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Does Trade Cause Capital to Flow?

Evidence From Historical Rainfalls

Masters in Monetary and Financial Economics
Monetary and Financial History

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Framework

- ✓Introduction and Methodology
- ✓Institutional Context and data
- ✓OLS analysis
- ✓IV analysis
- ✓Conclusions
- ✓References

Introduction and Methodology

- Causality runs from **capital flows to trade**.
  - Kemp (1966) and Jones (1967).
  - Helpman and Razin (1978).

- Or, causality runs from **trade to capital flows**.
  - Antras and Caballero (2009) **–** trade integration increases the capital flow to less developed economies.
  - Taylor and Wilson (2006).

Introduction and Methodology

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- Causality can run in both ways.

- Common shocks - **Mitchener and Weidenmier (2005)**
  - Financial crisis;
  - Sovereign defaults.

- Difficult to estimating the effect of trade on capital flows.

Introduction and Methodology

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- Instrument for trade: fluctuations in rainfalls.

- France, Germany, UK and the Ottoman Empire (1859-1913).

- **"Temporary fluctuations in agriculture production caused by year-to-year changes in rainfall".**

- Provisionistic policy: imports/exports.

Institutional Context and Data

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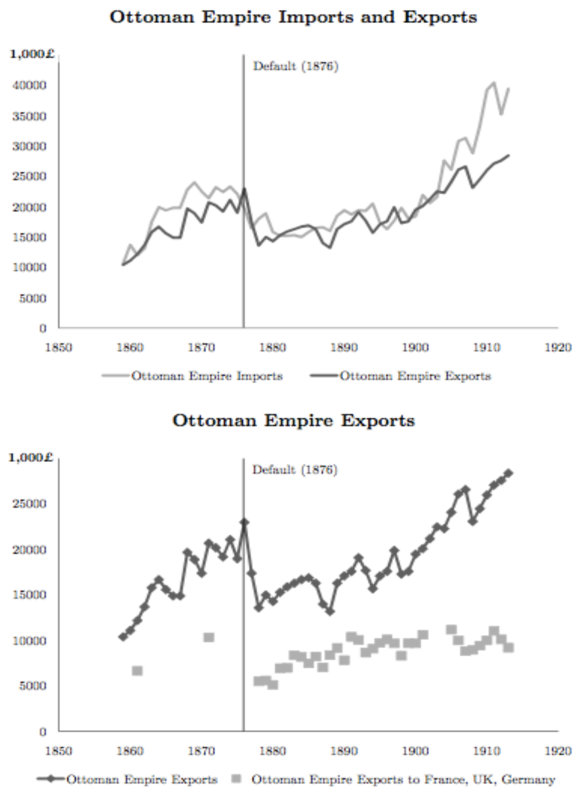
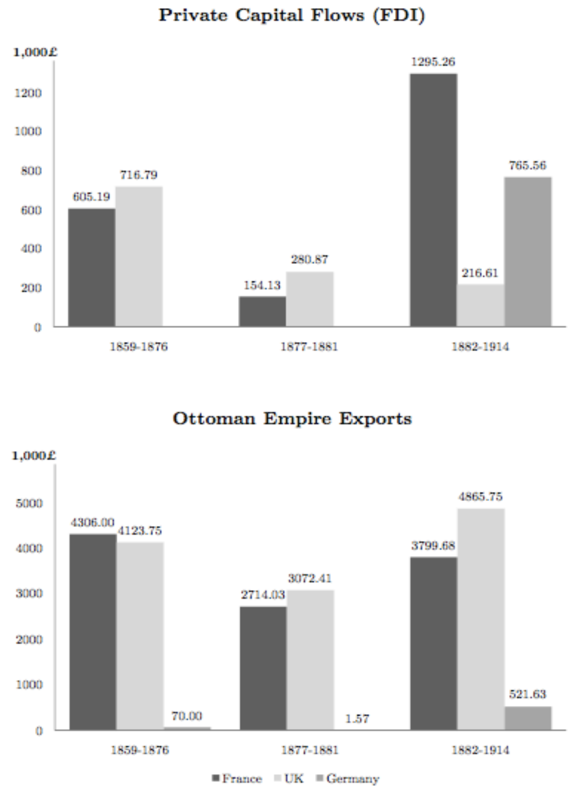


Notes: Data is from Pamuk (1987). All variables are measured in thousand sterling.

Figure 2: Exports and Imports of the Ottoman Empire during 1859–1913



Notes: Data is from Pamuk (1987). All variables are measured in thousand sterling.

Figure 3: Private capital inflow (FDI) and Exports of the Ottoman Empire during 1859–1913

OLS analysis

- **Exports are positive and highly significant:** 10% increase in exports leads to a 3-5% increase in FDI flows.

- The introduction of OPDA in the model might lead to **less need for a trade relationship** to keep serving as a guarantee for repayments of credit.

IV analysis

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- Rainfall is **positive and highly significant**, suggesting that there is a reduced form direct effect of rainfalls on FDI inflows.

- **The total effect is insignificant** after the establishment of OPDA, as expected.

- In response to positive rainfall shocks, **exports increase and so did conditional on time trends**, there is a significant effect of rainfall shocks on exports.

Conclusions

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- **Strong rainfalls created a surplus agricultural production**, which was exported under the provisionistic policy.

- A standard deviation in rainfalls from the mean lead to a 3.5% **increase in Ottoman exports**, which in turn causes, on average, a 10% **increase in capital inflows**.

References

- Kalemli-Ozcan, Sebnem Nikolsko-Rzhevskyy, Alex (2010). Does Trade Cause Capital to Flow? Evidence From Historical Rainfalls. *Working Paper 16034, National Bureau of Economic Research.*