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Leaving Home in Japan: Its Trends, Gender Differences, and Determinants

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Leaving Home in Japan:

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paper examines the trend, gender difference, Abstract determinants, and effects on nuptiality and fertility of home-leaving in Japan. Comparison of life tables reveals that the delay in leaving the parental home has been taking place since the cohort born in early 1950s. However, the proportion left home by age 20 in females born in early 1970s is higher than their predecessors, suggesting the delay is coming to an end. Unlike in Europe and North America, males leave the parental home earlier than females in Japan. This uniqueness is due to the fact that much more males leave home before marriage, especially at the age 18, than females. It is estimated that the probability of returning home among those who left before age 22 is more than 40 percent. A logistic regression analysis shows that parents' living in metropolitan area, home ownership, education, mother's not working on fulltime basis, and small family size prevent children from leaving home. It is unlikely that the delay in leaving home is the main reason of nuptiality and fertility decline in contemporary Japan.

Studies of young people leaving the parental home are attempted with various interests such as household composition of the youth, housing demand, psychological development of children, parents' happiness in the empty nest stage, and so forth. Recently, the rapid fertility decline in several European countries has raised the interest in overall postponements of transition to adulthood (Livi-Bacci, 2001, pp. 7-9; Kohler, Billari and Ortega, 2001, pp. 19-21). Thus, a study of home-leaving in Japan, a country with fertility level as low as Southern and Eastern Europe (TFR in 2001 was 1.33), would have a significant meaning. Lesthaeghe and Moors pointed out Japan's peculiar pattern in living arrangements of women aged 20-24. Japanese women are as low as Southern Europeans in proportion cohabiting or being single mothers but are as high as Western Europeans in propensity to live alone (Lesthaeghe and Moors, 2000,

p. 160). A study of leaving home adds another uniqueness of Japan in terms of gender difference. Japanese men leave the parental home as early as Northern Europeans while Japanese women leave as late as Southern Europeans. Such comparisons between Europe and East Asia would give an important insight for a demographic theory on household and family formation in developed societies.

1. Data and Methods

All the analyses in this article are based on the data from the Fourth National Survey on Household Changes conducted by the National Institute of Population and Social Security Research in July, 1999. The survey covered 300 census areas randomly sampled from whole Japan. From 16,267 private households in these areas, 13,385 households (82.3%) responded, and 12,434 households (76.4%) were coded into data files as valid responses. Household heads were asked to fill in questions on each member's transitions such as home-leaving, marriage, marital dissolution, birth, death, or inclusion into the household.

The large sample size of the survey allows a detailed comparison between cohorts and genders. However, the survey does not contain information on returning home and only an indirect estimate is available for the probability of returning. A sophisticated multivariate survival analysis of leaving home based on the retrospective data is not possible, either. Instead, a logistic regression analysis of children's living with parents at the time of survey is conducted. This improves the analysis using the former round of the survey data (Suzuki, 2001, p. 32).

There are 15,722 members (7,693 men and 8,029 women) aged 20-59 without missing values on the experience of leaving home and on the age at leaving if ever left. However, there is a response bias in this survey that persons living alone are underrepresented. Figure 1 reveals that the proportions living alone in this sample are apparently lower than in the 2000 census of Japan. Since persons living alone are home leavers, this bias would result in an underestimation of the propensity to leave home. Thus, the following case weights were calculated to adjust the bias.

$$w_a = p \frac{K_a + K_b}{K_a}, \quad w_b = (1 + p) \frac{K_a + K_b}{K_b},$$

where w_a and w_b are case weight coefficients for persons living alone and not alone respectively, K_a and K_b are the number of cases in the survey living alone and not alone

respectively, and p is the proportion living alone in the census. Coefficients were calculated by age and sex as in Table 1.

