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ORIGINAL PAPER

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Do coresidency and financial transfers from the children reduce the need for elderly parents to works in developing countries?

[illegible]: 10 M[illegible] 2005 / A[illegible]: 11 J[illegible] 2006 / [illegible]: 3 N[illegible] 2006
[illegible] 2006

Abstract D[illegible]

Keywords I[illegible] · E[illegible]

JEL Classification J226 · J22 · J14

1 Introduction

L[illegible] . H[illegible]

Responsible editor: J[illegible]

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[illegible]

L[illegible] I[illegible] ? [illegible] ? F[illegible] ? A[illegible]

I[illegible] (IFL) [illegible]

IFL [illegible]

I[illegible] 65 [illegible] 400% [illegible] 1990 [illegible] 2025, [illegible] (A[illegible] 1994). A[illegible] D[illegible] L[illegible] I[illegible]

A[illegible] C[illegible] [1] M[illegible]

[illegible]

[1] [illegible] F[illegible] K[illegible] (2003) [illegible] B[illegible] C[illegible] (2003, [illegible]).

[illegible]

2 Existing literature and the Indonesian context

[illegible]

[illegible]

M ... F ... (2002) ... I ...[4]

D ... C ... (1994) ... C ... (2000) ... M ... (1989) ... F ... (1999), ... I ...[5] A ... F ... (2002) ... I ...

... [6] I ... (B ... 1974, 1991), ... (B ... 1985) ... [7]

... L ... (1997) ... M ... F ... (2002) ... I ... (1997) ... H ... (1992) ... C ... K ... K (K ... A ... 1981) ... B ... (L ... 1985) ... [8] F ... D ... (1988) ... I ...

... I ...

4 ... Asia-Pacific Population Journal ... 1992 ... D ... 1997. ... H ... (2002), ... 10- ...

5 H ... (1996) ... (1999) ... A.

6 C ... J ... (1992) ... J ... (2004) ... K ... (1999) ... I ...

7 L ... (1997

[illegible][9] [illegible].

2.1 I[illegible]

I[illegible] (B[illegible] K[illegible] 2001). I[illegible] A[illegible][10] N[illegible] (F[illegible] K[illegible] 2003). [illegible] B[illegible] "[illegible]" [illegible][11]

3 The Indonesian family life survey

[illegible] IFL[illegible] AND[illegible] L[illegible] D[illegible] I[illegible] 1993 [illegible] 7,224 [illegible] I[illegible][12] [illegible] I[illegible] 60 [illegible] 7,224 [illegible] 2,625 [illegible] 1,891 [illegible].[13] B[illegible]

[9] I[illegible] (C[illegible] C[illegible]-G[illegible] 2002) [illegible].

[10] M[illegible] A[illegible] I[illegible] (F[illegible] 2003).

[11] [illegible]

[12] A[illegible] 1997, [illegible] A[illegible] 2000.

[13] I[illegible] 1993, [illegible] I[illegible] 63 ([illegible] B[illegible] 1995). E[illegible]

[illegible] 1,507 [illegible] 18. D[illegible] 1,429 [illegible].

[illegible] IFL [illegible] ([illegible]). A[illegible]. I[illegible].[14]

[illegible] IFL [illegible] ([illegible]) [illegible] 20 [illegible].

[illegible] IFL [illegible] 12 [illegible] ([illegible]).[15] I[illegible]. M[illegible]. I[illegible], IFL [illegible]. I[illegible], IFL [illegible].[16] [illegible] 6 [illegible] 7 [illegible] A[illegible] 1. [illegible] 1 [illegible] I[illegible]. M[illegible] (62.5%) I[illegible] 60 [illegible] "[illegible]". [illegible], 21.3% [illegible], 9.0% [illegible]

[14] IFL [illegible]. A[illegible]. A[illegible] 84 [illegible]. [illegible] MLE [illegible].

[15] [illegible].

[16] I[illegible] 27 [illegible] 1993.

Table 1 [illegible]

[illegible] (*N*=2,625)	[illegible] (%)
[illegible]	62.51
[illegible]	7.60
[illegible]	9.02
[illegible]	13.67
[illegible]	7.03

[illegible] 2000).

