China's One-Child Policy and the Demographic Transition
Econ 43750

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Overview

- People of different ages behave differently (economically speaking)
- The age-composition or age distribution of a society will have an impact on the economy.
  - Mostly working aged: Many workers, GDP is high, saving is high.
  - Mostly retired: Labor shortages, economic slowdown, low saving.
- China has undergone a significant demographic transition. (So has much of the industrialized world.)
- We'll start with China's transition and briefly talk about the transition in other countries. Then we'll look at how the demographic transition affects consumption and saving in China.

Why do people choose to have children? (Economist's perspective)

- Modern times.
  - Children are consumption goods. Supposed to provide utility to parents.
  - Quality-quantity tradeoff
- In the old days. Typical household was from peasantry.
  - Endogenous labor source for the household farm
  - Could have been a source of utility. Investing in quality not feasible for peasantry, so they went for quantity.
  - Fertility rates high due to high infant mortality rates.
  - Fertility rate is the number of children the average woman has over her lifetime.

Population Steady States and Dynamics

- Δ Pop = Births-Deaths.
  - Δ Pop = 0 is a population steady state.
- Pre-modern China (and the rest-of-world) was in high birth, high death steady state.
  - Malthus (1766-1834),'Population increases in a geometric ratio, while the means of subsistence increases in an arithmetic ratio.'
  - Malthus also said, unless you regulate family size, the misery of famine would always be present.
  - Hence, economics is called the dismal science.
  - From Roman Empire to 1500, world was stuck in the Malthusian trap.
- Modernization leads to improvment in
  - Sanitation–from understanding the germ theory of illness.
  - Nutrition
  - Medical care
- These things first lower death rates, increases life expectancy. Reduction in fertility lags.
- Life Expectancy in China
  - 1950: 41 years
  - 2000: 71 years

China's Population Policies

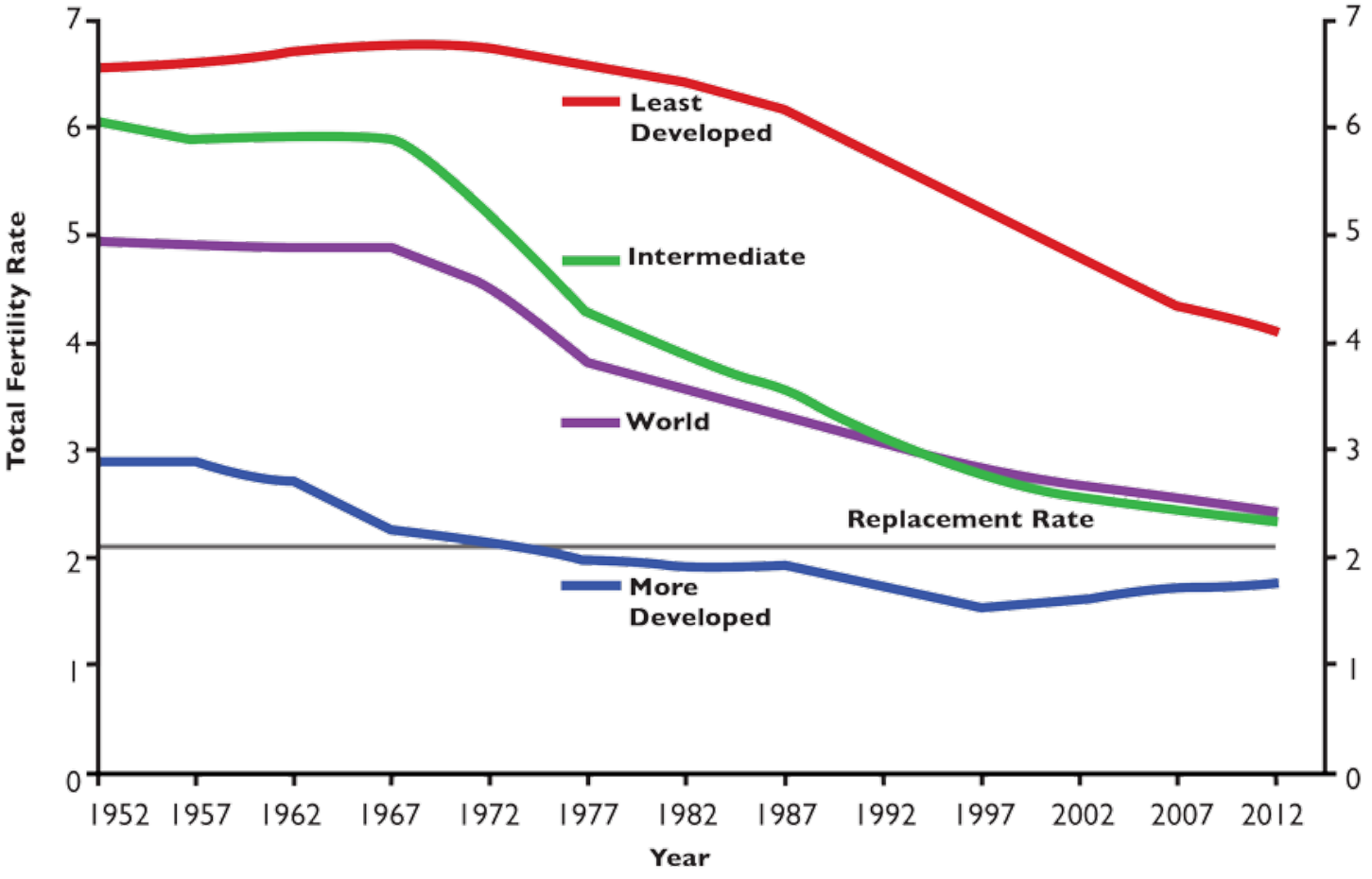
- Mao wanted a big population, hence a big labor force to generate big GDP. Mao held this view through the Great Leap Forward.
- 1962-1966: Pilot program of urban family planning introduced to promote voluntary birth control.
- 1971: Later-Longer-Fewer campaign.
  - Urged people to marry later in life. Have a longer space between children, and have fewer children overall.
  - Targeted both urban and rural couples.
  - Policy ended in 1978. Fertility rate fell from 5.8 to 2.7 during this campaign. Pretty effective, right?
- 1979: One-Child Policy.
  - Penalties imposed for women who have more than one child. Implementation strict in first 5 years. Taxed if you had additional children.
  - Urban people would lose their SOE jobs
  - 1983: Mandatory IUDs for women with one child. Forced sterilization for couples with 2 or more, forced abortion for unauthorized conceptions.
  - Local governments implemented the policy and local officials were evaluated on compliance–So you see village officials forcibly carrying women out of their homes to get abortions.

