Discussion of Chen, Kannan, Loungani, and Trehan

Daniel Aaronson
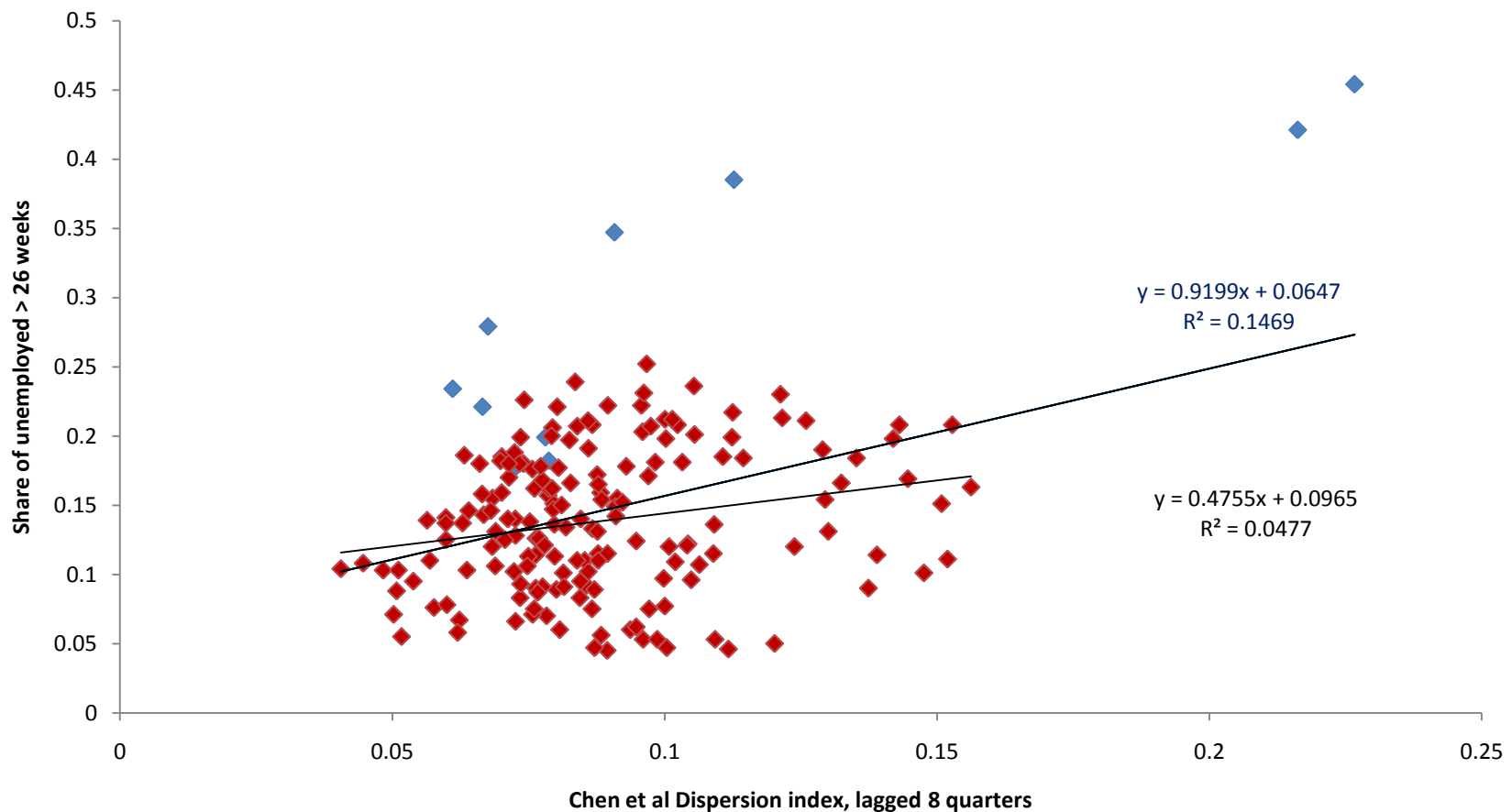
Chicago Fed

April 2011

Summary of paper

- Estimate shocks to sectoral reallocation using dispersion in industry stock market returns.

- Interesting result for at least two reasons:
  1. Explains ½ (!!) of the historic rise in LTU (Figure 10).
     a. Nice check -- No impact on ST unemployment, which is less likely to be "structural."
  2. Potential estimate of "structural unemployment" (Fig 11). Very large effects here too.

- Key assumption:
  – Assumes movements in stock prices within an industry reflect permanent (structural) shifts, rather than temporary (cyclical) changes.
  – But fair amount of evidence that "structural change" coincides with cyclical downturns. Makes identification difficult.
  – Particularly tricky when industry cyclicality varies.

Some reasons to be skeptical of magnitudes
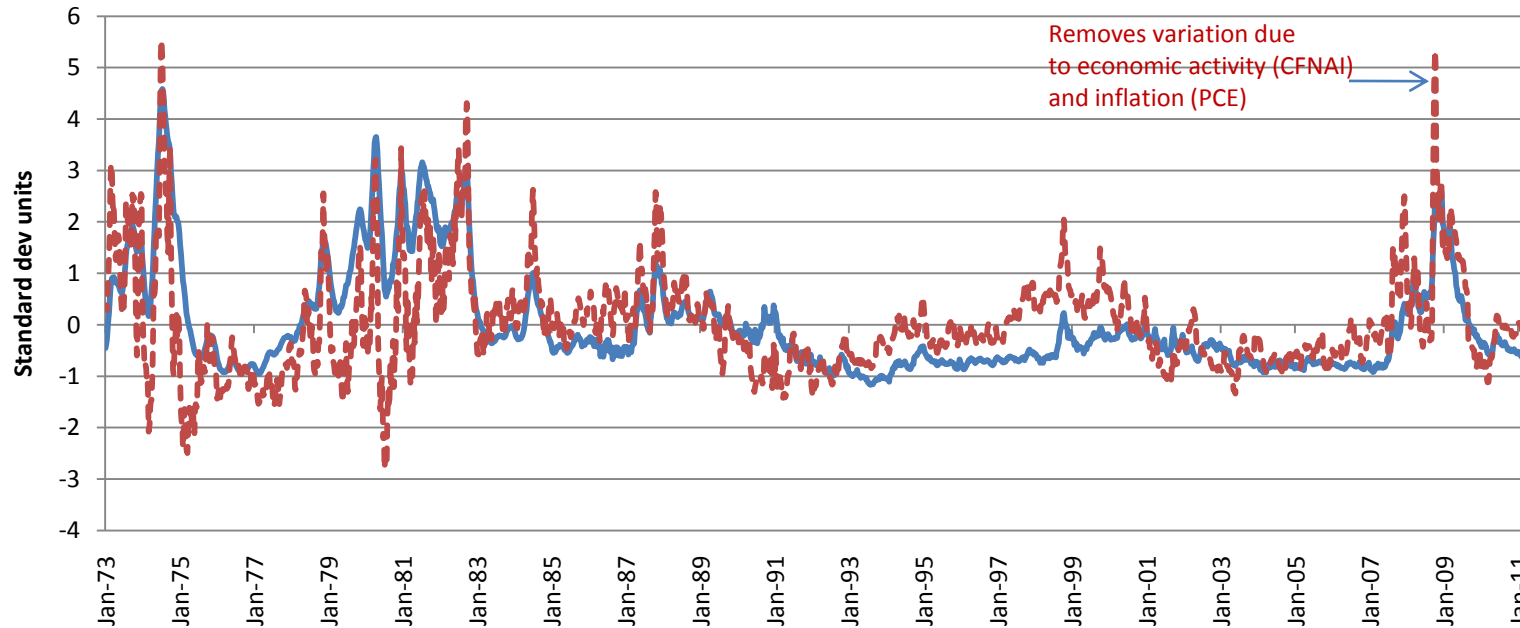# 1. Using the current period in the estimation.

