Research
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Knowledge

One way to the top: how services boost the demand for goods.

BY ANDREA ARIU, FLORIAN MAYNÉRIS & MATHIEU PARENTI

Andrea Ariu, Florian Maynéris and Mathieu Parenti published a working paper (December, 2016) studying the behavior of Belgian bi-exporters – firms that export both goods and services. First, they documented that while bi-exporters account for a small percentage of Belgian exporters, they account for a significant percentage of overall goods exports. These large firms, rather than substituting goods exports with the supply of new services, use services to boost the sales of their export. Second, digging into the microeconomic channels generating these complementarities, they found that even if the provision of services itself is costly, it adds to the perceived quality. In markets where bi-exporters sell both goods and services, foreign buyers are willing to pay more for the goods. These interactions within the firm have important implications for trade policy: their findings suggest that trade liberalization for manufactured products can be embedded in the liberalization of trade in services. Conversely, raising trade barriers on services, as one would expect in the aftermath of Brexit, may be magnified through these complementarities.

Bi-exporting firms: who are they?

Data One of the reasons why the interaction between goods and services has received little attention is **the lack of data on both goods and services activities at the firm-level**. The authors bridge this gap by **making use of uniquely detailed trade data** from the National Bank of Belgium (NBB) using information on export values and quantities at the firm, product and destination country level.

Stylized facts Bi-exporting is a very rare activity both across and within firms, **much less frequent than exporting several products** for example. However, despite being few, bi-exporters account for about half of the aggregate goods exports. **Bi-exporters are the most successful exporters in many dimensions**. They're larger, more productive, export more products and are more profitable overall. Bi-exporters almost **never export services alone**, and conditional on exporting goods bi-exporting follows gravity: firms provide services in the biggest and closest destinations where they supply goods. At a much finer level, the key finding of the study shows that when comparing two firms in the same market, selling the same product during the same year, the firm that provides services in that market typically outclasses its competitor, both in values and in quantities.

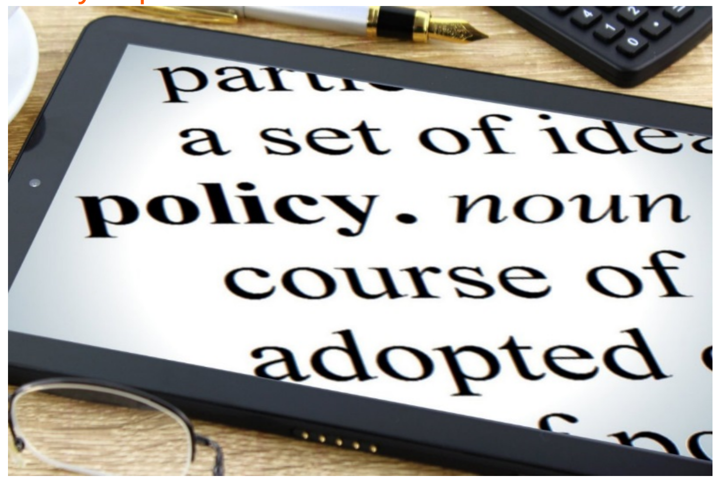
Examples One famous example is **Apple who sells not only computers but also software and assistance with the utilization of computers and cell phones**. While Apple Care is itself costly, our data reflects that

firms like Apple are still able to set a higher price for their computers when they offer the purchase of a costly but optional service with the good. Other examples include Toyota, exporting both cars and consumer loans to buy these cars; and Technip, supplying fertilizers as well as technical and financial solutions combining aspects related to mining, beneficiation and fertilizers manufacturing.

Theory and microeconomic channels: how services boost goods sales

Goods and services play inherently asymmetric roles within bi-exporters. Goods remain the core competence of the firm: most sales are driven by goods sales and services are not necessarily exported along with goods. This leads the authors to develop a model featuring one-way complementarity between goods and services where the product is essential to consumer consumption while the service is optional. Concretely, they consider that consumers arbitrate between the consumption of the good alone or the good-service bundle. Supplying a service allows firms to better segment the market: the provision of a service increases the demand for the good alone, as observed in the data. A further implication of the theory however is that this increase in demand should also be reflected in firms' market power and hence prices. The theory therefore suggests that firms' sales are higher because their good is supplied at a higher price.

Policy implications



Goods and services have been generally analyzed as two different items in the consumer portfolio supplied by firms in separate industries, subject to their own market adjustments, calling thereby for **specific policies**. This also shows up in the way trade agreements are negotiated and designed, and in the way economists model and quantify their effects. Considering goods and services separately in the negotiation of trade agreements is likely to miss part of the business and welfare gains and losses related to these treaties.

Indeed, the conclusions of the authors suggest **that the liberalization of trade in services,** which were/is at stake in many bilateral negotiations such as those between the EU and the US for the TTIP or those with the UK for Brexit, **might have also important consequences for trade in goods in general** and for the biggest firms that are bi-exporters in particular.

In the case of Brexit specifically, ignoring such complementarities between goods and services **will lead to a mis-quantification of economic consequences**. The identification of firms and sectors that will be mostly harmed by a hard Brexit, as well as its aggregate impact on the British economy, cannot afford to overlook this channel given the size of the service sector in the UK.

Read the full research paper here.

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