China's Population Policies

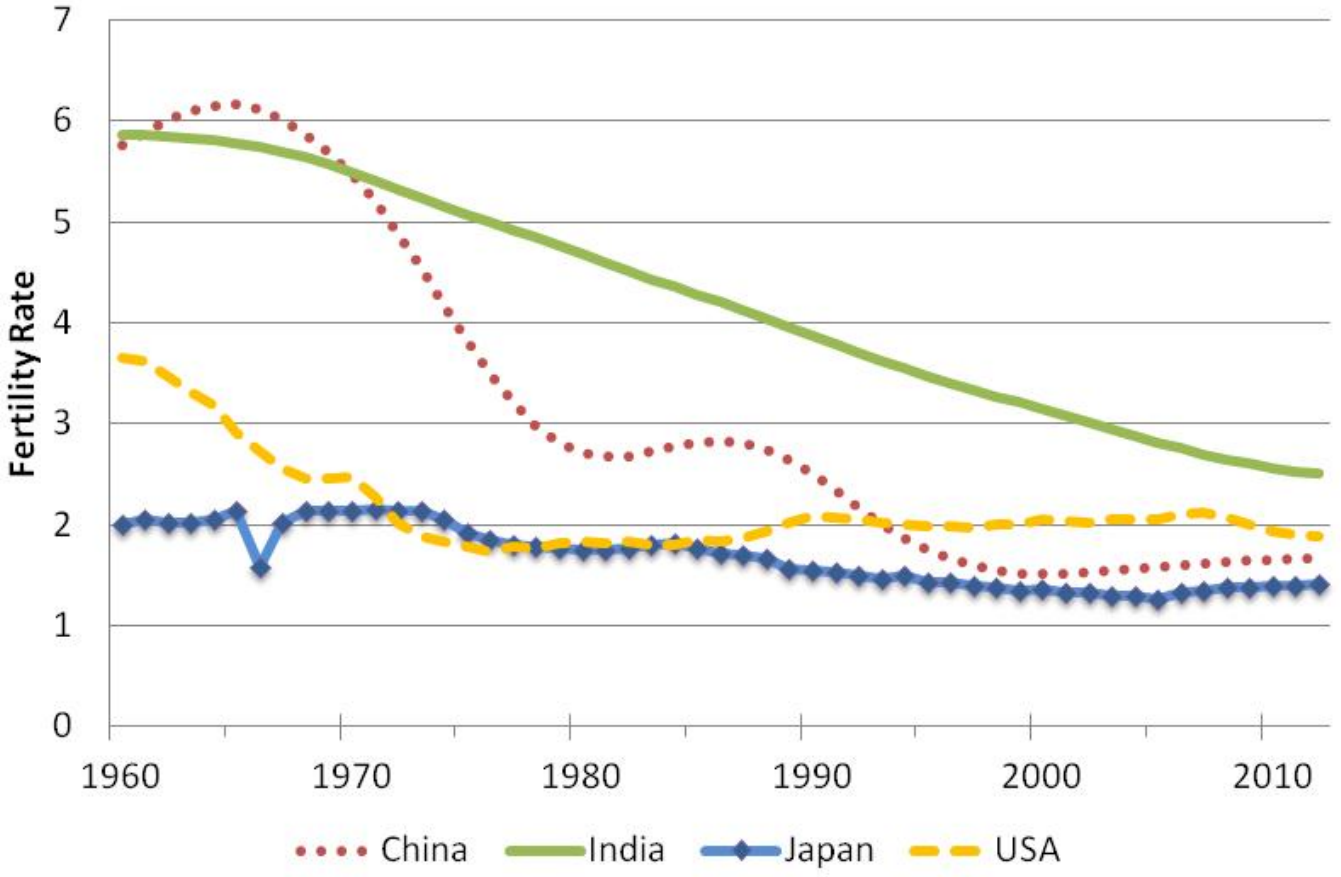
- Chinese preference for boys led to
  - Selective abortions
  - Female infanticide
  - Human traficking
  - Missing girls–No official record, no Hukou
  - Huge sex imbalance
- Natural sex ratio at birth is 105 males to 100 females.
  - 1953: 104.9
  - 1982: 107.6
  - 2010: 118.6
- Dramatically cutting fertility creates a demographic bulge

