Entrepôt: Hubs, Scale, and Trade Costs
Data Usage Guide

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Background

Exchanging goods over borders involves more than production and consumption: shipping, transshipping, and distribution can include multiple agents and additional countries beyond producers and consumers. These activities are concentrated at entrepôts, trading hubs which goods travel through—from other origins and bound for other destinations. In Ganapati, Wong, and Ziv (2024), we study entrepôts, the trade network they form, and their impact on international trade. Using novel microdata, we document that the trade network is a hub-and-spoke system where 80% of trade is shipped indirectly, and nearly all via entrepôts.

As a result, trade does not always travel directly from origin i to destination j, it may be routed indirectly through a leg from k to l. We construct the leg-level trade cost from k to l, $a_{kl} = t_{kl}^{-\theta}$, up to a dispersion parameter θ to represent idiosyncratic preferences. These leg-level costs allow us to construct the expected trade cost for a shipment from origin i to destination j, $b_{ij} \propto \tau_{ij}^{-\theta}$.

Here we provide a global set of trade costs that is consistent with indirect-shipping for 186 countries. We establish the validity of both our estimates and modeling approach by finding a tight match between our estimated trade costs and external freight rate data, as well as between our model-predicted network flows and microdata on shipment journeys.

Data Sources and Code

For details on data, code and instructions to replicate the findings in Ganapati, Wong, and Ziv (2024), please refer to the AEA Data and Code Repository Project ID openicpsr-189842 (`https://doi.org/10.3886/E188242V1`).

Reference

Ganapati, Sharat, Woan Foong Wong, and Oren Ziv. 2024. "Entrepôt: Hubs, Scale, and Trade Costs." *American Economic Journal: Macroeconomics*, 16 (4): 239–78. DOI: 10.1257/mac.20220250

File Descriptions

1. iso_names.csv
    - Description: Crosswalk of country names to ISO codes
    - Columns
        - iso2 - char - 2 digit ISO code
        - iso_name - char - full ISO country name
        - iso3 - char - 3 digit ISO code
2. trade_cost_table.csv
    - Description: Full data for both leg trade costs a_{ij} and implied trade costs b_{ij}
    - Columns
        - iso3_i - char - 2-digit ISO code for country i
        - iso3_j - char - 2-digit ISO code for country j
        - a_ij - float - leg trade cost a_{ij}
        - b_ij - float - aggregate route trade cost b_{ij}
        - log_b_ij - float - $\log(b_{ij})$