Summary of GMM Estimates

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Table 1: Joint GMM Estimation of Production and Demand - Preferred Specification

	$\epsilon_{\tau,g}$		$\epsilon_{x,H}$		δ_1		δ_2	
	($\kappa=0$)	($\kappa=1$)	($\kappa=0$)	($\kappa=1$)	($\kappa=0$)	($\kappa=1$)	($\kappa=0$)	($\kappa=1$)
	0.20^+	0.20^+	0.50	0.50	0.13	0.17	0.83	0.83
	(0.05)	(0.05)	(0.09)	(0.09)	(0.03)	(0.04)	(0.02)	(0.02)
	$\tilde{\phi}_m$: Mother's Time		$\tilde{\phi}_f$: Father's Time		$\tilde{\phi}_x$: Childcare		ϕ_θ: TFP	
	($\kappa=0$)	($\kappa=1$)	($\kappa=0$)	($\kappa=1$)	($\kappa=0$)	($\kappa=1$)	($\kappa=0$)	($\kappa=1$)
Constant	8.33	8.22	4.25	4.13	-1.21	-1.19	1.30	1.10
	(1.94)	(1.90)	(1.28)	(1.27)	(0.41)	(0.41)	(0.42)	(0.47)
Single	0.08	0.10	-	-	0.61	0.61	-0.15	-0.20
	(0.37)	(0.37)	-	-	(0.21)	(0.21)	(0.06)	(0.07)
Type 2	-0.96	-0.96	-	-	0.08	0.08	0.04	-0.05
	(0.55)	(0.55)	-	-	(0.30)	(0.30)	(0.08)	(0.09)
Type 3	-2.41	-2.41	-	-	0.10	0.10	-0.30	-0.43
	(0.93)	(0.93)	-	-	(0.31)	(0.31)	(0.11)	(0.14)
Mother some coll.	-0.52	-0.50	-	-	0.00	0.01	0.10	0.05
	(0.46)	(0.45)	-	-	(0.20)	(0.20)	(0.07)	(0.07)
Mother coll+	-1.74	-1.71	-	-	-0.22	-0.23	-0.03	-0.08
	(0.74)	(0.74)	-	-	(0.19)	(0.19)	(0.09)	(0.11)
Child's age	-0.61	-0.60	-0.49	-0.48	-0.07	-0.07	-0.13	-0.13
	(0.18)	(0.17)	(0.18)	(0.17)	(0.03)	(0.03)	(0.03)	(0.04)
Num. of children 0-5	0.50	0.46	0.66	0.64	0.07	0.06	0.08	0.06
	(0.30)	(0.30)	(0.42)	(0.42)	(0.12)	(0.12)	(0.04)	(0.05)
Father some coll.	-	-	-1.08	-1.04	-0.01^+	-0.00^+	0.01	-0.01
	-	-	(0.72)	(0.72)	(0.25)	(0.25)	(0.07)	(0.07)
Father coll+	-	-	-0.98	-0.95	-0.64	-0.63	0.22	0.17
	-	-	(0.68)	(0.68)	(0.24)	(0.23)	(0.07)	(0.08)
Year = 2002	-	-	-	-	-	-	-0.34	-0.30
	-	-	-	-	-	-	(0.05)	(0.06)

Table 2: Joint GMM Estimation of Production and Demand - Preferred Specification with Relative Price Instruments

	$\epsilon_{\tau,g}$		$\epsilon_{x,H}$		δ_1		δ_2	
	$(\kappa=0)$	$(\kappa=1)$	$(\kappa=0)$	$(\kappa=1)$	$(\kappa=0)$	$(\kappa=1)$	$(\kappa=0)$	$(\kappa=1)$
	0.21^+	0.20	0.48^+	0.48^+	0.03	0.16	0.82	0.82
	(0.05)	(0.05)	(0.09)	(0.08)	(0.02)	(0.04)	(0.01)	(0.02)

