

Disaggregating the Matching Function

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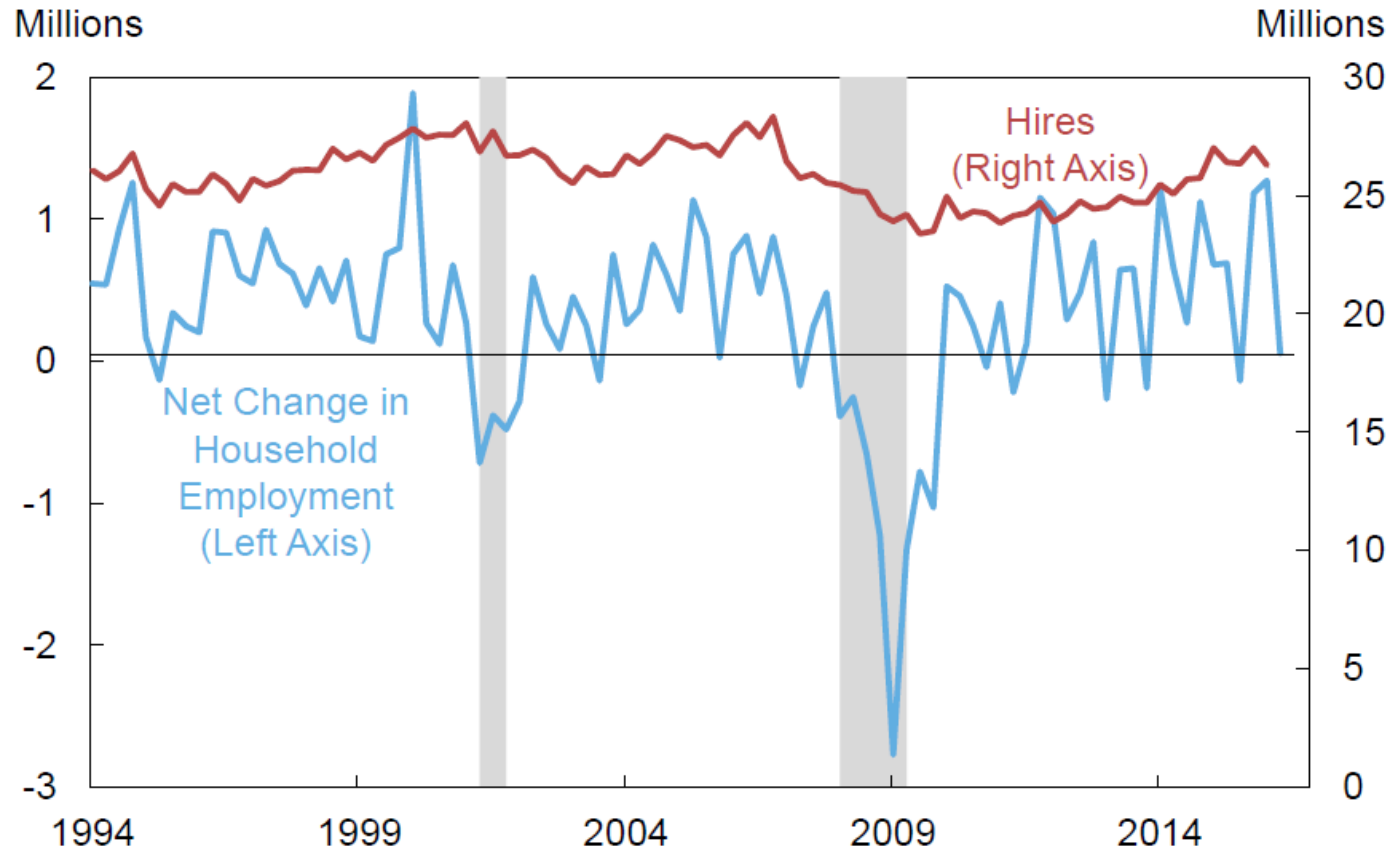
IMF Seventeenth Jacques Polak Annual Research Conference

Macroeconomics After the Great Recession

November 3-4 2016

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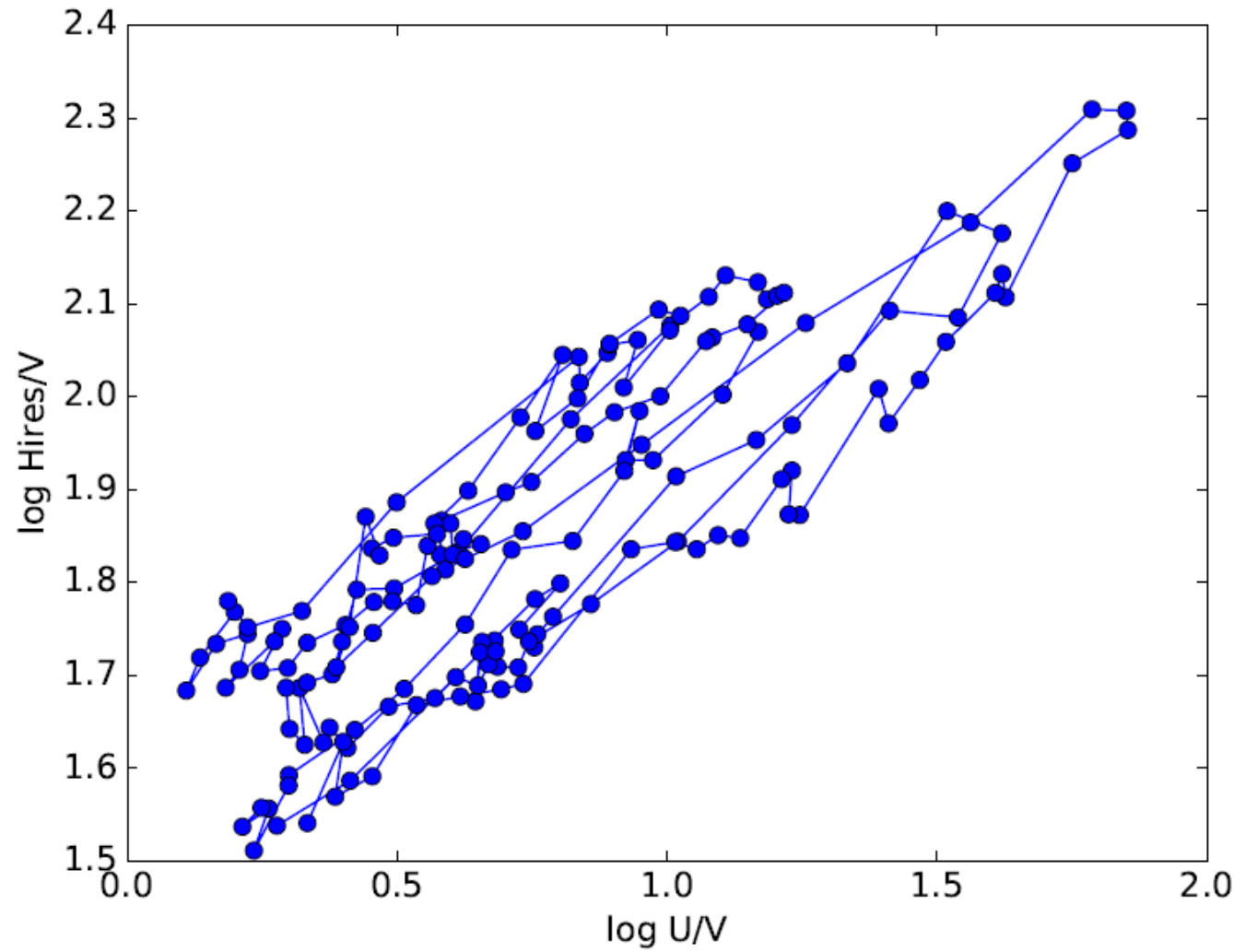
Net Change in Household Employment and Gross Hires



Source: Current Population Survey

Note: Shading shows NBER recessions.

Log Job-filling Rate vs. Log Unemployment/Vacancies



(Quarterly Data, 1975Q3-2016Q1)

Hiring Function Regressions

$$\frac{H[U, V]}{V} = A \left(\frac{U}{V} \right)^\alpha$$

Hires	Start Date	A	α	α s.e.	R^2
UE+NE+EE	1975Q3	4.80	0.37	0.02	0.88
UE+NE+EE	1994Q1	5.16	0.31	0.02	0.92
JOLTS Hires	2001Q1	3.14	0.20	0.03	0.92

Source: BLS, JOLTS, Barnichon (2010), Fallick & Fleischman (2004)

Note: Quarterly Data, ends in 2016-Q1

As noted in Okun (1962),
the unemployment rate is at best
“a proxy variable for all the ways in
which output is affected by idle
resources.”

