

1)

가 () 가 가 가 1, 2
 , , 가
 () ,
 가 () 3 가 가

I.

1997 , 가
 가 ()
 가 가 가 ,
 가 가 가
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 가 가 가 가 ,
 가 가 가 가 ,
 가 가 () () ,
 , ()

1)

가

가 가 가 , 가
가

II.

Carrington(1993), Addison and Portugal(1989), Podgrusky and Swaim(1987)

Ruhm(1990)

가

(heterogeneous bias)

. Ong and Mar(1992)

(4)

, Kletzer(1996)

, Jacobson, LaLonde, and Sullivan(1993)

4

가

38%

6

) , , .

Parent(2000) Neal(1995) . Parent(2000)

() , Neal(1995)

(1992, 1995) ,

SIPP(th Study of Income and Program Participation)

가

Parent(2000) Neal(1995) 가

가

() 가

() 가

(Switcher) (Stayer) . (

) () 가 ,

III.

1, 2

가 8,277

[1] < 1> . 8,277

1998 1999 가

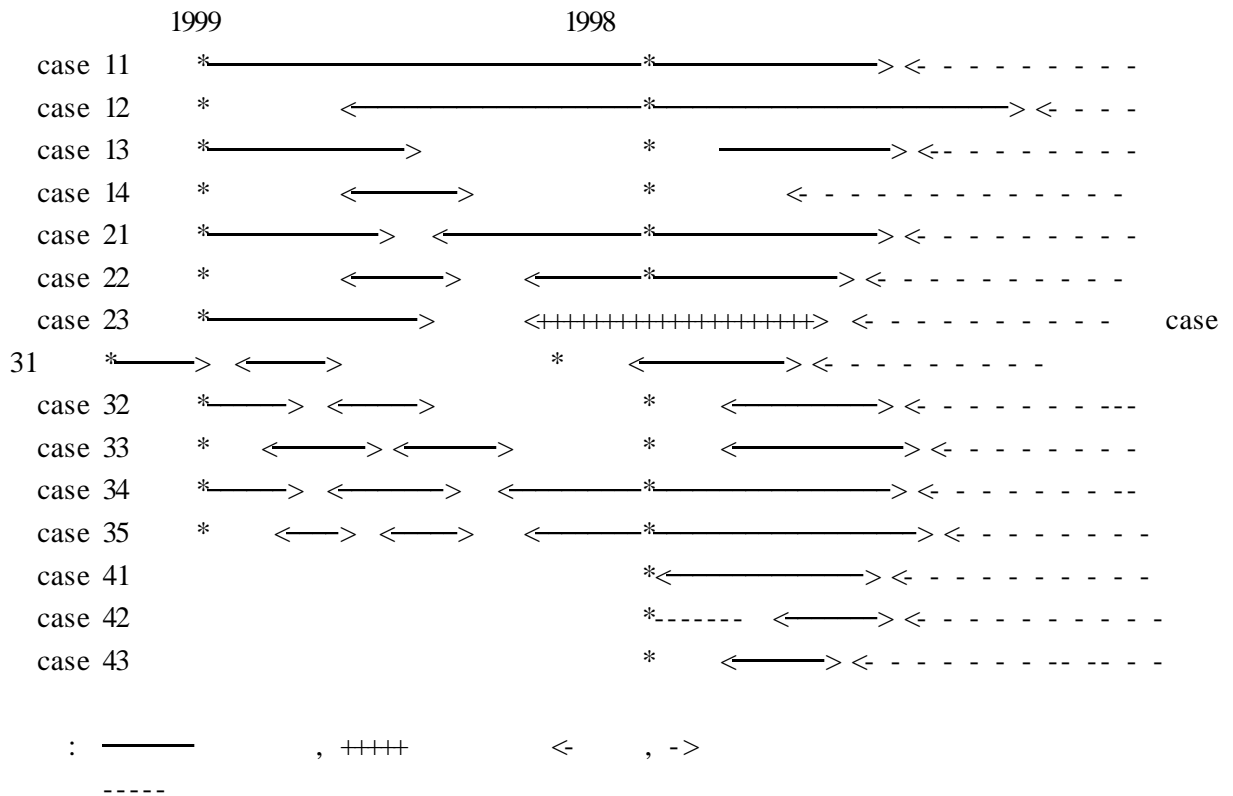
8,063 가 , , , ,

가 500 , 20

, 15 65 .

