

ECONOMICS

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This paper discusses the trade statistics for the analysis of UK-EU trade flows following the introduction of the Trade and Cooperation Agreement (TCA) in January 2021. Given the importance of the TCA to the UK, it is fundamental for analysts.

On the other hand, a good that changes ownership but never leaves the British soil can be recorded as trade by the ONS but it is generally not recorded by HMRC. For a more detailed description of the differences between IMST and BPM6 methods, see this [Eurostat article](#).

Given that under the European Single Market many firms organised supplied chains at the EU-level, transactions involving no change of ownership might be recorded

insurance incurred in transportation from the exporter to the importer territory. Few countries report trade statistics on both CIF and FOB basis, but even then, mirror flows do not match exactly. Other issues that can determine asymmetries in mirror flows are currency conversions, trade

collected via customs declarations (see [Eurostat metadata](#)). However, according to the Eurostat explanation the concept used for the intra-EU system is close to the general trade system (see [Eurostat glossary](#)). This could create some differences between pre- and post-2021 data for UK exports to the EU. Because the general trade system includes more transactions than the special system, we should expect UK exports to the EU in 2021, recorded with the new method, to be lower than what they would have been if

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Source: authors' elaboration of HMRC, Eurostat and Eurotunnel data.

a) HMRC exports

b) Eurostat mirror exports

Another measure that can be informative is air freight traffic. Eurotunnel traffic data is a better measure of UK-EU trade because only a small fraction of UK-EU trade is transported via airplanes (5% in 2020). Air freight transport data are downloaded from the UK Civil Aviation Authority, which publishes monthly statistics on air freight data, broken down by three partner countries: domestic, EU and non-EU.¹⁰

$$U_t = \alpha + \beta \frac{P_t}{N_t} + \gamma \Delta_{2021} + \epsilon_t$$

Eq. 1

Where U_t is trade either total, exports or imports in period t . The variable $\frac{P_t}{N_t}$ is the number of trucks that passed by the Eurotunnel in period t and the coefficient β measures the relation between trade and traffic. The parameter α is a constant measuring the average gap between the trade and truck traffic series. Finally, Δ_{2021} is a dummy that equals one in 2021. This is the parameter of interest and will tell us by how much the gap trade/traffic in 2021 is different from the pre-2021 average. If we reject the hypothesis that $\Delta_{2021} = 0$ then we conclude that trade in 2021 are not really comparable to pre-2021 ones.

We also estimate a second equation that takes into account information of air freight traffic as well as trucks traffic. While air freight alone might not be a good proxy for UK-EU trade, it still carries some information.

Table 3: Regressions of trade on trucks traffic and air freight traffic

	HMRC			Eurostat mirror		
	Total trade	UK exports	UK imports	Total trade	UK exports	UK imports
Trucks traffic	0.199*** (0.021)	0.074*** (0.011)	0.125*** (0.012)	0.209*** (0.018)	0.064*** (0.010)	0.145*** (0.012)
Air freight	0.330*** (0.082)	0.116** (0.039)	0.214*** (0.045)	0.312*** (0.085)	0.147*** (0.036)	0.165** (0.054)
year=2021	-1070.348 (927.305)	-88.135 (853.527)	-982.214 (554.360)	-2414.253** (800.401)	-3154.391*** (649.848)	740.136 (615.169)
Constant	-5563.509	-1259.959	-4303.549*	-4300.142		

traffic, we conclude that UK exports to the EU as reported by the UK (HMRC or ONS) should be used instead of their mirror flows reported by EU countries. This is because the former saw smaller methodological changes compared to their mirror flows.

We downloaded data on EU trade by mode transport from the Eurostat database (dataset ‘Extra-EU trade since 2000 by mode of transport, by HS2-4-6[DS-1262527]’ accessed on 13/07/2021). Since the UK is a non-EU country since 2020, Eurostat reports trade with the UK by mode of transport starting from February 2020.

The dataset has eight modes of transport plus an ‘unknown’ category. We computed the share of exports, imports and total bilateral trade (sum of exports and imports) of the UK with the EU over the period February - December 2020 (we use the EU aggregate as provided by Eurostat). The table is from the perspective of the EU, so ‘exports’ are EU exports to the UK.

Table 4: EU trade with the UK by mode of transport 2020, %