Okun, Arthur M. 1962. “Potential GNP: Its
Measurement and Significance,” *American Statistical
Association, Proceedings of the Business and Economics
Statistics Section*, pp. 98–104. Page 99.

Vacancies

- 20% of all new hires involve no formal vacancy or recruiting time by the employer

Faberman and Menzio (2010), from the 1982 wave of the Employment Opportunity Pilot Project Survey.

Vacancies

- 41.6% of hires took place at establishments with no recorded vacancy going into the month.
- In a model of daily hiring fitted to monthly data, 27.4% of hires would have taken place at establishments that filled vacancies too quickly to be in the data.

Davis, Faberman, and Haltiwanger (2013), JOLTS data from January 2001 through December 2006,

Hiring probability, hires by job status and search effort

Job status	Search activity	Percent hired	Hires, by job status	Hires, overall
Employed	No search	1.8%	77.6%	25.7%
	Search	11.3%	22.4%	7.4%
Not employed	Not in labor force (no search)	4.9%	63.1%	42.2%
	Unemployed (search)	29.1%	36.9%	24.7%

Note: Hires in March of survey years by February employment and search status. Surveys conducted in 1995, 1997, 1999, 2001, and 2005

Source: Carrillo-Tudela, C., Hobijn, B., Perkowski, P. and Visschers, L., 2015. Majority of hires never report looking for a job. FRBSF Economic Letter, 10. Table 1.

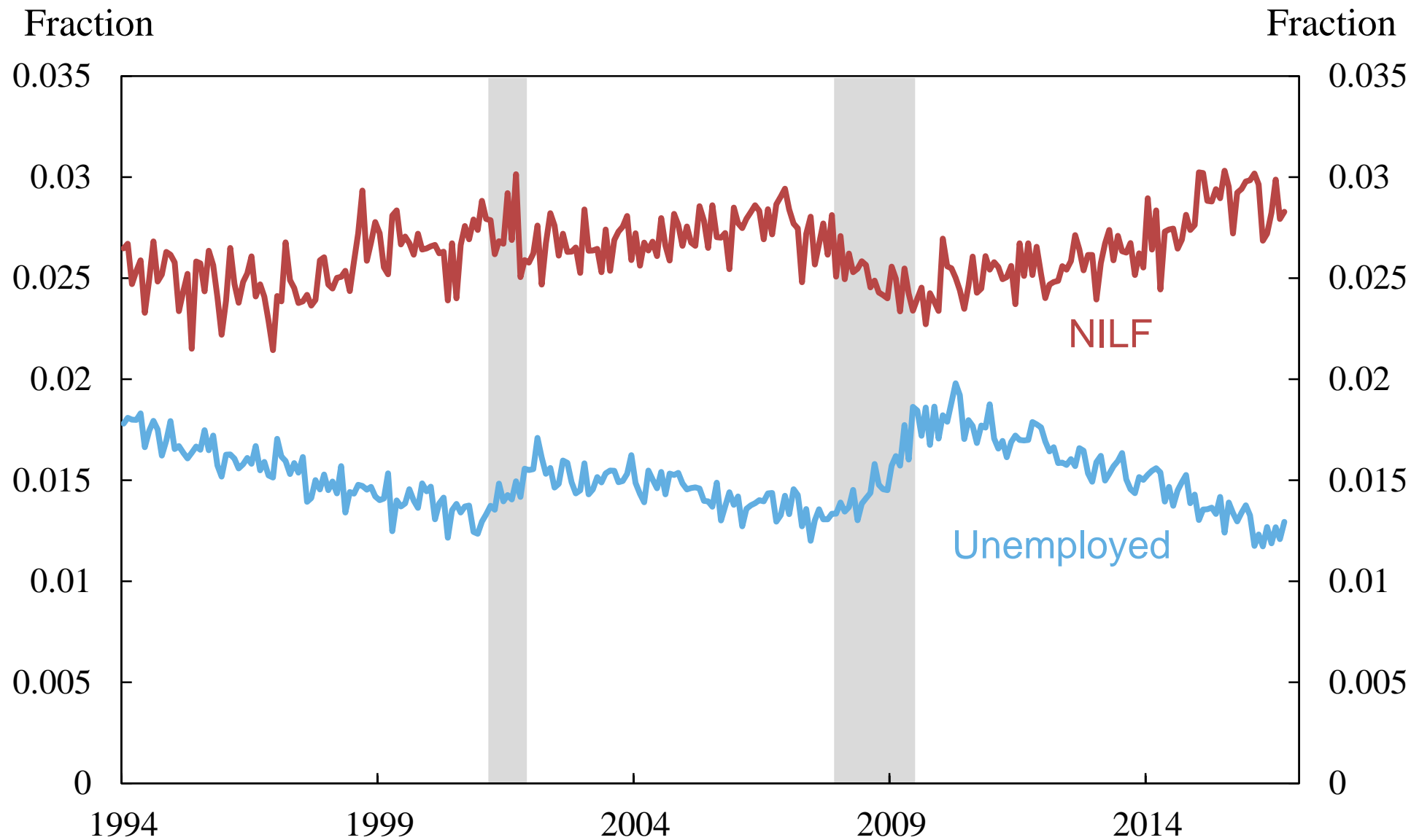
Search Effort and Outcomes by Labor Force Status

	Wants New Job	<i>Employed</i> Wants Addl. Job	Not Looking	Unemployed	OLF
Pct. of population	11.6	7.3	56.3	5.0	19.7
Pct. of offers received	26.3	21.2	28.1	13.1	11.3

Note: Estimates come from authors' tabulations from the SCE Labor Supplement for October 2013 and 2014, restricted to individuals aged 18-64.

Source: Faberman, R.J., Mueller, A., Sahin, A. and Topa, G., 2016. Job Search Behavior among the Employed and Non-Employed. *Federal Reserve Bank of New York, mimeo*. Table 5.

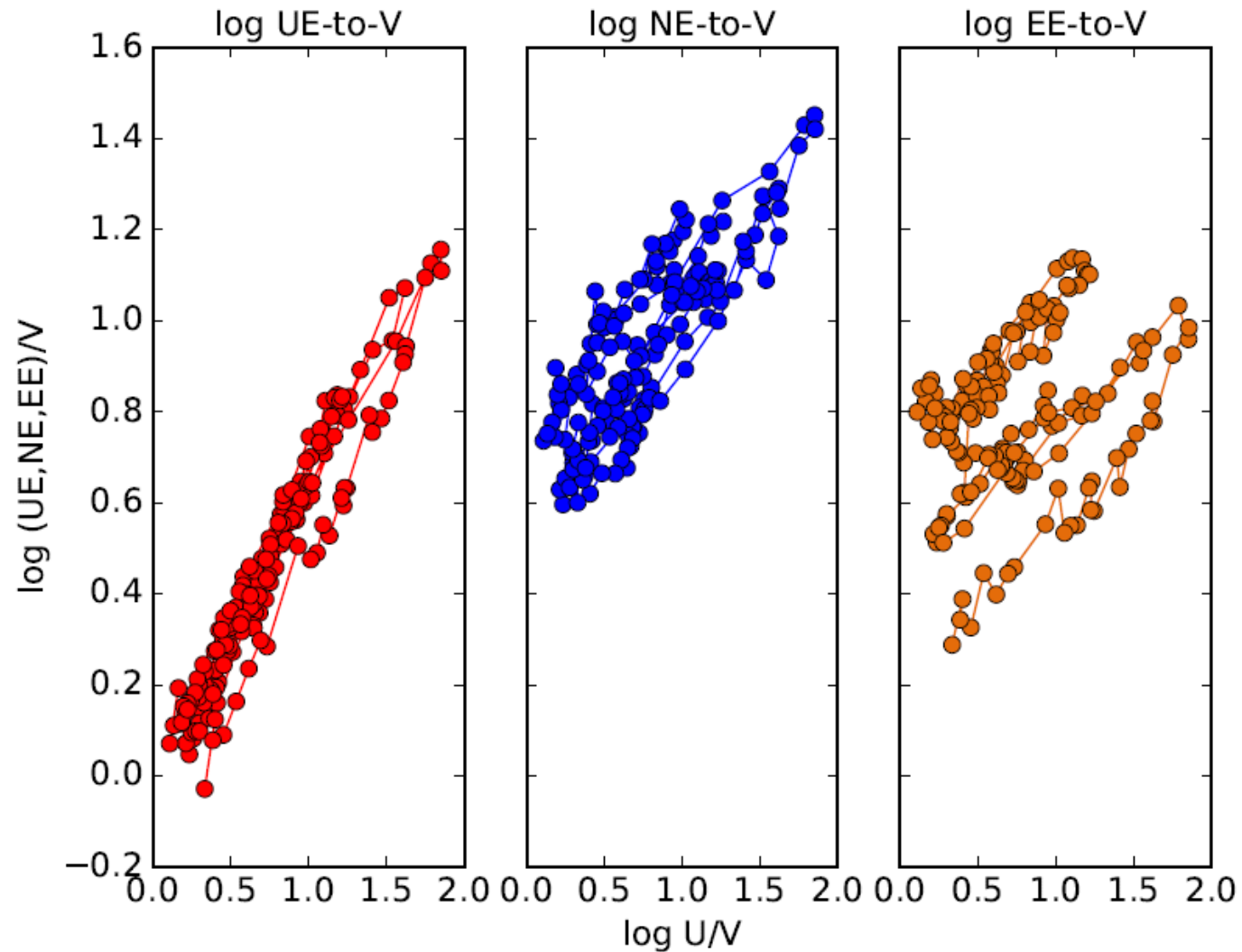
Hires from U and N as a Fraction of Employment



