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Comments on the referee's report on our paper entitled

"Costs of trade and self-selection into exporting and importing: The case of Turkish manufacturing firms"

We are very grateful to the referee for carefully reading our paper and we appreciate the insights and feedback received. The comments provide more focus to the paper and will make it much clearer and stronger. Below, we provide a discussion of the issues raised by the referee using the structure of the referee's report. The referee's comments are in *italics* whereas our comments are added in red.

Comments

- *The paper is too long relative to its content, and at time too verbose.To enhance the readability and thus the impact of the paper, the authors should really try to communicate the main message of the paper in a much more concise manner. To achieve this, I suggest trimming the discussion of the existing literature in the paper throughout (i.e., in all sections). I would cut Section 2 entirely, which reads like a literature review and is not a substantial contribution. Moreover, it is largely redundant since the authors can refer to existing work both in the introduction and as they discuss their empirical findings. In referring to existing work, I urge the authors to be short and to the point. There are many points in the text where they run on for too long regarding issues that they really can't say much about or where they make the nearly identical point somewhere else in the paper.*

  The point is well taken. To enhance the readability of the paper, first of all we can exclude Section 2 and slightly extend the discussion of the background literature inthe introduction to the paper. We will alsoensure that furtherdiscussion of the existing literature in the paper is made more concise.

- *Some important citations are missing, especially those concerning the existing empirical analyses using Turkey data. See for instance, the recent paper of Lo Turco and Maggioni (forthcoming the World Economy) which investigates the role of importing, exporting and the joint involvement in both activities on the firm product scope and new product introduction.*

  The point is well taken; we will cite Lo Turco and Maggioni (forthcoming the World Economy).

- *I really think that there is too much in the paper, so that the potential contributions are not fully developed, risking to actually downgrade the paper itself to just a long list of results, rather than a thorough discussion of one or two main topics or issues. In this respect, my suggestion is to move many of the preliminary analyses in a Online Appendix. I also suggest to cut entirely Section 5.3.*

As above we will provide more focus in the revised version of the paper, and while the country and product diversification results are interesting, we can see how they overly broaden the scope of the paper. We agree with the suggestion of preparing an online appendix in particular with more of the descriptive results, and we will cut out Section 5.3 entirely.

- *Concerning the econometric analyses, I thing that the authors should focus only on firms' productivity (both LP or TFP) and drop from the paper the results concerning the other dependent variables. When focusing on firms' productivity they should re-run all the regression by using capital, size, skilled intensity as controls as these are time variant variables which might influence both a firm's efficiency and its propensity to trade. This would make the empirical analyses more consistent with the underlying theoretical framework which has typically focused on selection based on productivity.*

We agree with this suggestion, and will drop the estimation results concerning other outcome variables. With regard to adding capital, size and skill intensity for greater consistency with the theoretical framework, the empirical literature is mixed on this. The core variables we have used represent a common specification (e.g. Altomonte and Bekes, 2009; Castellani et al., 2010; Muuls and Pisu, 2009; Vogel and Wagner, 2010); however, we can also easily add capital, skilled intensity as controls to the trade premia regressions in Table 7, and regressions on ex-ante performance differentials of trade starters in Table 8. Note that, size is already included in all the specifications except when they are used as dependent variables.

- *If the aim of the paper is to investigate the differences in sunk costs between exporting and importing firms I would focus only on those regressions in which a direct comparison between the two trade activities is possible[1]. This would mean estimating equation 1 and the equation with trade starters (without number). I would exclude instead the results concerning the dynamic probit model where a direct comparison is not possible.*
  Footnote 1: To make the coefficients comparable the authors should jointly estimate the export and the corresponding import equations using the seemingly unrelated regressions (SUR) methodology and then using a Wald tests.

Here there are two (related) issues raised by the referee. The first is with regard to the dynamic probit model. Central to this paper is the highlighting of the differences in trading costs (fixed or variable) between exporting and importing. However, this issue is directly dealt with only by the dynamic probit model. The results in the earlier part of the paper

identify the performance differentials, but without dealing with the issue of what might be driving those performance differential – notably differences in trading costs. The referee's argument that a direct comparison is not possible is of relevance since the coefficients on the lagged dependent variables does not give the magnitude of the sunk costs. However, following Roberts and Tybout (1997), Bernard and Jensen (2004) and Muuls and Pisu (2009), it is through the dynamic probit model that we are able to account for the sunk costs by means of past trade experience- where the coefficient of the lagged dependent variable is interpreted as a measure of sunk costs. Thus, considering those coefficients as a measure of sunk costs, we compare the importance of sunk costs in importing and exporting activities, which is central to the paper. We feel it is therefore important to include the dynamic probit regressions. However, for the sake of focus and conciseness we propose to only include the regressions with tariffs in Table 10.

