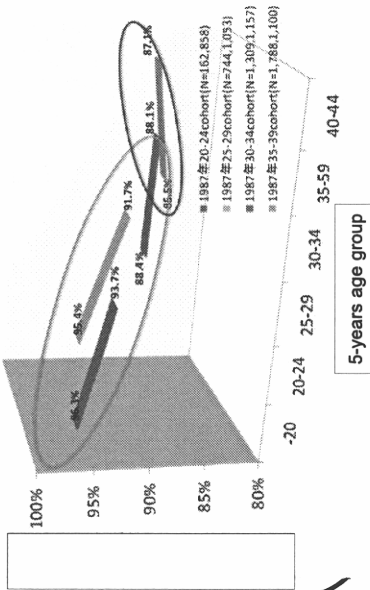
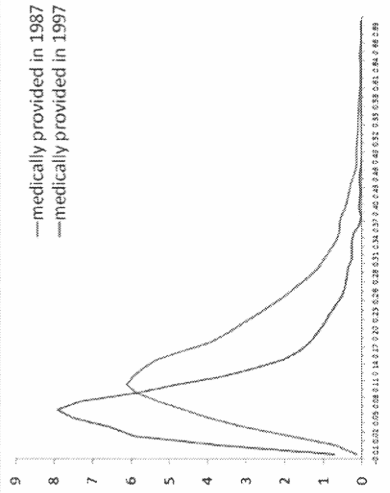


Basic Trend (5)-Married

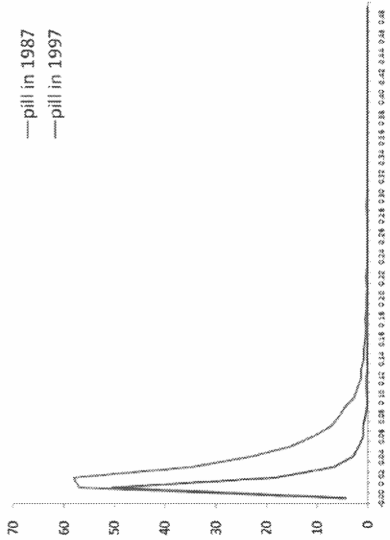
Rate of non-medically provided method use



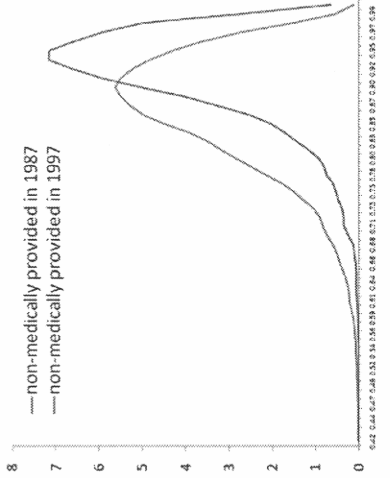
Kernel density of predicted value of medically provided methods use based on probit analysis(6)-Married

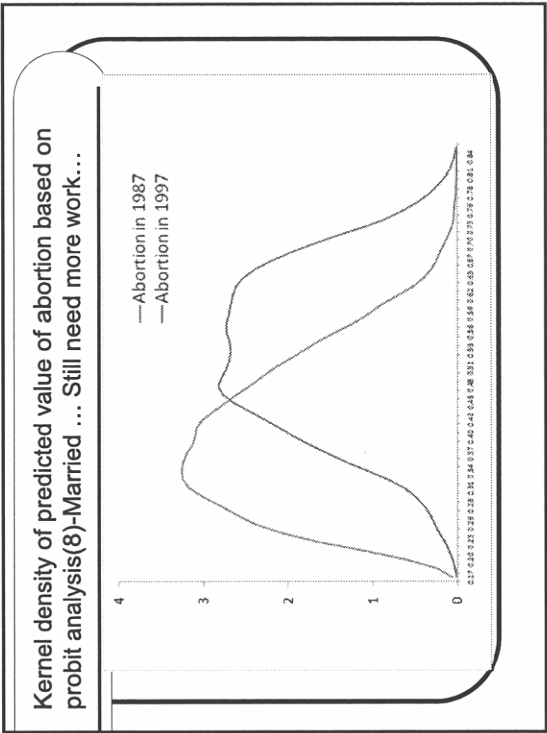
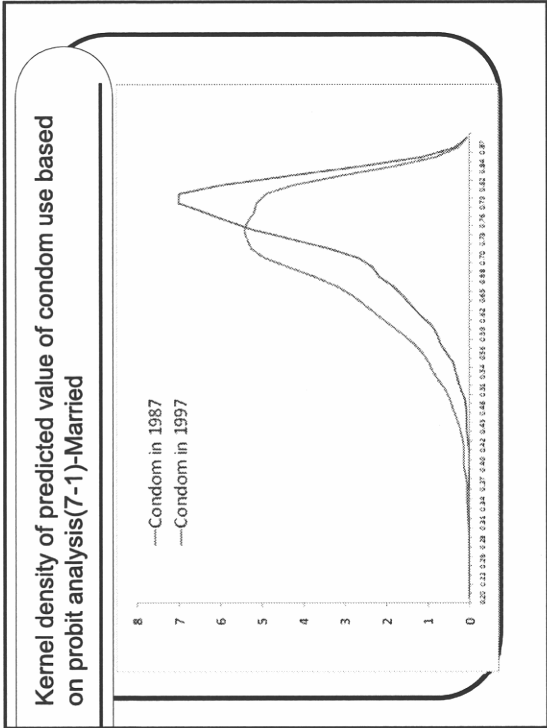


Kernel density of predicted value of oral contraception pill based on probit analysis(6-1)-Married



Kernel density of predicted value of non-medically provided methods use based on probit analysis(7)-Married



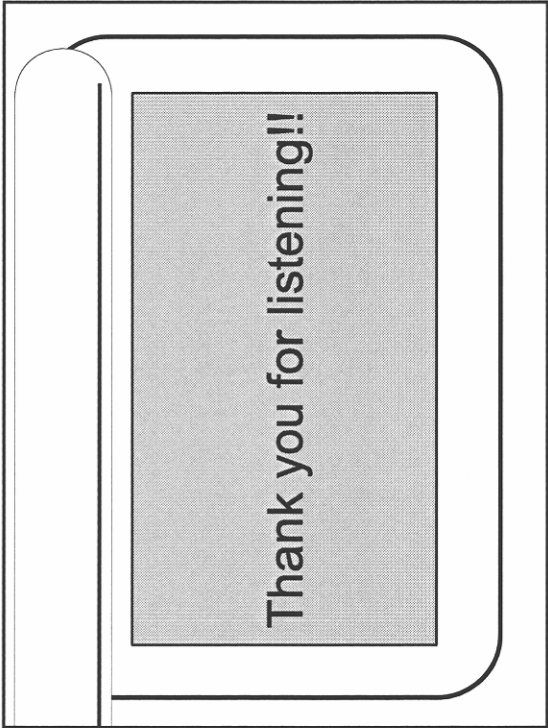


Conclusions (1)

- Women's choice of contraception would decrease the risk of pregnancy, miscarriage, and abortion.
- Among those with experience of contraception, wage rates are higher among those who experienced miscarriage and abortion than those who did not.
- Those who experienced miscarriage or abortion are less likely to work in large firms or public sector.
- Need to examine the causality of the results (maybe related to opportunity costs, social values etc).

