

가 , 가 50%
 가 1993
 1999
 가
 , 가 ,
 , ()
 가 .¹⁾
 가
 1989 84.1% 1998 60.5%
 가 ,
 가가

,
²⁾
 『 1 (1998) 2 (1999) 』
 『 가
³⁾ 가 『
 10 (5)
 『 』

1) (2000, 50) 가
 (stepping- stone)
 가 (last resort)
 2) (1999)
 3) 2000 8 『 가 가 , , 가 가 .

가

가 가 가

axaca

, Lee(1978)
(switching regression model)

가

II

III 2

3,667 / , ,

IV

V /

II.

(1984), (1986), (1989),
(1991), (1991), Bai and Cho(1992), (1994), (1996)
(1991) (1980 , 1986 , 1988)
axaca(1973) , 가 1980 57.1% 1988 49.6%
, ‘ , 1980 가 가
(1991) 가
(1973 , 1978 , 1983 , 1988)
Kamolich and Polacheck(1982)가 , 30%
64% . Bai and Cho(1992)

가 , (1984 , 1989)

0.320 1984 1989 가 0.412, (1994)

(1981 , 1986 , 1989 , 1991) 1991

(3,897) 1991 (=

/) 75.9% 57.7%가 (')

(1996) .

가

(1983) 1980

1.901 39%

(1997) 1980

Mince- 가 가

, 가

(1983) , (1995)

(1988) , (1990) . (1996)

가 . , (1994)

(1998)

(1990) , ,

(1992) . 48~65%

가

, 1973~1989

(2000) 『

』

, 『 』 1 (1998)

가

가

가

III.

1. 『 』

『 』 1 (1998) 2 (1999)
 . 『 』 1995 『 』 10% (21,938
) 1997 『 』 2,497
 951 1997 가
 5~6 가 ((1999), 5~7). 『 』
 5,000 가 15 가
 13,738 .
 『 』 3 (2000) .
 가 가 , 가 , , ,
 가 가 , , , , ,
 가 가 가 가 .
 , , , , ,
 , , , , ,
 . , , , , ,
 . , , , , ,
 『 』 13,738 2 xxxxx
 . , 15 65
 10
 3,667 . 2,211 (60.3%) 1,456 (39.7%) .
 25.2%, 40.6%, 13.1%, 21.1%
 . , 15~24 12.5%, 25~29 15.6%, 30 40 가
 32.3%, 24.8% , 50 14.8% .

2.

- 가 가 . 『 』
 『 』 , 가
 . ‘ (self-reported)’

< 1>

(, %)

	3667	2595	(70.8)		1072	(29.2)	
	2743	2517	(91.8)	[97.0]	226	(8.2)	[21.1]
	504	53	(10.5)	[2.0]	451	(89.5)	[42.1]
	420	25	(6.0)	[1.0]	395	(94.0)	[36.8]
	3331	2531	(76.0)	[97.5]	800	(24.0)	[74.6]
	336	64	(19.0)	[2.5]	272	(81.0)	[25.4]

: ₩ 15 65 2 (1999) 13,738

: ()
[]

가

-

() ()

가 < 1>

71% 2595 29% 1,072 가

8.2% 가 89.5%,

94.0% 가 가 , 3%

21%가 가

(full-time work)

3/4 , (part-time work) 4/5가 3/4

(97.5%)

가 < 2> 23%,

38%가

13% , 50%

25~29 21% 가 50

42% , 55%, 50 57%가 ,

가

(transition matrix) < 3>

8% 22%가

4/5 1/5

< 2 >

(: , %)

