

# Demographic Transitions Across Time and Space

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# The Paper

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## A. Impressive data set to uncover 3 regularities:

1. Length of demographic transition has shortened over time
2. Income per capita at the start of the transitions is “*more or less*” constant
3. A country’s transition is associated to neighbours’ (contagion)

## B. Model to explain the data:

1. Many (closed) economies with 2 sectors.
2. Parents decide number and education of children
3. Technical change diffuses slowly from frontier (Britain) to ROW

# Omitted factor: Global population-control programmes

- Led by US, Sweden, India, Indonesia...
  - Two key global players: International Planned Parenthood Federation and the Population Council
  - Local governments and non-government groups in different countries
- Two pillars of the programmes:
  1. Diffusion of contraceptive technologies
  2. Actions to change social norms on family size (tailored to each country's political, social, religious and cultural constraints). Establish a norm of **2 children per woman**.

De Silva and Tenreyro (JEP 2017), “**Population-control Policies and Fertility Convergence**”

- strong link between fertility decline and different measures of programme intensity

De Silva and Tenreyro (AEJ 2020), “**The Fall in Global Fertility: A Quantitative Model**”

- endogenous human capital, norms, and population policies



 <b>one</b>	 <b>two</b>
<b>...and that's ideal</b>	

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A SMALL FAMILY IS A HAPPY FAMILY

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PLAN YOUR FAMILY



the NUMBER of CHILDREN FEED, CLOTHE and EDUCATE

girl or boy



two is enough

WORLD POPULATION YEAR

HAPPINESS IS A 2-CHILD FAMILY



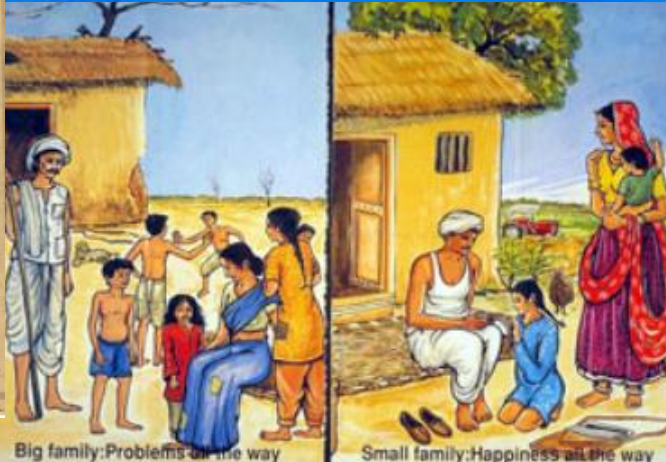
ते ते पांव पसारिये जेती लांबी सौर



परिवार नियोजन केन्द्र से सलाह लें

Big family: Problems all the way

Small family: Happiness all the way



STAY COMPLIANT.



No more than two children. A third is absurd.

"We Must Get on with the Job"

President Lyndon B. Johnson

"N<sup>o</sup>t in the period of years, the really great challenge to the human family is the one between food supply and population increase. That one hangs in the air."

"The time for debate has already passed. The time for enactment will be here, and we must get on with the job."

"We believe that these principles must prevail if our policy is to succeed."

"First, the developing nations must give higher priority to food production, including the use of technology and the capital of private enterprise."

"Second, nations with food deficits must pay more of their overseas foreign currency family planning programs."

"Third, the developed nations must make other actions to world starvation in the short run and to more rapidly increase the ability to feed themselves."

"Every member of the world community now bears a direct responsibility to help bring our world hunger problem under control."

John F. Kennedy Library  
January 15, 1967

"The World's Most Critical Problem"

