The Rise of Market Power and The Macroeconomic Implications

Jan De Loecker, Jan Eeckhout, Gabriel Unger

Presented by Pat Leepipatpiboon (Nov 15, 2021)

Overview

- **Research Question:** The evolution of markups overtime.

- Estimates firm level markup using proposed production approach.

- Inspects a decomposition of markup and presents related macroeconomic implication.

- **Why is this interesting:**

  - Proposes new method of mark-up estimation that required less data and less assumptions.

  - Presents evolution of markups from 1950-2016.

Empirical Framework and Data
Obtaining Markups

1. **Accounting Approach**

$$\mu \equiv \frac{P}{C} = \frac{PQ}{CQ}$$

   • Requires constant returns to scale.

2. **Demand Approach (BLP 1995)**

   • Required prices and quantities data with market conduct assumption.

3. **Production Approach (Hall 1988)**

   • Doesn't require assumptions on demand and market conduct.

   • Use firm's financial statements' data.

Empirical Framework and Data
Production Approach

- **Production Function**

$$Q_{it}(\Omega_{it}, V_{it}, K_{it})$$

Productivity | Variable Inputs | Capital

- Perform Cost Minimization

- Define Mark-up as $\mu = \dfrac{P}{\lambda}$

Output elasticity
Of Variable inputs

Total Revenue

$$\mu_{it} = \theta_{it}^{V} \frac{P_{it}Q_{it}}{P_{it}^{V}V_{it}}$$

Cost of Variable inputs

Empirical Framework and Data
Data

- **Compustat 1950-2016**: publicly traded firms (29% of private employment)

  - Concern: *Selection Bias*

    1. Consistency check using census data

    2. Using population weights for each sector

  - Variable Inputs: COGS

  - Overhead Costs: COGS + SG&A

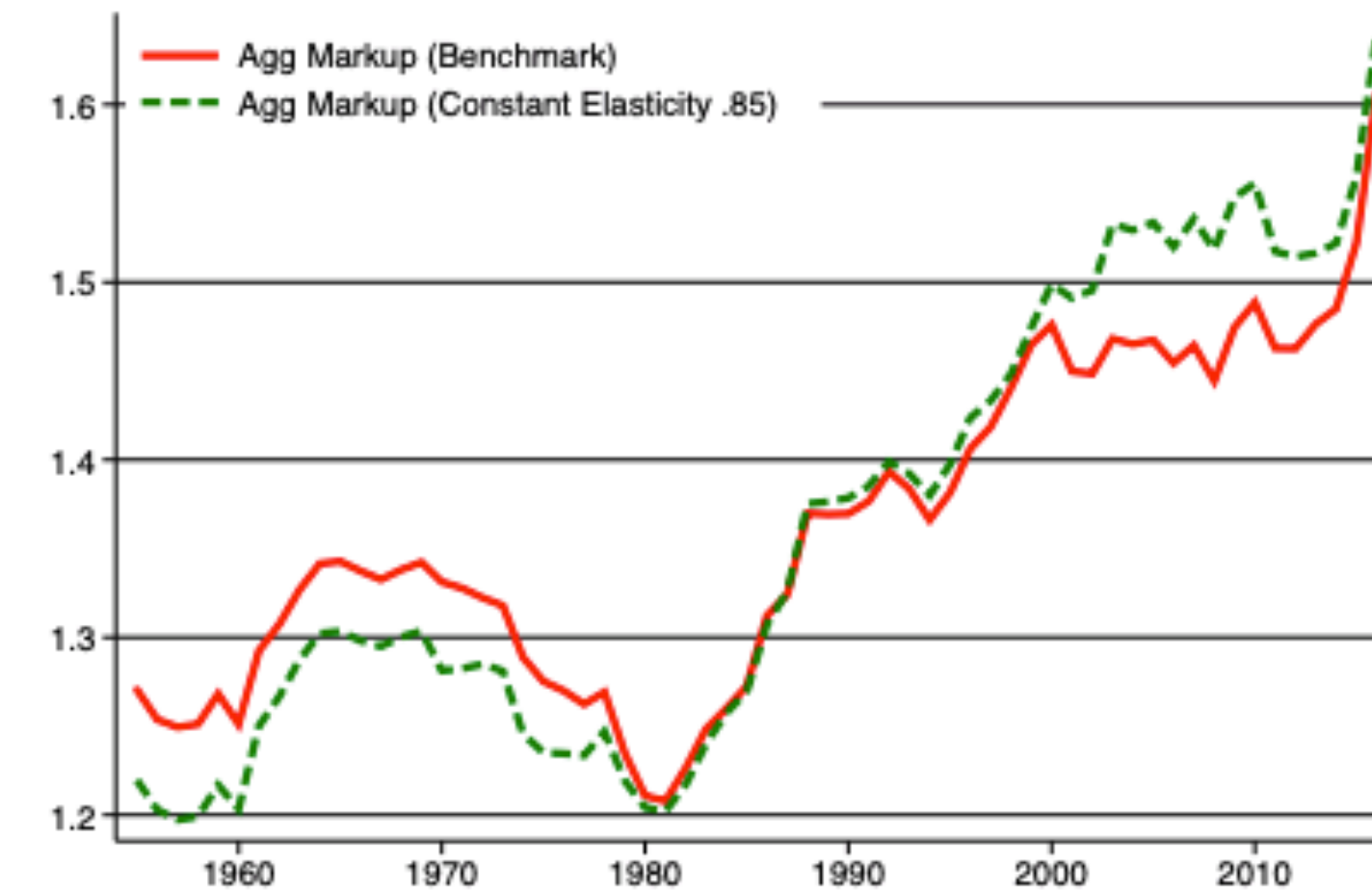# The Evolution of Markups in the U.S. Economy
Aggregate Markups

