

Comments on “Productivity Before, During and After the Great Recession” by John Fernald

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Overview

- Labor productivity and total factor productivity have exhibited relatively slow growth in the years since the Great Recession.
- But this careful treatment and look at the data highlight that this slowdown predates the Great Recession by several years.
- The argument is made that the timing rules out disruptions from the Great Recession.
- Instead, the story appears to be:
 - A slowdown in productivity from IT producers
 - A slowdown in productivity from IT intensive industries.
 - “Return to normal” hypothesis.
- Important for considerations of measures of current and future potential output.

Comment 1: We know more about IT producing than IT using industries

- A weak link of U.S. industry level data is the allocation of investment by asset data to industries.
- Measurement of investment flows is top down and not bottom up. Allocation of investment flows is via a Capital Flows Table developed by BEA.
- Current Capital Flow Table from BEA is outdated (last one released in 2003 and based 1997 data) and based on questionable assumptions:
 - As Meade, Rzeznick, and Robinson-Smith (2003) describe it, “[c]ertain occupations or sets of occupations are assumed to be good indicators of which industries use a specific type of capital good; for example, machine tools are allocated to industries by the employment of machine tool operators.”

Evidence suggests some non-trivial discrepancies

- Becker et. al. (2006) compare Capital Flow Table (CFT) to Annual Capital Expenditures Survey (ACES) data and Stats Canada data (direct data collection like ACES):
 - Evidence shows that CFT has a much smaller share of computer and related equipment in business services than found in Stats Canada or in ACES.
 - Share of computer and related equipment in Business Services is about 38 percent smaller in CFT compared to Stats Canada and 12 percent smaller than in ACES.
- Still capturing something but different interpretation?
 - High IT worker industries have had an especially large decline in productivity?

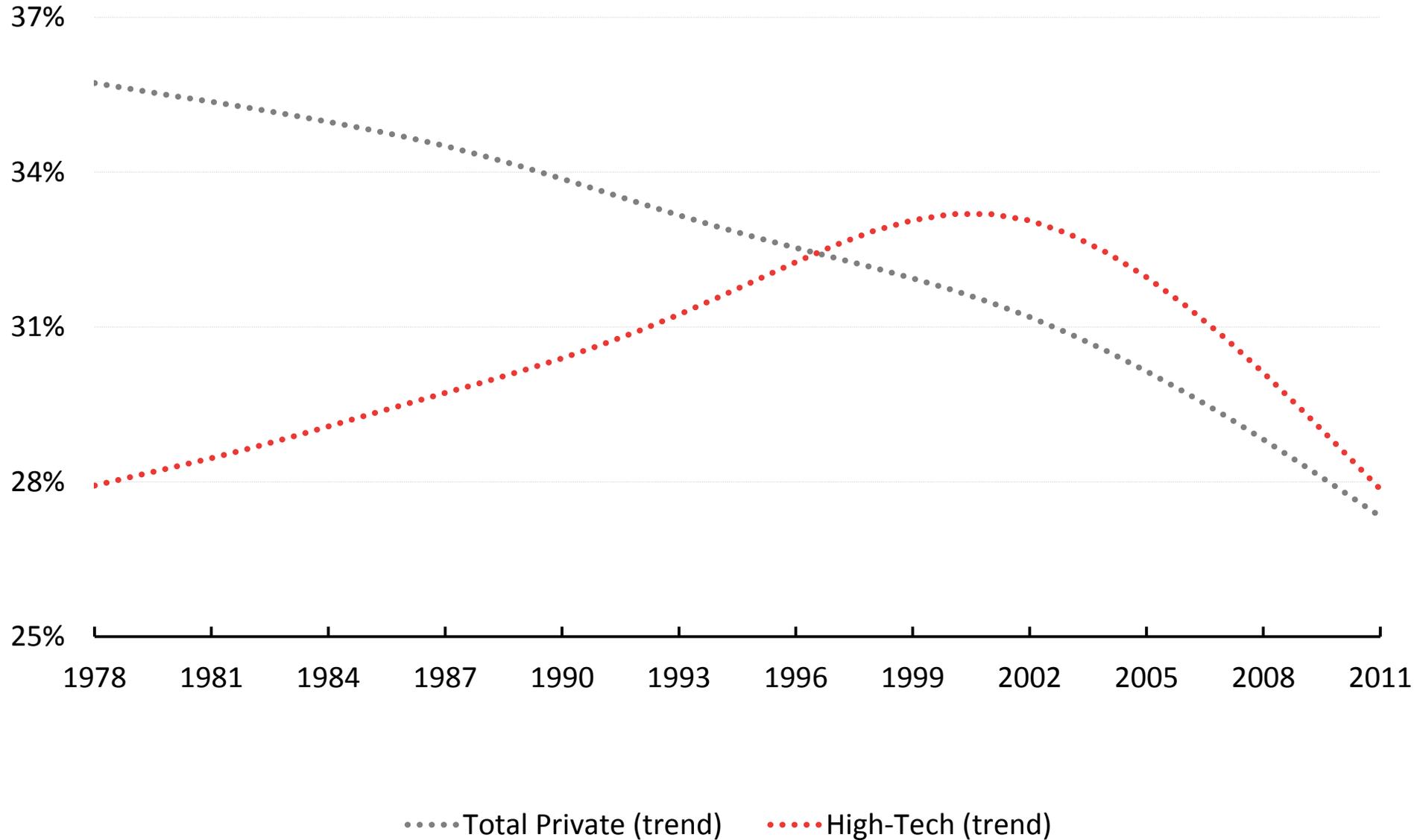
Comment 2: Endogenous Technological Progress

- Paper pushes on view that after an IT surge in both producing and using (intangible capital inducing) industries, we are observing a return to normal.
- But innovation and technological progress is presumably endogenous. Not just luck...
- Remainder of comments suggest looking at factors that are examined through this lens...(e.g., declining dynamism, role of housing prices, etc.)....

