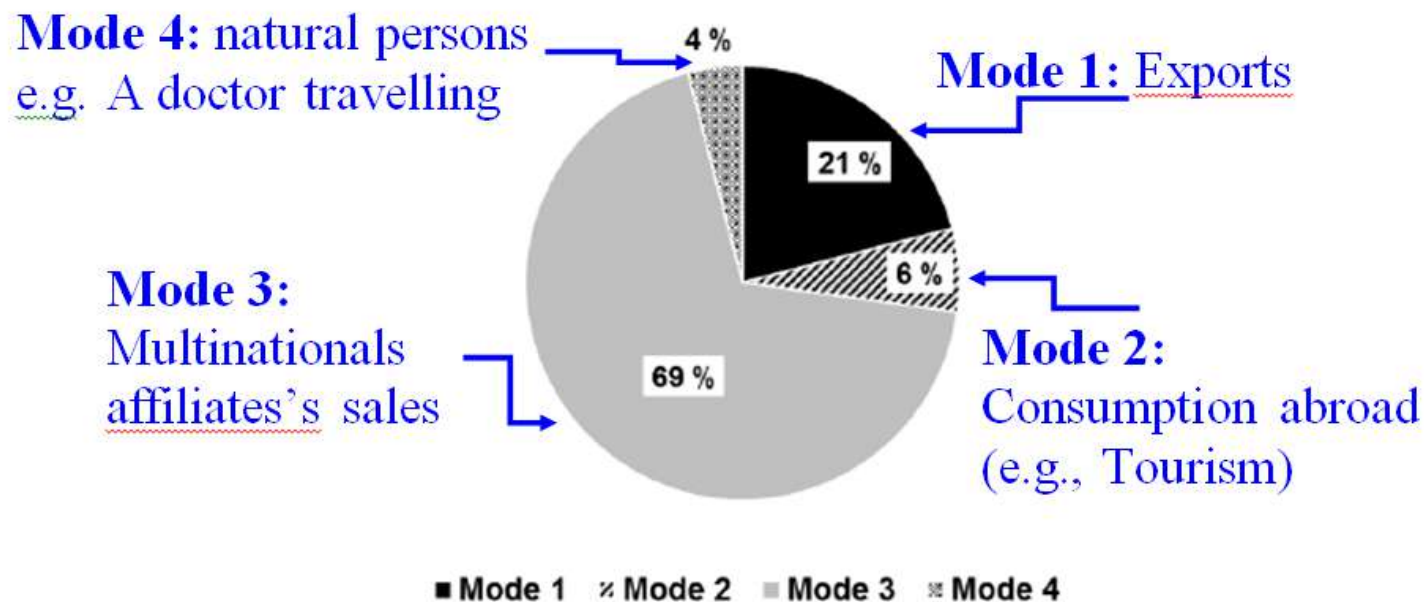
There are 4 modes or ways by which services can be provided beyond a country's borders:

- Mode 1: exports (e.g. banking via internet)**
- Mode 2: consumption abroad (e.g. by a tourist or patient)**
- Mode 3: multinationals affiliates' sales (e.g., sales of the Spanish multinational Zara in shops out of Spain).**
- Mode 4: presence of natural persons (e. g. doctors or teachers)**

The most important way of provision of services is 3!

Weight of multinationals in services' provision (mode 3):

- World economy: 45%- 50% (Steen et al., 2018).
- US around 60% (Man, 2017)
- EU 69% (Rueda et al., 2016):



Productivity

**Productivity is a key variable in economics.
It is the most important source of growth**

Consumption varieties

Provide a way to capture consumers' welfare

What do we do?

We look at 3 underexplored aspects of Brexit:

- *Multinationals & Foreign Direct Investment (FDI)*
- *Productivity*
- *Number of consumption varieties*

We quantify their impact

We analyse these aspects in the context of:

- ***Brexit alone: Hard and Soft***
- ***UK's unilateral tariff elimination***
- ***Possible UK FDI agreements:
with 3 largest Asian (China+India+Japan)***
- ***UK trade&FDI agreement with the US***
- ***EU trade&FDI agreement with the US***

Methodology:
A CGE

Intuitively...

