Discussion of “Misallocation or Mismeasurement” and “Industry Concentration”

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From Micro to Macro
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Macroeconomics is about aggregate welfare, GDP (growth), inflation, and unemployment.

EIB cares are investment that creates jobs and promotes equality.

Q: So why a session about mismeasurement of output and employment at firms and about firm concentration?

A: It looks like micro and statistics, but it’s about macro.

Methodology for measurement and analysis is evolving, but improvements still needed in data comparability, design of indicators, and analysis of results.
Macro Puzzles and Micro Answers

- Empirical macro has worked with traditional macro timeseries and representative agent paradigm.
- These indicators provide very little to answer questions on slow productivity growth, low investment-output ratio, decreasing labor share, increased profit skewness, higher mark-ups.
- 'Secular Stagnation' story has very little to offer in terms of policy options.
- Micro-evidence on supply-side of the economy, evaluated using appropriate theoretical framework, is more likely to provide a coherent view, along with policy trajectories.
- But, hard work is required to generate statistical measures and theoretical frameworks before we can return to macro questions, let alone policy trajectories.
Summary of Findings: BKR

- “Misallocation or Mismeasurement” paper attempts to provide context to empirical observations from firm-level data.
  - Dispersion of ’revenue productivity’ (RP) has been increasing slightly in the US.
  - Cross-sectional correlation between growth in RP and level of RP has been declining.
- Following Hsieh-Klenow framework, the slight increase in dispersion of RP is interpreted as a severe increase in misallocation of resources across firms (from 60% efficient to 30% efficient).
- Following BKR, the reduction in correlation between growth in RP and RP is interpreted as an increase in ’additive measurement error’ in production data.
- After correction for measurement error, dispersion in RP is reduced, so misallocation is reduced in US.
“Industry Concentration in EU and NA” paper attempts to provide facts concerning industry concentration in OECD countries.

- Using national firm-level data, results from MultiProd project show that top 10% firms increase market share about 2-3 percentage points from 2001-2010.
- Using global Orbis et al. data, concentration ratio of top few enterprises in each country-industry is seen to increase 10 percent over the period.

The paper does not provide an interpretation of the finding, but points to different possible avenues to explore.

- Increasing Market Power (entry barriers, product market regulation, network externalities, anti-competitive behavior)
- Increased optimal scale (associated with technology, intangibles, globalization)
What can we learn about methodology

- The BKR paper contributes to the literature by showing the difficulty in going from micro data to useful information for macro analysis.
- A simple measure computed from firm-level data (RP dispersion) decomposed into an indicator, ie how much higher would output be if resources were allocated efficiently, by appealing to HK model.
- The resulting puzzle of declining Allocative Efficiency (also relative to India) in the US leads to exploration of another interpretation of increasing dispersion, in this case measurement error.
- In the BBCCT paper, aim is to provide clean facts about concentration.
- A large volume of useful work done to prepare and merge Orbis et al. data sources, partly following footsteps of others, to generate a robust measure of industry-concentration.
- No model is needed to convey what the computed indicator ’means’.
- The MultiProd data requires harmonization at stats agencies, but the resulting computation of the concentration measure not as clean an ’indicator’.
Patterns of Decline in Reallocation Differ Substantially Across Sectors
Only After 2000 is the Decline Ubiquitous

Source: Decker et al., 2019
Precise link between distortions and AE depends strongly on specification of production technology and demand system (see e.g. Mrazova and Neary (AER 2017; JEEA 2018) on role of elasticity and convexity of demand, and on selection effects)

Without mismeasurement, TFPR dispersion is proportional to distortion

Additive mismeasurement (and fixed overhead costs) can be distinguished from distortions through moment conditions. (In paper, simple case of regressing growth in RP on level of RP).

The paper has nice example on mismeasurement of age and BOY/EOY variables in India. Does the mismeasurement of these worsen over time in US?

What in statistical process worsened (increased variance of additive errors) in US relative to India?
Rising labor productivity dispersion (std dev of log real labor productivity) in Manufacturing

Robust to ASM vs. Admin Data, Robust to weighted vs. unweighted

Source: Decker et al., 2019
Brown et al. (2016) have a variant of Hopenhayn, with a rich set of distortions: entry fee, fixed costs, exit costs, and restructuring costs.

Not just allocation but also selection (of entrants, entry-type, exit) plays a role in TFPR and aggregate productivity (welfare).

Reducing policy-induced barriers (e.g., entry fees, admin burden, exit costs) is ambiguous for dispersion of TFPR but increases welfare.

Empirical work in the US and Eastern Europe: no clear link between policy and dispersion of TFPR.

Changing nature of technology and production may be changing TFPR (and TFPQ) distribution.
Important to do apportioning group information. (see chart).

Industry concentration vs market concentration

Can we do more to distinguish domestic market conditions?
  - From compnet or multiprod: export intensities at different points in size distribution
  - In analytical use: add country/industry information from wiod on apparent consumption.
  - In next round of multiprod, link in trade information.
Looking only at HQ or only subsidiaries or apportioning?

Change in the share of sales due to 8 largest groups (rel. to 2000)
Orbis-Worldscope-Zephyr data, average across industries

Source: BBCCT, 2019
Many new features of facts about firm-level dynamics are emerging that related to more macro related puzzles

Many possible hypotheses could explain

- Changing tech for transferring primary inputs to final demand (production function, business model)
- Changing market structure (market power, entry barriers)
- Changing nature of external shocks
- Changing frictions and distortions

Cross-country evidence as promising route to identification.

Careful data work, as well as modelling with an open mind, is needed.