가 2,768 . 5,051 . 1999 가 2,283 , 1998

[1]



< 1>

11	2328	3527
12	602	284
13	515	219
14	383	0
21	136	443
22	79	17
23	64	40
31	45	4
32	32	19
33	30	0
34	11	24
35	11	1
40	4041	473
	8277	5051

< 2>

72.8%

< 2>

(, %)

		5051	3421	1630
	AGE()	36.3	37.8	33.2
	EDY()	12.8	13.1	12.1
	TEN()	6.7	7.6	4.7
	TXA()	11.6	13.4	7.8
1)	NXSC()	8.5	9.7	6.0
2)	NXSN()	8.7	9.9	6.1
3)	NXSC3()	7.7	8.8	5.5
4)	NXSN3()	7.9	9.0	5.5
	MRG	72.0	80.0	57.0
	O1	1.0	2.0	0.0
	O2	11.0	10.0	13.0
	O3	14.0	15.0	13.0
	O4	22.0	18.0	31.0
	O5	9.0	6.0	16.0
	O7	21.0	24.0	13.0
	O8	11.0	14.0	6.0
	MAF	33.0	35.0	30.0
	CON	5.0	6.0	3.0
	FNS	6.0	5.0	8.0
	SEV1	8.0	9.0	7.0
	SEV2	20.0	16.0	26.0
	DSF	14.0	12.0	18.0
	SG	27.0	30.0	22.0
	UN	29.0	32.0	21.0

1) 1= + , 2= + ,
 3= 3 + , 4= 3 + ,
 2) 500 =1. 0

$$\ln W_{ijkt} = \beta_1 Ten_{ijt} + \beta_2 Exp_{ijt} + \beta_3 IndExp_{ikt} + \xi_{ijt} \quad (1)$$

$$\xi_{ijt} = \alpha_i + \alpha_{ij} + \alpha_{ik} + \alpha_{ijt}$$

W_{ijkt} : t, i, K, j 가
 3). T, Exp, IndExp

(i) (ij)

(ik)

OLS, 가

OLS

(ik가) IndExp_{ikt}가

3

, 가

Altonji and Shakotko(1987)

(T_{ijt} - E(T_{ijt})),

(IndExp_{ijt} - E(IndExp_{ijt}))

4). 가 2

가, (completed job duration)

Abraham and Faber(1987)

가, i

ij, ik

< 5>

(OLS)

가

, 1

15% 0.85% 43%가

2.3% 1.7% 22%

3)

가 missing 가

4)

가 가 가, (ij)

가

가

3

NLSY PSID 가 Parent (2000)
 45%
 , 22%
 가 (transferable)

< 5> ()

5-1)

			1		3		1		3	
OJ	-0.0421	(0.0144)	-0.0446	(0.0143)	-0.043	(0.0143)	-0.0457	(0.0143)	-0.0428	(0.0143)
TEN	0.015	(0.0024)	0.0085	(0.0031)	0.002	(0.0035)	0.0091	(0.0030)	0.0019	(0.0034)
TENSQ	-0.0099	(0.0082)	-0.0085	(0.0105)	0.0139	(0.0117)	-0.0104	(0.0102)	0.0142	(0.0114)
TXA	0.0225	(0.0021)	0.0176	(0.0024)	0.0183	(0.0022)	0.0163	(0.0025)	0.0172	(0.0022)
TXASQ	-0.0524	(0.0055)	-0.0488	(0.0064)	-0.0452	(0.0060)	-0.0473	(0.0066)	-0.0431	(0.0061)
INDEXP			0.012	(0.0030)	0.0182	(0.0033)	0.0128	(0.0030)	0.0193	(0.0032)
INDESQ			-0.0045	(0.0099)	-0.0305	(0.0108)	-0.0044	(0.0099)	-0.0338	(0.0105)
R-square	0.5697		0.5762		0.5745		0.5768		0.5752	
N	5051		5051		5051		5051		5051	