1) A CGE reproduces micro¯oeconomic relationships in the economy

2) **Aggregate results:** GDP

Wages

Rental rate of K

CPI

Exports & Imports

Welfare (Private Consumption)

Sectoral variables:

Production

Prices

Intermediate costs

Value added

Exports

Imports

These features are common to most CGE models

Our CGE approach

**We combine Melitz (2003) in manufactures
with multinationals (&FDI) in services**

**This extends our previous work: Olekseyuk (2016) & Latorre
and Yonezawa (2018) & Latorre et al. (2018a)**

Melitz

- We include the latest developments in modelling trade effects.
- i.e., Different productivity levels and firm sizes within each manufacturing sector

This allows us to derive effects on:

- Productivity
- Number of varieties

FDI&Multinationals

Services sectors have 3 \neq types of services provision:

- Producing locally
- Domestic firms
 - Multinational firms coming from \neq countries
 - Imported varieties coming from \neq countries

↑ **Barriers to FDI** ↑ costs of multinationals, which affect their entry and profitability.

Data

11 x 4 x 21 model of the world economy:

11 regions

UK-REU-US-Chn-Ind-Jpn-LatCar-SEAsia-OtherAdv-ROW

x 4 factors of production

Labor-land-natural resources-capital

x 21 sectors

Projections to 2020

*Using IMF GDP growth & unemployment data
(World Economic Outlook)*

Scenarios

Our barriers assumptions follow the literature in modelling:

- 1) Brexit (Soft & hard)**
- 2) UK unilateral tariff elimination**
- 3) UK FDI simultaneously with China+India
+Japan modest (10% cuts) & ambitious (25% cuts)**
- 4) REU-US TTIP**
- 5) UK-US TTIP**
- 6) Joint TTIP&Brexit for: 1) UK-US 2) REU-US**

Soft Brexit (\approx Norway):

- 1) **Trade barriers:** UK and EU face \uparrow in NTBs of 1/4 of NTBs that US faces on EU markets before the TTIP
- 2) **FDI barriers:** \uparrow in NTBs of 1/4 between UK and REU
- 3) **Total:** 1) + 2)

Hard Brexit (i.e., reversion to WTO rules):

- a. **Tariffs:** MFN level
- b. **Trade barriers:** \uparrow NTBs of 1/2 of NTBs
- c. **FDI barriers:** \uparrow in NTBs of 1/2
- d. **Total:** a) + b) + c)

TTIP: modest (10% cuts) and ambitious (25% cuts)

- 1) Trade related NTBs reductions (“ntb”)
 - 2) Tariffs elimination (“tar”)
 - 3) FDI in services NTBs reductions (“fdi”)
- Total: 1) + 2) + 3) (“total”)**

Exact total % Trade costs ↑ related to Brexit

Sectors		Total Brexit trade costs increases EU-UK		
		Hard Brexit		Soft Brexit
		In REU	In UK	In REU and UK
CRTS sectors	Agriculture	38.6	39.2	14.2
	Other primary	28.4	28.5	14.2
	Wood and paper	6.1	6.6	2.8
	Personal services	2.2	2.2	1.1
	Other services	2.2	2.2	1.1
IRTS sectors with Melitz structure	Food	48.2	50.4	14.2
	Textiles	19.6	19.1	4.8
	Chemicals	9.6	9.5	3.4
	Metals	7.8	8.0	3.0
	Motor vehicles	20.8	21.5	6.4
	Other transport	11.1	11.0	4.7
	Electronics	7.3	7.9	3.2
	Other machinery	1.7	1.8	0.0
	Other manufactures	8.2	7.8	2.8
	Construction	2.3	2.3	1.2
IRTS services with	Water transport	4.0	4.0	2.0
	Air transport	1.0	1.0	0.5
	Communications	5.9	5.9	2.9
	Finance	5.7	5.7	2.8
	Insurance	5.4	5.4	2.7
	Business services	7.5	7.5	3.7