Figure 1. Proportion living alone

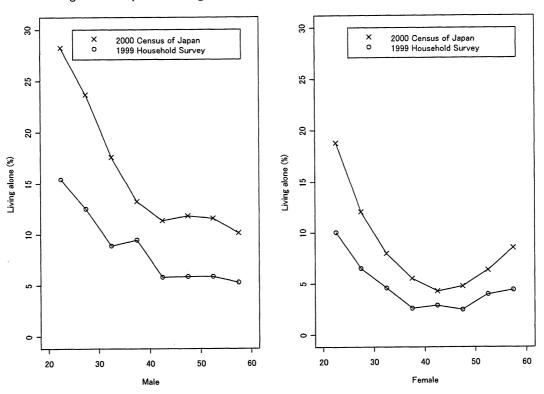


Table 1. Case weight coefficients

	N	Male	Fe	Female		
Age	Live alone	Not live alone	Live alone	Not live alone		
20~24	1.83096	0.84844	1.87797	0.90223		
25~29	1.88928	0.87281	1.85133	0.94078		
30~34	1.98286	0.90427	1.73494	0.96474		
35~39	1.39978	0.95828	2.11837	0.97018		
40~44	1.95577	0.94115	1.48294	0.98569		
45~49	2.01703	0.93675	1.93159	0.97656		
50~54	1.97507	0.93936	1.59748	0.97534		
55~59	1.91439	0.94895	1.93667	0.95706		

2. Trends in Leaving Home

Table 2 compares the proportion never left home by exact age (Kaplan-Meyer survivorship function) between cohorts. For males, the proportions by age 25 have been rising since the cohort born in the early 1950s, but the proportions after age 35 have been decreasing by cohort. While the former demonstrates the delay in home-leaving since the 1970s, the latter corresponds to the decline in the traditional household formation pattern that the eldest son never leaves home even after marriage. For females, the proportions at all ages are increasing with an exception of the youngest cohort. The rise in leaving home before age 20 for this last cohort might be a sign that the long-term trend of delay in leaving home is coming to a halt. Thus, it is important to inspect closely the home-leaving behavior of this cohort and its successors.