- Aggregate markups: weighted average using m_{it} as a weight for each firm.
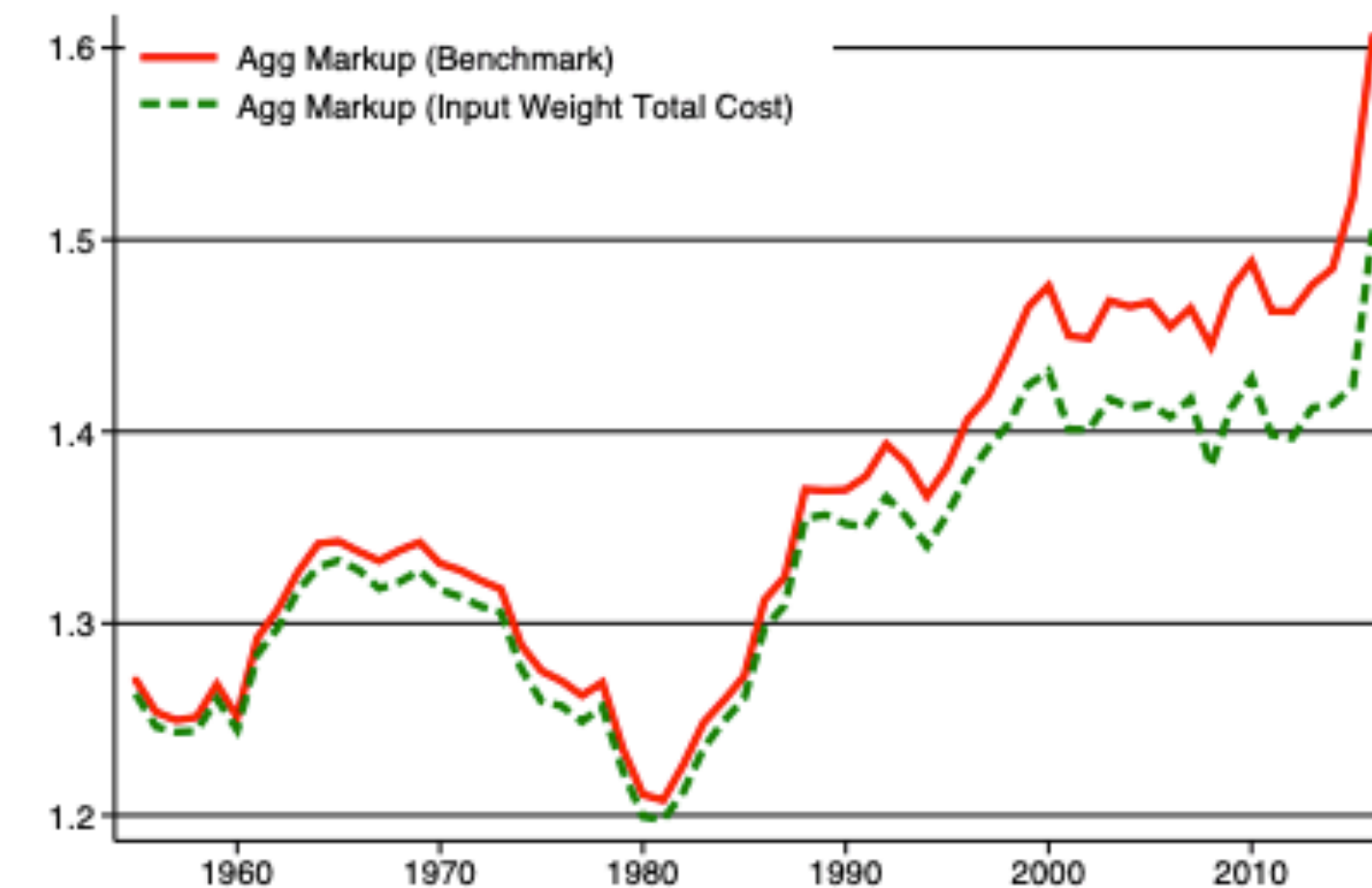