Exact total % trade costs ↓ related to TTIP

Sectors		Total TTIP trade costs reductions							
		Ambitious				Modest			
		In EU	In UK	In US for EU	In US for UK	In EU	In UK	In US for EU	In US for UK
CRTS sectors	Agriculture	-17.5	-18.1	-20.6	-19.0	-9.0	-9.6	-9.7	-8.0
	Other primary	-14.2	-14.2	-18.4	-18.4	-5.7	-5.7	-7.4	-7.4
	Wood and paper	-3.1	-3.1	-2.1	-2.0	-1.4	-1.4	-1.0	-0.8
	Personal services	-1.1	-1.1	-0.6	-0.6	-0.4	-0.4	-0.3	-0.3
	Other services	-1.1	-1.1	-0.6	-0.6	-0.4	-0.4	-0.3	-0.3
IRTS sectors with Melitz structure	Food	-27.7	-25.3	-20.9	-19.5	-19.2	-16.8	-10.0	-8.5
	Textiles	-11.1	-12.9	-11.9	-10.6	-8.3	-10.0	-9.4	-8.1
	Chemicals	-5.4	-5.5	-6.1	-6.2	-3.4	-3.5	-3.3	-3.4
	Metals	-4.9	-4.7	-5.5	-5.2	-3.2	-2.9	-3.0	-2.7
	Motor vehicles	-14.6	-10.4	-7.8	-7.9	-10.8	-6.6	-3.8	-3.9
	Other transport	-5.9	-5.7	-4.9	-4.8	-3.1	-2.8	-2.1	-2.0
	Electronics	-3.7	-3.9	-4.0	-4.1	-1.8	-2.0	-1.8	-1.9
	Other machinery	-1.2	-1.6	-0.9	-0.8	-1.2	-1.6	-0.9	-0.8
	Other manufacturing	-4.7	-3.6	-3.8	-2.6	-3.0	-1.9	-2.6	-1.5
	Construction	-1.2	-1.2	-0.6	-0.6	-0.5	-0.5	-0.3	-0.3
IRTS services with	Water transport	-2.0	-2.0	-2.0	-2.0	-0.8	-0.8	-0.8	-0.8
	Air transport	-0.5	-0.5	-0.5	-0.5	-0.2	-0.2	-0.2	-0.2
	Communication	-2.9	-2.9	-0.4	-0.4	-1.2	-1.2	-0.2	-0.2
	Finance	-2.8	-2.8	-7.9	-7.9	-1.1	-1.1	-3.2	-3.2
	Insurance	-2.7	-2.7	-4.8	-4.8	-1.1	-1.1	-1.9	-1.9
	Business services	-3.7	-3.7	-1.0	-1.0	-1.5	-1.5	-0.4	-0.4

Detailed costs ↓ related to NTBs and tariffs of TTIP

Sectors		TTIP NTBs costs reductions				TTIP 100% Tariffs Elimination			
		Ambitious		Modest		In EU	In UK	In US for	In US for
		In EU&UK	In US	In EU&UK	In US	for US		EU	UK
CRTS sectors	Agriculture	-14.2	-18.3	-5.7	-7.3	-3.3	-3.9	-2.3	-0.6
	Other primary	-14.2	-18.3	-5.7	-7.3	0.0	0.0	-0.1	-0.1
	Wood and paper	-2.8	-1.9	-1.1	-0.8	-0.2	-0.3	-0.2	0.0
	Personal services	-1.1	-0.6	-0.4	-0.3	0.0	0.0	0.0	0.0
	Other services	-1.1	-0.6	-0.4	-0.3	0.0	0.0	0.0	0.0
IRTS sectors with Melitz structure	Food	-14.2	-18.3	-5.7	-7.3	-13.5	-11.1	-2.6	-1.2
	Textiles	-4.8	-4.2	-1.9	-1.7	-6.3	-8.1	-7.7	-6.4
	Chemicals	-3.4	-4.8	-1.4	-1.9	-2.0	-2.1	-1.4	-1.5
	Metals	-3.0	-4.3	-1.2	-1.7	-2.0	-1.7	-1.3	-1.0
	Motor vehicles	-6.4	-6.7	-2.6	-2.7	-8.2	-4.1	-1.1	-1.2
	Other transport	-4.7	-4.8	-1.9	-1.9	-1.2	-1.0	-0.1	-0.1
	Electronics	-3.2	-3.7	-1.3	-1.5	-0.5	-0.7	-0.3	-0.4
	Other machinery	0.0	0.0	0.0	0.0	-1.2	-1.6	-0.9	-0.8
	Other manufacture	-2.8	-1.9	-1.1	-0.8	-1.9	-0.8	-1.9	-0.7
	Construction	-1.2	-0.6	-0.5	-0.3	0.0	0.0	0.0	0.0
IRTS services with multinationals	Water transport	-2.0	-2.0	-0.8	-0.8	0.0	0.0	0.0	0.0
	Air transport	-0.5	-0.5	-0.2	-0.2	0.0	0.0	0.0	0.0
	Communications	-2.9	-0.4	-1.2	-0.2	0.0	0.0	0.0	0.0
	Finance	-2.8	-7.9	-1.1	-3.2	0.0	0.0	0.0	0.0
	Insurance	-2.7	-4.8	-1.1	-1.9	0.0	0.0	0.0	0.0
	Business services	-3.7	-1.0	-1.5	-0.4	0.0	0.0	0.0	0.0