Conclusions (2)

- Although Japanese women have been becoming sexually active, the choice of contraception methods still remains conservative (Ogawa and Retherford (1991), Kitamura (1999), Goto, Reich, and Aitken (1999), Kihara, Kramer, Brain, et al. (2001)).
- Probably because the socio-economic access cost to medically provided methods is high for Japanese women.
- Still need more work on this subject...



Parental leave benefits and women's employment after childbirth in Japan

February 8, 2011

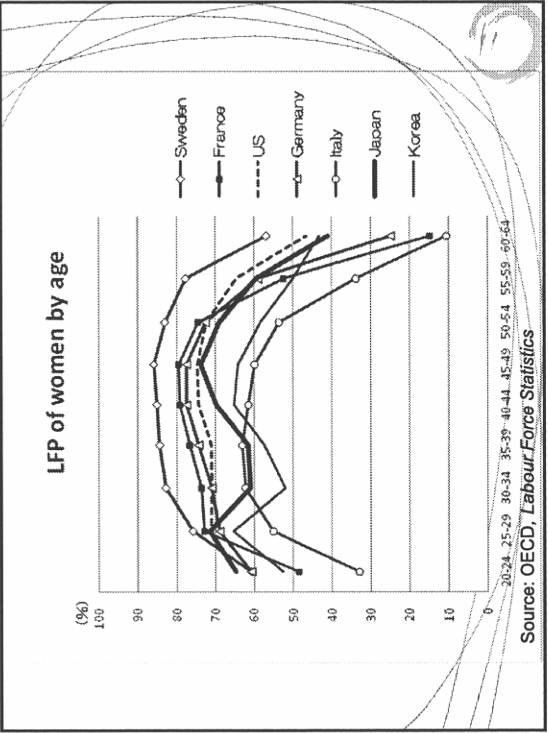
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Overview

- Did the increase in the parental leave benefits in 2001 have any impact on the job retention rate of new mothers?
- Using a dataset which includes information on the employment status of women before and after childbirth, I try to identify the effect of benefit change by comparing the job retention rate of mothers who could time her conception and those who couldn't.
- The result suggests that...

Background

- The age profile of female labor participation rate of Japan is still M-shaped, bottoming at 30-39 year olds.
- Many Japanese women quit their jobs around the births of their first baby and resume working when their youngest child reach school-age.
 - ⇒ 70 % of new mothers who had jobs before conception were not working 6 months after the childbirth in 2001 (MHLW, 21st Century Baby Panel).
- Regular employment opportunities for mothers are quite limited; mothers usually return to work as part-time/non-regular basis and earn low wages.
 - ⇒ Hourly wage of women: 69% (regular) 48.5%(part-time) (Male regular workers' hourly wage=100%)



Background (cont.)

- Trade-off between work and family raises women's opportunity cost of having children, leading to a decline in the TFR.
- Equal Employment Opportunity Law was enacted in 1986. Those women who had entered the labor market after the enactment of EEOL reached childbearing ages in the 1990s.
- Japan's TFR hit historical low in 1989, causing enormous political concern.
- To alleviate work-family conflict of women (and to promote fertility and to pursue gender equity), policy measures to encourage women to retain their jobs after childbirth have been carried out since the 1990s.

Institutional background

- **Maternity leave (1947~)**
 - Guaranteed by the Labor Standard Law
 - Applies to every female employee
 - 6 weeks (14 weeks for multiple birth) / 8 weeks
 - Leave benefits: 66% (paid by the workers' health insurance)
- **Parental leave (1992~)**
 - Guaranteed by the Child Care and Family Care Leave Act
 - Applies to both men and women who care for children younger than 12 months (18 months under certain conditions)
 - Not eligible if working on temporary basis
 - Leave benefits: 50% (paid by the Employment Insurance)

A brief history of parental leave act and leave benefits

- 1992 Child Care Leave Act
 - Applies to establishments with more than 30 employees
- 1995 Amendment of CCLA
 - Applies to every establishment
 - Exemption of pension and health insurance contributions for on-leave workers
- Introduction of the Parental Leave Benefits (25%)**
- 1999 Child Care and Family Care Leave Act
- 2000 Exemption of pension contributions for the employers of on-leave workers
- 2001 Replacement rate of PLB raised (40%)**
 - Exemption of health insurance contributions for the employers of on-leave workers
- 2002 Amendment of CCFCLA
- 2005 Amendment of CCFCLA (for non-regular workers)
- 2007 Replacement rate of PLB raised (50%)
- 2010 Amendment of CCFCLA (exemption from overtime work, mandates for offering shorter time work schedules, introduction of "Papa-Mama Bonus Period")

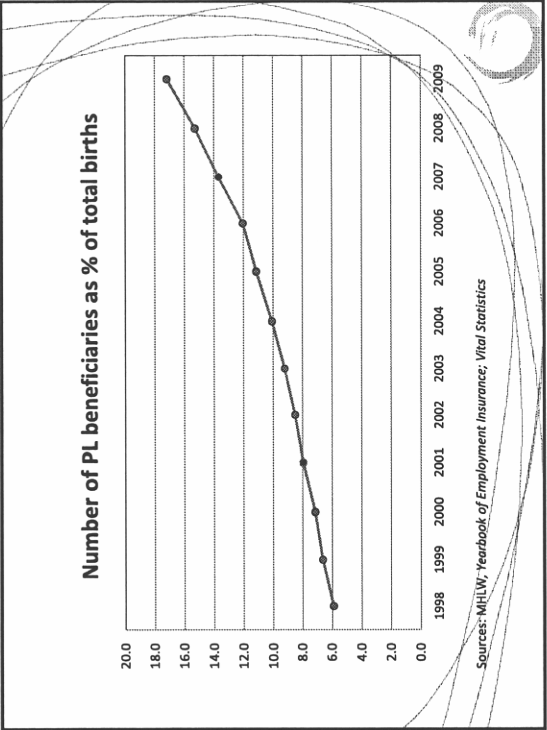
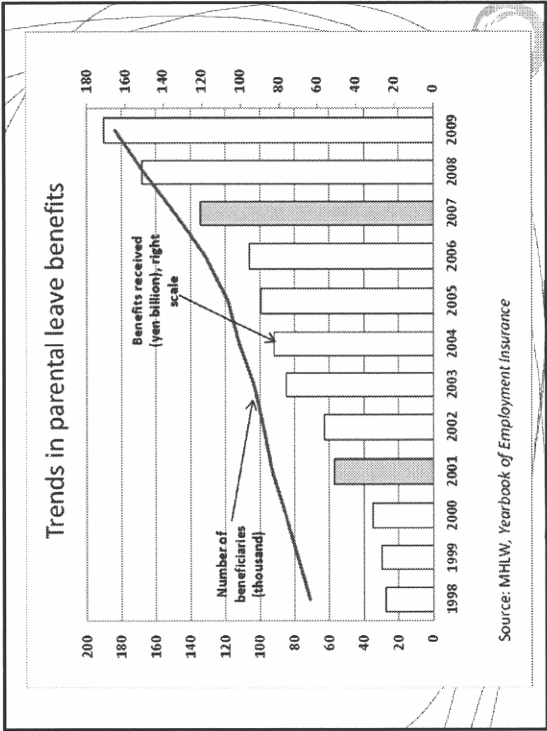
Financing of parental leave benefits

- Since leave benefits are financed by the Employment Insurance (similar to UI) contributions, non-subscribers of EI are not entitled to receive leave benefits.

