Trade-related effects of Brexit. Implications for Central and Eastern Europe.

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The authors would like to acknowledge the financial support of the Polish National Science Center, grant number UMO-2018/31/B/HS4/01855.

Introduction

- Following the referendum on 23 June 2016, the UK voted to leave the EU and UK left the European Union on 31 January 2020.
- Trade talks concluded in December 2020 with an FTA-type arrangement (zero tariffs and quotas) but UK is not going to be a part of the Single Market, so NTBs may emerge over time.
- Literature on the effect of Brexit on the New Member States countries is scarce – while UK is their 2-3rd largest trade partner
- We evaluate the possible impact of Brexit using the GTAP CGE model and Brexit scenarios encompassing changes in tariffs and NTBs with a focus on NMS.
- We perform our own estimation of intra and extra EU NTBs using a gravity framework (see, e.g, Fontagne, Guillin and Mitaritonna, 2011)
- Since this paper was written when Hard Brexit (MFN rules) was still an option, the scenarios include both Hard and Soft Brexit (FTA)

Preliminaries

- Brexit is an asymmetric shock with the EU share of UK exports/imports at 40+ percent
- UK is an important destination for NMS exports (with Poland having the highest share in merchandise trade (6.3%) and services (5.3%). Imports from UK to NMS important mainly in the service sectors.
- Positive NMS trade balance in goods, negative in services
- Revealed comparative advantages in UK market differ among NMS countries. In merchandise trade these are mainly traditional production sectors: food and beverages, wood, minerals, metals but also electronic equipment, motor vehicles (CZE and SVK). In services: transport, construction, some business services

EU MFN tariff and NTB estimates

	Applied Tariff	MFN Tariff	NTB Intra EU	NTB Extra EU
Agriculture	2.31	4.76	0.0	26.9
Fishing	1.78	3.19	20.5	43.5
Mining	0.00	0.00	6.1	11.7
Food	11.27	16.74	0.0	19.9
Beverages & Tobacco	5.62	7.98	0.0	31.2
Textiles	4.39	7.59	1.1	8.8
Wearing Apparel	6.33	11.37	0.0	15.3
Leather	7.74	9.25	0.0	13.8
Wood	1.54	2.01	1.0	10.7
Paper, Publishing	0.04	0.09	6.9	18.7
Fuels	1.43	1.77	19.2	27.1
Chemicals	3.13	4.45	7.7	19.0
Pharmaceuticals	0.31	0.57	0.0	13.8
Rubber & Plastics	3.33	4.71	8.2	16.3
Non-metalic minerals	3.16	4.10	6.5	12.7
Steel	0.30	0.63	33.8	47.8
Metals nec	1.03	1.90	32.1	44.9
Metal products	2.03	2.63	8.0	11.5
Electronics and opticals	0.86	1.12	8.1	14.3
Electrical equipment	1.77	2.39	8.5	11.1
Machinery and equipment nec	1.02	1.33	14.6	15.5
Motor vehicles and parts	3.94	7.30	0.0	11.4
Transport equipment nec	1.59	1.86	8.8	6.3
Manufactures nec	0.96	1.13	9.6	15.3

	Applied Tariff	MFN Tariff	NTB Intra EU	NTB Extra EU
Energy			0.4	7.5
Construction			29.0	37.1
Trade			32.9	39.0
Accommodation and Food			34.9	39.2
Transport nec			36.8	44.4
Water transport			9.7	10.6
Air transport			6.4	11.2
Warehousing and support			32.2	37.1
Communication			25.5	31.2
Financial services nec			46.2	55.0
Insurance			58.1	65.8
Real estate activities			28.5	33.6
Business services nec			21.8	26.7
Recreational and oth			30.5	32.9
Public Administration			25.4	34.5
Education			15.0	22.2
Human health, social work			10.8	16.9

Tariffs are tariffs weighted averaged across all extra-EU partners for 2014. NTBs from gravity model estimations.