Results

Macroeconomic results

Only Brexit impact

FDI adds 1/3 of the negative effects

Scenario	Soft Brexit		Hard Brexit	
	GDP			
	REU	UK	REU	UK
NTBs	-0.10	-0.82	-0.18	-1.47
FDI barriers	-0.06	-0.41	-0.12	-0.83
Tariffs			-0.06	-0.39
Total	-0.16	-1.23	-0.35	-2.53

Source: Latorre et al. (2018b)

***UK Unilateral tariff
elimination & FDI
agreements***

UK obtains very little with the unilateral tariff elimination and the FDI agreements:

	GDP
	UK
UK Unilateral Tariff Elimination	0.12
UK modest FDI w/Chn+Ind+Jpn	0.02
UK ambitious FDI w/Chn+Ind+Jpn	0.06

Source: Latorre et al. (2018c)

UK-US TTIP

A UK-US TTIP would be important for UK but not much for the US

FDI explains 1/3 for UK and 1/2 for US

		GDP	
		UK	US
UK-US modest TTIP	fdi	0.08	0.02
	ntb	0.13	0.02
	tar	0.05	0.01
	total	0.26	0.04
UK-US ambitious TTIP	fdi	0.22	0.04
	ntb	0.37	0.05
	tar	0.05	0.01
	total	0.66	0.10

EU-US TTIP

A EU-US TTIP would be important for both the EU and the US

FDI explains 1/3 for EU and 1/2 for US

		REU	US
REU-US modest TTIP	fdi	0.06	0.11
	ntb	0.10	0.07
	tar	0.04	0.04
	total	0.22	0.22
REU-US ambitious TTIP	fdi	0.17	0.29
	ntb	0.30	0.19
	tar	0.04	0.04
	total	0.53	0.53

Joint Brexit & TTIP

A UK-US TTIP agreement is insufficient to compensate the negative impacts of Brexit but TTIP could be useful for the REU

	GDP	
	UK	EU
modest TTIP & soft Brexit	-1.19	0.06
ambitious TTIP & soft Brexit	-0.58	0.37
modest TTIP & hard Brexit	-2.28	-0.14
ambitious TTIP & hard Brexit	-1.89	0.19

***Microeconomic results:
Visual of Results***

Brexit vs liberalization

Productivity

		Brexit				Liberalization Scenarios				
		Soft Brexit		Hard Brexit		UK Unilateral Tariff Elimination	UK-US modest TTIP	UK-US ambitious TTIP	REU-US modest TTIP	REU- ambitious
		UK	REU	UK	REU	UK	UK	UK	REU	REU
		Domestic productivity								
IRTS sectors with Melitz structure	Food	-1.22	-0.21	-2.12	-0.41	0.48	0.17	0.47	0.16	0.40
	Textiles	-0.77	-0.09	-2.27	-0.28	1.26	0.13	0.14	0.19	0.23
	Chemicals	-0.99	-0.10	-2.27	-0.24	0.41	0.30	0.52	0.20	0.37
	Metals	-0.65	-0.05	-1.60	-0.11	0.44	0.23	0.42	0.05	0.08
	Motor vehicles	-2.27	-0.21	-2.27	-0.62	0.60	0.25	0.49	0.23	0.42
	Other transport	-0.91	-0.14	-1.89	-0.28	0.99	0.43	0.98	0.29	0.64
	Electronics	-1.39	-0.12	-2.27	-0.26	0.58	0.13	0.26	0.06	0.12
	Other machinery	0.06	0.01	-0.59	-0.01	0.34	0.13	0.10	0.06	0.03
	Other manufactures	-0.22	-0.03	-0.66	-0.08	0.25	0.05	0.07	0.08	0.09
	Construction	0.00	0.00	0.00	0.01	0.01	0.00	-0.01	0.00	-0.00
		Industry productivity								
IRTS sectors with Melitz structure	Food	-1.13	-0.26	-2.75	-1.10	-0.01	-0.09	-0.76	-0.14	-0.70
	Textiles	-0.72	-0.08	-2.37	-0.45	0.38	-0.14	-0.25	-0.11	-0.20
	Chemicals	-0.91	-0.07	-2.18	-0.22	0.28	0.22	0.35	0.12	0.20
	Metals	-0.57	-0.03	-1.48	-0.12	0.28	0.13	0.20	0.00	-0.00
	Motor vehicles	-2.08	-0.18	-2.33	-0.65	0.45	0.17	0.27	0.13	0.18
	Other transport	-0.84	-0.10	-1.83	-0.28	0.69	0.33	0.71	0.20	0.42
	Electronics	-1.29	-0.09	-2.15	-0.24	0.43	0.09	0.16	0.02	0.03
	Other machinery	0.05	0.01	-0.54	-0.01	0.26	0.11	0.08	0.04	0.02
	Other manufactures	-0.20	-0.02	-0.63	-0.09	0.09	0.03	0.04	0.03	0.04
	Construction	-0.05	0.00	-0.07	-0.01	-0.10	0.02	0.05	0.00	0.02

