# Discussion of "The Rise of Market Power and Macroeconomic Implications"

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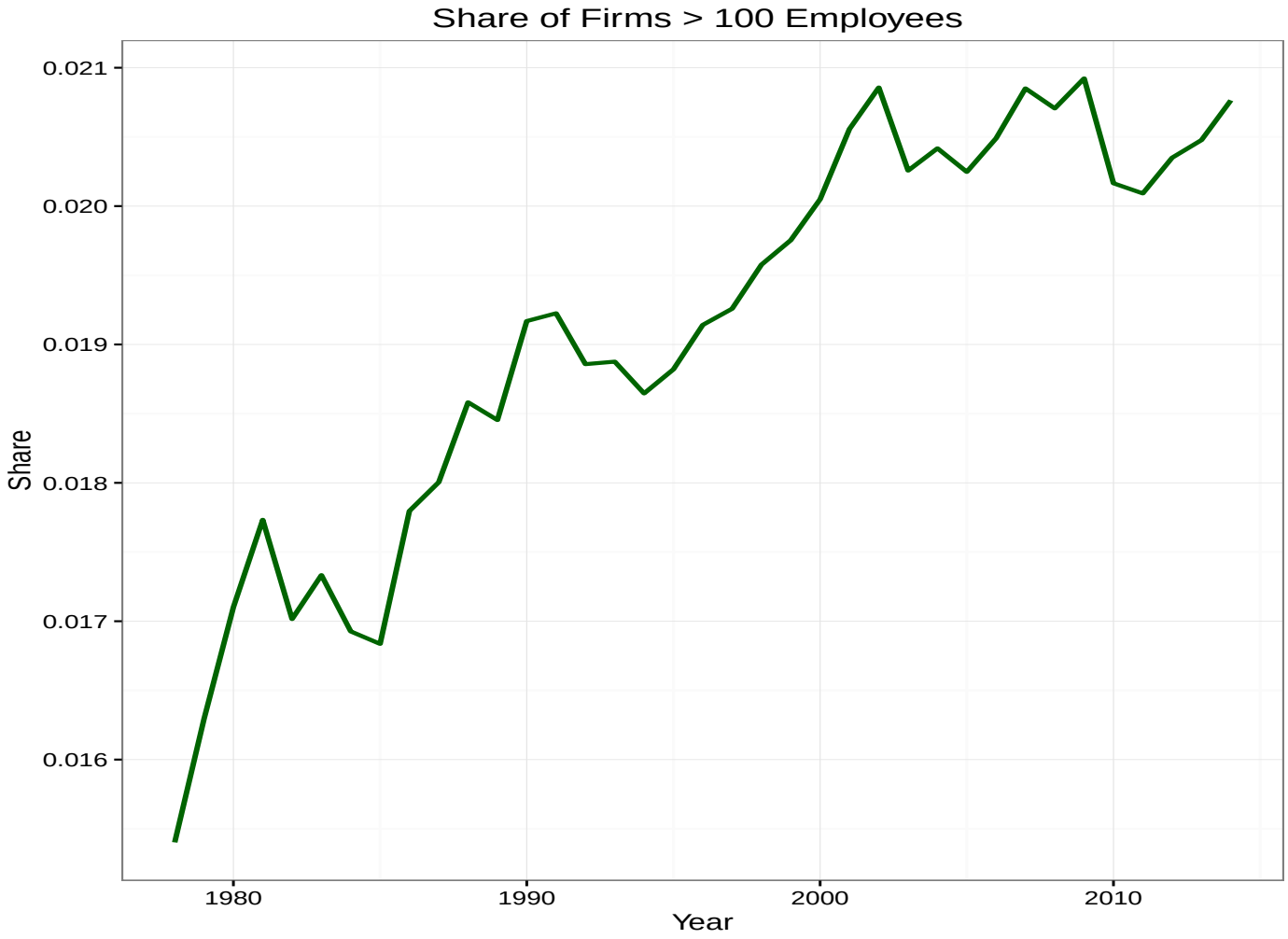
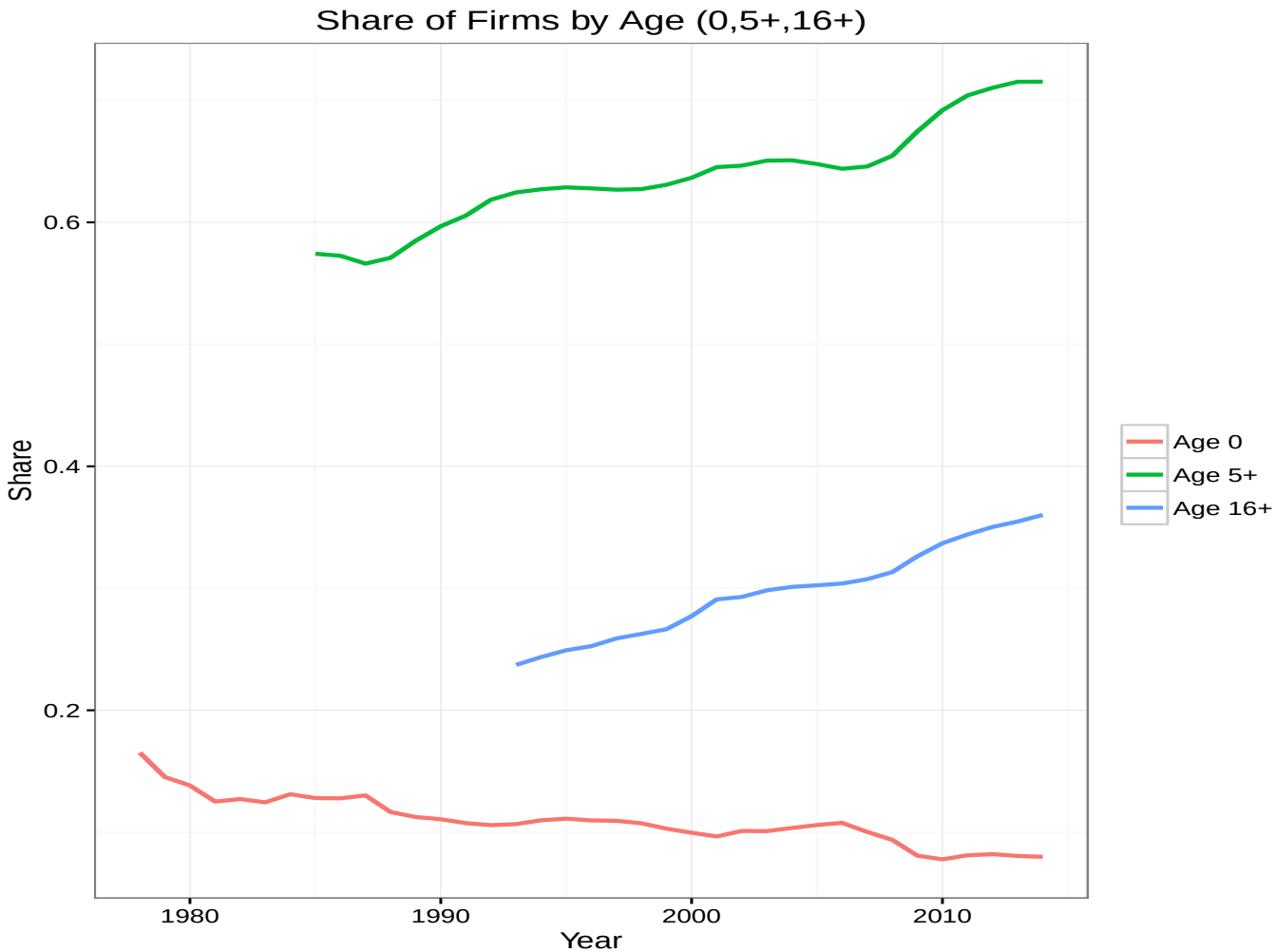
# In the US, firms are getting bigger....