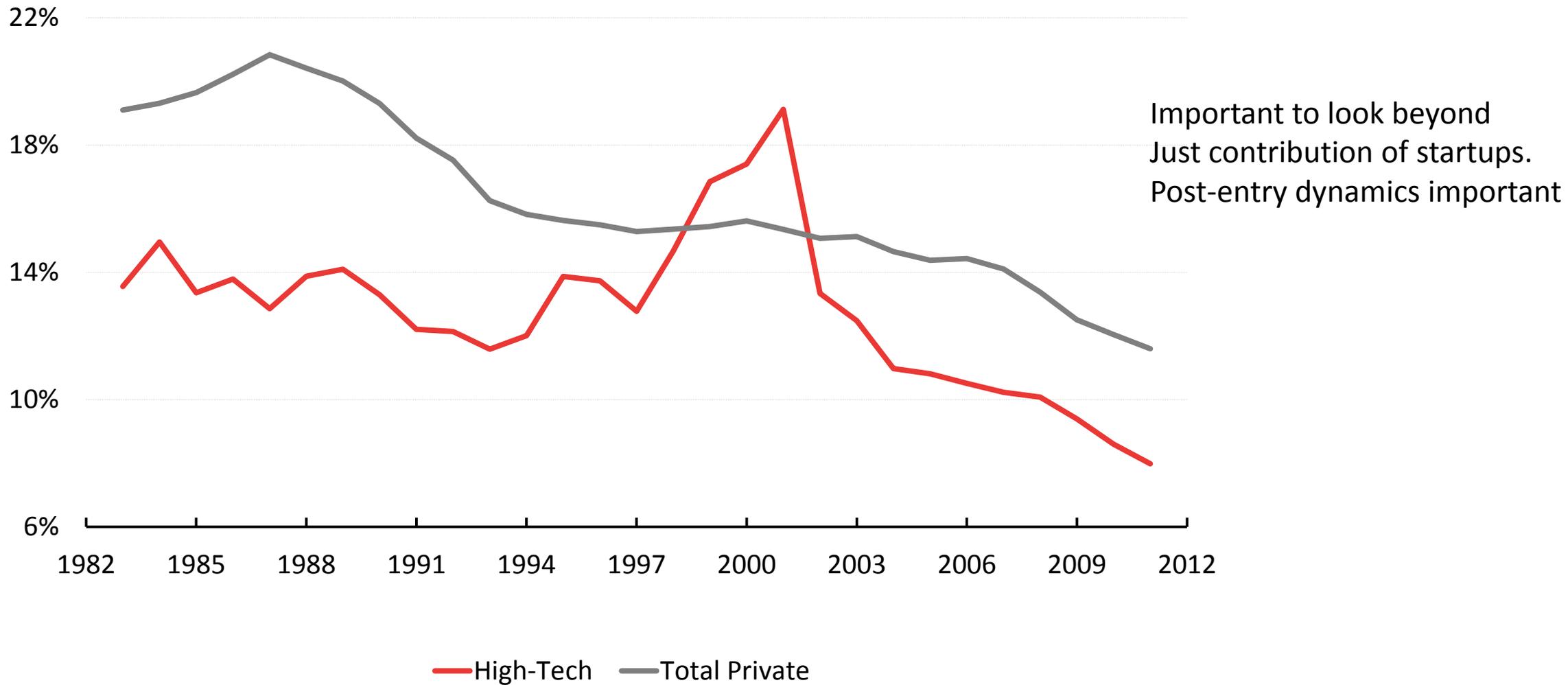
Comment 3: Role of Declining Dynamism

- Much evidence that startup rates in the U.S. have declined substantially over the last few decades.
- Share of activity in U.S. accounted for by young businesses has declined.
- Associated decline in pace of indicators of business dynamism (e.g., job reallocation, firm volatility).
- Job reallocation/firm volatility is not of value per se
- But much evidence that this is productivity enhancing:
 - Reallocation from less productive to more productive businesses
 - Among innovative businesses, young businesses are disproportionately important as innovators (Acemoglu et. al. (2013)).
- Timing? Pre-dates slowdown in decline in productivity? But evidence that decline accelerated in the post-2000 period especially among potentially important innovative sectors and “high growth” firms.

