



***Japan's Baby Bust:  
Causes, Implications, and Policy  
Responses***

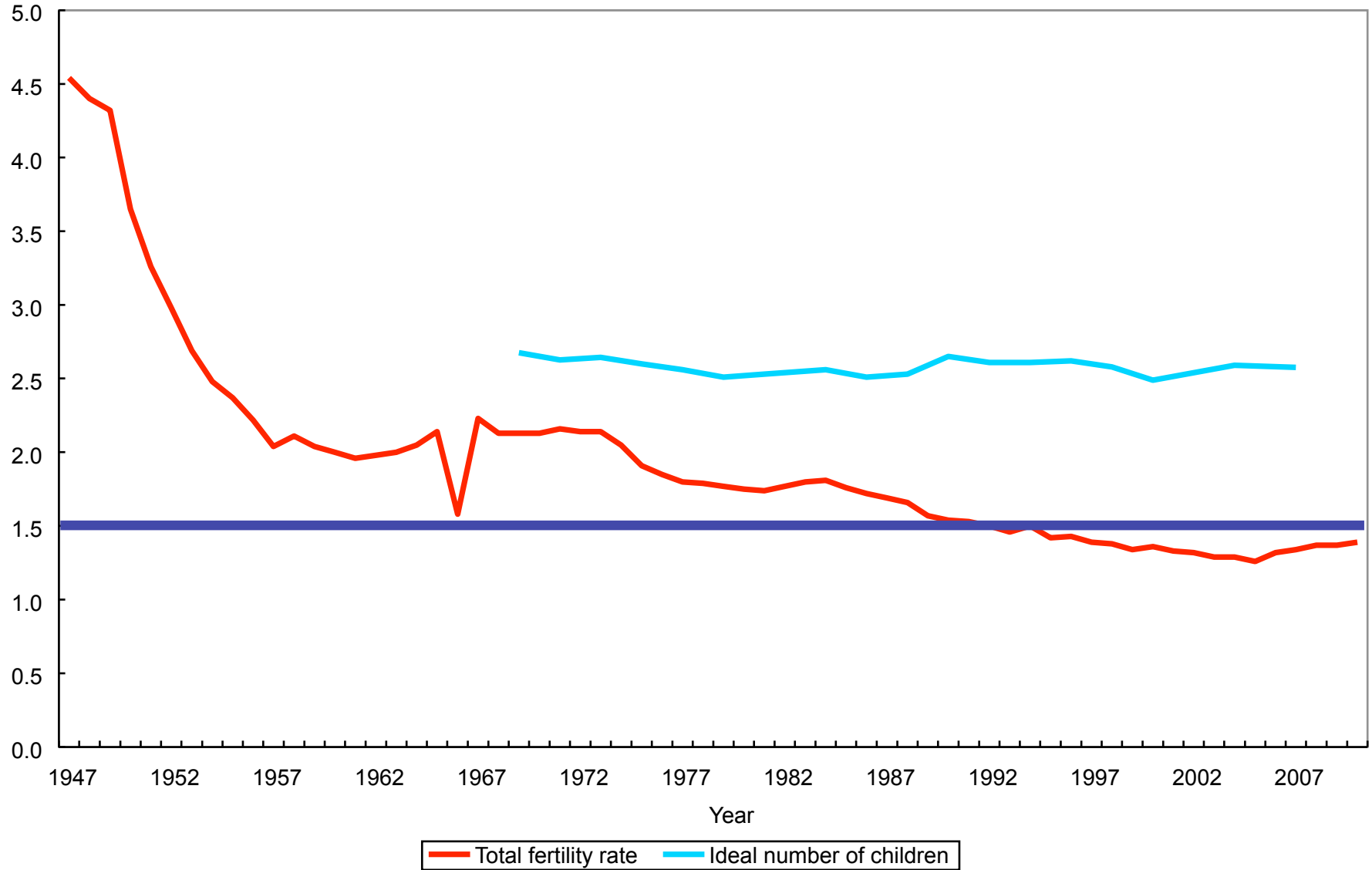
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## *URL for backup paper (downloadable as pdf)*



- [http://www.eastwestcenter.org/publications/search-for-publications/?class\\_call=view&pub\\_ID=1621&mode=view](http://www.eastwestcenter.org/publications/search-for-publications/?class_call=view&pub_ID=1621&mode=view)
- Working paper that was subsequently published as a book chapter:
  - Retherford, R. D., and N. Ogawa. 2006. Japan's baby bust: causes, implications, and policy responses. In Fred Harris (ed.). *The Baby Bust: Who Will Do the Work? Who Will Pay the Taxes?* Boulder, Colorado: Rowman and Littlefield.