	3667	2595	(70.8)		1072	(29.2)	
	2211	1698	(76.8)	(65.4)	513	(23.2)	(47.9)
	1456	897	(61.6)	(34.6)	559	(38.4)	(52.1)
	923	466	(50.5)	(18.0)	457	(49.5)	(42.6)
	1490	1075	(72.1)	(41.4)	415	(27.9)	(38.7)
	481	382	(79.4)	(14.7)	99	(20.6)	(9.2)
	773	672	(86.9)	(25.9)	101	(13.1)	(9.4)
15~24	458	315	(68.8)	(12.1)	143	(31.2)	(13.3)
25~29	572	451	(78.8)	(17.4)	121	(21.2)	(11.3)
30~39	1185	886	(74.8)	(34.1)	299	(25.2)	(27.9)
40~49	908	626	(68.9)	(24.1)	282	(31.1)	(26.3)
50	544	317	(58.3)	(12.2)	227	(41.7)	(21.2)
.							
	453	252	(55.6)	(28.1)	201	(44.4)	(36.0)
	922	708	(76.8)	(78.9)	214	(23.2)	(38.3)
	289	239	(82.7)	(26.6)	50	(17.3)	(8.9)
	547	499	(91.2)	(55.6)	48	(8.8)	(8.6)
	470	214	(45.5)	(23.9)	256	(54.5)	(45.8)
	568	367	(64.6)	(40.9)	201	(35.4)	(36.0)
	192	143	(74.5)	(15.9)	49	(25.5)	(8.8)
	226	173	(76.5)	(19.3)	53	(23.5)	(9.5)
.							
15~24	143	85	(59.4)	(9.5)	58	(40.6)	(10.4)
25~29	346	276	(79.8)	(30.8)	70	(20.2)	(12.5)
30~39	817	676	(82.7)	(75.4)	141	(17.3)	(25.2)
40~49	543	422	(77.7)	(47.0)	121	(22.3)	(21.6)
50	362	239	(66.0)	(26.6)	123	(34.0)	(22.0)
15~24	315	230	(73.0)	(25.6)	85	(27.0)	(15.2)
25~29	226	175	(77.4)	(19.5)	51	(22.6)	(9.1)
30~39	368	210	(57.1)	(23.4)	158	(42.9)	(28.3)
40~49	365	204	(55.9)	(22.7)	161	(44.1)	(28.8)
50	182	78	(42.9)	(8.7)	104	(57.1)	(18.6)

: 2 (1999)

< 1 >

: ()

()

< 3>

(: , %)

	3667	2595	(70.8)		1072	(29.2)	
	1641	1212	(73.9)	(46.7)	429	(26.1)	(40.0)
	438	204	(46.6)	(7.9)	234	(53.4)	(21.8)
	321	177	(55.1)	(6.8)	144	(44.9)	(13.4)
	1265	1000	(79.1)	(38.5)	265	(20.9)	(24.7)

: 『 』 2 (1999) . < 1> .
: ()
()

『 』
“ ”
“ ”
“ ”
“ ”

(=

*4.3)

< 4>

105 4)
125 59% 74 5)
69 (120) 58%
가
40%

51.1 ,

52.6 6) 47.5 11%
, 48.4 , 53.0 10%

4) 『 』 10 3,900
『 』 (1999) 160
가 가

5) 『 』 (1999) (178) 63.3% 100.6

6) 『 』 (1999)』 208.2 (48.4)
가 10
가

< 4> (*4.3)
 5.7
 가
 , (4.1) (6.7) 61.2%
 40% 4.1 (6.3) 65%
 35%
 6.2 3.0
 가 35%
 가

< 4>

	()	()	()	()	()
	3667	104.7 (61.2)	51.1 (14.6)	5.7 (17.0)	5.3 (6.8)
	2211	125.3 (63.6)	53.0 (14.4)	6.7 (21.5)	6.5 (7.5)
	1456	73.5 (41.0)	48.4 (14.4)	4.1 (5.2)	3.4 (5.0)
	2595	119.5 (62.3)	52.6 (12.9)	6.3 (19.9)	6.2 (7.0)
	1072	68.9 (40.2)	47.5 (17.4)	4.1 (5.5)	3.0 (5.6)
	1698	137.9 (63.8)	53.9 (13.1)	7.3 (24.3)	7.3 (7.5)
	513	83.4 (40.8)	50.0 (17.5)	4.4 (4.4)	4.1 (7.0)
	897	84.7 (40.6)	50.3 (12.1)	4.3 (4.3)	4.3 (5.5)
	559	55.7 (34.8)	45.3 (17.1)	3.8 (6.3)	1.9 (3.5)

: 1999년 2월 1일 기준
 : ()

IV.