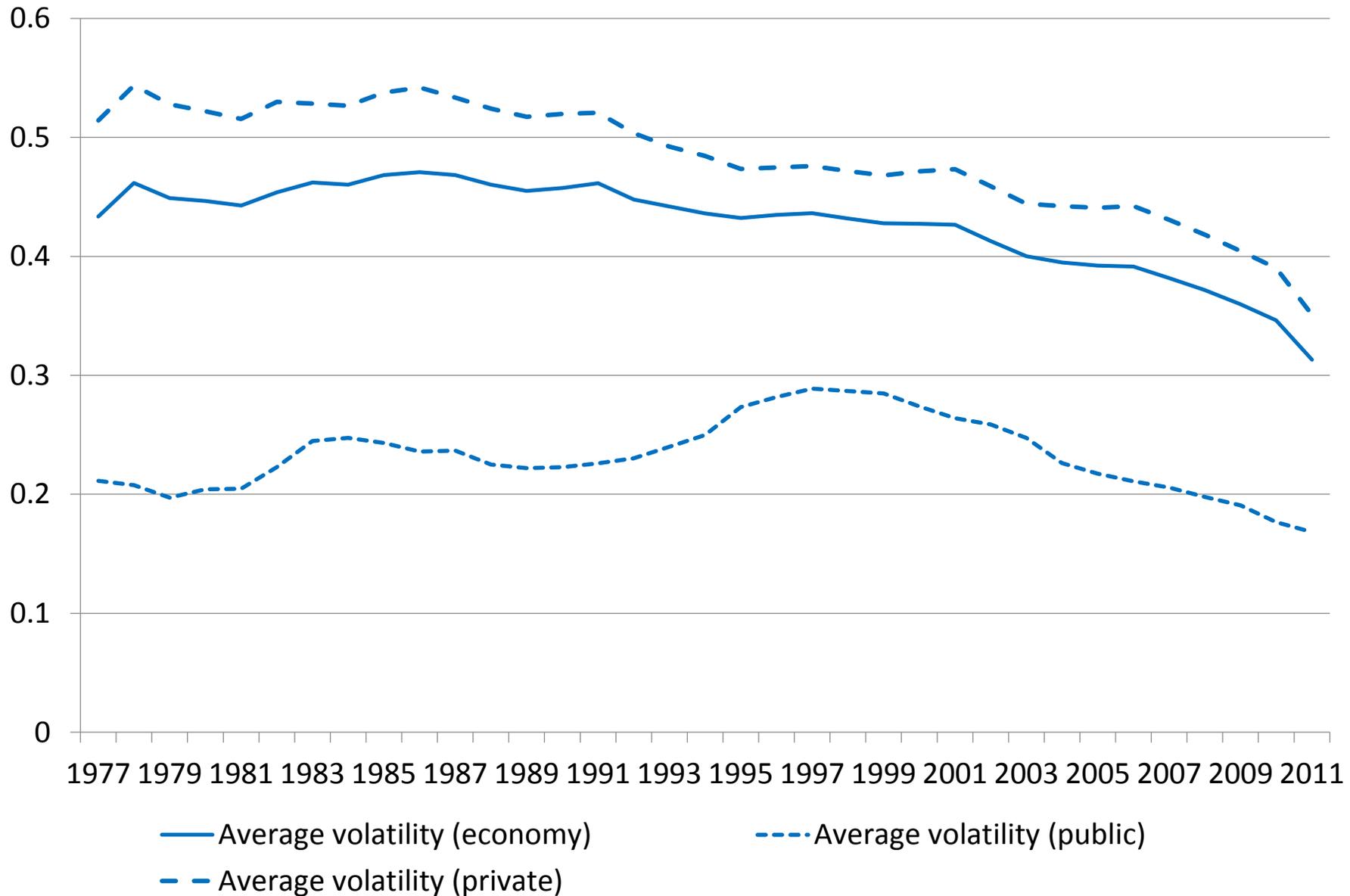
Trends (H-P) in Job Reallocation Rates for the Private Sector vs. High Tech (mostly ICT producing industries)



