Did the Housing Price Bubble Clobber Local Labor Market Job and Worker Flows When It Burst?

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Housing and the Labor Market

- Housing bubble, with a peak in 2006
- Subsequent recession seems to be different from previous recessions:
  - Longer in the labor market (unemployment rate sticky, LF participation rate down)
  - Housing market still declining (played no apparent role in previous recessions)
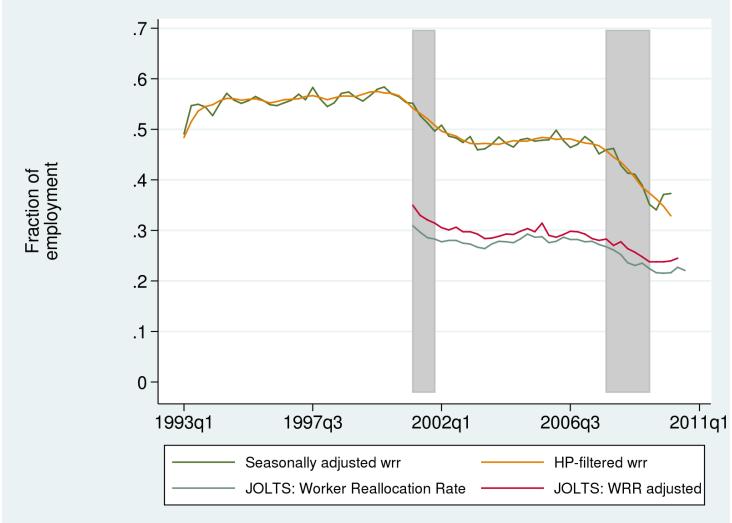- Is it a red herring?

Usual and Unusual Suspects

- Increase in unemployment benefits (response and cause; Bender, Schmieder, von Wachter, 2011)
- Low vacancy rates/ structural (skill) mismatch
- Unusual amount of "underwater" mortgages but also foreclosures, leading to "lock-in" (Farber, 2011; Donovan and Schure, 2011)
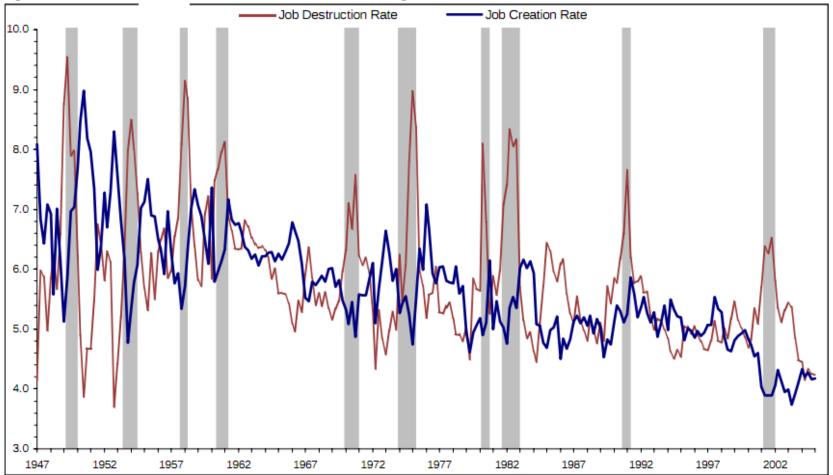
Something Else As Well

