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The resilience of the EU single market

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ABSTRACT

The "*Coronavirus pandemic*" has challenged both domestic economies and data show a significant decrease in the value of traded goods and services. The pandemic influences countries' trade policies. For instance, more open and pro-integration trade policies are contrasted with calls for re-shoring and export restrictions on certain goods. The objective of this paper is to provide a quantitative economic assessment of the value of the EU single market during a trade crisis using CGE simulations. Specifically, we aim to quantify the benefits of the Single Market in terms of adaptation and resilience of the EU economy.

We will use the latest available GTAP database version, the 10a. Since such database refers to 2014, we will update it to 2020 with macro shocks (GDP, Population, and labour force) and EU trade policies (new FTAs entered into force between 2014 and 2020).

To assess the contribution to adaptation, a trade shock is applied worldwide to all countries of the world with respect to two different baselines: a "*business as usual*" baseline and a baseline under which the EU's single market collapses into a much less integrated trade relationship. These simulations are performed with the static GTAP-MRIO model. We want to evaluate the value of the EU single market in reducing the impact of a possible trade crisis. In other words, we use the model to compare the actual EU market with a counterfactual and significantly less integrated scenario. These two baseline trade regimes are exposed to a global shock to global supply chains leading to a significant increase in the cost of trading across regions. Results are expected to show the extent to which the contraction of GDP and renationalisation of GVCs would have been would have been (more) harmful in the absence of the Single market.

Methodology

The potential economic impact of a global supply shock is performed using a CGE model, specifically the GTAP-MRIO, following a similar approach used by the OECD (OECD, 2020).

The GTAP model is built on general equilibrium theory and designed to assess the inter-regional, economy-wide economic policies incidence (Hertel and Tsigas, 1997). The main advantages of the CGE approach are its solid micro-theoretical underpinning and its economy-wide scope, as well as its detailed inter-sector linkages for each of the economies represented and the complete and consistent coverage of all bilateral trade flows. We depart from the standard framework using the GTAP-MRIO database, which extends the standard GTAP Data Base (Aguiar et al., 2019). This extension is important for better analyzing the global economy, which is organized in production stages being performed in different countries. MRIO is constructed from IO tables of other countries complemented by trade databases which contain bilateral trade flows by end-users, namely: firms, consumers, and investors. Further, the analysis of the results is performed using the GTAP-VA module (Antimiani, Salvatici and Fusacchia, 2019), which can help us to highilight the value of the Single Market in fsupporting EU trade.

As a database, we used the most recent available GTAP database version – known as version 10a – which includes data on up to a maximum of 141 regions and countries, 64 industries and 8 endowments, and has 2014 as a base period.

Geographical and sectoral aggregation is shown in Table 1.