- Two criteria for the EI coverage

	Minimum tenure	Working hours
~ March 31, 2009	≥ 1 year	≥ 20 h/w
April 1, 2009 ~	≥ 6 months	≥ 20 h/w
April 1, 2010 ~	≥ 31 days	≥ 20 h/w

- The number of PL beneficiaries has reached to 183 thousand in FY2009 (17.1% of births).
- Total amount of leave benefits sums up to 171 billion yen (\$ 2 bill.) in FY2009 (about one million yen (\$ 1130) per beneficiary).



Research question

- Were the increases in the PL benefits effective in promoting job retention of new mothers?
- The goal of the empirical work is to identify the effect of benefits change which affected labor supply behavior of particular groups of new mothers (treatment group).

Previous studies

- PL enhances the retention rate of women (Higuchi, Abe and Waldfogel 1998; Shigeno and Ohkusa 1998; Waldfogel 1999; Baum 2003, Suruga and Chou 2003; Baker and Milligan 2008)
- PL raises the women's fertility (Morita and Kaneko 1998; Matsuura and Shigeno 2001; Sugura and Cho 2003)

Theoretical background

- Klerman, J. A. and A. Leibowitz (1997)
The mother's decision to take PL and retain job or to quit job at all depends on the following factors;
 - Wage from the current job (assuming the wage doesn't change before/after childbirth)
 - Employment opportunity (and wage) outside of the firm (possibly affected by the labor market conditions)
 - Reservation wage (declines as the child grows older)
 - Leave eligibility
 - **Leave benefits**

National Fertility Survey 2002 & 2005

- Nationally representative samples of 18-49-year-old married women.
- Each survey contains information on age, educational attainment, year and month of first marriage, year and month of first child's birth, husband's age and educational attainment, work status before/after the birth of first child.
- Pooled data from NFS conducted in 2002 and 2005.

Sample selection rules for analysis

- NFS 2002 + NFs 2005 **14,752**
- Has more than one child, the year and month of birth of the first child is known **12,118**
- Employed on regular basis at the time of conception of the first child (=eligible for PL) **5,183**
- First child's birth year $\geq$ 1995 + no missing data **1,959**

Identification strategy

- Year effects
Entire sample (first child born in 1995-2005, N=1959)
=1 if birth year of the first child $>=$ 2001 (32%)
=0 if birth year of the first child $<$ 2001 (68%)

.....however, women might have anticipated the benefits rule change prior to 2001.

To control for the potential endogeneity bias, I estimate the model using sample of women who had their first child in 1998-1999 or in 2001-2002.

Subsample (N=842)
=1 if first child was born in 2001-2002 (45%)
=0 if first child was born in 1998-1999 (55%)

Identification strategy (cont.)

- Premarital pregnancy (shotgun marriage)
=1 if first birth in *non*-shotgun-marriage
(entire sample: 79%; subsample: 80%)
=0 if first birth in shotgun marriage
(entire sample: 21%; subsample: 20%)

We assume that shotgun-married couples cannot time conception as they did not plan to have baby.

I follow the conventional definition in which births occurring within the first 7 months of marriage are regarded as "premarital pregnancy (PMP)" and must assume no systematic misreporting of the months in which respondents married and gave birth to their first child (Akerlof et al. 1996; Ginther and Zavodny 1997; Kamata 2005; Raymo and Iwasawa 2007; Kureishi and Wakabayashi 2008).

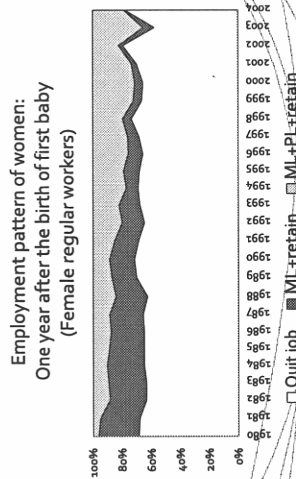
Two types of retention variables

- We employ two types of retention dummy as dependent variables
Retention dummy
=1 if the mother's work status one year after the birth of her first child is the same as which at the time of conception
=0 otherwise
ML+PL+retain dummy
=1 if "retention dummy=1" plus the mother took maternity and parental leave after childbirth
=0 otherwise

Dep. variable	Total	Non PMP	PMP
Retention dummy =1			
Entire sample	30.4%	33.1%	19.9%
Subsample	28.4%	31.4%	16.5%
ML+PL+retain =1			
Entire sample	31.7%	34.8%	20.0%
Subsample	31.1%	35.2%	20.4%

Changing pattern of leave taking

- Very few women who had worked on regular basis at the time of conception returned to work just after her first ML around the year 2001 (13 in 2000, 4 in 2002).



Estimation model

$$Retain^* = \alpha_0 + \alpha_1 \cdot dum01on + \alpha_2 \cdot nonmp + \alpha_3 \cdot dum01on \cdot nonmp + \alpha_4 \cdot benefit + X\beta + \epsilon,$$

$$Retain = \begin{cases} 1 & \text{if the mother retained work,} \\ 0 & \text{otherwise.} \end{cases}$$

dum01on indicates that birth year of the child >= 2001
nonmp indicates non-shotgun marriage
benefit is potential amount of the PL benefits if the mother takes parental leave
Xβ is a vector of individual and family characteristics
α₃ is the DD estimator to identify the policy effect

PL benefits calculation

- **First step:** estimation of the mother's monthly earnings at the time of conception
 - Following the method employed in Ueda(2005), average monthly earnings of female workers by age, year, educational attainment and firm size were retrieved from the Wage Census and imputed to each mother according to the information on individual characteristics and work status at the time of conception.
- **Second step:** benefit calculation
 - As a base for benefit calculation, daily wage is obtained by dividing the mother's imputed monthly earnings by 30. Then, benefit scheme which was in effect at the time of the birth of her first child is applied to calculate the amount of benefit the mother could receive if she took maximum length of parental leave (=44 weeks).
 - Note that the amount of benefit is exogenous either to the mother's leave-taking decision or the actual length of parental leave.

Other variables

- **Mother's annual earnings** which could be earned if she retains her job is calculated by applying the same method as used in the calculation of PL benefits.
- **Father's income** at the time of birth of his first child is calculated using the father's current income and work status because NFS asks about the father's income and occupation only at the time when the survey was conducted. So I estimate an income equation and backcast the income to age X when the child was born.
- **Job-openings-to-applicants ratio by prefecture** is included as an explanatory variable to capture the effect of employment opportunities outside of the firm.
- **Public sector dummy** is included because public sector employees enjoy strong job security and preferable employment conditions.
- **Income-related variables** are adjusted for inflation by CPI (2005=100).

Results: Simple DD

Comparison of births in 1998-1999 and births in 2001-2002

	Non premarital pregnancy			Premarital pregnancy		
	N	%	Std. error t-value	N	%	Std. error t-value
<i>Dependent variable: Job retention (N=842)</i>						
1998-1999	370	0.319	0.024	94	0.223	0.043
2001-2002	302	0.308	0.027	76	0.092	0.033
Difference		-0.011	0.036		-0.131	0.055
DD		0.120				-2.405
<i>Dependent variable: ML+PL+retain (N=803)</i>						
1998-1999	346	0.295	0.025	91	0.209	0.043
2001-2002	290	0.421	0.029	76	0.197	0.046
Difference		0.126	0.038		-0.011	0.063
DD		0.137				-0.182

Note. *** significant at 1% level. ** significant at 5% level.

