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A Policy-Oriented Analysis of Fertility Behaviors and Attitudes in Japan*

Hiroshi KOJIMA

I Introduction

Japan has had a relatively low total fertility rate (TFR) since the early 1950s, which is around the replacement level. Since 1974 Japan started its long-term fertility decline as many other developed countries, possibly due to the economic restructuring caused by the first oil crisis of the fall 1973. From 1988 to 1989 the TFR dropped further by a relatively large margin of 0.08. Immediately after the TFR of 1.57 was announced as the record low figure by the Department of Statistics and Information, Japan Ministry of Health and Welfare, in June 1990, the term "1.57 shock" was coined and circulated in mass media. Then, fertility has suddenly become a policy issue in Japan. However, there have not been many policy-oriented empirical works on which the discussion about the possible pronatalist measures should be based. There is a recent increase in the number of multivariate analyses of micro-level fertility behavior, but they are not necessarily policy-oriented[1].

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*This is a revised version of the paper, "Potential Effects of Pronatalist Policy in Japan" presented at the Intercongress Seminar of the ISA／RC#41 (Sociology of Population), Montreal, August 24, 1993. The opinion expressed in this paper is the author's and does not represent that of the institution with which he is affiliated. He would like to dedicate this article to Dr. Tatsuya ITOH who has recently passed away before reviewing it as his boss.

1) *e.g.*, Kenji Otani, "Proportional Hazards Model Analysis of Birth Intervals Among Marriage Cohorts Since the 1960s," *Jinko Mondai Kenkyu* [*Journal of Population Problems*], No. 181, 1987, pp.14-30 (in Japanese with an English summary).

Kenji Otani, "Proportional Hazards Model Analysis of Women's Reproductive Career in Present-Day Japan," *Jinko Mondai Kenkyu* [*Journal of Population Problems*], No. 189, 1989, pp.1-17 (in Japanese with an English summary).

Kenji Otani, "Time Distributions in the Process to Marriage and Pregnancy in Japan," *Population Studies*, Vol.45, No. 3, 1991, pp.473-487.

Kenji Otani, "Proportional Hazards Analysis of Birth Timing Since the 1960s in Japan," *Kansai Daigaku Keizai Ronshu* [*Economic Journal of Kansai University*], Vol.41, No. 4, 1991, pp.759-789 (in Japanese).

Machiko Osawa, "Working Mothers : Changing Patterns of employment in Japan," *Economic Development and Cultural Change*, Vol.36, No. 4, 1988, pp.623-650.

Hiromichi Sakai, "Child-Sex Effects on Further Births," *Jinko Mondai Kenkyu* [*Journal of Population Problems*], No. 189, 1989, pp.18-30 (in Japanese with an English Summary).

Robert W. Hodge and Naohiro Ogawa, *Fertility Change in Contemporary Japan*, Chicago, The University of Chicago Press, 1991.

Sachiko Imada and Shuichi Hirata, "Female Labor Force Participation and Fertility," *Nihon Keizai Kenkyu* [*JCER Economic Journal*], No. 22, 1992, pp.1-18 (in Japanese).

Although recent multivariate analyses of macro-level fertility indicators are often policy-oriented, they may have a problem of the ecological fallacy[2]. The study by Harada and Takada seems to be the only effort to assess the effect of a change in a policy variable (child allowance)[3]. These macro-level studies tend to find negative effects of women's employment, educational costs and housing costs on fertility.

Since the 1982 national fertility survey (the Eighth National Fertility Survey) included a few questions related to employment, income and housing as well as those related to fertility behaviors and attitudes, the multivariate analysis of the survey data can be promising. Although Otani and Sakai respectively analyzed fertility behaviors based on the data, they did not focus on policy-related independent variables[4].

Table 1a shows the distribution of first-married couples by family size and marriage duration based on the survey. About 55% of first-married couples end up having two children, 25%, three children and 10%, one child. Only a minority of

Table 1 Selected Results of the 1982 National Fertility Survey

a) Distribution of Couples by Children Ever-Born and Marriage Duration (%)

Duration (Years)	N	Children Ever-Born 0	1	2	3	4	5+	Mean
0-4	1,279	39.3	42.5	17.4	0.7	—	—	0.80
5-9	1,742	4.4	16.1	61.0	17.5	1.0	0.1	1.95
10-14	1,628	2.6	10.2	59.6	24.1	2.8	0.6	2.16
15-19	1,421	3.2	9.1	55.5	27.3	4.2	0.6	2.23
20-24	1,160	2.2	10.2	56.6	24.9	5.0	1.1	2.24
25-29	429	1.4	7.7	52.4	30.5	5.6	2.3	2.40
30-34	33	9.1	6.1	24.2	51.5	6.1	3.0	2.48

2) *e.g.*, Hiroshi Ohbuchi, "The Quantity and Quality of Children, Labor Supply and Wages of Married Women in Postwar Japan," *Jinkogaku Kenkyu* [*Journal of Population Studies*], No. 11, 1988, pp.5-14.

Hiroshi Doihara and Tsutomu Miyagawa, "An Economic Analysis of Fertility : An Approach from the Theory of Time Allocation," *ESP*, No. 235, 1991, pp.74-77 (in Japanese).

Seiritsu Ogura and Robert Dekle, "Explaining the Declining Fertility of Japanese Women since 1979 through Prefectural Cohort Data," *Nihon Keizai Kenkyu* [*JCER Economic Journal*], No. 22, 1992, pp.46-76 (in Japanese).

Hiromichi Mutoh, "Demand for Children and Child-bearing Cost," *Nihon Keizai Kenkyu* [*JCER Economic Journal*], No. 22, 1992, pp.119-136 (in Japanese).

Tomoko Furugori, "Work Behavior of the Youth and Recent Change in Fertility Rate in Japan," *Jinkogaku Kenkyu* [*Journal of Population Studies*, No. 15, 1992, pp.45-55 (in Japanese).

Economic Planning Agency, Japan, *1992 White Paper on National Life : The Advent of a Small-Family Society-Its Effects and Policy Implications*, 1992 (in Japanese).

3) Yasushi Harada and Seiji Takada, "A Theory and Projection of Population," N. Takada and Y. Harada (eds.), *Finance and Saving in an Aging Society*, Tokyo, Nihon Hyoronsha, 1993, pp.1-16 (in Japanese).

4) Otani, 1987, *op. cit.* in footnote 1) and Sakai, *op. cit.* in footnote 1).

