Japan’s Baby Bust: Causes, Implications, and Policy Responses

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URL for backup paper
(downloadable as pdf)


- Working paper that was subsequently published as a book chapter:
Three stages of fertility decline since 1947

- **Stage 1: 1947–57**
  - TFR fell from 4.54 to 2.04 births per woman
  - Contraception backed by abortion (legalized 1948)

- **Stage 2: 1957–73**
  - Per capita real income grew about 10% per year
  - People felt they could afford to get married and have children
  - Age at marriage stopped rising and marital fertility stopped falling
  - TFR stayed approximately constant at about 2.1
Third stage of fertility decline, starting in 1973

Stage 3: 1973–2005 (baby bust)

- Age at marriage started rising again and TFR started falling again
- TFR gradually fell from 2.14 to 1.25
  - Update: TFR was 1.39 in 2010
- About half of the decline in TFR_{ppr} occurred because of later marriage and less marriage
Oil shock of 1973 triggered third stage of fertility decline

- Caused steep recession followed by rebound to lower economic growth rate of 3 to 4% per year
- 53% inflation in three years
- Unions negotiated big wage increases for full-time workers
- Struggling companies started hiring non-union part-time workers at much lower wages (mostly women)
- Many women moved from piece work at home to production work outside the home
Trend in singulate mean age at marriage (SMAM) by sex, Japan, 1950-2005

Note: SMAM is calculated from age-specific proportions single (never-married) in Japan’s quinquennial censuses. SMAM in 2005: Females 29.4, males 31.1.
Trend in the synthetic proportion still single at age 50, by sex, 1951-2005

Note: The synthetic proportion still single at age 50 is calculated from age-specific first-marriage rates in the specified calendar year using life table methods. First marriage rates are calculated from census and vital registration data.

In 2005: females 24%, males 27%.
Two-part explanation of the baby bust after 1973

- Rise in age at marriage and proportion never marrying
- Fall of marital fertility

- The two sets of explanatory factors are not quite the same
Reasons for later marriage and less marriage after 1973 in Japan

- Remarkable educational gains by women
- Massive increases in the proportion of women who work for pay outside the home: 99% now work before marriage, about 90% for pay
  - No financial need to get married
- Changing values about marriage
  - Big decline of arranged marriage
  - Big decline of coresidence with parents
  - Big increase in premarital sex
  - “New single concept:” Acceptable to enjoy single life without pressure to get married
  - Women want more help from husbands
Trends in the proportion of marriages that were arranged and the proportion of newly married couples who coresided with parents at the time of marriage: Japan, 1955–2002
Big rise in premarital sex

- Between 1990 and 2000, the proportion of single women age 16 and over who reported that they were currently using contraception rose from 39 to 57 percent.
- Among single women, the proportion with a male friend and the proportion using contraception are about the same.
- **Upshot**: Don’t have to get married to have sex (helps explain later marriage and less marriage).
- **Note**: Only about 2% of births out of wedlock, so later marriage and less marriage have a big effect on fertility.
Marital fertility

- **Parity of a woman**: Defined as the number of children she has ever borne.

- **PPR (parity progression ratio)**:
  - The fraction of women of a given parity who go on to have at least one more child.
Trends in period parity progression ratios (PPPRs), Japanese women, 1950-2005

Note: Computed from census and vital registration data.
Reasons for post-1973 declines in marital fertility

- Rising educational levels of women
- Rising labor force participation of women
- Direct costs of children have risen (substitution of quality for quantity): Higher education is a big component
- Opportunity costs of children have risen (woman’s lost income)
- Preferences have shifted away from children toward “other goods”
  - Decline of “consumption utility” of children
- Families are less secure
Direct economic cost of raising and educating a child (around year 2000)

- **Least expensive scenario:** All education through university in government schools: $286,000

- **Most expensive scenario:** All private schools through medical school: $630,100

- **Note:** Dollar amounts include the cost of feeding, clothing, and housing a child (in addition to education)

- **Note:** 2000 census: 50 percent of women age 25-29 had gone to junior college or university
Opportunity cost of a child (woman’s lost income)