- Concern: Big outlier (dispersion, LTU) in 2008/09 much of the variation used to predict rise in LTU and structural unemployment recently.

y = 0.9199x + 0.0647
R² = 0.1469

y = 0.4755x + 0.0965
R² = 0.0477

Share of unemployed > 26 weeks

Chen et al Dispersion index, lagged 8 quarters

Why is this a potential concern?

- Lots going on recently. Control for overall stock market dispersion is nice but not far enough. Much more of this would be great (broader financial conditions, within-industry dispersion).

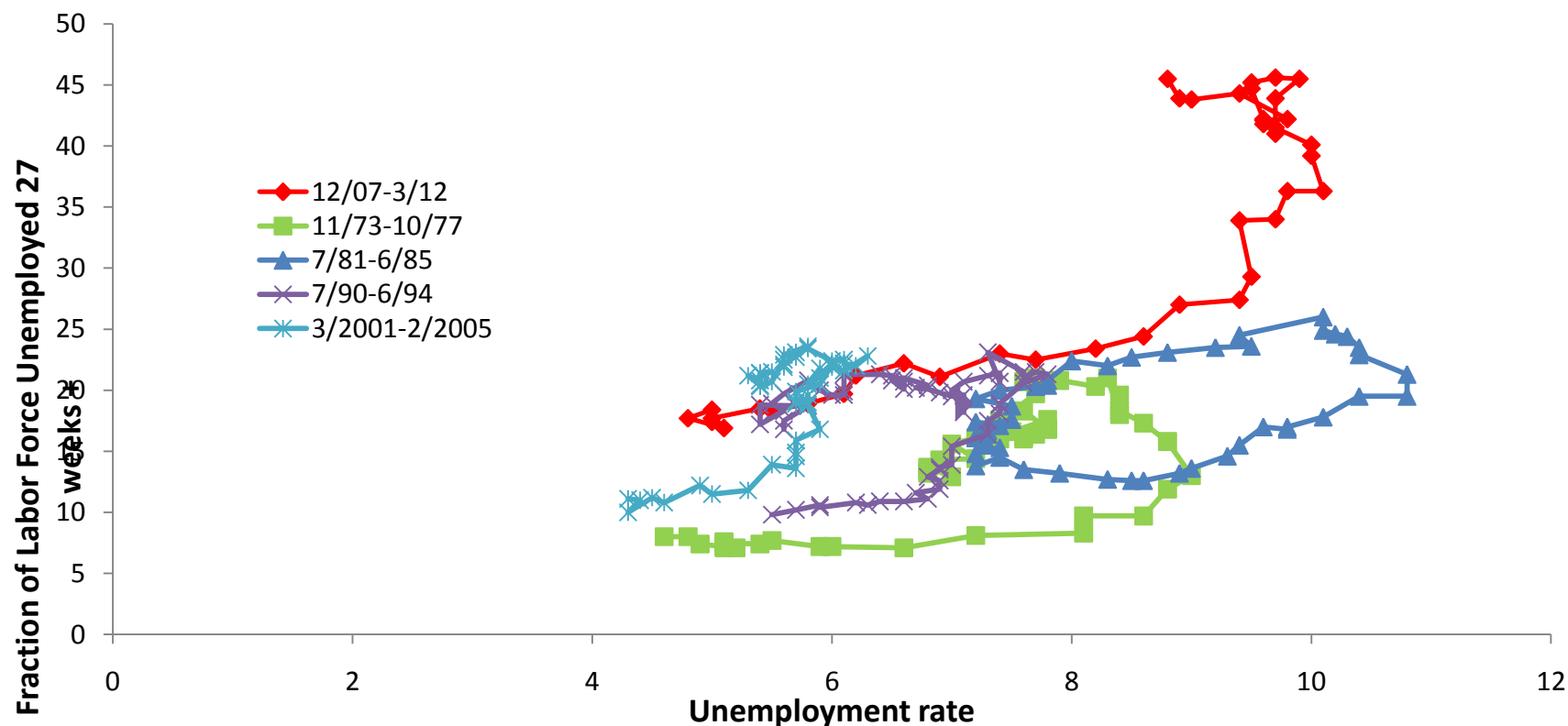- Need out of sample tests. Effects almost surely smaller.