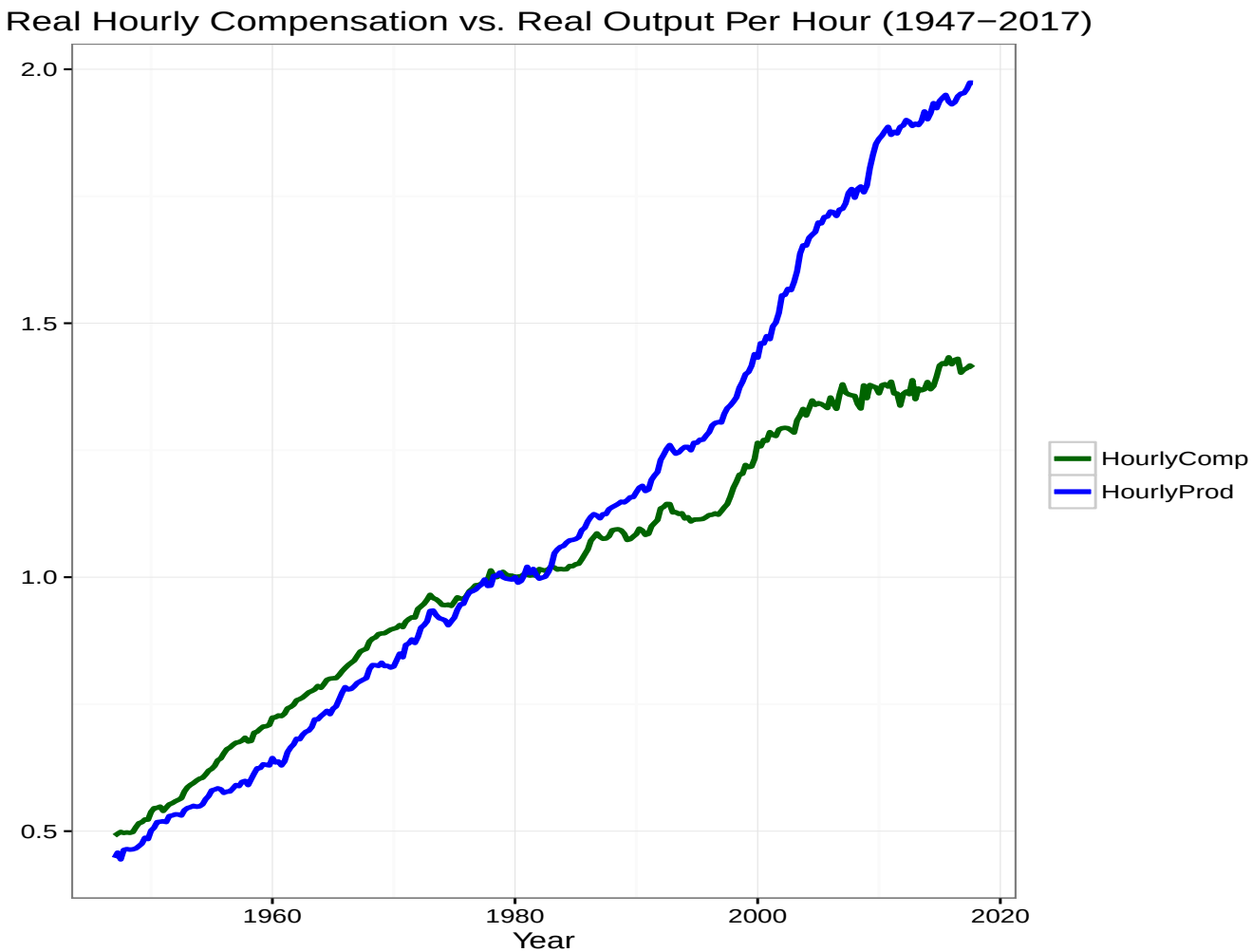
# ...AND ALSO GETTING OLDER.