Going on for Quite Some Time

Figure 5. Job Creation and Job Destruction in Manufacturing, 1947 - 2005
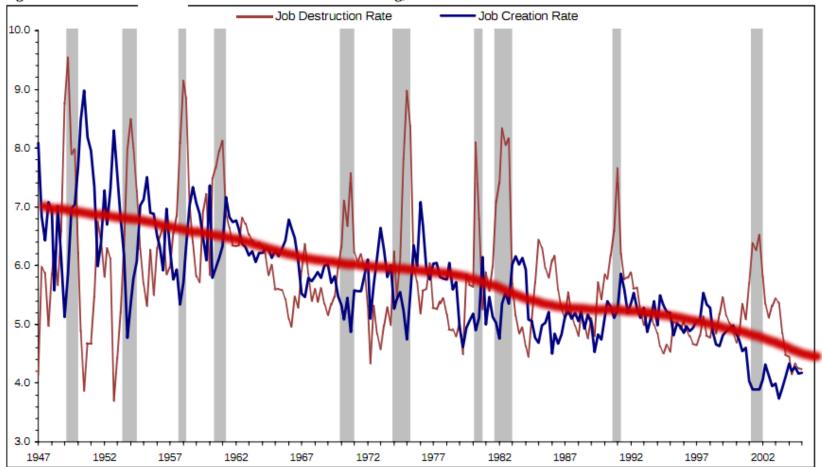

Notes: Estimates come from author's calculations from the BED and a spliced series of LTS and LRD manufacturing job flow data. The series are spliced together using GMM estimation to match key moments of the data. See text and Davis and Haltiwanger (1999) for details. Shaded areas represent NBER-dated recessions.

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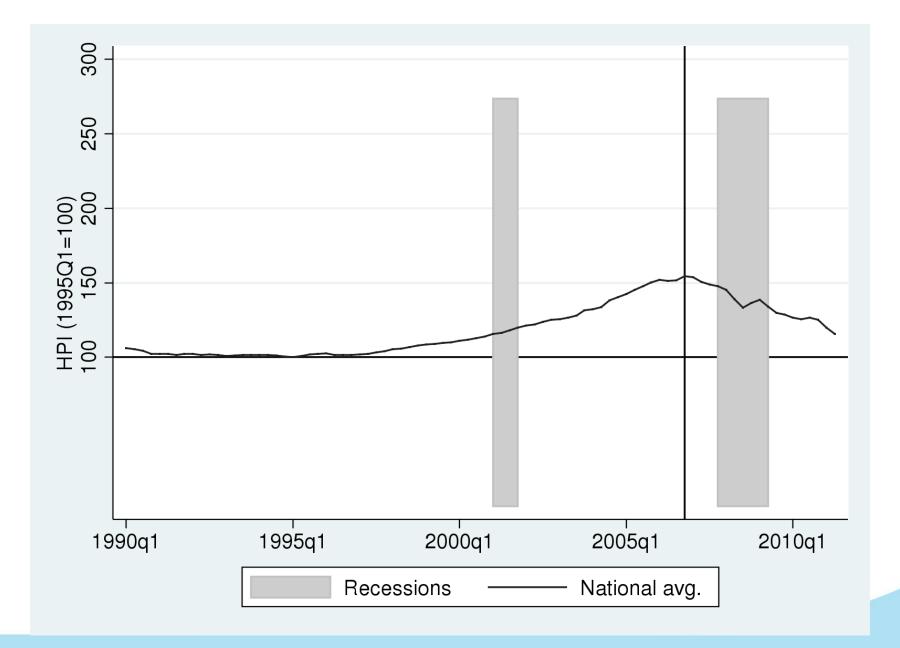
Labor Market Rigidity in the Great Recession