Source: Current Population Survey

Note: Shading shows NBER recessions.

Log Job-filling Rates by Source vs. Log Unemployment/Vacancies



(Quarterly Data, 1975Q3-2016Q1)

Separate Hiring Regressions

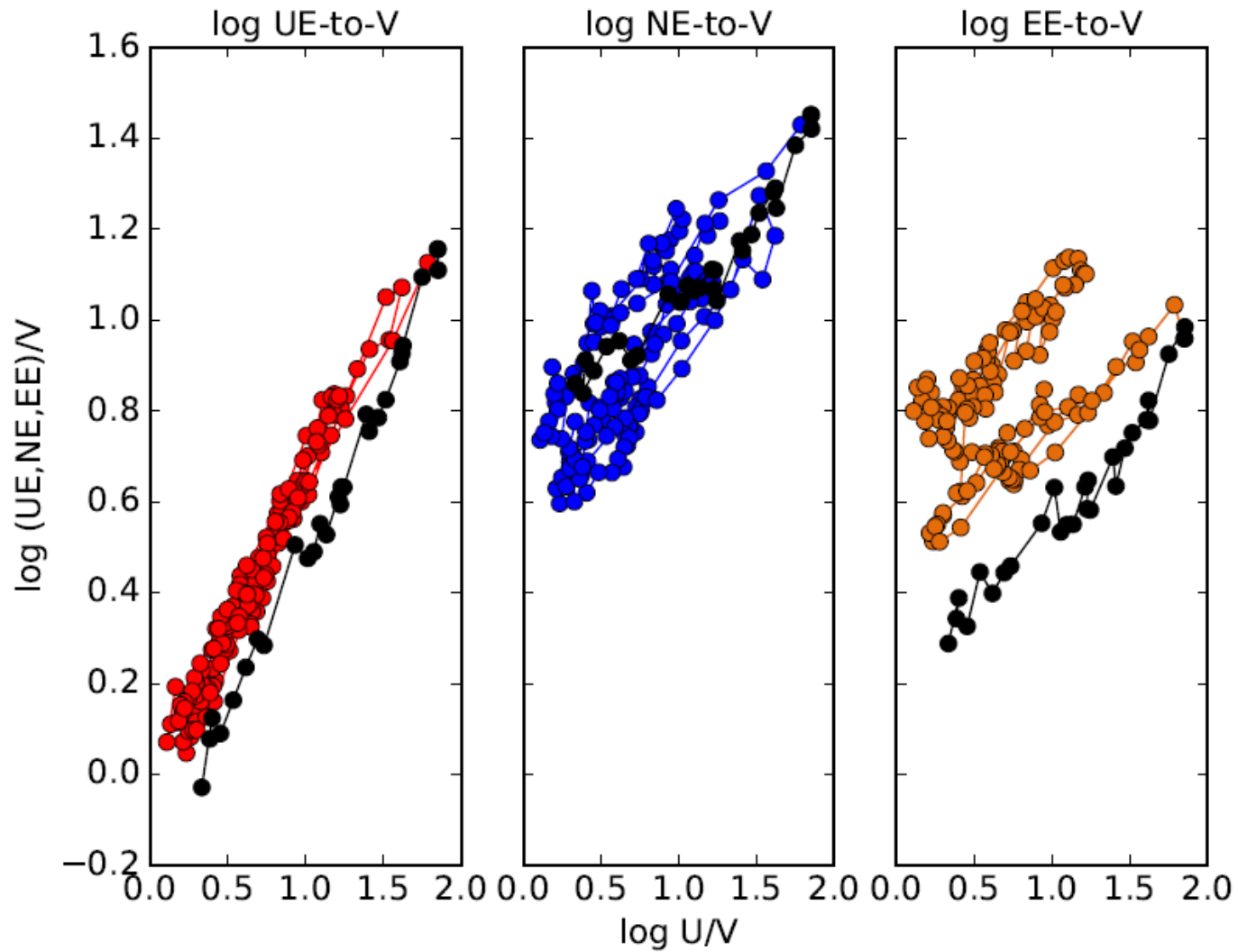
$$\frac{H[U, V]}{V} = A \left(\frac{U}{V} \right)^\alpha$$

Hires	Start Date	A	α	α s.e.	R^2
UE+NE+EE	1975Q3	4.80	0.37	0.02	0.88
UE	1975Q3	0.98	0.63	0.01	0.82
NE	1975Q3	1.89	0.40	0.02	0.84
EE	1975Q3	1.96	0.15	0.03	0.81
UE+NE+EE	1994Q1	5.16	0.31	0.02	0.92
UE	1994Q1	1.02	0.57	0.02	0.86
NE	1994Q1	2.07	0.36	0.02	0.92
EE	1994Q1	2.11	0.06	0.04	0.84

Source: BLS, JOLTS, Barnichon (2010), Fallick & Fleischman (2004)

