

Discussion of  
“Corporate Taxation and Firm Productivity”  
by Holtmann et al.

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# Overview

## Question

Do corporate tax incentives affect (residual) firm TF productivity?

## Contribution

Despite plethora of theoretical mechanisms.  
Empirical work is scant.

## Data

Orbis sample with 4M firms in 200 countries between 2010-18.

## Research Design

Estimate TFP using Akerberg et al. (2015)  
Unconditional quantile regression – Effect along TFP distribution

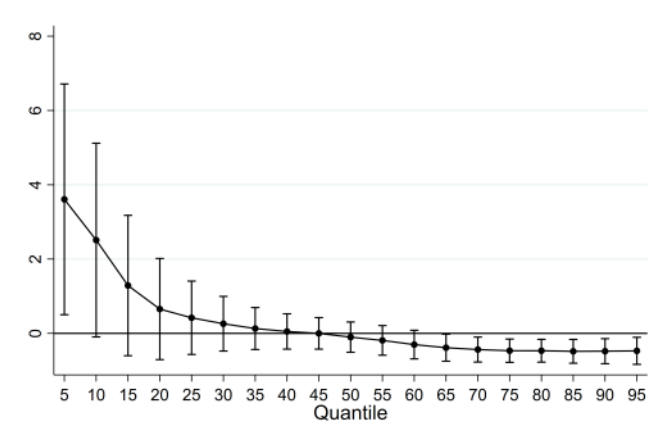
## Main Results

- (1)  $\uparrow$  C-tax  $\implies$   $\uparrow$  3.61pts. of TFP at 5th-pctile of TFP dist. related to firm exit.
- (2)  $\uparrow$  C-tax  $\implies$   $\downarrow$  0.48pts. of TFP at 90th-pctile of TFP dist. related to reduction in productivity-enhancing investment.
- (3) C-tax reduces firm mobility over distribution of TFP.

# Impact of C-tax

Figure 5: Unconditional Quantile Regression Coefficients

(a) EATR



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(Levinsohn-Petrin'03; Deval '23; Olley-Pakes'96, ACF'15)

P: uses Orbis' value added following Gal (2013)

⇒ might introduce input pricing estimation concerns unless we believe  $m_{it}$  is separable + deflate series separately using output & input indices.

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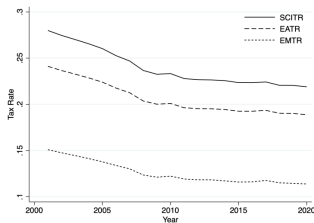
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\* Actual assumption is first-order Markov process



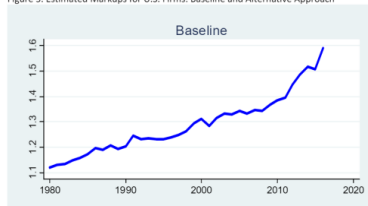
# Market Power & Misallocation

Figure 1: Tax Rate Developments



This paper: Falling C-tax

Figure 5. Estimated Markups for U.S. Firms: Baseline and Alternative Approach



Diez et al. '23: Rising markups

C-tax affects TFP through exit & productivity-enhancing investment OR through market competition?

C-tax may also affect misallocation a la Hsieh & Klenow (2009) for example through loss provisions.

Both implying less TFP.

# Other Thoughts

- Theoretical exercise perhaps too restrictive given empirical nature
  - S: Either remove it or allow a more complex environment.
- Serial correlation in residual productivity?
  - S: Model as an AR(1)?
- Reverse causality? statutory corporate tax reacts to low productivity shocks.
  - S: unlikely in developed economies where tax policy is acyclical (Vegh & Vuletin 2015); focus on a sample of developed economies.
  - S: look at dynamics in a staggered DiD model.
- Account for multiple simultaneous changes in tax code
- More details on estimation method for TFP.

## Direction of travel

- Explore robustness w.r.t. the estimation of TFP.
  1. estimate TFP using Bond-Blundell GMM methods.
  2. calculate using parametric methods assuming industry-level input shares.
  3. if using VA as dep. var., deflate output using output price index & flex. inputs using inputs price indices
  4. Regardless, estimate using sales data too.
- Study more directly market power/misallocation mechanism within this framework. Do higher taxes imply less investment or more misallocation/market power?
- Account for other changes in the tax system: dividends, capital gains.
- I would want more evidence on why multinationals are less affected. Can we study the avoidance mechanism directly using anti-avoidance recent reforms?