Table 1 (Continued)

b) Distribution of Couples by Expected Number of Children and Ideal Number of Children (%)

Ideal Number	N	Expected Number of Children 0	1	2	3	4	5 +	Mean
0	121	62.8	9.9	22.3	5.0	—	—	0.69
1	179	3.4	82.7	9.5	4.5	—	—	1.15
2	3,136	1.6	9.9	84.8	3.3	0.4	0.0	1.91
3	3,519	0.8	5.2	45.9	46.9	0.9	0.3	2.43
4	722	0.3	1.7	41.7	36.4	18.8	1.1	2.76
5 +	107	1.9	5.6	29.9	30.8	14.0	17.8	3.16
Total	7,784	2.1	8.6	59.8	26.5	2.5	0.5	2.20

c) Percentage of Wives Having Chosen Each Reason for Not Having the Ideal Number of Children by Age (Among those expecting to have smaller number of children than ideal)

Wife's Age	N	Reasons (MA) 1	2	3	4	5	6
-19	0	—	—	—	—	—	—
20-24	59	5.1	6.8	23.7	42.4	22.0	11.9
25-29	316	8.2	8.2	31.0	42.7	23.4	15.8
30-34	698	11.3	20.8	28.9	33.8	26.2	15.9
35-39	636	18.9	32.4	22.0	21.2	17.3	10.2
40-44	609	21.2	36.5	18.9	15.6	12.3	7.9
45-49	527	27.9	33.6	12.0	12.3	5.3	5.5
Total	2,845	17.7	27.4	22.0	24.3	17.0	10.9

Wife's Age	Reasons (MA) 7	8	9	10	11	UK
-19	—	—	—	—	—	—
20-24	1.7	5.1	—	5.1	6.8	18.6
25-29	2.2	14.6	5.1	7.6	4.7	7.6
30-34	1.3	14.3	3.7	10.0	6.7	5.3
35-39	0.3	13.7	2.2	9.1	4.4	6.8
40-44	1.3	7.2	0.2	7.2	2.1	9.2
45-49	1.5	5.3	—	5.7	1.5	15.0
Total	1.2	10.8	2.0	8.0	4.0	8.8

Note : 1. I cannot bear children any more.
2. I do not want to bear children at a higher age.
3. Educational cost is too high.
4. Childrearing in general is too costly.
5. I cannot stand the physical and psychological burden of childrearing any more.
6. Our house is too small.
7. I would like to conform to the majority in the number of children.
8. Incompatible with work.
9. Incompatible with hobbies and leisure activities.
10. I hope that the last child attain the age of majority before husband's retirement.
11. Others

Source : Institute of Population Problems, Eighth National Fertility Survey, Married-Couple Survey Data Tape.

couples end up having no children or more than three children. The resulting mean is about 2.2. Therefore, more than 90% of married couples finally have at least one child and more than 80% have at least two children, but only about 30% end up having three or more children.

Table 1b shows the distribution of first-married couples by expected number of children and ideal number of children. Expected number of children means the children ever-born plus the additional number of children planned. As the first column shows, the majority have two or three children as an ideal, while slightly more prefer three-child family to two-child family. Among those couples who have two children as an ideal, most expect to have two children. However, among those who have three children as an ideal, 46% expect to have two children and 47% expect to have three children. This means that among those women who expect to have two children more than one third have three children as an ideal. This may show that policy measures to help those women to have ideal three-child family can be legitimate and effective.

In the 1982 national fertility survey, we asked those women whose expected number of children is smaller than the ideal number of children to choose the reasons why they expect to have smaller number of children than the ideal. They had eleven multiple choices (including "others") as shown by Table 1c. The most popular choice is No. 2 (age), but naturally this is often chosen by older women. The second most popular choice is No. 4 (general cost), which is mainly chosen by younger women probably because younger couples tend to have a lower income. The third most popular choice is No. 3 (educational cost), which is chosen often by women of prime childbearing age. The results seem to show that the cost consideration as reflected in the choices, Nos. 3 and 4 have large effects on preventing women from having the ideal family size. The choices of Nos. 6 (small housing) and 8 (incompatibility with work) are also related to the cost consideration in terms of space and opportunity. Therefore, the analysis of these results may show the potential target of each type of pronatalistic measures (monetary incentives, education, housing, employment, etc.).

This is an extension of my previous theoretical and empirical studies on the possible pronatalist policy in Japan[5]. Based on a multinomial logit analysis of the data from the 1985 national household survey, I found a significant and negative effect, on the acceptance of fertility policy, of a higher age at marriage, childlessness and a high household expenditure, while I found a significant and

5) Hiroshi Kojima, "The Effectiveness of Pronatalist Policies," *Jinko Mondai Kenkyu [Journal of Population Problems]*, Vol.45, No. 2, 1989, pp.15-33 (in Japanese with an English Summary).
Hiroshi Kojima, "Attitudes toward Fertility Trends and Policy in Japan," *Jinkogaku Kenkyu [Journal of Population Studies]*, No. 15, 1992, pp.19-30.
Hiroshi Kojima, "Relationship Between Pronatalist Policies and Tax System," *Nihon Keizai Seisaku Gakkai Nempo [Annual of Japan Economic Policy Association]*, No. 41, 1993, Tokyo, Keiso Shobo, pp.41-44 (in Japanese).

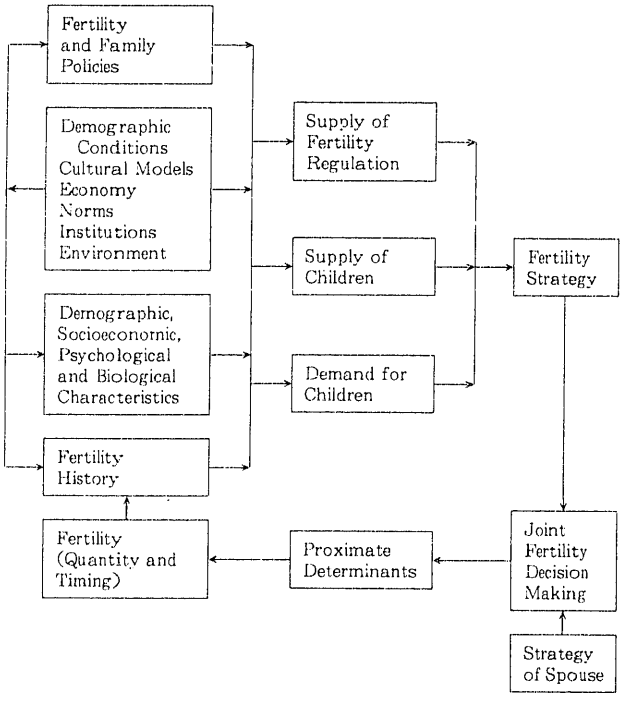
positive effect of living in large metropolitan areas[6]. Similarly, I found a positive effect, on the acceptance, of being female and rural residence and a negative effect of middle age, being never-married, and a high household expenditure[7].