Share of Employment in Young Firms (Age<5) for the Private Sector and High Tech

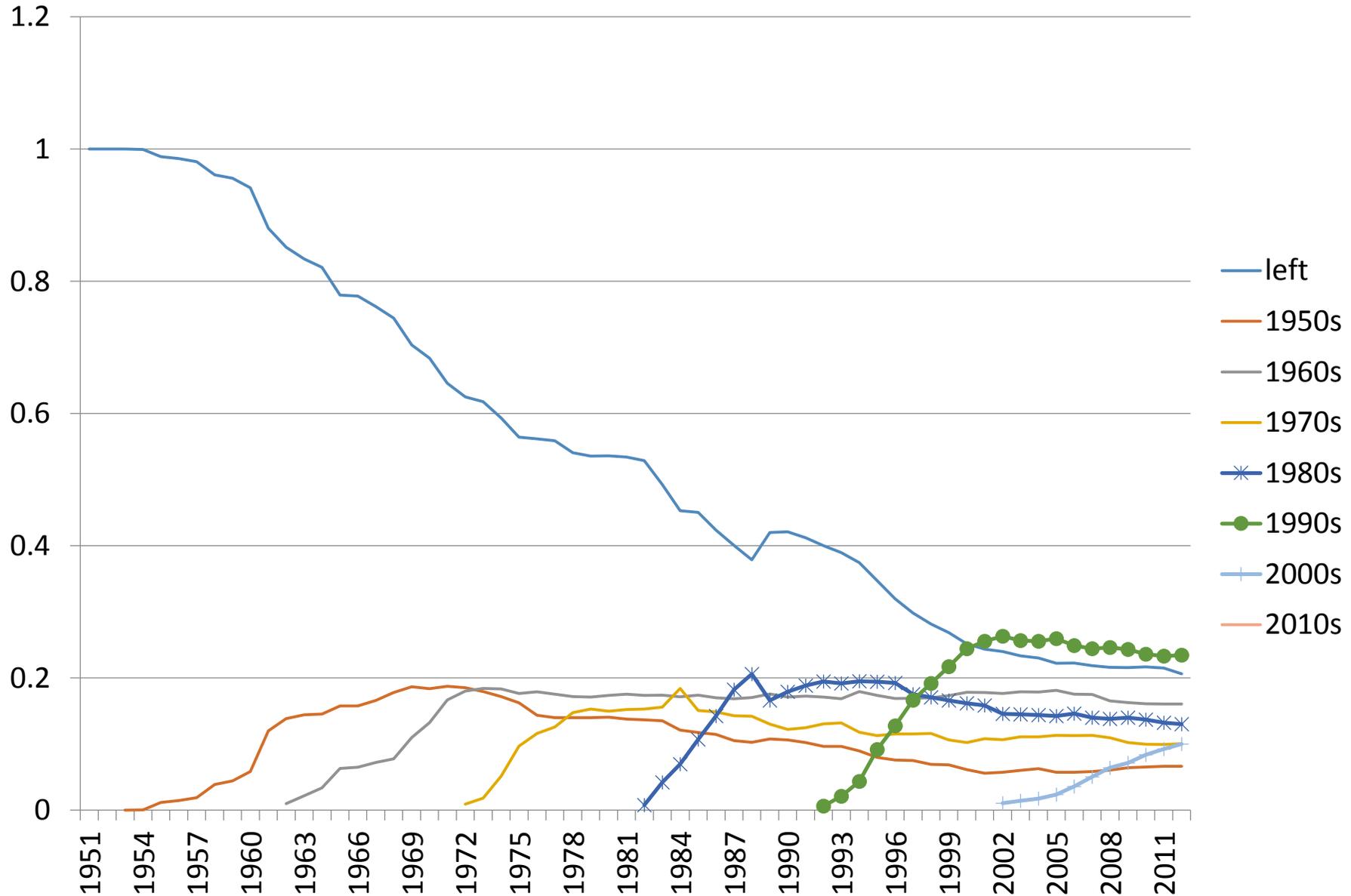


Declining Firm Volatility: Total, Privately Held and Publicly Traded



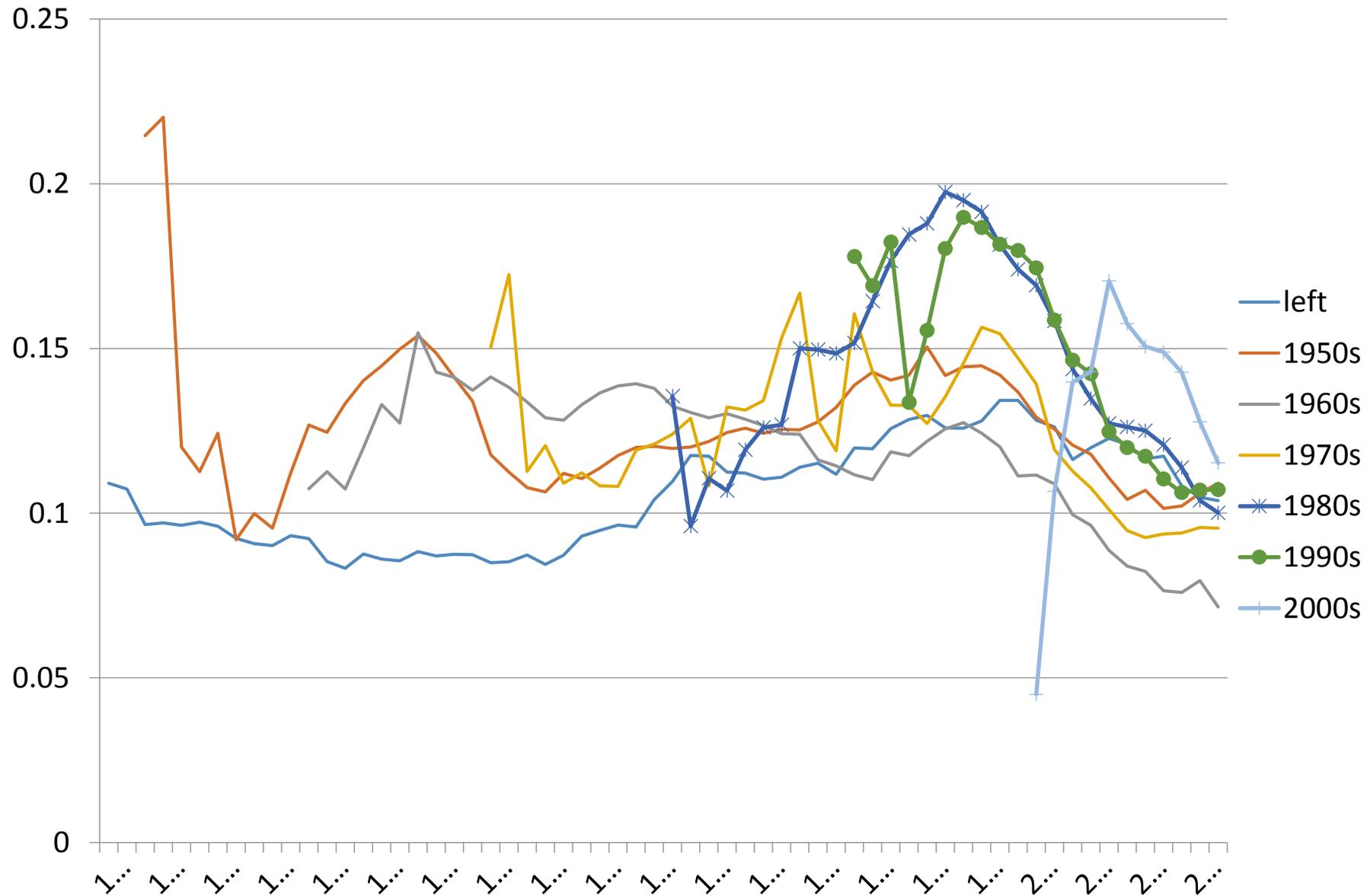
Source: Decker, Haltiwanger, Jarmin and Miranda (2014)