# Total fertility rate (TFR) and ideal family size, Japan, 1947-2010



# *Three stages of fertility decline since 1947*

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- **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*

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- **Stage 3: 1973–2005 (baby bust)**

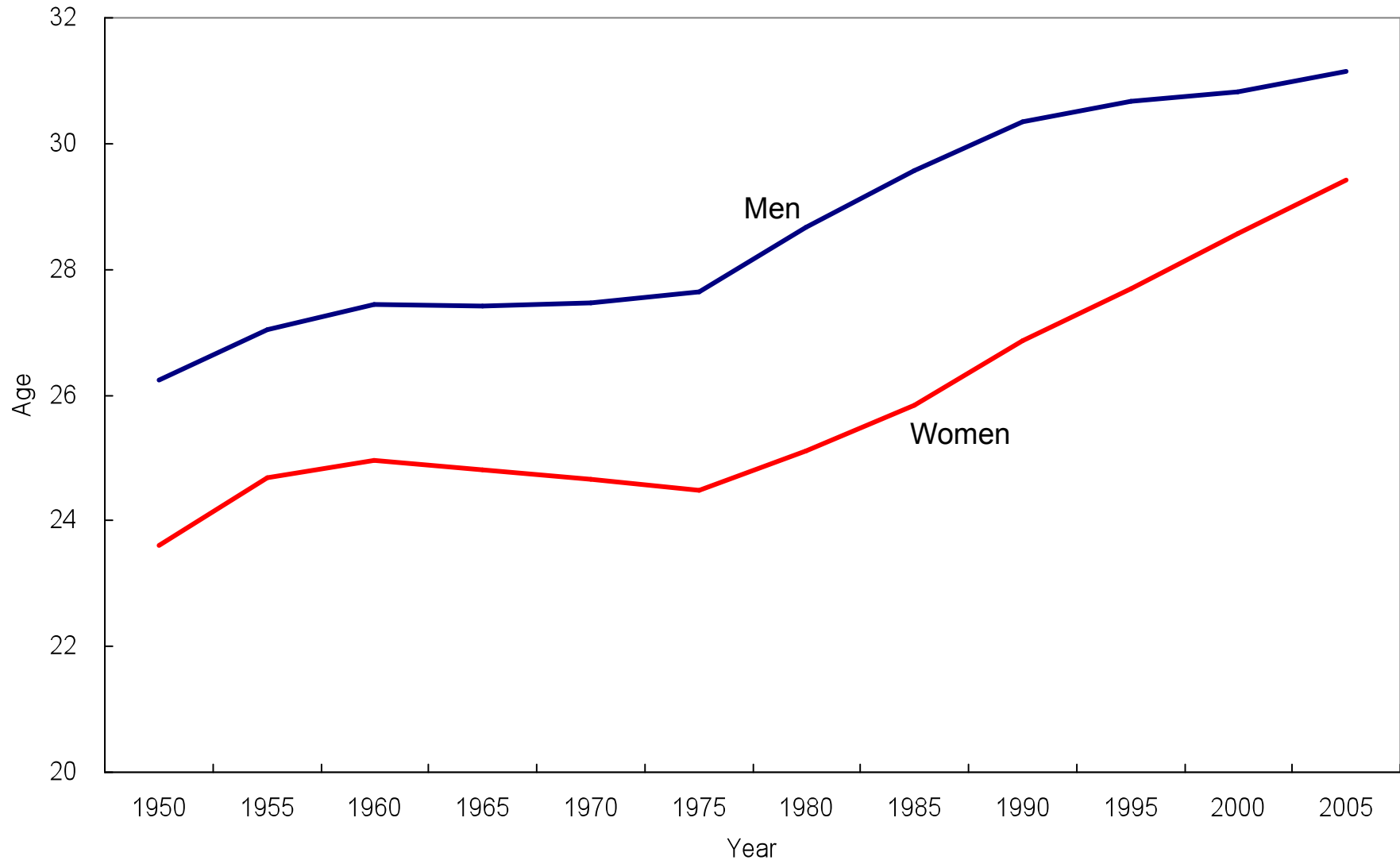
- Age at marriage started rising again and TFR started falling again
- TFR gradually fell from 2.14 to 1.25
  - Update: TFR was 1.39 in 2010
- About half of the decline in  $TFR_{ppr}$  occurred because of later marriage and less marriage