- **Scenario 1:**
  - University graduate, works full-time for six years, drops out for six years, comes back to another full-time job: **Income lost is $847,700**

- **Scenario 2:**
  - Same scenario, but comes back to a part-time job: **Income lost is $2,379,300**

**Source:** Government White Paper. Figures include lost pension income due to lower earnings (retirement at age 60).
“Consumption utility” of children declines

- People today typically grow up with only one sibling who is close in age
- Teenagers and young adults rarely interact with babies and young children, not socialized to enjoy them
- Later marriage magnifies this effect—settle into a lifestyle without children
- New values of “finding oneself”, “realizing one’s potential”, “self-actualization”, pursuing a career
- Adds up to what are called “post-modern fertility preferences”
Less security for families

- Decline of extended family—not there to help
  - Need to ask about who is there to help
- Economic globalization, market-oriented reforms
  - More competition, less job security
  - Perceived future income stream more uncertain
  - Need two incomes—so don’t have to sell house and other assets if one spouse loses job
- Woman’s job becomes more precious

- All these things contribute to later childbearing and fewer children
Trend in the proportion of firms reporting that they offer lifetime employment, by firm size (number of employees), Japan, 1988–2002
Rising risk of divorce

- Japan’s crude divorce rate per 1,000 population
  - Rose from 0.74 in 1960 to 2.25 in 2003
  - Between rate in 2000 for France (1.9) and Germany (2.4)

- Contributes to delayed and lower childbearing
  - Wife needs a good job as a hedge against divorce
  - Husband doesn’t get much from children if divorced but still has to pay child support
Japan’s Efforts to Raise Fertility
Government is worried about low fertility

- Mainly because it is contributing greatly to population aging, causing worries about how to fund social security system
- More worry after population started to decline in 2006
Age structure of Japan’s population in 2050
Japan’s population by age, 2000–2050

(millions)

<table>
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<th></th>
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<td>Age 65+</td>
<td>22</td>
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Source: UN Projections, 2000 revision, medium variant.
Government actively concerned about low fertility since 1990

● “1.57 shock”
  • TFR hit 1.57 in 1989—lowest ever
  • Lots of media attention in 1990 when TFR for 1989 was announced

● 1990: Government establishes inter-ministry committee on “creating a sound environment for bearing and rearing children”
Two approaches to raising fertility

- Provide direct subsidies for marriage, childbearing, and childrearing
- Change the institutional environment to facilitate marriage, childbearing, and childrearing

- Japan is doing both
Child allowances

- Current benefits: ¥13,000/month per child under 15 years of age
  - ¥13,000 = US$160
  - Went into effect April 1, 2010
  - Represents a substantial increase
  - No means test (previously there was)
    - Everyone gets it, even foreigners living in Japan (even if their children are living outside Japan)
1991 Childcare Leave Act

- Intent: Make it easier for working women to have children
- Up to one year of unpaid childcare leave for either mother or father
  - Only for child under one year of age
- Restricted to full-time “regular” employees

- Intent: Make it easier for working women to have children
- Major expansion of day-care centers
- Also after-school programs
- Higher-income households pay more for services and are sometimes refused
1995 Childcare and Family Care Leave Act

- Superceded 1991 Childcare Leave Act
- Full-time employees eligible for one-year leave for child under one year of age
- New provisions while on leave
  - 25% pay (from Employment Insurance Scheme)
  - Employee accumulates seniority
  - Employer pays employer’s share of social security
  - Government pays employee’s share

- Further expansion of day-care centers, after-school programs, family support centers
- Services heavily subsidized. Very costly for government, especially in major urban areas
  - Tokyo: Monthly cost to government of day care for one infant exceeds average male worker’s monthly wage ($4500)
Further changes in 2000 and 2001

- 2000: Government picks up employer share as well as employee share of social security contributions during childcare leave
- 2001: Amendment to Employment Insurance Law
  - 40% pay during childcare leave
- Today: 50% pay during childcare leave
2003: “Next Generation” law