Results: Probit DD

- When we estimate the model for the years 1995-2005, the DD estimator isn't statistically significant.
- When we limit the estimation period to 1998-2002, the DD estimator becomes larger and statistically significant.
- Suggesting that the 2001 reform had the effect of raising the retention rate by 15-25%.
- The effect is even larger for mothers who were born after 1970.
- Mother being a public sector employee raises the retention rate by 23-50%.

Results: Probit DD

1998-1999 vs 2001-2002

	DD model 3a	DD model 4a	DD model 5a
		Born in 1971 or after	Born in 1971 or after
		private sector employee	private sector employee
Job retention	0.2043 ** (0.0958)	0.2293 ** (0.1004)	0.2576 ** (0.1039)
N	842	500	467
ML+PL+retain	0.1520 * (0.0914)	0.1908 * (0.1008)	0.1999 ** (0.1014)
N	803	479	448

Note: Estimation results using father's annual income as control variable.

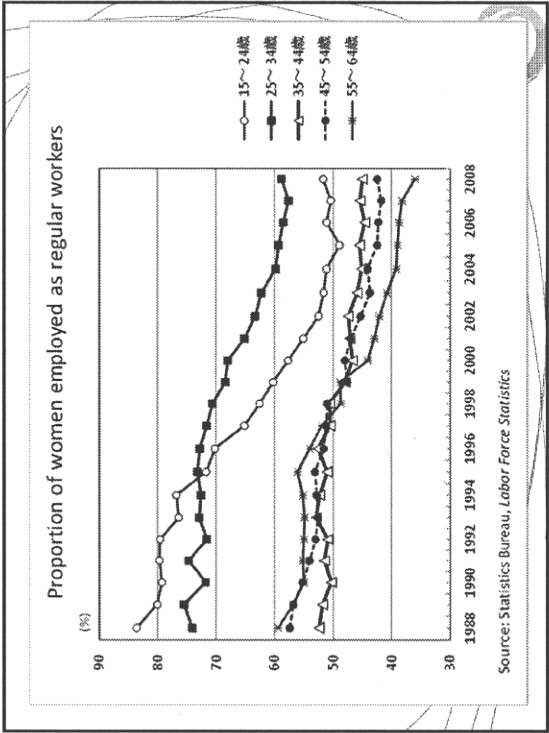
Results: Probit DD (cont.)

1998-1999 vs 2001-2002

	DD model 3a	DD model 4a	DD model 5a
		Born in 1971 or after	Born in 1971 or after
		private sector employee	private sector employee
Job retention	0.2108 ** (0.0962)	0.2436 ** (0.1011)	0.2749 ** (0.1043)
N	842	500	467
ML+PL+retain	0.1520 * (0.0916)	0.2011 ** (0.1016)	0.2110 ** (0.1018)
N	803	479	448

Note: Estimation results using father's education as control variables.

- Issues to be assessed
- DD estimates assume randomness of premarital pregnancy. However, the results could be biased if there are systematic differences in the labor supply between women who had their first child in shotgun marriage and those who had in non-shotgun marriage.
 - Even though PL benefits significantly raise the retention rate, the effect might be deteriorated given the fact that more women work on non-regular basis.



子どもの貧困の時期の健康への影響： 厚労省21世紀出生児パネルを使った分析

Experiences of Poverty & Child's physical
development and Health: Analysis using
Japanese Panel data

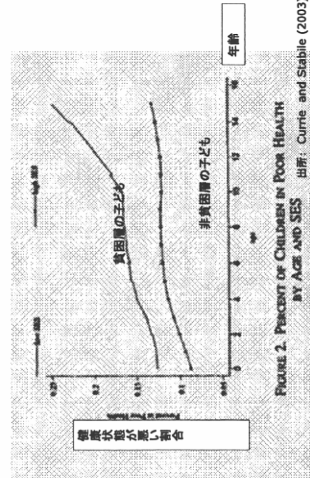
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SESによる子どもの健康格差

- 子どもの健康とSES(または貧困)の関係についての分析は多く存在する(特にアメリカ):
 - Millar & Korenman 1994,
 - Currie & Thomas 1993, 1995,
 - Korenman & Miller 1997,
 - Case/Lubotsky & Paxson 2002,
 - Conditt & Link 2008, etc.
- 成人におけるSESと健康との関係と異なり、子どもの健康とSESの関係はunidirectionalと考えられるのでは? (Conditt & Link 2008) ⇒ 子どもの健康状態が悪いことが、親(特に母親)の就労を妨げる可能性もゼロとはいえないが。
- 子ども期の健康状態が、成人期のアウトカムに与える影響は、学歴などの伝統的「経路」と同様の強さにある(Palloni 2006) ⇒ 「健康」が世代間貧困連鎖の経路となり得る

SESによる子どもの健康格差は拡大する(?)



- Currie & Stabile (2003)のカナダのパネルデータ (1994-98)による分析。健康格差は10歳以降に拡大し、貧困層の健康の悪化によって引き起こされる。
- アメリカでも同様の結果(Case, Lubotsky & Paxson 2002, Conditt & Link 2008)。
- イギリスでは、格差の拡大はSignificantに検証されるものの、格差の拡大は確認できなかった(Currie, Shields & Price 2007) - Subjective + Objective(高血圧、低ヘモグロビン、低ferritin)

子どもの健康格差の発生メカニズム (Currie and Stabile 2003からの知見)

- ① 健康ショックへの対応「力」の違い
- ② 健康ショックの頻度と強度による違い

貧困層の子どもの健康悪化は、健康ショックからの悪影響が非貧困層に比べ大きい(または長引く)のではなく、彼らがより多くの「健康ショック」を受けているからである。
 • 94年時点でのchronic conditionをコントロールすると、98年時点では貧困層の子どもの非貧困層に比べ健康状態が悪いとはいえない

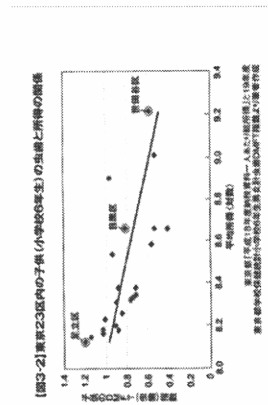
Condiff and Link 2008

- PSID Child Development Supplements 1997, 2002 + Medical expenditure Panel Survey 1996-2002
- (クロス・データ)子どもの主観的健康度(1~5)に対する世帯所得の係数は子どもの年齢が上昇するとともに大きくなる(格差拡大を確認)。
- 低SES層の子どもは、健康シヨック(新しい慢性疾患)に対する対応力が高SES層に比べ低い。
- 低SES層は、高SES層に比べ、健康シヨック(新しい慢性疾患)の頻度が年齢とともに大きくなる(が、Currie & Stabile ほどではない)

貧困の時期による、貧困が及ぼす子どもの成長への影響の違い

- Korenman & Miller 1997
- National Longtidinal survey of Youth (NLSY), 1979-91
- 5歳児から7歳児の身体的成長を分析
- SES(貧困)変数：前半の4年間の貧困X後半4年間の貧困 = 4つのセル (前期後期貧困、前期貧困後期非貧困、前期非貧困後期貧困、前期後期非貧困)
- 身長：前期の貧困の影響が大きい For height, first 4 years were more important determinant
- 体重：後期の貧困の影響が大きい
- 長期貧困(調査時点での貧困ではなく)の影響が深刻

日本における子どもの健康格差のエビデンス



- 駒村 (2009)：東京23区の区単位の子どものデータを用いて、小学校6年生の虫歯(子どものDMFT(虫歯)指数)と、区の平均所得(対数)の相関を分析、平均所得の低い区ほど子どもの虫歯の状況が悪い

