

Discussion of “Income Dispersion and
Counter-Cyclical Markups”
by Edmond and Veldkamp

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Contributions:

Facts

- Estimates from PSID suggest earnings dispersion is countercyclical (Storesletten et al., 2004)
- Several papers argue that markups are countercyclical
- Can cyclicalities of earnings dispersion explain countercyclical markups?
- Novel, exciting link

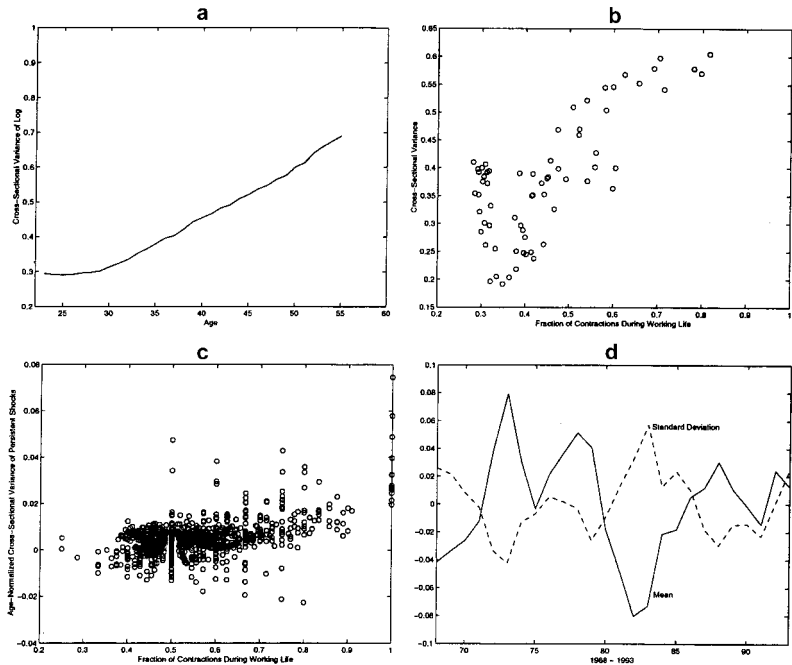


FIG. 1.—Cross-sectional variance of earnings, based on the idiosyncratic component (y^h from eq. [21]) of log labor earnings plus transfers from the PSID, 1968–93. *a*, Cross-

Contributions:

Model (Simple Version)

- Continuum of agents
- $U = \log c_i + \theta(1 - n_i) + \nu \int_0^1 x_{ij} dj$
- Discrete choice: $x_{ij} = 0$ or 1
- Wages: w_i dist. $\text{unif}[z - \sigma, z + \sigma]$

Consumer follows threshold rule: Buys if $w_i \geq \theta/\nu p_j$

Contributions:

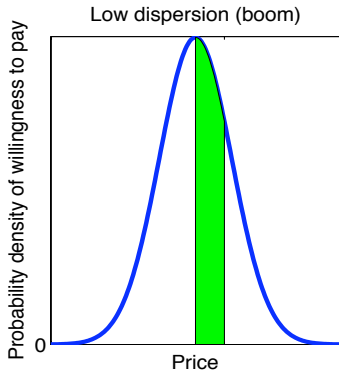
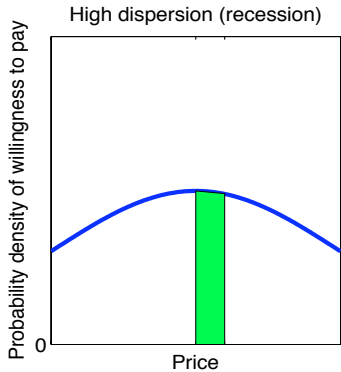
Model

Aggregate demand Curve:

$$x(p_j) = \frac{z + \sigma}{2\sigma} - \frac{\theta/\nu}{2\sigma} p_j$$

Elasticity decreasing in:

- Productivity z
- Earnings dispersion σ



Contributions:

Key Predictions

1. Countercyclical earnings dispersion → Countercyclical markups
2. Procyclical productivity → Procyclical markups

Effect #1 more important

Quantitative calibration: Countercyclicalities of markups, long-run trends in wages, agg. volatility

Empirical evidence: State-level panel data

My Comments

1. How general are the results?
 - Alternative Demand curves: Comparison to BLP
2. Empirical evidence
 - A. Evidence on the cyclical nature of earnings dispersion
 - B. Panel data analysis

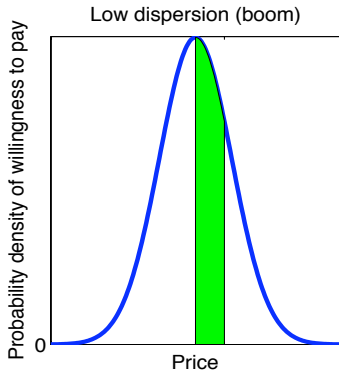
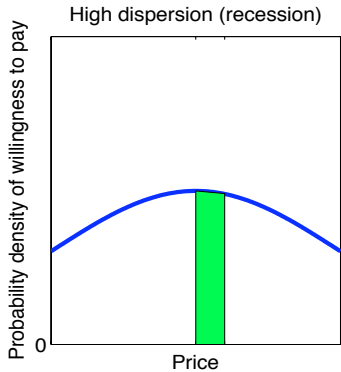
1. How general are the results?

Alternative Demand Curves

Edmond + Veldkamp:

- Consumers buy either one or zero units, expand consumption of x_{ij} by buying more types
- More income dispersion → Less consumers “on the margin”
- Degenerate demand curve for indiv. consumer
- No effect on price of consumers “away from the margin”

Empirical evidence: Heterogeneous behavior conditional on income, multi-unit purchases



Alternative Demand Curves (cont'd)

- Berry, Levinsohn and Pakes (1995)
- Consumer i selects item with highest indirect utility
- $U_{ij} = \alpha_j - \beta_i p_j$
- Assume β_i differs across consumers with different incomes
- No tractable analytical pricing formula

$$s_{ij} = \frac{\exp(\alpha_j - \beta_i p_j)}{1 + \sum_{k=1}^K \exp(\alpha_k - \beta_i p_k)}$$

Alternative Demand Curves (cont'd)

- I simulated prices for the coffee market for two cases
 - Case 1: No dispersion in price elasticity (logit model)
 - Case 2: High income consumers (one std above mean) have price elasticity 25% higher than mean
- Results: Markups are not strictly increasing in income dispersion
- Model with greater dispersion can produce *lower* markups

Key difference: BLP model yields non-degenerate demand curves for individual consumers → Aggregate demand is integral over indiv. demand curves

Could also matter for effects of prod. shocks?

2. Empirical Evidence: A. Countercyclical Earnings Dispersion

Storesletten, Telmer and Yaron (2004): Dispersion is countercyclical

Related Facts:

1. Detrending is key: Recent “countercyclical” due to rapid rise in dispersion in 1980’s
2. Most countercyclical movements come from lower half of income distribution
 - PSID oversamples low wage workers
3. Consumption dispersion much less countercyclical than earnings dispersion
 - Edmond+Veldkamp find results are stronger if use consump. dispersion: puzzling