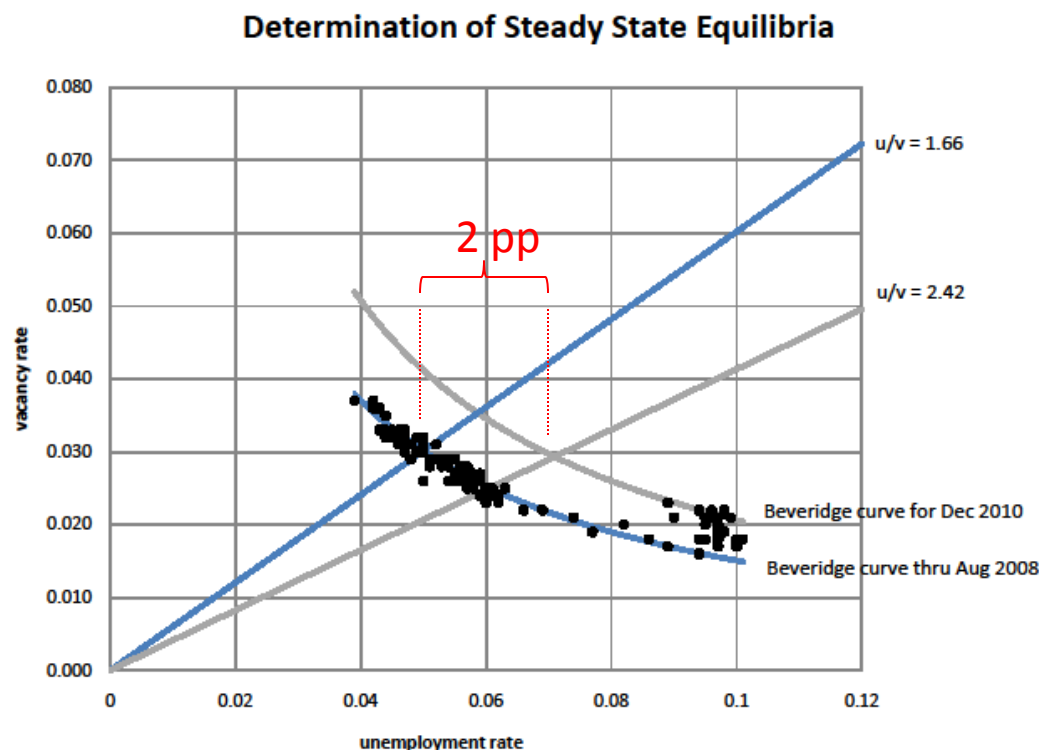**Chicago Fed National Financial Conditions Index**

Removes variation due to economic activity (CFNAI) and inflation (PCE)

http://chicagofed.org/webpages/publications/nfci/index.cfm

Long lags between business cycle shock and the rise in LTU are standard parts of recovery.

- But do we think that recessions always involve sectoral reallocation? Not clear (some evidence in a few slides).

Unemployment Rate vs share long-term unemployed, selected cycles

2. Suggests alot more structural unemployment (8.5-9%) than other approaches

Determination of Steady State Equilibria

2 pp

u/v = 1.66

u/v = 2.42

Beveridge curve for Dec 2010

Beveridge curve thru Aug 2008

vacancy rate

unemployment rate

Shock: 16% reduction in match efficiency (BF 2011) →New Beveridge Curve

With free entry condition (and other assumptions), →u/v must rise by 45%.

→Shock to match efficiency can only lead to an *upper bound* of 7% SS unemployment

Barlevy (2011, forthcoming)

And its probably even lower:
1. Davis et al (2010) – Firm search intensity; 2. UI – worker search intensity
    (Aaronson/Mazumder, Mazumder, Valetta, etc.)
So can't all be about mismatch (within DMP framework).

And a lot more sector reallocation (e.g. Sahin et al (2011))

- Economy is a large number of distinct labor markets (industries, occupations, etc) with unemployed resources and vacancies.
  - Kind of like a industry-specific (or occupation-specific, etc) Beveridge Curve analysis

- Question: how much unemployment can be "fixed" by freely moving resources to job openings in other sectors.
  - i.e. the share of unemployment due to workers being in the "wrong" labor market (the one without openings).

- By industry: explains 0.4 to 0.7 perc points of 5 point rise during recession and early recovery. Most of this is construction (and a little manufacturing).

- Index has a little trouble with timing because it reverts back pretty quickly in 2009-10 when UR and LTU are particularly high (unless there are long lags like in Prakash's VARs).