1)

5-2)

			1		3		1		3	
OJ	-0.0454	(0.0188)	-0.0481	(0.0186)	-0.0463	(0.0187)	-0.0487	(0.0186)	-0.045	(0.0187)
TEN	0.0131	(0.0029)	0.0042	(0.0038)	-0.0071	(0.0046)	0.005	(0.0037)	-0.005	(0.0043)
TENSQ	0.0005	(0.0099)	0.0077	(0.0135)	0.0556	(0.0168)	0.0047	(0.0131)	0.0477	(0.0159)
TXA	0.0227	(0.0026)	0.0165	(0.0029)	0.0175	(0.0027)	0.015	(0.0030)	0.0166	(0.0027)
TXASQ	-0.0551	(0.0068)	-0.0466	(0.0077)	-0.0431	(0.0071)	-0.0449	(0.0079)	-0.0415	(0.0073)
INDEXP			0.0146	(0.0038)	0.026	(0.0045)	0.0154	(0.0038)	0.0247	(0.0043)
INDESQ			-0.015	(0.0132)	-0.0685	(0.0163)	-0.0143	(0.0130)	-0.062	(0.0154)
R-square	0.4546		0.4611		0.4648		0.4615		0.461	
N	3421		3421		3421		3421		3421	

5-3)

			1		3		1		3	
OJ	-0.0311	(0.0221)	-0.0325	(0.0220)	-0.0339	(0.0219)	-0.0334	(0.0220)	-0.0354	(0.0219)
TEN	0.0234	(0.0045)	0.0183	(0.0055)	0.0106	(0.0061)	0.0192	(0.0054)	0.0082	(0.0060)
TENSQ	-0.0230	(0.0152)	-0.0268	(0.0177)	-0.0135	(0.0185)	-0.0288	(0.0175)	-0.0082	(0.0182)
TXA	0.0166	(0.0035)	0.0148	(0.0043)	0.0158	(0.0040)	0.0143	(0.0045)	0.0139	(0.0041)
TXASQ	-0.0357	(0.0095)	-0.045	(0.0128)	-0.0467	(0.0124)	-0.0443	(0.0132)	-0.0421	(0.0124)
INDEXP			0.0082	(0.0053)	0.0155	(0.0056)	0.0077	(0.0055)	0.0197	(0.0056)
INDESQ			0.0087	(0.0162)	-0.0042	(0.0165)	0.0101	(0.0165)	-0.0137	(0.0163)
R- square	0.5101		0.5149		0.5172		0.5146		0.5189	
N	1632		1632		1632		1632		1632	

5-4)

			1		3		1		3	
OJ	-0.0288	(0.0335)	-0.0326	(0.0334)	-0.0356	(0.0335)	-0.0273	(0.0334)	-0.0305	(0.0335)
TEN	0.0165	(0.0053)	0.0002	(0.0076)	-0.0082	(0.0096)	0.0081	(0.0070)	0.0062	(0.0084)
TENSQ	-0.0344	(0.0174)	-0.0004	(0.0259)	0.0347	(0.0316)	-0.0281	(0.0238)	-0.0099	(0.0274)
TXA	0.0318	(0.0053)	0.0244	(0.0058)	0.0269	(0.0055)	0.0263	(0.0062)	0.0284	(0.0058)
TXASQ	-0.0594	(0.0152)	-0.0435	(0.0168)	-0.0455	(0.0159)	-0.056	(0.0181)	-0.0512	(0.0171)
INDEXP			0.0237	(0.0081)	0.03	(0.0097)	0.0137	(0.0077)	0.0135	(0.0087)
INDESQ			-0.0496	(0.0272)	-0.0832	(0.0321)	-0.0109	(0.0262)	-0.032	(0.0288)
R- square	0.4706		0.4761		0.4749		0.4751		0.4718	
N	1203		1203		1203		1203		1203	