Table 1 - Geographical and sectoral aggregation

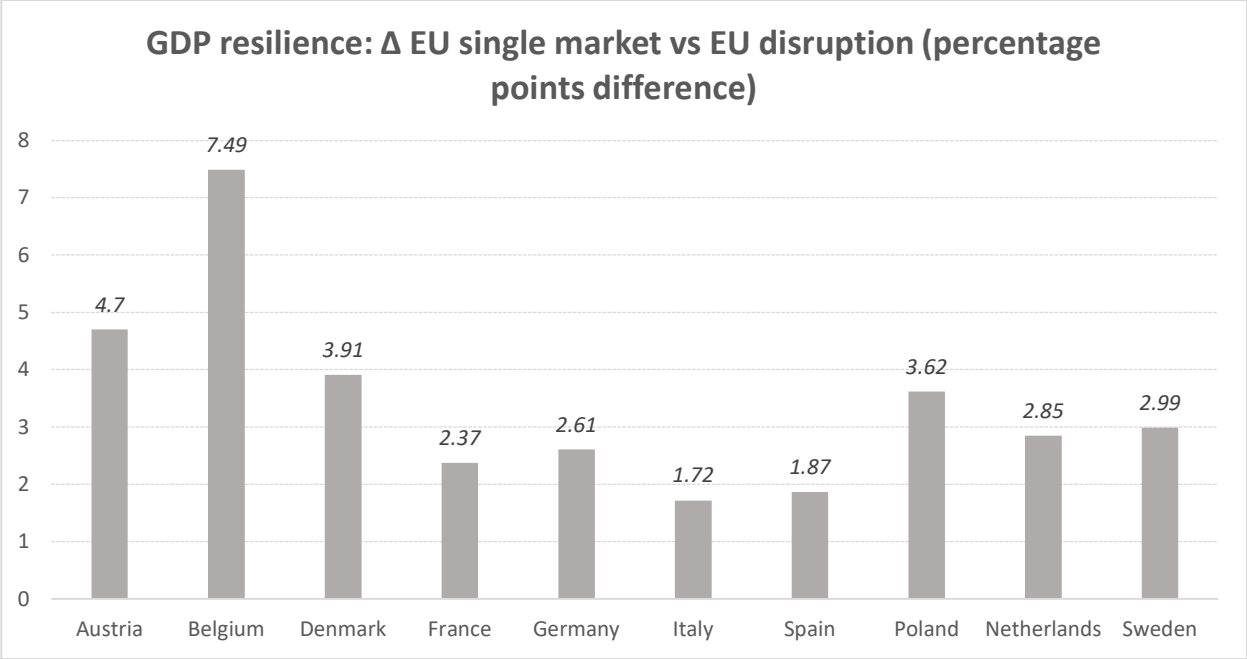
Countries/regions	*Sectors*		*Factors*
Austria	Crops	Electrical components	Land
Belgium	Vegetables and Fruit	Machinery	Natural resources
Denmark	Livestock	Motorvehicle	Capital
France	Wool	Transport Equipment	Skilled labour
Germany	Forestry	Other Manufactures	Unskilled labour
Italy	Fishing	Electricity	
Spain	Energy commodities	Gas supply	
Poland	Mineral goods	Construction	
Netherlands	Meat	Trade	
Sweden	Processed Food	Tourism	
Rest of EU	Dairy	Land transport	
UK	Rice	Water transport	
Swiss	Sugar	Air transport	
USA	Beverage & Tobacco	Warehousing	
Japan	Textile	Real Estate	
Canada	Wearing	Business	
Korea	Leather	Recreational	
Mexico	Wood	Public Services	
Vietnam	Paper & Publishing		
EFTA and EU FTAs	Chemical		
Latin America	Basic Pharmaceutical		
China	Rubber and Plastic		
EBA countries	Ferrous Metals		
Gulf Cooperation Council	Metal sector		
Rest of World	Computer		

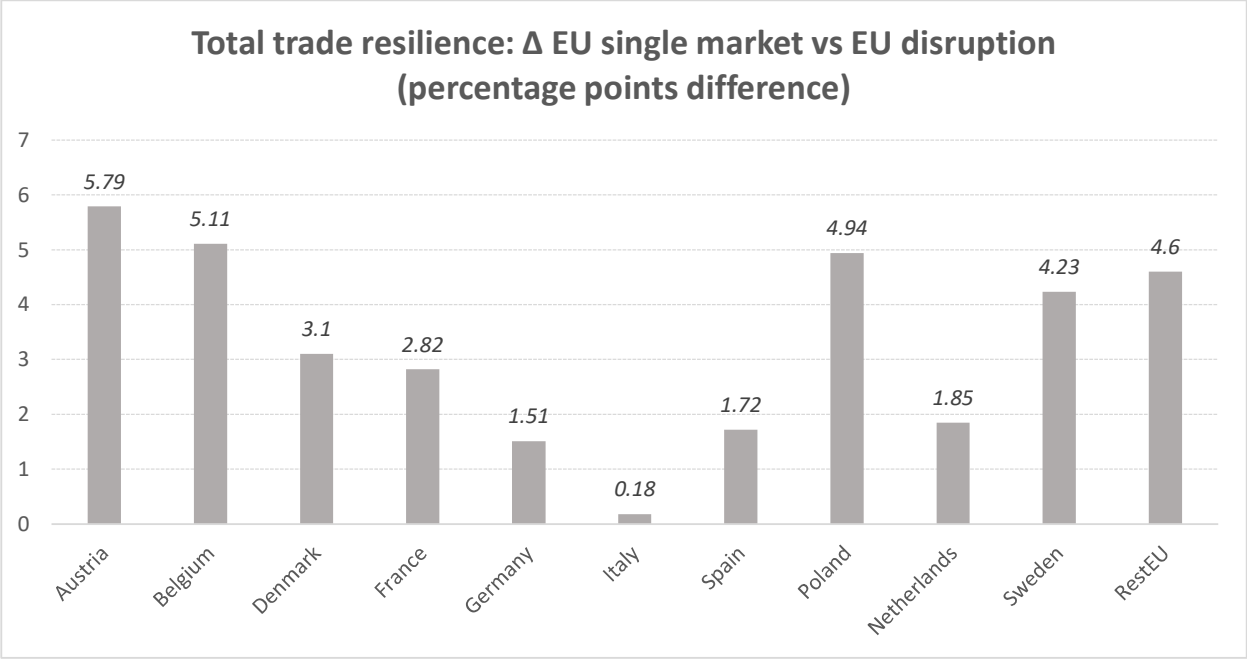
The policy scenario is built following the idea of global value chain disprution, following the approach applied by OECD in simulating the COVID (OECD, 2020). However, here the idea is not to simulate COVID pandemia but to check the resilience of EU single market against a generic trade crisis.