[illegible] 7.0% [illegible]

[illegible] 2 [illegible] $71), [illegible]

[illegible] 2 [illegible] (F[illegible] 1). [illegible]

Table 2 [illegible]

	[illegible]		M[illegible]	
	C[illegible]		C[illegible]	
	N[illegible]		N[illegible]	
M[illegible] (000)	217.2	160.0	186.2	185.4
[illegible] (%)	70.2	52.9	66.6	48.9
M[illegible]/M[illegible] (%)	35.6	6.8	28.2	9.9
M[illegible]/M[illegible] (%)	115.5	34.9	33.8	16.9
[illegible] (%)	55.6	39.0	83.4	72.0
M[illegible]	17.6	13.4	34.0	30.3
M[illegible] >0	31.6	34.4	40.1	42.1

[illegible]

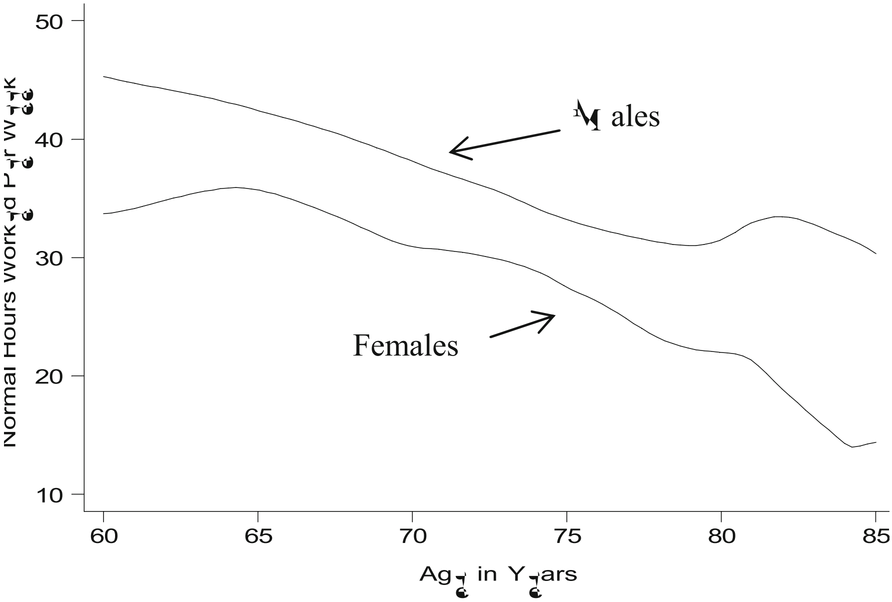

Fig. 1 [illegible]

[illegible] 34.0 [illegible] 30.0 [illegible] 13.4 [illegible] 17.6 [illegible].

4 The empirical framework

[illegible]

4.1 [illegible]

E[illegible] 1–6 [illegible]

4.2

(LS_i^p):

$$LS_i^p = \max\left(\beta_{0n} + \beta_{1n} Z_i^p + \gamma_{1n} TR_i + \varepsilon_{1i}, 0\right) \quad if\ C_i = 0 \tag{1}$$

$$LS_i^p = \max\left(\beta_{0n} + \beta_{1r} Z_i^p + \beta_{2r} Z_i^{CC} + \gamma_{1r} TR_i + \varepsilon_{2i}, 0\right) \quad if\ C_i = 1, \tag{2}$$

1 2 [17]

$$TR_i = \max\left(\pi_{on} + \pi_{in} Z_i^{NC} + \pi_{2n} Z_i^P + u_{1i}, 0\right) \quad if\ C_i = 0 \tag{3}$$

$$TR_i = \max\left(\pi_{or} + \pi_{ir} Z_i^{NC} + \pi_{2r} Z_i^P + \pi_{3r} Z_i^{CC} + u_{2i}, 0\right) \quad if\ C_i = 1, \tag{4}$$

[18]

---

[17]

[18] IFL

$$C^*_i = \eta_0 + \eta_1 Z^P_i + \eta_2 Z^C_i + \eta_3 H_i + \nu_i \quad (5)$$

$$\begin{aligned} Ci &= 1 \; if \; C^*_i > 0 \\ &= 0 \; if \; C^*_i \leq 0 \end{aligned} \quad (6)$$

... (C^*) ... H. ... (C^*) ... (C).[20]

19 ... 2.2% ... 18, ... 27.6% ... 18 ... 25. ...