Employment has fallen broadly
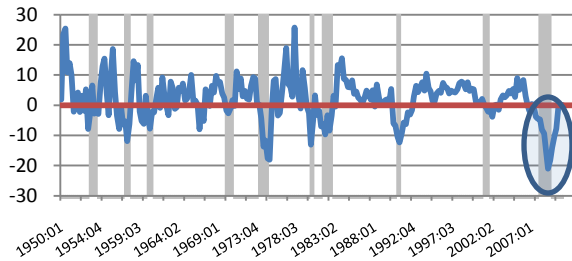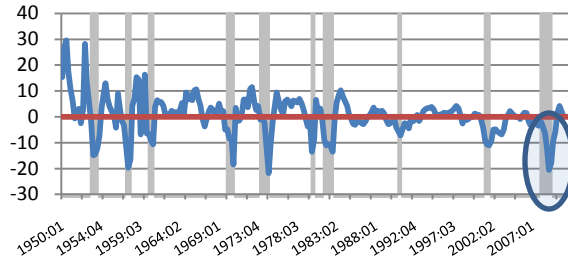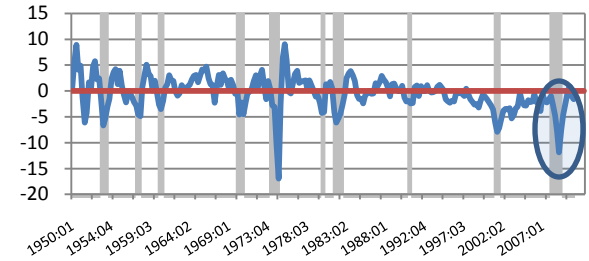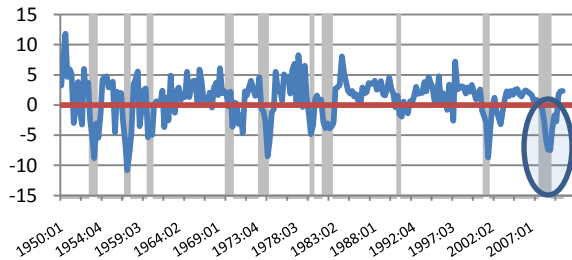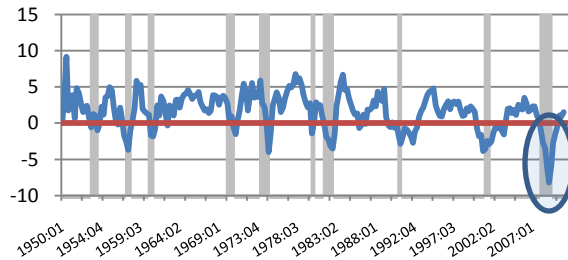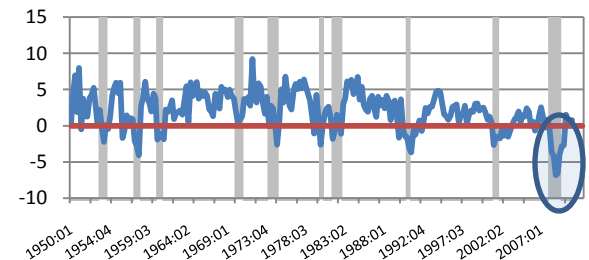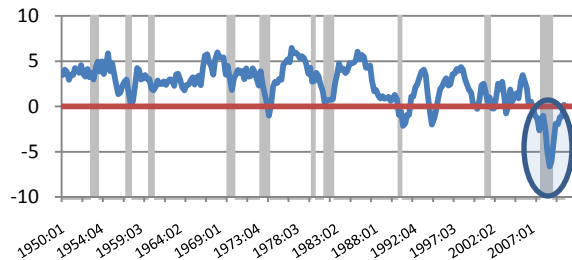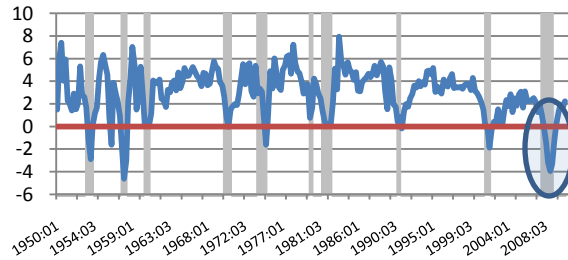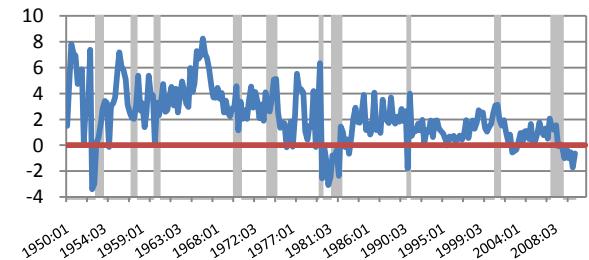
Employment has fallen broadly (and fairly cyclically)
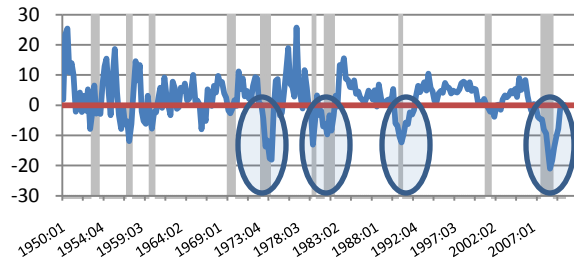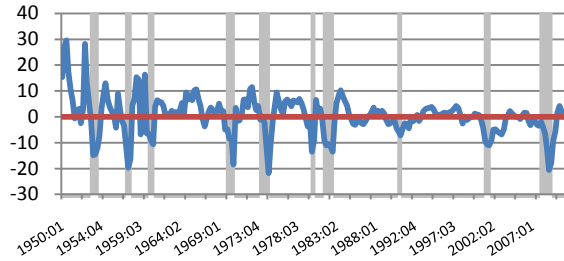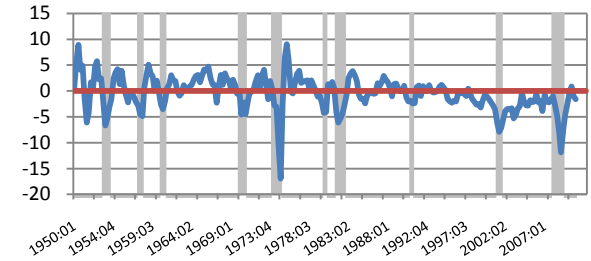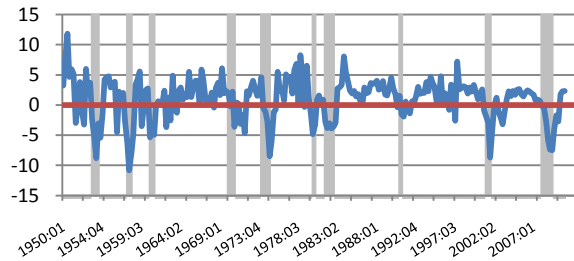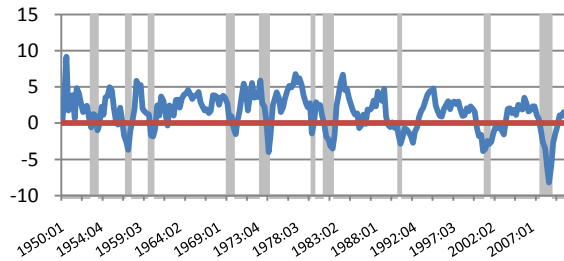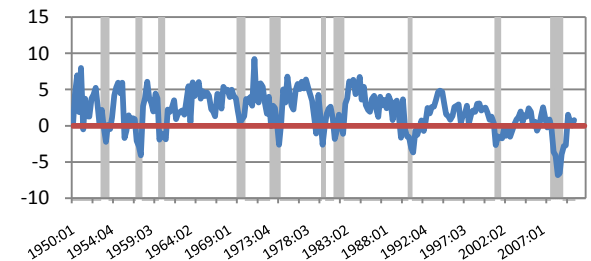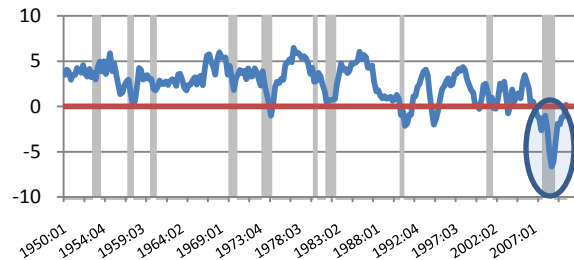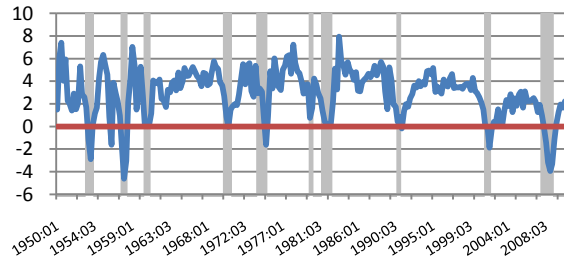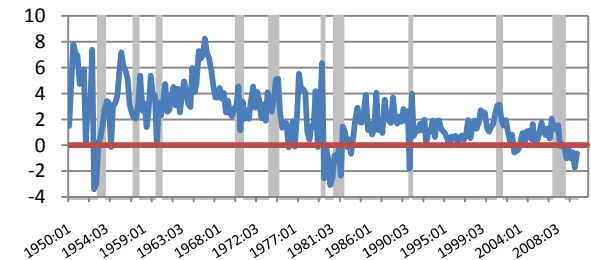
Statistical model of Rissman (2010): Noncyclical reallocation barely budged

Important caveat: Limited categorization (9 industries). Mismatch may be within industry
or across other labor market segmentations.