- Overall job reallocation in the labor market has declined
  - Secular decline lasting several decades
  - More severe declines in the past two, including the last recession
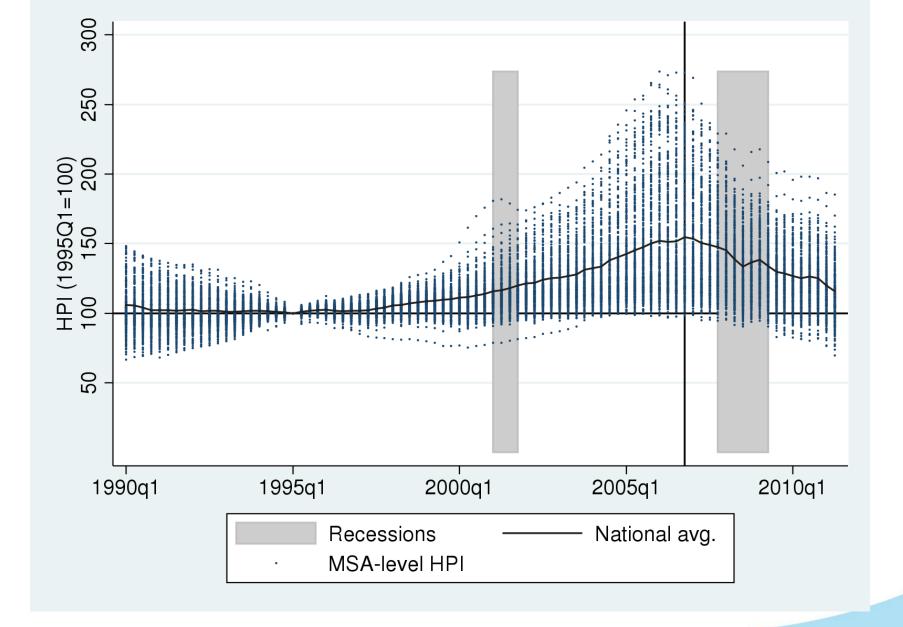 - No sign of upward tick

United States Census Bureau
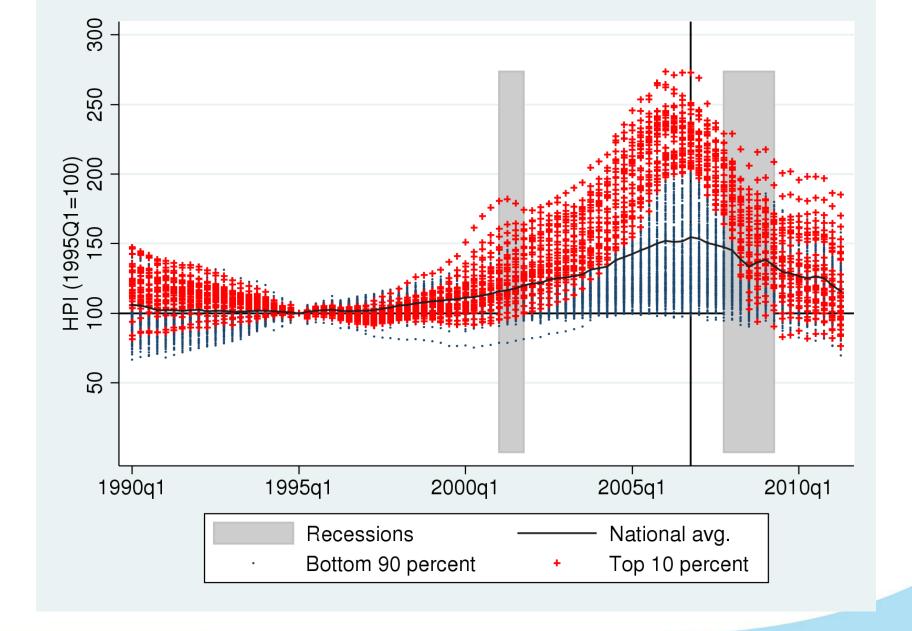
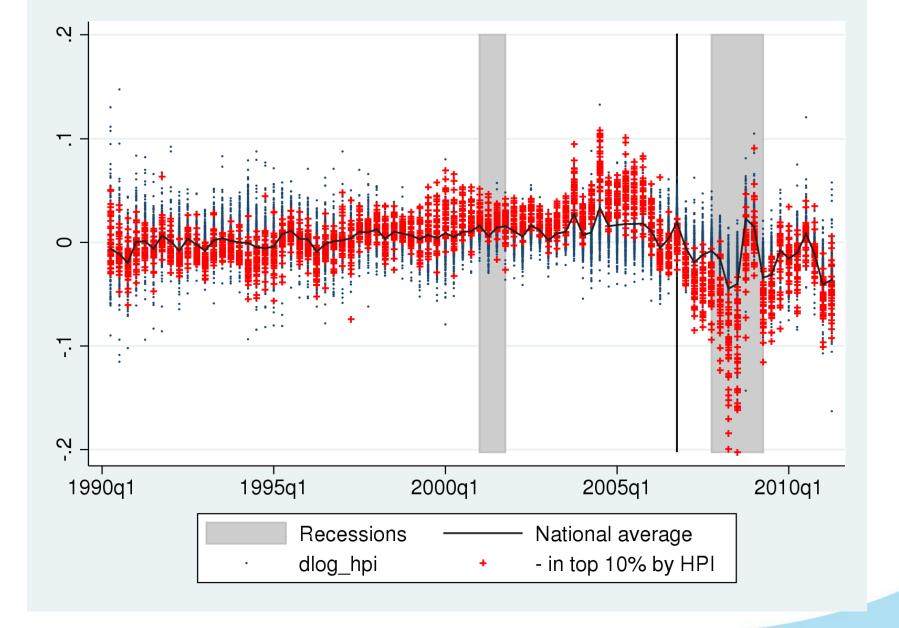# BACK TO HOUSING AND THE LABOR MARKET