データ

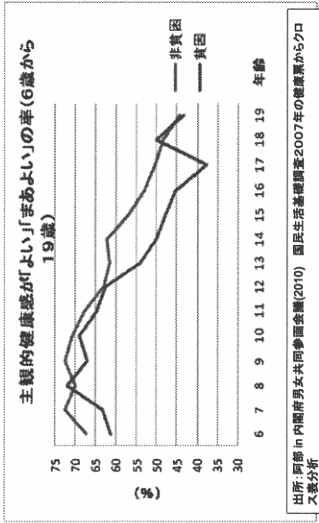
- ① 厚生労働省 ①21世紀出生児縦断調査 ②国民生活基礎調査H17年
- ③ 2001年の1月と7月のそれぞれ1週間に生まれた子ども全数調査。
- ④ 現在データ利用可能なのは、第7ウェーブ(7歳時点)まで。
- ⑤ サンプル数： 大きい attrition
 - ⑥ 1回(2001) age 6 months 6か月 47,015,
 - ⑦ 2回(2002) age 1.5 歳
 - ⑧ 3回(2003) age 2.5 歳
 - ⑨ 4回(2004) age 3.5 歳
 - ⑩ 5回(2005) age 4.5 歳
 - ⑪ 6回(2006) age 5.5 歳
 - ⑫ 7回(2007) age 7 歳(小学1年生の7月と1月) 36,785
- ⑬ Shortcomings: Respondents are parents, not children.

貧困変数

貧困線(各年の中央値50%未満)				Fixed Poverty Line			
Full Sample		Balanced Sample		n		pov. Rate	
年齢・性別	n	pov. Rate	n	pov. Rate	n	pov. Rate	
全サンプル	47,013		29,978		47,013		
1年目	46,975	14.66%	29,978	9.44%	46,975	14.66%	
2年目	40,515	10.27%	29,978	8.42%	40,515	11.10%	
4年目	39,717	9.92%	29,978	8.26%	39,717	10.15%	
5年目	37,929	9.94%	29,978	8.26%	37,929	9.83%	
7年目	34,929	10.80%	29,978	9.54%	34,929	7.06%	

- 3回と6回は所得データなし
- Def. of poverty: below 50% of median income of each year
- Full sample: Sample gets increasingly "richer" because of attrition, thus the poverty definition gets increasingly fuzzy as the year progresses. - the increase/decrease of poverty rate is hard to interpret.
- Balanced sample: Skewed sample to begin with
- Poverty def. is relative to this sample survey (households with children of certain age) , not relative to society as a whole. - Pros/Cons.
- 本稿でのアプローチ: 貧困=第1回の世帯所得で計算した貧困線(50%median)を各年で固定して用いる

日本の子どもの主観的(?)健康感: by 貧困status



日本においても、貧困層の子どもはそうでない子どもに比べ健康感が悪い。10歳以降の格差の拡大は？ Maybe.

Question 1

子どもの健康格差は年齢とともに拡大するか？

2歳から7歳の各年の入院、by pov. stat

入院経験あり	2	3	4	5	6	7
Poor (7ix)	13.23%	11.63%	7.57%	7.08%	5.36%	4.11%
Non-Poor (7ix)	12.18%	8.92%	6.75%	5.87%	4.91%	3.55%
diff	1.05%	2.71%	0.82%	1.21%	0.46%	0.56%
Poor (1ix)	14.38%	10.78%	7.66%	7.02%	5.83%	3.87%
Non-Poor (1ix)	12.26%	9.28%	6.83%	5.92%	4.93%	3.59%
diff	2.12%	1.49%	0.83%	1.10%	0.89%	0.27%
At-poor	14.06%	11.85%	7.71%	7.16%	5.87%	4.34%
Non-at-poor	12.41%	9.15%	6.89%	5.94%	4.91%	3.55%
diff	1.64%	2.71%	0.83%	1.22%	0.97%	0.79%

オレンジ: 所得階層がない3回と6回は、前年の所得を雇用。赤字: Not sig. by χ^2

注: Poor(1)1年目の貧困ステータス, Poor(7)7年目の貧困ステータスを固定, At-poorは、1年目の貧困線を固定して各年の所得で計算

- 各年において、貧困層と非貧困層には統計的に有意な差。貧困層は非貧困層に比べて入院が多い。格差の拡大については？

結果（資料1）

- ベビーパネルの分析（被説明変数が入院）においては、すべての年齢において世帯所得の係数は負であるものの母親の学歴をコントロール後に有意なのは7歳のみに。⇒まだ年齢が小さいせい？
- 学歴をコントロールしないと、2, 4, 7歳で有意であり、絶対値も大きくなっている。
- 国民生活基礎調査の分析（非説明変数は主観的健康感）においては、すべて負で有意であるものの、絶対値の拡大傾向は見られない（むしろ縮小傾向）⇒イギリスと同じパターン

課題：

- 被説明変数の測定時点での所得・貧困ではなく、測定時点の「以前」の貧困の経験が効くのではないか？
- 被説明変数（主観的健康感、入院経験）には、SESによるバイアスがかかっていないか。どのような被説明変数が、子どもの健康を正確に捉えられるか？
- 所得を連続的に捉えるのではなく、貧困ステータスで捉えるべきではないか。

Question 2

子どもの貧困経験の時期と、身体的成長はどのようにに関係するか？

第5回（4.5歳時点）のデータを使った結果（阿部2008）

4.5 yr old		Doctor's		Hospitalization		Height		Weight	
貧困経験年数	n	visit	n	n	(0.1cm)	(100g)			
なし	26552	98.19%	5.80%	1035.11	166.17				
1回	3910	97.80%	6.55%	1033.84	165.88				
2回	1604	97.57%	7.54%	1031.96	165.2				
3回	878	95.52%	7.40%	1034.53	165.05				
4回	645	96.28%	8.06%	1031.51	164.85				
総数		98.01%	6.06%	1034.74	166.04				

Data: 阿部(2008)

- Multivariate analysis showed number of years in poverty was significantly negative in height, weight, doctor's visit, and significantly positive in hospitalization.

身長、体重、肥満度： 貧困経験年数別 (両親が日本人の子どものみ)

7 yr old	Ethnic Japanese only (n=45398, 3.4% は少なくとも片親が外国人)			肥満児(%)		
貧困経験年数	n	身長 (cm)	n	体重 (kg)	n	肥満児(%)
なし	20902	119,204	21256	22,065	20814	5.24%
1回	3140	119,134	3234	22,049	3117	5.97%
2回	1136	119,059	1170	22,215	1130	6.99%
3回	618	118,732	644	21,868	613	6.53%
4回	382	118,790	390	21,895	381	6.30%
5回	222	119,424	231	22,512	222	8.11%
総数	26400		26925		26277	

- 身長:4回、5回から傾向反転
- 体重:1回以上から増加
- 肥満:0回から増加、5回は突出

肥満度 (肥満児の定義)

肥満度(身体質量指数) = $\frac{\text{身長別標準体重(kg)} - \text{身長別標準体重(kg)}}{\text{身長別標準体重(kg)}} \times 100$

	a	b	a	b
年齢	男	女	男	女
5	0.363	23.699	0.377	22.75
6	0.461	32.382	0.485	32.079
7	0.513	38.678	0.608	38.967
8	0.592	45.804	0.661	45.006
9	0.667	51.39	0.652	56.992
10	0.762	70.461	0.73	68.091
11	0.782	75.106	0.603	76.846
12	0.783	75.642	0.796	76.934
13	0.615	61.348	0.655	54.234
14	0.532	53.095	0.594	48.264
15	0.765	70.669	0.56	37.002
16	0.660	51.822	0.578	36.057
17	0.672	53.642	0.566	42.339