5-5)

			1		3		1		3	
OJ	-0.0215	(0.0295)	-0.0234	(0.0294)	-0.0198	(0.0294)	-0.0243	(0.0294)	-0.0193	(0.0294)
TEN	0.0212	(0.0055)	0.0195	(0.0063)	0.0082	(0.0070)	0.0183	(0.0062)	0.0069	(0.0068)
TENSQ	-0.0378	(0.0218)	-0.0477	(0.0246)	-0.003	(0.0275)	-0.0434	(0.0243)	0.0021	(0.0271)
TXA	0.0085	(0.0037)	0.007	(0.0041)	0.005	(0.0039)	0.0053	(0.0042)	0.0039	(0.0039)
TXASQ	-0.0266	(0.0092)	-0.0285	(0.0104)	-0.0182	(0.0096)	-0.0251	(0.0105)	-0.0158	(0.0096)
INDEXP			0.0023	(0.0052)	0.0175	(0.0060)	0.0055	(0.0053)	0.0205	(0.0059)
INDESQ			0.0154	(0.0171)	-0.0448	(0.0213)	0.0064	(0.0171)	-0.054	(0.0209)
R- square	0.2659		0.2738		0.2729		0.2765		0.2754	
N	1269		1269		1269		1269		1269	

가
() 0.85%, () 1.76%,
() 1.20% 3
가 1.82% 가 ,
1.93% 가 .
, 1
68% , 3
< 5-4>, < 5-5>
, 1 5
7
8.7% ,
3
5)
가 ,
가 ,
3 ,
가
가 가
가 ()
⁵⁾ ⁶⁾ Abraham and
Faber(1987) ³ ⁵⁾ ⁶⁾
Weibull 가 (proportional
hazard Weibull specification) ‘ (completed job duration)

가
가
6).
5) , 가
) 가
6)

2

7).

1995

가

, 1995

1999

(censored data)

< 6>

< 6> (Weibull Proportional Hazard Model)

AGE	.3407	(.0121)	.2010	(.0163)
AGESQ	-.0032	(.0001)	-.0018	(.0002)
EDY	.0451	(.0103)	.0520	(.0135)
O1	.1261	(.1995)	1.1672	(1.0735)
O2	.5241	(.1400)	1.0438	(.2073)
O3	-.1846	(.1034)	-.0981	(.1554)
O4	.3449	(.0990)	.2804	(.1455)
O5	-.0511	(.1124)	-.3706	(.1430)
O7	.1510	(.0871)	.1093	(.1456)
O8	-.1495	(.0932)	.1654	(.1594)
MRG	.9501	(.0976)	1.4277	(.1105)
SCALE	.9420	(.0189)	1.053	(.0225)
Log-L	-3631.6		-2489.0	
N	3486		2114	

< 7>

(PRED)

가

가

8).

가

가

가

7)

0.5 가

8)

가

()가

가

가

7-3)

			1		3		1		3	
PRED	0.0038	(0.0013)	0.0040	(0.0013)	0.0041	(0.0013)	0.0040	(0.0013)	0.0042	(0.0013)
OJ	-0.0325	(0.0221)	-0.0341	(0.0220)	-0.0356	(0.0219)	-0.0352	(0.0220)	-0.0372	(0.0219)
TEN	0.0231	(0.0045)	0.018	(0.0055)	0.0101	(0.0061)	0.0188	(0.0054)	0.0077	(0.0065)
TENSQ	-0.0252	(0.0153)	-0.03	(0.0178)	-0.0167	(0.0186)	-0.0319	(0.0176)	-0.0114	(0.0183)
TXA	0.0158	(0.0035)	0.0138	(0.0043)	0.0149	(0.0040)	0.0133	(0.0046)	0.0129	(0.0041)
TXASQ	-0.0347	(0.0095)	-0.0447	(0.0128)	-0.0465	(0.0123)	-0.0438	(0.0132)	-0.0419	(0.0124)
INDEXP			0.0082	(0.0053)	0.0156	(0.0056)	0.0078	(0.0055)	0.0198	(0.0056)
INDESQ			0.0099	(0.0162)	-0.0032	(0.0165)	0.0111	(0.0165)	-0.0125	(0.0163)
R- square	0.5109		0.5161		0.5184		0.5159		0.5202	
N	1632		1632		1632		1632		1632	