Fertility Rates by Level of Development

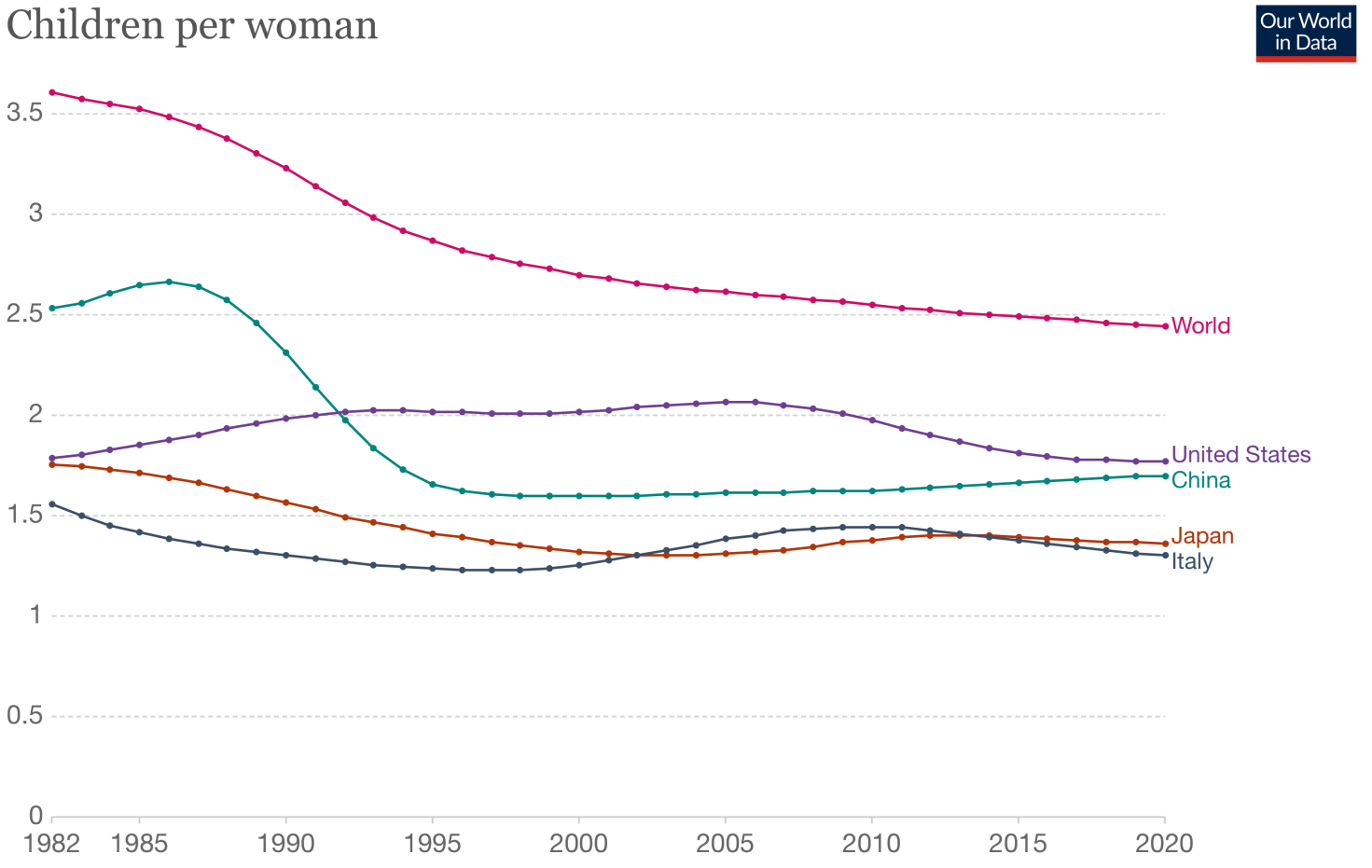
Figure 1: *Total Fertility Rates by Level of Development*[1]