1.

가 가

$$(1) y^* = C\theta + u$$

가 , y^* 가 (latent variable), C

, θ , u

가 y^* 가 (binary variable) y

$y = 1(y^* > 0)$ $y = 1(\quad)$, $y = 0(\quad)$
 , 1() () (true) 1, (false) 0 (index
 function) . 가 (selection equation)
 (maximum likelihood estimation) .
 (30 , 15~24 , 25~29 , 40 , 50
), , , , 가 (가 , , 가), 가
 (, , , ,), (,
 ,), (, , ,)
 . < 1 > .
 (1) 가 < 5 > . ,
 가 (가), 가
 . (30) 15~24 50
 . 가 . 가

2.

(D) 가 (1)
 (2) $y^* = C\theta + D\delta + u$
 . 가 D 가 1997 ,
 1998 , 1999 가 가 .
 $H_0: \delta = 0$ ($H_a: \delta \neq 0$)
 가 (가) (1) (2)
 $\ln Lr^* - \ln Lu^*$
 $\lambda = -2(\ln Lr^* - \ln Lu^*) \sim \chi^2(r)$, r (the degrees of freedom)

	1		2		2		2	
FEMALE	-0.1808	(0.0707) **	-0.1629	(0.0731) **				
Constant	-0.1296	(0.1187)	0.3773	(0.1284) ***	0.0103	(0.1755)	0.2641	(0.2137)
AGE1	-0.0843	(0.1116)	0.2132	(0.1179) *	-0.0586	(0.1620)	0.3548	(0.1874) *
AGE2	0.0858	(0.0897)	0.1853	(0.0941) **	0.1209	(0.1229)	0.2959	(0.1532) *
AGE4	0.0517	(0.0660)	-0.0118	(0.0683)	-0.0986	(0.0930)	0.0702	(0.1058)
AGE5	-0.0571	(0.0803)	-0.1356	(0.0833)	-0.2236	(0.1033) **	-0.0362	(0.1486)
HGC	0.0931	(0.0081) ***	0.0822	(0.0084) ***	0.1175	(0.0121) ***	0.0365	(0.0130) ***
HEALTHP	-0.4656	(0.1073) ***	-0.3892	(0.1115) ***	-0.4143	(0.1486) ***	-0.3501	(0.1727) **
NEVER	0.0869	(0.1028)	0.0903	(0.1066)	-0.0166	(0.1277)	0.5534	(0.2043) ***
SPOUSE	-0.2726	(0.0857) ***	-0.1682	(0.0889) *	-0.3644	(0.4515)	0.2302	(0.1243) *
OTHER	-0.3426	(0.0985) ***	-0.2667	(0.1025) ***	-0.2789	(0.1274) **	-0.1577	(0.1788)
YFIN	0.2089	(0.0795) ***	0.1907	(0.0820) **	0.1619	(0.1117)	0.2539	(0.1252) **
YEST	0.2536	(0.1228) **	0.3224	(0.1272) **	0.1525	(0.1651)	0.5114	(0.2040) **
YPUB	-0.3184	(0.1163) ***	-0.2661	(0.1181) **	-0.4526	(0.1640) ***	-0.0814	(0.1762)
YTRA	-0.1917	(0.0687) ***	-0.1653	(0.0711) **	-0.1244	(0.0994)	-0.1699	(0.1049)
YETC	-0.2650	(0.0713) ***	-0.1808	(0.0732) **	-0.0259	(0.0974)	-0.3937	(0.1171) ***
FROMCONT	-0.6275	(0.0718) ***	-0.5588	(0.0743) ***	-0.6313	(0.1008) ***	-0.4138	(0.1134) ***
FROMSELF	-0.4421	(0.0820) ***	-0.4959	(0.0844) ***	-0.5303	(0.1057) ***	-0.3583	(0.1450) **
FROMNON	0.1252	(0.0571) **	-0.0495	(0.0608)	-0.0873	(0.0871)	0.0020	(0.0883)
SEOUL	-0.1287	(0.0586) **	-0.1255	(0.0605) **	-0.1162	(0.0823)	-0.1131	(0.0915)
METRO	-0.0519	(0.0555)	-0.0289	(0.0575)	0.0708	(0.0784)	-0.1346	(0.0875)
D1997			-0.1758	(0.0930) *	-0.0674	(0.1343)	-0.2905	(0.1338) **
D1998			-0.5779	(0.0733) ***	-0.5191	(0.1015) ***	-0.6492	(0.1103) ***
D1999			-0.9538	(0.0606) ***	-0.9034	(0.0830) ***	-1.0011	(0.0920) ***
- ()	3,667		3,667		2,211		1,456	
1	1919.70		1783.87		944.25		805.21	
2	73.74%		76.08%		80.69%		70.26%	
3	592.04 ***		863.68 ***		506.94 ***		328.85 ***	
			271.65 ***		130.92 ***		130.34 ***	