Rissman, Ellen, 2010, *Economic Perspectives*.
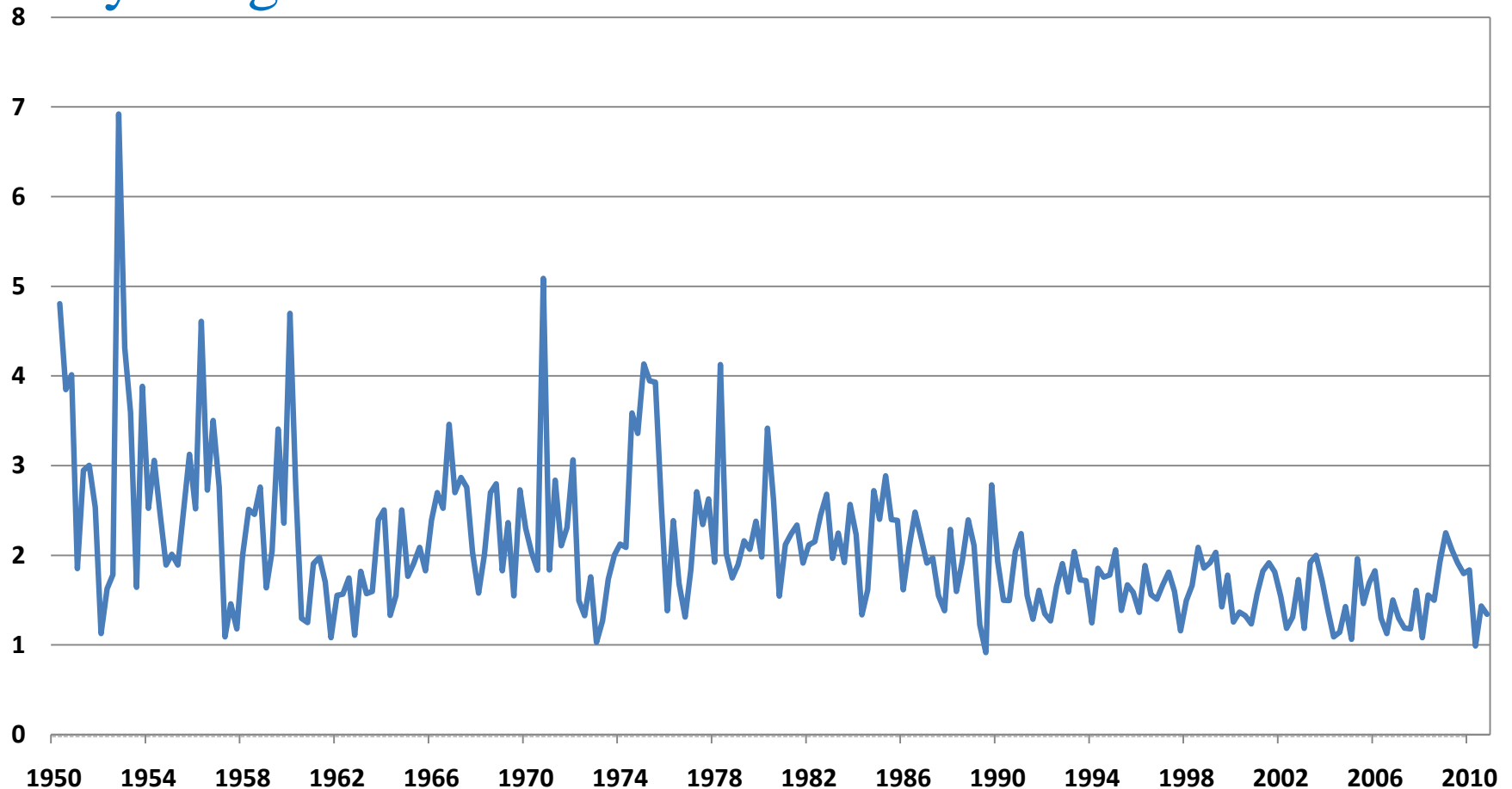
Aaronson et al (2010)

- Oaxaca-Blinder decomposition of long-term unemployment changes over last 30 years.

- Virtually no evidence that across-industry (again, broad) changes can explain much.

- Within-industry changes are actually much more useful. Maybe this is picking up some of Prakash's results.
  - Easy test: play with the level of aggregation.

- Rob V has better evidence on how unusual the current period is, after adjusting for demographics.