Fertility Rates China, India, Japan, USA



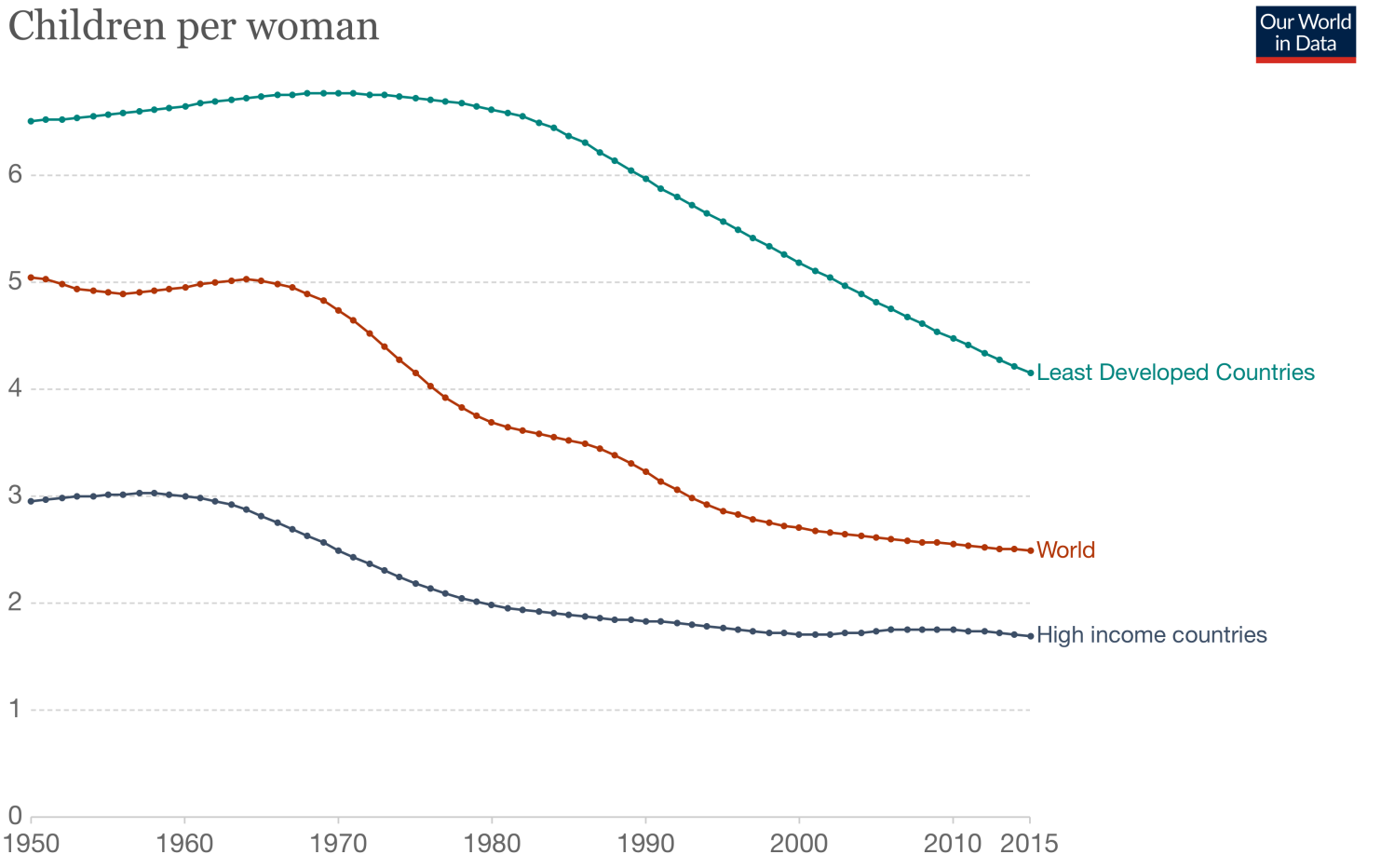
Recent Fertility Rates–selected countries



Source: United Nations – Population Division (2019 Revision) OurWorldInData.org/fertility-rate • CC BY

Note: Children per woman is measured as the total fertility rate, which is the number of children that would be born to the average woman if she were to live to the end of her child-bearing years and give birth to children at the current age-specific fertility rates.

High and Low Income Fertility Rates



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Fertility for selected countries

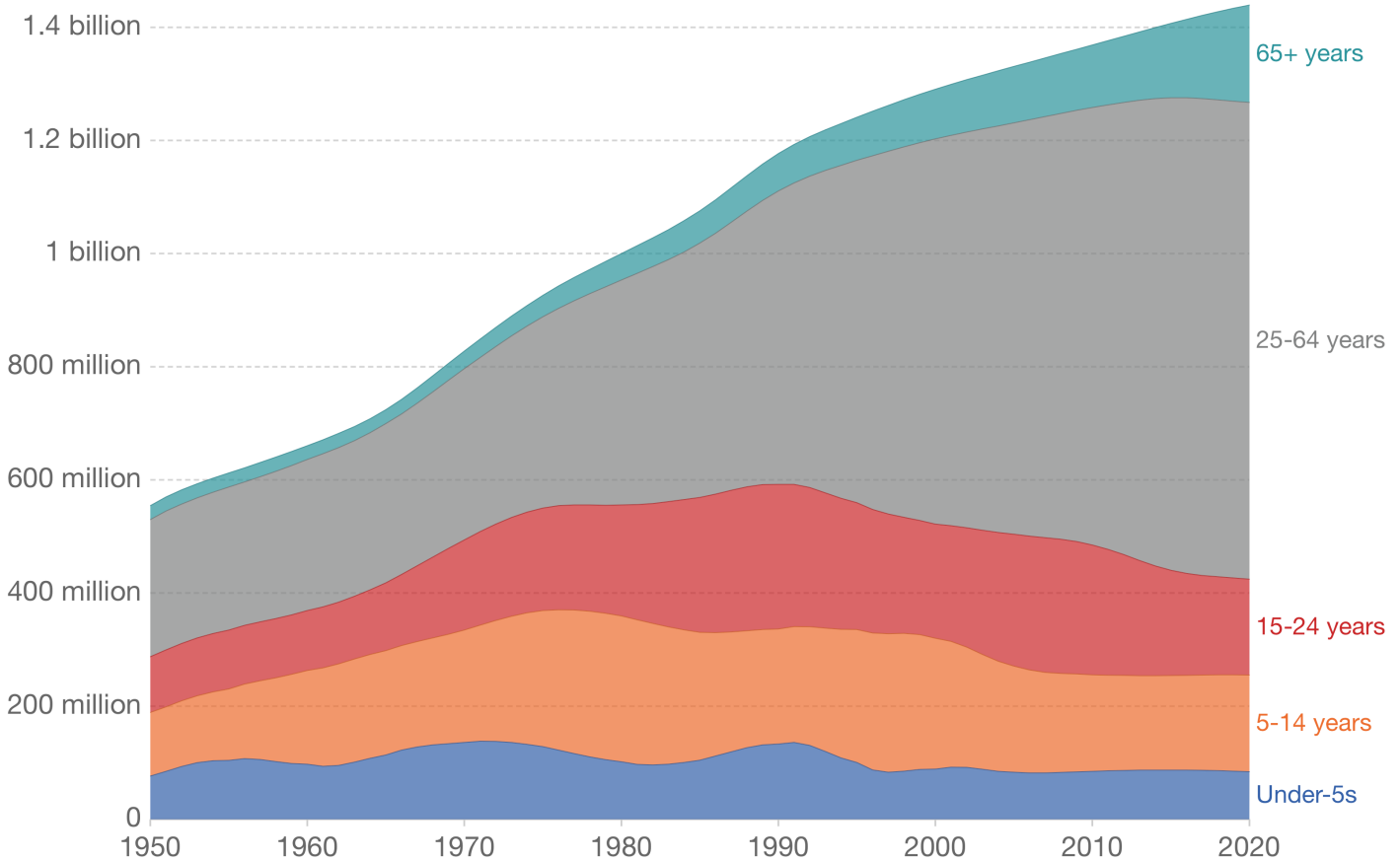
Singapore	0.8
Hong Kong	1.17
S. Korea	1.25
Poland	1.33
Japan	1.40
Italy	1.42
Germany	1.43
China	1.69
USA	1.77
Afghanistan	5.43
Niger	6.89