Table 2. Proportion never left home by cohort and sex

45~49 (1949.7~1954.6) 0.4507 0.3229 0.2282 0.1946 0.18 50~54 (1944.7~1949.6) 0.5042 0.3484 0.2265 0.2063 0.19 55~59 (1939.7~1944.6) 0.5197 0.3777 0.2499 0.2251 0.21 Age (Cohort) 20 25 30 35 (Female) 20~24 (1974.7~1979.6) 0.6764	Table 2. Proportion never left home by conort and sex						
20~24 (1974.7~1979.6) 0.6171	Age	(Cohort)	20	25	30	35	40
25~29 (1969.7~1974.6) 0.5893 0.4156					(Male)		
30~34 (1964.7~1969.6) 0.5627 0.3460 0.2341 35~39 (1959.7~1964.6) 0.5293 0.3516 0.2163 0.1617 40~44 (1954.7~1959.6) 0.4861 0.3244 0.2340 0.1919 0.17 45~49 (1949.7~1954.6) 0.4507 0.3229 0.2282 0.1946 0.18 50~54 (1944.7~1949.6) 0.5042 0.3484 0.2265 0.2063 0.19 55~59 (1939.7~1944.6) 0.5197 0.3777 0.2499 0.2251 0.21 Age (Cohort) 20 25 30 35 (Female) 20~24 (1974.7~1979.6) 0.6764	20~24	$(1974.7 \sim 1979.6)$	0.6171				
30~34 (1964.7~1969.6) 0.5627 0.3460 0.2341 35~39 (1959.7~1964.6) 0.5293 0.3516 0.2163 0.1617 40~44 (1954.7~1959.6) 0.4861 0.3244 0.2340 0.1919 0.17 45~49 (1949.7~1954.6) 0.4507 0.3229 0.2282 0.1946 0.18 50~54 (1944.7~1949.6) 0.5042 0.3484 0.2265 0.2063 0.19 55~59 (1939.7~1944.6) 0.5197 0.3777 0.2499 0.2251 0.21 Age (Cohort) 20 25 30 35 (Female) 20~24 (1974.7~1979.6) 0.6764	25~29	$(1969.7 \sim 1974.6)$	0.5893	0.4156			
35~39 (1959.7~1964.6) 0.5293 0.3516 0.2163 0.1617 40~44 (1954.7~1959.6) 0.4861 0.3244 0.2340 0.1919 0.17 45~49 (1949.7~1954.6) 0.4507 0.3229 0.2282 0.1946 0.18 50~54 (1944.7~1949.6) 0.5042 0.3484 0.2265 0.2063 0.19 55~59 (1939.7~1944.6) 0.5197 0.3777 0.2499 0.2251 0.21 Age (Cohort) 20 25 30 35 (Female) 20~24 (1974.7~1979.6) 0.6764	30~34		0.5627	0.3460	0.2341		
40~44 (1954.7~1959.6) 0.4861 0.3244 0.2340 0.1919 0.17 45~49 (1949.7~1954.6) 0.4507 0.3229 0.2282 0.1946 0.18 50~54 (1944.7~1949.6) 0.5042 0.3484 0.2265 0.2063 0.19 55~59 (1939.7~1944.6) 0.5197 0.3777 0.2499 0.2251 0.21 Age (Cohort) 20 25 30 35 (Female) 20~24 (1974.7~1979.6) 0.6764	35~39		0.5293	0.3516	0.2163	0.1617	
50~54 (1944.7~1949.6) 0.5042 0.3484 0.2265 0.2063 0.19 55~59 (1939.7~1944.6) 0.5197 0.3777 0.2499 0.2251 0.21 Age (Cohort) 20 25 30 35 (Female) 20~24 (1974.7~1979.6) 0.6764	40~44		0.4861	0.3244	0.2340	0.1919	0.1705
50~54 (1944.7~1949.6) 0.5042 0.3484 0.2265 0.2063 0.19 55~59 (1939.7~1944.6) 0.5197 0.3777 0.2499 0.2251 0.21 Age (Cohort) 20 25 30 35 (Female) 20~24 (1974.7~1979.6) 0.6764	45~49	$(1949.7 \sim 1954.6)$	0.4507	0.3229	0.2282	0.1946	0.1821
55~59 (1939.7~1944.6) 0.5197 0.3777 0.2499 0.2251 0.21 Age (Cohort) 20 25 30 35 (Female) 20~24 (1974.7~1979.6) 0.6764 25~29 (1969.7~1974.6) 0.6885 0.4757 30~34 (1964.7~1969.6) 0.6677 0.4057 0.1846 35~39 (1959.7~1964.6) 0.6486 0.3752 0.1446 0.1060	50~54	- ·	0.5042	0.3484	0.2265	0.2063	0.1975
(Female) 20~24 (1974.7~1979.6) 0.6764	55~59		0.5197	0.3777	0.2499	0.2251	0.2185
(Female) 20~24 (1974.7~1979.6) 0.6764	Age	(Cohort)	20	25	30	35	40
25~29 (1969.7~1974.6) 0.6885 0.4757 30~34 (1964.7~1969.6) 0.6677 0.4057 0.1846 35~39 (1959.7~1964.6) 0.6486 0.3752 0.1446 0.1060				(Female)			
25~29 (1969.7~1974.6) 0.6885 0.4757	20~24	(1974.7~1979.6)	0.6764				
30~34 (1964.7~1969.6) 0.6677 0.4057 0.1846 35~39 (1959.7~1964.6) 0.6486 0.3752 0.1446 0.1060	25~29		0.6885	0.4757			
35~39 (1959.7~1964.6) 0.6486 0.3752 0.1446 0.1060	30~34	\	0.6677	0.4057	0.1846		
) 0 1004 0 000F 0 00	35~39	•	0.6486	0.3752	0.1446	0.1060	
40^{44} (1954.7~1959.6) 0.0109 0.3030 0.1234 0.0323 0.00	40~44	$(1954.7 \sim 1959.6)$	0.6159	0.3030	0.1284	0.0925	0.0826
45~49 (1949.7~1954.6) 0.5750 0.2223 0.0976 0.0747 0.07	45~49	$(1949.7 \sim 1954.6)$	0.5750	0.2223	0.0976	0.0747	0.0703
	50~54	·	0.6178	0.2634	0.1327	0.1073	0.0985
		· .	0.6466	0.2746	0.1314	0.1148	0.1090

Table 3 shows the ages at the proportion never left home crosses each quartile. Whether or not the youngest cohort marks the end of continuous change, the trend by the second youngest cohort was that of delay in home-leaving as in many other developed societies (Ravanera, Rajulton and Burch, 1995, p. 181; Goldscheider and Goldscheider, 1994, p. 18; Mayer and Schwarz, 1989, p. 151; Holdsworth, 2000, p. 204; Aassve, Billari and Ongaro, 2000, p. 1; Billari, Philipov and Baizán, 2001, p. 10). In

Japan, the median age at leaving home rose 3.2 years for both men and women since the cohort born in early 1950s.

