UK EXPORTERS: New evidence on currency choice in setting prices

Exporting firms that are more reliant on imported inputs are less likely to price their goods in their home currency. That is the central finding of research by **Wanyu Chung**, to be presented at the annual congress of the European Economic Association in Mannheim in August 2015.

The study looks at 10 million trades between the UK and non-EU countries in 2011 and compares UK exporters based on how dependent they are on imports. It finds that a 10 percentage point higher dependence on imports makes a firm 20% less likely to set their prices in their home currency.

The research seeks to understand how firms set their prices when exchange rates fluctuate. Many firms have to import raw materials to make goods that they can then export. If the price of the imported goods rises due to the pound being weaker, then a firm that prices its exports in a different currency can prevent itself from losing out. The research finds that:

- Firms with more than 13% of their inputs priced in sterling are 40% more likely to set their prices in sterling than firms with none of their inputs priced in sterling.
- The UK's manufacturing industry only prices 55% of its exports in sterling, compared with 70% for the food industry.
- Exports to the United States are more likely to be priced in dollars than exports to any other country with respect to their local currency.
- When the pound depreciates, firms increase their export prices by around 70% of the lost value. But when the pound appreciates, they still tend to raise prices even further to compensate for lost sales.

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The main contributions of the paper are threefold. First, it documents new stylised facts on currency denomination in UK trade using a novel and rich dataset from Her Majesty's Revenue and Customs (HMRC), containing 10 million trade transactions with non-EU countries in 2011.

Second, it develops a theoretical framework that features firm heterogeneity in dependence on imported inputs together with endogenous invoicing currency choice. The theory predicts that exporters more dependent on imported inputs are less likely to price in the home currency, a result supported by the UK data. Specifically, a 10 percentage point higher share of foreign currency-denominated inputs is associated with a 20% decrease in the probability of using the pound sterling as an invoicing currency.

Last, it discusses the policy implications of invoicing currency for exchange rate pass-through, that is, how prices respond to changes in exchange rates. The key message is that the variations in currency denomination across firms and industries should not be neglected in estimating pass-through.

Currency denomination in international trade has far-ranging policy implications for the international transmission of macroeconomic shocks, the effectiveness of monetary policy and the choice of exchange rate regimes. This is because it directly determines who bears exchange rate uncertainty, whether prices respond to changes in exchange rates and a country's degree of exposure to external shocks.

A fundamental question, then, is what determines invoicing currency choice. This paper examines, theoretically and empirically, whether exporters' dependence on imported inputs determines their invoicing currency choice.

To guide the main empirical strategy, the author develops a theoretical framework in which firms endogenously choose the share of imported inputs and price in a given invoicing currency. The model yields a direct prediction that exporters more dependent on imported inputs, and therefore more exposed to input currency uncertainty, are less likely to use their own currency.

The study uses a novel dataset of UK trade in 2011, with invoicing currency recorded for each of the 10 million transactions. The author first documents a large variation in invoicing currency choice across destinations and industries. For example, the share of exports priced in the pound sterling is about 55% for the manufacturing industry, whereas for food industry the share is close to 70%. Also, exports to the US have the highest share priced in the destination's currency (the US dollar) among all destinations.

Overall the results provide strong support for the theory. A 10 percentage point higher share of foreign currency-denominated inputs is associated with a 20% decrease in the probability of using the pound sterling as an invoicing currency. Among firms that use imported inputs, a firm with the share of pound-denominated inputs at the upper quartile (=13%) is about 40% more likely to use the pound for exports, compared with firms with no inputs priced in pounds.

The research also discusses the implications of invoicing currency for exchange rate pass-through and documents a significant asymmetry of pass-through with respect to the direction of exchange rate movements, even after controlling for invoicing currency.

Facing a depreciation of the pound, a typical UK exporter increases the export prices of goods priced in pounds by 69%, which implies a pass-through level of 31% to the destination prices. When the pound appreciates, however, firms increase export prices to compensate the falling value of sales (in pounds), instead of lowering prices to maintain their market shares, as the theory suggests.

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Imported Inputs and Invoicing Currency Choice: Theory and Evidence from UK Transaction Data
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