The second issue relates to the possibility of common shocks impacting on both exporters and importers and the need to take this into account in the estimations. With regard to Table 7 We suggest that the regressions in Table 7 are not suitable for the SUR methodology as we have both importers and exporters in the same regression. However, in order to compare the coefficients within each regression, we have performed the Wald test of the difference between the coefficients on only-export and only-import dummies. Our F-statistics are highly significant rejecting the hypothesis that two coefficients are equal.

In terms of Table 8, (at the suggestion of the referee) we have tried to jointly estimate the export-starter and import-starter regressions using SUR methodology, but this was not possible because the binary variables export-starter and import-starter both take value "zero", if the firm does not trade at all over the whole sample period. To provide an alternative, instead of the starter equations, we have jointly estimated the following equations using SUR methodology:

$$y_{it-\rho} = \beta_0 + \alpha_i + \beta_1 D_{it}^{Exp} + \delta Controls_{t-\rho} + \varepsilon_{it}, 1 \leq \rho \leq 2$$

$$y_{it-\rho} = \gamma_0 + \alpha_i + \gamma_1 D_{it}^{Imp} + \delta Controls_{t-\rho} + \varepsilon_{it}, 1 \leq \rho \leq 2$$

And then we have performed Wald test for the equivalence of the coefficients on export/import dummies., and again these indicate that they are statistically different. However, note that these coefficients do not directly provide insights on the self-selection effect since an exporter/importer firm might have also been exporting/importing at *t-2* and/or *t-1*. We would propose that this could also be included in the online appendix.

We also would like to note that the methodology we have employed to test and compare self selection effects is well recognized in the related literature (e.g. for the same specification testing self-selection into importing see Vogel and Wagner, 2010; for the same specification testing and comparing self-selection effects into exporting and importing see Castellani et al., 2010).

- *To test directly to what extent fixed and variable costs differ between exports and imports, the author should think about a specification in which only export starter and only import starter are interacted with some proxies of fixed costs. A similar analysis has been run in Davies and Jeppensen (forthcoming Review of World Economy) in the context of direct, indirect traders.*

This is a very interesting comment and suggestion, and we have spent some time already considering this. In principle there are possible proxies of the fixed costs of exporting and importing such as from the World Bank (WB) Doing Business Surveys as in Davies and Jeppensen (2015) and Bernard et al. (2011). The difficulty of using this information in our work, is that these proxies are country specific with no sectoral variation, and would drop out of our regressions. For Davies and Jeppensen this is not an issue as their work is cross-country. Hence, while we would very much like to explore alternative proxies for fixed costs – the information is not available. Our way of approaching this, therefore, was to consider different types of goods (intermediate, capital, consumption etc.) as one would expect these fixed costs to differ between these types.

- *In general, the regression with the Probit model are not at all clear, especially those with the tariffs. Is the probability of exporting or importing country-specific? If not, how can tariff be included in this specification? Shouldn't be the same for all firms?*

The point is well taken, and we need to be clearer here in our explanation. We will explain the reasoning of the probit model and calculation of the tariffs more carefully. In calculating firm level tariffs, we use import and export tariffs at HS6 digit product category from WITS-Trains database. We then calculate firm level tariffs by weighting each product-country level (eg. export line) tariff rate with the share of that product in the total exports of the firm. In this way, we get an average tariff rate which is specific to each firm. Thus, although the probability of exporting or importing is not country-specific, the probability of exporting or importing is affected by the average tariffs that each firm faces.

- *In Table 9 there are two variables (exporter dummy t − 1 and importer dummy t − 1) but not the corresponding coefficients. Why?*

The coefficients should be added; we will insert them accordingly.

- *Reduce the number of footnotes consistently. The paper is almost unreadable as it is now.*

The point is well taken; we will reduce the number of footnotes consistently.

- *The paper needs absolutely to be proof-read by a native English speaker. There are several mistakes.*

The point is well taken and the paper will be thoroughly proof read.