General Dwight D. Eisenhower

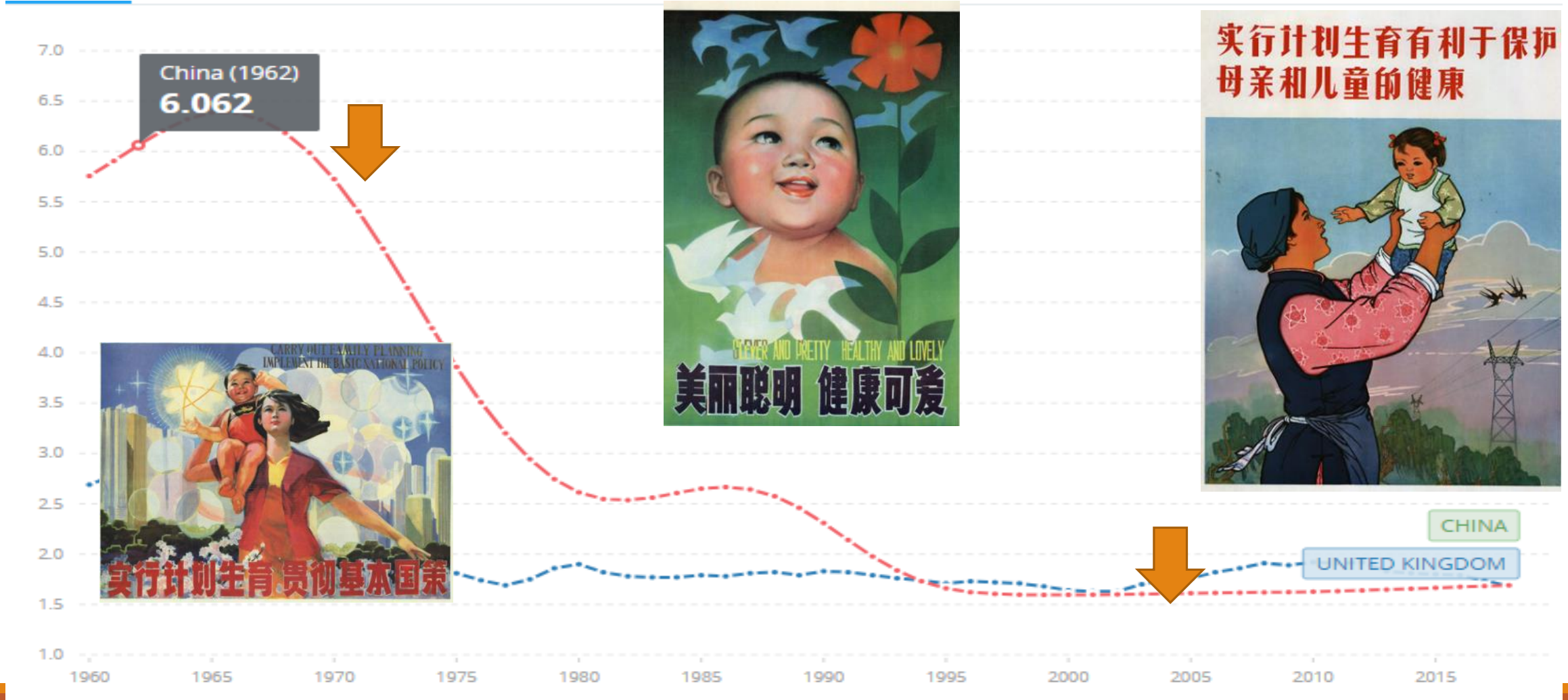
"O<sup>n</sup>ly as President, I thought I ought to add the last comment was not the business of our Federal Government. The facts changed my mind. Today with better President Truman I am Honorary Co-Chairman of Planned Parenthood because I have come to believe that the population explosion is the world's most critical problem. It is more serious than anything else that is now threatening our world peace. Millions of people in our countries — hundreds of millions abroad — are still denied the most basic right of enjoying the benefits of children they will have. Governments must act, and private citizens must cooperate eagerly through voluntary means to secure the right for all people. Failure would bring the indignities of future generations in stark poverty and suffering, and bring down upon us history's condemnation."

The above statement by General President Dwight D. Eisenhower was presented at a public meeting for all-Chinese family education and youth assembly and for world youth during February 1955 through the auspices and with the approval of the Honorary Council of the United States.