Table 3. Age at leaving home by cohort and sex (quartiles)

1 0010 0	3 1 2 3 1 2 3 1 2 3 1 3 1 3 1 3 1 3 1 3					
Age	(Cohort)	25%	50%	75%		
			(Male)			
20~24	$(1974.7 \sim 1979.6)$	18.84				
25~29	$(1969.7 \sim 1974.6)$	18.73	22.49			
30~34	$(1964.7 \sim 1969.6)$	18.61	21.46	29.16		
35~39	$(1959.7 \sim 1964.6)$	18.55	20.57	28.29		
40~44	$(1954.7 \sim 1959.6)$	18.41	19.81	28.75		
45~49	$(1949.7 \sim 1954.6)$	18.31	19.30	28.46		
50~54	$(1944.7 \sim 1949.6)$	18.33	20.09	28.45		
55~59	$(1939.7 \sim 1944.6)$	18.25	20.47	30.00		
Age	(Cohort)	25%	50%	75%		
		(Female)			
20~24	$(1974.7 \sim 1979.6)$	18.95				
25~29	$(1969.7 \sim 1974.6)$	18.94	24.50			
30~34	$(1964.7 \sim 1969.6)$	18.81	23.50	27.78		
35~39	$(1959.7 \sim 1964.6)$	18.76	22.96	26.58		
40~44	$(1954.7 \sim 1959.6)$	18.67	22.56	25.80		
45~49	$(1949.7 \sim 1954.6)$	18.46	21.31	24.64		
$50 \sim 54$	$(1944.7 \sim 1949.6)$	18.52	22.16	25.20		
55~59	$(1939.7 \sim 1944.6)$	18.54	22.42	25.48		

Table 4. Reason for leaving before age 20 by cohort and sex (%)

Table 4. Reason for leaving before age 20 by confort and sex (70)							
$^{\circ}$ Age	(Cohort)	N	School	Job	Marriage	Other, Unknown	Never left
						(Male)	
20~24	$(1974.7 \sim 1979.6)$	940	27.2	6.8	0.3	4.0	61.7
25~29	$(1969.7 \sim 1974.6)$	959	24.1	11.9	0.4	4.7	58.9
30~34	$(1964.7 \sim 1969.6)$	969	24.0	14.6	0.5	4.7	56 .3
35~39	(1959.7~1964.6)	889	27.5	14.2	0.6	4.7	52.9
40~44	(1954.7~1959.6)	931	26.9	20.0	0.5	4.0	48.6
45~49	$(1949.7 \sim 1954.6)$	1,059	21.9	28.5	0.2	4.4	45.1
50~54	$(1944.7 \sim 1949.6)$	1,076	16.6	27.8	0.5	4.7	50.4
55~59	$(1939.7 \sim 1944.6)$	870	8.8	34.4	0.7	4.2	52.0
Age	(Cohort)	N	School	Job	Marriage	Other, Unknown	Never left
	1.					(Female)	
20~24	$(1974.7 \sim 1979.6)$	988	20.9	6.4	1.5	3.6	67.6
25~29	$(1969.7 \sim 1974.6)$	1,107	18.9	7.6	1.6	3.1	68.8
30~34	(1964.7~1969.6)	983	17.3	11.3	1.6	3.1	66.8
35~39	$(1959.7 \sim 1964.6)$	847	18.1	11.6	2.7	2.7	64.9
40~44	$(1954.7 \sim 1959.6)$	938	18.6	14.0	2.8	3.0	61.6
45~49	(1949.7~1954.6)	1,100	14.2	24.0	2.1	2.1	57.5
	(1944.7~1949.6)	1,085	7.7	26.3	2.1	2.2	61.8
55~59	(1939.7~1944.6)	981	4.8	24.2	2.9	3.4	64.7

Since a considerable part of cohort leaves home at marriage, it is possible that the delay in leaving home is simply a reflection of marital delay. In fact, however, the rise in the proportion never left at age 20 in Table 2 indicates that the leaving home before marriage has also decreased. Table 4 displays the reason for leaving home before age 20. Note that the share of "never left" is the same as the proportion at age 20 in Table 2. Most of the leavers in these tables left at graduation from high school at age 18. Naturally, leaving for marriage is very rare for these leavers. Leaving home for higher education once halted but rose again in the youngest cohort. Apparently, the delay in leaving home before age 20 was caused by the decrease in leaving for occupational reason. The rising proportion of children growing up in metropolitan areas who can find job without leaving home might be the main factor. However, the economic recession and worsened labor market condition in Japan might be another factor, at least for those who finished high school after 1990.

3. Gender Differences in Leaving Home

Billari, Philipov and Baizán (2001) revealed that there is a very high heterogeneity in Europe in terms of home-leaving. They compared cohorts born around 1960 among 20 European countries using the FFS (Fertility and Family Surveys) data. Here, the Japanese cohort born between July 1954 and June 1964 (aged 35-44 on the survey date) will be compared with European cohorts. Figure 2 also includes the median age at leaving of the American cohort (Goldscherder and Goldscherder, 1994, p. 18) and the Canadian cohort (Ravanera, Rajulton and Burch, 1995, p. 181).

