

HOW DO DIFFERENT EXPORTERS REACT TO EXCHANGE RATE CHANGES? THEORY, EMPIRICS AND AGGREGATE IMPLICATIONS

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NON-TECHNICAL SUMMARY

Movements of nominal and real exchange rates are large. They however seem to have little effect on aggregate variables such as import prices, consumer prices, and the volumes of imports and exports. The sensitivity, or rather lack of, of prices to exchange rate movements has been well documented by Goldberg and Knetter (1997) and Campa and Goldberg (2005 and 2008) who provide estimates of the pass-through of exchange rates into import prices. There is also evidence indicating a decline in exchange rate pass-through to import prices in the U.S. On the quantity side, the elasticity of aggregate exports to real exchange rate movements is typically found to be low in industrialized countries, rarely above 2, sometimes below unity. In international real business cycle models, the elasticity used for simulations is typically between 0.5 and 2.

One possible explanation is that prices are rigid in the currency of the export market. However, Campa and Goldberg, (2005) show that the incomplete pass-through of exchange rate changes into import prices is far from being a short-term phenomenon as it remains after one year. This suggests that price rigidities cannot fully explain this phenomenon. Moreover, Gopinath and Rigobon (2008) have recently shown on good-level data, that even conditioning on a price change, trade weighted exchange rate pass-through into U.S. import prices is low, at 22%. Another explanation is the presence of local distribution costs. These can directly explain why consumer prices do not respond fully to exchange rate movements.

In this paper, we show that the heterogeneity of the optimal response of exporters to exchange rate movements can help explain the lack of response of aggregate variables (prices and quantities) to these movements. We show theoretically and empirically that high and low performance firms react very differently to exchange rate movements. We interpret performance in terms of productivity or, in an alternative version of the model, in terms of quality. Whereas, following a depreciation, high performance firms optimally raise their markup rather than the volume they export, low performance firms choose the opposite strategy. Another way to state this result is that high performance firms absorb exchange rate movements in their markups but

low performance firms do not. The reason is that, due to local distribution costs, the demand elasticity perceived by high performance firms is lower than the elasticity perceived by low performance ones. This heterogeneity is a novel finding and is also interesting because of its implications for aggregate effects of exchange rate movements. In our model, following the spirit of Melitz (2003), fixed export costs generate a selection mechanism through which only the best performers are able to export. Also, heterogeneity in productivity implies that a very large share of aggregate exports is made by a small portion of high performance firms. Hence, exporters, and even more so big exporters, are, by this selection effect, firms which optimally choose to absorb exchange rate movements in their markups. A depreciation also leads new firms to enter the export market but these are less productive and smaller than existing ones. We show that our model, with sufficient heterogeneity in productivity, can indeed reproduce the observed low level of the elasticity of the intensive and extensive margins of trade to exchange rate movements. Our simple model emphasizes the role of distribution costs in generating endogenous and heterogeneous pricing to market (although changing the demand system to make it linear or translog can also yield heterogeneous responses to exchange rate changes).

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