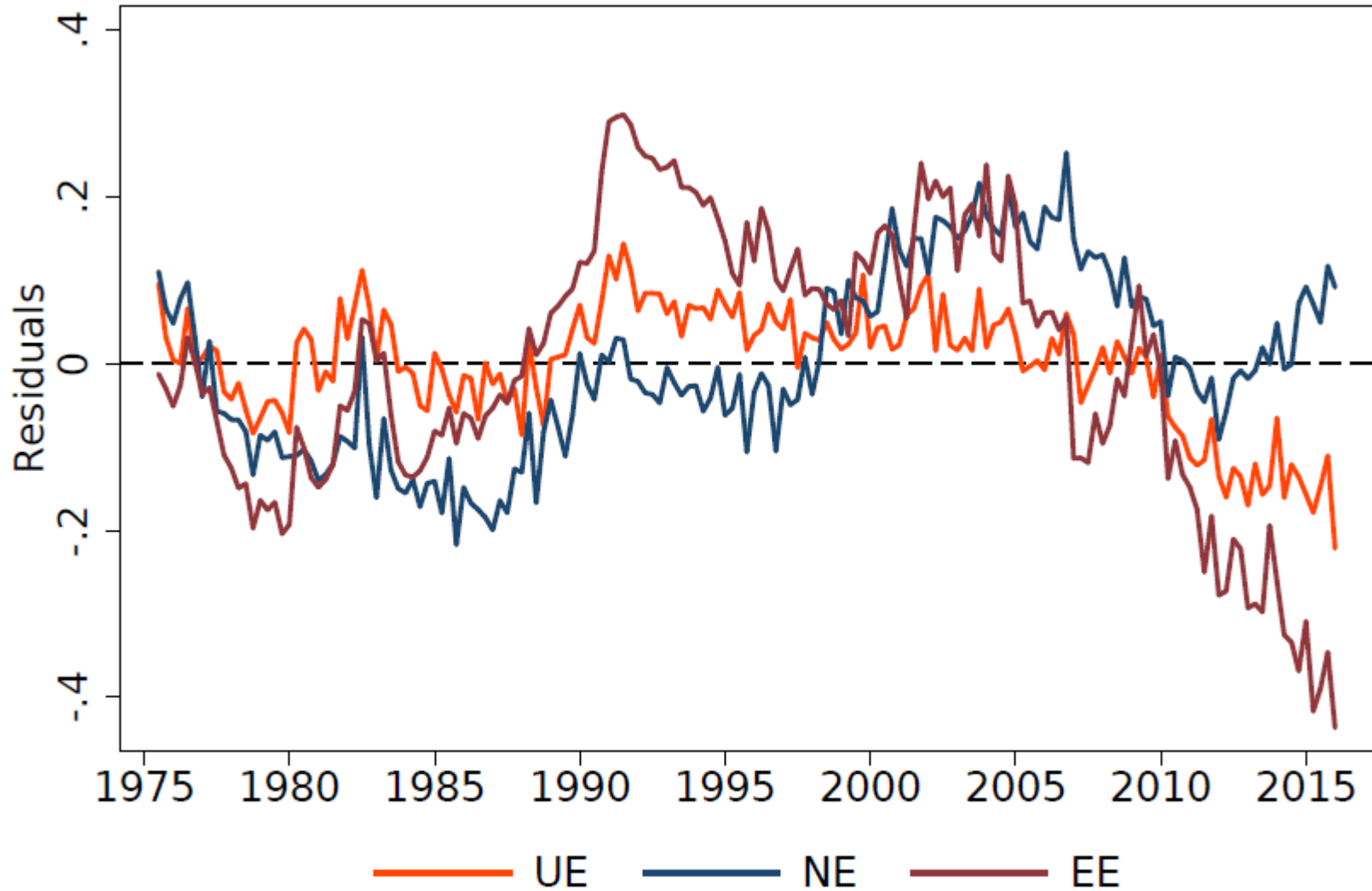
Note: Quarterly Data, ends in 2016-Q1

Log Job-filling Rates by Source vs. Log Unemployment/Vacancies, Observations Since 2009 Q3 in Black



(Quarterly Data, 1975Q3-2016Q1)

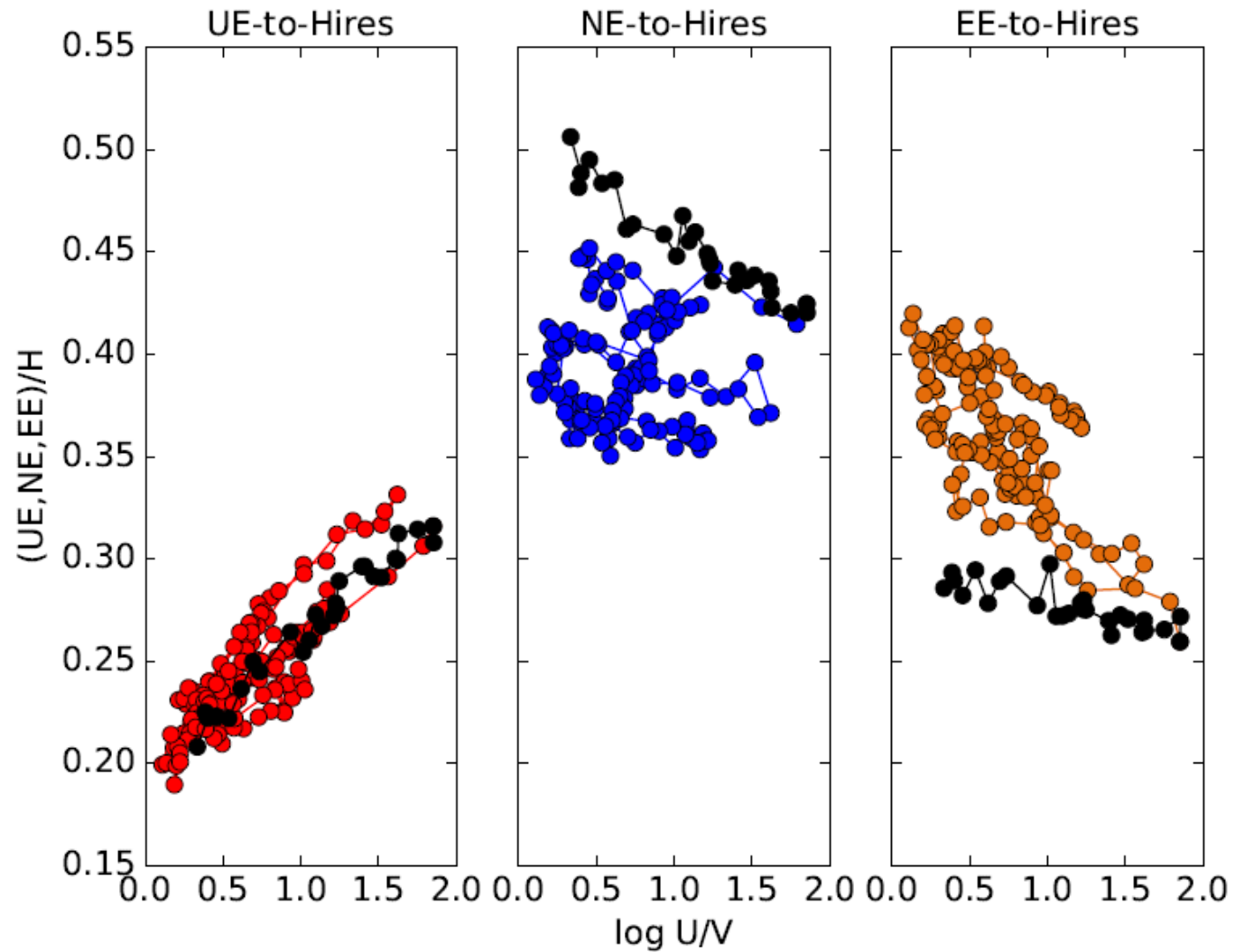
Matching Function Regression Residuals



Source: BLS, JOLTS, Barnichon (2010), Fallick & Fleischman (2004)