: 1997 1998 1999 < 1>

: 1.

2.

3.

가

< 1> . ()

***, **, *

0.01, 0.05, 0.10

(likelihood ratio test statistics)

< 5>

가

1997

1998

1999

3

가

. 30

20 가

50

가

가

가

가

. (1)

가

3.

35%

(wage

differentials)가

가

(wage discrimination)

7)

$$(3) \ln W = X \beta + E \alpha + \varepsilon$$

가 , ln W , X

, β

, E

가 , α

, ε

.

()

(

가)가

가

,

,

,

,

가

48

40

가 (

5

100

, 100

500

, 500

, 5

),

가

(

),

가

(

),

가

.8)

<

7) Ehrenberg and Smith(1997, Ch. 12)

charateristics)

가

(p. 418)

가

,

(productive

가 (the prices)

(measure)

8)

1>

< 6> (3)

19%

가
15~1.9%

40

. 48

1.6~1.8% 가

가 가 가 가 , (3)

$$(4) \ln W_k = X_k \beta_k + \varepsilon_k \quad k = r(\quad), k=c(\quad)$$

가 , < 7>

< 6> ()

FEMALE	-0.3416	(0.0168) ***				
JCONT	-0.2107	(0.0188) ***	-0.1921	(0.0248) ***	-0.1939	(0.0289) ***
Constant	-0.0504	(0.0946)	-0.7007	(0.1325) ***	0.0058	(0.1369)
AGE	0.0647	(0.0044) ***	0.0967	(0.0062) ***	0.0421	(0.0070) ***
AGESQ	-0.0007	(0.0001) ***	-0.0011	(0.0001) ***	-0.0005	(0.0001) ***
HGC	0.0309	(0.0029) ***	0.0356	(0.0036) ***	0.0249	(0.0050) ***
TENURE	0.0128	(0.0013) ***	0.0098	(0.0014) ***	0.0200	(0.0028) ***
HEALTHP	-0.0314	(0.0339)	-0.0629	(0.0415)	-0.0139	(0.0561)
HOURGAP1	-0.0183	(0.0007) ***	-0.0190	(0.0008) ***	-0.0154	(0.0014) ***
HOURGAP2	0.0166	(0.0017) ***	0.0158	(0.0027) ***	0.0175	(0.0023) ***
JSTOP	-0.0651	(0.0239) ***	-0.0704	(0.0296) **	-0.0818	(0.0390) **
FIRML	0.0925	(0.0225) ***	0.0606	(0.0263) **	0.1317	(0.0405) ***
FIRMM	0.0104	(0.0242)	-0.0400	(0.0277)	0.0875	(0.0448) *
FIRMV	-0.0746	(0.0183) ***	-0.0880	(0.0230) ***	-0.0734	(0.0298) **
UNION	0.0695	(0.0211) ***	0.0372	(0.0244)	0.0969	(0.0394) **
		3,667		2,211		1,456
R ²		0.5732		0.5758		0.4789
R ²		0.5698		0.5703		0.4687
F-	1	168.43 ***		105.77 ***		46.84 ***

: 2 (1999) < 1>

: 1.

