



Decomposing the Ins and Outs of Cyclical Unemployment

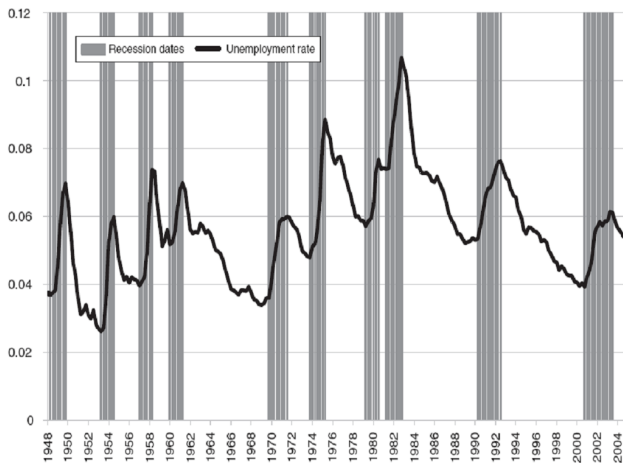
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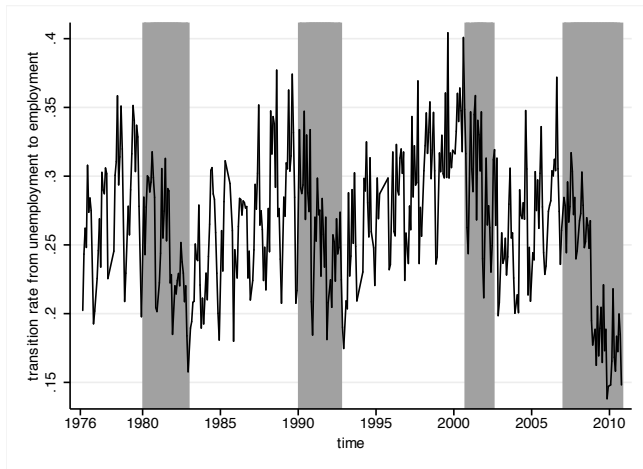
Cyclical unemployment



Elsby et al. 2009



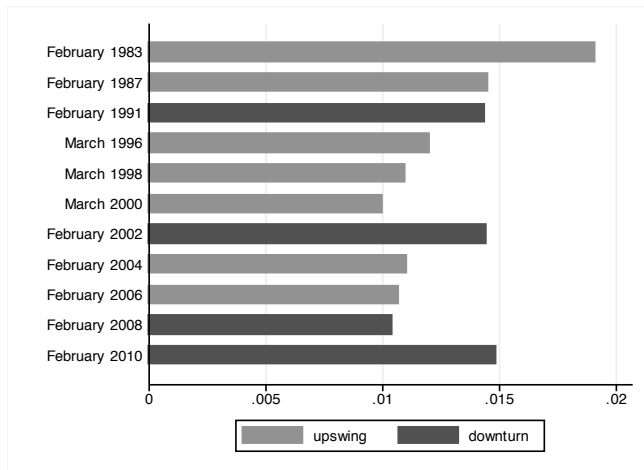
UE transition rate



CPS, own computation



EU transition rate



CPS, own computation



This paper:

- Focus on two particular flows: transition rate from unemployment to employment (“outs”) and from employment to unemployment (“ins”)
- Fully exploit the micro information available.
- Decompose the transition rates.

What we learn from decomposing the transition rate from unemployment to employment:

- The role of composition effects:
 - ▶ Are there more highly-educated workers in the pool of the unemployed during a recession?
 - ▶ How does the increased number of short-term unemployed workers in the pool of the unemployed affect labour market dynamics?
- The role of behavioural effects:
 - ▶ The “behaviour” of which groups drives the cyclical of labour market dynamics?
 - ▶ How does the “pay-off” to certain characteristics vary over the business cycle?