Simulation scenarios/Methods

Scenario	Agriculture & food	Manufacturing	Services
A	UK trade with EU:	UK trade with EU:	UK trade with EU: 50% of
(FTA + UK tariffs vs RoW	Zero tariffs,	Zero tariffs,	external level NTB,
stay intact including	25% of external level NTB,	25% of external level NTB,	border costs 2.5%
preferential agreements of	border costs 2.5%	border costs 2.5%	
EU)			
	UK external tariff same as EU	UK external tariff same as EU	UK external tariff same as EU
Conservative short run	external tariff	external tariff	external NTB
scenario	(British negotiations of existing		
	FTA of EU needed)		
B	UK trade with EU:	UK trade with EU:	UK trade with EU:
(FTA + UK partially	Zero tariffs,	Zero tariffs, 25% EU NTBs,	50% of external EU NTBs ,
liberalizes tariffs versus third	50% of external level NTB,		
countries)	& 60% for fisheries	border costs 2.5%	border costs 2.5% in UK-EU
	border costs 2.5%		trade
Long-run scenario			
	UK sets EU tariff on RoW to	UK sets EU EU tariff on RoW	
	75% of current EU external tariff	to 80% of current EU external	
		tariff	
C	UK trade with EU:	UK trade with EU:	UK trade with EU:
(FTA + UK partially	Zero tariffs,	Zero tariffs,	50% of external EU NTBs ,
liberalizes tariffs and NTBs	50% of external level EUl NTBs,	25% external level EU NTBs,	
versus third countries)	& 60% for fisheries		
	border costs 2.5%	border costs 2.5% in UK-EU	border costs 2.5% in UK-EU
Most liberal scenario		trade	trade
	UK reduces EU tariff on RoW to	UK sets EU EU tariff on RoW	
	50% of current EU external tariff	to 70 % of current EU external	
	NTBs vs ROW are 75% of	tariff	UK sets NTBs on RoW to 75
	current EU external NTBs	UK sets NTBs on RoW to 75	% of current EU external
		% of current EU external NTBs	NTBs

- The GTAP model is a multi-regional computable general equilibrium model. It features CES production sectors, Armington-based international trade and non-homothetic preferences allowing for non-unitary income elasticities of demand.
- GTAP database version 10 with 2014 base year
- Shocks to NTBs are modelled as an increase in the iceberg trade costs.
- All scenarios include 2.5% iceberg border costs across all sectors
- All scenarios have feature tariff-free trade between UK and EU members and a varying degree of NTBs between UK and the EU and the third countries
  - Scenario A: NTBs in trade with the EU – a short term scenario
  - Scenario B: NTBs in trade with the EU and tariff liberalization in the UK with the third countries – a longer-term scenario
  - Scenario C: NTBs in trade with the EU and tariff and partial NTB liberalization in the UK with third countries
- All the standard scenarios feature standard GTAP closure (fixed factor endowments, mobility of factors across sectors.
- Scenario B LR: „steady-state" capital-accumulation, i.e. changes in investment translate to the increase of the stock of capital of the same rate.

Macro results

	Real GDP				Equivalent Variation (% of GDP)			
Country/scenario	A	B	B LR	C	A	B	B LR	C
Poland	-0.1	-0.1	-0.4	-0.1	-0.1	-0.2	-0.4	-0.2
Czechia	-0.1	-0.2	-0.5	-0.1	-0.1	-0.2	-0.4	-0.2
Slovakia	-0.1	-0.1	-0.3	-0.1	-0.1	-0.1	-0.2	-0.1
Hungary	-0.1	-0.1	-0.3	-0.1	-0.1	-0.1	-0.3	-0.1
Germany	-0.1	-0.1	-0.3	-0.1	-0.1	-0.1	-0.2	-0.1
France	-0.1	-0.1	-0.2	-0.1	-0.1	-0.2	-0.2	-0.2
Netherlands	-0.2	-0.2	-0.7	-0.2	-0.2	-0.3	-0.6	-0.3
Ireland	-1.0	-1.3	-7.2	-1.1	-1.0	-1.4	-4.5	-1.3
Rest of NMS	-0.1	-0.1	-0.4	-0.1	-0.1	-0.2	-0.3	-0.2
Rest of EU-14	-0.1	-0.1	-0.3	-0.1	-0.1	-0.2	-0.3	-0.2
UK	-0.9	-0.9	-1.8	-0.5	-1.4	-1.5	-1.9	-1.1