3. Is there Unusual Demand in Certain Sectors? Standard wage data doesn't suggest it.
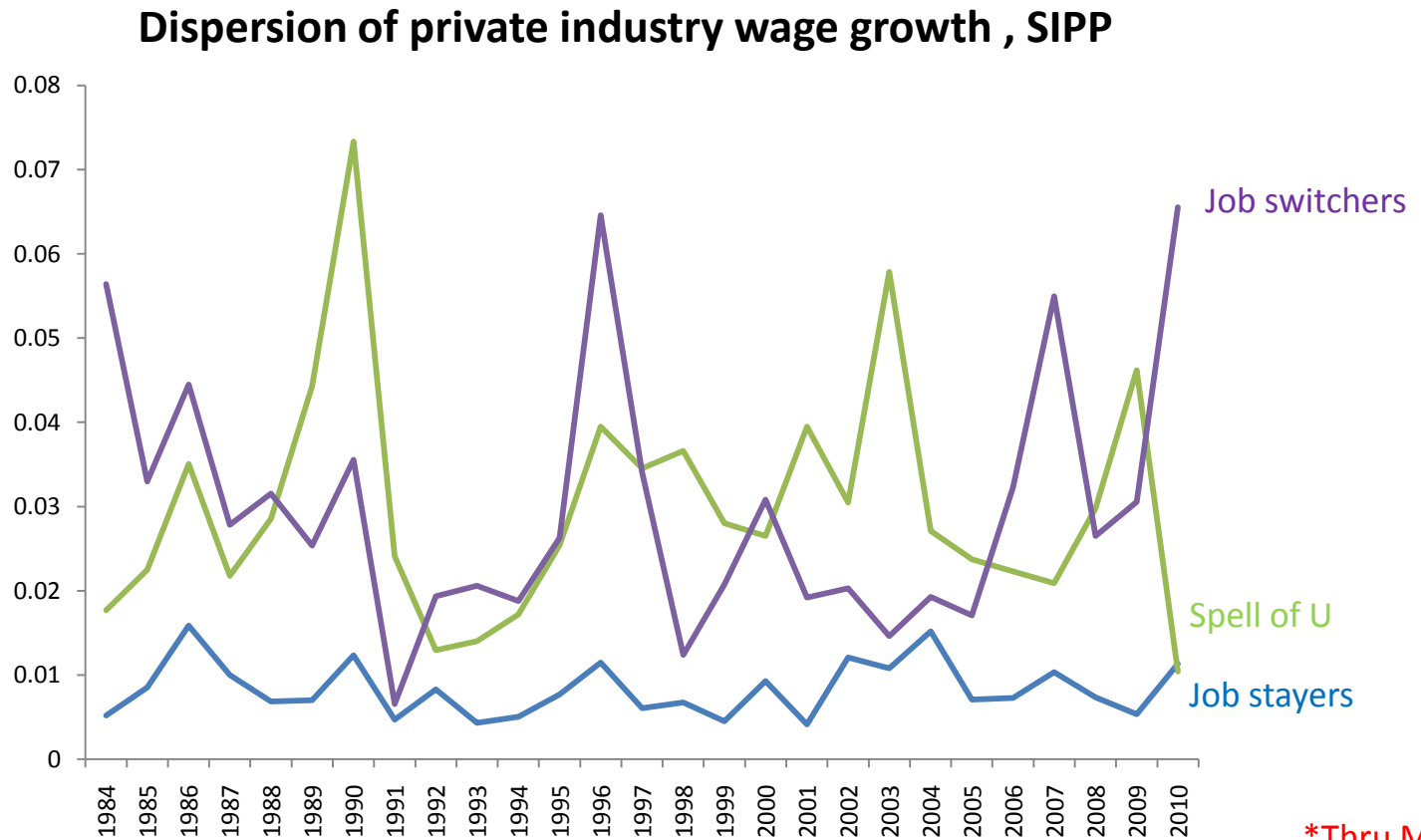
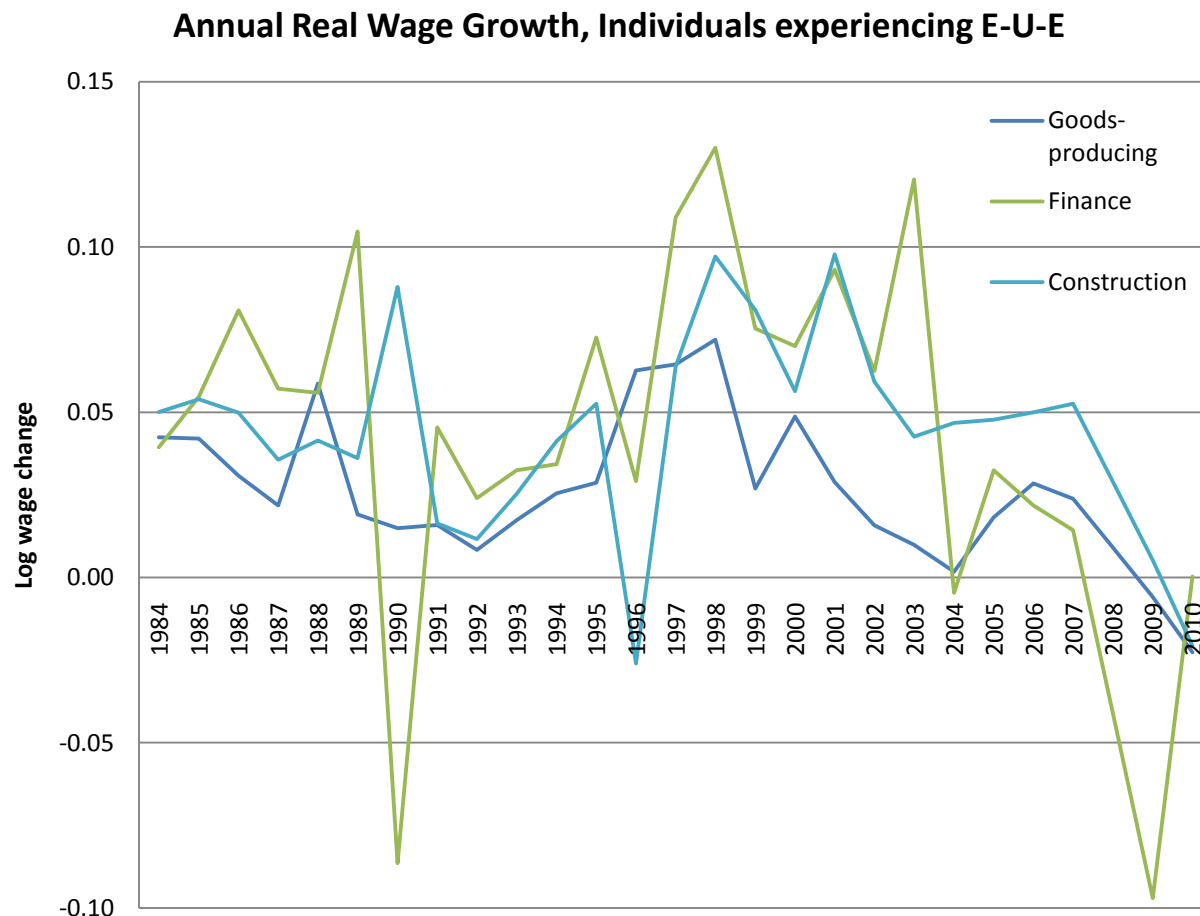**Dispersion of private industry hourly earnings**
(year-over-year)