	$\tilde{\phi}_m$: Mother's Time		$\tilde{\phi}_f$: Father's Time		$\tilde{\phi}_x$: Childcare		ϕ_θ: TFP	
	$(\kappa=0)$	$(\kappa=1)$	$(\kappa=0)$	$(\kappa=1)$	$(\kappa=0)$	$(\kappa=1)$	$(\kappa=0)$	$(\kappa=1)$
Constant	8.20	8.20	4.17	4.14	-1.18	-1.14	1.73	1.05
	(1.83)	(1.92)	(1.22)	(1.28)	(0.42)	(0.42)	(0.33)	(0.43)
Single	0.07	0.08	-	-	0.63	0.65	-0.15	-0.18
	(0.35)	(0.37)	-	-	(0.22)	(0.21)	(0.05)	(0.07)
Type 2	-0.91	-0.96	-	-	0.08	0.06	0.08	-0.04
	(0.52)	(0.55)	-	-	(0.31)	(0.31)	(0.07)	(0.09)
Type 3	-2.25	-2.46	-	-	0.13	0.07	-0.10	-0.39
	(0.86)	(0.94)	-	-	(0.33)	(0.32)	(0.07)	(0.13)
Mother some coll.	-0.54	-0.60	-	-	-0.01	0.00	0.12	0.06
	(0.44)	(0.47)	-	-	(0.20)	(0.20)	(0.05)	(0.07)
Mother coll+	-1.70	-1.80	-	-	-0.24	-0.25	0.15	-0.05
	(0.71)	(0.76)	-	-	(0.20)	(0.20)	(0.07)	(0.10)
Child's age	-0.60	-0.59	-0.47	-0.48	-0.07	-0.08	-0.10	-0.12
	(0.17)	(0.17)	(0.17)	(0.18)	(0.03)	(0.03)	(0.03)	(0.03)
Num. of children 0-5	0.52	0.48	0.71^+	0.75	0.05	0.03	0.12	0.05
	(0.29)	(0.30)	(0.41)	(0.43)	(0.13)	(0.12)	(0.04)	(0.04)
Father some coll.	-	-	-1.09	-1.10	0.00^+	0.01^+	0.07	-0.00
	-	-	(0.70)	(0.73)	(0.26)	(0.26)	(0.06)	(0.07)
Father coll+	-	-	-0.87	-0.92	-0.66	-0.63	0.32	0.17
	-	-	(0.63)	(0.67)	(0.24)	(0.24)	(0.06)	(0.07)
Year = 2002	-	-	-	-	-	-	-0.38	-0.28
	-	-	-	-	-	-	(0.04)	(0.05)

Identical results to above but with relative price instruments included in production moments.

Table 3: Joint GMM Estimation of Demand - Preferred Specification

	$\epsilon_{\tau,g}$		$\epsilon_{x,H}$		Correl. residuals	
	(1)	(2)	(1)	(2)	(1)	(2)
	0.20	0.37	0.51	0.77	0.88	0.88
	(0.05)	(0.17)	(0.09)	(0.09)		

	$\tilde{\phi}_m$: Mother's Time		$\tilde{\phi}_f$: Father's Time		$\tilde{\phi}_x$: Childcare	
	(1)	(2)	(1)	(2)	(1)	(2)
Constant	8.37	5.55	4.11	3.35	-1.19	-1.45
	(1.97)	(1.67)	(1.28)	(0.76)	(0.40)	(0.28)
Single	0.29	0.11	-	-	0.62	0.63
	(0.38)	(0.21)	-	-	(0.21)	(0.14)
Type 2	-1.14	-0.49	-	-	0.03	0.00
	(0.59)	(0.46)	-	-	(0.29)	(0.20)
Type 3	-2.49	-1.09	-	-	-0.04	-0.09
	(0.96)	(0.86)	-	-	(0.30)	(0.21)
Mother some coll.	-0.44	-0.13	-	-	-0.00	-0.06
	(0.45)	(0.28)	-	-	(0.19)	(0.13)
Mother coll+	-1.81	-0.76	-	-	-0.20	-0.28
	(0.77)	(0.65)	-	-	(0.19)	(0.13)
Child's age	-0.60	-0.34	-0.48	-0.24	-0.07	-0.04
	(0.18)	(0.15)	(0.18)	(0.14)	(0.03)	(0.02)
Num. of children 0-5	0.33	0.16	0.59	0.29	0.09	0.08
	(0.29)	(0.18)	(0.42)	(0.26)	(0.12)	(0.08)
Father some coll.	-	-	-1.08	-0.41	0.06	0.01
	-	-	(0.74)	(0.45)	(0.25)	(0.17)
Father coll+	-	-	-0.84	-0.22	-0.54	-0.41
	-	-	(0.66)	(0.44)	(0.23)	(0.16)

Table 4: Joint GMM Estimation - Fully Restricted Case, No Binding Constraints

	$\epsilon_{\tau,g}$ (1)	(2)	(3)	(4)	$\epsilon_{x,H}$ (1)	(2)	(3)	(4)	δ_1 (1)	(2)	(3)	(4)	δ_2 (1)	(2)	(3)	(4)
	0.29^+	0.26^+	0.20^+	0.18^+	0.53	0.47^+	0.50	0.50	0.12	0.16	0.13	0.13	0.82	0.84	0.83	0.8
	(0.05)	(0.05)	(0.05)	(0.05)	(0.09)	(0.08)	(0.09)	(0.09)	(0.04)	(0.04)	(0.03)	(0.04)	(0.02)	(0.02)	(0.02)	(0.0