- See the pattern between rich and poor countries
- What accounts for this pattern?

Age Structure

Our World in Data Demographics Link.
See age structure and dependency ratios.
https://ourworldindata.org/age-structure

Population by broad age group, China



Source: United Nations – Population Division (2019 Revision)

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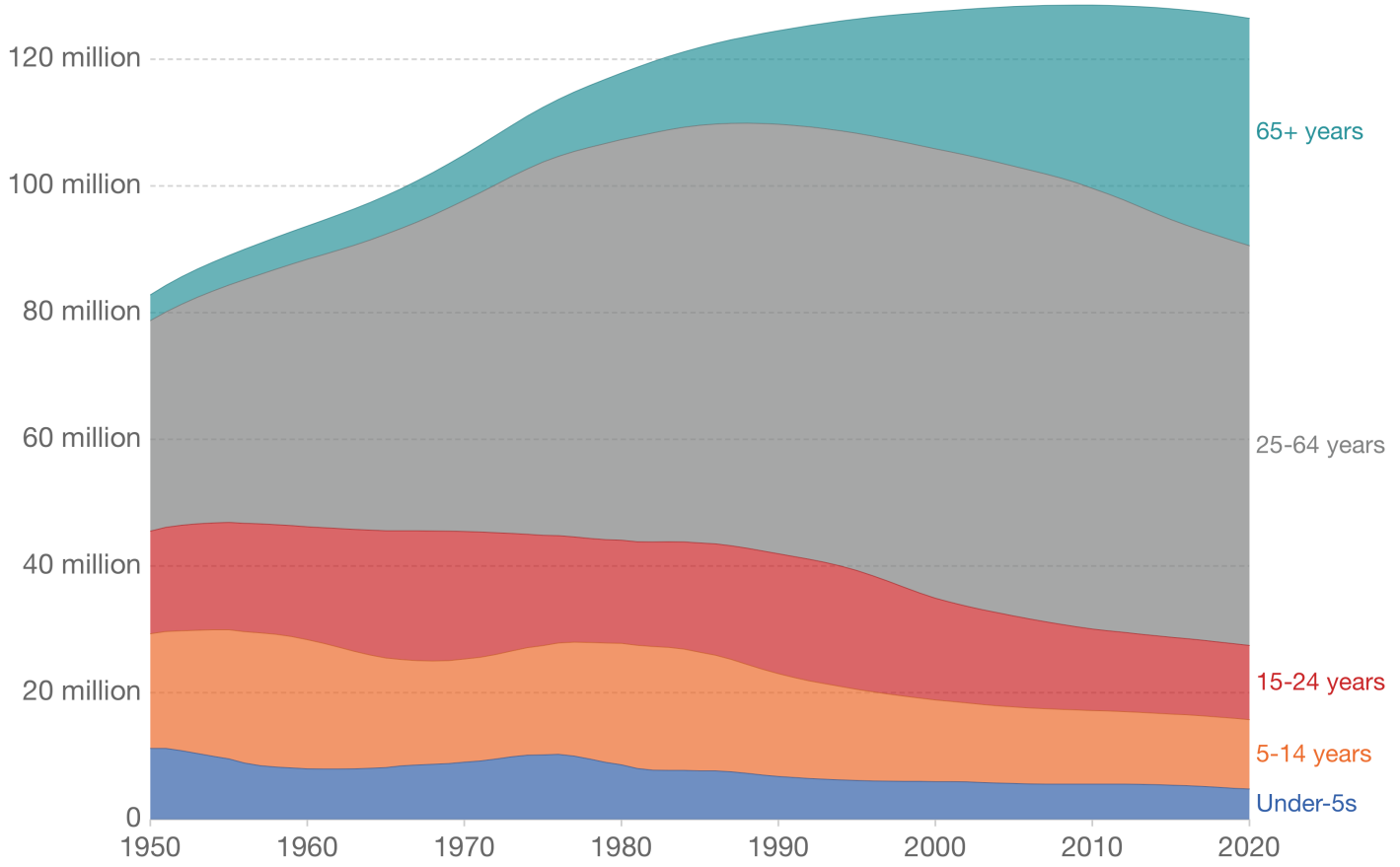
Population by broad age group, Japan