7-4)

			1		3		1		3	
PRED	0.0042	(0.0018)	0.0042	(0.0018)	0.0043	(0.0018)	0.0040	(0.0018)	0.0041	(0.0013)
OJ	-0.0339	(0.0335)	-0.0379	(0.0334)	-0.0411	(0.0335)	-0.0322	(0.0334)	-0.0355	(0.0335)
TEN	0.0165	(0.0053)	-0.0003	(0.0076)	-0.0092	(0.0095)	0.008	(0.0070)	0.0061	(0.0084)
TENSQ	-0.0365	(0.0174)	-0.0004	(0.0258)	0.0362	(0.0315)	-0.0295	(0.0237)	-0.0114	(0.0274)
TXA	0.024	(0.0061)	0.0163	(0.0065)	0.0185	(0.0063)	0.0187	(0.0069)	0.0206	(0.0065)
TXASQ	-0.048	(0.0158)	-0.0312	(0.0174)	-0.0329	(0.0166)	-0.0426	(0.0187)	-0.0394	(0.0176)
INDEXP			0.0243	(0.0080)	0.031	(0.0096)	0.0136	(0.0077)	0.0135	(0.0087)
INDESQ			-0.0526	(0.0271)	-0.0876	(0.0320)	-0.0117	(0.0262)	-0.0327	(0.0287)
R- square	0.4735		0.479		0.4781		0.4778		0.4747	
N	1203		1203		1203		1203		1203	

7-5)

			1		3		1		3	
PRED	-0.0004	(0.0181)	-0.0013	(0.0023)	-0.0000	(0.0002)	-0.0012	(0.0024)	0.0000	(0.0003)
OJ	-0.0214	(0.0296)	-0.0229	(0.0294)	-0.0197	(0.0294)	-0.0237	(0.0294)	-0.019	(0.0294)
TEN	0.0212	(0.0055)	0.0195	(0.0063)	0.0082	(0.0070)	0.0183	(0.0062)	0.0069	(0.0068)
TENSQ	-0.0377	(0.0219)	-0.0477	(0.0246)	-0.002	(0.0275)	-0.0434	(0.0242)	0.0021	(0.0271)
TXA	0.0087	(0.0043)	0.008	(0.0047)	0.0051	(0.0045)	0.0062	(0.0048)	0.0039	(0.0045)
TXASQ	-0.0259	(0.0099)	-0.03	(0.0110)	-0.0183	(0.0102)	-0.0265	(0.0112)	-0.0158	(0.0102)
INDEXP			0.0022	(0.0052)	0.0175	(0.0060)	0.0055	(0.0053)	0.0205	(0.0059)
INDESQ			0.0158	(0.0171)	-0.0447	(0.0213)	0.0068	(0.0171)	-0.054	(0.0209)
R- square	0.2659		0.2739		0.2729		0.2748		0.2754	
N	1269		1269		1269		1269		1269	

가 , 2 1,911
 , 가 , Cov(ϵ_{ijt} , ϵ_{ijt+1}) 0 가
 . 1 가 ,
 . 가 3 , Fixed-Effects 가 .
 , (IndExp) 가 ,
 가 .
 .

5.