	$\tilde{\phi}_m$: Mother's Time (1)	(2)	(3)	(4)	$\tilde{\phi}_f$: Father's Time (1)	(2)	(3)	(4)	$\tilde{\phi}_x$: Childcare (1)	(2)	(3)	(4)	ϕ_θ: TFP (1)	(2)	(3)	(4)
Constant	5.53	6.39	8.33	12.69	3.52	3.72	4.25	4.36	-1.21	-1.24^+	-1.21	-1.61	1.07	1.17	1.30	2.1
	(0.78)	(1.03)	(1.94)	(3.74)	(0.81)	(0.92)	(1.28)	(1.42)	(0.31)	(0.42)	(0.41)	(0.62)	(0.44)	(0.48)	(0.42)	(0.4
Single	0.18	0.18	0.08	0.10	-	-	-	-	0.55	0.61	0.61	0.61	-0.15	-0.14	-0.15	-0.1
	(0.25)	(0.28)	(0.37)	(0.40)	-	-	-	-	(0.20)	(0.22)	(0.21)	(0.21)	(0.06)	(0.07)	(0.06)	(0.0
Mother some coll.	-0.36	-	-0.52	-0.54	-	-	-	-	0.04	-	0.00	0.04	0.11	-	0.10	0.0
	(0.30)	-	(0.46)	(0.50)	-	-	-	-	(0.18)	-	(0.20)	(0.20)	(0.06)	-	(0.07)	(0.0
Mother coll+	-1.07	-	-1.74	-1.86	-	-	-	-	-0.19	-	-0.22	-0.21	0.03	-	-0.03	-0.0
	(0.41)	-	(0.74)	(0.84)	-	-	-	-	(0.18)	-	(0.19)	(0.19)	(0.08)	-	(0.09)	(0.1
Child's age	-0.42	-0.48^+	-0.61	-0.66	-0.31^+	-0.37	-0.49	-0.53	-0.06	-0.07^+	-0.07	-0.07	-0.10	-0.14	-0.13	-0.1
	(0.09)	(0.11)	(0.18)	(0.21)	(0.09)	(0.11)	(0.18)	(0.21)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.0
Num. of children 0-5	0.35	0.44	0.50	0.61	0.43	0.49	0.66	0.75	0.10	0.10	0.07	0.09	0.08	0.09	0.08	0.0
	(0.20)	(0.23)	(0.30)	(0.35)	(0.27)	(0.30)	(0.42)	(0.47)	(0.12)	(0.13)	(0.12)	(0.12)	(0.04)	(0.05)	(0.04)	(0.0
Type 2	-	-0.64	-0.96	-	-	-	-	-	-	0.09	0.08	-	-	0.07	0.04	-
	-	(0.39)	(0.55)	-	-	-	-	-	-	(0.32)	(0.30)	-	-	(0.09)	(0.08)	-
Type 3	-	-1.70	-2.41	-	-	-	-	-	-	0.12	0.10	-	-	-0.30	-0.30	-
	-	(0.58)	(0.93)	-	-	-	-	-	-	(0.32)	(0.31)	-	-	(0.12)	(0.11)	-
μ_k	-	-	-	-2.66	-	-	-	-	-	-	-	0.21	-	-	-	-0.4
	-	-	-	(1.10)	-	-	-	-	-	-	-	(0.26)	-	-	-	(0.1
Father some coll.	-	-	-	-	-0.58	-0.67	-1.08	-1.10	-0.01^+	0.07	-0.01^+	-0.05^+	0.03	0.03	0.01	0.0
	-	-	-	-	(0.45)	(0.50)	(0.72)	(0.80)	(0.23)	(0.27)	(0.25)	(0.25)	(0.07)	(0.07)	(0.07)	(0.0
Father coll+	-	-	-	-	-0.45	-0.44	-0.98	-1.10	-0.62^+	-0.64^+	-0.64	-0.69	0.24	0.25	0.22	0.1
	-	-	-	-	(0.41)	(0.43)	(0.68)	(0.76)	(0.21)	(0.23)	(0.24)	(0.24)	(0.06)	(0.07)	(0.07)	(0.0
Year = 2002	-	-	-	-	-	-	-	-	-	-	-	-	-0.32	-0.32	-0.34	-0.3
	-	-	-	-	-	-	-	-	-	-	-	-	(0.04)	(0.05)	(0.05)	(0.0

Table 5: Joint GMM Estimation - Fully Restricted Case, No Borrowing or Saving

	$\epsilon_{\tau,g}$				$\epsilon_{x,H}$				δ_1				δ_2			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
	0.30^+	0.26^+	0.20^+	0.18^+	0.53	0.47^+	0.50	0.50	0.15	0.20	0.17	0.16	0.82	0.83	0.83	0.83
	(0.05)	(0.05)	(0.05)	(0.05)	(0.09)	(0.08)	(0.09)	(0.09)	(0.04)	(0.05)	(0.04)	(0.04)	(0.02)	(0.02)	(0.02)	(0.02)