- **Intent**
  - Many were not taking childcare leave because of social disapproval from fellow employees and employers
  - Create an atmosphere in companies that encourages parents to take the childcare leave

- **Firms with more than 300 employees** have to come up with a plan to raise fertility among their employees by April 1, 2005
  - Get stamp of approval (use of logo) if plan is approved
Logo for government-certified child-friendly employer
Translation of logo

- **Top of logo**
  - “We support childrearing among our employees”

- **Bottom of logo**
  - Four zeros: Replace with year (e.g., 2005)
  - Rest of bottom: “Government-certified family-friendly employer”
Employer plans will likely include dating services

- Appropriate, because later marriage and less marriage are a big part of the problem
- All the big *keiretsu* already have dating services for their employees (outsourced)
- There are about 3,100 dating-service firms in Japan
Net result of fertility-raising measures so far

- Fertility has continued to decline
  - TFR was 1.20 in 2010

- TFR probably would have declined even more without government efforts to raise fertility
**Dangers in placing too much burden on employers**

- Employers may avoid hiring women
- Firms may become less efficient and less competitive in the global economy
Currently married women below 50 working full- and part-time
**A policy dilemma**

- One year of childcare leave is not enough
  
  - Most women want to take about six years off to have two children
  
  - Come back to work when second child is about three and can go to preschool

- Usually not feasible for businesses to give such long leave
What the government has to do: The big picture

- Restructure the economy to make it more efficient and competitive in the global market place
- Restructure society to be more marriage-friendly and more parent-and-child-friendly in order to raise fertility
- How to do the second without jeopardizing the first, and without jeopardizing women’s hard-won gains in education and employment?
- It won’t be easy, and it won’t be cheap
Challenges Posed by Population Aging at Ever-Lower Levels of Development in Asian Countries

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Individual aging and population aging

- **Individual aging**: Measured by life expectancy

- **Population aging**: Measured by percent age 65+
Causes of population aging

- Declining mortality
  - Note: Individual aging is only one of the causes of population aging

- Declining fertility
  - Decline in proportion of children automatically causes rise in proportion of elderly

- Net out-migration or low net in-migration
  - In-migrants tend to be younger than average, so net in-migration makes the population younger and net out-migration makes the population older
Very low fertility in East Asia

- 1.2—1.5 children per woman in almost all East Asian countries

- Governments of Japan, Korea, and Taiwan are now trying to raise fertility
  - Major reason: Worries about rapid population aging
The case of Japan

- **2000**
  - % 65+ : 17% (among highest in world)

- **2050 (projected)**
  - % 65+ : 36% (among highest in world)
Age structure of Japan’s population in 2050

Male

Female

Percent of total population
# Japan’s population by age, 2000–2050

(millions)

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*Source: UN Projections, 2000 revision, medium variant.*
Projected percentages age 65+ for world and selected countries

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Many Asian countries will get old before they get rich

- Japan already has problems funding social security
  - Will get much worse
  - But at least Japan is rich!

- Population aging in South Korea, Taiwan, and China 20–30 years after Japan
  - These countries are not nearly as rich
Getting old before getting rich: The case of Tamil Nadu state in India

- Fertility hit 2.0 births per woman in 1999.
- 52% literacy among women of reproductive age
- Only 34% of households have a toilet or latrine
- Per capita income less than US$1,000/year
- Tamil Nadu will get old before it gets rich
Implications of timing of Asian demographic transitions

- In Asia (compared with the West), mortality and fertility are falling at lower levels of development
  - **Reason:** Importation of mortality and fertility control technology

- As a consequence, population aging is occurring at lower levels of development
Projecting ahead for Asian countries

- Consider the level of population aging typical of Western countries in 1970

- Asian countries that achieve this level of aging in 2025 will have a per capita income about 1/7 as high as was typically the case in Western countries
  - The analysis takes into account inflation and projections of per capita income as well as population.
Policy implications

- Accelerate economic growth
  - Pursue good macroeconomic policies
  - Take advantage of “demographic dividend”

- Plan ahead: Put pension and medical schemes in place (sustainable ones)

- Some international assistance may be needed