I conducted the proportional hazards analysis for determinants of the cumulative probability of the first through fourth births (birth interval) and the binomial logit analysis for determinants of the ideal number of children of three or more, the expected number of children of three or more, and the excess of ideal number over expected number, which was a kind of preliminary analysis for this study[8]. The following results were found :

The wife's full-time employment significantly reduces the probability of all the births while her part-time employment and self-employment discourage the third and later births. On the other hand, working women seem to have the number of children that they want. The probability of the third and later births is relatively low among the middle income bracket of 4-5 million yen, suggesting that those couples are affected by both income and price effects of having children. They also have a larger excess of the ideal over the expectation. Compared with couples paying back housing loan or living in employer-owned or rental housing, couples living in parents' housing or on parents' land have relatively high probability of the third birth. They also have a larger ideal and expected family size.

This study aims to assess the potential effects and the potential targets of possible pronatalistic family policies in Japan. Proportional hazards and binomial logit analyses are applied to the data from the Eighth National Fertility Survey (with 8,000 samples) conducted by the Institute of Population Problems in 1982. The third birth is emphasized because it is often the target of pronatalistic family policies and because most Japanese couples have had at least two children anyway.

Figure 1 Framework for the Analysis of Fertility Determinants



II Analytical Framework

Figure 1 presents the analytical framework for the determinants of

6) Kojima, 1989, *op. cit.* in footnote 5).
7) Kojima, 1992, *op. cit.* in footnote 5).
8) Kojima, 1993, *op. cit.* in footnote 5).

fertility in Japan. It shows the mechanism through which policy-related variables affect fertility. This framework is based on the analytical framework for the study of fertility determinants presented by Bulatao and Lee and that for the study of nuptiality determinants devised by Dixon as well as that for the study of determinants of fertility and contraception developed by myself[9].

In this framework, fertility is determined by proximate determinants. They are, in turn, determined by the joint fertility decisions made by the couple and, possibly, other household members. Each spouse or household member is hypothesized to have fertility strategy which is determined by the following three intervening variables : the supply of fertility regulation, the supply of children and the demand for children. These intervening variables are determined by macro-level conditions including "cultural models", micro-level characteristics and micro-level fertility history.

According to Gérard[10], the cultural models peculiar to each risk (birth, death, marriage, etc.) link the vital events to individual elements and constitute the social logic surrounding the phenomenon concerned. They are the product of the collective consciousness or the collective unconscious and cannot be observed directly. He indicates that cultural models provide the key to any action designed to influence the risk as follows :

> ... the modification of cultural models in the desired direction obliges the individual to adapt his usual behaviour, which he finds increasingly incompatible with the new structure, or rather with the new vision of the world that he has developed almost unconsciously. Provided it is perfectly controlled, intervention at the collective level would make it possible to direct demographic processes at will and, to do so while formally maintaining full respect for individual freedom.

Therefore, Gérard's notion of cultural models at the collective level to be affected by interventions seems to underlie what Pierre Bourdieu calls "strategy" at the individual level.

The term "strategy" is used here in the sense defined by Bourdieu: *i.e.*, the series of actions which are organized by the *habitus* (the system of dispositions which acts

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9) Rodolfo Bulatao and Ronald D. Lee, "A Framework for the Study of Fertility Determinants," R. Bulatao and R. D. Lee (eds.), *Determinants of Fertility in Developing Countries*, Volume 1, New York, Academic Press, 1983, pp.1-26.

Ruth B. Dixon, "The Social and Demographic Determinants of Marital Postponement and Celibacy : A Comparative Study," Ph.D. dissertation, University of California, Berkeley, 1970.

Hiroshi Kojima, "The Effects of Mass Media on Contraception and Fertility in African Countries," Paper presented at the IUSSP XXIInd General Population Conference, Montreal, Canada, 24 August-1 September, 1993 [To be published in Shigemi Kono and Yasuko Hayase (eds.), *Fertility in Developing Countries : A Comparative Study of the Demographic and Health Survey Data*, Tokyo, Institute of Developing Economies (IDE Statistical Data Series, No. 66)].

10) Hubert Gérard, "Types of Intervention Available to a Demographic Policy : A Theoretic Approach," *Population Bulletin of the United Nations*, No. 16, 1984, pp.16-25.

as a mediation between structures and practice) and objectively adjusted to the situation without strategic calculation[11]. Therefore, his definition of strategy is different from the standard definition of the term.

Although Bourdieu does not specifically define "fertility strategy", he often includes it as a part of the system of biological, cultural and social reproduction strategies[12]. In contemporary France, the objective of fertility strategy for the middle class is to produce the right number of children so that its members can maintain the trajectory of their upward social mobility by investing all the limited resources to children[13]. The hypotheses to be mentioned below implicitly incorporate the ideas expressed in the fertility model developed by Bourdieu and Darbel which explicitly includes pronatalist policy measures and which emphasizes the effects of factors relevant to contemporary Japan (marginal cost of children, norm about children's educational attainment, housing costs, wife's earnings, attitudes toward savings, etc.)[14].

We will examine the following five hypotheses :

1) The couples in the upper middle income bracket are less likely to have the third birth and more likely to have an excess of the ideal over the expected family size because their fertility strategy is to invest the limited resources in the quality (*e.g.*, education) rather than the quantity of children so that they can continue the upward social mobility.
2) The wives with a full-time employment (and part-time employment, to some extent) are less likely to have the third birth and more likely to have an excess of the ideal over the expected family size because their fertility strategy is to invest the limited resources (barely augmented to a decent level by their own earnings) in the quality rather than the quantity of children so that they can continue the upward social mobility.
3) The couples paying back the housing loan are less likely to have the third birth and more likely to have an excess of the ideal over the expected family size because their disposable income to be invested in children is severely reduced.
4) The couples living in a owned condominium are less likely to have the third birth and more likely to have an excess of the ideal over the expected family size because the housing space is generally more limited than in a owned house.
5) The wives with an excess of the ideal over the expected family size are more likely to choose the reasons corresponding to the cost constraints (in terms of money, time and space) imposed by their own personal and household characteristics.

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11) Hiroshi Kojima, "A Demographic Evaluation of P. Bourdieu's 'Fertility Strategy'," *Jinko Mondai Kenkyu* [*Journal of Population Problems*], Vol.45, No. 4, 1990, pp.52-58 (in Japanese).
12) *ibid.*
13) Pierre Bourdieu, *La distinction. Critique sociale du jugement*, Paris, Minuit, 1979 (*Distinction : A Social Critique of Taste*, Cambridge, MA, Harvard University Press, 1984).
14) Pierre Bourdieu et Alain Darbel, "La fin d'un malthusianisme ?," Darras (éd.), *Le partage de bénéfices. Expansion et inégalité en France*, Paris, Minuit, 1966, pp.135-154.