< 1> 가
() . ***, **, * 0.01, 0.05, 0.10

(parsimony)

(4) 가 (turning point)

[1] 15 3 () 44.5 (44.0)

() 43.5 (42.5)

4.6%, 4.3%

1 가 1.1%, 2.2% 가 9)

가

(1.6%)

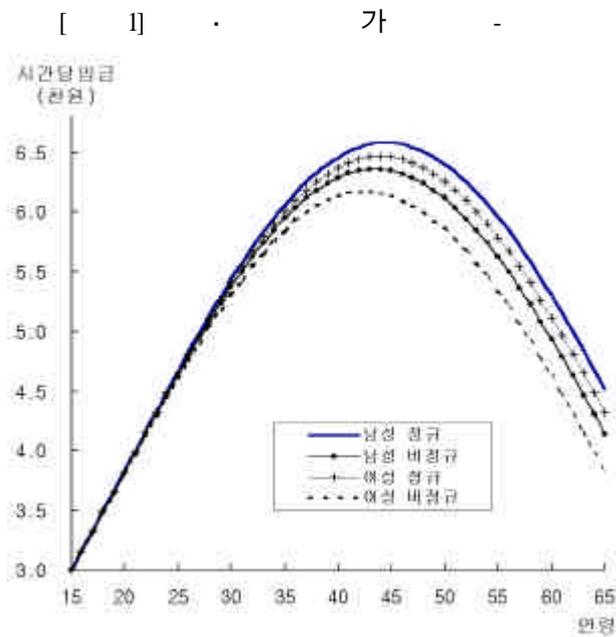
가

가

가

(-)

가



9) (1999, 134) 1986 1988
 () 1 8~10%
 가 가

$$\begin{aligned} \ln W_r - \ln W_c &= (\ln W_r - \ln W_c^*) + (\ln W_c^* - \ln W_c) \\ &= \beta r' (X_r - X_c) + X_c (\beta r' - \beta c') \end{aligned}$$

, $\beta r' - \beta c'$, W_c^* ,
가 , .

(discrimination coefficient)

$$D = \frac{(W_r/W_c) - (W_r/W_c^*)}{W_r/W_c^*}$$

$$\ln(D+1) = (\ln W_r - \ln W_c) - (\ln W_r - \ln W_c^*) = X_c (\beta r' - \beta c')$$

$$D_1 = \exp[X_c (\beta r' - \beta c')] - 1$$

$$D_2 = \exp[X_r (\beta r' - \beta c')] - 1$$

가 .

< 8> 가 46%
38% 54% 62% 가
() . 24.3%,
22.1% ,
36.7%, 25.2% 가 가 .

< 8>

	1.7264	5.62	1.3067	3.69
	1.3221	3.75	0.9874	2.68
	0.4043 (100.0)	1.87	0.3193 (100.0)	1.01
	0.1865 (46.1)		0.1199 (37.5)	
	0.2178 (53.9)		0.1994 (62.5)	
$\ln(D_1+1)$	0.2178		0.1994	
D_1	0.2433		0.2207	
$\ln(D_2+1)$	0.3126		0.2249	
D_2	0.3670		0.2522	

5.

:

(3) (4) (selectivity bias)
가 가

, Lee(1978)

가 ,
(switching regression model)

$$\begin{aligned}
 (5) \quad \ln W_r &= X_r \beta_r + \varepsilon_r & \varepsilon_r &\sim N(0, \sigma_r^2) \\
 \ln W_c &= X_c \beta_c + \varepsilon_c & \varepsilon_c &\sim N(0, \sigma_c^2) \\
 I^* &= \delta_1(\ln W_r - \ln W_c) + C\theta - \nu & \nu &\sim N(0, \sigma_\nu^2)
 \end{aligned}$$

가 가 가

$$I^* > 0$$

$$(5) \quad 11) \text{가} < 9 > \quad (4)$$

Oaxaca

Maddala(1983,

356-358) , (5)

, W_k^* , $\exp(X_k \beta_k)$ 가

$$E W_k^* = E \exp(\ln W_k^*) = \exp(X_k \beta_k + \sigma_k^2/2)$$

가

$$D = \frac{W_r^* - W_c^*}{W_r^*}$$

$$. < 10 >$$

34%

, (33%)

(35%)

가

가

40% 가

30

11)

LIMDEP 7.0

LIMDEP User's Manual(1995, 668~678)

V.