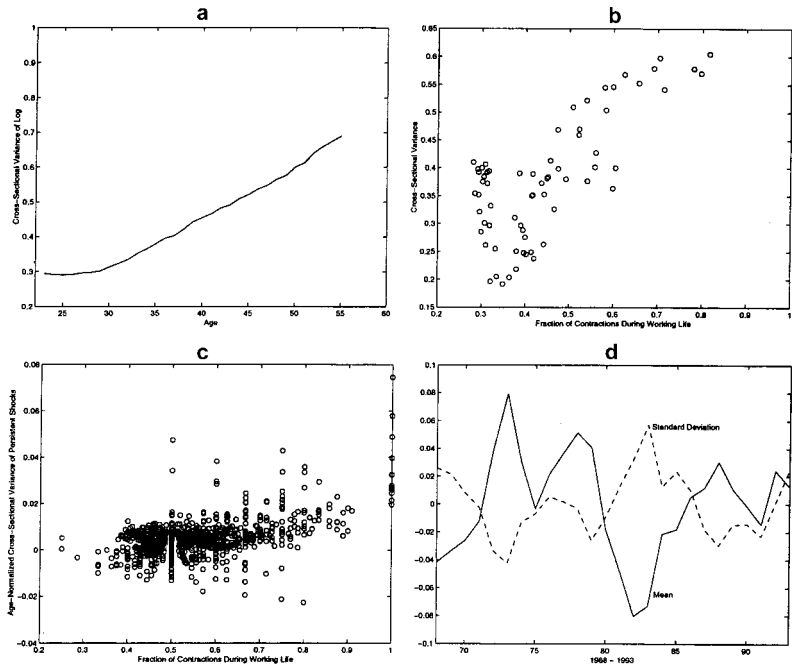
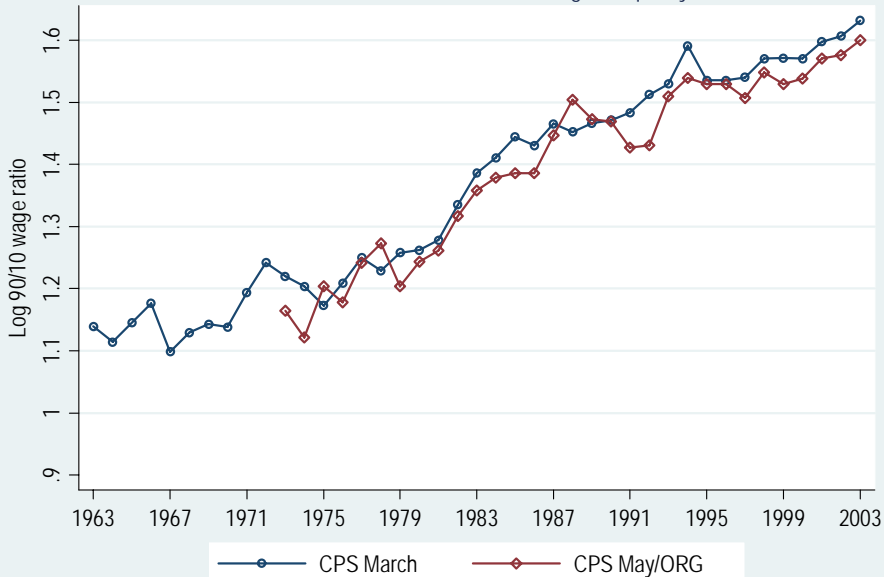
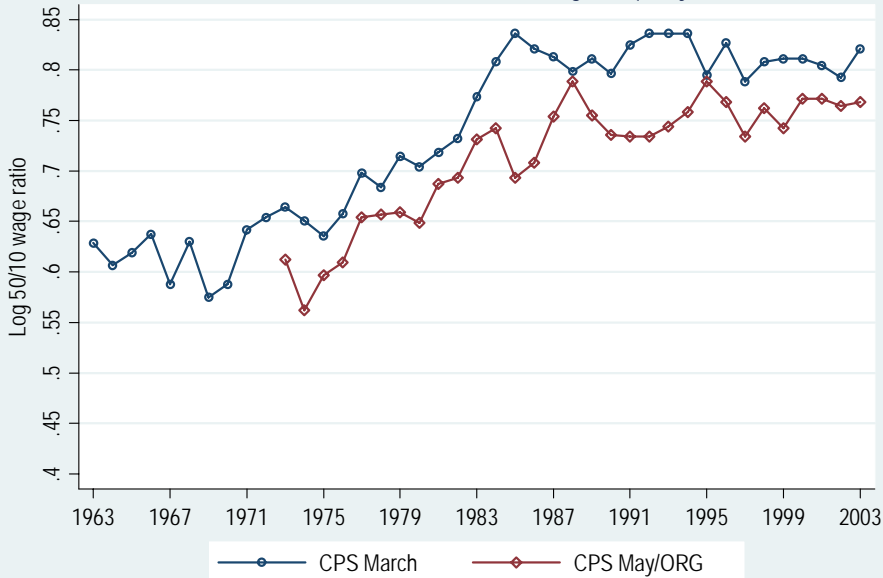