Ⅲ Data and Methods

This study uses a data set derived from the Eighth National Fertility Survey, Married-Couple Survey (NFS8M) conducted by the Institute of Population Problems in Tokyo in 1982, in cooperation with the Department of Statistics and

Table 2 Definition of Control and Independent Variables

Variables Categories	Definition	Distribution (%)
[Control]		
Marriage Cohort	Year of marriage	
1960-64		20.1
1965-69		21.8
1970-74		26.6
1975-82		31.5
Age at Marriage	Wife's age at marriage	
16-19		4.4
20-29		92.0
30-49		3.6
Marriage Type	Mate selection method	
Arranged	With formal introduction	37.8
Love	Without formal introduction	62.2
Postnuptial Res.	Living arrangement at marriage	
Virilocal	Lived with husband's parents	30.9
Uxorilocal	Lived with wife's parents	4.8
Neolocal	Lived separately from both	64.3
W's Education	Wife's education	
Low	Completed junior high school	25.6
Middle	Completed senior high school	57.4
High	Completed 2- or 4-year college	17.0
H's Occupation	Husband's occupation	
Farmer	Farmer	4.1
Self-Emp.	Other self-employed occupation	17.4
Other	Other occupation	78.5
U/R Residence	Urban-rural residence	
Rural	Non-DIDs (Densely Inhabited Districts)	39.2
Urban	DIDs with > .5 million population	40.9
Metropolitan	DIDs with .5+ million population	19.9
Region	Geographical regions (Areas)	
Hokkaido		5.1
Tohoku		7.7
Kanto		30.9
Chubu		17.6
Kinki		18.6
Chu-shikoku		9.5
Kyushu		10.6

Table 2 (Continued)

Variables Categories	Definition	Distribution (%)
[Independent]		
C's Income	Couple's annual income	
> 2 million	Less than 2 million yen	10.8
2-3 million	2-3 million yen	24.8
3-4 million	3-4 million yen	26.0
4-5 million	4-5 million yen	17.0
5-6 million	5-6 million yen	10.6
6+ million	6 million yen or more	10.8
W's Employment	Wife's current employment	
Full-Time	Employed full-time	20.6
Part-Time	Employed part-time	14.4
Self-Emp.	Self-employed	19.7
Non-Emp.	Non-employed	45.3
Home Ownership		
Own/Parents	Parents' house or land	32.2
Own/Help	Parents' help for purchase	11.0
Own/Loan	No parents' help for purchase	21.1
Public	Public housing	10.1
Company	Company-owned housing	8.9
Private	Privately owned rent housing	14.7
House Type		
Own/Condo	Owned condominium	4.5
Others	Others	95.5

Source : Institute of Population Problems, Eighth National Fertility Survey, Married-Couple Survey Data Tape.

Information, Japan Ministry of Health and Welfare. The survey used a subsample of subjects (households) from the Department's Basic Survey of Health and Welfare Administration. Two-stage systematic sampling was applied to all the ordinary census enumeration districts in Japan. NFS8M used self-enumerated questionnaires while the Department's survey used interviews. NFS8M was conducted on couples with wives aged less than 50. Out of a sample of 8,853 couples, there were 8,433 (95.3%) usable questionnaires.

The analysis is limited to the couples consisting of a first-married husband and a first-married wife in order to exclude the effects of children from previous marriages as well as other effects derived from heterogeneous nature of remarried couples. This limitation reduces usable cases to around 6,500. Table 2 shows the definition and percentage distribution of control and independent variables. In this study, the variables for the couple's income, the wife's employment and the ownership and type of housing are treated as independent variables because they are more directly related to the cost of children as well as the possible policy measures. However, some caution is necessary because they pertain to the current situation rather than the situation at the time of childbearing.

In order to test the hypotheses mentioned above, the proportional hazards (Cox regression) model and the binomial logit (logistic regression) model are applied to the data set. The Cox regression model (the PHGLM procedure in the SAS package) is most suitable for the analysis of interval or timing. The binomial logit model (the CATMOD procedure in the SAS package) is most suitable for the analysis of dichotomous dependent variables. For ease of computation, only categorical variables are used. Dummy coding is used for these variables in order to facilitate the interpretation, especially that of interaction effects.

IV Results

Table 3 shows the results of proportional hazards and binomial logit analyses. The first three columns present the coefficients for determinants of cumulative probabilities of the first through third births (the first through third birth intervals). The last three columns present the coefficients for determinants of the log-odds (logit) of having three or more children as an ideal, expecting to have three or more children and having an excess of the ideal over the expected family size (cf. Table 1b).

The coefficients show the additive effect of each variable (category) on the probability of each birth or the log-odds of each choice. After exponentiation, they represent the multiplicative effects on the relative probability or the relative odds. For example, the coefficient for the wife's full-time employment in the first column is -.197, which means that those wives with a full-time employment have .821 ($e^{-.197}$) times as high cumulative probability as non-employed wives to have the first child. Therefore, the first birth interval is longer among wives with a full-time employment. Similarly, the coefficient for the wife's full-time employment in the fourth column is -.140, which means that those wives with a full-time employment are .869 ($e^{-.140}$) times as high odds as non-employed wives to have three or more children as an ideal.

1) Fertility Behaviors and Attitudes : Main Effects

According to the first three columns of the second part of Table 3, the couples' income does not have any significant effects on the cumulative probability of the third birth (the third birth interval) while the couples in the highest income bracket are more likely than those in the lowest bracket to have the first and second births (shorter first and second birth intervals). Employed wives are significantly less likely than non-employed wives to have the third birth (more likely to have a longer third birth interval) as expected. The wives with a full-time employment are less likely than non-employed wives to have the first and second births (more likely to have longer first and second birth intervals) while self-employed wives are somewhat more likely to have the second birth (a shorter second birth interval) possibly because it is easier for them to combine work and childrearing.

These results may be partly due to the reverse causation (the birth might have caused the discontinuation of employment) because the employment refers to the current situation rather than the situation at the childbearing period. However, there should be, at least partly, real effects of preceding employment on the subsequent birth because those women currently in full-time employment and

Table 3 Results of Proportional Hazards and Binomial Logit Analyses

Variables Categories	Cumulative Birth Prob. 1st	2nd	3rd	Odds of Births Ideal 3 +	Expected 3 +	Ideal> Expected
[Control]						
Marriage Cohort						
1960-64	.000	.000	.000	.000	.000	.000
1965-69	.013	.173***	.051	.244**	.068	.142#
1970-74	.142***	.215***	.032	.061	−.029	.016
1975-82	.126**	.305***	.206#	−.120	.117	−.480***
Age at Marriage						
16-19	.059	−.125#	.195	.160	.341*	−.343*
20-29	.000	.000	.000	.000	.000	.000
30-49	−.318***	−.383***	−1.036**	−.349*	−1.173***	.584***
Marriage Type						
Arranged	.114***	.057#	−.072	−.094	−.083	−.030
Love	.000	.000	.000	.000	.000	.000
Postnuptial Res.						
Virilocal	.113**	.077#	.266***	.026	.237**	−.256***
Uxorilocal	.032	.089	.192	.049	.184	−.319*
Neolocal	.000	.000	.000	.000	.000	.000
W's Education						
Low	−.010	.007	−.003	−.225**	−.042	−.199**
Middle	.000	.000	.000	.000	.000	.000
High	−.086*	−.000	.108	.157*	.111	.062
H's Occupation						
Farmer	−.230**	.107	.461***	.178	.614***	−.666***
Self-Emp.	−.023	.044	.361***	.190*	.318***	−.096
Other	.000	.000	.000	.000	.000	.000
U/R Residence						
Rural	.032	.036	−.006	.132*	.095	−.039
Urban	.000	.000	.000	.000	.000	.000
Metropolitan	−.097*	−.114*	−.115	−.145*	−.142#	−.010
Region						
Hokkaido	.116#	.135#	.321*	−.051	.192	.024
Tohoku	.190**	−.008	.334**	.188	.372**	.063
Kanto	.000	.000	.000	.000	.000	.000
Chubu	.064	.096*	.246**	−.015	.251**	−.170*
Kinki	.108**	.243***	.075	−.054	.124	−.095
Chu-shikoku	.110*	.167**	.253*	−.092	.171	−.114
Kyushu	.146**	.255***	.553***	.261**	.647***	−.198#