# *Oil shock of 1973 triggered third stage of fertility decline*

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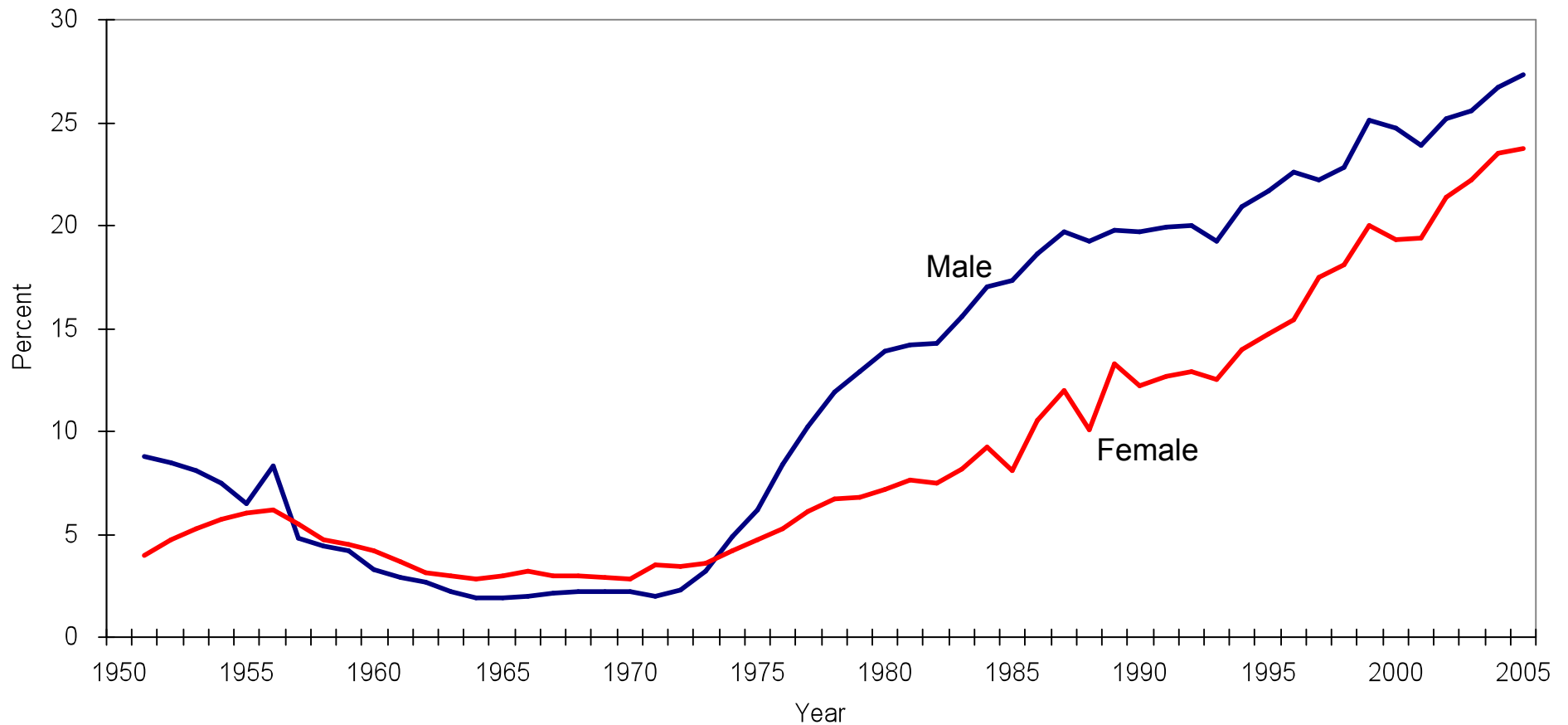
- Caused steep recession followed by rebound to lower economic growth rate of 3 to 4% per year
- 53% inflation in three years
- Unions negotiated big wage increases for full-time workers
- Struggling companies started hiring non-union part-time workers at much lower wages (mostly women)
- Many women 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***