Housing Indices

- Remarkable heterogeneity across MSAs

- But also persistence within MSAs

- We classify MSAs by their 2006:4 location in the distribution, track them throughout

- Focus on the top 10%

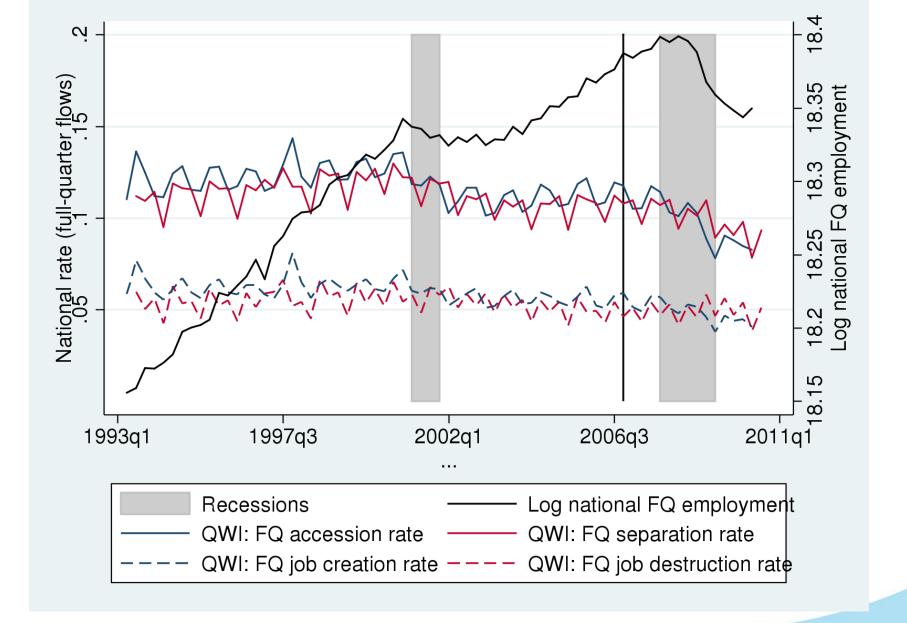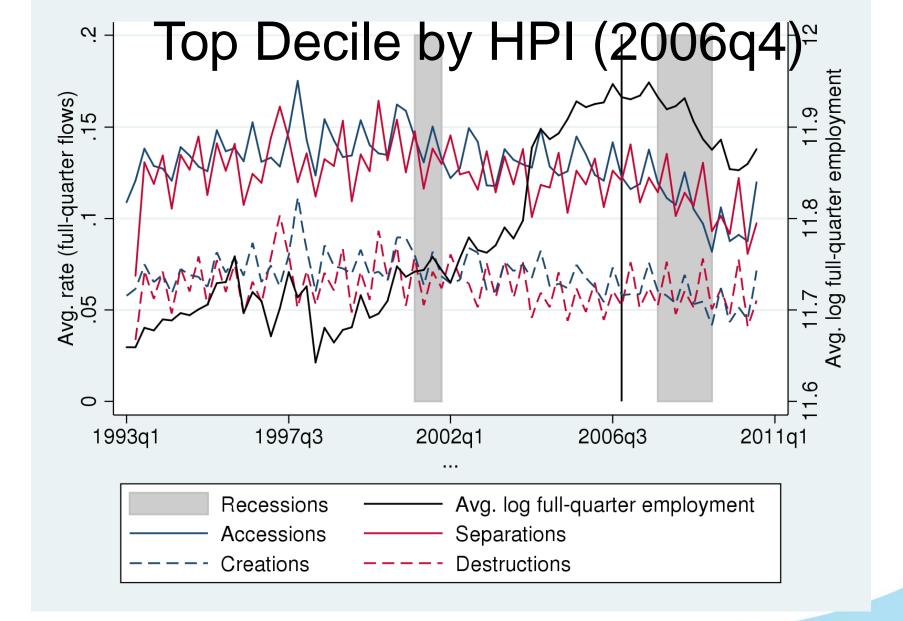|		
Recessions		National average
dlog_hpi	+	- in top 10% by HPI