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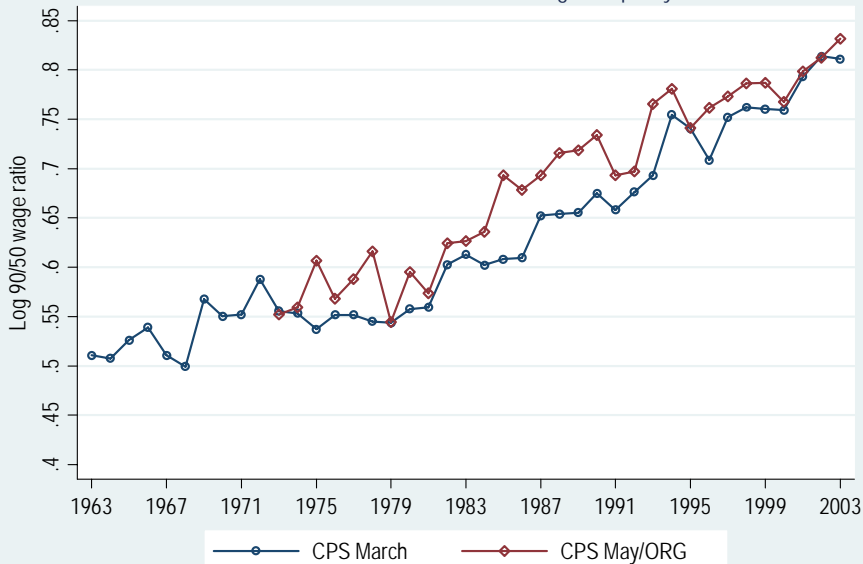
Overall Male 90/10 Full-Time Wage Inequality



Overall Male 50/10 Full-Time Wage Inequality



Overall Male 90/50 Full-Time Wage Inequality



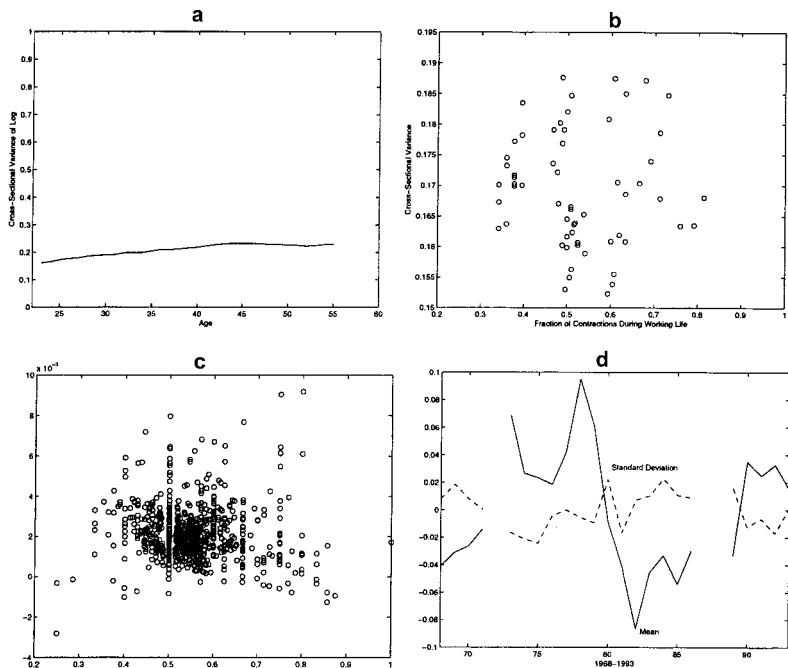


FIG. 2.—Cross-sectional variance of consumption, based on the idiosyncratic component (u_{it}^h from eq. [2]) of log consumption from the PSID, 1968–93, except the years 1972, 1987 and 1988 in which no consumption data are available. *a* Cross-sectional variance

