

## Box A The Effects of Covid-19 and Brexit on Firms' Trading Decisions

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This box focuses on adjustments of firms' product trade portfolios, i.e. the number of products exported and inputs imported, and it looks at the literature on past crises and UK data to infer how UK businesses may be adjusting the range of products traded in response to the twin challenge of Covid-19 and Brexit. A key point is that this adjustment depends on firms' perception of the nature of these crises. Thus, firms tend to maintain their product portfolio when faced with temporary shocks and alter it when faced with permanent ones.

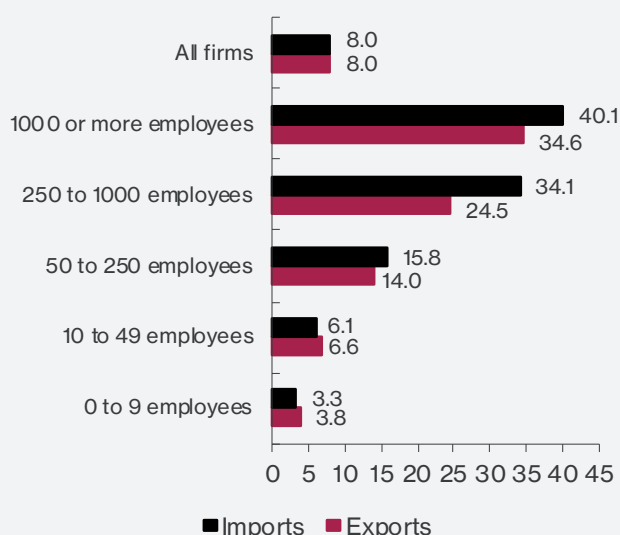
Naturally it is too early to draw solid conclusions with just two months of noisy data; there is a tendency to attribute this poor performance to the disruptions caused by the end of the transition period as the UK left the European Union (EU), preceded by the stockpiling of goods from some industries. However, this fall also coincided with the start of a national lockdown in January 2021 to contain the rise of Covid-19 infections. Hence, this panorama poses a huge challenge to researchers aiming to disentangle the effect of both shocks on UK trade.

First the facts: UK trade registered an unprecedented downturn in January 2021, with exports and imports of goods falling by 19.3 per cent and 21.6 per cent respectively compared with December 2020 (ONS, 2021a,b), although there was a slight recovery the following month. Most of this collapse has been driven by much lower trade with the EU (41 per cent and 28 per cent falls in exports and imports in January respectively).

A useful starting point is to understand the decision-making process at the firm level. Firms engaged in international trade decide on what to export, how much and where. Adjustments of these decisions in response to changes in the economic conditions shape the overall trade and output growth of a country. But these reactions depend on the perceived nature of these shocks, for instance, whether they are perceived as temporary or permanent.

Figure A1 shows that in 2016 firms both exported and imported an average of eight goods. Clearly the larger the firm, the larger its product trade portfolio, with a sizeable gap between firms with over 250 employees and those below. Note though that these figures are average, which might conceal some skewness.

**Figure A1** UK Firms' Average Number of Goods Traded, 2016 (4-digit commodity codes)



Note: Excluding wholesale and retail industries

Source: HMRC, ONS, NIESR calculations.

Besides this, Figure A2 indicates that firms' product mixes vary considerably across sectors, with manufacturing industries such as transport equipment, pharmaceuticals, chemicals and mining tending to trade more products than industries like agriculture, food, beverages and tobacco.

ONS-HMRC figures also show that in 2016 UK firms tended to trade fewer products with the EU than with the rest of the world, but data on EU trade is limited by a threshold which might conceal more products.<sup>1</sup>

This was the picture in the year the UK decided to leave the EU.<sup>2</sup> How might these figures have changed due to the twin challenges of Covid-19 and Brexit? We should bear in mind the perceived nature of each.

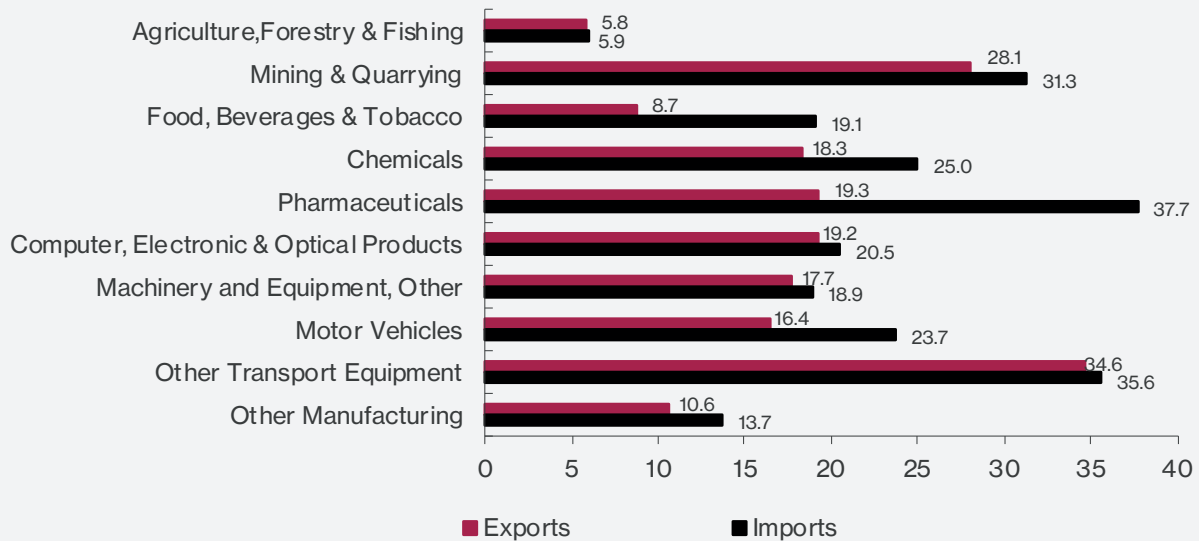
An early study on the global effects of Covid-19 (Antràs, 2020) argues that there is not yet evidence of an era of 'de-globalisation', since firms view Covid-19 as a temporary shock, after which the 'global value chain' will gradually return to its usual form. As a result, firms are mainly responding by trading smaller volumes of their existing products, rather than adding or dropping products from the market. Nevertheless, the study warns it is not clear yet whether Covid-19 can be labelled as a