- 肥満度が小児20%以上、幼児15%以上なら肥満児と定義。

肥満児 (肥満=1) に対するlogistic 結果

肥満 logistic	肥満児(7歳時点)			肥満児(7歳時点)		
	モデル1	モデル2	モデル3	モデル1	モデル2	モデル3
	ベイズ 標準誤差 サブジ	ベイズ 標準誤差 サブジ	ベイズ 標準誤差 サブジ	ベイズ 標準誤差 サブジ	ベイズ 標準誤差 サブジ	ベイズ 標準誤差 サブジ
年齢	0.094	0.100	1.099 X	0.092	0.093	1.094 X
性別	-0.044	0.109	0.557 X	-0.044	0.109	0.557 X
両親が日本人(1回以上)	0.244	0.111	1.27 X	0.244	0.111	1.27 X
両親が日本人(2回以上)	-0.004	0.117	0.992 X	-0.004	0.117	0.992 X
両親が日本人(3回以上)	-0.073	0.128	0.532 X	-0.073	0.128	0.532 X
両親が日本人(4回以上)	0.002	0.095	1.002 X	0.002	0.095	1.002 X
両親が日本人(5回以上)	0.023	0.097	1.053 X	0.023	0.097	1.053 X
両親が日本人(6回以上)	0.028	0.144	1.029 X	0.028	0.144	1.029 X
両親が日本人(7回以上)	-0.005	0.043	0.955 X	-0.005	0.043	0.955 X
両親が日本人(8回以上)	-0.041	0.054	0.860 X	-0.041	0.054	0.860 X
両親が日本人(9回以上)	-0.233	0.164	0.715 X	-0.233	0.164	0.715 X
両親が日本人(10回以上)	0.117	0.054	1.124 X	0.117	0.054	1.124 X
両親が日本人(11回以上)	0.237	0.144	1.599 X	0.237	0.144	1.599 X
両親が日本人(12回以上)	-0.175	0.091	0.859 X	-0.175	0.091	0.859 X
両親が日本人(13回以上)	-0.276	0.043	0.738 X	-0.276	0.043	0.738 X
両親が日本人(14回以上)	0.050	0.117	1.053 X	0.050	0.117	1.053 X
両親が日本人(15回以上)	-0.074	0.080	0.925 X	-0.074	0.080	0.925 X
両親が日本人(16回以上)	-0.273	0.068	0.781 X	-0.273	0.068	0.781 X
両親が日本人(17回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(18回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(19回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(20回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(21回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(22回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(23回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(24回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(25回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(26回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(27回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(28回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(29回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(30回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(31回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(32回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(33回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(34回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(35回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(36回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(37回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(38回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(39回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(40回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(41回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(42回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(43回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(44回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(45回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(46回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(47回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(48回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(49回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(50回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(51回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(52回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(53回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(54回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(55回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(56回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(57回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(58回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(59回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(60回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(61回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(62回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(63回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(64回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(65回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(66回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(67回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(68回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(69回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(70回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(71回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(72回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(73回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(74回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(75回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(76回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(77回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(78回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(79回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(80回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(81回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(82回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(83回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(84回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(85回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(86回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(87回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(88回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(89回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(90回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(91回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(92回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(93回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(94回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(95回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(96回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(97回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(98回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(99回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X
両親が日本人(100回以上)	0.133	0.012	1.142 X	0.133	0.012	1.142 X

入院(7歳)

入院 logistic		入院(7歳時点)		入院(7歳時点)		入院(7歳時点)		入院(7歳時点)		入院(7歳時点)	
		モデル1		モデル2		モデル3		モデル1		モデル2	
		ベイズ		標準誤差		サブジ		ベイズ		標準誤差	
		標準誤差		サブジ		サブジ		標準誤差		サブジ	
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		標準誤差		サブジ		サブジ					

結果

肥満(7歳)

- 過去(0歳～6歳)の貧困経験は、7歳時点での肥満児となる確率に影響する
- 過去の貧困経験年数が多いほど、肥満児となる確率が高くなる
- 親の学歴(特に母親)は、子どもが肥満児となる確率に大きく影響する。
- 両親が日本人であると負、男児であると正の影響がSig.入院(7歳)
- 入院については、過去の貧困経験との関連が*あやしい*
- 男児であると入院確率が高まり、7月生まれは1月生まれより低くなる。

暫定的結果 - 課題

- The relationship between poverty experience and children's physical development and health is not straight forward. While it is true that poor children tend to have lower weight, height, visits to doctors, and higher hospitalization and obesity (from cross table analysis), after controlling for parents' education, family type etc. the effect of POVERTY per se is diminished, except for obesity.
- However, findings here suggest:
 - The timing of poverty seems to be important – more needs to be investigated because of correlation of poverty status from year to year

Question 3

健康ショックに対する対応度は、子どものSES(貧困経験)によって異なるか？

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ありがとうございました

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子どもの貧困と社会的排除の関係
—大規模パネル調査からの示唆—
An analysis of Childhood Poverty and
Social Exclusion using Japanese panel
survey

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National Institute of Population and Social Security Research

What is Social Exclusion in the context of Children?

- ▶ Ridge, Tess. *Childhood poverty and social exclusion: From a child's perspective*. 2002.
- ▶ Limited access to their own autonomously controlled economic resources (i.e. pocket money) – “a vital socioeconomic resource, facilitating their capacity for sustaining social interaction” (p.131)
- ▶ Access to transport
- ▶ Friendship and peer networks – Friends as “protection” (from bullying and exclusion) “Fears of loneliness and social isolation were very real, and some children were clearly isolated. This is an area in which children struggled particularly hard to main an acceptable level of social involvement.” (P.133)

- ▶ “Fear of being bullied, of being different, or in any way standing out, was apparent throughout the interviews”
- ▶ Clothes – especially important for their self-identity and for social protection
- ▶ Children from benefit families were having qualitatively different experience of school – more likely to be expelled or suspended, more concerns about bullying, relationship with teachers problematic, perception of the value of school to their future reveal disengagement, more likely to be unhappy with schoolwork, did not feel their parents watched them closely at school, but preferred to be independent.
- ▶ Exclusion from school vs. Exclusion within school

- ▶ Social Exclusion of a child is different from Social Exclusion of a household with children.
- ▶ “Children are engaged in a complex social world, the realm of childhood. This has its own social and cultural values and its own social and economic demands, and the pressures on children to fit in and to join in with their peers are considerable” (p.143)

This Study

- ▶ An attempt to see differences of social networks and school experiences depending by SES among Japanese children
- ▶ Data:
 - ▶ MHLW The 21st Century Children's Panel Survey
 - ▶ Started in 2001, surveys children born in 1 week in January and 1 week in July – Data available up to 7th installment (Age 7)
 - ▶ Sample size:
 - ▶ 1st (2001) age 6 months 47,015,
 - ▶ 2nd (2002) age 1.5 yr
 - ▶ 3rd (2003) age 2.5 yr
 - ▶ 4th (2004) age 3.5yr
 - ▶ 5th (2005) age 4.5yr
 - ▶ 6th (2006) age 5.5 yr
 - ▶ 7th (2007) age 7 (primary school grade 1) 36,785
- ▶ Shortcomings: Respondents are parents, not children.

