Dominant currency dynamics: Evidence on dollar-invoicing from UK exporters

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This paper: we investigate the invoicing choices of British exporters using transaction level data of 2010-2016 and build a model to explain the micro dynamics of firms’ invoicing choices and the macro evolution of aggregate invoicing shares.

Introduction
A stunning feature in the data is the abnormally high dollar usage in global trade (Gopinath 2015):
- world exports: dollar share 40% >> US share 12%
- world imports: dollar share 43% >> US share 9%

Research question:
- Which factors drive the invoicing choices of individual firms?
- How do these factors contribute to the dollar’s global dominance?

UK data present a unique opportunity to study this question:
1. diverse invoicing choices: 90% of UK firms invoice in more than one currency
2. a long panel of invoicing choices at the transaction level (2010-2016)
3. significant rise of UK’s dollar-invoiced export share over time (see the figure below)

Empirical specification:
Estimate a linear probability model for entry into new markets:

$$
\Pr(Y = 1) = \beta_0 + \sum_k \sum_{l=0}^k \gamma_k \text{Export Tenure}_{k-l} + \beta_l \text{Spell}_{l-1} + \beta_\text{USD}_d \text{USD}_d + \beta_\text{Euro}_d \text{Euro}_d + \beta_\text{LCI}_d \text{LCI}_d + \gamma_{\text{size}}_d + \gamma_{\text{FE}} + \nu_{idt}
$$

- $$\Pr(Y = 1)$$: dummy equal to one if firm $$f$$ selling product $$h$$ in a new market $$d$$ in year $$t$$ used US dollars to invoice its transactions and zero otherwise
- Export Tenure: dummy equal to one if firm $$f$$ has $$k$$ years of exporting experience prior entry into the new market
- Spell $$f_{t-1}$$: dummy equal to one if firm $$f$$ has $$l$$ years in its existing markets prior entry into the new market
- $$\text{USD}_d$$: dummy equal to one if $$f$$ has used dollars for $$l$$ years in its existing markets prior entry into the new market
- $$\text{Euro}_d$$, $$\text{LCI}_d$$: dollar-, euro- and destination-currency invoiced import shares of firm $$f$$ (operational hedging measures)

Key empirical finding:
We document significant within-firm spillover of dollar usage over time and across markets:

A firm’s dollar invoicing probability in a new market increases in its prior dollar experience, after controlling for strategic complementarity and operational hedging motives.

Theoretical contribution:
We introduce a fixed cost of currency use at the firm level to explain the newly documented spillover effects:

- **scale effect**: the more destinations using a currency, the lower the cost
- **joint market decisions**: the pricing and invoicing choices are interdependent across markets due to the firm-level cost of currency usage
- **path dependence**: a firm’s invoicing choice in a new market depends on its past invoicing choices in existing markets

Aggregate and policy implications:

1. Dominance of US dollars:
We estimate that the dollar share of UK’s extra-EU exports would be 7% lower (0.39 → 0.32) without the spillover effect.

2. Global transmission of shocks:
Due to the interdependence of firms’ invoicing choices across markets, a destination-specific shock can quickly propagate and have global impacts.

Questions and comments are welcome: Contact Lu Han at hanlulong@gmail.com

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