Literature

- macro studies - 'ins vs. outs' (CPS gross flows data): Darby, Haltiwanger, Plant (1986), Shimer (2007)/Hall (2005), Elsby et al. (2009), Fujita/Ramey (2009)
- micro studies on unemployment duration: Baker (1992), Dynarski/Sheffrin (1990)
- econometrics: Blinder (1973), Oaxaca (1973), Oaxaca/Ransom (1994); Fairlie (1999, 2003)

The data

Current Population Survey (CPS)

- Monthly survey
- Representative for the U.S. population
- Includes labour market status and unemployment duration
- Sample rotation: 4 months in, 8 out, 4 in
- Can match waves longitudinally
- Time period: 1976-2010

Sample construction

- focus on workers who
 - ▶ declare themselves unemployed
 - ▶ are in dependent-status employment, i.e. no self-employment.
- analyse transitions between these two labour market states
- only workers aged 16-64

Recessionary periods

- defined by evolution of unemployment, taking into account official definition of the NBER Business Cycle Dating Committee (cf. Elsby et al. 2009)

Empirical strategy

Blinder-Oaxaca decomposition

$$Y_0 = X_0' \beta_0 + \varepsilon_0 \quad (\text{Group 0: women/upswing}),$$

$$Y_1 = X_1' \beta_1 + \varepsilon_1 \quad (\text{Group 1: men/recession}),$$

$$R = \bar{Y}_1 - \bar{Y}_0 = C + E,$$

$$C = \bar{X}_1' (\hat{\beta}_1 - \beta^*) + \bar{X}_0' (\beta^* - \hat{\beta}_0),$$

$$E = (\bar{X}_1 - \bar{X}_0)' \beta^*.$$

Note: group membership can change over time in the business cycle application.

How we proceed:

- 1 run regression for probability of transition from unemployment to employment
- 2 decompose regression results
 - 1 decomposition of raw difference into endowment and coefficient effects
 - 2 decomposition of raw difference into endowment and coefficient effects according to variable groups (duration classes, age classes, ...)
 - 3 decomposition of raw difference into endowment and coefficient effects for individual variables (e.g. workers aged 16-24, aged 25-54, aged 55-64).

	Upswing	Downturn
Job tenure	-0.00006*** (0.00001)	-0.00006*** (0.00001)
Male	0.00196*** (0.00050)	0.00312*** (0.00069)
White	-0.00122 (0.00081)	-0.00026 (0.00106)
Age 16-24 years	0.00292* (0.00143)	0.00430* (0.00211)
Age 25-44 years	-0.00223** (0.00085)	-0.00307* (0.00125)
High school	0.00169 (0.00099)	0.00093 (0.00143)
Some college	-0.00158 (0.00107)	-0.00178 (0.00154)
Higher college	-0.00637*** (0.00078)	-0.00719*** (0.00116)
College	-0.00437*** (0.00117)	-0.00639*** (0.00159)

	Upswing	Downturn
Unemp. dur.	-0.00288*** (0.00007)	-0.00257*** (0.00006)
Male	0.01590*** (0.00175)	0.01004*** (0.00190)
White	0.03938*** (0.00196)	0.02693*** (0.00213)
Age 16-24 years	0.00281 (0.00274)	0.00378 (0.00306)
Age 25-44 years	0.01298*** (0.00238)	0.01046*** (0.00261)
High school	-0.00035 (0.00315)	-0.00907** (0.00331)
Some college	0.01514*** (0.00385)	-0.00303 (0.00398)
Higher college	0.01245** (0.00437)	0.01827*** (0.00452)
College	0.01202* (0.00593)	0.01558* (0.00605)