Table 3 (Continued)

Variables Categories	Cumulative Birth Prob. 1st	2nd	3rd	Odds of Births Ideal 3 +	Expected 3 +	Ideal> Expected
[Independent]						
C's Income						
>2 million	.000	.000	.000	.000	.000	.000
2-3 million	.083	.001	.083	.162	.146	.037
3-4 million	.098#	−.008	.002	.262*	.093	.141
4-5 million	.085	−.031	−.192	.273*	−.009	.282*
5-6 million	.087	.010	−.004	.375**	.109	.170
6+ million	.134*	.128#	−.018	.577***	.185	.393**
W's Employment						
Full-Time	−.197***	−.079#	−.337***	−.140#	−.265**	.131#
Part-Time	−.048	.075	−.377***	−.237***	−.345***	.039
Self-Emp.	.047	.076#	−.195*	.031	−.065	.101
Non-Emp.	.000	.000	.000	.000	.000	.000
Home Own.						
Own/Parents	.228***	.243***	.223*	.516***	.453***	.172#
Own/Help	.217***	.130***	−.009	.146	.097	.053
Own/Loan	.023	.057	−.045	.147	.005	.128
Public	.016	.015	.049	.058	−.002	.089
Company	.129*	.233**	−.021	.141	.115	−.080
Private	.000	.000	.000	.000	.000	.000
House Type						
Own/Condo	−.153*	−.112	−.304#	−.152	−.269	−.018
Others	.000	.000	.000	.000	.000	.000
[Constant]	−	−	−	−.252#	−1.438***	−.474**
-2 L.L.	242.0***	216.5***	235.0***	7002***	6018***	6769***
d.f.	34	34	34	5198	5188	5212
N	5952	5387	4336	6022	6021	6040
Odds	−	−	−	1.223	.412	.563

Note : #: $p < .10$; *: $p < .05$; **: $p < .01$; ***: $p < .001$.
Source : Institute of Population Problems, Eighth National Fertility Survey, Married-Couple Survey Data Tape.

self-employment often continue the same employment from the beginning of marriage. This point is also supported by my preliminary analysis of the 1987 national fertility survey (the Ninth National Fertility Survey) which has found a negative effect of the wife's employment during the preceding or the last birth interval on the probability of the subsequent birth.

The couples living in a parents' housing or on a parents' land are significantly more likely than those living in a privately owned rent housing to have the third birth (a shorter third birth interval) as expected. In addition to them, the couples given parents' help for purchasing a housing and those living in a company-owned

housing are significantly more likely than those living in a privately owned rent housing to have the first and second births (shorter first and second birth intervals). The couples living in a owned condominium are somewhat less likely than others to have the third birth (more likely to have a longer third birth interval) as expected. They are also significantly less likely to have the first birth (more likely to have a longer first birth interval).

On the other hand, the fourth through sixth columns show the effects of those policy-related variables on the log-odds of each choice. As the couple's income increases, the wife is more likely to have a large family (three or more children) as an ideal. While income does not have any significant effects on the odds of expecting to have a large family, the wives in the upper middle and the highest income brackets are more likely than those in the lowest bracket to have an excess of the ideal over the expected family size. The wives with a full-time or part-time employment are less likely than non-employed wives to have a large family as an ideal or an expectation. The wives with a full-time employment are somewhat more likely than non-employed wives to have an excess of the ideal over the expected family size as expected. The wives living in a parents' housing or on a parents' land are more likely than those living in a privately owned rent housing to have a large family as an ideal and an expectation as well as an excess of the ideal over the expectation. However, housing type (owned condominium) does not have any significant effects on these three dependent variables.

We have also conducted the multinomial logit analysis of the trichotomous dependent variables in stead of the dichotomous ones. The results (not presented) are generally similar as far as the effects on the odds of a large family (as an ideal or an expectation) or an excess are concerned, but we also found a couple of interesting effects on a small family (0 or 1 child) or a shortage. Those wives in the lowest income bracket are more likely than others to have a small family size as an ideal or an expectation, while they are more likely to have a shortage of the ideal over the expectation which may mean their failure in fertility control. The couples living in a parents' housing or on a parents' land and those given parents' help for purchasing a housing are less likely than those living in a privately owned rent housing to have a small family as an ideal or an expectation.

2) Fertility Behaviors and Attitudes : Interaction Effects

We have examined the following three kinds of interaction effects in this study : the interaction with marriage cohort, the interaction with region and the interaction between policy-related variables. Table 4 shows the partial results for determinants of the cumulative probability of the third birth by marriage cohort. Only the coefficients for policy-related variables are presented. The coefficients for the total are the same as those in Table 3. Although income does not have any significant effects in the total, it comes to have a significant effect when it is interacted with the marriage cohort of 1970-74. The wives of this marriage cohort

Table 4 Coefficients for Independent Variables for Each Marriage Cohort : Cumulative Third Birth Probability

Variables Categories	Total	1960 -64	1965 -69	1970 -74	1975 -82
[Independent]					
C's Income					
>2 million	.000	.000	.000	.000	.000
2-3 million	.083	−.013	.274	−.023	.230
3-4 million	.002	−.157	.373	−.249	.276
4-5 million	−.192	−.079	.066	−.484*	−.473
5-6 million	−.004	−.176	.365	−.173	.136
6+ million	−.018	−.087	.115	−.072	.274
W's Employment					
Full-Time	−.337***	−.324	−.202	−.565***	−.020
Part-Time	−.377***	−.265	−.234	−.649***	−.526
Self-Emp.	−.195*	−.036	−.043	−.394**	−.699*
Non-Emp.	.000	.000	.000	.000	.000
Home Own.					
Own/Parents	.223*	−.098	.380*	.179	.808*
Own/Help	−.009	−.353	.063	.248	−.677
Own/Loan	−.045	−.082	−.100	−.158	.003
Public	.049	−.246	.073	.016	.423
Company	−.021	−.409	.057	.045	−.094
Private	.000	.000	.000	.000	.000
House Type					
Own/Condo	−.304#	−.657#	.155	−.435	.093
Others	.000	.000	.000	.000	.000

Note : #: $p < .10$; *: $p < .05$; **: $p < .01$; ***: $p < .001$.
Source : Institute of Population Problems, Eighth National Fertility Survey, Married-Couple Survey Data Tape.

in the upper middle income bracket are significantly less likely to have the third birth. The significant and negative effects of the wife's employment in the total mainly reflect the significant effects in this marriage cohort. They may be due to the first oil crisis or the massive marriages of baby-boomers born between 1947-49. On the other hand, the weak negative effect of living in a owned condominium largely reflects the weak effect in the marriage cohort of 1960-64. This may be due to the reverse causation (the smaller family size allows the purchase of condominium both financially and spatially).