20 ... (1999). ...

4.3 L[illegible]

[illegible] ([illegible]) [illegible].[21] [illegible]

4.4 E[illegible]

E[illegible] 1–6 [illegible]:

$$\begin{pmatrix}\nu_i\\ u_i\\ \varepsilon_i\end{pmatrix} \sim N\left(\begin{pmatrix}0\\0\\0\end{pmatrix}, \begin{pmatrix}1 & \sigma_{\nu u} & \sigma_{\nu\varepsilon}\\ & \sigma_u^2 & \sigma_{u\varepsilon}\\ & & \sigma_\varepsilon^2\end{pmatrix}\right),$$

[illegible] $\sigma_{\nu u} = \rho_{\nu u}\sigma_u$, $\sigma_{u\varepsilon} = \rho_{u\varepsilon}\sigma_u\sigma_\varepsilon$, and $\sigma_{\nu\varepsilon} = \rho_{\nu\varepsilon}\sigma_\varepsilon$. [illegible] E[illegible] 1–6, [illegible] A[illegible] 2. E[illegible]

5 The effect of coresidency and transfers on labour supply

[illegible] N[illegible].[22]

[21] [illegible] (1999), [illegible] A. [illegible]

[22] I[illegible] A[illegible] 2[illegible]

5.1 [illegible] I[illegible]

[illegible] 3. [illegible] I [illegible] D[illegible] 20.8[illegible][23]. N[illegible] 1.5[illegible] 0.4 [illegible]. G[illegible].

A[illegible] ([illegible]) [illegible] 12.0 [illegible] 9219.1([illegible])-226.2([illegible])-215.7([illegible])-222([illegible] 9219.8([illegible].)-222.7(A[illegible])-2[illegible]. E[illegible].

F[illegible].

[23] I[illegible]. M[illegible] (2002) [illegible].

Table 3 D [illegible] (t [illegible])

	C [illegible] (N=418)		N [illegible] (N=302)		C [illegible] M (N=407)		N [illegible] M (N=302)	
[illegible]								
[illegible] (000)	−0.001	−0.19	−0.017	−1.94	−0.007	−0.80	−0.042	−0.54
[illegible] (000,000)	1.592	1.47	0.733	0.26	0.024	0.02	9.365	0.49
A [illegible] (000,000)	−0.002	−0.08	−0.005	−0.06	0.043	1.13	−4.722	−0.62
[illegible]								
A	−0.653	−3.35	−0.447	−1.69	−1.413	−5.47	−1.468	−6.73
E [illegible]								
[illegible]	0.520	0.26	2.309	0.79	−4.046	−1.22	−5.065	−1.81
[illegible]	4.481	0.96	−17.962	−2.32	−8.175	−1.38	−11.950	−2.14
M [illegible]	3.083	1.86	−1.306	−0.48	5.683	1.06	7.656	1.65
D [illegible]	−6.748	−2.32	−13.560	−2.62	−20.819	−3.48	−6.074	−1.08
[illegible]	−0.216	−0.12	5.866	1.93	5.307	1.70	0.889	0.29

[illegible] C [illegible] ([illegible]), [illegible] ([illegible]) [illegible][24] [illegible].

6 The interdependencies between various forms of old-age support

[illegible] 3. [illegible][25] [illegible]

[illegible] ([illegible]). [illegible][26] [illegible]

6.1 C[illegible] I[illegible]

[illegible] (C=1) [illegible] (C=0) [illegible][27] [illegible]

[illegible] (4). [illegible] 10 [illegible]

[25] [illegible] 1 [illegible] 8 [illegible] 9. [illegible] (t=3.37) [illegible] (t=−1.91). [illegible]

[26] [illegible] 60. [illegible]

[27] [illegible]

... 10 ... .[28] ... (...) ... I ... I ... ,[29] ...