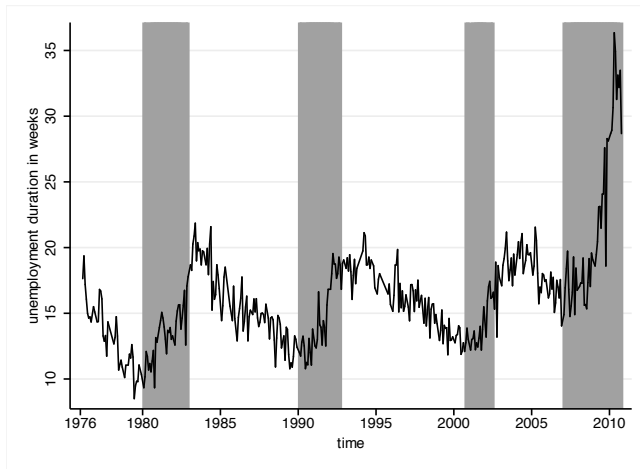
Decomposition of inflow rate

	Coeff.	SD	Perc.
Raw gap	0.00224**	0.00086	100
Coefficient effect	0.00286***	0.00086	127.8
Endowment effect	-0.00062***	0.00009	-27.8

Decomposition of inflow rate: group effects

		Coefficients	SD	Perc.
Coefficients	Tenure	-0.00008	0.00078	-3.7%
	Education	-0.00033	0.00052	-14.8%
	Age	-0.00044	0.00079	-19.8%
	Gender	0.00006	0.00004	2.7%
	Race	0.00067	0.00093	29.8%
	Constant	-0.00299	0.00198	133.5%
Endowments	Tenure	-0.00024***	0.00005	-10.6%
	Education	-0.00041***	0.00006	-18.4%
	Age	0.00002	0.00005	1.0%
	Gender	-0.00002	0.00002	-0.7%
	Race	0.00002***	0.00002	1.0%

Unemployment duration



CPS, own computation

Decomposition of outflow rate 1976 - 2008

	Coeff.	SD	Perc.
Raw gap	-0.0133***	0.0038	100
Coefficient effect	-0.0156***	0.0040	117.3
Endowment effect	0.0023***	0.0002	-17.3

Decomposition of outflow rate 1976-2010

	Coeff.	SD	Perc.
Raw gap	-0.05547***	0.00274	100
Coefficient effect	-0.04676***	0.00273	84.3
Endowment effect	-0.00872***	0.00065	15.7

Decomposition of outflow rate: group effects

		Coefficients	SD	Perc.
Coefficients	Duration	0.00263	0.00192	-4.7
	Education	-0.00091	0.00173	1.6
	Age	-0.00046	0.00051	0.8
	Gender	-0.00067*	0.00030	1.2
	Race	-0.00543***	0.00144	9.8
	Months	0.00068*	0.00032	-1.2
	Constant	-0.04260***	0.00438	76.8
Endowments	Duration	-0.01009***	0.00047	18.2
	Education	0.00198***	0.00020	-3.6
	Age	-0.00124***	0.00019	2.2
	Gender	0.00093***	0.00013	-1.7
	Race	0.00068***	0.00021	-1.2
	Months	-0.00098**	0.00030	1.8

Group details: Endowments - outflows

	Coefficients	SD	
Duration	-0.01009***	0.00047	18.2
Less than high school	0.00156***	0.00016	-2.8
High school	-0.00005	0.00003	0.1
Some college	0.00006*	0.00003	-0.1
college	-0.0000***	0.00003	-0.1
Higher college	0.00029***	0.00007	-0.5
College	0.00013**	0.00005	-0.2
Age 16-24	-0.00011	0.00007	0.2
Age 25-44	-0.00026***	0.00006	0.5
Age 45-65	-0.00086***	0.00013	1.5
Male	0.00046***	0.00006	-0.8
Female	0.00046***	0.00006	-0.8
White	0.00034***	0.00010	-0.6
Non-White	0.00034	0.00010	-0.6

Conclusions

- generally, composition effects reduce the impact of the business cycle;
- behavioural effects (“payoffs to characteristics”) are key;
- behavioural effect relatively homogeneous across worker groups;
- job tenure and unemployment duration most important for inflow and outflow rate, respectively;
- result for inflow rate robust to dynamics during great recession;
- composition effects for outflow rate also dampening, but not for great recession.

Thank you very much for your attention!