2. Empirical Evidence

B. Panel data analysis

Edmond + Veldkamp:

- Sort data into groups based on earnings dispersion across counties within states
- Compare “markups” (inv. of real wage) across groupw

Similar to panel regression:

$$-\log(w_{ij}) = \alpha + \beta \log(\sigma_{ij}) + \gamma \log(y_{ij}) + I(\text{year})$$

w_{ij} : Real wage, inverse gives markup; σ_{ij} : Earnings dispersion; y_{ij} : Per-capita real gdp

Regression results: Estimate $\beta = 0.03$ positive and significant

Note: All identification comes from cross-sectional differences in markups and income dispersion

B. Panel data analysis (cont'd)

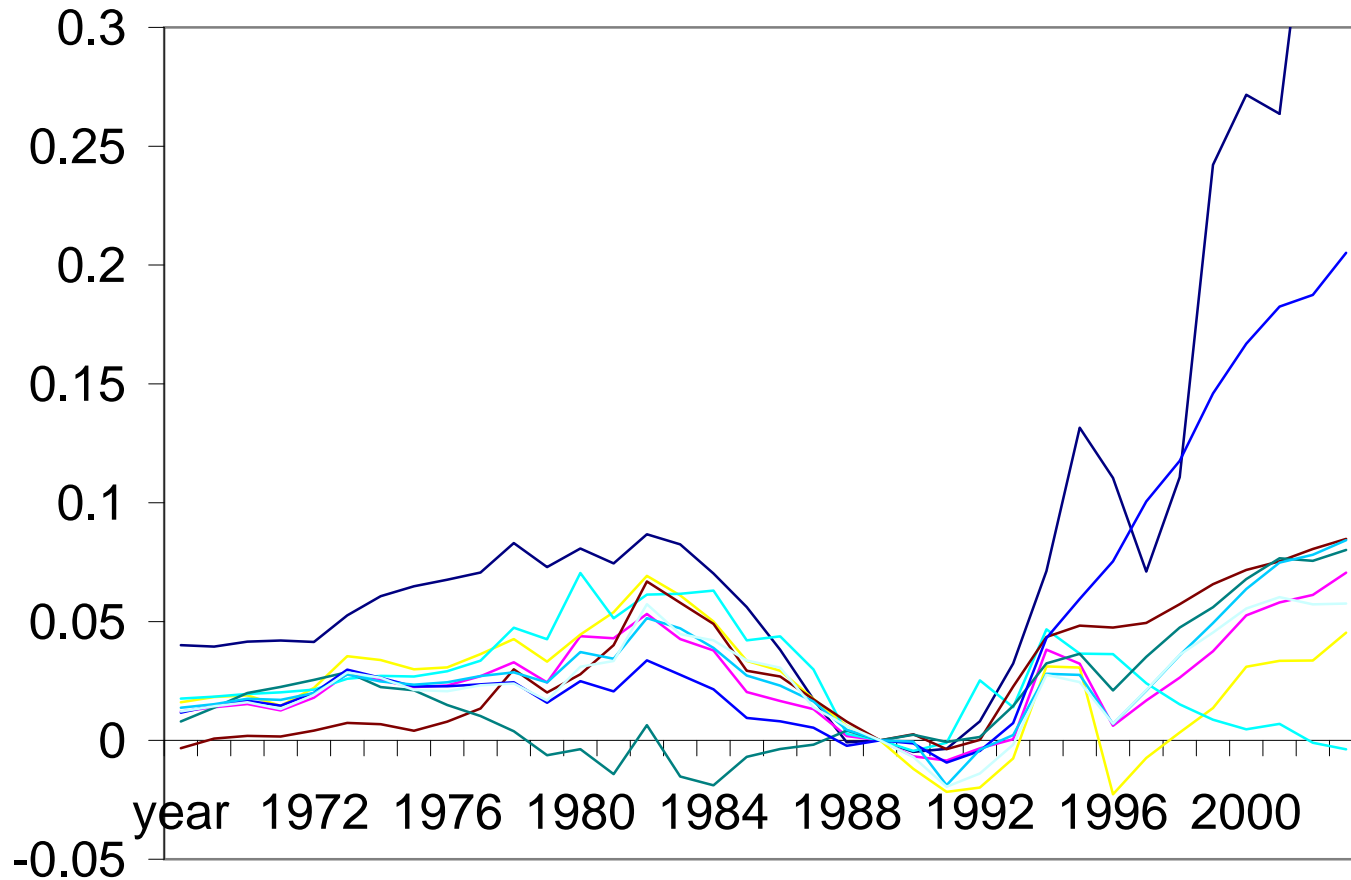
- State-level price indexes not widely available
- Edmond-Veldkamp use state-level prices from Del Negro (1998) for 1969-1990 and BEA for 1990-2005.