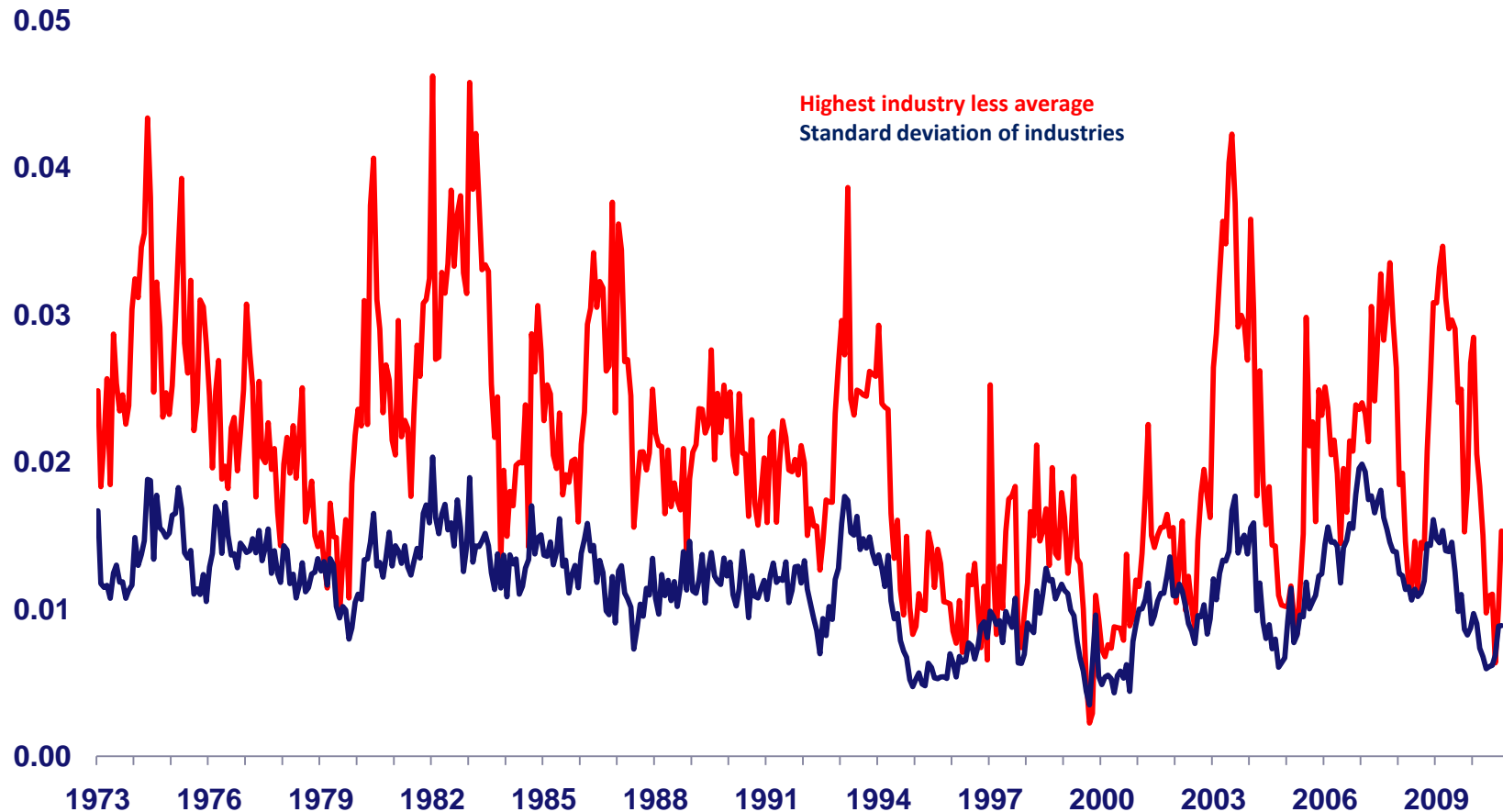
Average hourly earnings, by private industry (CES). Excludes mining and logging. Red line = highest industry less average industry. Blue line = standard deviation of industry average hourly earnings.