  - m_{it} is a sale share
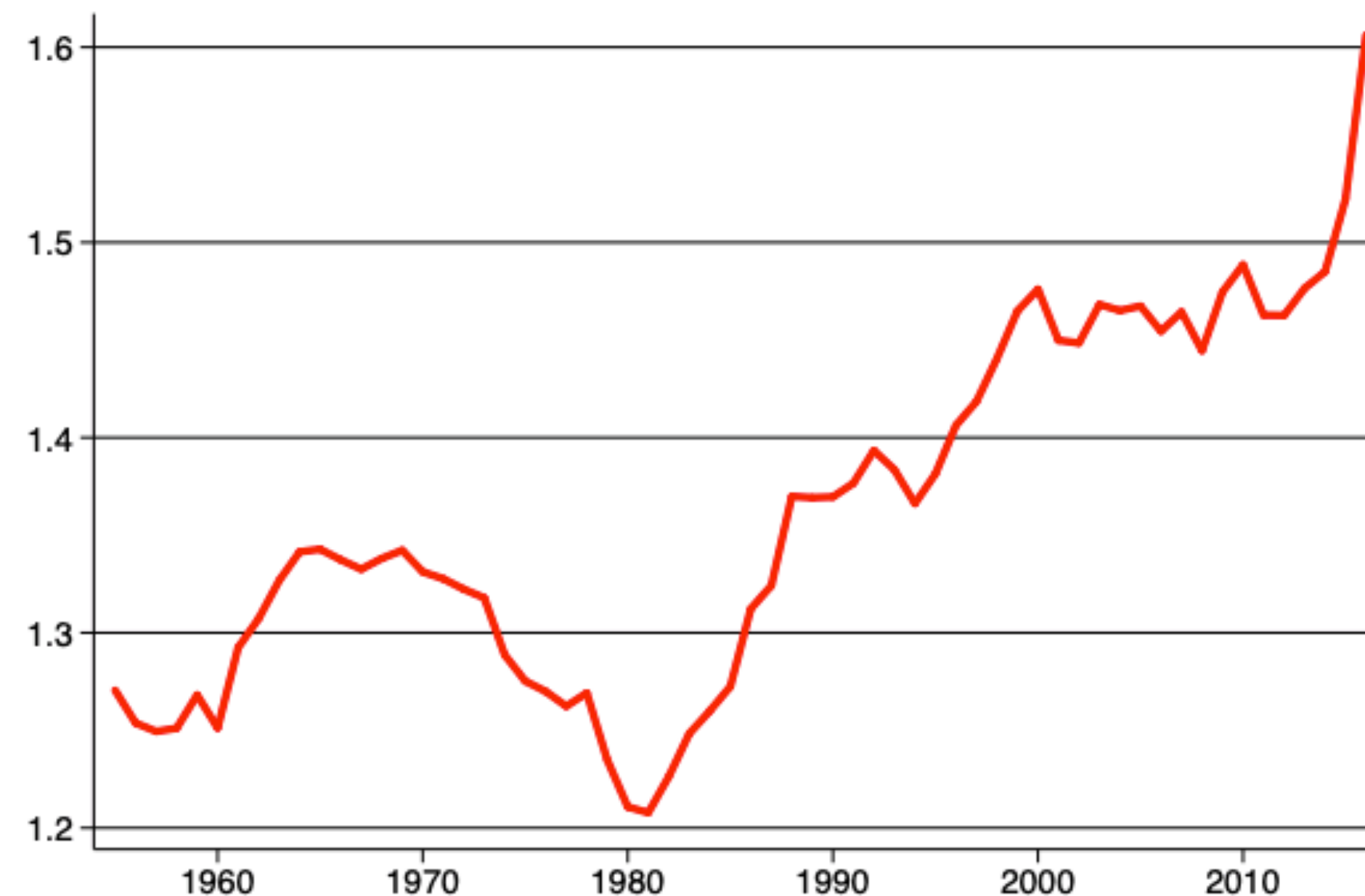
The Evolution of Markups in the U.S. Economy
Aggregate Markups