	$\tilde{\phi}_m$: Mother's Time				$\tilde{\phi}_f$: Father's Time				$\tilde{\phi}_x$: Childcare				ϕ_θ: TFP			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
Constant	5.43	6.25^+	8.22	12.56	3.44	3.59	4.13	4.29	−1.19	−1.23	−1.19	−1.59	0.76	0.81	1.10	2.00
	(0.77)	(0.99)	(1.90)	(3.68)	(0.81)	(0.90)	(1.27)	(1.40)	(0.31)	(0.42)	(0.41)	(0.61)	(0.50)	(0.55)	(0.47)	(0.45)
Single	0.18	0.21	0.10	0.13	-	-	-	-	0.55	0.61	0.61	0.62	-0.20	-0.19	-0.20	-0.18
	(0.25)	(0.28)	(0.37)	(0.40)	-	-	-	-	(0.20)	(0.22)	(0.21)	(0.21)	(0.06)	(0.07)	(0.07)	(0.07)
Mother some coll.	−0.34	-	−0.50	−0.53	-	-	-	-	0.04	-	0.01	0.04	0.07	-	0.05	0.05
	(0.30)	-	(0.45)	(0.50)	-	-	-	-	(0.18)	-	(0.20)	(0.20)	(0.07)	-	(0.07)	(0.07)
Mother coll+	−1.04	-	−1.71	−1.83	-	-	-	-	−0.20	-	−0.23	−0.20	−0.01	-	−0.08	−0.09
	(0.40)	-	(0.74)	(0.83)	-	-	-	-	(0.18)	-	(0.19)	(0.19)	(0.09)	-	(0.11)	(0.11)
Child's age	−0.40	$−0.46^+$	−0.60	−0.66	−0.30	−0.35	−0.48	−0.52	−0.06	−0.07	−0.07	−0.07	−0.09	−0.13	−0.13	−0.14
	(0.09)	(0.10)	(0.17)	(0.21)	(0.09)	(0.11)	(0.17)	(0.20)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.04)	(0.04)	(0.04)
Num. of children 0-5	0.34	0.41	0.46	0.58	0.42	0.48	0.64	0.73	0.09	0.09	0.06	0.08	0.07	0.06	0.06	0.06
	(0.20)	(0.22)	(0.30)	(0.34)	(0.26)	(0.30)	(0.42)	(0.47)	(0.12)	(0.13)	(0.12)	(0.12)	(0.05)	(0.05)	(0.05)	(0.05)
Type 2	-	−0.62	−0.96	-	-	-	-	-	-	0.10	0.08	-	-	−0.06	−0.05	-
	-	(0.38)	(0.55)	-	-	-	-	-	-	(0.32)	(0.30)	-	-	(0.10)	(0.09)	-
Type 3	-	−1.68	−2.41	-	-	-	-	-	-	0.13	0.10	-	-	−0.43	−0.43	-
	-	(0.57)	(0.93)	-	-	-	-	-	-	(0.32)	(0.31)	-	-	(0.14)	(0.14)	-
μ_k	-	-	-	-2.64	-	-	-	-	-	-	-	0.20	-	-	-	-0.52
	-	-	-	(1.09)	-	-	-	-	-	-	-	(0.26)	-	-	-	(0.15)
Father some coll.	-	-	-	-	−0.56	−0.63	−1.04	−1.08	$−0.02^+$	0.07	$−0.00^+$	$−0.05^+$	0.01	−0.00	−0.01	0.00
	-	-	-	-	(0.45)	(0.49)	(0.72)	(0.79)	(0.23)	(0.27)	(0.25)	(0.25)	(0.07)	(0.08)	(0.07)	(0.07)
Father coll+	-	-	-	-	−0.43	−0.40	−0.95	−1.07	$−0.62^+$	$−0.64^+$	−0.63	$−0.69^+$	0.18	0.18	0.17	0.15
	-	-	-	-	(0.40)	(0.43)	(0.68)	(0.75)	(0.21)	(0.23)	(0.23)	(0.24)	(0.07)	(0.09)	(0.08)	(0.08)
Year = 2002	-	-	-	-	-	-	-	-	-	-	-	-	-0.28	-0.26	-0.30	-0.29
	-	-	-	-	-	-	-	-	-	-	-	-	(0.05)	(0.06)	(0.06)	(0.05)

Note: Superscripts indicate results of Lagrange Multiplier test of individual parameter restrictions. Rejection for a test of size 5%, 1% and 0.1% is indicated by *, **, and ***.