- The macro impact of Brexit for the NMS economies varies across scenarios but it is in general limited.
- The short term impact of introduction of the barriers to UK-EU trade translate to 0.1-0.2 percent of GDP and a similar drop in Equivalent Variation with Czechia being hurt the most (small size, relatively open, specialized in manufacturing sectors).
- Scenarios B and C do not add a lot to the macro impact (GDP) but welfare is additionally hurt by a slight deterioration of terms of trade.
- In the longer-run B scenario translates to a more significant drop in GDP which partially from less access to import-intensive investment goods and hurts capital-intensive sectors.
- Outside NMS largest impact on Ireland and Netherlands, both more exposed to trade with the UK than other economies
- Negligible effect for most of the rest of the world (omitted here).

Trade and output

- The trade impact on the NMS-UK trade flow is substantial
- …but is largely compensated by redirecting trade with other EU members and third countries
- Output changes are not necessarily negative.

Scenario	Source / Destination	POL	CZE	SVK	HUN	rest NMS	GBR
A	EU	1.0	0.8	0.6	0.6	0.7	-11.7
	ROW	1.0	0.8	0.6	0.6	0.6	10.0
	UK	-16.1	-15.6	-14.9	-15.5	-16.0	18.1
	Total	-0.1	0.0	0.0	0.0	0.0	0.0
B	EU	1.5	1.1	1.0	0.9	1.0	-15.6
	ROW	1.7	1.4	1.1	1.1	1.1	13.3
	UK	-25.9	-23.8	-23.3	-23.5	-23.9	17.9
	Total	-0.1	0.0	0.0	0.0	0.0	0.0
B LR	EU	1.2	0.8	0.8	0.7	0.7	-19.9
	ROW	1.2	0.8	0.7	0.7	0.8	8.0
	UK	-25.5	-23.3	-22.8	-22.9	-23.4	14.2
	Total	-0.4	-0.4	-0.2	-0.2	-0.3	-4.8
C	EU	1.5	1.0	0.9	0.8	0.9	-14.1
	ROW	1.9	1.5	1.2	1.2	1.2	12.7
	UK	-26.0	-23.4	-22.8	-23.3	-24.0	9.2
	Total	-0.1	0.0	0.0	0.0	0.0	0.3

Largest output changes, scenario B

POL	CZE	SVK	HUN	rest NMS
Wearing apparel (+1.0)	Wearing apparel (-1.8)	Wearing apparel (+1.5)	Wearing apparel (-0.9)	Wearing apparel (-2.2)
Other transport equipment (+1.1)	Leather (-2.8)	Leather (+1.1)	Leather (+0.9)	Leather (+1.1)
Non-Ferrous Metals (-1.4)	Chemicals (+0.8)	Chemicals (+1.1)	Chemicals (+0.5)	Chemicals (+0.5)
Pharmaceuticals (+1.1)	Pharmaceuticals (+1.0)	Pharmaceuticals (+1.0)	Non-Ferrous Metals (-0.7)	Steel(+0.9)
Electrictronics (-0.8)	Electronics (-1.1)	Electronics (-1.0)	Electronics (-1.1)	Electrictronics (0.7)
Motor vehicles (+0.9)	Motor vehicles (+0.9)	Steel(+0.7)	Motor vehicles (+1.0)	Motor vehicles (+1.0)
Food (-0.5)	Furniture (-0.3)	Food (-0.5)	Food (-0.5)	Wood (-0.9)

- As trade with UK is hampered in all the EU members and trade barriers are introduced in almost all sectors, there is a considerable reallocation in production sectors.
- In the NMS there is no universal pattern of changes of sectoral output except the drop in drop in output of food electronics and to some extent – wearing apparel.
- The output increases are simulated in sectors where UK imports are replaced partially by domestic production: i.e., chemicals, pharmaceuticals and motor vehicles.
- While real wages of all factors slightly fall (but these changes are below 0.5 percent in NMS) – the drop in real land rents is more pronounced than of real wages of other factors, and no large differences across skilled and unskilled labor are observed.
- The output changes are amplified in the long-run version of the B scenario.

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Poster presented at the Allied Social Science Association Annual Meeting, 3-5 January 2021