# The Paper

- Estimates markups at the firm level (1950-2014).
  - Compustat data.
  - Production approach:
    - Specify technology.
    - Infer markup from elasticity of output to variable inputs, firm-level sales to (variable) cost ratio.
  - Time series.
    - Rise of 30% since 1980. Roughly constant before.
  - Cross-section.
    - Markup positively related to size conditional on industry.
    - Composition accounts for trend only slightly. Markups increase within industries important.
- Relates upward trend in markups since 1980 to recent trends in factor shares, relative prices, and productivity.
- **It'a great paper...**

# Compensation vs. Productivity



# Compensation vs. Productivity

- $Y = AN$.
- Ouput $=$ Income $=$ Profits $+$ Wage Bill
- $Y = \pi + wN = \mu \frac{w}{A} AN - wN + wN = \mu wN$
- $AN = \mu wN$
- $\hat{A} = \hat{\mu} + \hat{w}$

# Compensation vs. Productivity

- Prior to 1980 – roughly constant markups – wages and productivity grow roughly at the same rate.
- Productivity: from 1980 to 2014 $\approx$ 90% growth.
- Markups: 1.2 (1980) to 1.6 (2014) $\approx$ 30% growth.
- Wage growth in wages should be about 60% (about 3/5 of gap).

# National vs Domestic Profits

- National: $\pi_N = \pi_{US,DOM} + \pi_{US,FOR}$
- Domestic: $\pi_D = \pi_{US,DOM} + \pi_{NON\,US,DOM}$

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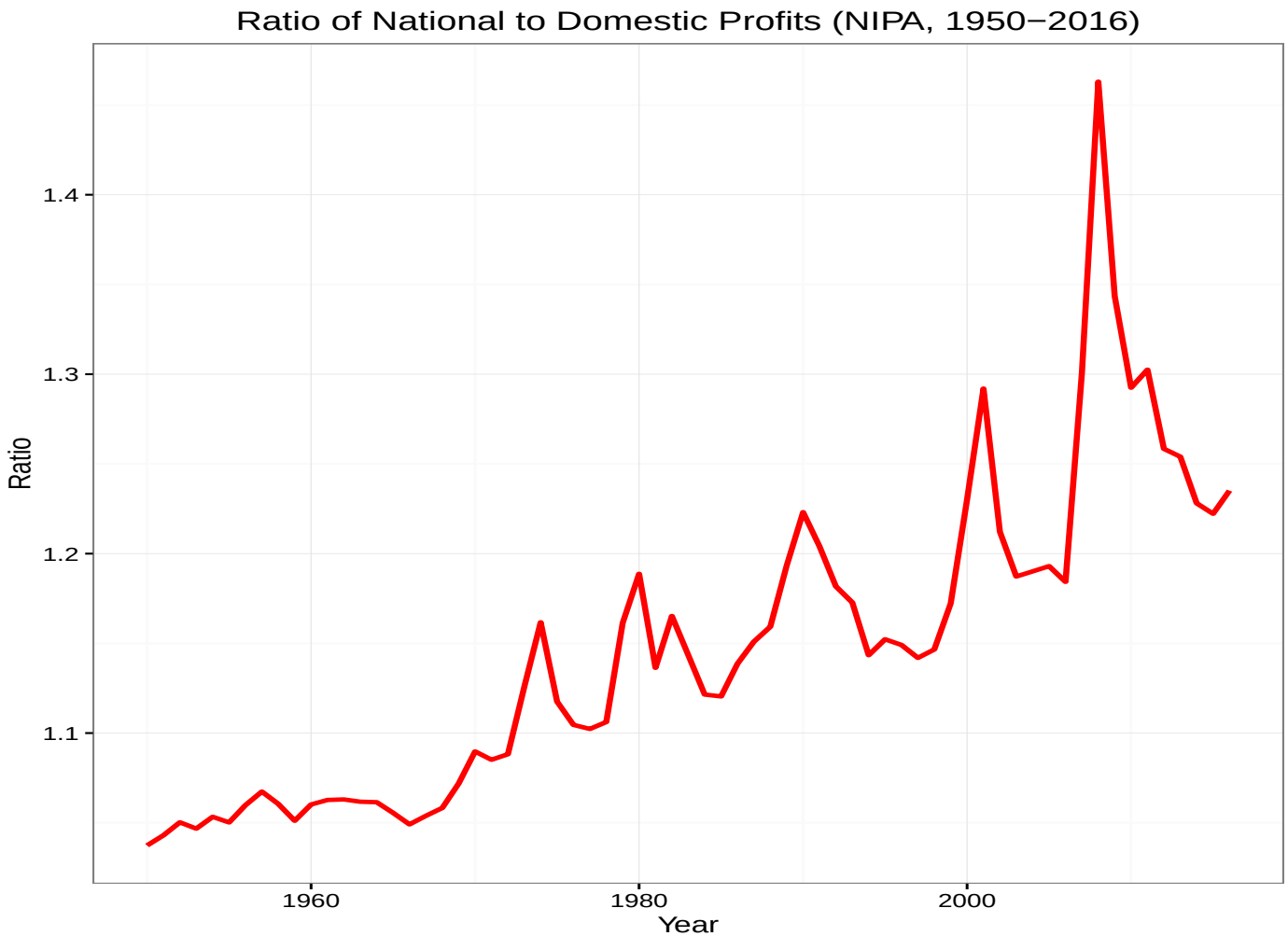