(Switcher) (Stayer) .

$$\text{Stayer} : \ln W_{\text{newjob}} = \beta_1 X + \beta_2 T_{\text{oldjob}} + \beta_3 E_{\text{oldjob}} + \epsilon_1 \quad (2)$$

$$\text{Switcher} : \ln W_{\text{newjob}} = \beta_1 X + \beta_2 T_{\text{oldjob}} + \beta_3 E_{\text{oldjob}} + \epsilon_2 \quad (3)$$

(2), (3) W_{newjob} , T_{oldjob} , E_{oldjob}
 (,) . X
 , ϵ_1, ϵ_2 0 .
 가
 (Switcher) (Stayer) , $\beta_3 >$
³ .

가 , ‘ (randomly) 가 가 ‘ .
 (random sample) . 가 10).
 ,

10) ‘ ,
 . , “ ”(가
) . ,

< 8 >

(OLS Estimates)

			(Stayer)		(Stayer)	
OJ	0.0452	0.0731	0.1462	0.0964	-0.1178	0.0758
TEN	-0.0258	0.0103	0.0271	0.0169	0.0091	0.0121
TENSQ	0.0002	0.0004	-0.0009	0.0008	-0.0004	0.0004
R-square	0.5124		0.4946		0.6344	
OJ	0.0155	0.0587	0.1348	0.0943	-0.1001	0.0760
TEN	-0.0209	0.0130	-0.0148	0.0214	-0.0159	0.0186
TENSQ	0.0008	0.0005	0.0007	0.0010	0.0007	0.0007
INDEXP	0.0502	0.0126	0.0595	0.0189	0.0314	0.0170
INDESQ	-0.1646	0.0513	-0.1996	0.0758	-0.1210	0.0663
R-square	0.5124		0.4566		0.6420	
N	421		222		198	

1) Stayer:

Switcher:

< 8 >

(Stayer)가 (Switcher) 가
 , 1 2.7%가 가
 , 0.9% ,
 ()
 , 가
 , Stayer , 1 6.0%
 가 , Switcher 3.1% .
 , (selection bias)가 .

(discharge) ,
 , (layoff or displacement) ,
 (random sample)
 가 .

Heckman 2

가

가

< 9 >

: Switcher = 1. Stayer = 0		
Constant	-0.0985	0.9584
TEN	0.02481	0.0453
TENSQ	0.0011	0.0020
TEXP	0.0718	0.0325
TEXSQ	-0.1681	0.0882
INDEXP	-0.1564	0.0495
INDESQ	0.3497	0.1934
IMG	0.3647	0.7799
ESZ	0.0057	0.0119
EDY	0.0066	0.0258
MRG	-0.1915	0.1891
OP2	-0.8521	0.4117
OP3	-0.0524	0.2295
OP4	-0.3343	0.2348
OP7	-0.0415	0.1846
OP8	-0.0862	0.2286
Log-L	-276.3	
N	443	

:

< 9 >

Neal(1995)

가

가 (IMG)

(ESZ)

가

11).

가

11)

가

t

, "(t+1

- t-1

)t

"

▮

▮

< 10>

(Two-Stage Estimates)

	(Stayer)		(Switcher)	
				0.0761
OJ	0.1499	0.0961	-0.1166	0.0761
TEN	0.0223	0.0171	0.0109	0.0137
TENSQ	-0.0006	0.0008	-0.0005	0.0005
Correction	0.2381	0.1511	-0.0387	0.1384
R- square	0.5009		0.6346	
OJ	0.1294	0.0944	-0.0795	0.0764
TEN	-0.0211	0.0221	-0.0232	0.0189
TENSQ	0.0006	0.0010	0.0005	0.0007
INDEXP	0.0774	0.0242	0.0578	0.0225
INDESQ	-0.2418	0.0838	-0.1775	0.0731
Correction	-0.2820	0.2399	-0.3524	0.1978
R- square	0.5261		0.6485	
N	222		198	

< 10>

가
가
(Switcher)

가
(Stayer),

가
가

가 가 가 가

VI.

가 . Becker
“ OJT 가 가 ”
가 가

가

(3)

() 가 가

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