... F ... M ... A ... 200,000 ... (...) ... 2 ... .[30]

H ... M ... H ... , C ... (2000) ... I ...

... F ... (2002), ...

I ... (... 1%, ... 10%, ...) ...

[28] ...

[29] IFL ... F ... 85 ... (...) ... E ... I ... — ... — ... H ... , F ... (1999) ... I ...

[30] I ... I 1993, $1 ... 2,500. ... I ... / ... H ... , ... 60. ...

Table 4 [illegible]

	[illegible] (*N*=720)		M[illegible] (*N*=709)	
	M[illegible]	*t* [illegible]	M[illegible]	*t* [illegible]
[illegible]				
[illegible] ([illegible] 000,000)	−0.096	−3.71	−0.022	−1.16
A[illegible] ([illegible] 000,000)	−0.001	−1.91	0.001	1.39
[illegible]				
A[illegible]	−0.011	−3.41	−0.001	−0.16
M[illegible]	−0.067	−1.57	−0.005	−0.08
D[illegible]	0.083	1.24	−0.046	−0.50
[illegible]	−0.029	−0.58	−0.018	−0.42
[illegible]	−0.074	−0.72	0.008	0.09
[illegible]	−0.083	−1.73	−0.028	−0.54
[illegible]				
[illegible]	−0.068	−1.57	−0.140	−2.17
G[illegible]	0.037	0.21	−0.109	−1.04
[illegible]	−0.100	−1.40	−0.084	−1.14
C[illegible]				
M[illegible]	−0.002	−0.17	0.016	1.53
N[illegible]	0.150	6.45	0.177	8.69
[illegible]	0.037	2.61	0.003	0.20
[illegible]	−0.023	−0.93	−0.054	−2.16
L[illegible]				
A[illegible] ([illegible] 000,000)	0.036	1.73	0.080	3.80

6.2 [illegible] I[illegible]

[illegible] A[illegible] ([illegible] 1997; [illegible] D[illegible] 1988), [illegible] ([illegible] 5). D[illegible] 10,000 [illegible] 10% [illegible].[31] F[illegible] ([illegible]) [illegible]. N[illegible].

F[illegible] — [illegible] — [illegible].

[31] G[illegible]

Table 5 [illegible] (000) [illegible] ,
[illegible] ([illegible] t [illegible])

	C[illegible]		N[illegible]		C[illegible]		N[illegible]	
	[illegible] (*N*=418)		[illegible] (*N*=302)		M[illegible] (*N*=407)		M[illegible] (*N*=302)	
[illegible]								
[illegible] (000,000)	46.4	1.95	105.4	2.49	51.8	2.56	37.6	0.91
A[illegible] (000,000)	1.9	3.51	2.6	1.82	−0.1	−0.12	2.4	1.32
[illegible]								
A[illegible]	0.8	0.23	3.1	0.69	−10.4	−1.94	−3.1	−0.66
E[illegible]								
[illegible]	88.0	2.04	8.7	0.12	130.6	2.36	−146.8	−2.52
[illegible] / [illegible]	313.3	2.92	−376.4	−2.41	6.4	0.05	−222.0	−1.77
M[illegible]	−108.7	−2.74	−175.7	−2.72	−2.0	−0.02	15.4	0.15
D[illegible]	−1.5	−0.03	−19.1	−0.18	−74.9	−0.56	7.2	0.06
[illegible]	83.5	2.14	−46.0	−0.74	125.0	2.10	119.5	1.62
[illegible]	−2.4	−0.14	22.1	0.89	28.8	1.09	13.1	0.56
[illegible]								
[illegible]	7.9	0.19	−71.1	−1.17	135.2	1.54	−8.2	−0.08
G[illegible]	−310.5	−1.69	559.9	2.35	−86.5	−0.53	−43.6	−0.28
[illegible]	−41.4	−0.58	−204.2	−1.94	50.3	0.53	1.2	0.01
C[illegible]								
M[illegible]	21.6	0.49			55.1	0.84		
N[illegible]	−5.9	−0.19			−213.8	−4.97		
[illegible]	−13.6	−0.43			−27.2	−0.57		
[illegible]	79.9	1.80			179.3	1.86		
N[illegible]								
M[illegible]	77.9	6.45	63.2	4.09	49.5	2.85	33.9	2.18
N[illegible]	52.0	1.71	164.3	3.84	−23.5	−0.65	−53.7	−0.97
[illegible]	2.6	0.19	2.2	0.10	29.8	1.13	70.7	3.09
[illegible]	42.1	1.43	62.2	1.69	98.6	1.81	52.6	1.29
C[illegible]	−59.4	−0.24	291.0	0.87	1,079.2	2.54	166.5	0.44

