Discussion of "The Micro and Macro Dynamics of Capital Flows"

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Paper in a nutshell

▶ Empirical and theoretical study of the effects of capital flows on resource allocation within and across-sectors triggered by a financial liberalization.

▶ Firm- level census data from the financial liberalization in Hungary: Novel data on service and agricultural firms.

▶ SOE with two sectors a la Melitz (2003) + capital controls (CC)+..... Financial liberalization (FL).

▶ Two main channels:

   ▶ Input-cost channel: benefits firms in capital intensive industries.
   ▶ Consumption channel: benefits firms in industries that produce goods with high income elasticity.

▶ Short term: second channel dominates benefiting firms in services industries and reallocating resources to sectors with high IE, in the long run the effects move in the opposite direction.

My take

- ▶ Topical question + New focus on services (vast majority of firms and output in an economy but little attention in the CCs/FL literature).

- ▶ New mechanism to explain heterogeneous effects of FL and its consequences in terms of resource allocation.

- ▶ Very rich paper, lots of insights.

    - ▶ Empirical insights.
    - ▶ Quantitative results.
    - ▶ Effort to link/validate empirical and quantitative results.

- ▶ Enjoyed reading it and learning from it.

- ▶ Main comments:

    1. Services and manufacturing sectors: IE vs CE
    2. Capital accumulation and their allocation between sectors
    3. Exports decision

- ▶ Minor comments.

Empirical analysis

- ▶ Great firm-level census data 1992-2008, over 1MM firm-year observations (agriculture, manufacture, services)

- ▶ Dif-in-Dif estimation of the effect of the FL across sectors with different capital and income elasticity in different outcomes:
  - ▶ Firm-level: value added, capital intensity, capital.
  - ▶ Industry-level: Number of firms, firm size, Net entrants, Entrants, RTFP, Producer price index.

- ▶ Main take-away:
  - ▶ Capital and income elasticity shape the firm-level effects of FL.
  - ▶ Resources are reallocated to sectors with high income elasticity (higher net entry).

Model

▶ Melitz(2003) SOE + CCs (financial autarky)

▶ Two sectors:
   1. Manufacturing: relatively higher capital elasticity (CE), can export.
   2. Services: relatively higher income elasticity (IE) of demand, cannot export.

▶ Households invest and rent capital to firms.

▶ Quantitative exercise: economy in transition to long-run autarky SS.

▶ FL triggers lower interest rates and capital inflows to the country.

▶ Services are relatively more positively benefited due to the IE channel overrunning the input cost channel in the short run. Effect reverses in LR.
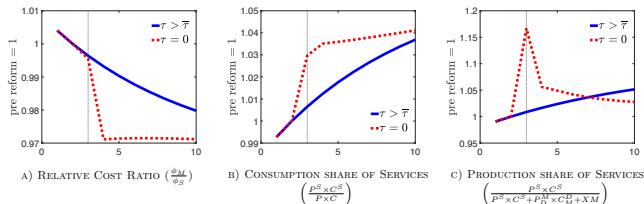

a) Relative Cost Ratio $\left(\frac{\phi_M}{\phi_S}\right)$ b) Consumption share of Services $\left(\frac{P^S \times C^S}{P \times C}\right)$ c) Production share of Services $\left(\frac{P^S \times C^S}{P^S \times C^S + P_D^M \times C_M^D + XM}\right)$

Figure 5: Reallocation across Sectors in the short term

Main Comments

▶ Caveat: Services and manufacturing firms are very different in the calibrated exercise along many dimensions

	Manufactures	Services
Income Elasticity	0.97	1.58
Capital share (elasticity)	0.36	0.30
Fixed operating cost	0.14	0.03
Exit prob	0.11	0.08
Mean/Std Prod. dist.	2.32/1.08	0/2.06
Intl. trade	yes	no

▶ Sensitivity analysis? Is it possible to isolate the effect of the income elasticity?

▶ How big is the difference in terms of IE that we need between sectors to trigger this mechanism?

▶ Can the input-cost channel become more prevalent for alternative reasonable calibrations?

▶ RER movements only affect manufactures' exports and competition from imports.

▶ Caveat: Services and manufacturing (and agricultural) sectors are very different in the data along many dimensions ▶ Firms' characteristics

How do we want to think about the different sectors and the heterogeneity?

▶ Is the effect a continuum across firms in different industries (IE and CE)?

▶ Or is it that manufacturing firms are different from services and within them there are also heterogeneous effects?

▶ Empirical analysis pools all firms together.

▶ Dividing the sample by sectors:

  ▶ could provide more info on the differential responses between sectors. (agriculture??).
  ▶ would guarantee that the results are not driven by services (almost 80% of the sample).