Brexit leads to ↓ in productivity in both UK&REU, but they are more intense in the UK

Liberalization leads to ↑ in productivity

Number of consumption varieties

		Brexit				Liberalization Scenarios				
		Consumption varieties								
IRTS sectors with Melitz structure	Food	-1.75	-0.10	-2.88	-0.16	0.40	0.19	0.45	0.12	0.27
	Textiles	-0.76	-0.09	-1.49	-0.20	0.84	0.14	0.35	0.07	0.19
	Chemicals	-0.52	-0.08	-1.24	-0.16	0.02	0.10	0.22	0.08	0.21
	Metals	-0.26	-0.03	-0.39	-0.08	0.14	0.07	0.12	0.02	0.05
	Motor vehicles	-2.37	-0.15	-6.47	-0.33	0.00	0.13	0.31	0.11	0.27
	Other transport	-0.39	-0.07	-0.73	-0.13	0.04	0.15	0.40	0.11	0.29
	Electronics	-0.50	-0.06	-1.22	-0.12	0.03	0.06	0.13	0.04	0.10
	Other machinery	-0.11	-0.02	-0.18	-0.06	0.02	0.04	0.07	0.02	0.05
	Other manufactures	-0.41	-0.05	-0.73	-0.11	-0.01	0.13	0.32	0.04	0.12
	Construction	-0.04	-0.01	-0.07	-0.02	0.00	0.01	0.02	0.01	0.02
		UK	REU	UK	REU	UK	UK	UK	REU	REU
		Soft Brexit		Hard Brexit		UK Unilateral Tariff Elimination	UK-US modest TTIP	UK-US ambitious TTIP	REU-US modest TTIP	REU-US ambitious TTIP

Similarly to productivity:

Brexit leads to ↓ in the number of variables available in both UK&REU, but this is more intense in the UK

Liberalization leads to ↑ in the number of varieties

***Joint Brexit and TTIP
impacts***

TTIP & Brexit joint impact on UK

	UK-US modest TTIP & soft Brexit			UK-US ambitious TTIP & soft Brexit		
	Domestic productivity	Industry productivity	Consumption varieties	Domestic productivity	Industry productivity	Consumption varieties
FPR	-1.06	-1.16	-1.54	-0.77	-1.72	-1.27
T_A	-0.64	-0.84	-0.62	-0.62	-0.96	-0.41
CHM	-0.70	-0.69	-0.43	-0.48	-0.56	-0.32
MMP	-0.42	-0.43	-0.19	-0.23	-0.36	-0.14
mvh	-2.27	-2.12	-2.13	-2.27	-2.21	-1.84
otn	-0.48	-0.50	-0.24	0.06	-0.11	0.01
EEQ	-1.26	-1.20	-0.45	-1.13	-1.12	-0.37
ome	0.20	0.15	-0.07	0.16	0.13	-0.04
omf	-0.16	-0.17	-0.28	-0.15	-0.16	-0.09
cns	0.00	-0.03	-0.03	-0.01	0.01	-0.02
	UK-US modest TTIP & hard Brexit			UK-US ambitious TTIP & hard Brexit		
	Domestic productivity	Industry productivity	Consumption varieties	Domestic productivity	Industry productivity	Consumption varieties
FPR	-1.97	-2.66	-2.64	-1.71	-3.03	-2.35
T_A	-2.22	-2.53	-1.32	-2.19	-2.63	-1.12
CHM	-2.26	-2.21	-0.97	-2.06	-2.07	-0.87
MMP	-1.37	-1.32	-0.33	-1.19	-1.24	-0.28
mvh	-2.27	-2.36	-6.22	-2.27	-2.44	-5.92
otn	-1.46	-1.47	-0.57	-0.93	-1.07	-0.32
EEQ	-2.27	-2.18	-1.12	-2.27	-2.22	-1.00
ome	-0.46	-0.42	-0.15	-0.49	-0.45	-0.12
omf	-0.60	-0.60	-0.61	-0.59	-0.59	-0.42
cns	0.00	-0.05	-0.07	-0.01	-0.01	-0.05