It is apparent that Japan (JPN) is unique in terms of gender difference in home-leaving. Actually, Japan is the only country in Figure 2 where men leave the parental household earlier than women. The inconsistent pattern that the Japanese men leave as early as Northern Europeans but women leave as late as Southern Europeans makes Japan an outlier.

This inconsistency comes from the difference in the proportion leaving at marriage. Figure 3 compares the share of leaving home for union formation, including cohabitation for European cohorts. Most of the countries are located slightly upper-left from the diagonal, indicating that the proportion leaving for union is moderately higher for women than for men.

Figure 2. Median age at home-leaving of cohorts born around 1960

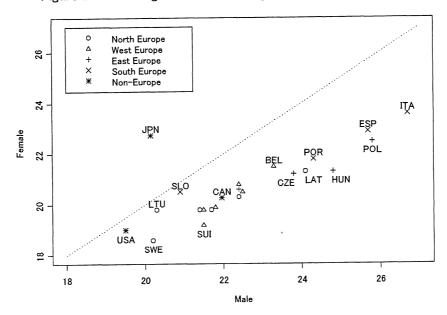
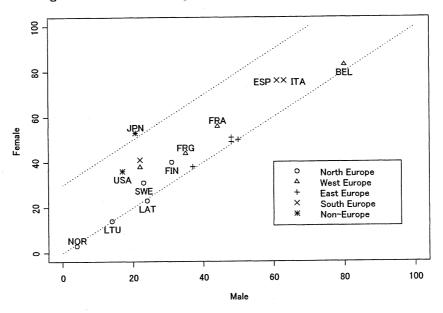


Figure 3. Percent leaving at marriage of cohorts born around 1960



For the Japanese cohort, however, the female proportion of leaving for marriage (52.9%) exceeds the male proportion (20.5%) by more than 30 points. Men exceed women for any reasons other than marriage. The proportion leaving for higher education is 34.4% for men and 20.9% for women, that leaving for occupation is 31.8% for men and 18.8% for women, and that leaving for other reasons is 13.3% for men and 7.3% for men.

Women leave earlier than men in other countries because women marry earlier and a considerable part of men and women leave at marriage. In Japan, however, the gender difference in the proportion leaving before marriage is large enough to reverse the difference in the age at marriage.

According to De Vos (1989, p. 618), Latin American countries also show ordinary pattern that women leave earlier than men. Indirect estimates by Zeng and his colleagues indicated that China and Korea belong to this ordinary group (Zeng, et al., 1994, p. 69). Although historical evidences show that men left earlier than women in pre-industrial England and in the United States during World War II (Wall, 1989; p. 385; Goldscheider and Goldscheider, 1994, p.14), Japan seems to be the only country with this reversed gender pattern in the contemporary world.

4. Returning Home

The Fourth National Survey on Household Changes does not have information on returning home but only the co-residence with parents of persons who ever left home is available. The problem here is that there is no way to adjust the response bias. It is inferred that persons who ever left home and lived alone on the survey date are underrepresented than those who ever left and did not live alone. However, the proportion living alone among home-leavers is not available in the census or other reliable sources. Thus, the proportion co-residing with parent among home-leavers might be an overestimation of the probability returning.

Figure 4 shows this proportion for home-leavers aged 20-39. The peak comes around age 23 for both men and women, suggesting that more than 40% of persons who left by age 22 returns the parental home. It is difficult to estimate the exact probability of returning in Japan, but it could be possible that the probability is about the same as around 40% in the United States given by Goldscheider and Goldscheider (1994, p. 22).

Table 5 compares the proportion co-residing with parents of home-leavers by reason for leaving. The leavers left for higher education are most likely to return home. Thus, the peak around age 23 in Figure 4 is thought to correspond to the graduation from college as in the United States (Goldscheider, Thornton and Young-Demarco, 1993, p. 693). The leavers left for marriage are least likely to return home, which is also the same as in the United States (Da Vanzo and Goldscheider, 1990, p.247).