3

가

가

『

』

가

가

가

1999

50%

가

,

가

,

가

가

,

가

가

-

,

가

1998

『

』

1

2

-

가

,

,

,

,

,

,

,

,

,

35%

가

42%

가

19%

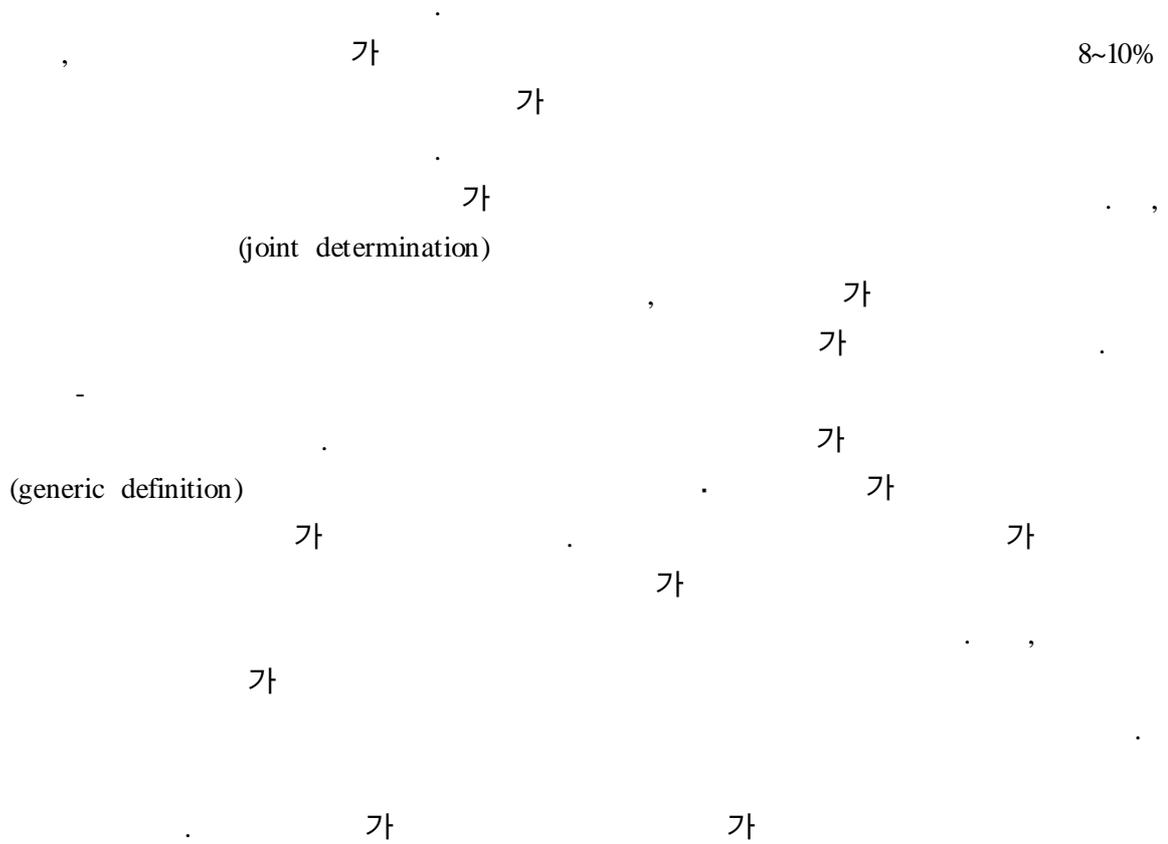
1/4~1/3

가

,

가

(health capital)



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