• Potential Source of rising in markups

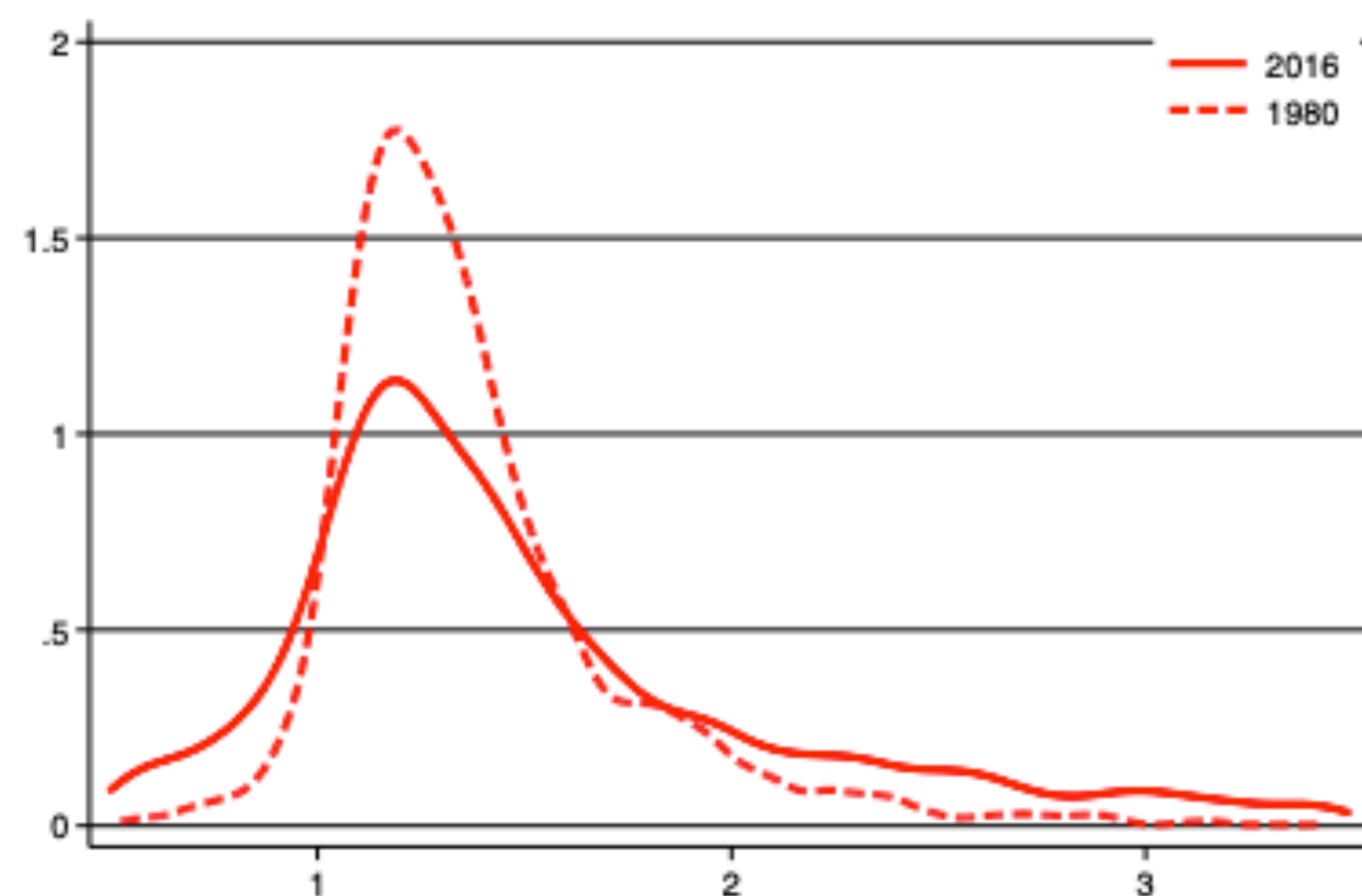1. Variable Cost Share

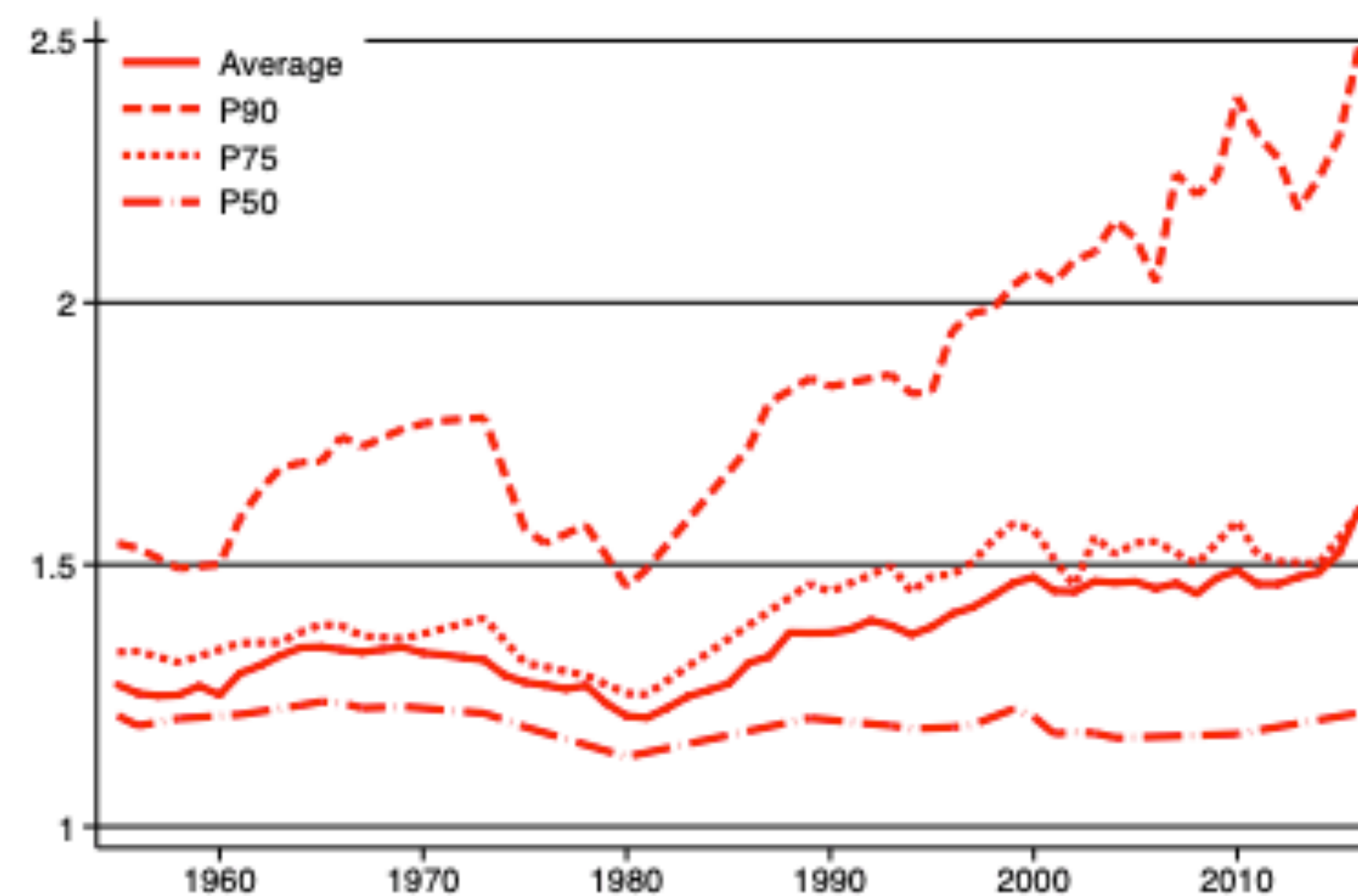2. Output elastic

3. Weight

(A) Constant elasticity

(B) Input weighted (total cost)

The Evolution of Markups in the U.S. Economy
The Distribution of Markups

(A) Kernel density (unweighted)