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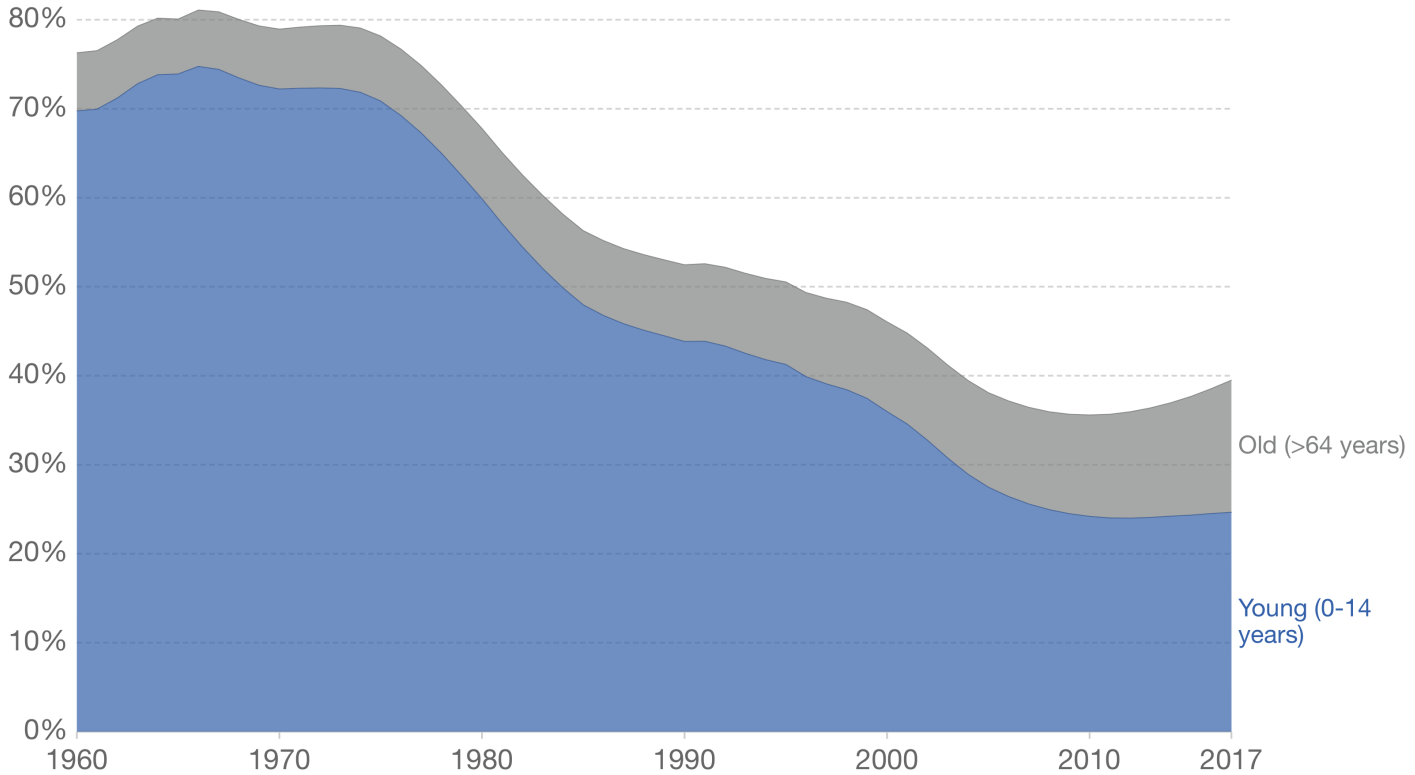
Age dependency breakdown by young and old dependents, China, 1960 to 2017

Our World in Data

Age dependency ratio is the ratio of dependents (either children aged 0-14 years, or older populations aged over 64 years) to the working age population (15-64 years). Data shows the relative composition of the dependent population between young and old.