Concerns:

1. Prices in all states normalized to one in 1990, dispersion set to zero

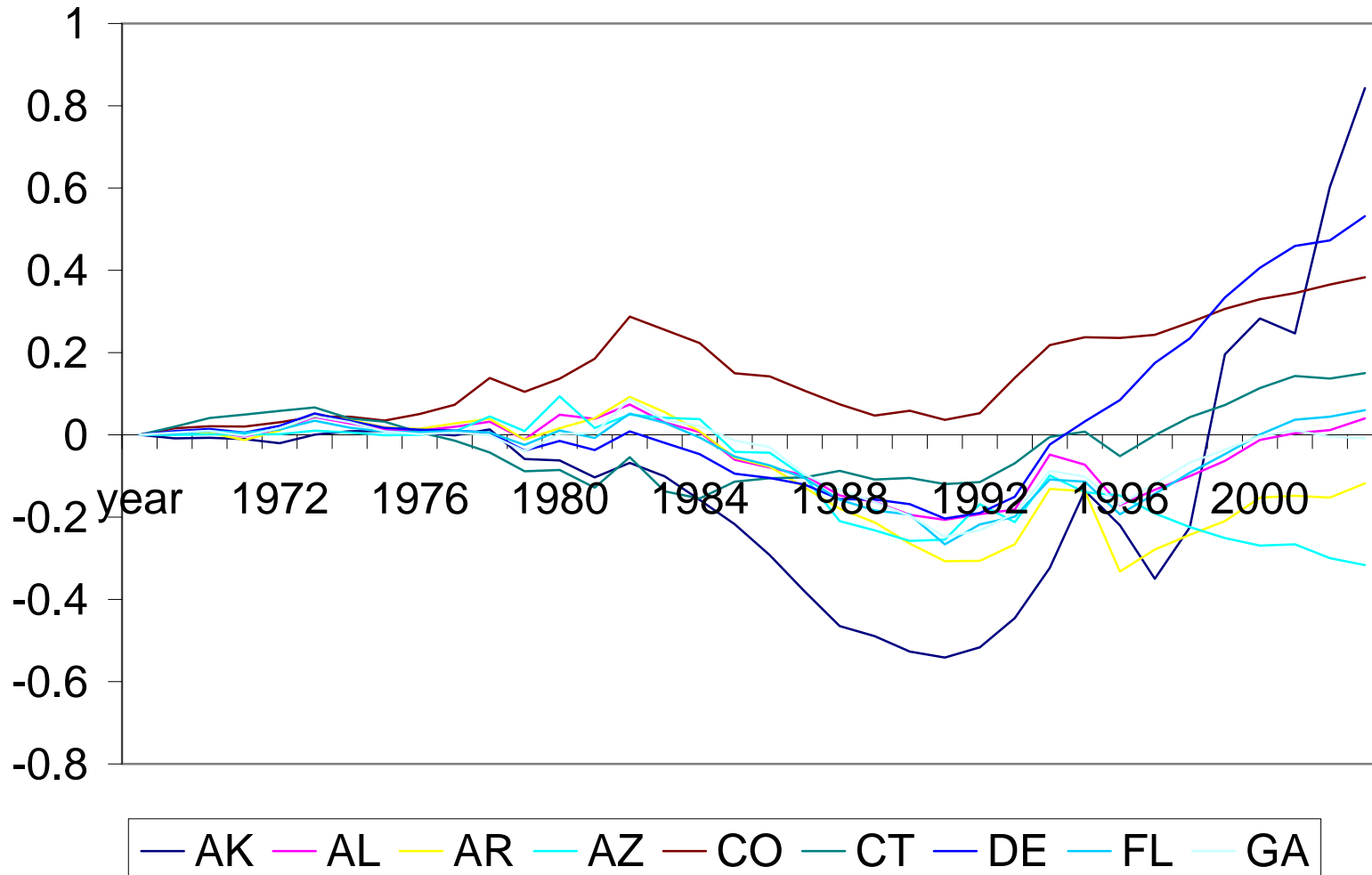
Arbitrary normalization → Cross-sectional comparisons not meaningful
2. Drop all data after 1997 due to switch from SIC to NAICS (Is this really necessary?)