(B) Percentiles markup distribution (revenue weight)

FIGURE III

The Distribution of Markups μ_{it}

The Evolution of Markups in the U.S. Economy
Reallocation of Economic Activity

- Markup Decomposition:

  Change in Markup = Δwithin + Δmarket Share + Δcross term + net entry
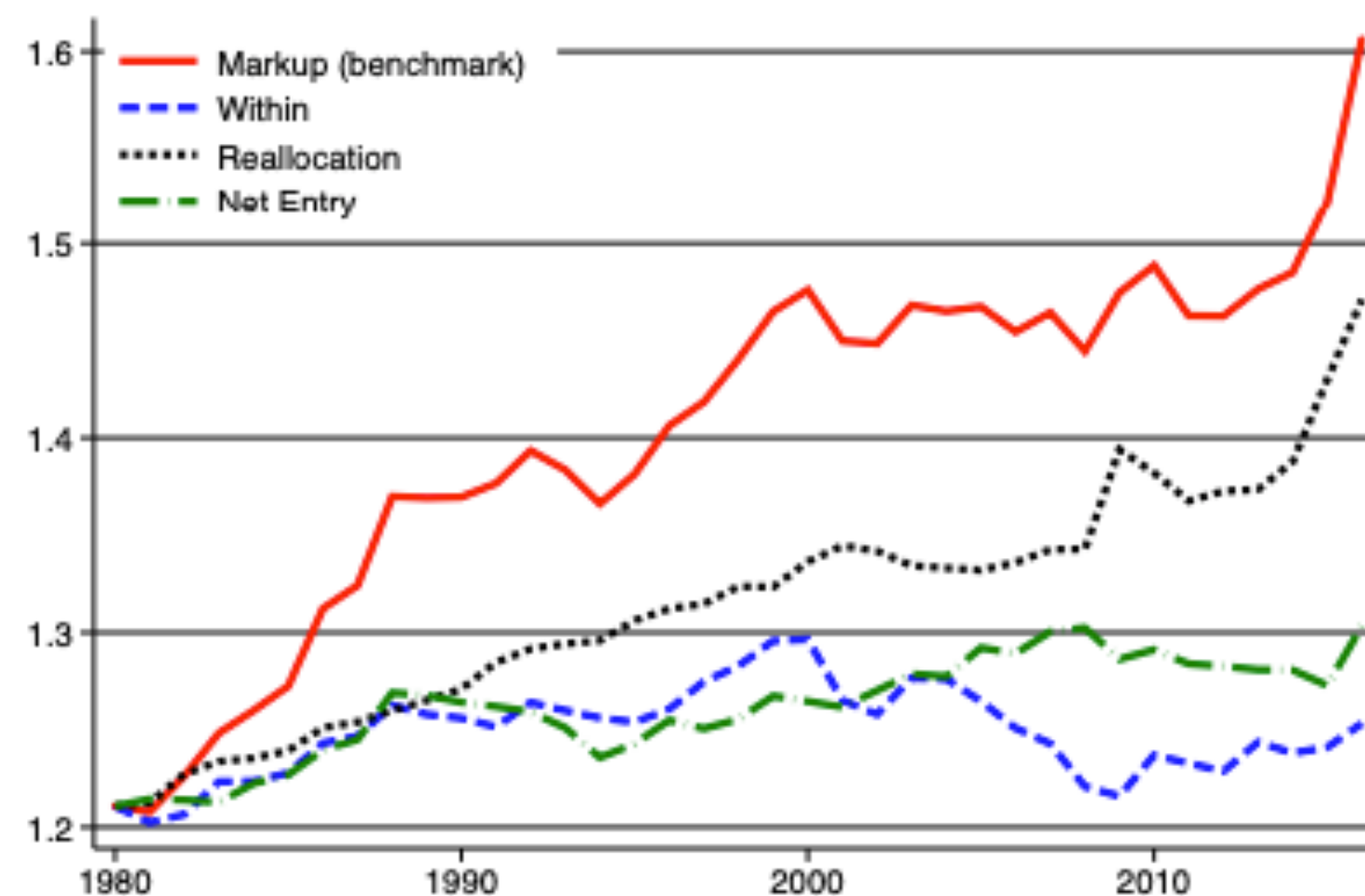
  Reallocation