Poverty statistics

	Full sample		Balanced sample	
	n	poverty rate	n	poverty rate
1st	46,975	14.66%	29,978	9.44%
2nd	40,515	10.27%	29,978	8.42%
4th	39,717	9.32%	29,978	8.26%
5th	37,929	9.94%	29,978	8.26%
7th	34,929	10.80%	29,978	9.54%

- ▶ Income data were not surveyed on the 3rd & 6th year.
- ▶ Def. of poverty: below 50% of median income of each year
- ▶ Full sample: Sample gets increasingly “richer” because of attrition, thus the poverty definition gets increasingly fuzzy as the year progresses. – the increase/decrease of poverty rate is hard to interpret.
- ▶ Balanced sample: Skewed sample to begin with
- ▶ Poverty def. is relative to this sample survey (households with children of certain age), not relative to society as a whole. – Pros/Cons.

Playmates: Who does your child play with, Often, Sometimes, Rarely/Never

Poverty Status 貧困/非貧困	Children from same 同級生	Older children 年上の子	Younger children 年下の子	Brothers/Sisters 兄弟姉妹
	n	n	n	n
Poor in the 7th yr	3774	923	473	2823
Non-poor	31195	1088	2684	2836
	34929	x ² = 28.274 p値= <.0001	x ² = 6.6646 p値= 0.0088	x ² = 1.611 p値= 0.2052
Poor in the 1st yr	4472	1088	570	3840
Non-poor	32255	19146	7862	24616
	36727	x ² = 11.2431 p値= 0.0008	x ² = 10.269 p値= 0.0013	x ² = 3.6465 p値= 0.0591
Income Quintile (1st yr)				
1st (poorest)	6249	3537	1660	4757
2nd	6249	1766	918	4757
3rd	7865	4440	1766	5920
4th	7865	4720	1627	5920
5th (richest)	36768	4904	1627	5704
		x ² = 34.2812 p値= <.0001	x ² = 97.8522 p値= <.0001	x ² = 232.7268 p値= <.0001

- ▶ Non-poor children are slightly likely to play with children from same grade (probably same school).
- ▶ Poor children are slightly likely to play with older or younger children (from neighborhood!)

Playmates cont'd:

Poverty Status 貧困/非貧困	Adults (Parents) 大人(親、祖父祖母)	Adults from family 大人(家族以外)	Alone ひとり
	n	n	n
Poor in the 7th yr	3774	1784	473
Non-poor	31195	14462	588
	34929	x ² = 1.056 p値= 0.3051	x ² = 7.0744 p値= 0.0052
Poor in the 1st yr	4472	2043	473
Non-poor	32295	15008	6223
	36768	x ² = 12.229 p値= 0.0032	x ² = 2.4457 p値= 0.1176
Income Quintile (1st yr)			
1st (poorest)	6249	2984	473
2nd	6249	2984	473
3rd	7865	3418	473
4th	7865	3418	473
5th (richest)	36768	3924	325
		x ² = 24.1243 p値= <.0001	x ² = 17.7363 p値= <.0001

- ▶ Adults- hard to say
- ▶ Non-poor (especially rich) children are likely to play ALONE.

Afterschool: Who does your child spend with? (Multiple answer possible)

	Alone	Friends	Carrying family	Non- poor family	Adults other than family	Other	n	s
Poor in the 7th yr	5.4%	70.1%	71.4%	6.4%	3.6%	2.6%	0.2%	
Non-poor	5.1%	76.1%	74.8%	10.7%	5.2%	2.0%	0.1%	
χ^2	0.34466	648.887	16.7618	19.0474	18.3399	4.7291	2.3336	
p	0.4583	<.0001	<.0001	<.0001	<.0001	0.0287	0.125	
Poor in the 1st yr	5.9%	70.6%	71.9%	9.1%	3.9%	2.6%	0.2%	
Non-poor	5.9%	76.6%	74.8%	10.7%	5.2%	2.0%	0.1%	
χ^2	0.4535	50.9693	10.8453	10.7655	25.6552	7.4653	2.981	
p	0.5007	<.0001	0.2008	0.001	<.0001	0.0063	0.0783	
2nd Quintile (1st yr)	5.3%	70.9%	72.4%	9.2%	3.8%	2.6%	0.2%	
2nd	5.2%	73.6%	75.0%	11.0%	4.6%	1.8%	0.1%	
3rd	5.1%	76.0%	77.6%	8.9%	4.4%	2.0%	0.1%	
4th	5.1%	76.6%	78.6%	12.7%	6.5%	2.6%	0.0%	
5th (richest)	5.1%	78.6%	88.6%	17.7%	10.6%	3.6%	0.0%	
χ^2	1.33468	178.2715	207.6347	73.4469	70.3409	13.3	7.6856	
p	0.8554	<.0001	<.0001	<.0001	<.0001	0.0099	0.1325	

注：Friends include friends from Gakudo.

- ▶ About 5% of children at least sometimes spend time alone.
- ▶ Poorer children tend to spend time less with friends.
- ▶ Richer children tend to spend more with non-family adults.

Number of friends After school

When your child plays with friends, how many friends does he/she play with? AFTERSCHOOL

	Don't play with friends	1	2	More than 3	Don't know	n	s
Poor in the 7th yr	9.8%	17.5%	20.8%	44.4%	6.8%	1.6%	
Non-poor	7.3%	18.7%	22.1%	45.9%	4.8%	1.5%	
χ^2	2						
p	0.0001						
Poor in the 1st yr	8.3%	16.4%	22.1%	43.9%	7.2%	2.1%	
Non-poor	7.4%	18.7%	21.6%	45.9%	4.8%	1.5%	
χ^2	2						
p	0.0001						
2nd Quintile (1st yr)	8.1%	14.8%	21.5%	44.2%	6.7%	2.0%	
2nd	7.3%	16.1%	22.5%	44.5%	5.2%	1.6%	
3rd	7.0%	19.6%	22.1%	45.5%	4.4%	1.5%	
4th	6.6%	20.2%	22.2%	45.3%	4.2%	1.2%	
5th (richest)	8.6%	17.3%	20.0%	47.9%	5.9%	1.0%	
χ^2	2						
p	0.0001						

- ▶ Poor children are slightly less likely to play with friends afterschool, but by quintile, this is seen in both richest and poorest children (probably for different reasons).
- ▶ Higher quintile children tend to play with more than 3 friends.
- ▶ Poor children's parents are more likely not to know.

Number of friends Weekends

When your child plays with friends, how many friends does he/she play with? WEEKENDS

	Don't play with friends	1	2	More than 3	Don't know	n	s
Poor in the 7th yr	48.3%	14.0%	13.1%	21.7%	3.6%	1.4%	
Non-poor	42.8%	12.9%	15.0%	23.4%	2.9%	1.0%	
χ^2	2						
p	0.0001						
Poor in the 1st yr	45.6%	13.0%	14.4%	21.0%	4.3%	1.7%	
Non-poor	52.5%	13.0%	12.5%	18.0%	2.9%	1.1%	
χ^2	2						
p	0.0001						
2nd Quintile (1st yr)	46.5%	13.3%	14.2%	21.3%	4.0%	1.6%	
2nd	48.5%	13.4%	13.5%	19.9%	3.5%	1.2%	
3rd	52.4%	12.8%	13.1%	18.0%	2.8%	1.0%	
4th	56.1%	12.5%	11.8%	16.7%	2.7%	1.1%	
5th (richest)	55.4%	13.0%	11.6%	16.8%	2.7%	0.6%	
χ^2	2						
p	0.0001						

- ▶ Richer children tend not to play with friends on weekends.