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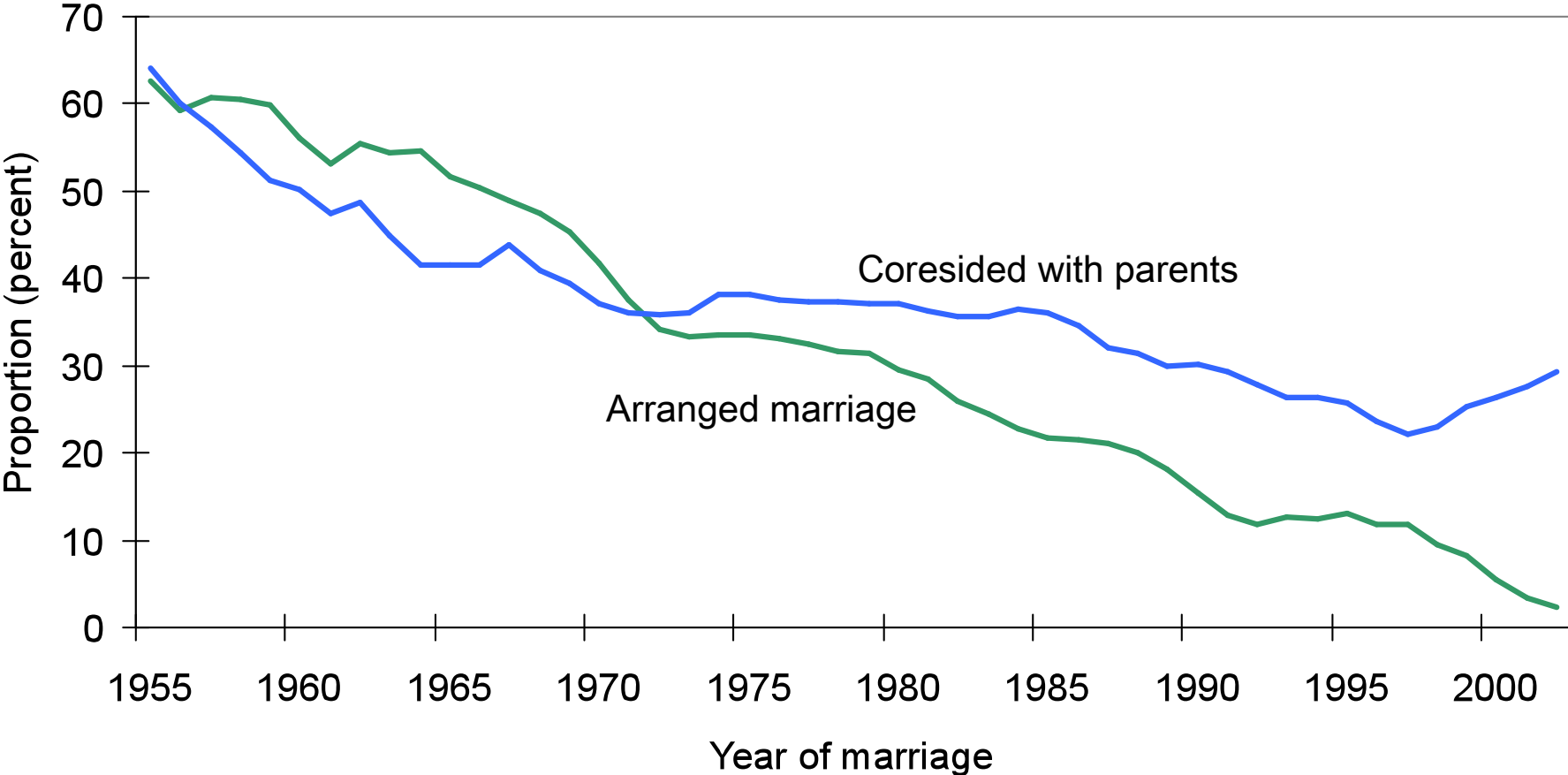
- Rise in age at marriage and proportion never marrying
- Fall of marital fertility
  
- The two sets of explanatory factors are not quite the same

# ***Reasons for later marriage and less marriage after 1973 in Japan***

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- 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*

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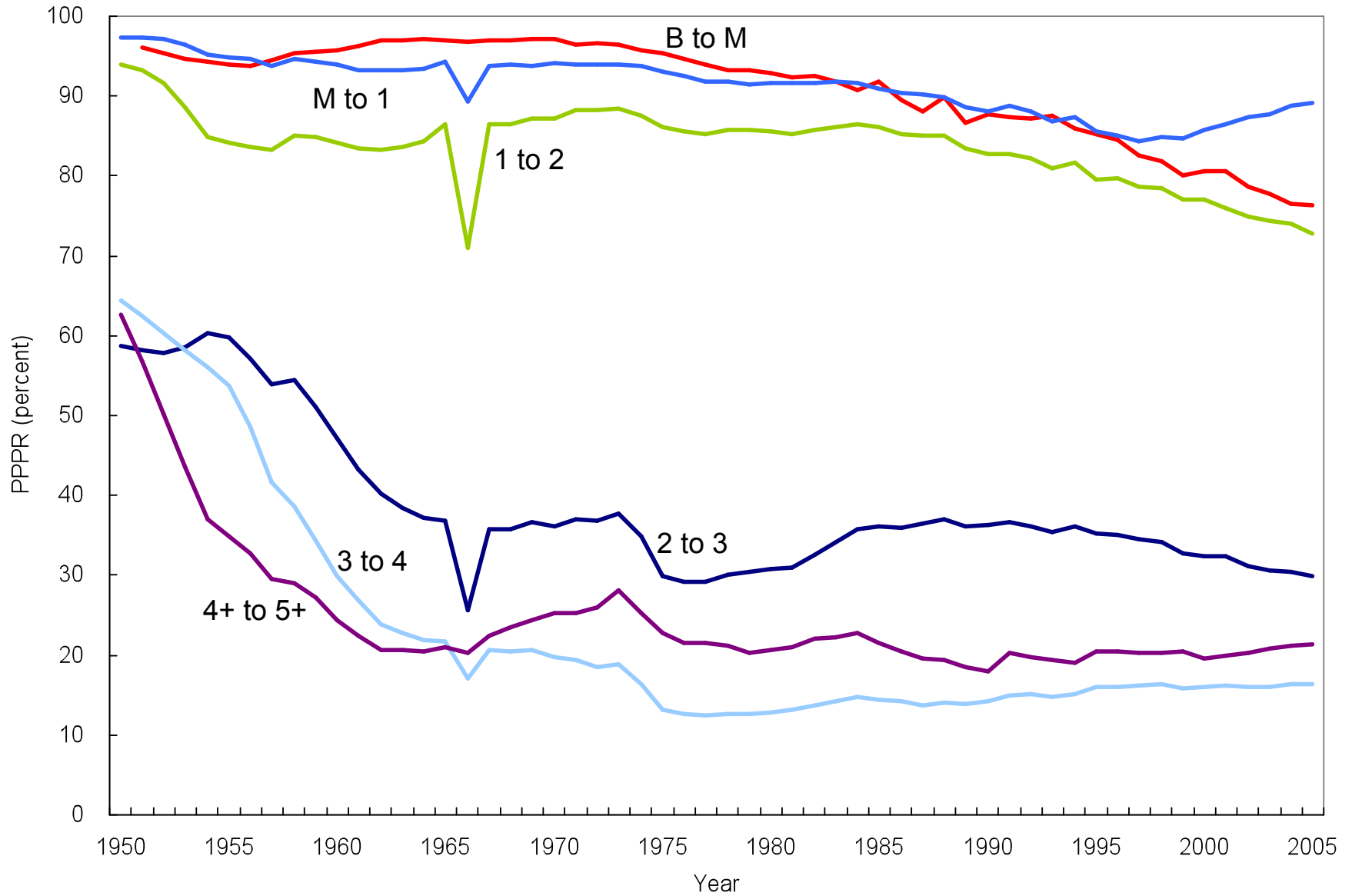
- Between 1990 and 2000, the proportion of single women age 16 and over who reported that they were currently using contraception rose from 39 to 57 percent
- Among single women, the proportion with a male friend and the proportion using contraception are about the same
- **Upshot:** Don't have to get 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*