Employment shares of Cohorts of Publicly Traded Firms



Source: Decker, Haltiwanger, Jarmin and Miranda (2014)

Firm volatility by Cohorts of Publicly Traded Firms



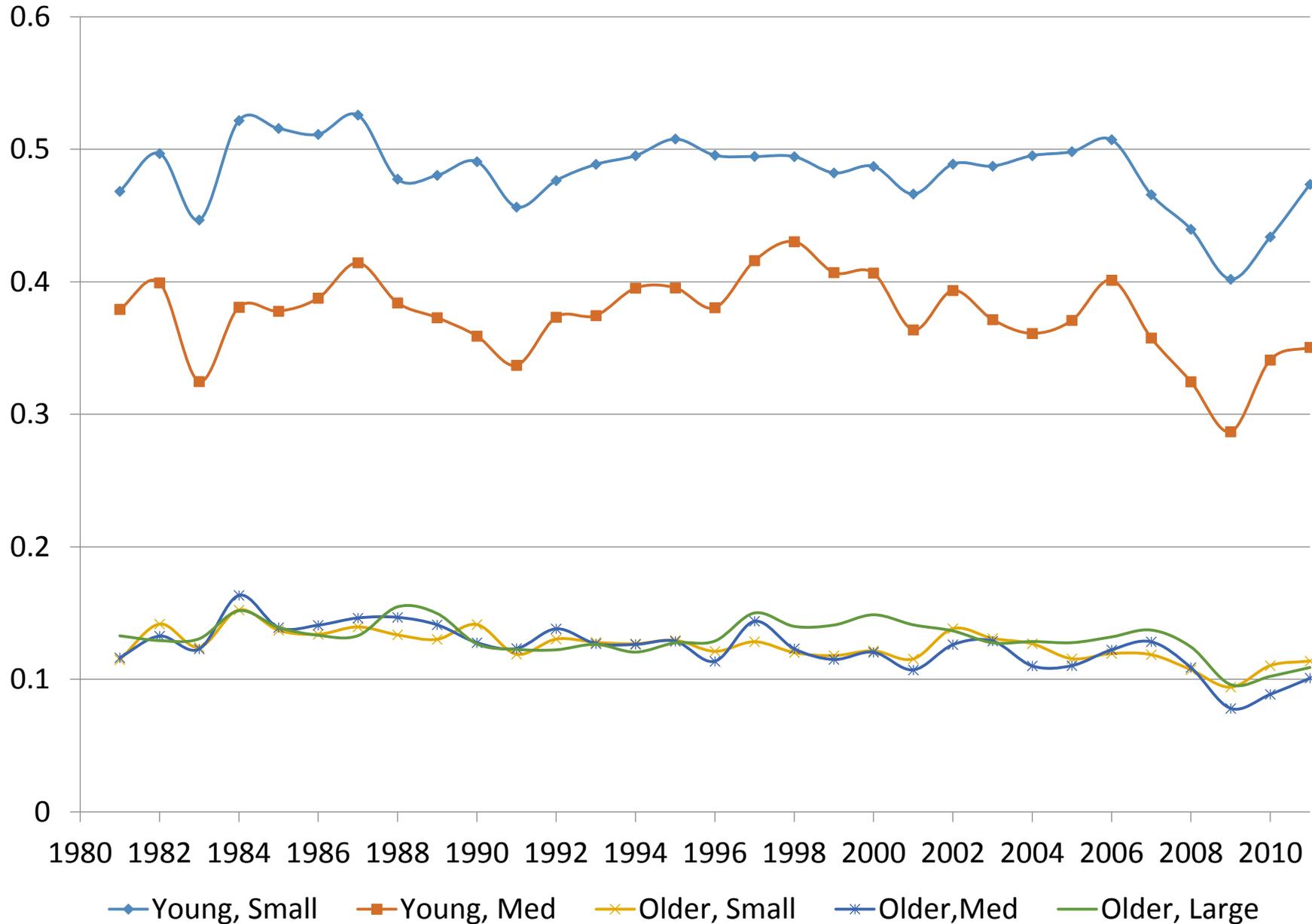
Source: Decker, Haltiwanger, Jarmin and Miranda (2014)

Comment 4: The Role of Housing Booms and Busts?