Table 6: Joint GMM Estimation - Unrestricted, No Borrowing or Saving

	$\epsilon_{\tau,g}$		$\epsilon_{x,H}$		δ_1	δ_2	$2N(Q_N - \tilde{Q}_N)$
	Rel. Dem.	Prod.	Rel. Dem.	Prod.	-	-	-
	0.21	0.56	0.50	-	0.17	0.82	1.72
	(0.05)	(21.96)	(0.09)	-	(0.05)	(0.03)	(0.42)

	$\tilde{\phi}_m$: Mother's Time		$\tilde{\phi}_f$: Father's Time		$\tilde{\phi}_x$: Childcare		ϕ_θ: TFP
	Rel. Dem.	Prod.	Rel. Dem.	Prod.	Rel. Dem.	Prod.	-
Constant	7.79	-	3.93	-	-1.18	-	1.21
	(1.69)		(1.17)		(0.41)		(0.62)
Single	0.11	-	-	-	0.60	-	-0.17
	(0.34)				(0.21)		(0.14)
Type 2	-0.87	-	-	-	0.07	-	-0.09
	(0.50)				(0.30)		(0.16)
Type 3	-2.19	-	-	-	0.10	-	-0.55
	(0.82)				(0.31)		(0.30)
Mother some coll.	-0.47	-	-	-	0.01	-	0.02
	(0.42)				(0.20)		(0.12)
Mother coll+	-1.55	-	-	-	-0.22	-	-0.18
	(0.65)				(0.19)		(0.22)
Child's age	-0.56	-	-0.43	-	-0.07	-	-0.16
	(0.15)		(0.16)		(0.03)		(0.04)
Num. of children 0-5	0.43	-	0.60	-	0.05	-	0.07
	(0.27)		(0.38)		(0.12)		(0.05)
Father some coll.	-	-	-0.95	-	0.00	-16.20	-0.08
			(0.67)		(0.25)	(130762285.78)	(0.58)
Father coll+	-	-	-0.83	-	-0.63	-	0.12
			(0.61)		(0.24)		(0.10)
Year = 2002	-	-	-	-	-	-	-0.30
							(0.06)

Note: the distance metric, $2N(Q_N - \tilde{Q}_N)$, is the difference between the optimally weighted gmm criterion at the restricted estimates and its value at the relaxed estimates. It has a χ^2 distribution with degrees of freedom equal to the number of constraints that are relaxed. Standard errors are indicated in parentheses *except* for the distance metric, which reports a p-value.

Table 7: Joint GMM Estimation - Unrestricted, No Binding Constraints

	$\epsilon_{\tau,g}$		$\epsilon_{x,H}$		δ_1	δ_2	$2N(Q_N - \tilde{Q}_N)$
	Rel. Dem.	Prod.	Rel. Dem.	Prod.	-	-	-
	0.21	0.55	0.50	-	0.14	0.83	1.98
	(0.05)	(27.77)	(0.09)	-	(0.05)	(0.03)	(0.37)

	$\tilde{\phi}_m$: Mother's Time		$\tilde{\phi}_f$: Father's Time		$\tilde{\phi}_x$: Childcare		ϕ_θ: TFP
	Rel. Dem.	Prod.	Rel. Dem.	Prod.	Rel. Dem.	Prod.	-
Constant	7.86	-	4.06	-	-1.19	-	1.36
	(1.70)		(1.17)		(0.41)		(0.59)
Single	0.08	-	-	-	0.60	-	-0.13
	(0.34)				(0.21)		(0.14)
Type 2	-0.87	-	-	-	0.07	-	0.01
	(0.50)				(0.30)		(0.14)
Type 3	-2.17	-	-	-	0.10	-	-0.40
	(0.81)				(0.31)		(0.28)
Mother some coll.	-0.47	-	-	-	0.01	-	0.07
	(0.42)				(0.20)		(0.11)
Mother coll+	-1.55	-	-	-	-0.22	-	-0.11
	(0.65)				(0.19)		(0.21)
Child's age	-0.56	-	-0.44	-	-0.07	-	-0.16
	(0.16)		(0.16)		(0.03)		(0.04)
Num. of children 0-5	0.45	-	0.61	-	0.06	-	0.08
	(0.27)		(0.38)		(0.12)		(0.05)
Father some coll.	-	-	-0.96	-	-0.00	-18.19	-0.05
			(0.66)		(0.25)	(1094529195.59)	(0.57)
Father coll+	-	-	-0.84	-	-0.64	-	0.17
			(0.61)		(0.24)		(0.10)
Year = 2002	-	-	-	-	-	-	-0.33
							(0.06)

Note: the distance metric, $2N(Q_N - \tilde{Q}_N)$, is the difference between the optimally weighted gmm criterion at the restricted estimates and its value at the relaxed estimates. It has a χ^2 distribution with degrees of freedom equal to the number of constraints that are relaxed. Standard errors are indicated in parentheses *except* for the distance metric, which reports a p-value.