FIGURE IV

Decomposition of Markup Growth at the Firm Level

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Sectoral Decomposition

TABLE I

SECTORAL DECOMPOSITION OF 10-YEAR CHANGE IN MARKUP

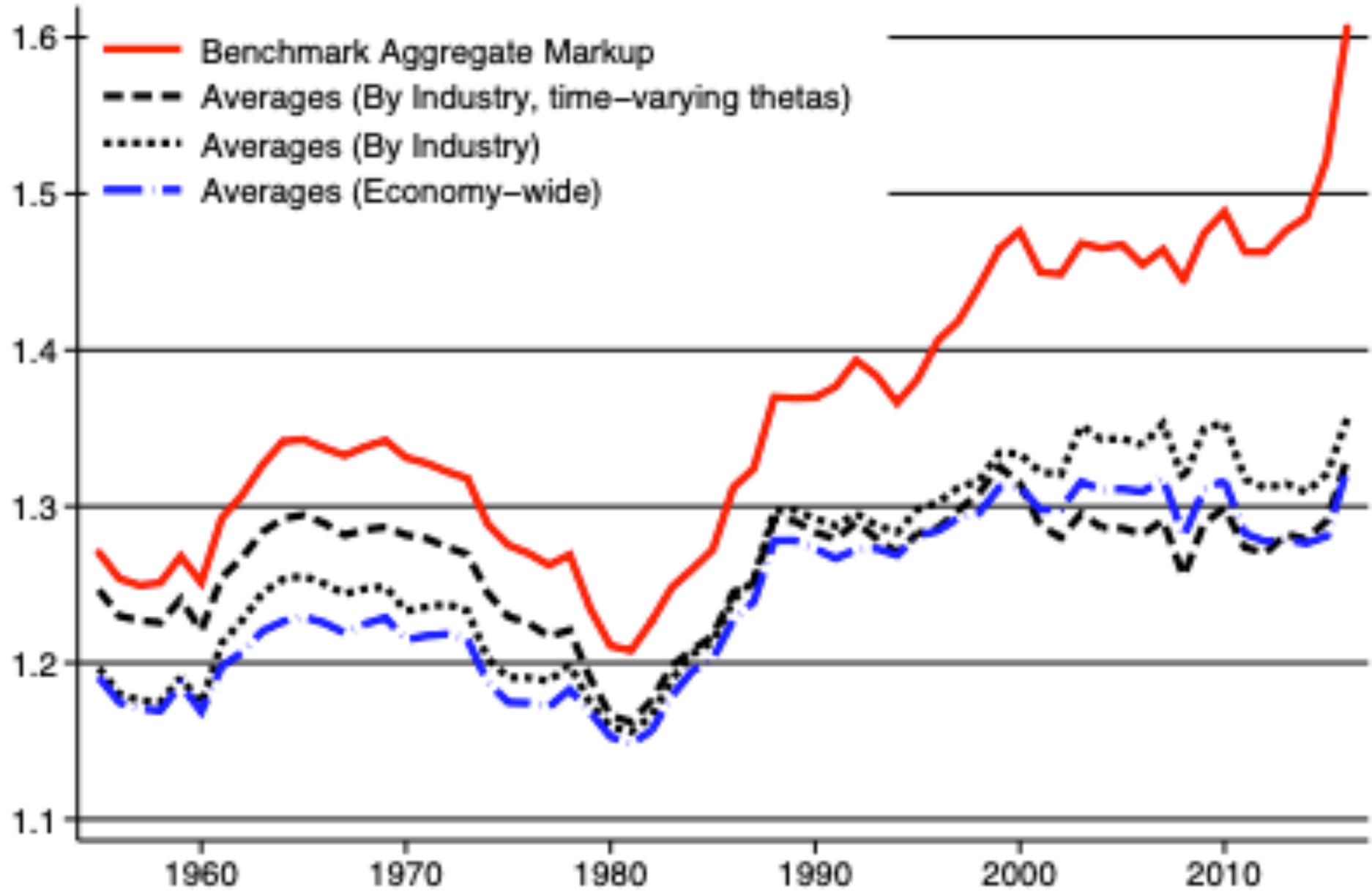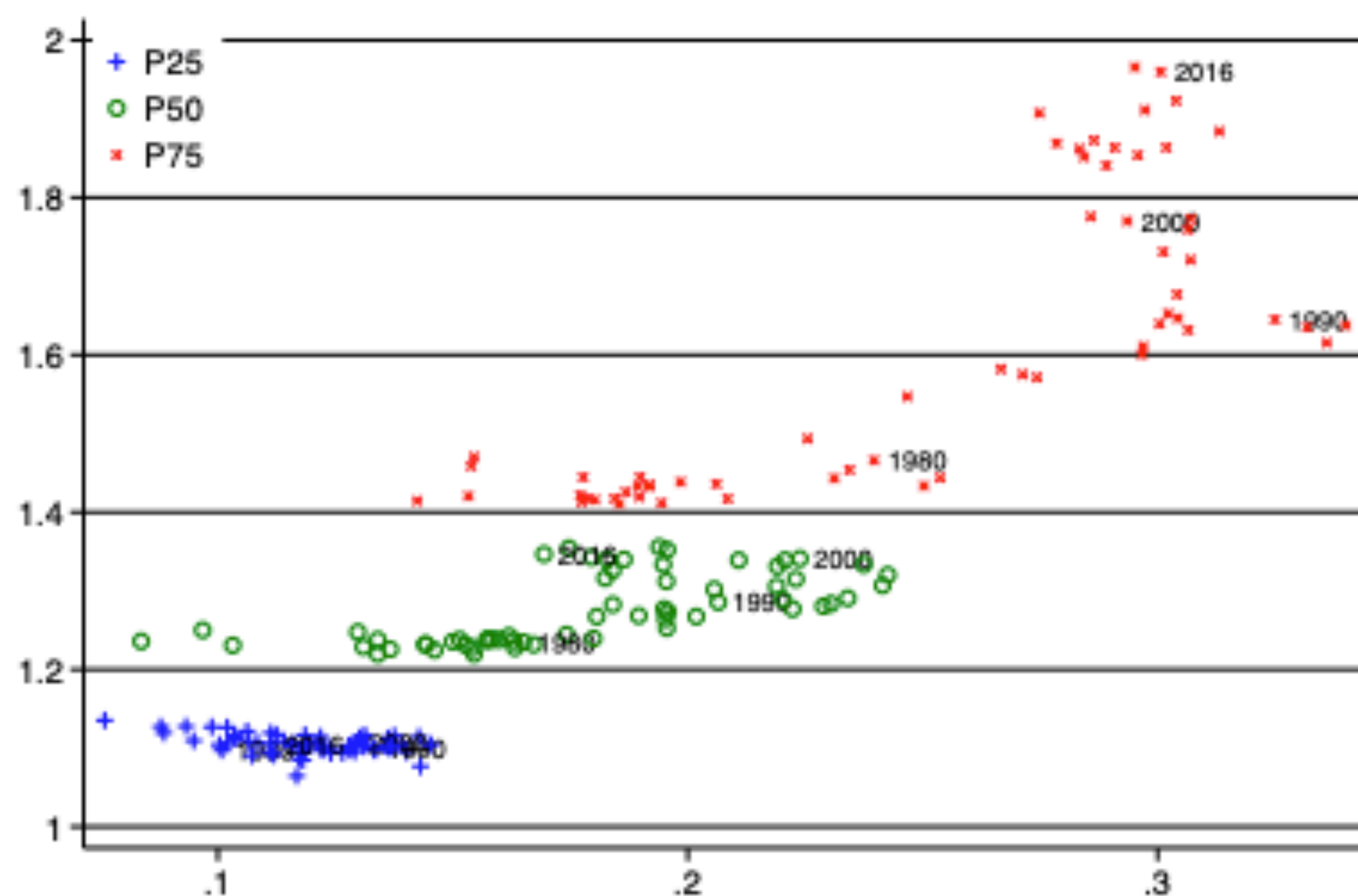|	Markup	Δmarkup	Δwithin	Δbetween	Δcross
1966	1.337	0.083	0.057	− 0.017	0.041
1976	1.270	− 0.067	− 0.055	0.002	− 0.014
1986	1.312	0.042	0.035	0.010	− 0.003
1996	1.406	0.094	0.098	0.004	− 0.008
2006	1.455	0.049	0.046	0.007	− 0.005
2016	1.610	0.154	0.133	0.014	0.007