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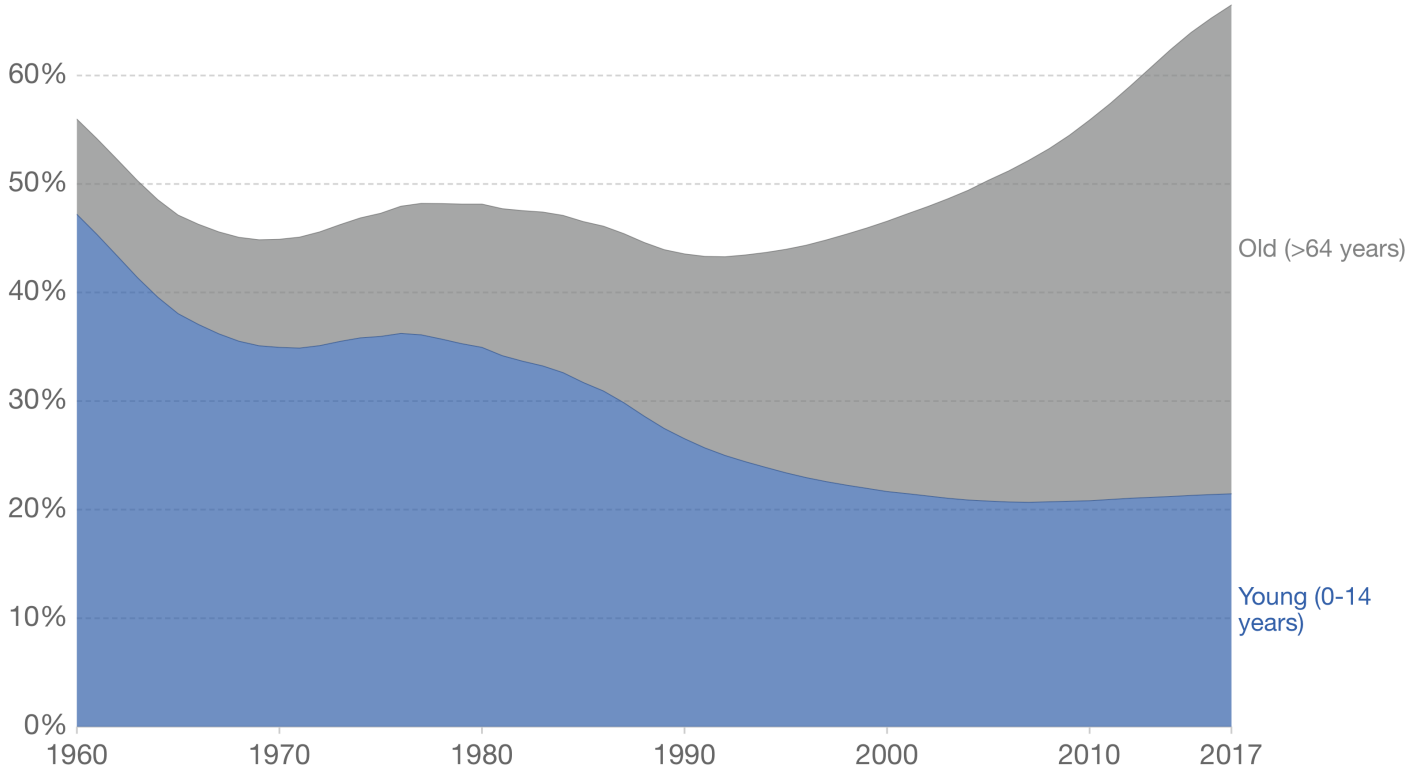

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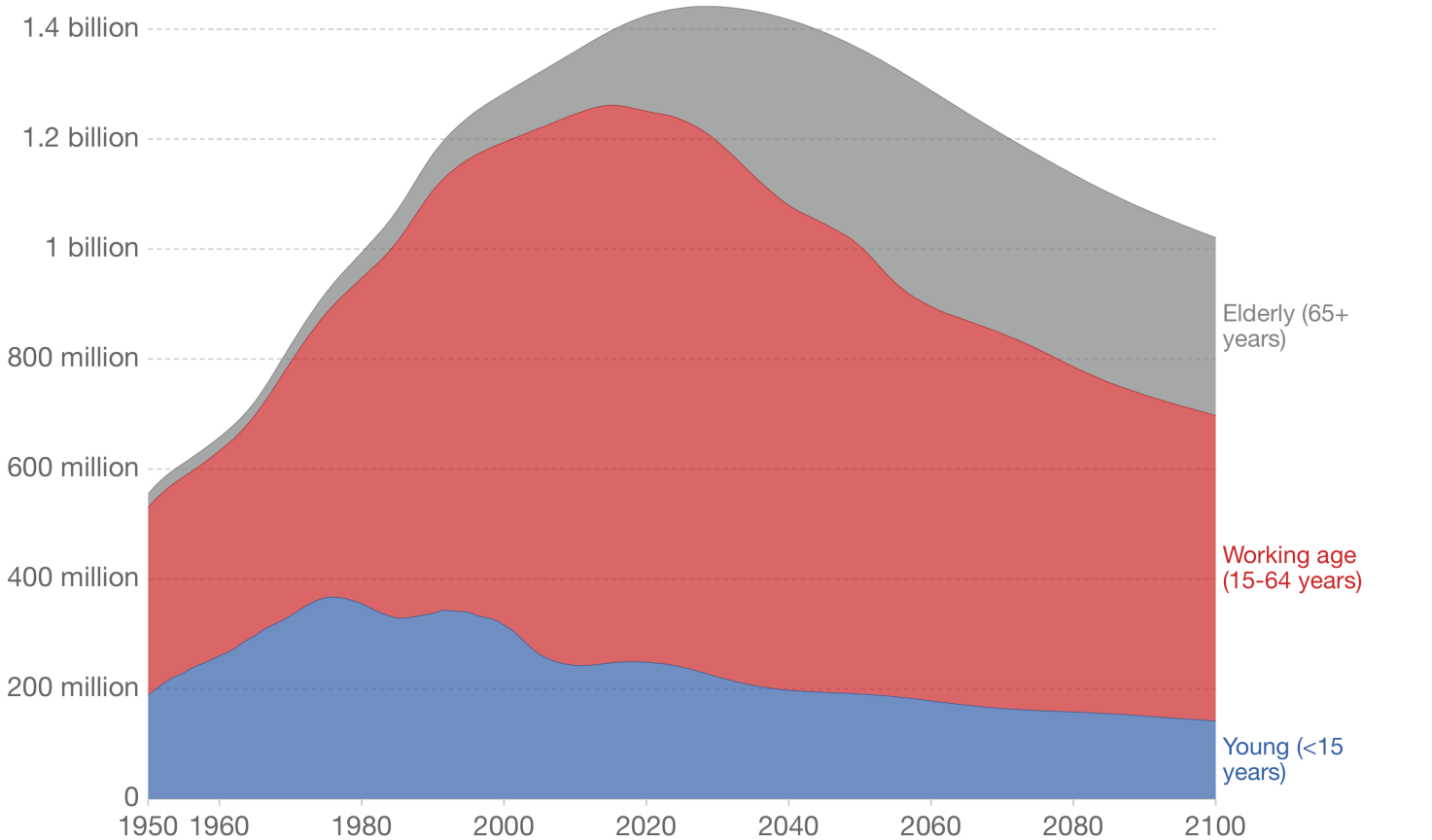
Size of young, working-age and elderly populations, China, 1950 to 2100