State Price Levels: Edmund-Veldkamp Normalization 1990=1 (Diff. vs. California)



— AK — AL — AR — AZ — CO — CT — DE — FL — GA

State Price Levels: Alternative Normalization 1969=1 (Diff. vs. California)



B. Panel data analysis (cont'd)

- Data is on changes (not levels) of prices in different states
- Alternative normalizations yield different results → Smaller β

Potential Alternatives:

1. Difference in Difference regression:

$$-\log(w_{ij}) = \alpha + \beta \log(\sigma_{ij}) + \gamma \log(y_{ij}) + I(\text{year}) + I(\text{state})$$

→ Implies $\beta = -0.03$ rather than $\beta = 0.03$

2. Collect meaningful data on relative prices

B. Panel data analysis (cont'd)

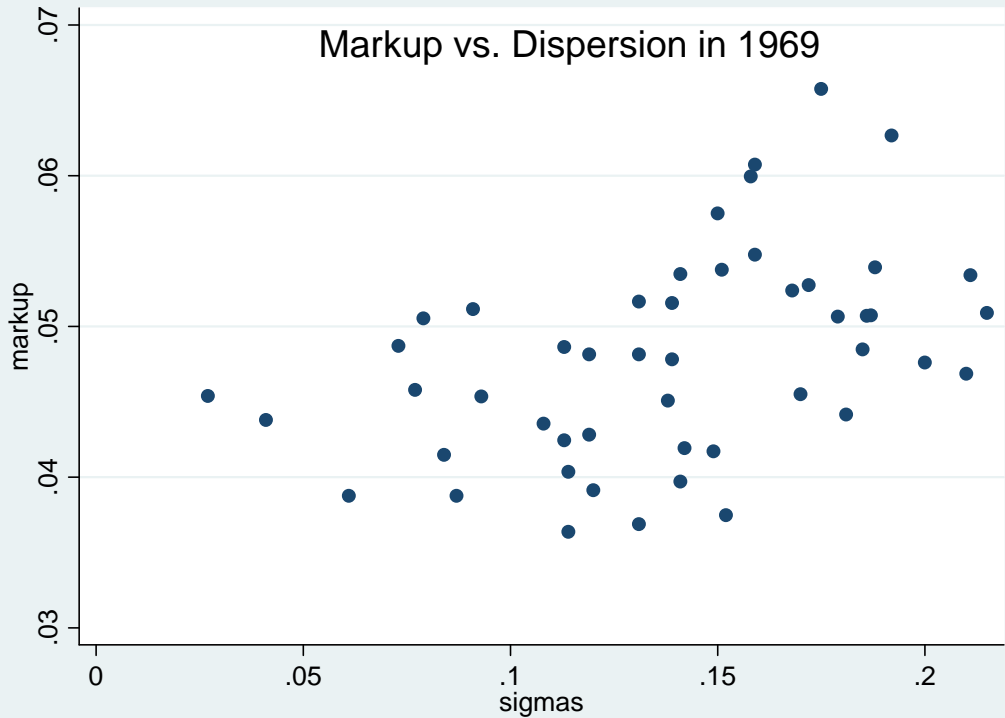
Switch from SIC to NAICS in 1997 affects construction of state-level GDP → Edmond+Veldkamp drop data after 1997

Question: Why would change invalidate state-level GDP data in recent period?