TTIP&Brexit joint impact on REU

	REU-US modest TTIP & soft Brexit			REU-US ambitious TTIP & soft Brexit		
	Domestic productivity	Industry productivity	Consumption varieties	Domestic productivity	Industry productivity	Consumption varieties
FPR	0.01	-0.30	0.01	0.26	-0.95	0.17
T_A	0.13	-0.16	-0.01	0.18	-0.24	0.11
CHM	0.13	0.07	0.00	0.30	0.15	0.13
MMP	0.01	-0.02	-0.01	0.05	-0.05	0.02
mvh	0.10	0.03	-0.02	0.31	0.10	0.14
otn	0.17	0.12	0.04	0.52	0.35	0.21
EEQ	-0.05	-0.06	-0.02	0.02	-0.05	0.04
ome	0.08	0.05	0.00	0.05	0.04	0.03
omf	0.05	0.02	-0.01	0.07	0.02	0.07
cns	0.00	0.01	0.00	0.00	0.02	0.01
	REU-US modest TTIP & hard Brexit			REU-US ambitious TTIP & hard Brexit		
	Domestic productivity	Industry productivity	Consumption varieties	Domestic productivity	Industry productivity	Consumption varieties
FPR	-0.23	-1.09	-0.05	0.02	-1.73	0.11
T_A	-0.06	-0.47	-0.11	-0.01	-0.55	0.01
CHM	-0.01	-0.06	-0.07	0.17	0.03	0.05
MMP	-0.05	-0.09	-0.05	-0.01	-0.11	-0.02
mvh	-0.27	-0.36	-0.20	-0.06	-0.27	-0.03
otn	0.03	-0.03	-0.02	0.39	0.21	0.16
EEQ	-0.19	-0.20	-0.08	-0.12	-0.18	-0.02
ome	0.06	0.04	-0.03	0.03	0.02	0.00
omf	0.01	-0.04	-0.06	0.03	-0.03	0.02
cns	0.00	0.00	-0.01	0.00	0.01	0.00

Conclusions

MNEs play an important role:

*Mode 3 explains around 1/3 or more
of the negative impact of Brexit*

*Several UK's policies do not
compensate Brexit*

*UK's unilateral tariff elimination &
FDI joint agreements (simultaneously with
China, India and Japan)*

have a tiny impact on GDP

Possible agreements with US:

A UK-US TTIP agreement is an important force but it is insufficient to compensate the negative impacts of Brexit.

But a REU-US TTIP agreement can overturn the limited negative effects it experiences with Brexit.

Productivity & varieties:

In UK & REU Brexit: ↓ productivity & ↓ # of consumption varieties across the board

The impact is more intense in the UK

We have provided quantitative estimations for these results

We cover many macro and microeconomic varieties

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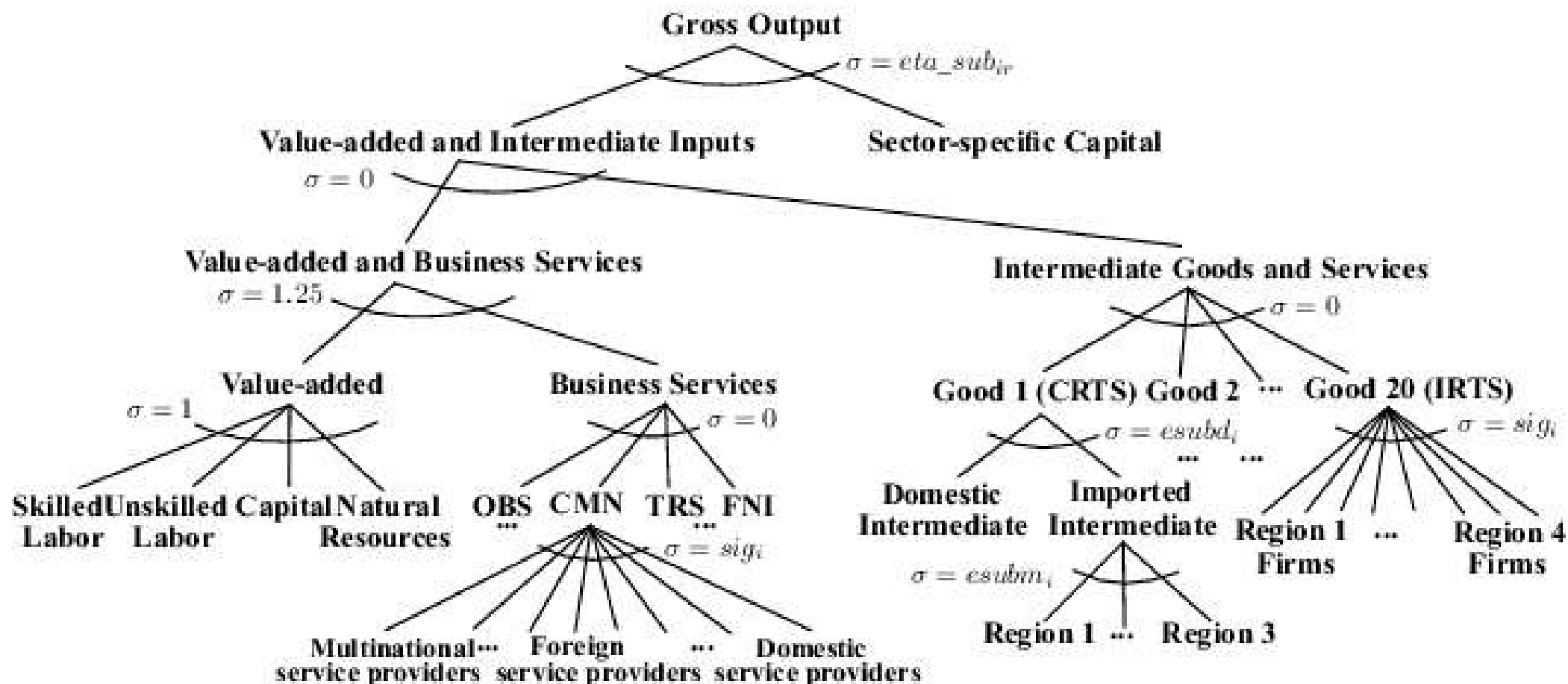
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Thank you!