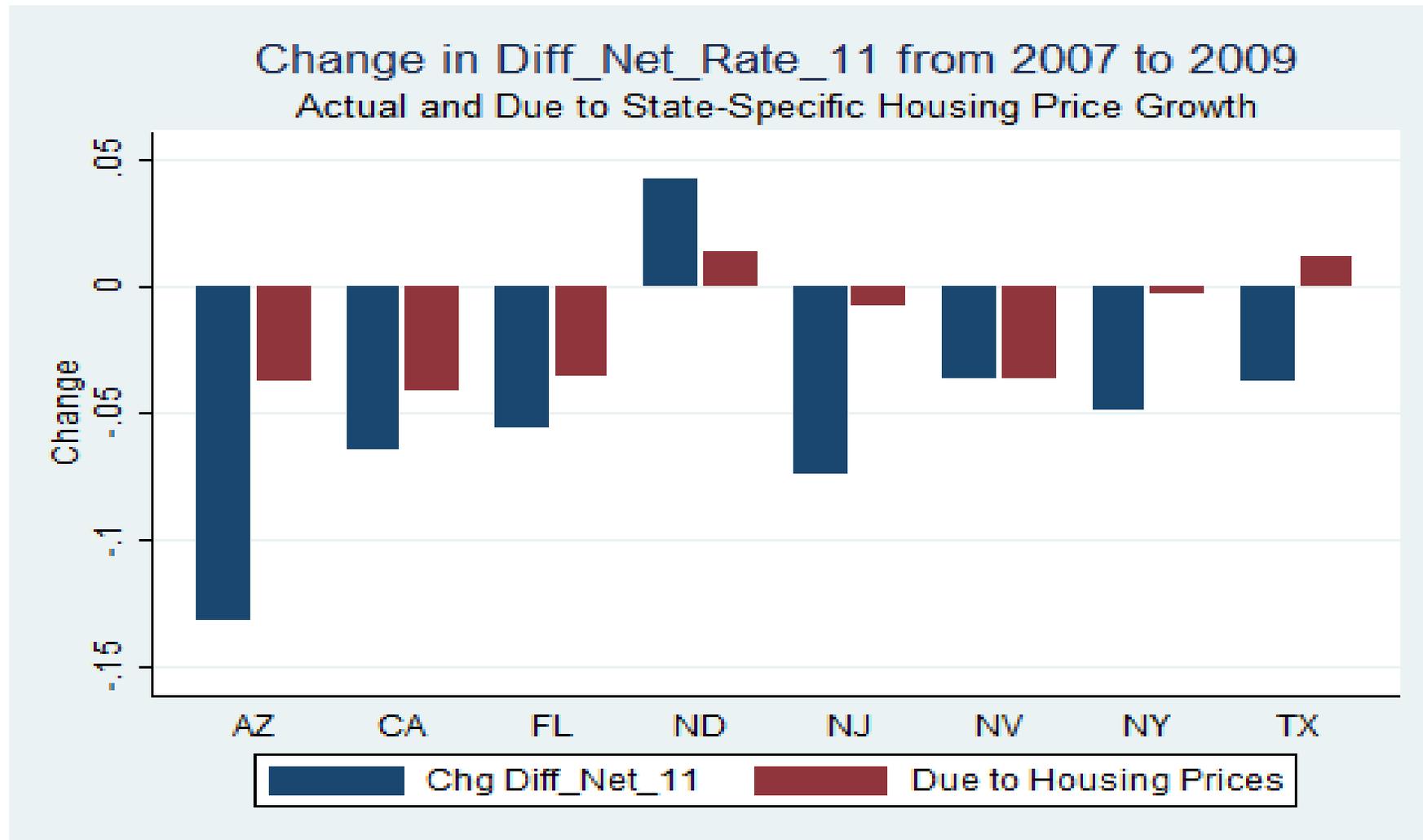
- Some evidence presented that in states with especially large fluctuations in housing prices that there are related fluctuations in labor productivity.
- But by sub-sector, results suggest it is primarily “bubble economy” sectors.
- My reading of the evidence is housing prices potentially important for the especially sharp downturn in startups and young businesses.
 - To the extent that they are important for innovation and productivity growth then this may be important. This latter hypothesis not directly investigated.
 - There is evidence that Great Recession was “less cleansing”
 - Reallocation did not rise as much or even fell.
 - The Reallocation that did occur was less productivity enhancing.

Job Creation Rates by Firm Age and Firm Size

Source: BDS



States with Large State-Specific Housing Price Declines Have Large Changes in Net Differential for Young/Small