# National vs Domestic Profits

- Goal: measure "distortions" in product markets and study their implications for factor markets.
- Labor markets local.
- High markups of foreign subsidiaries vs. low markups domestic operations?

# Reallocation and Productivity

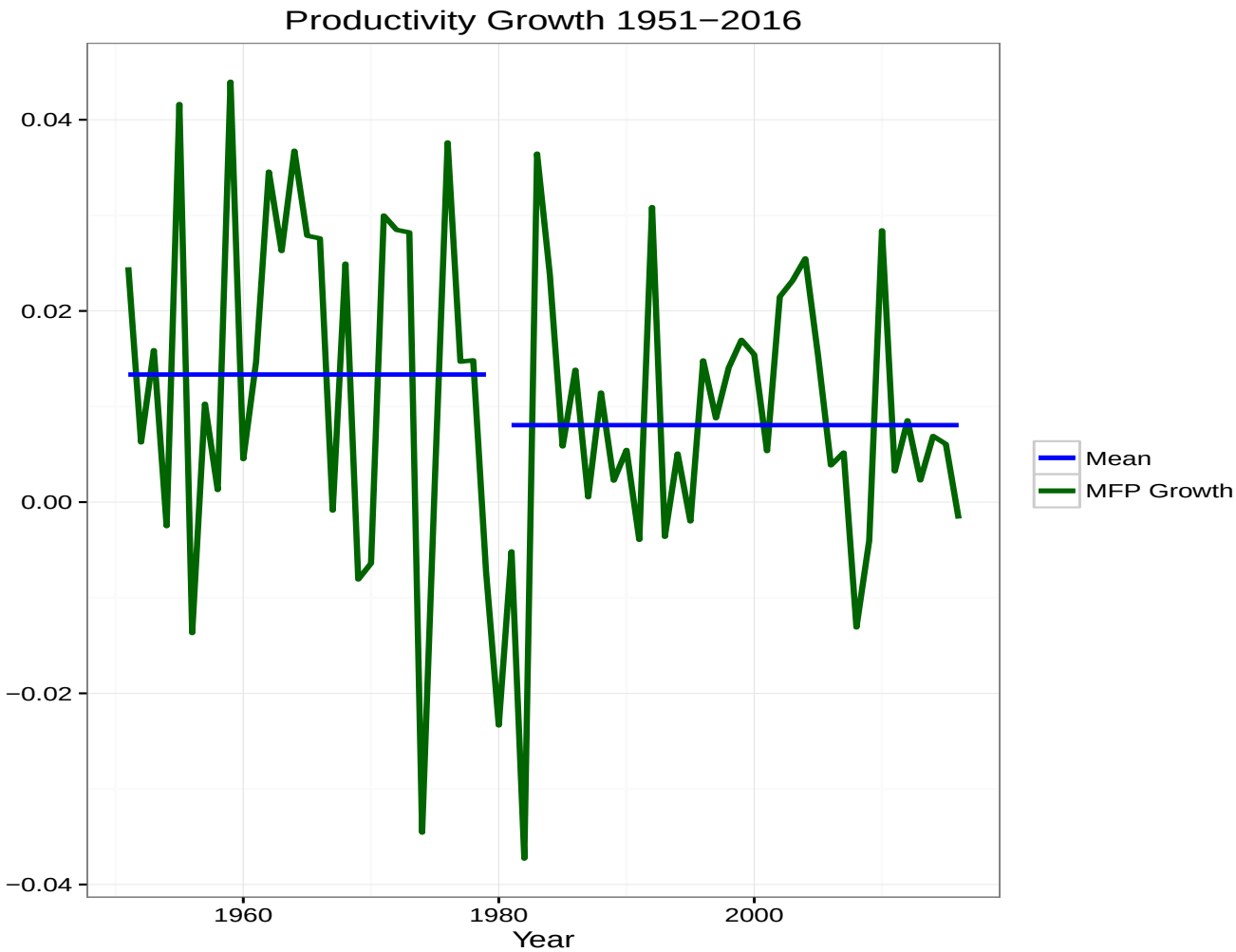
- Foster, Haltiwanger, Krizan (2006): Analyze retail sector during 1990s.
  - Increase in concentration.
  - Large reallocation of $L$ and $K$ from single-establishment local firms by national multi-establishment stores.
  - Large chains highly efficient and more capital intensive.
- Similar reallocation in Kehrig and Vincent (2017), but for establishments. "Hyper-productive" establishments grow very large.
- Evidence from Autor et al. (2017): $\uparrow$ concentration, $\uparrow$ innovation (# patents).
- What's missing in the aggregate?

# Wrapping Up

- Excellent paper!