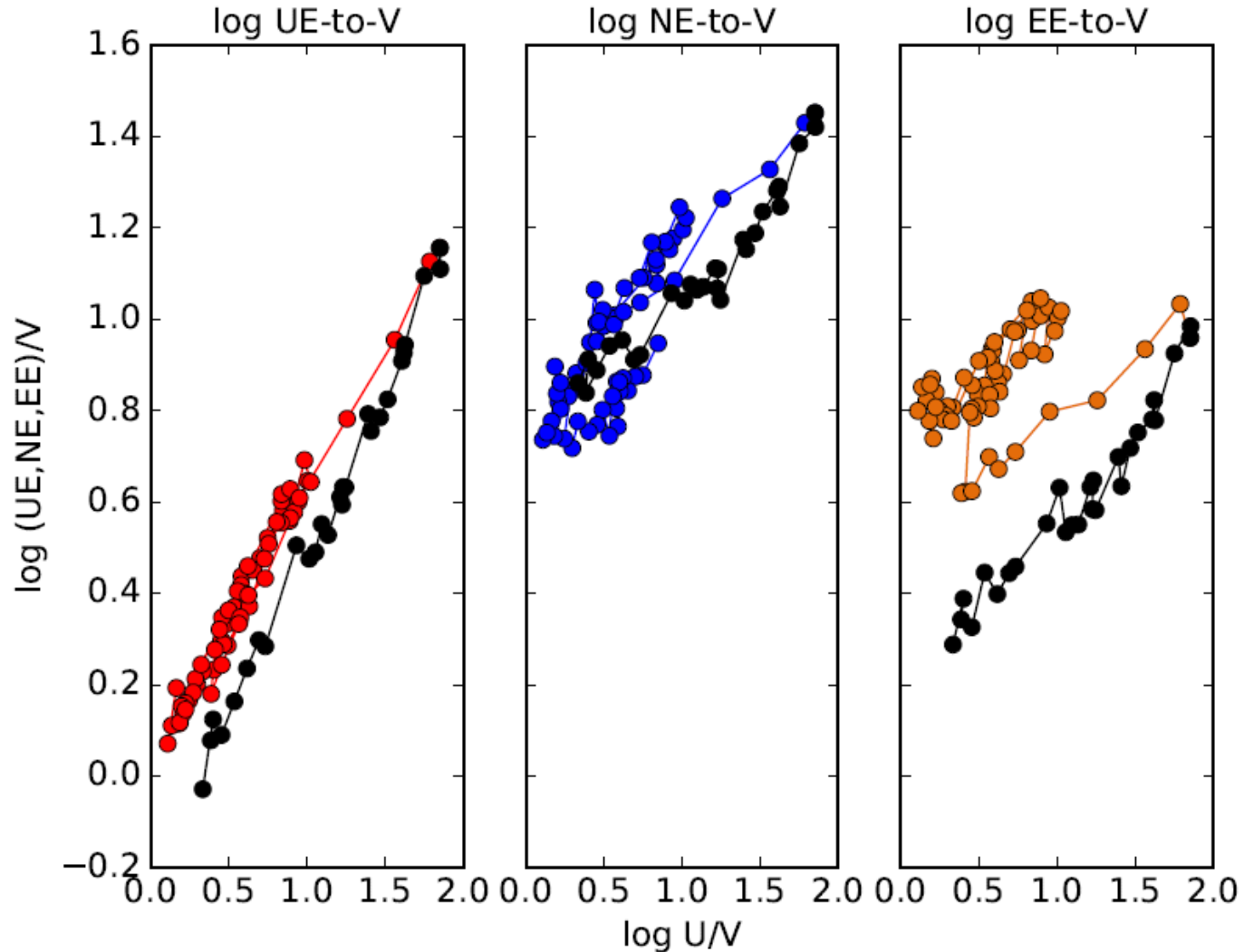
Note: Quarterly Data, 1975-Q3 - 2016-Q1

Fraction of Hires by Source vs. Log Unemployment/Vacancies, Observations Since 2009 Q3 in Black



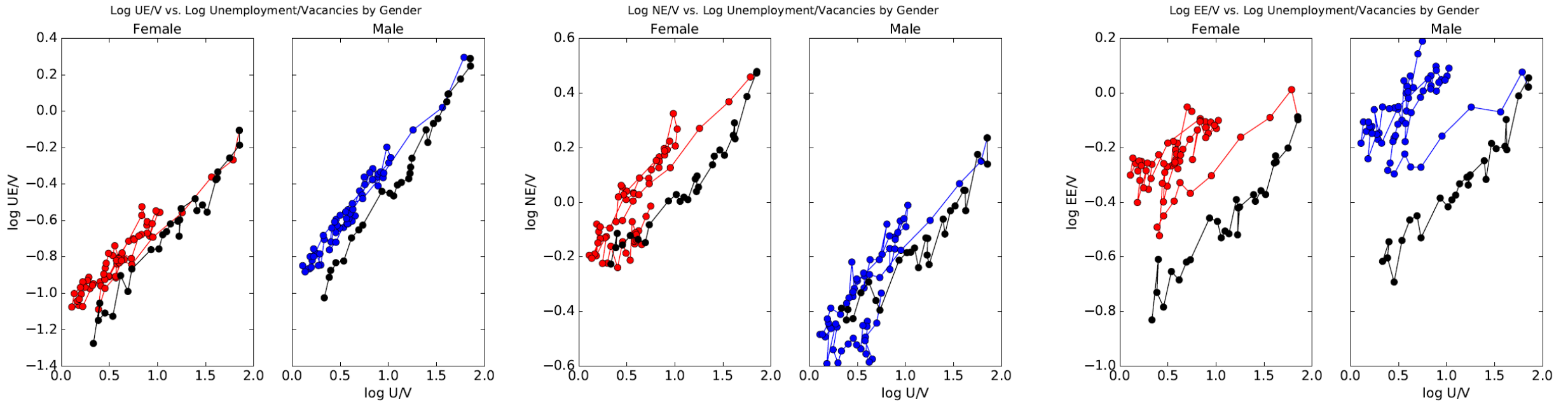
(Quarterly Data, 1975Q3-2016Q1)

Log Job-filling Rates by Source vs. Log Unemployment/Vacancies, Observations Since 2009 Q3 in Black



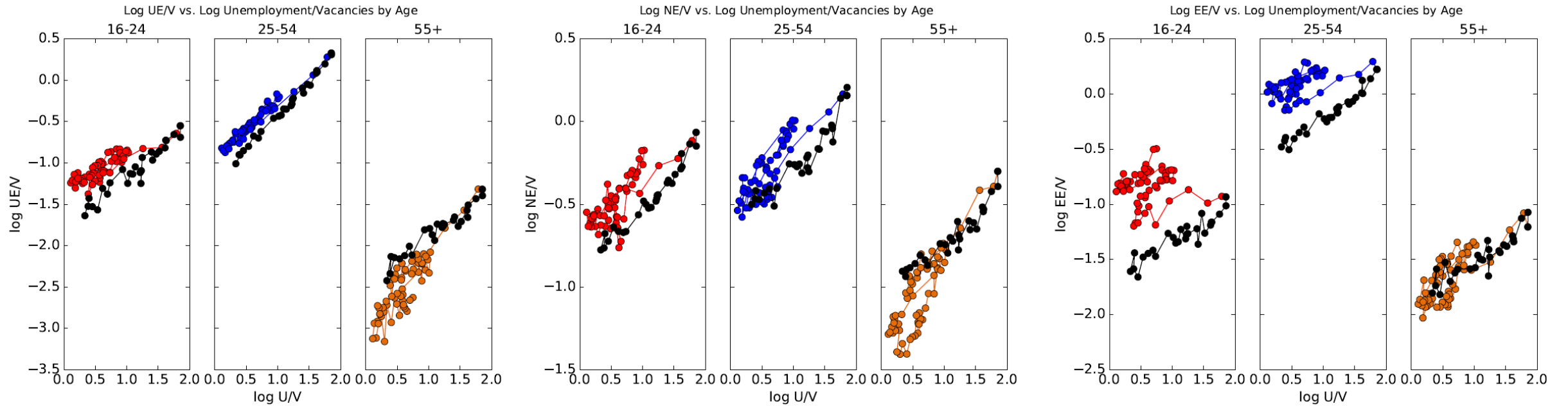
(Quarterly Data, 1994Q1-2016Q1)

Log job-filling rates by gender and log unemployment-vacancy ratio, Observations Since 2009 Q3 in Black



(Quarterly Data, 1994Q1-2016Q1)