Job Flows and the Business Cycle

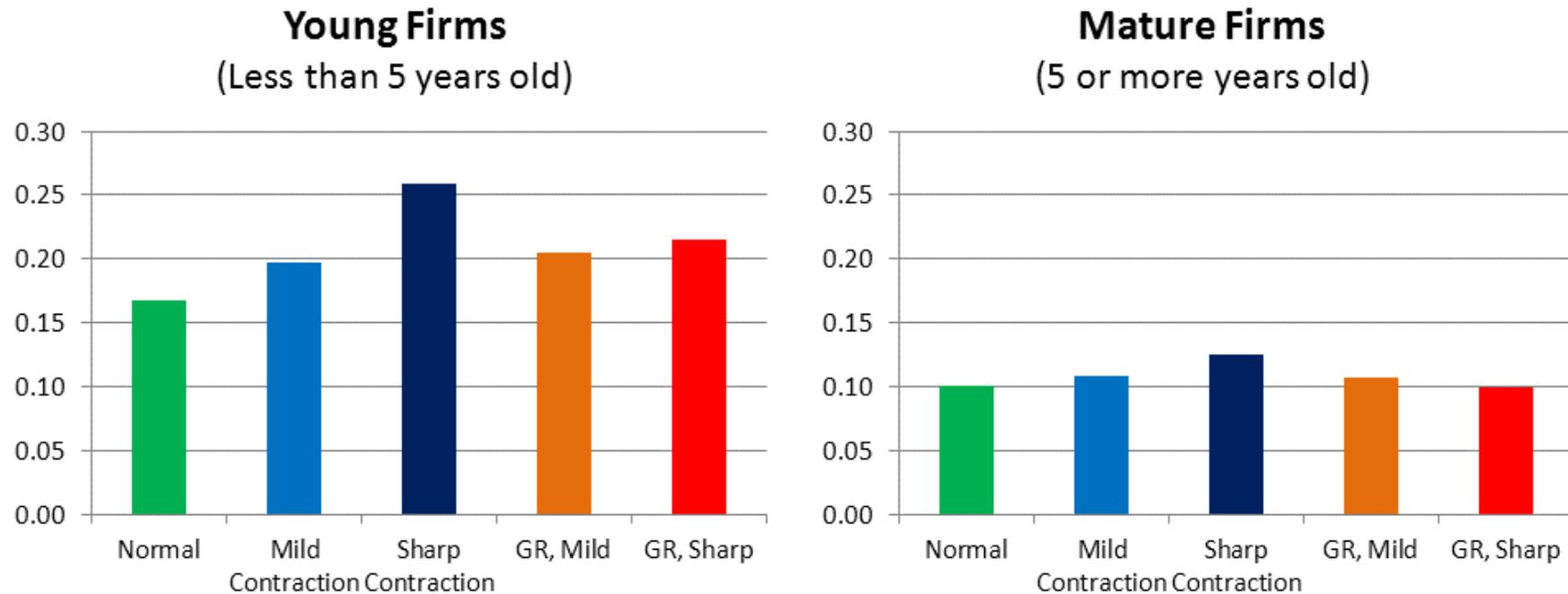
1981-2011

	Job Creation Rate	Job Destruction Rate	Reallocation Rate
Cycle	-0.631 ^{***} (0.046)	1.194 ^{***} (0.053)	0.563 ^{***} (0.068)
GR*Cycle	-0.371 ^{***} (0.079)	-0.421 ^{***} (0.079)	-0.793 ^{***} (0.128)
Trend	-0.168 ^{***} (0.010)	-0.136 ^{***} (0.011)	-0.304 ^{***} (0.020)
N	1,581	1,581	1,581

* p < 0.10, ** p < 0.05, *** p < 0.01

Notes: Cycle is State-Year Change in Unemployment Rate (March-to-March)
 GR=1 during Great Recession. Specifications include state fixed effects. Standard Errors clustered at state-level.

Differences in Overall Growth Rates Over the Business Cycle: High and Low Productivity Establishments



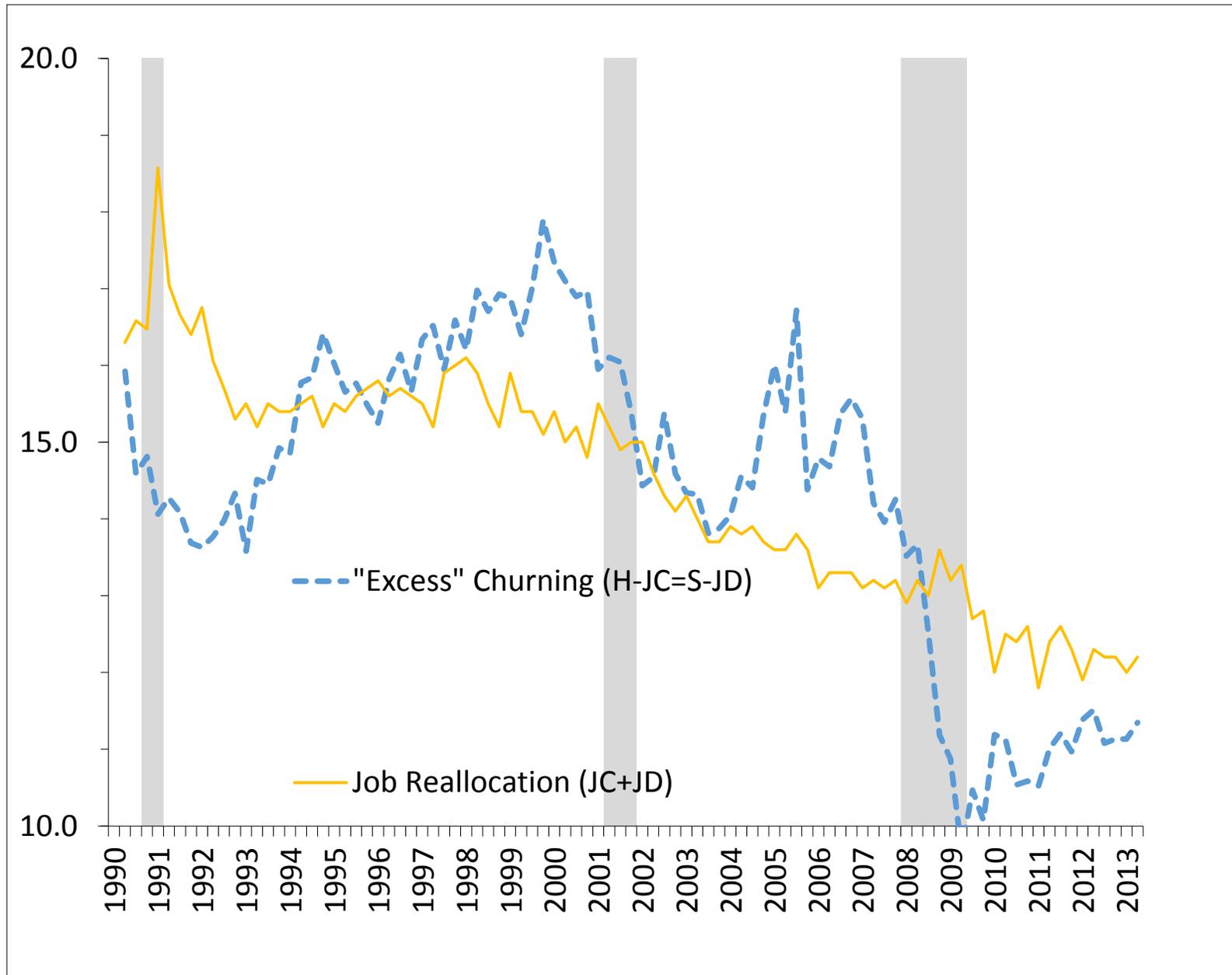
Normal is Zero Change in Unemployment, Mild is 0.01 Change, Sharp is 0.03 Change.
High Productivity is 1 std dev above mean, Low Productivity is 1 std dev below mean.