Table 8: Joint GMM Estimation - Fully Restricted Case, Unconstrained, Older Children

	ρ				δ_1				δ_2			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
	0.24	0.18	0.11	0.06	0.02	0.01	0.02	0.01	0.92	0.93	0.92	0.93
	(0.06)	(0.06)	(0.07)	(0.07)	(0.03)	(0.03)	(0.03)	(0.03)	(0.01)	(0.01)	(0.01)	(0.01)

	$\tilde{\phi}_m$: Mother's Time				$\tilde{\phi}_f$: Father's Time				$\tilde{\phi}_\theta$: TFP			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
Constant	6.06	7.51	12.63	36.51	3.66	4.45	6.53	11.26	2.18	2.40	2.25	2.47
	(2.18)	(3.08)	(7.84)	(40.30)	(2.39)	(3.21)	(5.91)	(13.97)	(0.35)	(0.35)	(0.36)	(0.35)
Single	0.43	0.49	0.52	0.83	-	-	-	-	-0.08	-0.07	-0.07	-0.07
	(0.46)	(0.61)	(1.00)	(1.93)	-	-	-	-	(0.06)	(0.06)	(0.06)	(0.06)
Mother some coll.	−0.76	-	−1.71	−2.84	-	-	-	-	-0.04	-	-0.02	-0.01
	(0.60)	-	(1.63)	(3.94)	-	-	-	-	(0.06)	-	(0.06)	(0.06)
Mother coll+	−1.23	-	−3.21	−5.63	-	-	-	-	-0.07	-	-0.05	-0.04
	(0.73)	-	(2.58)	(7.07)	-	-	-	-	(0.07)	-	(0.07)	(0.07)
Child's age	−0.49	−0.59	−0.96	−1.76	−0.37	−0.53	−0.94	−1.82	-0.12	-0.12	-0.12	-0.12
	(0.21)	(0.30)	(0.69)	(2.04)	(0.24)	(0.35)	(0.77)	(2.24)	(0.03)	(0.03)	(0.03)	(0.03)
Num. of children 0-5	0.37	0.61	0.85	1.96	0.62	0.79	1.33	2.21	-0.00	-0.02	-0.02	-0.01
	(0.44)	(0.59)	(1.01)	(2.63)	(0.54)	(0.71)	(1.35)	(3.07)	(0.06)	(0.06)	(0.06)	(0.06)
Type 2	-	−1.67	−2.99	-	-	-	-	-	-	-0.06	-0.07	-
	-	(1.05)	(2.37)	-	-	-	-	-	-	(0.07)	(0.07)	-
Type 3	-	−3.20	−5.48	-	-	-	-	-	-	-0.07	-0.12	-
	-	(1.63)	(3.99)	-	-	-	-	-	-	(0.13)	(0.11)	-
μ_k	-	-	-	−11.02	-	-	-	-	-	-	-	-0.08
	-	-	-	(13.25)	-	-	-	-	-	-	-	(0.12)
Father some coll.	-	-	-	-	−1.11	−1.72	−3.23	−6.53	-0.03	-0.05	-0.04	-0.02
	-	-	-	-	(0.84)	(1.19)	(2.78)	(8.33)	(0.08)	(0.08)	(0.08)	(0.08)
Father coll+	-	-	-	-	−1.08	−1.76	−3.50	−7.27	0.14	0.12	0.14	0.14
	-	-	-	-	(0.77)	(1.12)	(2.92)	(9.12)	(0.08)	(0.08)	(0.07)	(0.08)
Year = 2002	-	-	-	-	-	-	-	-	-0.31	-0.32	-0.30	-0.32
	-	-	-	-	-	-	-	-	(0.04)	(0.04)	(0.04)	(0.04)

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Table 9: Joint GMM Estimation - Mother's Share Unrestricted, No Borrowing or Saving

| | $\epsilon_{\tau,g}$ | | $\epsilon_{x,H}$ | | δ_1 | δ_2 | $2N(Q_N - \tilde{Q}_N)$ |
	Rel. Dem.	Prod.	Rel. Dem.	Prod.	-	-	-
	0.20	-	0.50	-	0.17	0.83	0.00
	(0.05)	-	(0.09)	-	(0.05)	(0.02)	(0.97)