[illegible]
[illegible] 20 [illegible] "[illegible]".
N[illegible]

F[illegible] ([illegible]) [illegible] , [illegible] , [illegible] . [illegible] , [illegible] . M[illegible] . H[illegible] , [illegible] .

[illegible] (1997) [illegible] 5% [illegible] 10% [illegible]

7 Conclusions

[illegible] (1) [illegible] (2) [illegible] (3) [illegible]

[illegible]

[32] [illegible]

[illegible]

[illegible]

Acknowledgements [illegible] 79813009.

Appendix 1

Table 6 [illegible]

	[illegible]
[illegible]	
[illegible]	[illegible] 18, 0 [illegible]
[illegible]	[illegible] 12 [illegible]
[illegible]	[illegible]
[illegible]	
[illegible]	[illegible] 12 [illegible]
A [illegible]	[illegible]
A	A [illegible]
[illegible]	[illegible] =1 [illegible], 0 [illegible]
[illegible]	[illegible], 0 [illegible]
[illegible]	[illegible]
[illegible]	[illegible] =1 [illegible], 0 [illegible]
[illegible]	[illegible], 0 [illegible]

Table 6 ([illegible])

	D[illegible]
[illegible]	D[illegible] 20 [illegible] "[illegible] 20 [illegible]" [illegible]
A[illegible]	A[illegible]
C[illegible]	
M[illegible]	N[illegible]
N[illegible]	N[illegible]
E[illegible]	N[illegible]. E[illegible] = [illegible] "[illegible]"

Table 7 M[illegible]

	[illegible]		M[illegible]	
	N[illegible]-[illegible] (*N*=302)	C[illegible] (*N*=418)	N[illegible]-[illegible] (*N*=302)	C[illegible] (*N*=407)
[illegible] / [illegible]				
[illegible] ([illegible]00,000)	1.270	1.650	1.412	2.757
A[illegible] ([illegible]000,000)	3.838	5.255	3.723	7.866
[illegible]				
A[illegible] ([illegible])	67.3	65.1	66.9	66.0
[illegible]	0.23	0.26	0.55	0.55
[illegible] / [illegible]	0.05	0.04	0.07	0.12
M[illegible]	0.42	0.46	0.91	0.91
D[illegible]	0.09	0.10	0.05	0.05
[illegible]	0.66	0.54	0.74	0.58
[illegible]				
[illegible]-[illegible]	0.42	0.31	0.65	0.53
G[illegible]	0.01	0.01	0.06	0.10
[illegible]	0.10	0.08	0.19	0.23
N[illegible]	0.47	0.60	0.10	0.14
N[illegible]-[illegible]				
M[illegible]	3.3	2.7	3.3	2.8
N[illegible]	0.4	0.3	0.6	0.4
[illegible]	2.5	1.7	2.5	1.7
[illegible]	0.9	1.1	1.1	1.2
[illegible]	0.3	0.2	0.3	0.2
[illegible]	0.9	0.7	1.0	0.7

		M

Table 8 ([illegible])

	C[illegible]		N[illegible]		C[illegible]		N[illegible]	
	[illegible] (*N*=418)		[illegible] (*N*=302)		M[illegible] (*N*=407)		M[illegible] (*N*=302)	
N[illegible]	79.218	2.51	102.731	2.10	79.903	2.50	−43.883	−1.22
[illegible]	3.626	0.22	4.522	0.17	26.080	1.21	77.383	3.53
[illegible]	21.109	0.58	22.629	0.50	37.295	0.95	41.694	1.06
C[illegible]	−9.780	−0.04	−408.573	−1.10	19.110	0.05	213.975	0.58

[illegible]

[illegible] 20 [illegible] “[illegible]”.