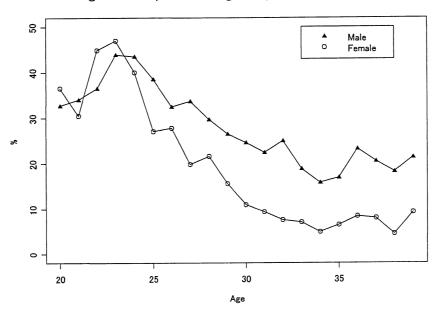


Figure 4. Proportion living with parent among leavers

Table 5. Proportion co-residing with parent by cohort, sex and reason for leaving (%)

Age	(Cohort)	School	$_{ m Job}$	Marriage	Other, Unknown
				(Male)	
$20 \sim 24$	$(1974.7 \sim 1979.6)$	43.6	40.8	0.0	31.5
$25 \sim 29$	$(1969.7 \sim 1974.6)$	41.6	33.5	5.6	25.0
30~34	$(1964.7 \sim 1969.6)$	27.2	24.4	9.9	14.9
35~39	$(1959.7 \sim 1964.6)$	25.1	25.6	9.7	14.6
Age	(Cohort)	School	Job	Marriage	Other, Unknown
				(Female)	
$20 \sim 24$	$(1974.7 \sim 1979.6)$	52.5	39.5	10.5	34.0
25~29	$(1969.7 \sim 1974.6)$	37.4	22.8	9.3	24.4
30~34	$(1964.7 \sim 1969.6)$	17.0	12.0	3.0	7.6
35~39	$(1959.7 \sim 1964.6)$	12.1	8.1	4.8	11.3

5. Determinants of Leaving Home

Literatures show that among determinants that prevent children to leave the parental home, there are metropolitan residence (Goldscheider and Da Vanzo, 1989, p. 606; Buck and Scott, 1993, p. 871), small sibling size (Goldscheider and Da Vanzo, 1989; Mitchell, Wister and Burch, 1989, p. 610; Aquilino, 1991, p. 1004; Kojima, 1990, p. 20; Goldscheider and Goldscheider, 1996, p. 15), being an eldest son (Kojima, 1990, p. 20), low household density (Buck and Scott, 1993, p. 870), marital stability of parents (Mitchell, Wister and Burch, 1989; Aquilino, 1991; Buck and Scott, 1993; Goldscheider and Goldscheider, 1996; Holdsworth, 2000, pp. 211-212), lower educational attainments

of parents (Goldscheider and Da Vanzo, 1989; Buck and Scott, 1993; Aquilino, 1991; Holdsworth, 2000; Corijn and Manting, 2000, p.52), occupation of mother (Goldscheider and Da Vanzo, 1989; Holdsworth, 2000), and unemployment of children (Aassve, Billari and Ongaro, 2000, pp. 15-20). These studies in Europe and North America are based on panel survey or detailed retrospective survey and executes sophisticated probit, logit or survival analyses.

However, the Fourth National Survey on Household Changes does not have detailed data on residential place, household composition or socioeconomic status of parents that do not live with young people at the survey date. Therefore, important determinants cannot be related with the experience of leaving home analyzed in sections above. Instead, it is attempted to evaluate the effect of characteristics of household heads on co-residence with single children aged 18 and over.

The analysis using the former round survey data (Suzuki, 2001) could not distinguish single children from married children. Since the former survey asked the age of each children, co-residence with children aged 20-24 were analyzed as proximate to co-residence with adult single children. This time the numbers of children by marital status (single or ever married) and by age (below 18 or over) are available. Thus, it is possible to analyze directly the co-residence with single adult children. Household heads aged 65 and over are excluded because we are not interested in support for old parents but in leaving home of young people. There are 3,946 children (2,110 sons and 1,836 daughters) without missing values on co-residence and explanatory variables. The number of household heads is 2,455, which means that the average number of adult children is 1.6 per head.

Because the former round survey did not have information on labor force status, it was impossible to evaluate the effect of mother's work on children's leaving home. The information is available this time and it is decided to combine mother's labor force status with living arrangements of parental couple. The combined variable has following six categories, and the category (1) is assigned as the reference category.

- (1) Father and mother live together, and mother is a full-time housewife.
- (2) Father and mother live together, and mother is a part-time worker.
- (3) Father and mother live together, and mother is self-employed.
- (4) Father and mother live together, and mother is full-time worker.
- (5) Father and mother do not live together, and father is sampled.
- (6) Father and mother do not live together, and mother is sampled.

A problem arises when parents are living apart. Especially for category (5), it is plausible that single children are not living with the male head sampled in this survey but with their mother (wife or ex-wife of him). Thus, not living with one of the parents does not necessarily mean that the child ever left home.