| | $\tilde{\phi}_m$: Mother's Time | | $\tilde{\phi}_f$: Father's Time | | $\tilde{\phi}_x$: Childcare | | ϕ_θ: TFP |
	Rel. Dem.	Prod.	Rel. Dem.	Prod.	Rel. Dem.	Prod.	-
Constant	8.19	8.10	4.12	-	-1.19	-	1.11
	(1.89)	(9.53)	(1.27)		(0.41)		(0.73)
Single	0.10	-	-	-	0.61	-	-0.20
	(0.37)				(0.21)		(0.34)
Type 2	-0.96	-	-	-	0.08	-	-0.05
	(0.55)				(0.30)		(0.24)
Type 3	-2.41	-	-	-	0.10	-	-0.43
	(0.92)				(0.31)		(0.45)
Mother some coll.	-0.50	-	-	-	0.01	-	0.05
	(0.45)				(0.20)		(0.16)
Mother coll+	-1.70	-	-	-	-0.23	-	-0.08
	(0.73)				(0.19)		(0.34)
Child's age	-0.59	-	-0.47	-	-0.07	-	-0.13
	(0.17)		(0.17)		(0.03)		(0.09)
Num. of children 0-5	0.46	-	0.64	-	0.06	-	0.06
	(0.29)		(0.42)		(0.12)		(0.06)
Father some coll.	-	-	-1.04	-	-0.00	-	-0.01
			(0.72)		(0.25)		(0.09)
Father coll+	-	-	-0.95	-	-0.63	-	0.17
			(0.67)		(0.24)		(0.12)
Year = 2002	-	-	-	-	-	-	-0.30
							(0.07)

Note: the distance metric, $2N(Q_N - \tilde{Q}_N)$, is the difference between the optimally weighted gmm criterion at the restricted estimates and its value at the relaxed estimates. It has a χ^2 distribution with degrees of freedom equal to the number of constraints that are relaxed. Standard errors are indicated in parentheses *except* for the distance metric, which reports a p-value.

Table 10: Joint GMM Estimation - Mother's Share Unrestricted, No Binding Constraints

	$\epsilon_{\tau,g}$		$\epsilon_{x,H}$		δ_1	δ_2	$2N(Q_N - \tilde{Q}_N)$
	Rel. Dem.	Prod.	Rel. Dem.	Prod.	-	-	-
	0.20	-	0.50	-	0.14	0.83	0.02
	(0.05)	-	(0.09)	-	(0.04)	(0.02)	(0.88)

	$\tilde{\phi}_m$: Mother's Time		$\tilde{\phi}_f$: Father's Time		$\tilde{\phi}_x$: Childcare		ϕ_θ: TFP
	Rel. Dem.	Prod.	Rel. Dem.	Prod.	Rel. Dem.	Prod.	-
Constant	8.43	8.80	4.28	-	-1.21	-	1.28
	(1.99)	(11.14)	(1.30)		(0.41)		(0.87)
Single	0.08	-	-	-	0.61	-	-0.14
	(0.37)				(0.21)		(0.27)
Type 2	-0.98	-	-	-	0.08	-	0.04
	(0.56)				(0.30)		(0.24)
Type 3	-2.44	-	-	-	0.10	-	-0.29
	(0.95)				(0.31)		(0.48)
Mother some coll.	-0.53	-	-	-	0.00	-	0.10
	(0.46)				(0.20)		(0.16)
Mother coll+	-1.77	-	-	-	-0.22	-	-0.02
	(0.76)				(0.19)		(0.37)
Child's age	-0.62	-	-0.49	-	-0.07	-	-0.13
	(0.18)		(0.18)		(0.03)		(0.11)
Num. of children 0-5	0.50	-	0.67	-	0.07	-	0.08
	(0.30)		(0.43)		(0.12)		(0.06)
Father some coll.	-	-	-1.10	-	-0.01	-	0.01
			(0.74)		(0.25)		(0.09)
Father coll+	-	-	-1.01	-	-0.64	-	0.21
			(0.69)		(0.24)		(0.11)
Year = 2002	-	-	-	-	-	-	-0.34
							(0.06)

Note: the distance metric, $2N(Q_N - \tilde{Q}_N)$, is the difference between the optimally weighted gmm criterion at the restricted estimates and its value at the relaxed estimates. It has a χ^2 distribution with degrees of freedom equal to the number of constraints that are relaxed. Standard errors are indicated in parentheses *except* for the distance metric, which reports a p-value.

Table 11: Direct GMM Estimation - Relaxed Demand Specification

	ρ (1)	γ (1)	δ_1 (1)	δ_2 (1)
	[-3.00, -0.04]	[-6.79, 2.17]	[-0.13, 0.07]	[0.71, 0.96]

	$\tilde{\phi}_m$: Mother's Time (1)	$\tilde{\phi}_f$: Father's Time (1)	$\tilde{\phi}_x$: Childcare (1)	ϕ_θ: TFP (1)
Constant	[-3.88, 2.75]	[-3.93, 0.99]	[-2.59, 1.80]	[-4.65, 0.58]
Single	-	-	[-4.40, 2.43]	[-0.01, 1.84]
Mother some coll.	-	-	-	[-3.19, 0.89]
Mother coll+	-	-	-	[-0.16, 2.17]
Father some coll.	-	-	-	[-1.16, 2.97]
Father coll+	-	-	-	[-0.11, 2.35]
Child's age	-	-	-	[-0.01, 0.52]
Num. of children 0-5	-	-	-	[0.45, 4.13]
Year = 2002	-	-	-	[-0.71, -0.25]

This table reports the 10th and 90th percentiles of the bootstrapped distribution of parameter estimates from the direct estimation method. To avoid convergence issues, each bootstrap trial is terminated after 100 LBFGS iterations followed by 10 iterations of Newton's method.