N[illegible]

Table 9 D[illegible] ([illegible] *t* [illegible])

	C[illegible]		N[illegible]		C[illegible]		N[illegible]	
	[illegible] (*N*=418)		[illegible] (*N*=302)		M[illegible] (*N*=407)		M[illegible] (*N*=302)	
[illegible]								
[illegible] ([illegible] 000)	−0.001	−0.80	−0.007	−3.37	0.001	0.47	0.003	0.78
[illegible] ([illegible] 000,000)	2.403	2.04	−0.606	−0.36	−0.300	−0.33	0.087	0.05
A[illegible] ([illegible] 000,000)	0.004	0.10	−0.023	−0.45	0.039	1.02	−0.039	−0.68
[illegible]								
A[illegible]	−0.690	−3.89	−0.462	−2.61	−1.317	−5.84	−1.601	−6.85
E[illegible]								
[illegible]	0.736	0.37	1.612	0.62	−4.771	−1.75	−4.926	−1.75
[illegible]	5.687	1.37	−15.148	−2.21	−8.083	−1.64	−11.162	−1.88
M[illegible]	3.642	2.11	−0.440	−0.19	4.617	1.03	8.078	1.62
D[illegible]	−7.934	−2.46	−12.400	−2.67	−19.682	−3.12	−6.141	−1.02
[illegible]	−0.012	−0.01	5.285	2.10	5.066	1.83	−0.950	−0.29
[illegible]								
[illegible]	18.068	9.29	13.545	5.63	13.342	3.48	18.713	3.75
G[illegible]	3.624	0.48	16.414	1.56	−6.761	−1.19	−3.610	−0.47
[illegible]	13.131	4.57	19.355	5.24	10.849	2.59	12.535	2.27
C[illegible]								
M[illegible]	0.487	0.26			−1.086	−0.43		
N[illegible]	0.443	0.31			0.138	0.09		
[illegible]	−2.346	−1.70			−0.503	−0.29		
[illegible]	−0.932	−0.37			−6.437	−2.04		
C[illegible]	32.969	2.74	31.115	2.51	92.827	5.28	119.268	6.71

[illegible]

[illegible] 20 [illegible] “[illegible]”.

N[illegible]

Appendix 2 Joint maximum likelihood estimation of the coresidency, transfers and labour supply equations

[illegible]

[illegible] E[illegible]. 1–6 [illegible]:

$$
\begin{aligned}
C_i &= 1\left(\eta_0 + \eta_1 Z_i^P + \eta_2 Z_i^C + \eta_3 H_i + \nu_i > 0\right) \\
&= 1(\eta Z_i + \nu_i > 0)
\end{aligned}
\tag{7}
$$

[illegible] 1( ) [illegible] 0 [illegible] Z_i [illegible] $[1, Z_i^P, Z_i^C, H_i]$.

E[illegible]:

$$
\begin{aligned}
TR_i &= \max\left(\pi_{0n} + \pi_{1n} Z_i^P + \pi_{2n} Z_i^{NC} + u_{1i}, 0\right) \\
&= \max\left(\pi X_i + u_{1i}, 0\right)
\end{aligned}
\tag{8}
$$

[illegible] i [illegible] $[1, Z_i^P, Z_i^{NC}]$. F[illegible]:

$$
\begin{aligned}
LS_i^P &= \max\left(\beta_{0n} + \beta_{1n} Z_i^P + \gamma_{1n} TR_i + \varepsilon_{1i}, 0\right) \\
&= \max\left(\beta W_i + \gamma TR_i + \varepsilon_{1i}, 0\right)
\end{aligned}
\tag{9}
$$

[illegible] i [illegible] $[1, Z_i^P]$.

