

Maternal Employment and Child Development

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Labour Force Participation and Economic Growth Workshop
14-15 April 2005



Importance of Issue

- **Rising Employment Rates of Mothers with Young Children**
With Children: 54% increase (1975-2001)
Children <6: 66% Increase (1975-2001)
Infants: 78% Increase (1976-2000)
- **And # Raised in Single Adult Households**
Increased from 20% to 31% (1975-2001)
- **“Low” LFPR of 25-34 Year Old NZ Women**

Mechanisms for Effects

- **Time vs. Money (Production Function)**
- **Mother-Child Attachments**
- **Quality of Interactions**
- **Social Capital**
- **Mothers as “Role Models”**

Research Challenges

- **Non-random Selection into Maternal Employment**
- **Reverse Causation**
Do Women Work More When Their Children Do Well?
- **Small/Unrepresentative Samples**
Lack of Statistical Power
- **Persistence of Effects**
- **Disparate Effects (Sex or SES)**
- **Role of Mediating Factors (Child Care)**
- **Characterisation of Maternal Employment**

Sample Means for U.S. 10-11 Year Olds

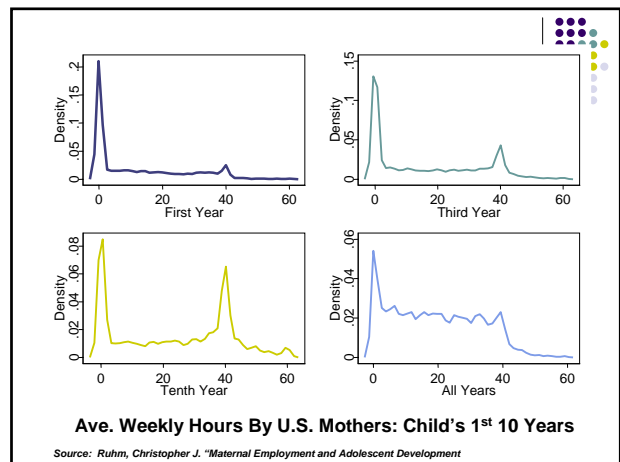
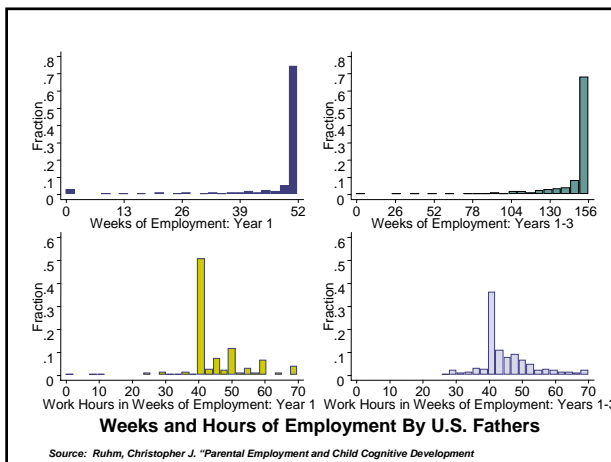
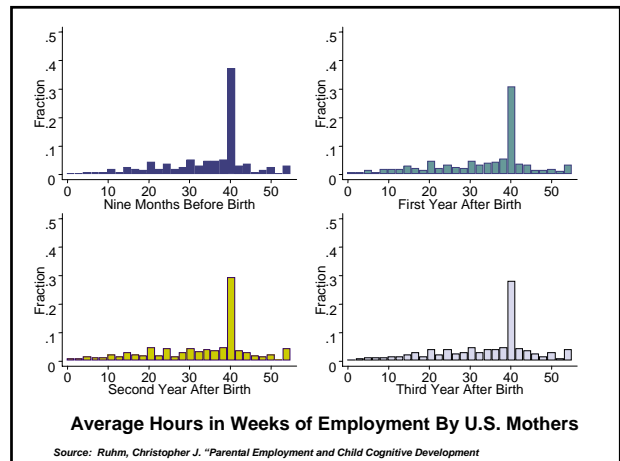
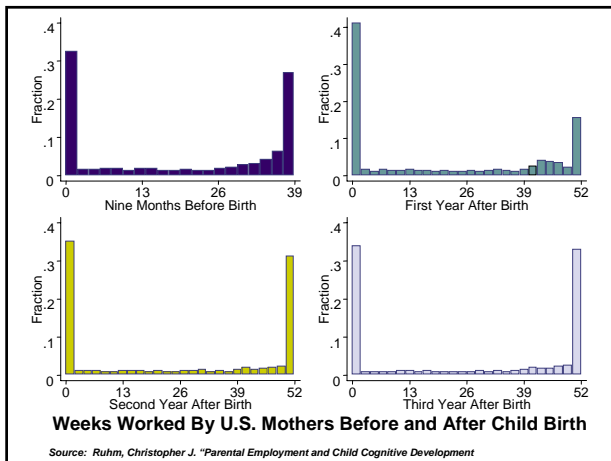
Variable	Average Weekly Work Hours		
	0-14	15-29	30+
Outcome			
Verbal Scores	-0.10	0.08	0.06
Mathematics Scores	-0.09	0.05	0.08
Reading Scores	-0.09	0.05	0.08
Obesity Rate (%)	11.9	12.5	14.1
Family Background			
Mother's Age (years) at Child Birth	22.7	22.7	23.5
Mother Attended College (%)	25.5	32.7	43.8
Mother's AFQT Score	33.5	40.1	44.4
Spouse/Partner Present (%)	69.6	76.5	80.4
Family Income: Prev. Year	\$36,891	\$45,170	\$54,106
Child Characteristics			
Low Birth Weight (%)	6.8	6.6	4.8
Very Low Birth Weight (%)	1.0	0.6	0.5