Table 6 describes corresidence with parent and its explanatory variables. As expected from the uniqueness in Japan, daughters are more likely than sons to live with their parents. According to chi-square test, this difference is statistically significant. It is expected that there is no effect of parental characteristics on the sex ratio of children in Japan. In fact, no explanatory variable shows significant difference between sons and daughters. The proportions of category (1) mentioned above, which is dropped from Table 6 because it is the reference category, are 30.2% and 27.3% for sons and daughters, respectively.

Table 6. Descriptive statistics of co-residence with parent and its determinants

	Son	Daughter
Co-residence with parent (%)	58.3	65.6
Parents together, mother part-time (%) Parents together, mother self-employed (%) Parents together, mother full-time (%) Parents not together, father sampled (%) Parents not together, mother sampled (%)	23.7 15.2 15.6 7.0 8.3	25.8 16.7 14.4 7.1 8.7
Parent lives in DID 10 (%) Parent lives in metropolitan area 20 (%) Parent owns house (%) Parent tertiary education (%) Number of Siblings 30	67.1 52.3 81.9 30.1 2.4	68.0 51.4 82.7 31.0 2.4
N	2110	1836

¹⁾ Densely Inhabited Districts, as defined in the Census.

Table 7 shows the result of logistic regression analysis in which co-residence is set 1 and living apart is set 0. Part-time job of a mother does not change the odds of staying home significantly with a housewife mother, self-employment reduces daughters' odds of staying, and fulltime job strongly reduces the odds for both sons and daughters. Children are less likely to live with a father who lives apart from mother, but this does not necessarily mean that children are more likely to leave home. Growing up in a Densely Inhabited District (DID) prevents daughters from leaving home. Growing up in Tokyo, Osaka or Nagoya metropolitan area and house ownership of parent strongly prevent both sons and daughters from leaving. Higher

²⁾ Saitama, Chiba, Tokyo, Kanagawa, Gifu, Aichi, Mie, Kyoto, Osaka and Hyogo.

³⁾ Includes oneself.

educational attainment of parent (usually of father) and large number of siblings encourage both sons and daughters to leave.

The differences by gender of children are seen in two explanatory variables; mother's self-employed work and growing up in a DID. It is inferred that a daughter of a working mother is expected to perform domestic roles, which makes daughters more sensitive than sons to mother's labor force status. It is also inferred that daughters are conservative to find educational and occupational opportunities apart from the parental home, while sons are more attracted by opportunities found only in metropolitan areas.

Table 7. Logistic regression on single children aged 18 and over living with parent

	So	n	Daug	hter
	$\exp(b)$	t	$\exp(b)$	t
Intercept	1.2201	0.8705	1.3206	1.0674
Parents together, mother part-time (%)	1.0398	0.3095	0.9463	-0.3751
Parents together, mother self-employed (%)	1.1683	1.0504	0.7228	$\textbf{-}1.9642 \ ^{*}$
Parents together, mother fulltime (%)	0.7553	-1.9807 *	0.6341	-2.7014 **
Parents not together, father sampled (%)	0.2407	-6.4665 ^{**}	0.1732	-7.5191 **
Parents not together, mother sampled (%)	0.8384	-0.9894	0.8642	-0.7093
Parent lives in DID 1) (%)	0.8932	-1.0837	1.5499	3.7129 **
Parent lives in metropolitan area 2 (%)	1.8127	6.0800 **	1.5138	3.7689 **
Parent owns house (%)	1.8986	5.0466 **	2.9125	7.4708 **
Parent tertiary education (%)	0.6521	-4.0966 **	0.7065	-2.9809 **
Number of Siblings 3)	0.8591	-2.3373 *	0.7785	-3.5789 **
Null deviance (degrees of freedom)	2866.8	(2109)	2362.7	(1835)
Residual deviance (degrees of freedom)	2693.8	(2099)	2154.5	(1825)

^{*}p<.05, **p<.01

6. Leaving Home, Marriage, and Fertility

Although a part of recent decline in leaving home is attributed to delay in marriage, it was shown that leaving home before marriage has been also declining. While marriages typically take place in the late twenties, many single leavers leave home at age 18 when they graduate from high schools. Among those who were born between July 1954 and June 1964 (aged 35-44 on the survey date) and left home before marriage, 50.1% left at age 18. Including 12.8% who left home under age 18, 62.9% of this cohort left home before achieving educational and occupational careers.

¹⁾ Densely Inhabited Districts, as defined in the Census.

²⁾ Saitama, Chiba, Tokyo, Kanagawa, Gifu, Aichi, Mie, Kyoto, Osaka and Hyogo.