[illegible]:

$$
\begin{pmatrix} \nu_i \\ u_{1i} \\ \varepsilon_{1i} \end{pmatrix} \sim N \begin{pmatrix} 0 & 1 & \rho_{\nu u_1}\sigma_{u_1} & \rho_{\nu\varepsilon_1}\sigma_{\varepsilon_1} \\ 0 & & & \rho_{u_1\varepsilon_1}\sigma_{u_1}\sigma_{\varepsilon_1} \\ 0, & & & \sigma_{\varepsilon_1}^2 \end{pmatrix}
$$

2.1 D[illegible]

[illegible]. B[illegible], [illegible]

2.1.1 Coresiding (C_i= 1)

[illegible]:

$$
\begin{aligned}
L_{1i} &= \Pr\left(C_i = 1\right)\\
&= \Pr\left(\nu_i > -\eta z_i\right)\\
&= 1 - \Phi(-\eta z_i)
\end{aligned}
$$

[illegible] Φ [illegible]. N [illegible]

2.1.2 Non-coresiding, receiving positive transfers and having positive labour supply

$$\left(C_i = 0, TR_i > 0, LS_i^P > 0\right)$$

$$
\begin{aligned}
L_{2i} &= \Pr\left(C_i = 0, TR_i = tr_i, LS_i^P = ls_i\right)\\
&= \Pr\left(TR_i = tr_i, LS_i^P = ls_i\right) \times \Pr\left(C_i = 0 | TR_i = tr_i, LS_i^P = ls_i\right)\\
&= \Pr(u_{1i} = tr_i - \pi x_i, \varepsilon_{1i} = ls_i - \beta w_i - \gamma tr_i)\\
&\quad \times \Pr(\nu_i < -\eta z_i | u_{1i} = tr_i - \pi x_i, \varepsilon_{1i} = ls_i - \beta w_i - \gamma tr_i)\\
&= \varphi_2(tr_i - \pi x_i, ls_i - \beta w_i - \gamma tr_i) \times \Phi(-\eta z_i | tr_i - \pi x_i, ls_i - \beta w_i - \gamma tr_i)
\end{aligned}
$$

[illegible] φ_2 [illegible].

2.1.3 Non-coresiding, receiving positive transfers and not working

$$\left(C_i = 0,\ TR_i > 0,\ LS_i^P = 0\right)$$

$$
\begin{aligned}
L_{3i} &= \Pr\left(C_i = 0, LS_i^P = 0, TR_i = tr_i\right)\\
&= \Pr\left(TR_i = tr_i\right) \times \Pr\left(LS_i^P = 0, C_i = 0 | TR_i = tr_i\right)\\
&= \Pr\left(u_{1i} = tr_i - \pi x_i\right) \times \Pr\left(\nu_i < -\eta z_i, \varepsilon_{1i} < -\beta w_i - \gamma tr | u_{1i} = tr_i - \pi x_i\right)\\
&= \phi_2(tr_i - \pi x_i) \times \Phi_2(-\eta z_i, -\beta w_i - \gamma tr_i | tr_i - \pi x_i)
\end{aligned}
$$

[illegible] ϕ [illegible], [illegible] Φ_2 [illegible].

2.1.4 Non-coresiding, receiving no transfers and working

$$\left(C_i = 0,\ TR_i = 0, LS_i^P > 0\right)$$

$$\begin{aligned}L_{4i} &= \Pr\left(C_i = 0, TR_i = 0, LS_i^P = ls_i\right)\\ &= \Pr\left(LS_i^P = ls_i\right).\Pr\left(TR_i = 0, C_i = 0\middle|LS_i^P = ls_i\right)\\ &= \Pr\left(u_i = ls_i - \beta w_i - \gamma tr_i\right)\times \Pr\left(u_{1i} < -\pi x_i, \nu_i < -\eta z_i, |\varepsilon_{1i} = ls_i - \beta w_i - \gamma tr_i\right)\\ &= \phi(ls_i - \beta w_i - \gamma tr_i)\times \Phi_B(-\pi x_i, -\eta z_i|ls_i - \beta w_i - \gamma tr_i)\end{aligned}$$