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- **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*

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- 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)*

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- **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)*

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- **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***

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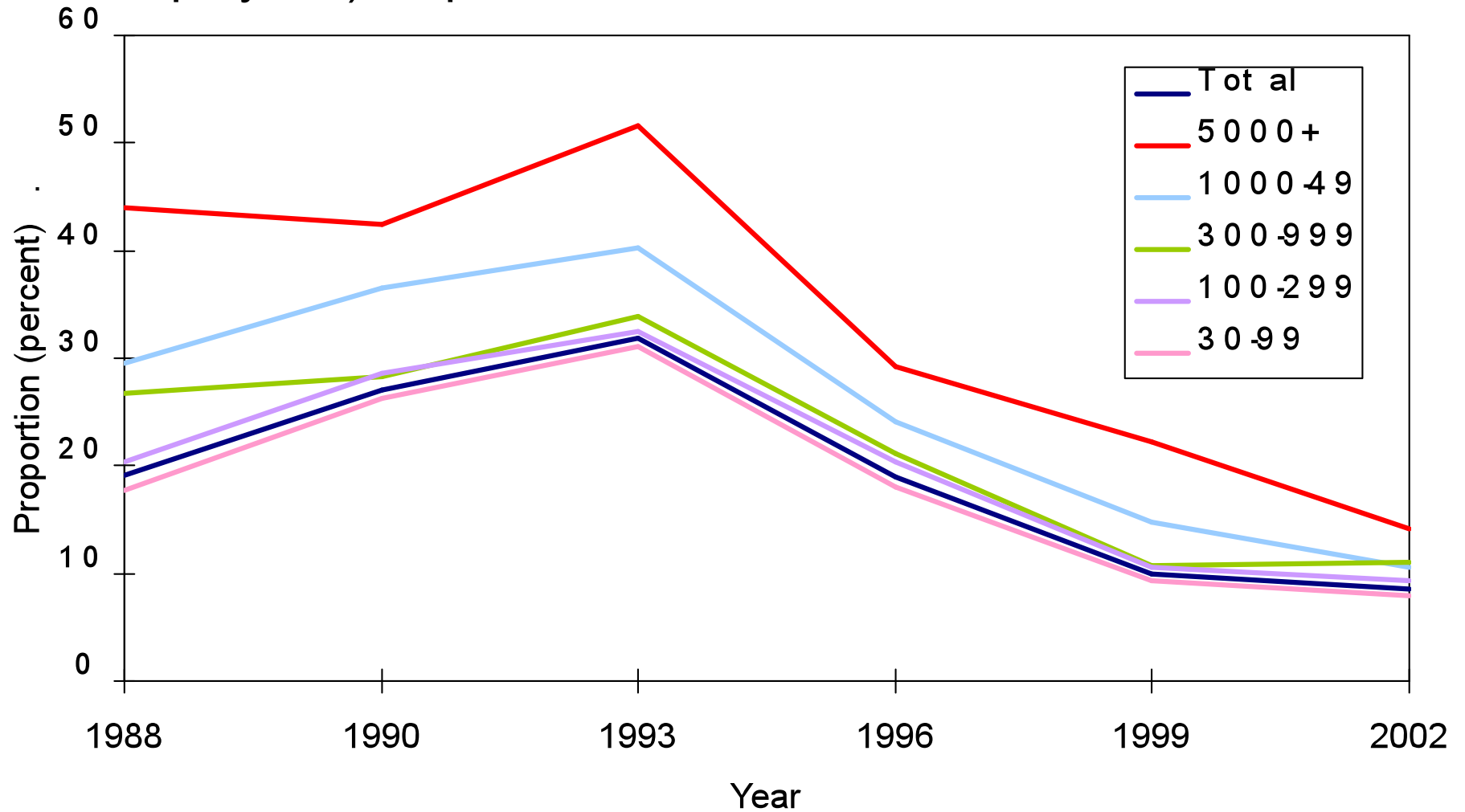
- People today typically grow up with only one sibling who is close in age
- Teenagers and young adults rarely interact with babies and young children, not socialized to enjoy them
- Later marriage magnifies this effect—settle into a lifestyle without children
- New values of “finding oneself”, “realizing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