Table 5 shows the partial results for determinants of an excess of the ideal over the expected family size by marriage cohort. The positive effects of the upper middle and highest income in the total mainly reflect the significant effects in the marriage cohort of 1975-82, which are largely due to their large positive effects on the ideal family size. The positive effects of the wife's full-time employment are accentuated in the marriage cohort of 1970-74, which may be due to the first oil crisis or the massive marriages of baby-boomers. The significant effects of housing disappear when it is interacted with marriage cohort. This is because

Table 5 Coefficients for Independent Variables for Each Marriage Cohort : Odds for Excess of Ideal over Expected Family Size

Variables Categories	Total	1960 -64	1965 -69	1970 -74	1975 -82
[Independent]					
C's Income					
>2 million	.000	.000	.000	.000	.000
2-3 million	.037	.026	.174	−.061	.083
3-4 million	.141	.188	.203	.029	.246
4-5 million	.282*	.295	.298	.246	.399#
5-6 million	.170	.120	.268	.241	.108
6+ million	.393**	.295	.432	.332	.810**
W's Employment					
Full-Time	.131#	.330#	.105	.348*	−.180
Part-Time	.039	.130	.158	.052	−.310
Self-Emp.	.101	−.015	.024	.342*	.161
Non-Emp.	.000	.000	.000	.000	.000
Home Own.					
Own/Parents	.172#	.243	.143	.178	.034
Own/Help	.053	−.136	−.015	.117	.144
Own/Loan	.128	.017	.197	.095	.091
Public	.089	−.070	.299	−.184	.241
Company	−.080	−.104	−.015	−.129	−.137
Private	.000	.000	.000	.000	.000
House Type					
Own/Condo	−.018	−.179	−.215	.088	−.006
Others	.000	.000	.000	.000	.000

Note : #: $p < .10$; *: $p < .05$; **: $p < .01$; ***: $p < .001$.
Source : Institute of Population Problems, Eighth National Fertility Survey, Married-Couple Survey Data Tape.

housing variables tend to have similar effects on both the ideal and the expected family size in each marriage cohort as expected from Table 3.

Although the results are not presented here, the interaction with regions (Areas) also produces interesting effects. The middle-range income has a significant and negative effect on the cumulative probability of the third birth in Tohoku Area. Although the effects of the wife's employment on the third birth are similar across regions, those of housing are not. Living in a owned housing in general tends to have negative effects on the third birth in the two largest metropolitan regions (Kanto and Kinki Areas), but it tends to have the opposite effects in other regions. Living in a public housing has a significant and positive effect in Chubu Area, while living in a company-owned housing has a significant and positive effect in Tohoku and Chubu Areas. Living in a owned condominium has a significant and negative effect on the third birth in Kinki Area. These results are difficult to interpret, but suggest that the local policy for better public housing or the introduction of housing allowances can be promising as a pronatalist measure.

It is also difficult to interpret the results for determinants of an excess of the ideal

over the expected family size by region. Although the effects of income are similar across regions, those of the wife's employment and housing are not. The wife's full-time employment has a significant and negative effect on the excess in Hokkaido Area while it has a significant and positive effect in Kanto Area. The wife's self-employment also has a significant and negative effect in Hokkaido Area. Living in a public housing has a significant and negative effect in Hokkaido Area while it has a significant and positive effect on the excess in Kinki Area.

The effects of the interaction between the three groups of policy-related variables are also examined for the two dependent variables. As for the cumulative probability of the third birth, the models with the interaction between income and employment and the interaction between income and housing are significantly different from the original model. The interaction between the income of 5-6 million yen and the wife's part-time employment has a significant and negative effect on the third birth, suggesting that the wives taking a part-time employment to attain the upper middle income invest the extra income for the quality (*e.g.*, education) of children rather than the quantity for their intergenerational upward social mobility. Similarly, the interaction between the income of 3-4 million yen and living in a company-owned housing has a significant and negative effect on the third birth, which suggests that the wives in the middle income bracket who have the extra disposable income by saving the housing cost invest the extra income for the quality of children.

As for the excess of the ideal over the expected family size, the models with the interaction between income and employment and the interaction between employment and housing are significantly different from the original model. The interaction between the income of 6+ million yen and the wife's full-time employment has a significant and positive effect on the excess probably because the wives taking a full-time employment to attain a higher income face the dilemma between the larger ideal family size encouraged by the high income and the smaller expected family size constrained by the full-time employment. The interaction between the income of 4-5 million yen and the wife's self-employment has a significant and negative effect on the excess possibly because they can better balance the income effect on the ideal family size and the price effect on the expected family size.

3) Reasons for Not Having the Ideal Number of Children

Table 6 shows the coefficients of binomial logit analyses for determinants of the reasons for not having the ideal number of children among those who have an excess of the ideal over the expected family size (cf. Table 1c). We present only the choices (reasons) on which policy-related variables have significant effects. Unexpectedly, they have significant effects on the choice of No. 2 which pertains to age. The wives in the upper middle and highest income brackets are more likely than those in the lowest bracket to choose this reason. They are also more likely to choose No. 10 which is also related to age (of husband's retirement). Those

wives in these two income brackets are more likely to have an excess of the ideal over the expectation as shown by Table 3. They may be because the effects of age are not captured jointly by the control variables for marriage cohort and age at marriage but captured by income which generally increases with age. Or this may be because the upper middle class families resort to a strategy to plan births (both

Table 6 Results of Binomial Logit Analyses for Determinants of Reasons for Not Having the Ideal Number of Children