- Important set of results that motivates:
  - Welfare evaluation of distortions in product markets.
  - Are these firms too large? Concentration because of efficiency vs entry barriers.
  - Implications for productivity/factor use.

# ADDITIONAL SLIDES

# Slower Growth Rate of TFP




1951-1979: 1.3%, 1981-2016 0.8%.

# Slower Growth Rate of TFP

- $Y = AK^{\alpha}L^{1-\alpha}$
- $1-\alpha = \mu\theta_L$, where $\mu$ is markup and $\theta_L$ is measured labor share.
- $Y = TFPK^{1-\theta_L}L^{\theta_L}$
- $y = TFPk^{1-\theta_L}$
- $\widehat{TFP} = \hat{y} - (1-\theta_L)\hat{k}$
- $\widehat{TFP} = \hat{A} + \alpha\hat{k} - (1-\theta_L)\hat{k}$

# Slower Growth Rate of TFP

- $\widehat{TFP} = \hat{A} + \theta_L(1-\mu)\hat{k}$
- $\widehat{TFP} = \hat{A} + \frac{(1-\alpha)}{\mu}(1-\mu)\hat{k}$
- $\widehat{TFP}_{<1980} = \hat{A}$
- $\widehat{TFP}_{>1980} = \hat{A} + \frac{(1-\alpha)}{\mu}(1-\mu)\hat{k}$