2.1.5 Non-coresiding, receiving no transfers and not working

$$\left(C_i = 0,\ LS_i^P = 0,\ TR_i = 0\right)$$

$$\begin{aligned}L_{5i} &= \Pr\left(C_i = 0, LS_i^P = 0, TR_i = 0\right)\\ &= \Pr\left(\nu_i < -\eta z_i, \varepsilon_{1i} < -\beta w_i - \gamma tr_i, u_{1i} < -\pi x_i\right)\\ &= \Phi_3(-\eta z_i, -\beta w_i - \gamma tr_i, -\pi x_i),\end{aligned}$$

[illegible] Φ_3 [illegible].

2.2 L[illegible]

[illegible]:

$$\begin{aligned}\log L_i = {} & 1(C_i = 1) \times \log L_{1i} + 1(C_i = 0, TR_i > LS_i > 0) \times \log L_{2i}\\ & + 1(C_i = 0, TR_i > 0, LS_i = 0) \times \log L_{3i}\\ & + 1(C_i = 0, TR_i = 0, LS_i > 0) \times \log L_{4i}\\ & + 1(C_i = 0, TR_i = 0, LS_i = 0) \times \log L_{5i}.\end{aligned}$$

[illegible] (1) [illegible]; (2) [illegible], [illegible]; (3) [illegible], [illegible]; (4) [illegible], [illegible]; [illegible] (5) [illegible], [illegible]. [illegible] E[illegible]. 1–4.

References

A A, D (1994) A : I . J C C G 9:99–108
A JF, H F, K L (1997) . J E 105(6):1121–1166
B , K (2001) L I : . I J G 7:17–33
B G (1974) A . J E 82(6):1063–1093
B G (1991) A . H , C
B D, A, L (1985) . J E 93:1045–1076
C M (1991) B 45:189–202
C L (2000) I : . D 37(1):17–27
C L, C -C D (2002) . A E L 9(10):649–652
C AJ, J G (1989) A A EAN: . I A
C D (1987) M . J E 95(3):508–543
C D, J E (1992) : B E 6(1):155–169
C D, M (1992) I . E 74 (2):305–314
D J, C A (1994) L M : ? D 31(1):95–113
F E, K (2003) I B . I B N . AC2003-0003. C , B , B
F E, B , M (1999) : I A J 27(2):65–86
F E, C A, MB (2002) I , 1939–99. 56:201–213
F E, L L, (2002) A . J M E 64(3):627–641
F J, K J, C B , A (2003) G A 25(6):587–630
H A (2000) A A . C A . 00-55. C , M , A A
H A ( ) (2002) A : M , A A
H J (1992) : K ? E D C C 40:545–566
H , G, F (1996) E 78(3):428–440
H -E D, J D, H (1993) C : . J E 108(2):413–435
H G (2000) L — I . I : D ( ) A A - : , L
J (2004) D ' ' ? E . J E 88(1–2):89–112
J D, M (1994) I . J H 29(4):1205–1234
K (1999) I - : I . I : K ( ) E .D. , D E , MI , C
K J, A (1981) A : K . J D E 8(2):205–226
K A (1999) E : - . E D C C 47(3):620–656

K A (2000) : J E 108(6):1184–1209

L J, (1994) , , . A J 99:1010–1041

L L, (1997) M : M . D 34(1):115–134

L , (1985) M : B . J E 93(5):901–918

M L (1989) L F , K , M . D 26:627–644

M G K, (1995) : J H 30(5): 186– 226

M C, (2002) H . D N . 846:1–46. E G C , N H

N A (1995) A I : . B L 151(3):422–437

L, B (1997) : . AEA . A E 87(2):460–464

L, B (1999) I : . J H 34(3):475–503

M, D L (1988) ' ': E 70:36–44

M, K (1993) I - : , , . J L E 11(1):84–112

G (1997) C . A ? J D 33 (4):487–511

B (1995) . A B . , N