Production structure in each region and sector



More detail of results:

		GDP			Welfare		
		UK	REU	US	UK	REU	US
Soft Brexit		-1.24	-0.17	0.01	-1.57	-0.29	0.01
Hard Brexit		-2.55	-0.38	0.01	-3.19	-0.63	0.02
UK Unilateral Tariff Elimination		0.12	-0.01	0.02	0.03	-0.04	0.04
UK modest FDI w/Chn+Ind+Jpn		0.02	0.00	0.00	0.03	0.00	0.00
UK ambitious FDI w/Chn+Ind+Jpn		0.06	0.00	0.00	0.09	0.00	0.00
UK-US modest TTIP	fdi	0.08	0.00	0.02	0.10	0.00	0.02
	ntb	0.13	0.00	0.02	0.18	0.00	0.02
	tar	0.05	0.00	0.01	0.06	-0.01	0.01
	total	0.26	0.00	0.04	0.34	-0.01	0.05
UK-US ambitious TTIP	fdi	0.22	0.00	0.04	0.30	0.00	0.06
	ntb	0.37	0.00	0.05	0.50	0.00	0.06
	tar	0.05	0.00	0.01	0.06	-0.01	0.01
	total	0.66	-0.01	0.10	0.87	-0.01	0.13
REU-US modest TTIP	fdi	-0.01	0.06	0.11	-0.01	0.11	0.15
	ntb	0.00	0.10	0.07	-0.01	0.18	0.08
	tar	-0.01	0.04	0.04	-0.01	0.05	0.05
	total	-0.02	0.22	0.22	-0.03	0.34	0.29
REU-US ambitious TTIP	fdi	-0.03	0.17	0.29	-0.04	0.30	0.39
	ntb	-0.01	0.30	0.19	-0.02	0.51	0.22
	tar	-0.01	0.04	0.04	-0.01	0.05	0.05
	total	-0.04	0.53	0.53	-0.06	0.88	0.69

More detail of results:

		Wages			Capital remuneration		
		UK	REU	US	UK	REU	US
Soft Brexit		-1.25	-0.18	0.00	-1.66	-0.22	0.01
Hard Brexit		-2.80	-0.41	0.01	-3.47	-0.45	0.02
UK Unilateral Tariff Elimination		0.51	-0.01	0.01	0.63	-0.01	0.02
UK modest FDI w/Chn+Ind+Jpn		0.01	0.00	0.00	0.05	0.00	0.00
UK ambitious FDI w/Chn+Ind+Jpn		0.02	0.00	0.00	0.12	0.00	0.00
UK-US modest TTIP	fdi	0.03	0.00	0.02	0.17	0.00	0.01
	ntb	0.11	0.00	0.01	0.13	0.00	0.01
	tar	0.08	0.00	0.01	0.07	0.00	0.01
	total	0.23	0.00	0.04	0.37	-0.01	0.03
UK-US ambitious TTIP	fdi	0.09	0.00	0.05	0.48	-0.01	0.02
	ntb	0.30	0.00	0.05	0.34	0.00	0.04
	tar	0.08	0.00	0.01	0.07	0.00	0.01
	total	0.49	0.00	0.10	0.92	-0.01	0.08
REU-US modest TTIP	fdi	-0.01	0.03	0.09	-0.02	0.10	0.16
	ntb	0.00	0.08	0.07	0.00	0.10	0.01
	tar	0.00	0.06	0.06	0.00	0.07	0.05
	total	-0.01	0.18	0.22	-0.03	0.29	0.23
REU-US ambitious TTIP	fdi	-0.02	0.07	0.24	-0.04	0.29	0.42
	ntb	0.01	0.24	0.20	-0.01	0.30	0.02
	tar	0.00	0.06	0.06	0.00	0.07	0.05
	total	-0.01	0.40	0.51	-0.06	0.69	0.52

		Exports			Imports			CPI	
		UK	REU	US	UK	REU	US	UK	REU
Soft Brexit		-7.39	-1.57	0.05	-6.48	-1.68	0.04	0.28	-0.06
Hard Brexit		-16.69	-3.53	0.12	-14.50	-3.81	0.10	1.06	-0.19
UK Unilateral Tariff Elimination		4.01	-0.09	0.48	3.09	-0.09	0.36	-1.19	-0.23
UK modest FDI w/Chn+Ind+Jpn		0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00
UK ambitious FDI w/Chn+Ind+Jpn		-0.01	0.00	0.00	0.04	0.00	0.00	0.00	0.00
UK-US modest TTIP	fdi	-0.17	0.00	0.07	0.07	0.00	-0.01	1.14	-0.17
	ntb	0.64	-0.02	0.23	0.50	-0.02	0.17	1.12	-0.20
	tar	0.59	-0.02	0.20	0.48	-0.02	0.15	0.95	-0.22
	total	1.13	-0.04	0.52	1.11	-0.05	0.32	1.08	-0.21
UK-US ambitious TTIP	fdi	-0.48	-0.01	0.20	0.21	-0.01	-0.02	0.29	-0.09
	ntb	1.89	-0.06	0.67	1.49	-0.07	0.49	0.42	0.28
	tar	0.59	-0.02	0.20	0.48	-0.02	0.15	0.04	-0.15
	total	2.22	-0.09	1.13	2.35	-0.11	0.66	0.14	0.10
REU-US modest TTIP	fdi	0.02	0.13	-0.02	0.00	0.03	0.10	-0.01	-0.02
	ntb	-0.07	0.67	1.23	-0.06	0.78	0.90	0.06	0.10
	tar	-0.06	0.93	1.21	-0.03	1.02	0.89	-0.09	-0.11
	total	-0.12	1.86	2.58	-0.09	1.96	2.00	-0.06	-0.05
REU-US ambitious TTIP	fdi	0.04	0.29	0.02	-0.01	0.10	0.25	0.01	-0.03
	ntb	-0.20	1.85	3.62	-0.17	2.19	2.64	0.19	0.33
	tar	-0.06	0.93	1.21	-0.03	1.02	0.89	-0.09	-0.11
	total	-0.23	3.44	5.31	-0.21	3.71	4.11	0.06	0.13

TTIP & Brexit Macroeconomic impact

	Impact on UK's					
	GDP	Welfare	Wages	K Remunerat.	Exports	Imports
UK-US modest TTIP & soft Brexit	-1.19	-1.23	-1.01	-1.29	-6.17	-5.29
UK-US ambitious TTIP & soft Brexit	-0.58	-0.70	-0.76	-0.76	-4.92	-3.92
UK-US modest TTIP & hard Brexit	-2.28	-2.84	-2.56	-3.10	-15.38	-13.23
UK-US ambitious TTIP & hard Brexit	-1.89	-2.32	-2.32	-2.57	-14.00	-11.76
	Impact on REU's					
	GDP	Welfare	Wages	tal Remunera	Exports	Imports
REU-US modest TTIP & soft Brexit	0.06	0.08	0.03	0.09	0.63	0.67
REU-US ambitious TTIP & soft Brexit	0.37	0.62	0.25	0.50	2.32	2.53
REU-US modest TTIP & hard Brexit	-0.14	-0.25	-0.19	-0.14	-1.30	-1.43
REU-US ambitious TTIP & hard Brexit	0.19	0.30	0.03	0.27	0.42	0.46