Industry wage dispersion in the SIPP. Mixed evidence?

- Pro: Can deal with some compositional biases (not completely done yet…).
- Con: *Very Preliminary*, not many industries (yet), smallish samples

Dispersion of private industry wage growth , SIPP

Job switchers

Spell of U

Job stayers

*Thru Mar 2010

Real wage growth among hires from U is falling in tandem

Annual Real Wage Growth, Individuals experiencing E-U-E

Legend:
- Goods-producing
- Finance
- Construction

Y-axis: Log wage change (−0.10 to 0.15)
X-axis: years 1984 to 2010

Change, 2008-2010 vs 1984-2007 growth

Finance	-0.099
Construction	-0.044
Goods prod	-0.037
Other serv	-0.018
Gov	+0.029

*Thru Mar 2010

Hiring is broadly bad. Some sectoral reallocation likely but evidence is far from clear that its substantial.

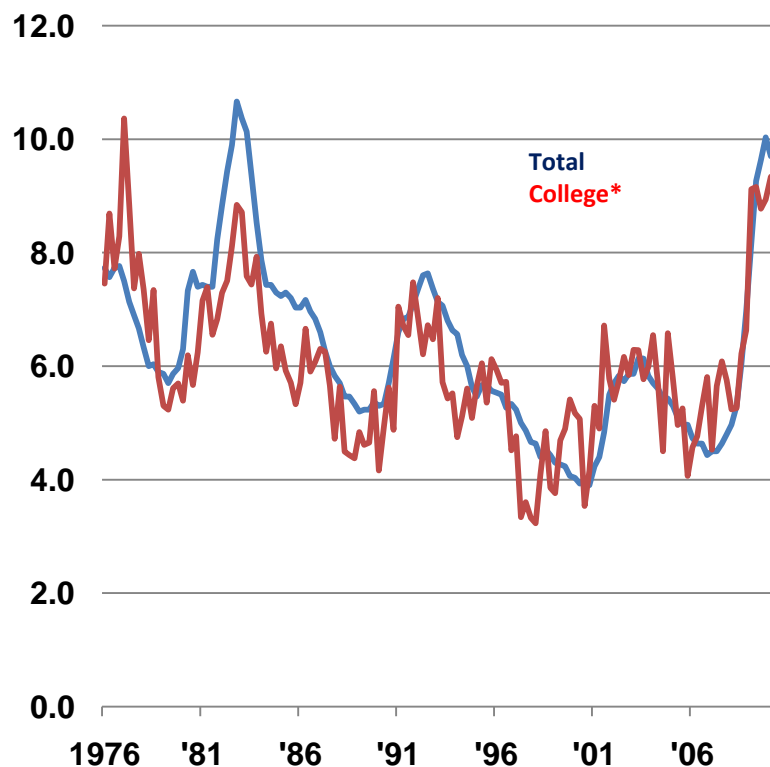**Fraction that move from U to E, by initial unemployment duration**
(total unemployed in t-1; SA percent)
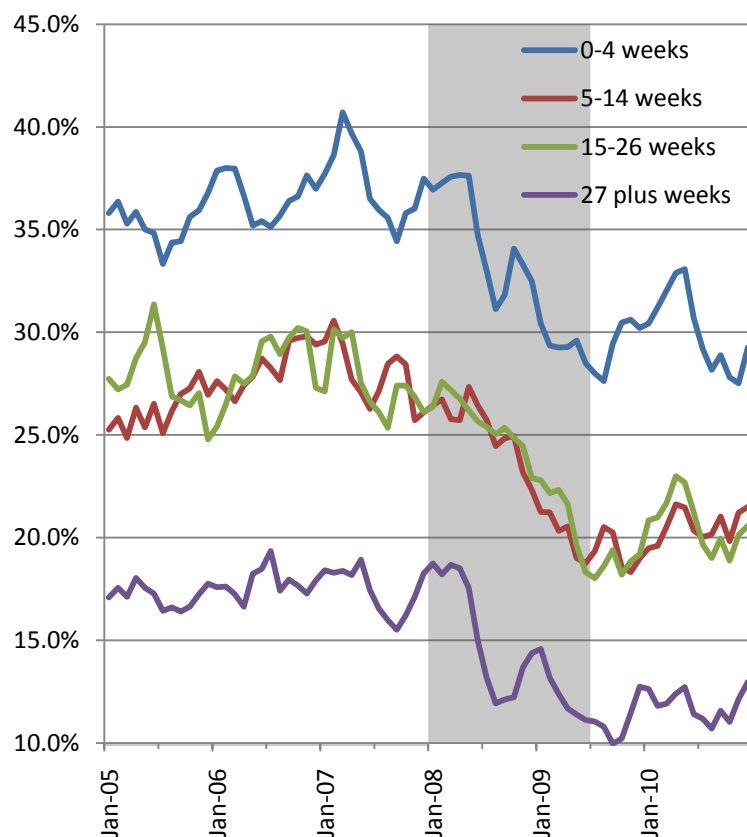
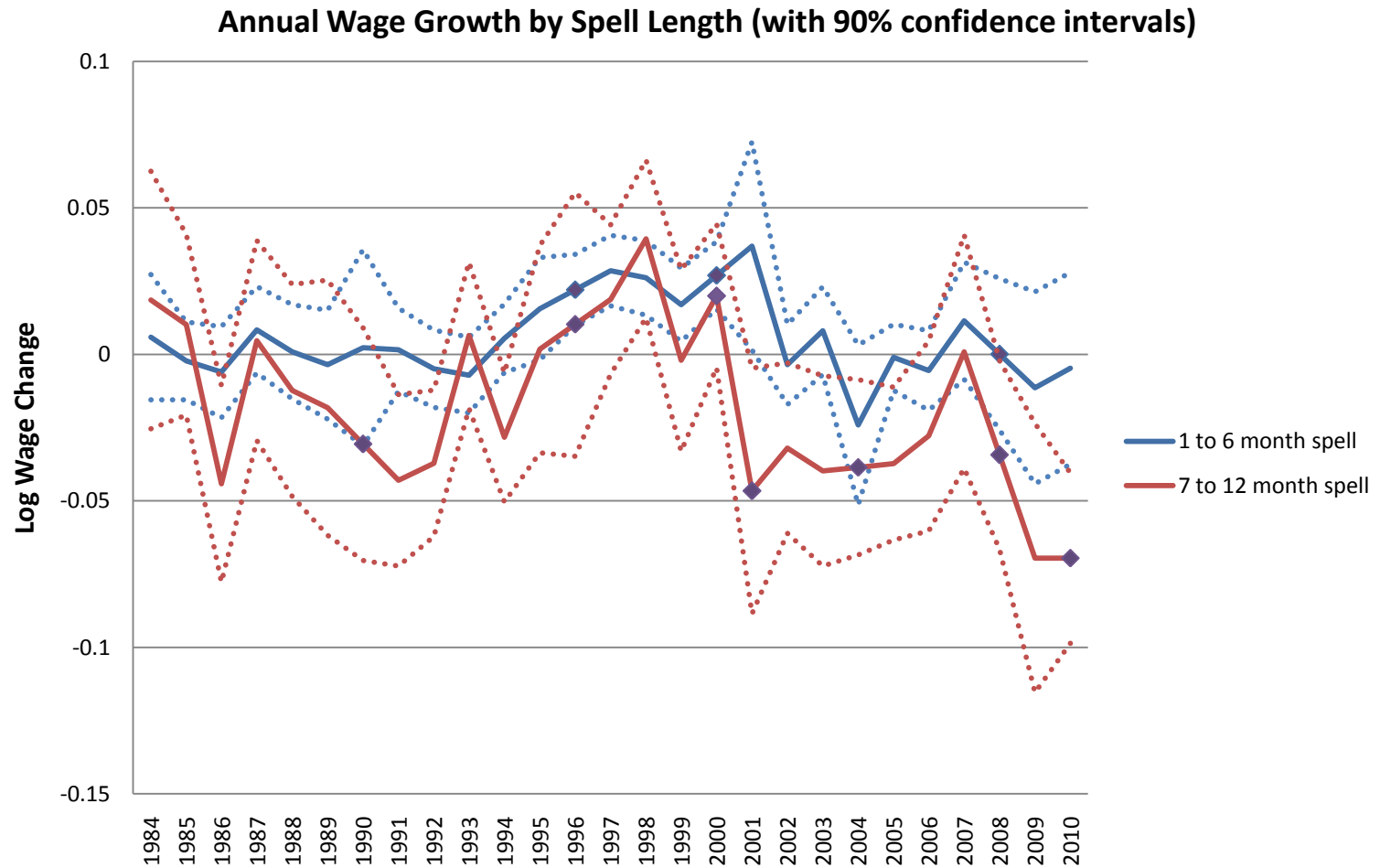Hiring bad at every duration spell.

Unemployment rates
(total; college degree or more, aged 16-24, SA percent)

* Recent college grads = No UI, no homes, highly mobile (geographically, sector). Yet UR rose to similar heights.

Extra slides

Wage changes among LTU (SIPP)

Annual Wage Growth by Spell Length (with 90% confidence intervals)

*Thru Mar 2010