Variables Categories	2 Age	3 Education	4 Cost	6 House	8 Work	10 Retire
[Control]						
Marriage Cohort						
1960-64	.000	.000	.000	.000	.000	.000
1965-69	.012	.270	.214	.334	.806***	.311
1970-74	−.346*	.487**	.578***	.452#	1.183***	.097
1975-82	−.862***	.553**	.837***	.299	1.235***	.551*
Age at Marriage						
16-19	−.691*	.196	−.134	−.417	−.217	1.073**
20-29	.000	.000	.000	.000	.000	.000
30-49	1.509***	−1.380***	−.890**	−.753*	−.733#	−.727
Marriage Type						
Arranged	.143	.008	−.119	−.139	−.100	.538***
Love	.000	.000	.000	.000	.000	.000
Postnuptial Res.						
Virilocal	−.259#	.027	−.085	−.189	.289	.462*
Uxorilocal	.192	−.125	−.501#	−.175	−.229	−.260
Neolocal	.000	.000	.000	.000	.000	.000
W's Education						
Low	.107	−.077	−.013	−.006	−.105	−.207
Middle	.000	.000	.000	.000	.000	.000
High	.164	.105	−.115	−.257	.536**	.032
H's Occupation						
Farmer	.072	−1.037*	−.629	−13.7	−.250	−1.672
Self-Emp.	.146	−.613***	−.392*	−.011	1.007***	−.637*
Other	.000	.000	.000	.000	.000	.000
U/R Residence						
Rural	−.046	−.044	.031	−.358	.413*	−.301
Urban	.000	.000	.000	.000	.000	.000
Metropolitan	.054	−.062	.113	.175	.061	−.082
Region						
Hokkaido	−.099	−.121	−.557*	−.866*	−.638	.915**
Tohoku	−.076	−.488*	−.147	−1.717**	.139	.338
Kanto	.000	.000	.000	.000	.000	.000
Chubu	.211	−.352*	−.042	−.435*	−.259	.029
Kinki	−.053	−.195	−.127	−.540**	−.233	−.040
Chu-shikoku	−.031	−.560**	−.277	−.784*	−.315	.006
Kyushu	.114	−.201	−.534**	−1.427***	.058	.338

Table 6 (Continued)

Variables Categories	2 Age	3 Education	4 Cost	6 House	8 Work	10 Retire
[Independent]						
C's Income						
>2 million	.000	.000	.000	.000	.000	.000
2-3 million	.303	.069	−.118	.198	.045	.224
3-4 million	.167	−.137	−.198	.196	.107	.403
4-5 million	.463*	−.330	−.522*	.081	−.058	.888*
5-6 million	.324	−.429#	−.569*	−.503	.336	.613
6+ million	.777**	−.606*	−1.112***	−1.015*	.614#	1.018*
W's Employment						
Full-Time	−.160	.012	−.068	−.012	2.849***	−.542*
Part-Time	−.325*	.397**	−.026	.167	1.323***	−.084
Self-Emp.	−.143	.172	−.324*	−.043	2.128***	.139
Non-Emp.	.000	.000	.000	.000	.000	.000
Home Own.						
Own/Parents	.378*	.119	−.060	−1.488***	.214	.066
Own/Help	.051	.463*	−.042	−1.425***	.373	.017
Own/Loan	.180	−.102	−.315#	−1.575***	.342	−.114
Public	.376#	.225	−.229	.392#	.125	.059
Company	−.091	.561**	−.025	−.054	.048	.437
Private	.000	.000	.000	.000	.000	.000
House Type						
Own/Condo	.155	.037	.113	1.824***	−.169	.082
Others	.000	.000	.000	.000	.000	.000
[Constant]	−1.300***	−1.226***	−.606*	−1.048*	−5.424***	−3.395***
-2 L.L.	2342***	2177*	2226*	1240	1231	1175
d.f.	2065	2065	2065	2065	2065	2065
N	2225	2225	2225	2225	2225	2225
Odds	.370	.307	.354	.134	.131	.093

Note : #: $p < .10$; *: $p < .05$; **: $p < .01$; ***: $p < .001$.
Source : Institute of Population Problems, Eighth National Fertility Survey, Married-Couple Survey Data Tape.

size and timing) for the upward social mobility of their children as suggested by Bourdieu[15].

On the other hand, the wives in the higher income brackets including them are less likely than those in the lowest bracket to choose the cost-related reasons (Nos. 3 and 4) as expected. Actually, the wives are less likely to choose these two reasons as the income increases. The wives in the highest income bracket are also less likely than those in the lowest bracket to choose No. 6 (small housing) pertaining to the

15) Bourdieu, *op. cit.* in footnote 13).

cost of space, while they are somewhat more likely to choose No. 8 (incompatibility with work), suggesting their sensitivity to the opportunity cost of children.

As expected, the wife's employment has a very significant and large positive effect on the choice of No. 8. The wives with a part-time employment are also more likely than non-employed wives to choose No. 3 (educational cost) probably because they have started working to supplement the educational expenses for children (*e.g.*, extracurricular schools). They are less likely to choose No. 2 (age) possibly because they tend to finish childbearing early due to the smaller ideal and expected family size as shown by Table 3. The wives with a full-time employment are less likely than non-employed wives to choose No. 10 (husband's retirement age) probably because they can support their children with their own earnings even after the retirement of their husbands due to their younger age on the average. Self-employed wives are less likely to choose No. 4 (general cost) possibly because they can reallocate the resources for their business to children and possibly because their children can supply labor for their business.

On the other hand, the variables related to housing have very significant and large effects on the choice of No. 6 (small housing) as expected. The wives living in a owned housing are much less likely than those living in a privately owned rent housing to choose No. 6, but these large negative effects are more than cancelled out when they live in a owned condominium due to the smaller space. The wives living in a public housing are somewhat more likely than those living in a privately owned rent housing to choose this reason possibly due to the difficulty to move out to a larger housing. The wives living in a parents' housing or on a parents' land are more likely than those living in a privately owned rent housing to choose No. 2 (age) possibly because they have to finish the care of younger children before they start the care of older parents living together or closely. The wives who are given parents' help for purchasing a housing and those who are living in a company-owned housing are more likely than those living in a privately owned rent housing to choose No. 3 (educational cost) probably because the facts that their parents can afford financial help and that they work for a larger company or the government with housing complexes for employees indicate that they are from the upper middle class families concerned about their children's upward social mobility as suggested by Bourdieu[16].

V Summary and Conclusion

The couple's income does not have any significant effects on the cumulative probability of the third birth in the total, but the upper middle income has a significant and negative effect in a more recent marriage cohort as hypothesized. The upper middle income also has a positive effect on an excess of the ideal over the expected family size as expected, which is also observed in a more recent marriage

16) Bourdieu, *op. cit.* in footnote 13).

cohort. The negative effects of the interaction between the upper middle income and the wife's part-time employment and the interaction between the middle income and living in a company-owned housing on the third birth as well as the interaction of the upper middle income and the wife's self-employment on an excess of the ideal over the expectation also lend support to the hypothesis. All these results seem to suggest that the couples in the upper middle income bracket face both income and price effects of having children. Therefore, financial support (the increase in child allowance or tax break for the third child) targeted toward these couples may have pronatalist effects.

The wife's full-time employment has a significant and negative effect on the cumulative probability of the third birth and a significant and positive effect on an excess of the ideal over the expected family size as hypothesized. The wife's part-time employment also has a negative effect on the third birth as expected. These results suggest that the measures to help working women (and their spouse) to harmonize work and family life, including the improved supply of child-care services, may have pronatalist effects.