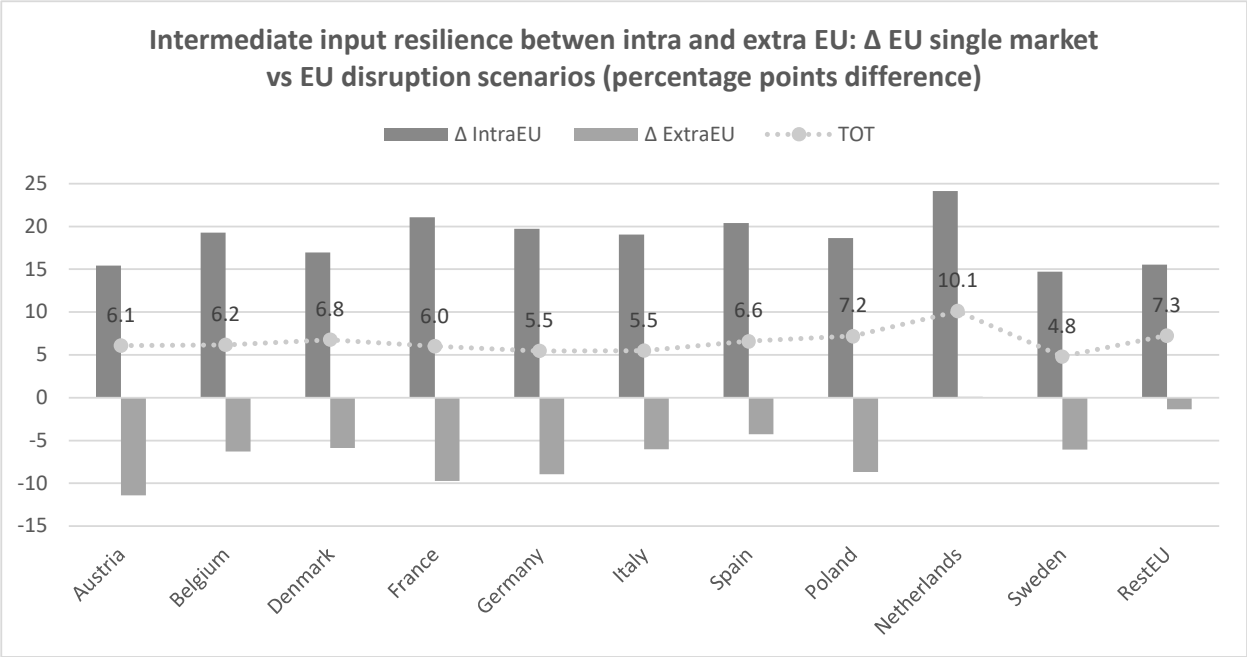
In the first scenario, called "*EU single market*", we applied a negative shock, increasing trade costs among countries and within regions by by 10%. However, the shock does not apply to intra-EU trade though the same shock is applied on EU member states trade flows with extra EU partners. The shocks are implemented as 'iceberg' trade cost shocks following the approach by Hertel et al (2001).

The second scenario, called "*EU disprution*", is the same of Scenario 1 but the shock applies to intra-EU trade flows as well. It should be noted that the scock is applied to a baseline where there isn't the EU single market and EU member countries apply MFN tariff rates on imports from other EU members.

Results


GDP resilience: Δ EU single market vs EU disruption (percentage points difference)
8
7
6
5
4
3
2
1
0
4.7
7.49
3.91
2.37
2.61
1.72
1.87
3.62
2.85
2.99
Austria
Belgium
Denmark
France
Germany
Italy
Spain
Poland
Netherlands
Sweden


Total trade resilience: Δ EU single market vs EU disruption (percentage points difference)
7
6
5
4
3
2
1
0
5.79
5.11
3.1
2.82
1.51
0.18
1.72
4.94
1.85
4.23
4.6
Austria
Belgium
Denmark
France
Germany
Italy
Spain
Poland
Netherlands
Sweden
RestEU


Intermediate input resilience betwen intra and extra EU: Δ EU single market vs EU disruption scenarios (percentage points difference)
Δ IntraEU
Δ ExtraEU
TOT
25
20
15
10
5
0
-5
-10
-15
6.1
6.2
6.8
6.0
5.5
5.5
6.6
7.2
10.1
4.8
7.3
Austria
Belgium
Denmark
France
Germany
Italy
Spain
Poland
Netherlands
Sweden
RestEU