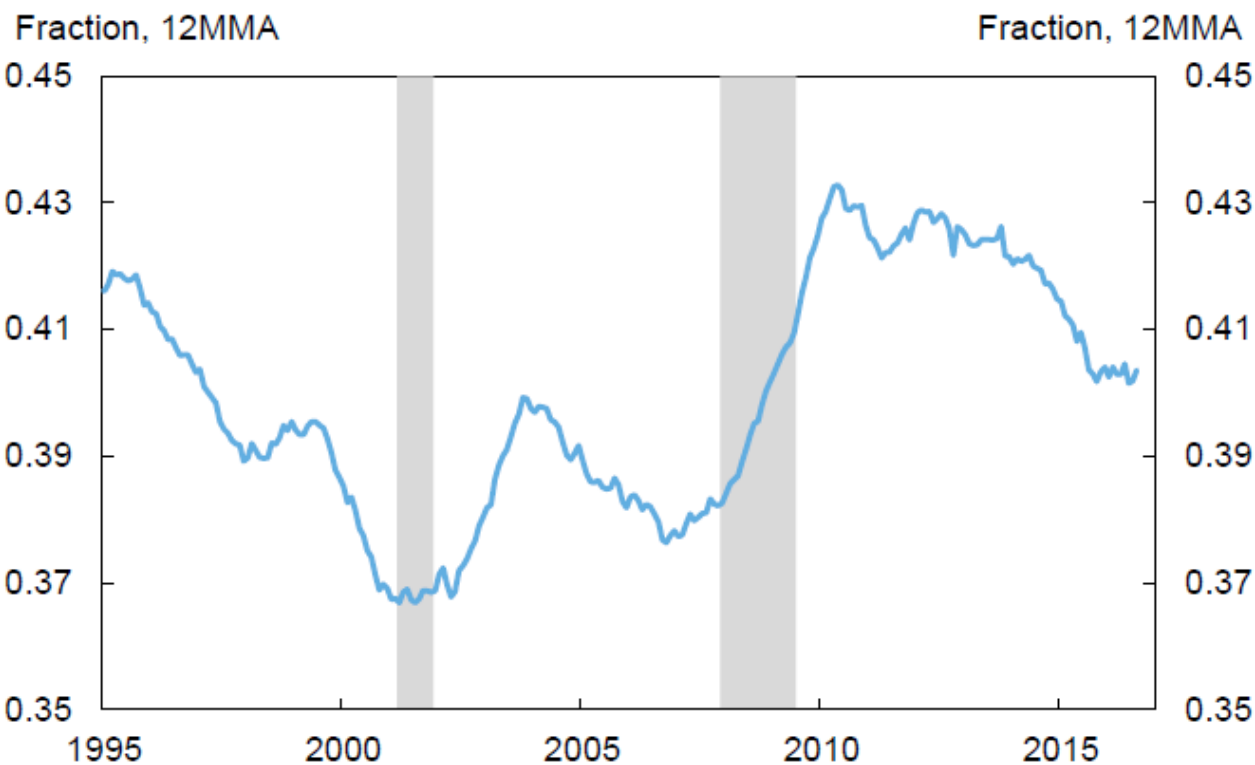
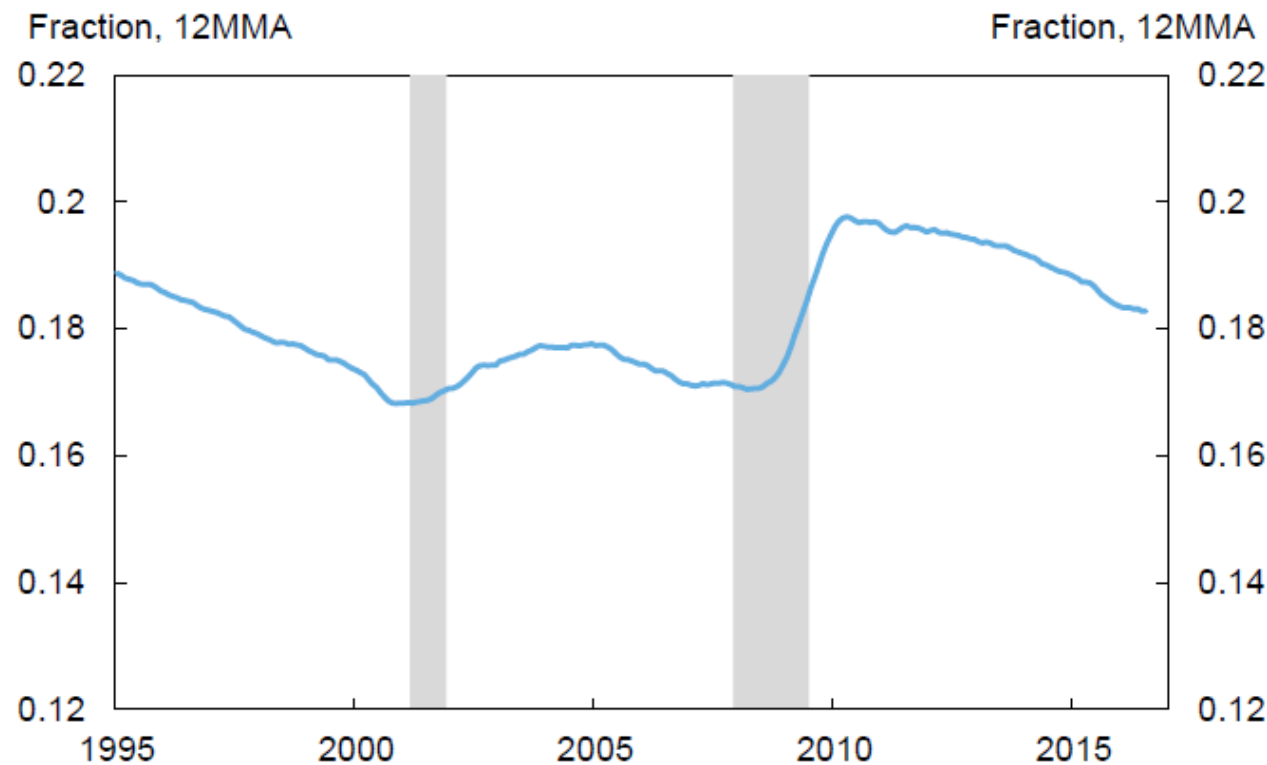
Log job-filling rates by age and log unemployment-vacancy ratio, Observations Since 2009 Q3 in Black



(Quarterly Data, 1994Q1-2016Q1)

Fraction of Total Employment that is Part-time

Fraction of Hires into Part-time Employment



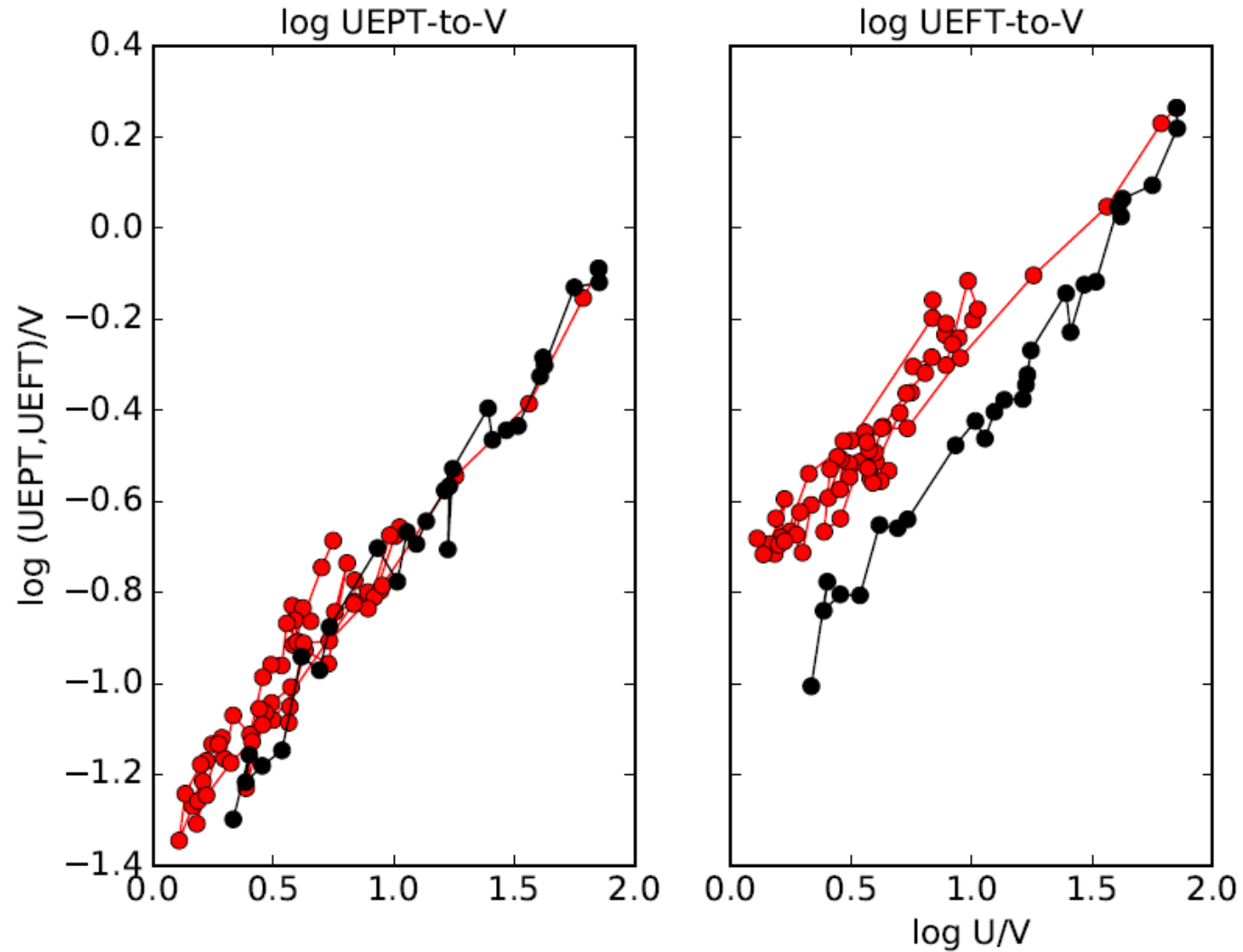
Source: Current Population Survey

Note: Shading shows NBER recessions.