School life

	Enjoys playing with friends at school	Enjoys schoolwork (no. clubs and activities)	Enjoys school lunch	Enjoys meeting teachers and other staff (uniform, etc.)	Enjoys school work (no. clubs and activities)	n	s
Poor in the 7th yr	91.8%	80.0%	75.2%	72.6%	93.0%	1.6%	
Non-poor	93.0%	82.0%	77.2%	76.1%	94.7%	1.5%	
χ^2	7.0955	25.9622	7.9474	22.579	18.0948		
p	0.0072	<.0001	0.0048	<.0001	<.0001		
Poor in the 1st yr	92.1%	80.0%	75.2%	72.6%	93.4%	2.1%	
Non-poor	93.0%	82.0%	77.2%	76.1%	94.7%	1.5%	
χ^2	5.9691	35.8076	34.293	32.2683	10.622		
p	0.0455	<.0001	0.0041	<.0001	0.0011		
2nd Quintile (1st yr)	92.0%	78.3%	76.1%	72.5%	93.7%	2.0%	
2nd	92.5%	80.0%	76.5%	74.2%	94.0%	1.6%	
3rd	92.5%	81.3%	76.9%	75.0%	94.4%	1.5%	
4th	93.1%	83.9%	77.8%	76.4%	94.9%	1.4%	
5th (richest)	93.1%	83.9%	77.8%	76.4%	94.9%	1.4%	
χ^2	16.7731	102.2418	5.5323	84.0567	15.9359		
p	0.0021	<.0001	0.2889	<.0001	0.003		

- ▶ Poor children are less likely to enjoy schoolwork, trust (enjoy company of) teachers – about 5 to 6 point difference between top and bottom quintile.
- ▶ Friends, lunch, events – slight difference

Home life: Time with Parents

All children	Time with mother (weekdays) Last 1 hour	Time with father (weekdays) Last 1 hour	Time with father (weekdays) Last 2 hours	All 4
Poor in the 7th yr	5.7%	4.0%	52.6%	39.3%
Non-poor	3.2%	2.0%	45.0%	9.6%
X ²	64.1134	61.721	76.4716	36.986
	<.0001	<.0001	<.0001	<.0001
Poor in the 1st yr	5.7%	4.0%	52.6%	39.3%
Non-poor	3.2%	2.0%	45.0%	9.6%
X ²	38.3774	28.9729	24.4051	16.7848
	<.0001	<.0001	<.0001	<.0001
Income Quintile (1st yr)				
1st poorest	5.1%	3.5%	40.8%	20.6%
2nd	3.4%	2.4%	40.8%	15.3%
3rd	3.1%	2.1%	40.8%	10.3%
4th	3.1%	2.1%	40.8%	10.3%
5th (richest)	3.0%	1.7%	51.2%	9.4%
X ²	55.9275	54.6591	245.7037	608.5897
	<.0001	<.0001	<.0001	<.0001

- ▶ About twice as much poor children spend less than 1 hour with mother on weekdays, and less than 2 hours on weekends (even though the % is not large).
- ▶ More of nonpoor children spend less than 1 hour with father on weekdays, but on weekends, more poor children spend less time with fathers.

Eating Alone and Not Eating

	Breakfast alone (everyday)	Dinner alone (everyday)	No Breakfast (everyday)	No dinner (everyday)
Poor in the 7th yr	5.5%	2.7%	0.4%	0.0%
Non-poor	5.6%	2.5%	0.1%	0.0%
X ²	0.0422	0.5211	13.8286	0.2413
	0.8372	0.4704	0.0022	0.6233
Poor in the 1st yr	5.5%	2.5%	0.1%	0.0%
Non-poor	5.6%	2.5%	0.1%	0.0%
X ²	0.0166	1.6538	13.7706	0.4154
	0.8916	0.1931	0.0022	0.5183
Income Quintile (1st yr)				
1st poorest	5.4%	2.5%	0.3%	0.0%
2nd	4.6%	2.3%	0.2%	0.0%
3rd	5.0%	2.3%	0.1%	0.0%
4th	6.2%	2.5%	0.1%	0.0%
5th (richest)	6.8%	2.8%	0.1%	0.0%
X ²	47.2011	8.2038	15.8132	1.814
	<.0001	0.0844	0.0033	0.7899

- ▶ About 5% of children, poor & nonpoor, eat breakfast alone everyday.
- ▶ Very small % (less than 1%) eat no breakfast or no dinner everyday, but significantly more among poor children.

Similar pattern if we restrict the sample to 2 parent families

Both parents present ONLY	Time with mother (weekdays) Last 1 hour	Time with mother (weekdays) Last 2 hours	Time with father (weekdays) Last 1 hour	Time with father (weekdays) Last 2 hours	All 4
Poor in the 7th yr	5.8%	2.8%	30.9%	11.5%	1.2%
Non-poor	2.7%	1.6%	43.8%	7.5%	0.7%
X ²	10.5985	18.4843	153.7471	49.8959	8.1532
	<.0001	<.0001	<.0001	<.0001	0.0043
Poor in the 1st yr	5.8%	2.8%	30.9%	11.5%	1.2%
Non-poor	2.7%	1.6%	43.8%	7.5%	0.7%
X ²	8.274	4.931	147.5601	54.192	4.5692
	0.006	0.0279	<.0001	<.0001	0.0322
Income Quintile (1st yr)					
1st poorest	5.5%	2.1%	32.4%	9.4%	0.9%
2nd	2.7%	1.9%	36.6%	9.3%	0.7%
3rd	2.7%	1.5%	43.9%	7.5%	0.5%
4th	2.7%	1.4%	49.7%	7.5%	0.5%
5th (richest)	2.7%	1.4%	49.7%	7.5%	0.5%
X ²	11.6102	11.7046	531.0822	57.553	10.3199
	0.0009	0.0197	<.0001	<.0001	0.0054

Eating alone or Not eating (incl. Sometimes)

	Breakfast alone (weekdays or weekends)	Dinner alone (weekdays or weekends)	No Breakfast (weekdays or weekends)	No dinner (weekdays or weekends)
Poor in the 7th yr	25.3%	16.5%	6.5%	1.1%
Non-poor	25.3%	15.5%	3.1%	0.5%
X ²	0.0007	4.8841	114.1059	17.7248
	0.9789	0.0271	<.0001	<.0001
Poor in the 1st yr	25.3%	16.5%	6.5%	1.1%
Non-poor	25.3%	15.5%	3.1%	0.5%
X ²	11.4831	8.0002	103.8346	7.5125
	0.0007	0.0047	<.0001	0.0061
Income Quintile (1st yr)				
1st poorest	27.0%	17.4%	5.5%	0.9%
2nd	27.8%	17.0%	4.8%	0.9%
3rd	26.8%	16.9%	3.6%	0.6%
4th	26.8%	16.9%	3.6%	0.6%
5th (richest)	29.2%	13.5%	1.8%	0.3%
X ²	129.1115	61.4631	211.6323	33.2408
	<.0001	<.0001	<.0001	<.0001

- ▶ About 6.5% of poor children eat no breakfast sometimes, while 3.1% of nonpoor children do so.
- ▶ About 17% of poor children eat dinner alone, and 13-14% of rich children do so.