Source: Foster, Grim and Haltiwanger (2013)

Comment 5: Declining Business Dynamism matched by Declining Churning of Workers

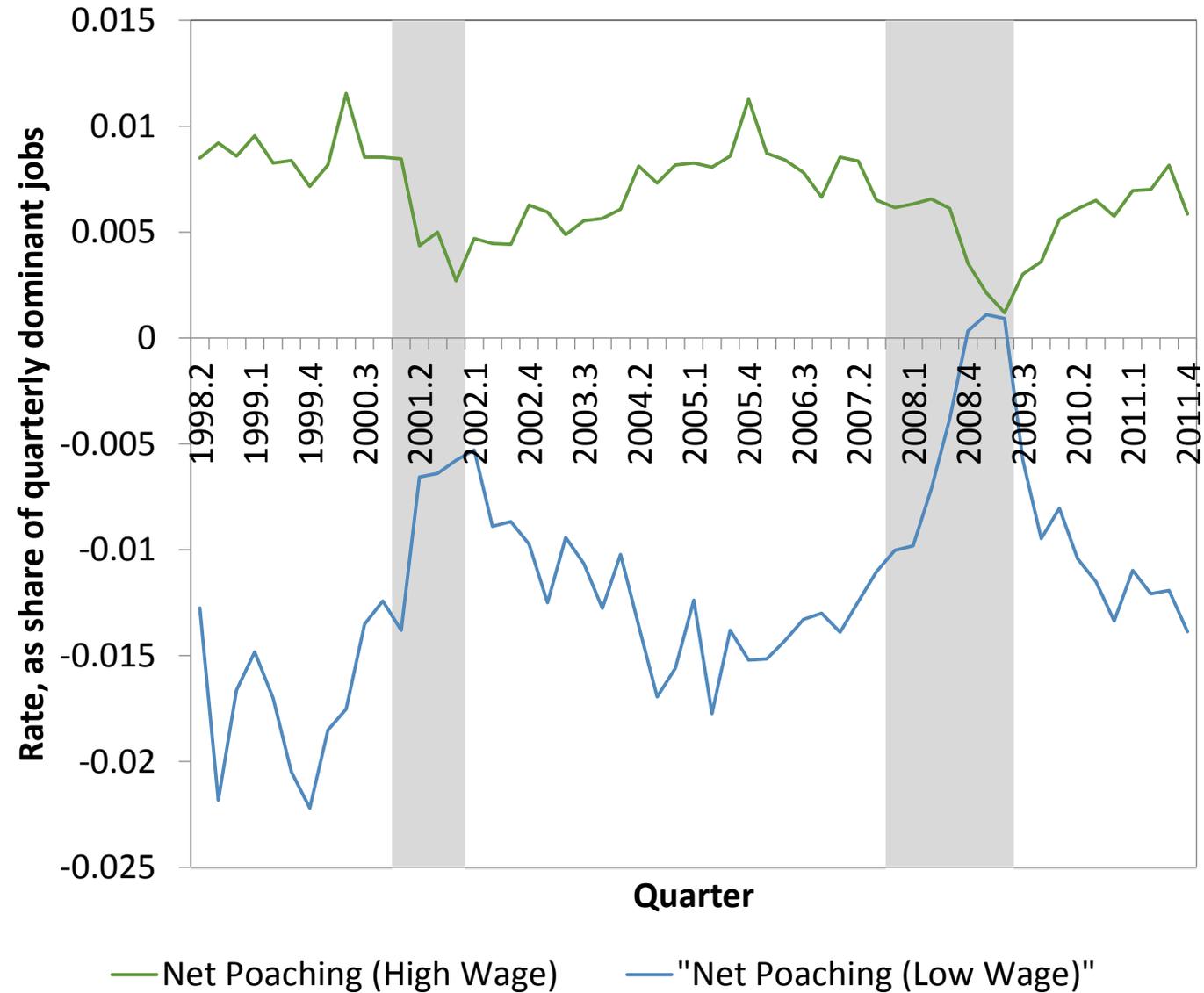
- U.S. long has been characterized as dynamic, flexible economy:
 - High pace of job creation and destruction – capturing changes in relative sizes across businesses.
 - High pace of worker churning over and above job reallocation. “Churning” at least as large as job reallocation.
 - Evidence that both are productivity enhancing.
 - Both exhibit downward trend that accelerated post 2000.
- Is the U.S. less flexible with a lower propensity to adapt to changing economic conditions?

Quarterly Rates of Job Reallocation and "Excess Worker Reallocation" (Churning)



Source: Davis, Faberman and Haltiwanger (2011), BED and JOLTS

Job-to-Job Flows from Low Wage to High Wage Slowed Considerably in Great Recession



Source: Haltiwanger, Hyatt, and McEntarfer (2014)