National and Local Labor Markets

- Focus on stable jobs and associated earnings, separations, accessions
- Use QWI data reported/aggregated to MSA level
- Use National QWI (NQWI) data (Abowd & Vilhuber, 2011)

MSAs in the Top HPI Decile

- Employment peaks earlier
- Lost 1.1 million full-quarter jobs from 2007:4 to 2009:4.
- Full-quarter accessions fell off the cliff
- Full-quarter separations fell only very gently

Analysis

- We attempt to capture the differentially strong effect of the housing price bubble on the top MSAs
- MSA-level estimates of the responsiveness of gross worker and job flows to the HPI
  - controlling for the national levels
  - isolating the marginal contribution of the local HPI on the predicted flows

MODEL

Model

- National equation $\quad y_{\circ t} = x_{\circ t}\bar{\beta} + \epsilon_{\circ t}.$

  – x: set of (lagged) national indicators

- Local equation

$$y_{jt} = x_{\circ t}\bar{\beta} + \left(x_{jt} - x_{\circ t}\right)\beta_j + \epsilon_{\circ t} + \epsilon_{jt}.$$

- Flexible estimation equation

$$y_{jt} = \beta_{1j} y_{\circ t} + \beta_{2j} x_{\circ t} + \beta_{3j} x_{jt} + \epsilon_{jt},$$

- Restated as mixed-effects model

$$
\begin{aligned}
y_{jt} \;=\; & \bar{\beta}_1 y_{\circ t} + \bar{\beta}_2 x_{\circ t} + \bar{\beta}_3 x_{jt} \\
& + \tilde{v}_{1j} y_{\circ t} + \tilde{v}_{2j} x_{\circ t} + \tilde{v}_{3j} x_{jt} \\
& + \epsilon_{jt}
\end{aligned}
$$

Fitted marginal predictors

$$\widehat{\overline{y}}_{jt} = \widehat{\overline{\beta}}_1 y_{\circ t} + \widehat{\overline{\beta}}_2 x_{\circ t} + \widehat{\overline{\beta}}_3 x_{jt}$$

- Effects of the overall market conditions and MSA variation in the housing market and local labor market conditions

