

Review of: "Impact of COVID-19 on imports of medical products: A panel data approach"

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The article discusses an important and interesting topic, namely, how the Covid19 pandemic impacted the import of seven medical products in the EU countries. The authors state four research questions (factors affecting imports of medical products, disadvantage of extra-EU suppliers, is there any change observable in 2020, price sensitivity of medical imports). The authors state that they answered all the four research questions, however, I believe it is not the case. Let me explain in detail. I will also add some ideas on how to further improve the paper.

There are some general concerns regarding the analysis executed. First, the majority of the results are driven by the size of the country. Larger countries import more products and larger countries have more people aged above 65 and more hospital beds. It would be better to use relative values (share of medical products in total import, percent of population aged above 65, number of hospital beds per 1,000 residents). Second, measurement is sometimes strange, for example, why Vehicles or Oxygen therapy equipment are measured in kg? It would be better to use values (EUR) instead as 1 kg of vehicle can have very different values. Third, since you differentiate intra-EU and extra-EU import, data should be shown separately in Table 1, too. It is also not clear what Figure 7 is showing (is it total import, i.e., intra-EU + extra-EU?).

Regarding the four research questions, I have the following concerns.

RQ1. (Do imports of each of the essential medical products needed to combat the pandemic depend on the same factors?) The authors state at the end of the paper that the import of the analyzed medical products are mainly driven by the same factors. However, based on Table 4, there are some notable differences (HICP, beds). Furthermore, other explanatory variables should be included in the regression, e.g., amount/value of local production, health-related expenditures.

RQ2. (Are extra-EU suppliers at a disadvantage compared to intra-EU suppliers?) The authors came to the conclusion that extra-EU suppliers are at a disadvantage as the Dextra dummy is negative for all the product categories investigated. However, there might be other explanations behind the regression results that need to be excluded. First, it might be that the largest global suppliers are located in the EU countries, hence, extra-EU supply/import is low due to the global patterns of production (there is little production outside the EU). Second, transportations costs might be important and intra-EU trade is normally associated with lower transportation costs (due to the closeness of the countries). Third, quality of products of intra-EU and extra-EU suppliers might be different (for e.g., quality of medical products produced in the EU might be higher and these products might be more demanded by the EU countries). Finally, a more detailed review of

tariffs and international trade regulations are needed to come to be able to state that “tariff agreements in the EU favor intra-EU trade over goods from other countries”.

RQ3. (Has there been a significant change in 2020 compared to previous years in imports of medical products classified as essential?) This is a rather trivial research question with a well-expected result. It would be more interesting to use a more sophisticated measure (e.g., number of confirmed cases, number of Covid19-related death, Oxford Covid19 Government Response Tracker) that also differentiates across EU countries. It can be interesting question for example whether countries with higher death rates imported more or less medical products than countries with lower death rates.

RQ4. (Are imports of medical products price sensitive?) In case of price elasticity, it would be better to use the individual price indices of the seven products, not a combined price index (HICP) that contains the prices of several other products, too. Furthermore, in case of some products (mainly disinfectants, medical consumables and protective garments) a shortage was observable in 2020. This should be taken into consideration during the analysis or at least be mentioned as a limitation of the study.