Source: Current Population Survey

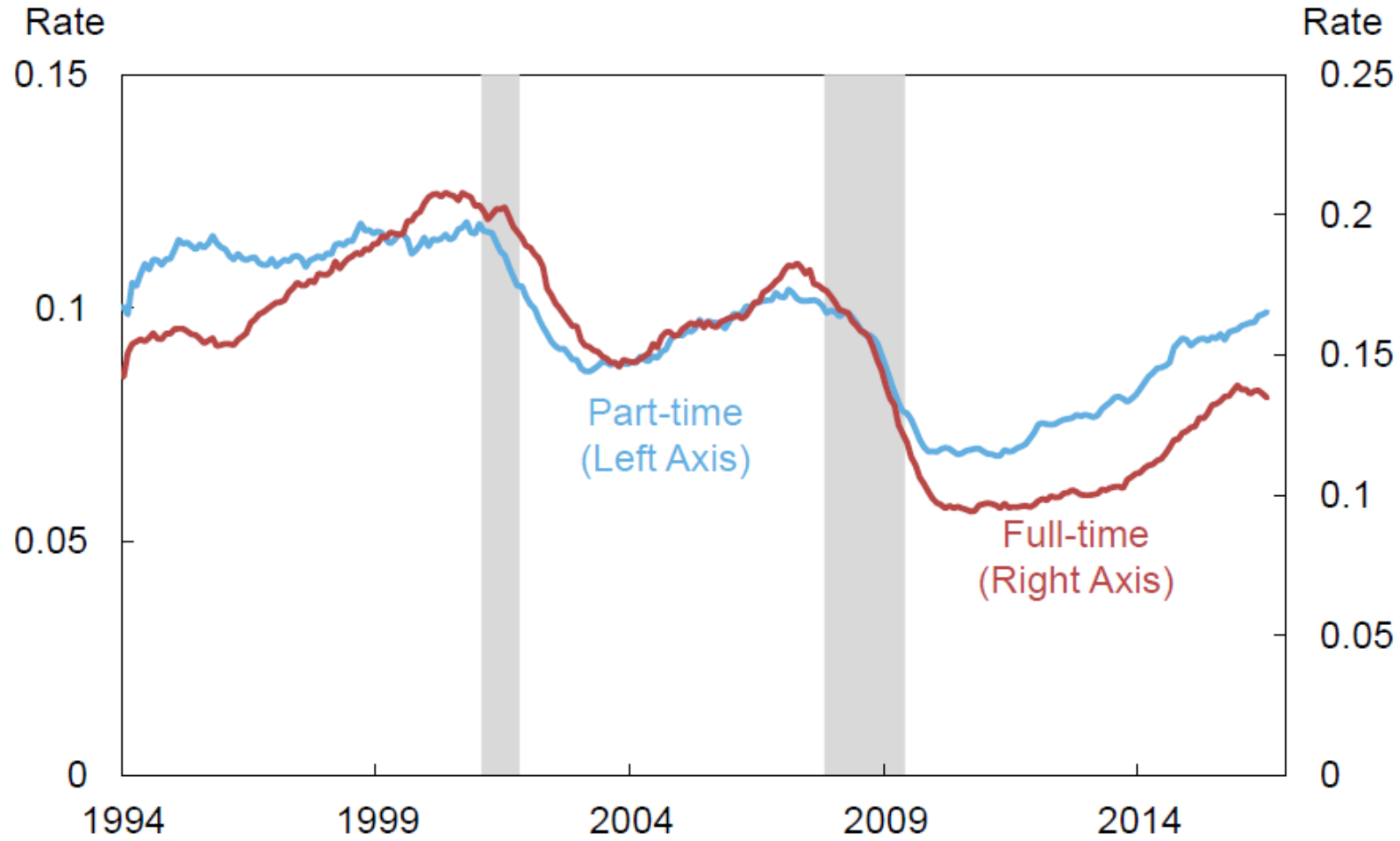
Note: Shading shows NBER recessions.

Log (UEPT,UEFT)/Vacancies and Log Unemployment/Vacancies Observations Since 2009 Q3 in Black



Note: Quarterly Data – 1994-Q1 - 2016-Q1
Source: BLS, JOLTS, Barnichon (2010)

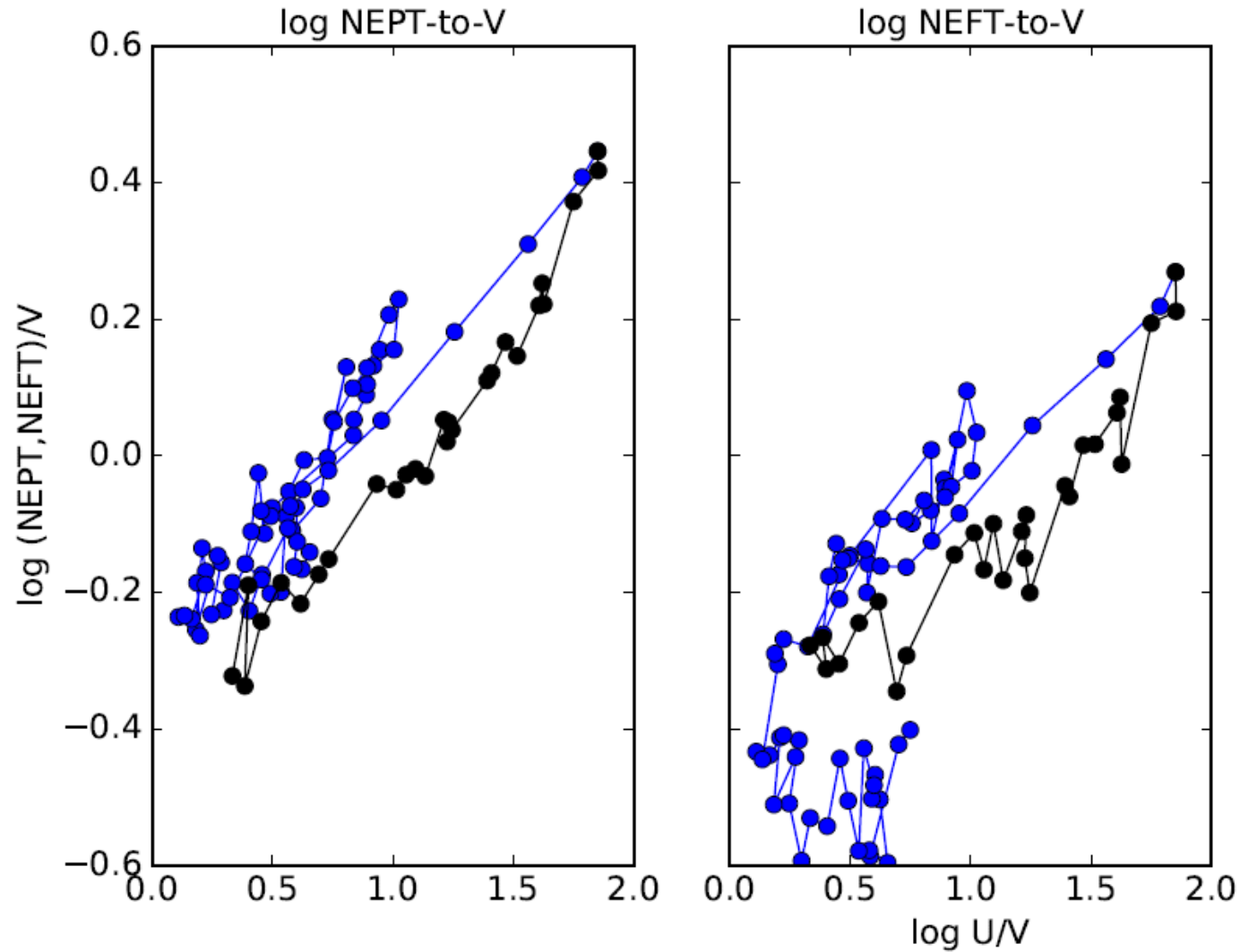
Unemployed to Employed Flow Rates, Part-time and Full-time



