

Reply to the referee

We thank the wonderful comments the referee suggests to our paper, which really help us to improve the paper. With respect to the comments, our responses are provided in detail below.

1. The key issue that authors of the paper should address is whether the change in aggregate productivity of exporters is a relevant economic category. This measure does not capture the contribution of exports to the change in aggregate productivity as exporters are also involved in the domestic market. It also does not capture the entire dynamics in a specific country as non-exporters are excluded from the sample.

Answer: In fact, we estimate the productivity of each exporter using a firm-level data, and then aggregate the productivity using added-value share as weight, it already captures all domestic and foreign factors affecting firm's productivity, so we argue the aggregate productivity isn't a relevant economic category.

However, as we mentioned in the paper, there is a concern that firms who exit from the foreign markets may be still active in the domestic market, in order to address this concern, we also adopt the export-share weighted measure of aggregate productivity suggested by the referee, although it can't distinguish the contribution of foreign markets and domestic markets to the productivity. the decomposition results are reported in following table.

Results of robustness check

	Productivity	Growth rate	Within-firm Effect	Between-firm Effect	Entry Effect	Exit Effect	Reallocation Effect
2006	1.586	0.050	0.026 (52%)	0.019 (38%)	-0.006 (-12%)	0.011 (24%)	0.022 (48%)
2007	1.686	0.063	0.032 (51%)	0.020 (32%)	0.006 (10%)	0.005 (7%)	0.031 (49%)
2008	1.722	0.021	0.010 (48%)	0.008 (38%)	-0.003 (-15%)	0.006 (29%)	0.011 (52%)
2009	1.784	0.036	0.019 (53%)	0.011 (30%)	-0.003 (-8%)	0.009 (25%)	0.024 (47%)

Total		0.170	0.087 (51%)	0.058 (34%)	-0.006 (-3%)	0.031 (18%)	0.083 (49%)
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The results suggest similar findings with the baseline study as follows: (1) the reallocation effect contributes 49% of aggregate productivity growth, which is a little bit higher than the result of baseline study, (2) the between-firm effect contributes most to the reallocation effect among all three components, which accounts for 34% of aggregate productivity growth, (3) the entry effect still imposes a negative influence on the productivity growth.

2. The results of decompositions for subgroups of firms are similarly problematic as these again appear as if they do not interact with other firms. For example, state-owned firms may compete with foreign-owned firms and due to differences in aggregate productivity of these groups of firms, reallocation may take between these firms. If the aggregate market share of more-productive foreign-owned firms increases, such reallocation process is productivity enhancing.

Answer: As we mentioned above, the productivity is firm level rather than group level, so the interaction effect between different groups isn't our concern. We aren't going to investigate the effect of interaction between different group.

3. Next comment is about the organization of the paper. It has too lengthy section on review of aggregate productivity decompositions.

Answer: we will give a brief review of different decompositions.

4. Authors mention at several points that there might be misallocation of resources. The only group of firms for which there seems to be misallocation are entrants. These typically have a negative contribution to the change in aggregate productivity, which has an interpretation of having lower aggregate productivity than surviving firms and is consistent with misallocation. However, this interpretation should at least be used with caution as entrants are known to set lower prices (see e.g. Haltiwanger et al., AER, 2008), may face higher costs related to early promotion, etc

Answer: we also realize that this conclusion isn't convincing, and we will drop it in the revised

paper.

5. The paper uses the estimates of firm-level productivity that are obtained using pooled sample of exporting firms. These estimates should be estimated at the level of industries as the obtained measures of total factor productivity may be biased and would also reflect difference in production function parameters.

Answer: we will consider the industry-level productivity in the robust study.

6. The description of the sample and firm dynamics is not very interesting. It should be used only to help the reader understand the key features of firm dynamics and should occupy less space.

Answer: we will delete the picture 1 because it is a repeat of table 1.

7. The sample is cut due to a missing year (2004). Maybe authors could use longer time differences and focus on longer differences, which might also be interesting for the reader. This might be particularly interesting if authors could relate the changes in components to some policy experiments such as privatization, removal or reduction of tariffs.

Answer: we indeed want exam the researching object at a longer term, which is impossible in our study. Investigating the relationship between some policies and the reallocation effects is of great interest to our future study.

8. Maaliranta et al. (Journal of Royal Statistical Society B, 2015) also provide testing procedures that can be used to compare the size of different components of Olley-Pakes decomposition. The appropriate redefinition of variables allows one to even use a regression framework to estimate the statistical significance of different components.

Answer: we try to take this suggestion into account.

9. Authors use an unusual mode of using footnotes. For example, the groups of firms (state-owned, etc.) are used in the main tables, while the description of these is only given in the footnote. Thus, tables are thus not self-contained. Authors should check the grammatical errors that are still in the text. As there are several. I refrain from making an explicit list.

Answer: we will take the English writing very carefully, and we will ask a native English-speaker help us with the writing.