Fitted marginal predictor + EBLUPs

$$\widehat{\widehat{\overline{y}}}_{jt} = \widehat{\overline{y}}_{jt} + \widehat{\widetilde{v}}_{1j} y_{\circ t} + \widehat{\widetilde{v}}_{2j} x_{\circ t} + \widehat{\widetilde{v}}_{3j} x_{jt}.$$

- captures the incremental contribution of the MSA-specific variation in the coefficients
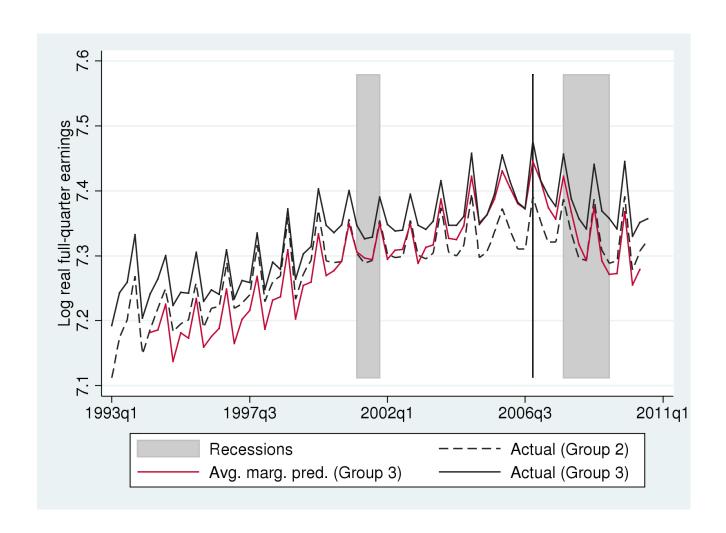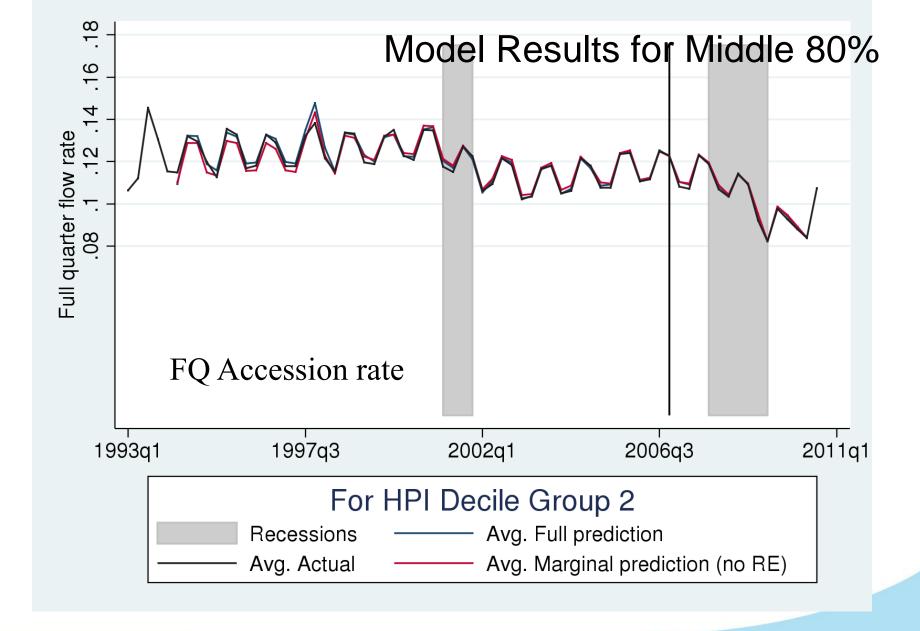
RESULTS

Dependent Variable	National Variable Coefficient	Random Effect Standard Deviation	Log Local Housing Price Index Coefficient	HPI Random Effect Standard Deviation
FQ accession rate	0.9649	0.1364	0.0267	0.0110
	(0.0307)		(0.0072)	
FQ separation rate	1.0318	0.1519	0.0222	0.0146
	(0.0407)		(0.0084)	
FQ job creation rate	0.9748	0.2485	0.0133	-
	(0.0399)		(0.0069)	
FQ job destruction rate	1.0236	0.2693	0.0101	0.0128
	(0.0491)		(0.0079)	

Standard errors are in parentheses.