Table 12: Monte Carlo Simulation - Direct vs Indirect Methods

| | Results for ρ | | | | | | | |
| | Bias | | | | Std. Dev. | | | |
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
$N = 500$	17.08	23.76	0.23	13.96	22.49	23.69	1.19	20.67
$N = 1000$	13.73	27.45	0.09	9.96	20.85	23.52	0.70	18.03
$N = 5000$	2.01	26.23	-0.00	0.75	8.05	22.05	0.29	4.54

| | Results for a | | | | | | | |
| | Bias | | | | Std. Dev. | | | |
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
$N = 500$	-0.00	-0.01	-0.00	-0.01	0.35	0.41	0.04	0.31
$N = 1000$	0.00	-0.01	0.00	0.02	0.32	0.38	0.03	0.26
$N = 5000$	0.01	0.00	-0.00	-0.00	0.15	0.29	0.01	0.10

| | Results for δ | | | | | | | |
| | Bias | | | | Std. Dev. | | | |
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
$N = 500$	-0.00	-0.00	-0.00	-0.00	0.02	0.02	0.02	0.02
$N = 1000$	-0.00	-0.00	0.00	0.00	0.01	0.01	0.01	0.01
$N = 5000$	-0.00	-0.00	-0.00	-0.00	0.00	0.00	0.00	0.01

This table presents results from 500 Monte Carlo samples of each estimator. Estimator 1 assumes inputs are perfectly measured and performs NLLS on production outcomes. Estimator 2 assumes measurement error in input 2 and uses relative demand observations to impute the second input, but does not impose cross-equation restrictions between demand and production when performing NLLS. Estimator 3 imposes the cross-equation restrictions. Estimator 4 implements estimator 1 assuming the true value of ρ.

Table 13: Monte Carlo Simulation - Increasing Relative Price Variation

					Results for ρ			
		Bias				Std. Dev.		
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
$N = 500$	15.40	15.79	0.01	15.84	21.76	21.48	0.19	21.65
$N = 1000$	10.21	11.90	0.01	8.29	18.47	19.01	0.13	17.55
$N = 5000$	1.05	2.67	-0.00	0.96	5.76	8.21	0.06	5.39

					Results for a			
		Bias				Std. Dev.		
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
$N = 500$	-0.00	-0.00	0.00	0.02	0.32	0.32	0.04	0.32
$N = 1000$	0.03	0.03	0.00	0.01	0.28	0.29	0.03	0.25
$N = 5000$	0.00	0.02	0.00	0.01	0.12	0.15	0.01	0.11

					Results for δ			
		Bias				Std. Dev.		
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
$N = 500$	-0.00	-0.00	0.00	-0.00	0.02	0.02	0.01	0.02
$N = 1000$	-0.00	-0.00	-0.00	-0.00	0.01	0.01	0.01	0.01
$N = 5000$	-0.00	-0.00	-0.00	-0.00	0.01	0.01	0.00	0.01

Same simulation results with σ_π doubled.

Table 14: Monte Carlo Simulation - Increasing Idiosyncratic Preference Variation

| | Results for ρ | | | | | | | |
| | Bias | | | | Std. Dev. | | | |
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
$N = 500$	15.40	15.79	0.01	15.84	21.76	21.48	0.19	21.65
$N = 1000$	10.21	11.90	0.01	8.29	18.47	19.01	0.13	17.55
$N = 5000$	1.05	2.67	-0.00	0.96	5.76	8.21	0.06	5.39

| | Results for a | | | | | | | |
| | Bias | | | | Std. Dev. | | | |
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
$N = 500$	-0.00	-0.00	0.00	0.02	0.32	0.32	0.04	0.32
$N = 1000$	0.03	0.03	0.00	0.01	0.28	0.29	0.03	0.25
$N = 5000$	0.00	0.02	0.00	0.01	0.12	0.15	0.01	0.11

| | Results for δ | | | | | | | |
| | Bias | | | | Std. Dev. | | | |
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
$N = 500$	-0.00	-0.00	0.00	-0.00	0.02	0.02	0.01	0.02
$N = 1000$	-0.00	-0.00	-0.00	-0.00	0.01	0.01	0.01	0.01
$N = 5000$	-0.00	-0.00	-0.00	-0.00	0.01	0.01	0.00	0.01

Same simulation results with all residual variation in relative demand attributed to true variation instead of measurement error.