# *Less security for families*

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- 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*

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- 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



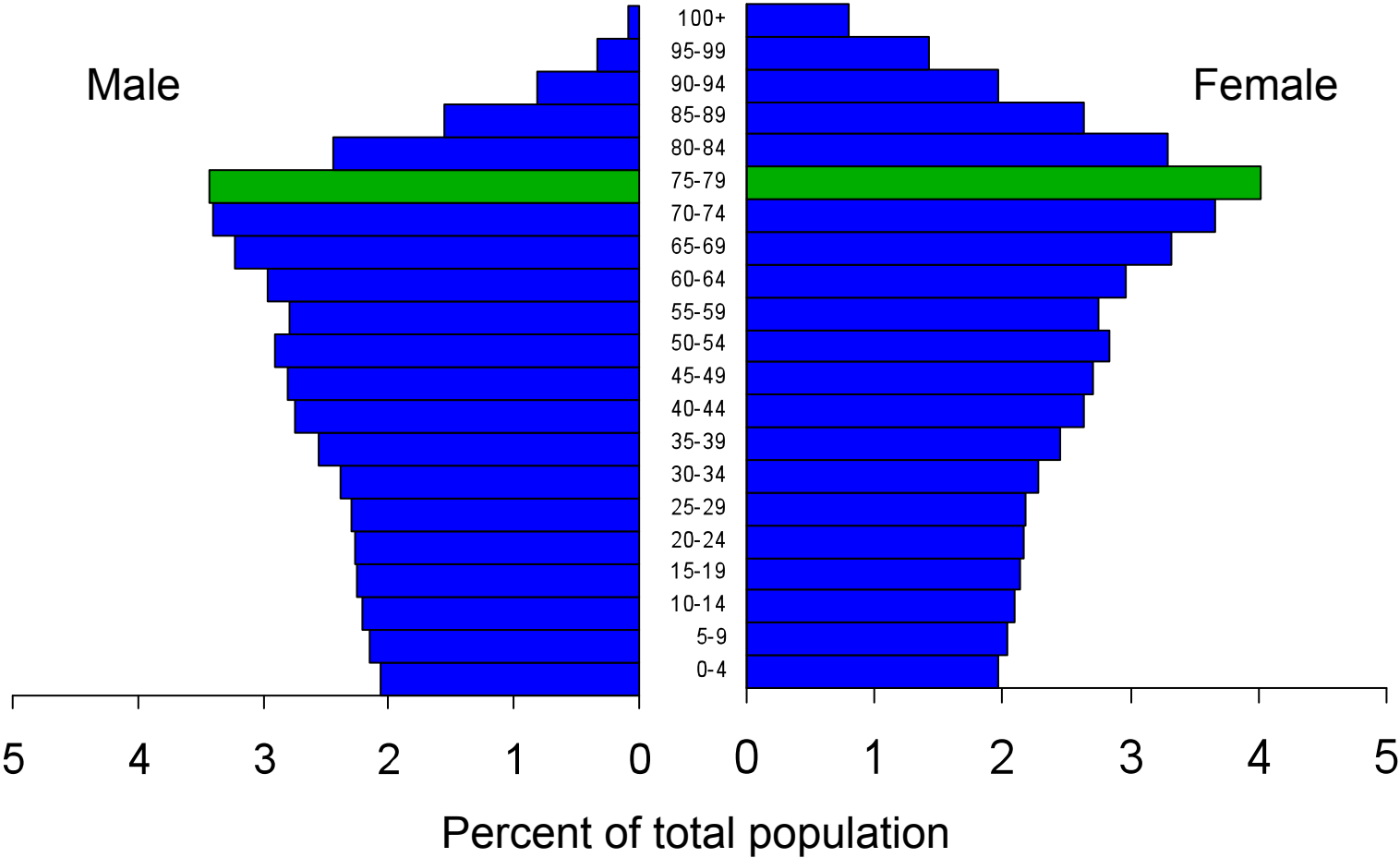
# ***Japan's Efforts to Raise Fertility***