1 The figures do not consider UK firms with trade with the EU below a threshold from the Intrastat survey. In 2016, those thresholds were £1.5 million for arrivals and £250,000 for dispatches.

2 There have not been further reports on products traded per firm since the 2018 ONS report with 2016 data.

temporary shock due to continuous disruptions of business travel services and increasing income inequality from divergent abilities to work from home (see Chapter 2).

**Figure A2** UK Firms' Average Number of Goods Traded by Industry, 2016 (10+ employees, 4-digit commodity codes)



Note: A, Agriculture, Forestry & Fishing; B, Mining & Quarrying; C 10-12, Food, Beverages & Tobacco; C 20, Chemicals; C21, Pharmaceuticals; C 26, Computer, Electronic & Optical Products; C 28, Machinery and Equipment, Other; C 29, Motor Vehicles; C 30, Other Transport Equipment; C Other, Other Manufacturing

Source: NIGEM simulation.

These conclusions are in line with the literature on past crises, such as the Great Recession in 2008-09, for countries like Belgium (Behrens et al., 2013) and Denmark (Abreha et al., 2013). The reason is that it is very costly for firms to shut down links with existing partners and search for others. These rigid production networks make links react sluggishly to trade shocks, as occurred in Chile during the Great Recession in 2008-09 (Hunneus, 2018). Moreover, some products have higher partner search costs than others (Martin et al., 2020). Hence, links remain active, but with smaller volumes of the same products.

Conversely, Brexit is generally seen as a permanent shock since it constitutes a permanent rise in trading costs with the EU. The literature on permanent trade shocks converges around the argument that changes in firms' product mixes are pervasive. This has been found in the case of China in response to institutional reforms (Söderbom and Weng, 2012) and the reduction of tax rebates (Han et al., 2015). There is also theoretical support when analysing unexpected changes in input tariffs (Grossman and Helpman, 2020). Hence, it is reasonable to expect long-run adjustments in UK firms' product portfolio in the EU market, dropping the least competitive products in response to Brexit. For instance, firms might drop the costliest goods to produce and export from sectors like machinery, transport equipment and chemicals, which saw the largest falls in trade with the EU early this year (ONS, 2021a,b).

It is worth bearing in mind as well that the high degree of uncertainty caused by Brexit has been remarked on by studies of its short-run, post-referendum effect. Such uncertainty has led to delays in firms' investment decisions (Bloom et al., 2019) and some firms deciding against trading in the EU market, but without causing a huge aggregate effect (Crowley et al., 2018). The former study also remarks that UK firms reported reduced investment in machinery, equipment and buildings and, to a lesser extent, in training, software and R&D. Additionally, recent trade data shows that UK exports in agricultural products, chemicals and some manufacturing industries (rubber, leather, silk, among others) fell the most between 2016 and 2020.<sup>3</sup>

<sup>3</sup> See coriolistechnologies.com

Considering the perceived natures of Covid-19 and Brexit, along with the experience from previous crises, it is arguably the case that the long-run Brexit effects will prevail in firms' product mix decisions, translating into fewer products being traded with the EU. However, much more information is required to disentangle the effects of both shocks and draw more evidence-based conclusions. And while it is not clear how trade in services with the EU will be affected in terms of number of services traded, the lack of a clear service sector deal raises questions for future research and policy-making.

In that sense, efforts to retrieve and analyse more real-time data are valuable. Research involving input from NIESR found a sustained drop in the number of UK exporters by May 2020 (around 2 per cent relative to May 2019) amid the first national lockdown, mostly accounted for by small and micro enterprises, which have less access to trade finance than larger firms.<sup>4</sup> Despite the recovery afterwards, figures have not returned to pre-Covid levels. According to the same data, one of the most up to date sources for trade activity, Northern Ireland is the worst hit among UK regions, despite remaining in the EU single market for goods. This is a useful reminder that differences across regions and sectors are also essential to depict a more complete picture of the effects of the twin challenges to UK trade.

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<sup>4</sup> A project developed with funding from Innovate UK and led by Coriolis, see note 3.