³⁾ Includes oneself.

It has been revealed that young persons' own characteristics such as educational attainment, labor force status and occupation have significant effects on marriage probability in Japan (IPP, 1989, p. 67; 1994, p. 100; Otani, 1993, p. 184; Tsuya and Mason 1995, p. 161; Wada, 2000, p. 485; Retherford, Ogawa and Matsukura, 2001, p. 74). Because such characteristics have not been achieved at premarital home-leaving, the transition should be explained by parental characteristics as in the former section. Thus, premarital home-leaving and marriage are seen as relatively independent events, taking place at relatively separate points in one's life course, and being determined by different factors.

Several influential papers seem to assert that there exists a significant causal effect of leaving home on nuptiality and fertility. Livi-Bacci wrote that very low fertility in Italy is explained by "postponement syndrome" that refers to overall delay in completing education, entering labor market, finding a stable job, leaving the parental home, and forming a union. According to him, each transition is the precondition of the next one (2001, pp. 7-9). Dalla Zuanna described a causal sequence that Mediterranean familism causes the delay in home-leaving and the delay lowers fertility (2001, pp. 148-149). A mathematical model by Billari, Manfredi and Valentini (2000) also implies that the delay in transition to adulthood (end of education or leaving the parental home) results in the postponement of marriage that induces the fertility decline.

However, it is misleading to state that the postponement of home-leaving is the cause of very low fertility in Southern Europe. Leaving the parental home before marriage has been traditionally rare in this region and these two events are impartible (Reher, 1998, p. 205). As a fact, more than 60% men and 75% women leave home at marriage in Italy and Spain (see Figure 3). In such a case, it is difficult to distinguish the delay in home-leaving from that in marriage to evaluate the causal effect of the former on the latter. Whether a decline in premarital home-leaving results in a decline in marriage is an empirical issue.

Although Yamada (1999, p. 56) asserted that there exists a positive feedback between the increase in young people staying with parents and the increase in never married youth in Japan, little empirical evidence can be found. Survival analyses using the Japanese National Fertility Survey data (Otani, 1993, p. 192; IPP, 1994, p. 100; Wada, 2000, p. 486) do not agree on the effect of staying home on marital hazard.

Since the Fourth National Survey on Household Changes does not have information on important determinants such as labor force status or occupation before marriage, a sophisticated multivariate analysis is not possible. Table 8 compares

female age at marriage by experience of leaving home before marriage. This bivariate analysis shows that premarital leavers marry later than stayers, as opposed to the expectation.

The result might imply that women grew up in a metropolitan area are less likely to leave home before marriage and are late in marriage. It is possible that net effect of premarital leaving is in favor of early marriage. However, even though there is a positive net effect, such an effect is as minor as hidden by other effects and cannot be the main reason of very low fertility in Japan.

Table 8. Female age at marriage by cohort and reason for leaving

	Lubio c. z .		<u> </u>		
_	A	(Cohort)	Reason for leaving		
Age	Age	· · · · · · · · · · · · · · · · · · ·	Marriage	Other	
_	30~34	$(1964.7 \sim 1969.6)$	25.83	24.77	
	35~39	$(1959.7 \sim 1964.6)$	25.97	24.70	
	40~44	$(1954.7 \sim 1959.6)$	25.48	24.49	
	45~49	$(1949.7 \sim 1954.6)$	24.43	24.00	
	$50 \sim 54$	$(1944.7 \sim 1949.6)$	24.50	24.02	
	55~59	$(1939.7 \sim 1944.6)$	24.09	23.79	

7. Conclusion

Although the long-term trend was that of delay in home-leaving, a sign of halt was found for the youngest female cohort. In this connection, it is noteworthy that the proportion growing up in metropolitan areas among children aged 10-14 has declined for cohorts born after 1975 (Suzuki, 2001, pp. 33-34).

As for gender pattern, whether Japan is alone or not depends on data collection in the developing world, especially in East Asia. Since the result of Zeng et al. (1994) was based on an indirect estimation procedure, more direct evidences from China and Korea are desired.

While the Fourth National Survey on Household Changes is rich in sample size, the limited number of variables caused some weakness in analyses. The most desirable data would be a panel survey that covers a cohort's experience from graduating high school to middle ages. The second preferable data is a detailed retrospective survey that can reconstruct an individual's whole experience of living arrangements and its proximate determinants. Such a survey would allow an accurate estimation of the probability returning home and a full statistical model on determinants of home-leaving behavior.

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