Historic estimates from 1950 to 2015, and projected to 2100 based on the UN medium scenario.



Source: UN World Population Prospects (2017)

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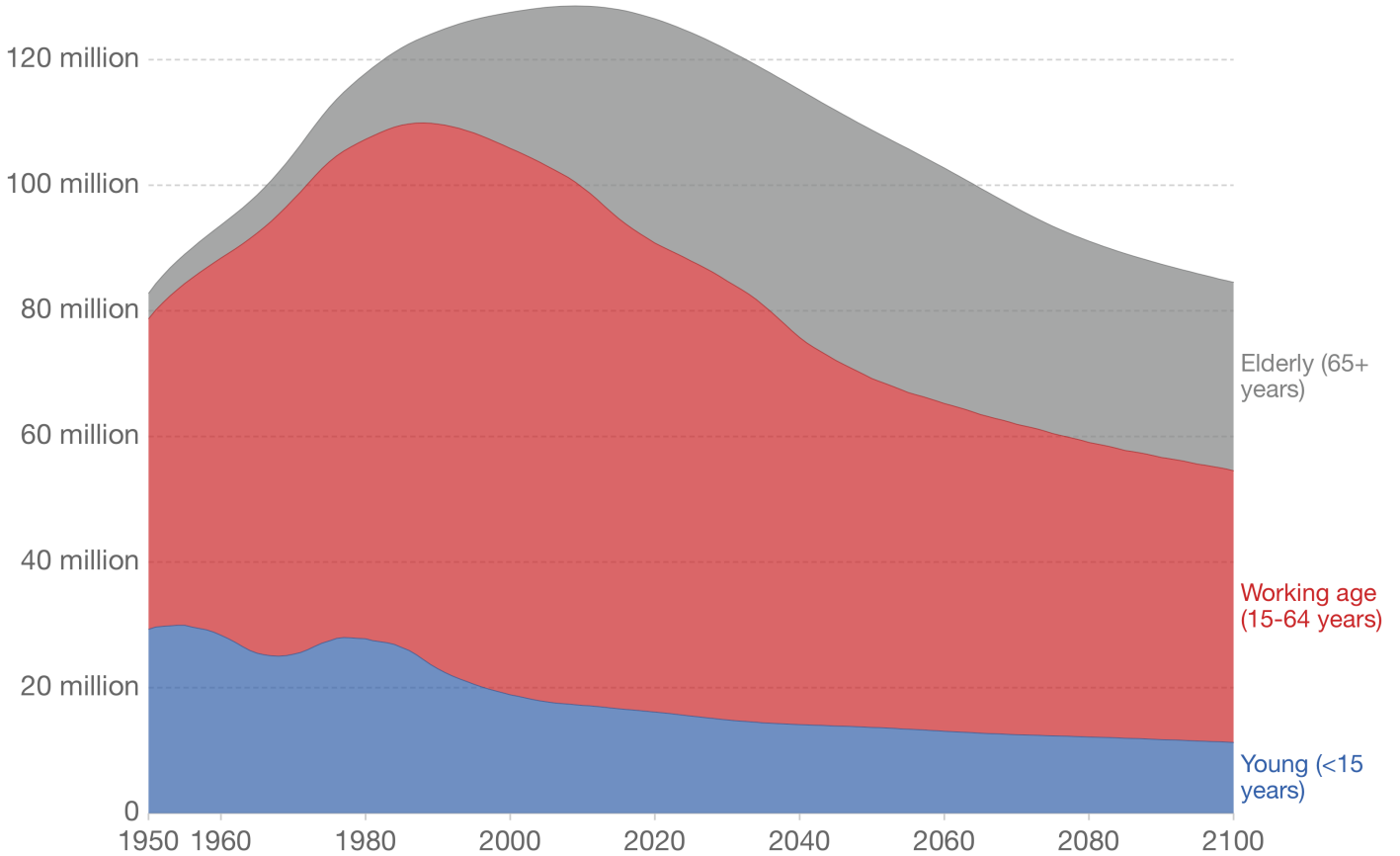

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Take Stock

- The One-Child Policy was coercive, and no doubt effective.
- Fertility in other countries dropped dramatically through free choice. This makes us wonder if One-Child Policy was necessary at all!
- Should note: Minority groups, some rural families were exempt from One-Child Policy
- Gradual removal of One-Child Policy
  - Since 2015. First, If both man and woman were only children, they could have 2 children. Later loosened so all couples can have two children.
  - Result: Fertility rate has barely moved. Constraint not binding!