Example: Differential effect on entry

Number of Net Entrants
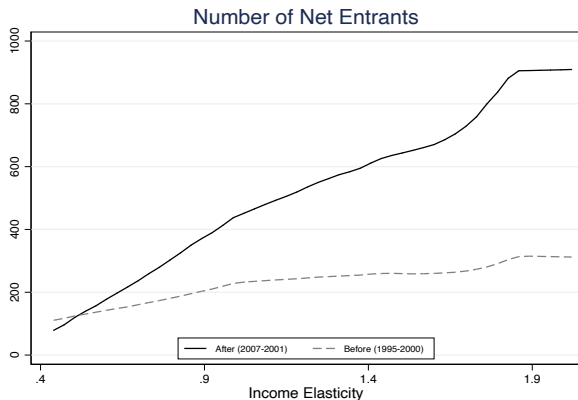
▶ Mean IE Manufactures: 0.78 (max=1.35) / Services: 1.15 (max=2.02).

▶ Include confidence intervals and provide distributions by sector (very little common support).

Capital growth and allocation between sectors

▶ Households choose investment, no collateral constraints.

▶ Firms rent capital, no adjustment cost.

▶ Capital can move freely between firms-sectors.

▶ As a result:

  ▶ Aggregate capital grows very fast after the financial liberalization.
  ▶ In the very short run, the model overshoots in terms of the relative entry rate of of services (also for production share and relative cut-off thresholds).
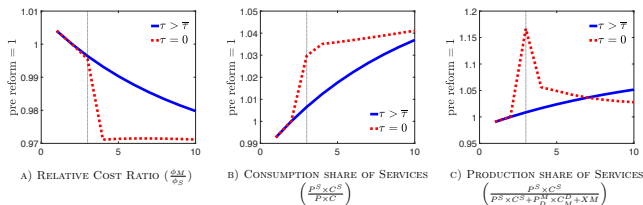

Figure 5: REALLOCATION ACROSS SECTORS IN THE SHORT TERM

Suggestions:

▶ Adding a financial friction would smooth the initial reaction while making capital in the model behave more similarly to "standard capital".

▶ In the long run, the responses of these variables are reversed, could they be reversed in the short run if a financial friction were present?

▶ Furthermore, many papers have shown that financial frictions are key to understanding the heterogeneous effects of CC/FL at the firm level.

  ▶ Gopinat et al. (2017), Forbes (2007), Andreasen et al. (2020, 2022).

▶ The differential short term response should be checked empirically: restrict sample to first few years after FL, local projections.

▶ It would also be interesting to have some financial discussion on the empirics: Do financing decisions shape the response of firms?

Considerable room to further exploit the exports decision

▶ In the literature, exporters tend to behave very differently during episodes of CC/FL due to their differential financial dependence (Alfaro et al. (2017)).

▶ Model:

  ▶ FL increases relative export cut-off for manufacturing firms (RER appreciation).
  ▶ Firms in the services sector are not allowed to export.

▶ Data:

  ▶ Robustness test of baseline with non-exporters...but there could be a heterogeneous response among exporters (only 10% of firm-year observations).
  ▶ Exploit extensive and intensive margins of exports within groups.
  ▶ Defining exporters and non-exporters is non trivial (provide more details, consider alternative definitions).
  ▶ Would be useful to restrict analysis to non-exporting service firms (as in the model).

Minor comments

▶ Include empirical-quantitative comparison of firms' distributions.

▶ Include sensitivity analysis to alternative key calibration parameters.

▶ Agricultural firms are included in the data but there is nothing in the model, additionally given their characteristics they should be treated separately.

▶ Maintain same number of observations in regressions.

▶ Provide more detail on the specifics of the calibration exercise.

▶ The FL in Hungary triggered a series of unwanted financial consequences: too much credit in FX towards the end of the 2000s. Is this an issue that we should consider?

Bottom line

▶ Very nice and well-written paper.

▶ New perspective on heterogeneous consequences of FL:

  ▶ CE and IE shape firms' and sectors' responses.

▶ Final suggestion: Strengthen link between empirical and quantitative results.

Thanks!

Firms' characteristics by sector

Table C.9: Firms' Characteristics across Sectors

	Agriculture	Manufacture	Services
	(1)	(2)	(3)
Value Added*	2,058	3,029	1,008
Capital*	5,200	2,140	1,038
Capital Intensity*	1,150	386	358
Employment	5	6	3
Log RTFP	5.40	5.53	5.10
Age	5	5	4
Export Share**	0.19	0.31	0.19
Number of firms	6,925	23,231	115,949

Notes: *in thousands of Forints. ** Conditional on Exporting/Importing. Median values.
Average over 1995-2000. Source: APEH.