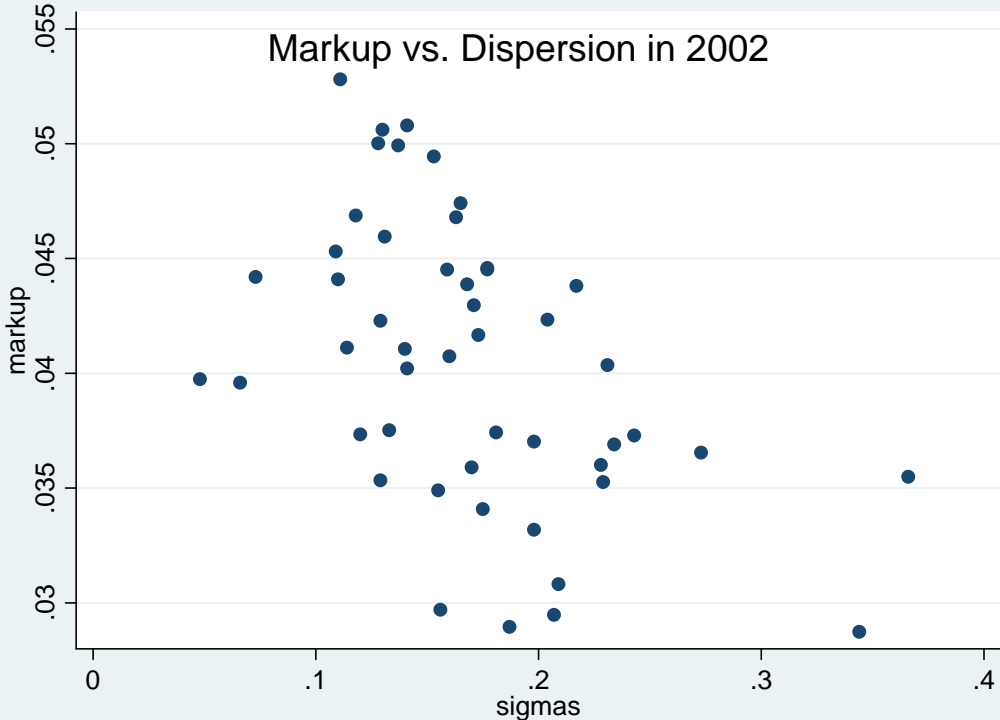
Potential concern:

- Could introduce bias: Correlations appear diff. after 1990

Markup vs. Dispersion in 1969



Markup vs. Dispersion in 2002



Conclusion

New, exciting link between income dispersion and markups

Theory

How general is relationship between earnings dispersion and markups?

- Alternative demand specifications yield embarrassment of riches
- → Wide range of markup behavior
- Does relationship between earnings disp. + markups depend on particular specification of demand?
 - E+V assume degenerate demand curve for indiv. consumers
 - BLP (1995) seems to imply diff. results

Small point on numerical simulation: Quantitative simulations should be for entire economy (not just x-sector), since switching between x and c sectors affects markups

Conclusion (cont'd)

Evidence

Evidence on cross-sectional earnings dispersion

- Most increase in dispersion for lower half of earnings dist: Can this be used to yield tighter empirical predictions?
- Why don't results change using consumption dispersion (little cyclical)?

Evidence from state-level panel

- Panel data analysis results depend on arbitrary normalization of relative prices in 1990's (affects markup measures) → Very hard to interpret
- Need state-level fixed effects or meaningful data on relative price *levels* → Could change results