Source: Current Population Survey

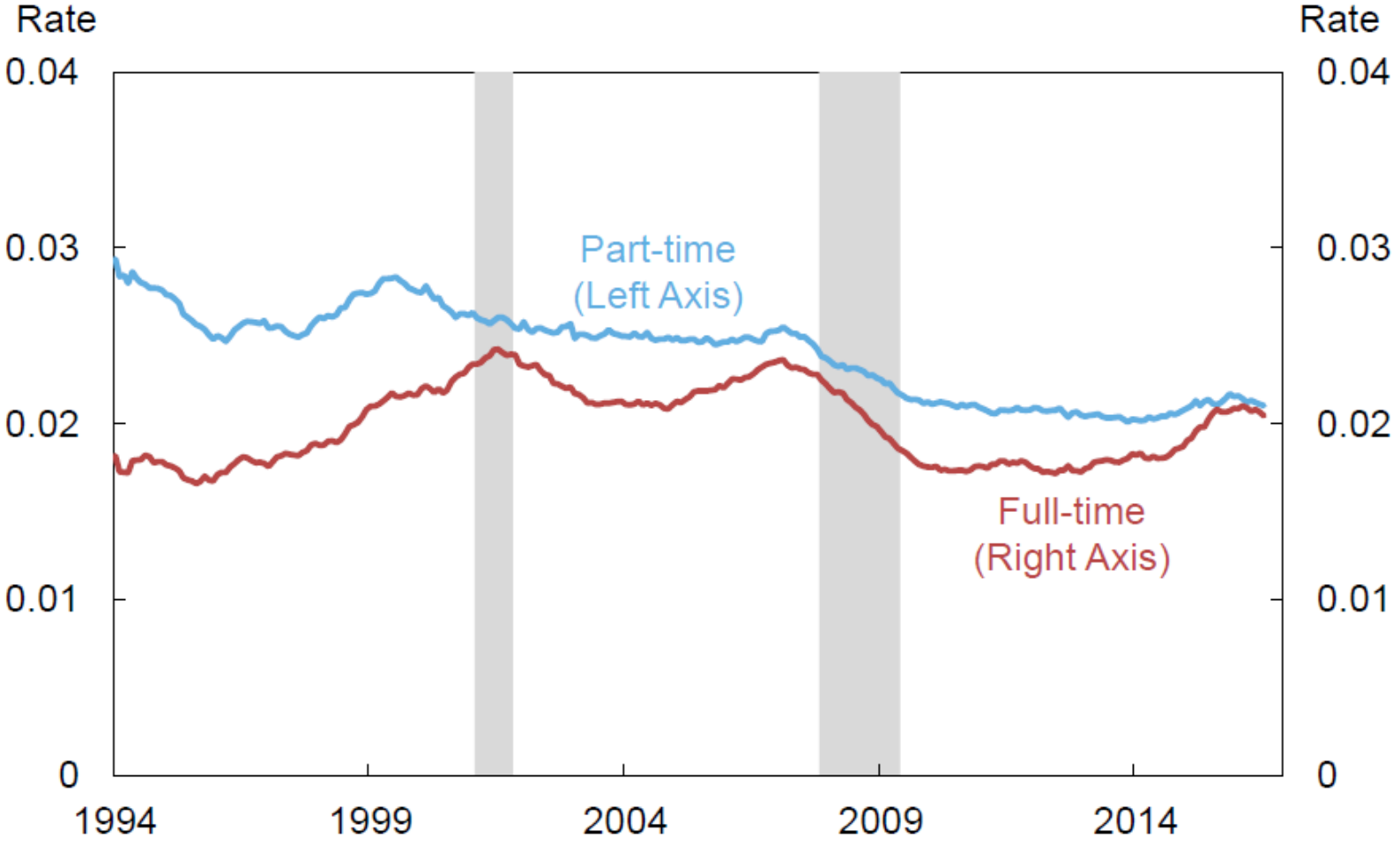
Note: Shading shows NBER recessions.

Log (NEPT,NEFT)/Vacancies and Log Unemployment/Vacancies Observations Since 2009 Q3 in Black



Note: Quarterly Data – 1994-Q1 - 2016-Q1
Source: BLS, JOLTS, Barnichon (2010)

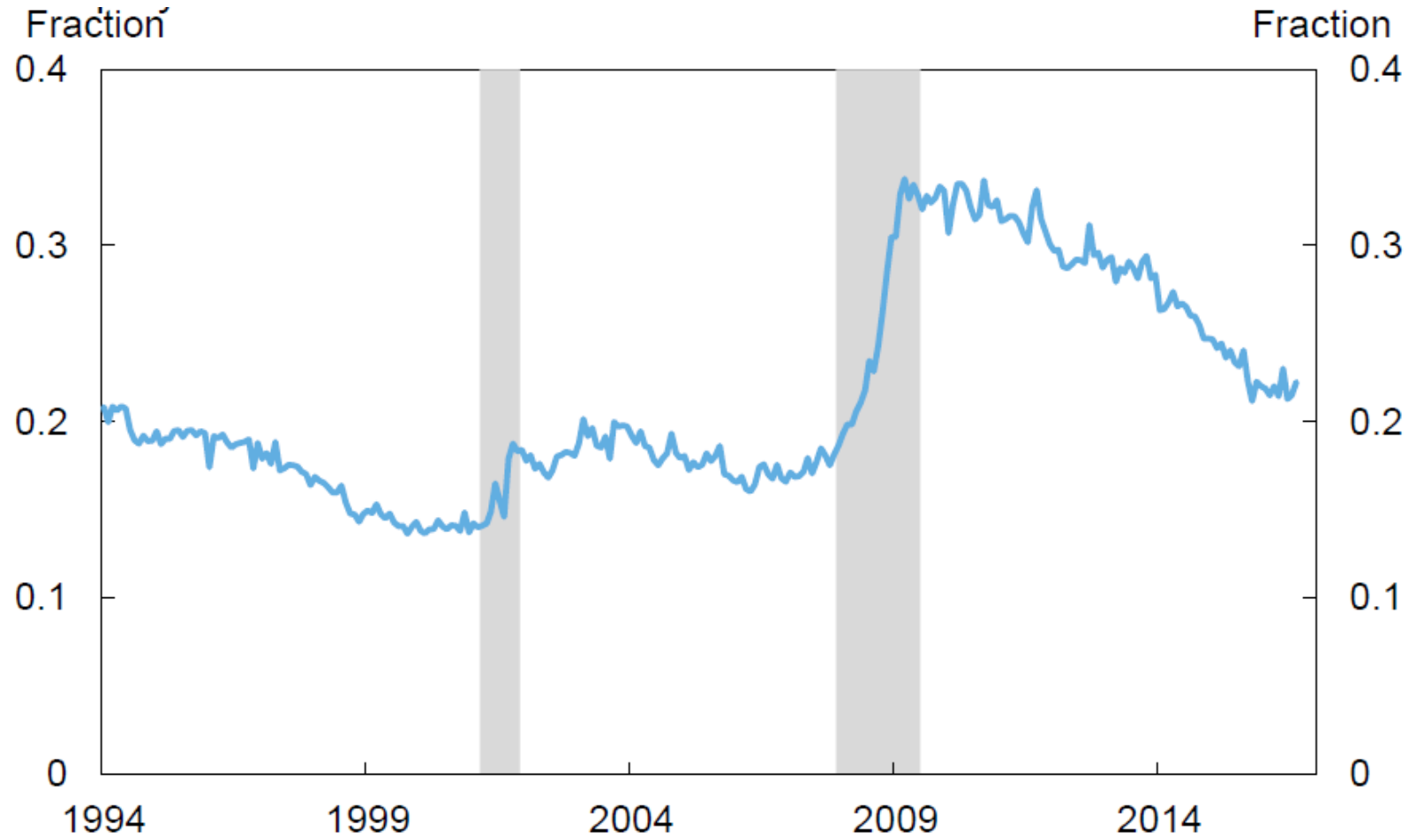
Not in the Labor Force to Employed Flow Rates, Part-time and Full-time



Source: Current Population Survey

Note: Shading shows NBER recessions.

Part-time for Economic Reasons as a Fraction of Part-time Employment



Source: Current Population Survey

Note: Shading shows NBER recessions.

it [is] necessary for man with his limited powers to go step by step; breaking up a complex question, studying one bit at a time, and at last combining his partial solutions into a more or less complete solution of the whole riddle.

...

Each exact and firm handling of a narrow issue, however, helps towards treating broader issues, in which that narrow issue is contained, more exactly than would otherwise have been possible.

Source: Alfred Marshall, 1920, *Principles of Economics*, eighth edition. New York: The Macmillan Company, 1948, page 366.