Unexpectedly, only living in a parents' housing or on a parents' land has a significant and positive effect on the cumulative probability of the third birth. This, in turn, means that all the other types of home ownership (non-ownership), including the purchase of home with housing loan, has a negative effect on the third birth, which is not inconsistent with the hypothesis. Living in a owned condominium also has a negative effect as expected. These results suggests that the saving of housing costs and possibly, living expenses and child-care costs through the coresidence with parents has pronatalist effects. Therefore, the improved provision of public housing and/or the introduction of housing allowance (or tax break for rent) can be a possibility if the reduction of inheritance or gift tax is not desirable for other policy goals. Considering the differential effects of living in a public housing by region and its positive effect on the choice of No. 6 (small housing), the increased supply of spacious public housing can be promising as a pronatalist measure.

This study can be extended into a couple of directions. First, as recent studies have done[17], we may be able to impute more direct policy-related variables (*i.e.*, the amount of child allowance and tax deduction) at the individual level. Second, we can incorporate community-level variables regarding public housing and child care services because they vary across regions and because the results of Gauthier's cross-national study suggest that the effects of each policy-related variable differ

17) David M. Blau and Philip K. Robbins, "Fertility, Employment, and Child-Care Costs," *Demography*, Vol.26, No. 2, 1989, pp.287-299.
Leslie A. Whittington, "Taxes and the Family : The Impact of the Tax Exemption for Dependents on Marital Fertility," *Demography*, Vol.29, No. 2, 1992, pp.215-227.
Olivia Ekert-Jaffé, "La politique familiale," Georges Tapinos (éd.), *La France dans deux générations. Population et société dans le premier tier du XXIè siècle*, Paris, Fayard, 1992, pp.223-253.

by the policy mix and the socioeconomic context[18].

Abstract

A Policy-Oriented Analysis of Fertility Behaviors and Attitudes in Japan

Hiroshi KOJIMA

This study aims to assess the potential effects and the potential targets of possible pronatalistic family policies in Japan. Proportional hazards and binomial logit models have been applied to the data from the Eighth National Fertility Survey (with 8,000 samples) contucted by the Institute of Population Problems in 1982. As a dependent variable, the third birth probability (interval) has been emphasized because it is often the target of pronatalistic family policies and because most Japanese couples have had at least two children anyway. The excess of the ideal over the expected family size is also emphasized because those couples with an excess are assumed to be those in need of policy supports to attain the goals and because the government can legitimize the intervention targeted toward those needy couples. We have focused on couple's income, wife's employment, and housing situation as policy-related independent variables after controlling for marriage cohort, wife's age at first marriage, mate selection method, postnuptial residence, wife's education, husband's occupation, urban-rural residence, and region.

The following results have been obtained regarding these policy-related variables. The couple's income does not have any significant effects on the cumulative probability of the third birth in the total, but the upper middle income has a significant and negative effect in a more recent marriage cohort. The upper middle income also has a positive effect on an excess of the ideal over the expected family size, which is also observed in a more recent marriage cohort. These results seem to suggest that financial support (the increase in child allowance or tax break for the third child) targeted toward the couples in the upper middle income bracket may have pronatalist effects.

The wife's full-time employment has a significant and negative effect on the cumulative probability of the third birth and a significant and positive effect on an excess of the ideal over the expected number of children. The wife's part-time employment also has a negative effect on the third birth. These results suggest that the measures to help working women (and their spouse) to harmonize work and family life, including the improved supply of child-care services, may have pronatalist effects.

Living in a parents' housing or on a parents' land has a significant and positive

18) Anne H. Gauthier, "Family Policies in Comparative Perspective," *Centre for European Studies, Nuffield College, Oxford, Discussion Paper*, No. 5, 1991.

effect on the cumulative probability of the third birth, which means that all the other types of home ownership (non-ownership) has a negative effect on the third birth. Living in a owned condominium also has a negetive effect on the third birth. These results imply that the improved provision of public housing and/or the introduction of housing allowance (tax break for rent) can be possible pronatalist measures if the reduction of inheritance or gift tax is not desirable for other policy goals.

A Policy-Oriented Analysis of Fertility Behaviors and Attitudes in Japan

わが国における出生に関する行動と態度の政策志向的分析

小　島　　宏

本研究はわが国において出生促進的家族政策を実施した場合の潜在的効果と潜在的対象を推定することを目的として行われた．1982年に人口問題研究所が実施した「第8次出産力調査」のデータ（約8,000サンプル）に比例ハザード・モデルと二項ロジット・モデルが適用された．従属変数としては第3子の出生確率（間隔）に重点を置くことにしたが，これは第3子が出生促進的家族政策の対象となることが多いし，わが国の夫婦の大部分がいずれにしても2子以上を生んできたからである．理想子供数による予定子供数の超過にも重点を置くことにしたが，これはこのような超過を示す夫婦こそが出生目標を達成するための政策的支援を必要としていると思われるし，政府も支援を必要とする夫婦を対象とした政策的介入を正統化することができるからである．政策関連の独立変数としては夫婦の所得，妻の就業，住宅状況に焦点を合わせたが，その際に結婚コーホート，妻の初婚年齢，配偶者選択法，結婚直後の居住形態，妻の学歴，夫の職業，都市農村区分，地方をコントロールした．

政策関連変数に関する結果は以下の通りである．全体についてみると夫婦の所得は第3子の累積出生確率に対して有意な効果をもたないが，最近の結婚コーホートでは中の上の所得が有意な負の効果をもつ．中の上の所得は理想子供数による予定子供数の超過に対しても有意な正の効果をもつが，これは最近の結婚コーホートにおいてもみられる．これらの結果は，中の上の所得階層の夫婦を対象とした経済的支援（第3子に対する児童手当または税額控除の増額）が出生促進的効果をもつ可能性があることを示すように思われる．

妻のフルタイム就業は第3子の累積出生確率に対して有意な負の効果をもち，理想子供数による予定子供数の超過に対して有意な正の効果をもつ．妻のパートタイム就業も第3子出生に対して負の効果をもつ．これらの結果は，保育サービス供給の改善を初めとする，就業女子（とその配偶者）による仕事と家庭生活の両立を支援するための施策が出生促進的効果をもつ可能性があることを示す．

親の家・土地への居住は第3子の累積出生確率に対して有意な正の効果をもつが，これは他のすべての住宅所有（非所有）形態が第3子出生に対して負の効果をもつことを意味する．また，持ち家のマンションへの居住も第3子出生に対して負の効果をもつ．これらの結果は，相続税や贈与税の軽減が他の政策目的にとって好ましくないとすれば，公営住宅供給の改善や住宅手当制度（家賃に対する税額控除）の導入が出生促進的施策となる可能性があることを示唆する．