# ***Government is worried about low fertility***

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- 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)

	<b>2000</b>	<b>2050</b>	<b>% Change</b>
<b>Total</b>	<b>127</b>	<b>109</b>	<b>– 14</b>
<b>Age 15–64</b>	<b>87</b>	<b>56</b>	<b>– 36</b>
<b>Age 65+</b>	<b>22</b>	<b>40</b>	<b>+ 84</b>

<sup>25</sup> *Source:* UN Projections, 2000 revision, medium variant.

# ***Government actively concerned about low fertility since 1990***

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- “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*

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- 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

# ***1994 “Angel Plan” for 1995–99***

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- 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***

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- 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

# ***1999: New Angel Plan for 2000–2004***

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- 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*

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- 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

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- 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*

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- 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***

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- 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*



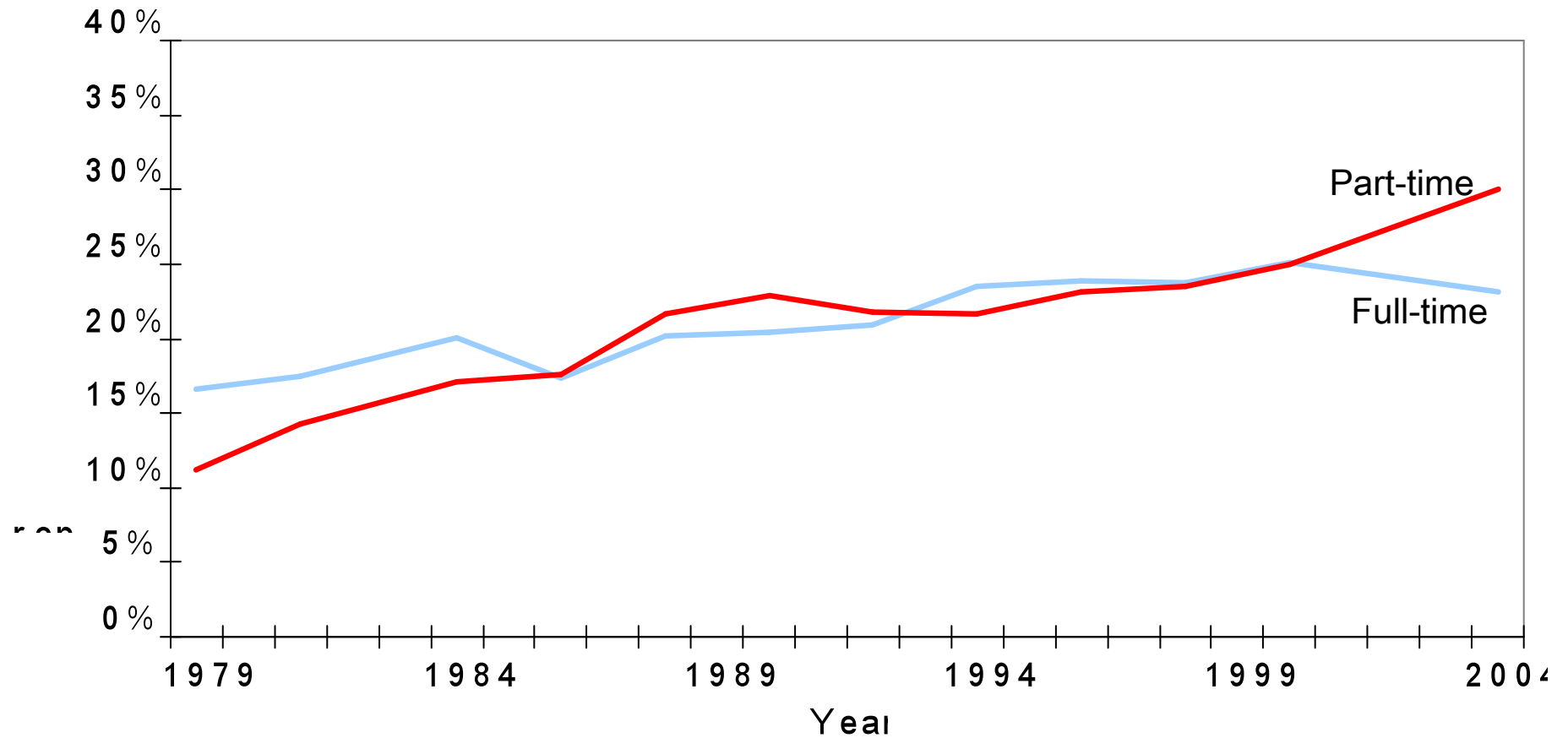
- Fertility has continued to decline
  - TFR was 1.20 in 2010
- TFR probably would have declined even more without government efforts to raise fertility