Source: Ruhm, Christopher J., "Maternal Employment and Adolescent Development"

Sample Means for N.Z. 10-11 Year Olds

Outcome	Weekly Work Hours			
	0	1-19	20-39	40+
Word Reading	99.0	101.0	100.0	100.9
Reading Comprehension	99.3	100.6	99.9	101.1
Mathematics	98.5	101.4	100.2	100.8
Family/Child Characteristics				
Mother's Age (years) at Child Birth	25.6	25.9	26.3	25.6
Mother's Education (year)	11.2	12.6	12.6	13.3
Single-Parent Family (%)	21.1	12.7	6.1	12.4
Maori/Pacific Island Ethnicity (%)	8.2	1.2	4.1	8.5

Source: Howard, John L. & David M. Fergusson, "A Longitudinal Study of Maternal Labor Force Participation and Academic Achievement", *J. Child Psychol. Psychiat.*, 40(7), 1999, 1013-24.



Effects of Maternal Employment: Cognitive Scores of 3-6 Year Olds

	Verbal Scores: 3-4 Year Olds			
Year 1	.054	-.039	-.038	-.065
Years 2-3	.097	.056	.023	.030
	Reading Scores: 5-6 Year Olds			
Year 1	.091	.020	.012	-.028
Years 2-3	.055	-.010	-.045	-.081
	Mathematics Scores: 5-6 Year Olds			
Year 1	.082	.017	.007	-.027
Years 2-3	.041	-.000	-.033	-.059
Additional Regressors	None	Basic (B)	B, Supplementary (S)	B,S Prior Employment (E)

Source: Ruhm, Christopher J. "Parental Employment and Child Cognitive Development"

Effects of Maternal Employment: 10-11 Year Olds

Outcome	(a)	(b)	(c)	(d)
Verbal Scores	.262	.048	.023	-.033
Math Scores	.195	.055	.044	-.031
Reading Scores	.190	.020	-.001	-.050
Obesity	.016	.029	.022	.016
Other Regressors	None	B	B,S	B,S,E

Source: Ruhm, Christopher J. "Maternal Employment and Adolescent Development"

Effects on Advantaged and Disadvantaged 10-11 Year Olds



Group	Outcome			
	Verbal	Math	Reading	Obesity
Disadvantaged Children				
Hispanic or Black	.018	.004	-.012	.002
Mother Not Attended College	.060	.033	-.017	.013
No Spouse/ Partner Present	.027	-.018	.030	-.008
Low SES (bottom 50%)	.004	.014	-.025	-.002
Advantaged Children				
Not Hispanic or Black	-.126	-.083	-.092	.022
Mother Attended College	-.214	-.155	-.133	.014
Spouse/Partner Present	-.063	-.030	-.089	.028
High SES (top 50%)	-.100	-.091	-.090	.032

Source: Ruhm, Christopher J. "Maternal Employment and Adolescent Development"

Sources of SES Disparities



- Benefits of Income/Earnings Muted at High SES
- Disadvantaged Children Receive Large Amounts of Day Care from Relatives
- High SES Children have Rich Home Environments (so high costs of using nonparental care)

Predicted Outcomes for 10-11 Year Olds by Maternal Employment and SES



Average Weekly Work Hours	Verbal Score (percentile)	Math Score (percentile)	Reading Score (percentile)	Obesity (%)	Over-weight (%)
Low SES Children					
0	27.1	32.2	34.4	16.8	32.8
20	32.7	35.4	38.7	17.4	31.9
40	27.4	33.1	32.8	16.5	33.2
High SES Children					
0	60.2	57.2	61.0	7.6	23.5
20	56.7	58.6	57.8	10.5	28.2
40	53.2	52.3	54.4	14.2	33.2

Child Care & Early Education



- High Quality (Affordable) Child Care Helps
- Negative Effects of Center-Based Care for Infants?
- Positive Effects of Pre-Kindergarten for Cognitive Skills at School Entry
 - But Negative Effects on Behavior?
 - Targeted vs. Universal Pre-K?

Balancing Work & Families



- Parental Investments in Early Childhood are Important
- Mothers vs. Fathers? (Special contributions of Dads?)
- Differences by Age of Child
 - Infancy A Key Role for Parents?
 - Years 2-3 High Quality Child Care Helps a Lot?
 - Years 4-5 Early Education for School Readiness?
 - School Years Parents? After-School Care?

Balancing Work & Families (Cont.)



- Goals of Increasing Maternal Employment?
- Potential Conflicts with Child Oriented Policies?
- Compensatory Policies
 - Parental Leave Entitlements
 - Child Care Policies
 - Work-Family Policies
 - Role of Government vs. Private Sector

