Mixed signals: To what extent does Wage Scarring vary with the characteristics of the local labour market?

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Outline

Wage Scarring.

What is Wage Scarring?
Long-term impact of individual unemployment experience(s), hypothesised to:

$\Rightarrow \uparrow$ likelihood of future unemployment,

$\Rightarrow \downarrow$ future earnings potential.

Empirical Strategy: (Control for..)
Individual characteristics; Selection bias;
Unobserved heterogeneity; State Dependance ;
Duration Dependance

Potential Mechanisms: Human Capital theory (Becker, 1962)

Motivation

State dependence

Paper	Data	Key Findings
AP(1989)	US DWS	1.5% nxt. job (p/year tenure)
HvA(1995)	Canadian DWS	2.0% nxt. job (p/year tenure)
Ruhm (1991)	PSID	16-18%, no recovery
JLS(1993)	Pennsylvanian Admin. Data	25% 5 years later.
GJ(2001)	NESPD-JUVOS	10% - 2% 3 years+.
Ar(2001)	BHPS	U: 6-14% 4 years+; OLF: 8.6-13.6% up to 3 years; NON-EMP: 6.4-10% 4 years+.
Kunze (2002)	Regional IAB	U: No penalty; OLF: 1% LR penalty (German males)

Duration dependence: US DWS studies - significant, 1.5% p/yr.

Gregory & Jukes (2001): 5% (6-months), 11% (12-months).

Arulampalam (2001): insignificant ,**but** low quality indicator.

Empirical Strategy:

The following flexible Mincerian Earnings function is estimated:

$$ln(w_{it}) = x'_{it}\beta + b'_{it}\varphi + c'_{it}\zeta + d'_{it}\gamma + \lambda_t + \alpha_{it} + \varepsilon_{it} \qquad (1)$$
$$, \forall\, i = 1 \ldots n, \ \forall\, t = 1 \ldots T$$

Where:

- w_{it} = Natural logarithm of *real* hourly wage, 1991 prices.
- b_{it} = Current employer tenure.
- c_{it} = Cumulative employment tenure.
- x_{it} = Vector of observed personal, workplace and regional characteristics, including tenure and experience.
- d_i = Dummy variable, taking the value 1 if individual i entered the current employment spell via a spell of interruption.
- λ_t = Time dummy.
- α_i = Time-invariant individual-specific error component.
- ε_i = Idiosyncratic error component.

Sample selection: Males 16-58, directly interviewed 1991, never in self-employment, left f/t education for 1st time, cont. present $\geq$ 2 waves. Wage eqn.: emp. $\geq$ twice.

Key Results

Research Questions

Test van Dijk & Folmer (1999) hypothesis.

> *Unemployment spells experienced in high unemployment regions seen as more of a characteristic of the region than a negative productivity signal (van Dijk & Folmer, 1999).*

+ Test importance of the regional dimension (Tight/Slack, Urban/Rural).

Table: Previous interruption (linear restriction).

	1991 - 1997	1991 - 2001
Previous labour market status:		
Inactivity	-0.116**	-0.096**
Unemployment	-0.087**	-0.100**

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

Key Results

Table: Time since interruption (ref. Previous employment).

	1991 - 1997	1991 - 2001
Previous unemployment:		
0-1 years	-0.053	-0.077**
1-2 years	-0.113**	-0.117**
2-3 years	-0.119**	-0.102**
3-4 years	-0.109**	-0.095**
4 years +	-0.125**	-0.125**
Previous inactivity:		
0-1 years	-0.67	-0.079**
1-2 years	-0.127**	-0.117**
2-3 years	-0.095	-0.052
3-4 years	-0.181**	-0.112**
4 years +	-0.178**	-0.114**

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

Key Results

Table: Reason for leaving prev. job:

Redundancy		-7%* (Non-linear w/age)		
	Age	[0,1)	[1,2)	[4,∞)
		1991 - 1997		
High U	<45	4.6%*	0.7%*	$\longrightarrow$ -2.6%*
	≥ 45	-8.2%**	-12.1%**	$\longrightarrow$ -15.4%**
Low U	<45	12%*	-1.1%*	$\longrightarrow$ -1.4%*
	≥ 45	-6.5%	-13.1%**	$\longrightarrow$ -13.4%**
		1991 - 2001		
High U	<45	0.7%*	-2.3%*	$\longrightarrow$ -3%*
	≥ 45	-9.4%**	-12.4%**	$\longrightarrow$ -13.1%**
Low U	<45	3.2%*	-1.5%*	$\longrightarrow$ -2.3%*
	≥ 45	-8%**	-12.7%**	$\longrightarrow$ -13.5%**

Underline: Not significantly different to average penalty (displayed).
* Significant at $\geq$ 10% level.
**Significant at $\geq$ 10% level, av. penalty insignificant.