FIGURE V
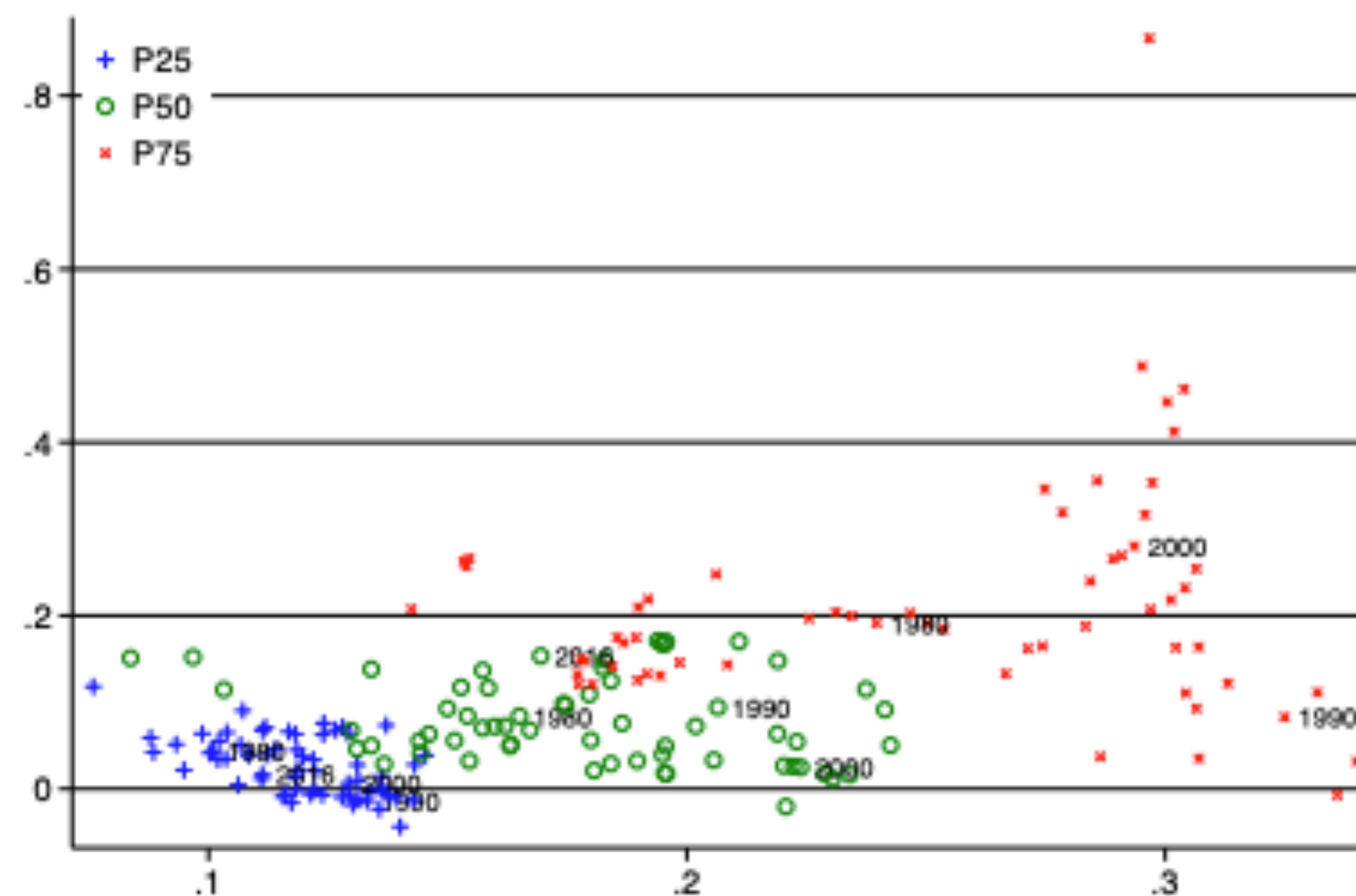
Using Industry and Economy-Wide Averages versus Aggregating Microdata

Market Power and Profitability
Markups vs Profitability

(A) Markups μ_{it} by SG&A share

(B) Excess markup $\mu_{it} - \mu_{it}^{\star}$ by SG&A share

Macroeconomic Implications

1. **The secular decline in the labor share**

   • A firm's markup increases by 10%, its labor share decreases by 2-2.4%

2. **The secular decline in the capital**

   • With firm fixed effects, there is a negative effect between capital share and markup with elasticity of -0.14.

3. **The secular decline in low-skill wages and labor force participation**

   • De Loecker, Eeckhout and Mongey (2018)

4. **The secular decline in labor reallocation and migration rates**

   • De Loecker, Eeckhout and Mongey (2018)

Conclusion

- The paper uses firm level data to study evolution of market power (both markups and profitability).

- The rise in market power nearly exclusively to the increase for firms with highest markups already.

- The rise in markups is not merely to offset a rise in overhead costs.

- There is a negative relationship between labor share and markup.