# ***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*

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- 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*

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- 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***

**Robert D. Retherford  
Population and Health Studies  
East-West Center**

# *Individual aging and population aging*

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- **Individual aging:** Measured by life expectancy
- **Population aging:** Measured by percent age 65+

# *Causes of population aging*

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- **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*

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- 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*

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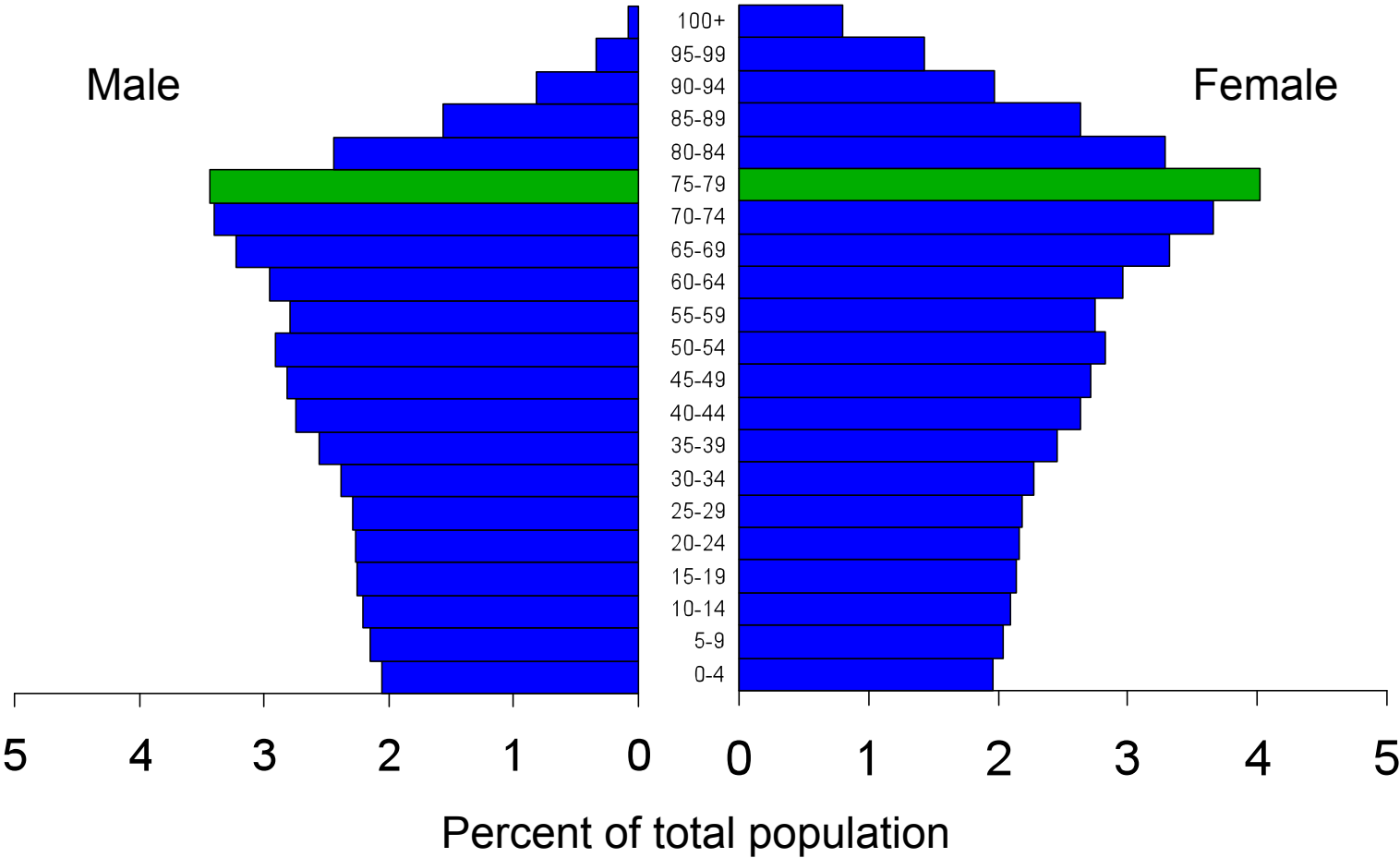
- **2000**

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

- **2050 (projected)**

- % 65+ : 36% (among highest in world)

# Age structure of Japan's population in 2050





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<sup>49</sup> *Source:* UN Projections, 2000 revision, medium variant.

## ***Projected percentages age 65+ for world and selected countries***

	2000	2050
World	7	19
India	5	15
China	7	23
Japan	17	36
Italy	18	36
Germany	16	31
USA	12	21

# *Many Asian countries will get old before they get rich*

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- 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***

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- 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*

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- 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*

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- 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*

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- **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