Model Results for Middle 80%

FQ Accession rate

For HPI Decile Group 2

Model Results for Top 10%

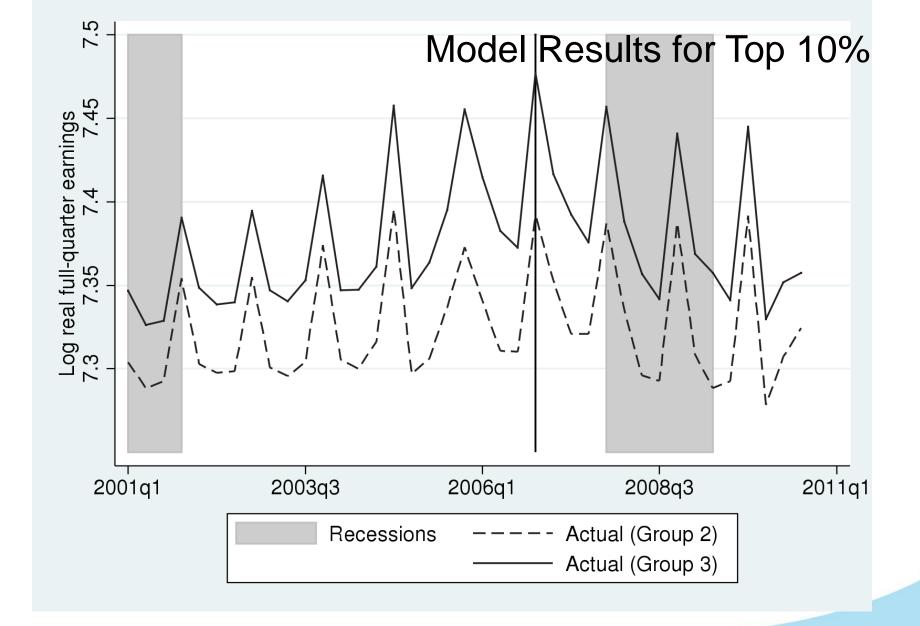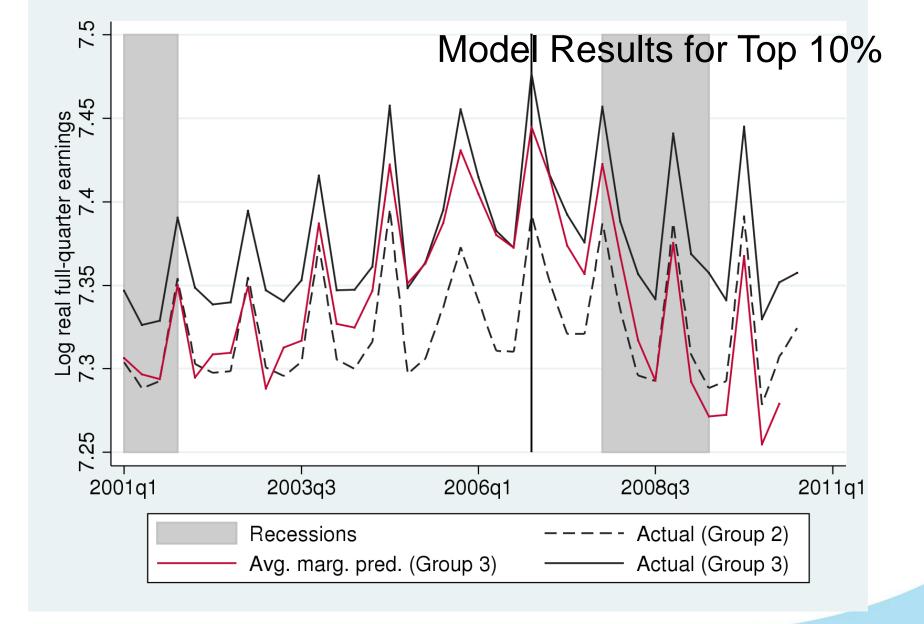Model Results for Top 10%
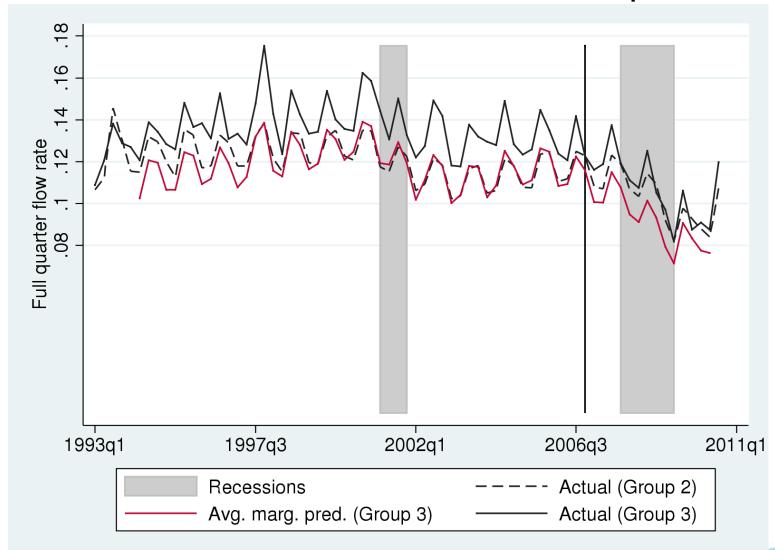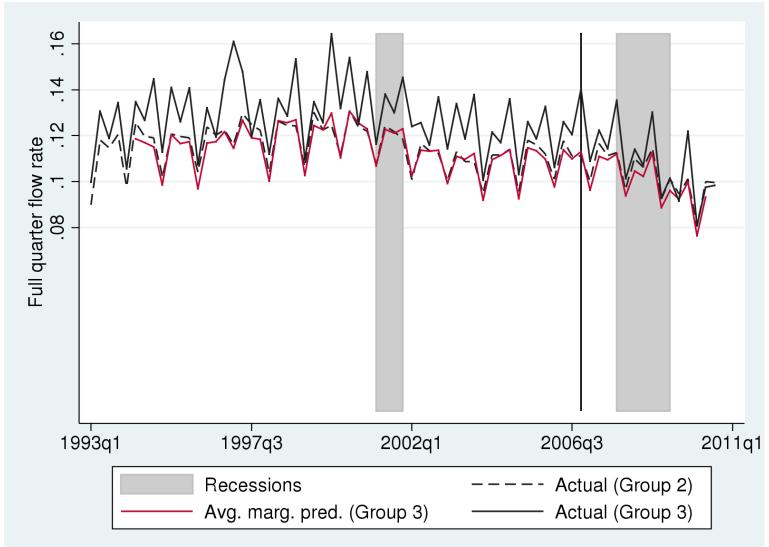
Model Results for Top 10%

Accessions: Model Results for Top 10%

Separations: Model Results for Top 10%

Conclusions

- For most MSAs the collapse of the labor market during the Great Recession was primarily a macro-economic phenomenon

- In the MSAs most severely impacted by the housing price decline, employment fell more rapidly (and sooner), accessions crashed more severely, and earnings failed to adjust as predicted by the average-MSA model

THE END

Additional links

- Paper will appear in American Economic Review – Papers and Proceedings (May 2012)

- Links to data and analysis programs will be on the AER website

- A working paper version (with color graphs and extensive appendix) is available at http://digitalcommons.ilr.cornell.edu/ldi/2/

United States™ Census Bureau