Key Results

Table: Reason for leaving prev. job:

Redundancy		-7%* (Non-linear w/age)		
	Age	[0,1)	[1,2)	[4,∞)
		1991 - 1997		
Urban	<45	7%	-10%**	$\longrightarrow$ -9.3%**
	≥ 45	-2%	-10%**	$\longrightarrow$ -9.3%**
Rural	<45	2.2%*	5.1%*	$\longrightarrow$ -0.3%*
	≥ 45	-19.3%**	-16.4%**	$\longrightarrow$ -21.8%**
		1991 - 2001		
Urban	<45	7.7%	-11.1%**	$\longrightarrow$ -9.8%**
	≥ 45	-3.5%	-11.1%**	$\longrightarrow$ -9.8%**
Rural	<45	0.6%*	2.1%*	$\longrightarrow$ -3%*
	≥ 45	-30.5%*	-29%*	$\longrightarrow$ -34.1%*

Underline: Not significantly different to average penalty (displayed).
* Significant at $\geq$ 10% level.
**Significant at $\geq$ 10% level, av. penalty insignificant.

Key Results

Table: Reason for leaving prev. job:

Redundancy		-7%* (Non-linear w/age)		
	Age	[0,1)	[1,2)	[4,∞)
		1991 - 1997		
Tight	<45	9.5%	-9.1%**	$\rightarrow$ -12.1%**
	≥ 45	-8.4%	-9.1%**	$\rightarrow$ -12.1%**
Slack	<45	4%*	-0.2%*	$\rightarrow$ 0.7%*
	≥ 45	-12.9%**	-17.1%**	$\rightarrow$ -16.2%**
		1991 - 2001		
Tight	<45	-8.4%	-9.2%**	$\rightarrow$ -11.02%**
	≥ 45	-9.4%*	-18.6%*	$\rightarrow$ -20.6%*
Slack	<45	1.5%*	-3.2%*	$\rightarrow$ -2.6%*
	≥ 45	-11.6%**	-16.3%**	$\rightarrow$ -15.7%**

Underline: Not significantly different to average penalty (displayed).
* Significant at $\geq$ 10% level.
**Significant at $\geq$ 10% level, av. penalty insignificant.

Summary

- Strong evidence of wage scarring, no sign of recovery
- Strong regional differences, but no evidence supporting van Dijk & Folmer (1999) hypothesis
- Robustness checks: F/Ed.$\surd$, S-Emp.$\surd$, Continuously present definition.$\surd$

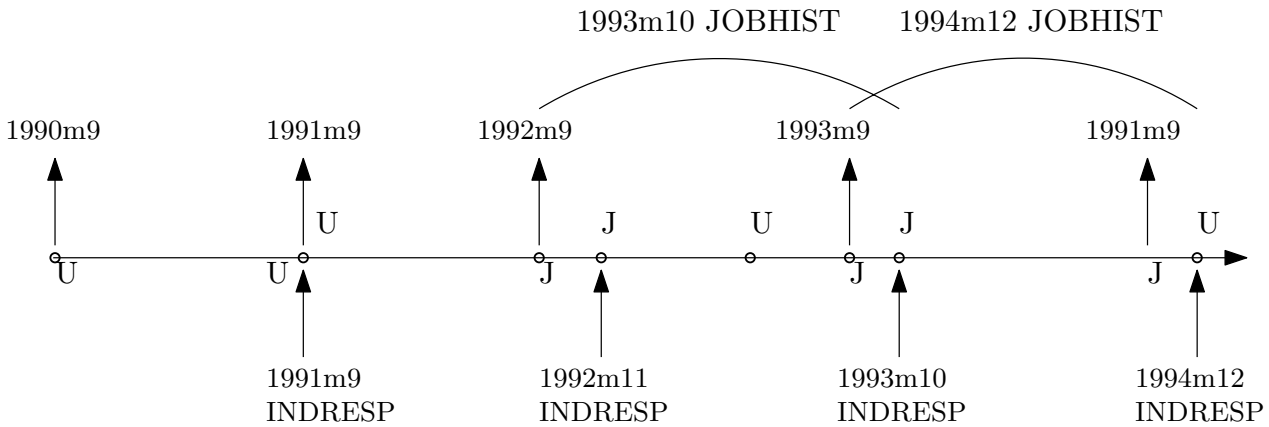
Possible Future Work

- $\Rrightarrow$ Female outcomes.
- $\Rrightarrow$ New labour market entrants + Wave 2 entrants.
- $\Rrightarrow$ Condition unemployment on whether registered.
- $\Rrightarrow$ Part-time vs. full-time re-employment (Nazarov, 2009)

Thank you!!!

Illustration of overlapping data structure:

Figure: BHPS Data Structure: Time line showing data collection points and data source coverage.



Retrospective info. collected at Waves 2 & 3, but not straightforward to reconcile.

Potential issues: false negatives (Jürges,2007), spurious transitions, recall bias (likely to impact on OLF spells most. Paull, 2002, BHPS, heterogeneity by age & gender, recall has no impact on reported U spell length)

- Mantra:
  - *Rules-based approach* Priority given to information reported closest to event, e.g. Halpin(1997), Paull(2002), Upward(1999), Maré(2006).