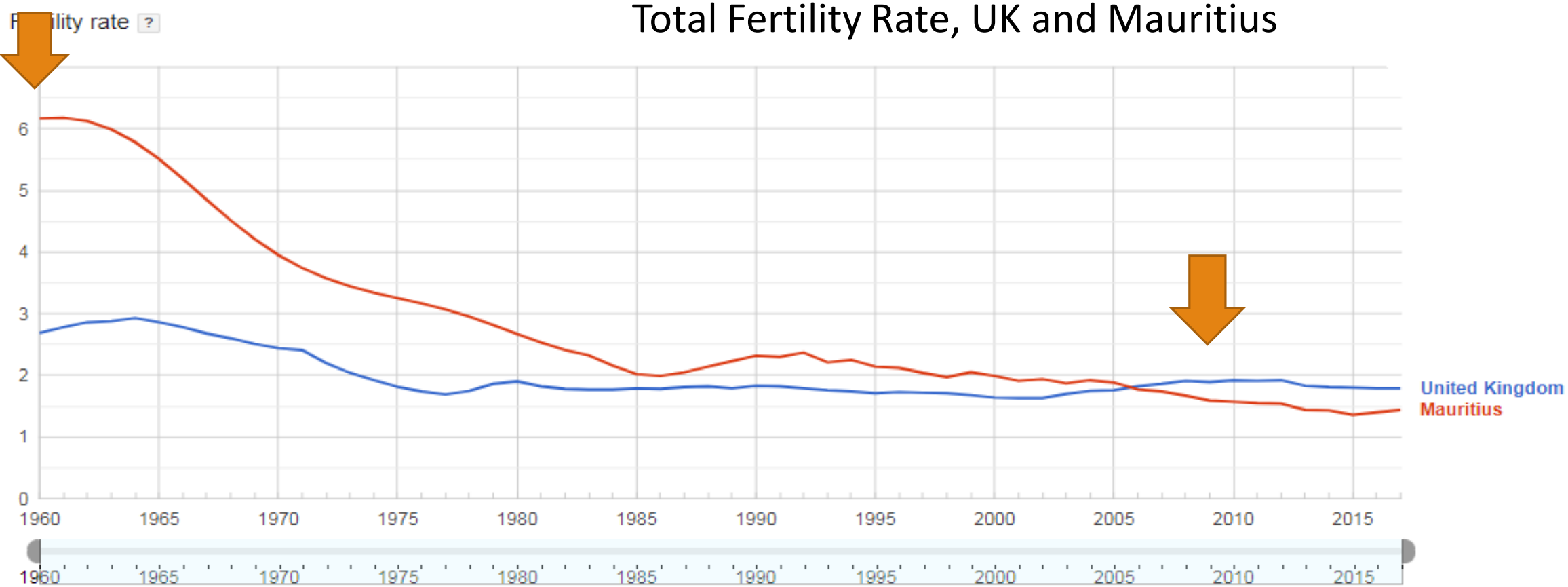


# An extreme example: China (CBT start 1972; finish 2005)

## Total Fertility Rate, UK and China



# An example: Mauritius (CBT start 1958, finish 2009)

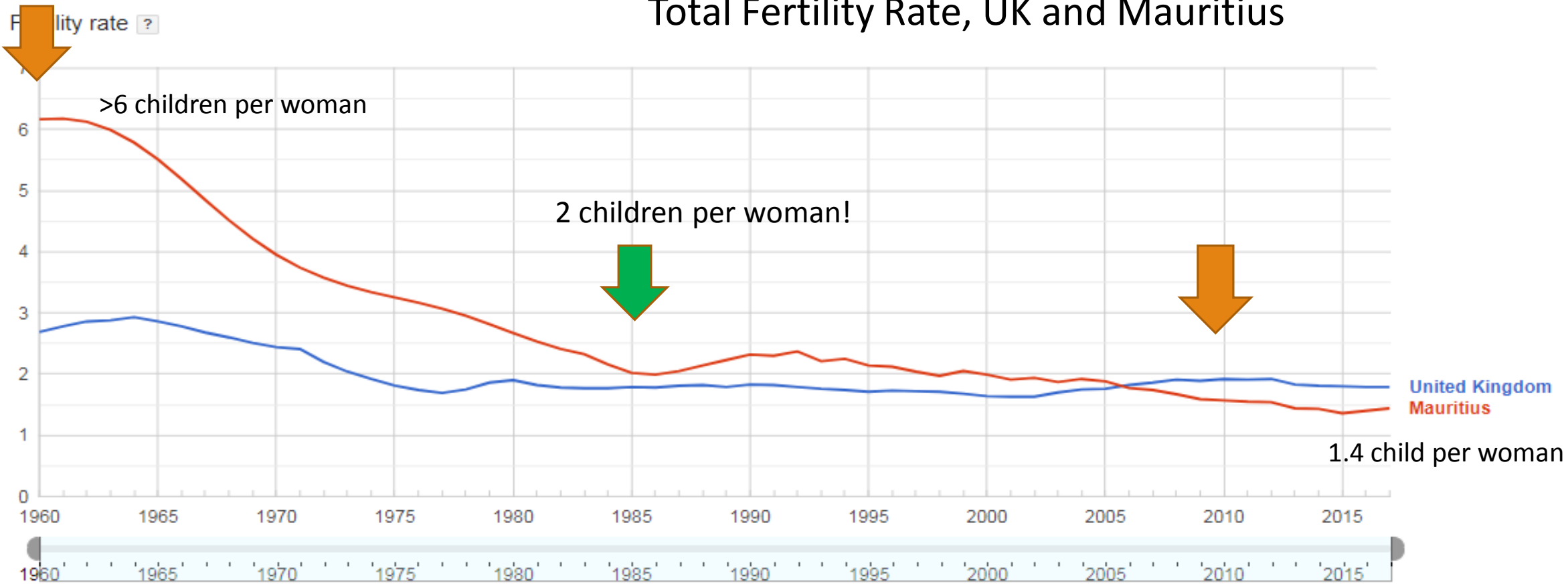


Data from World Bank Last updated: Apr 8, 2020

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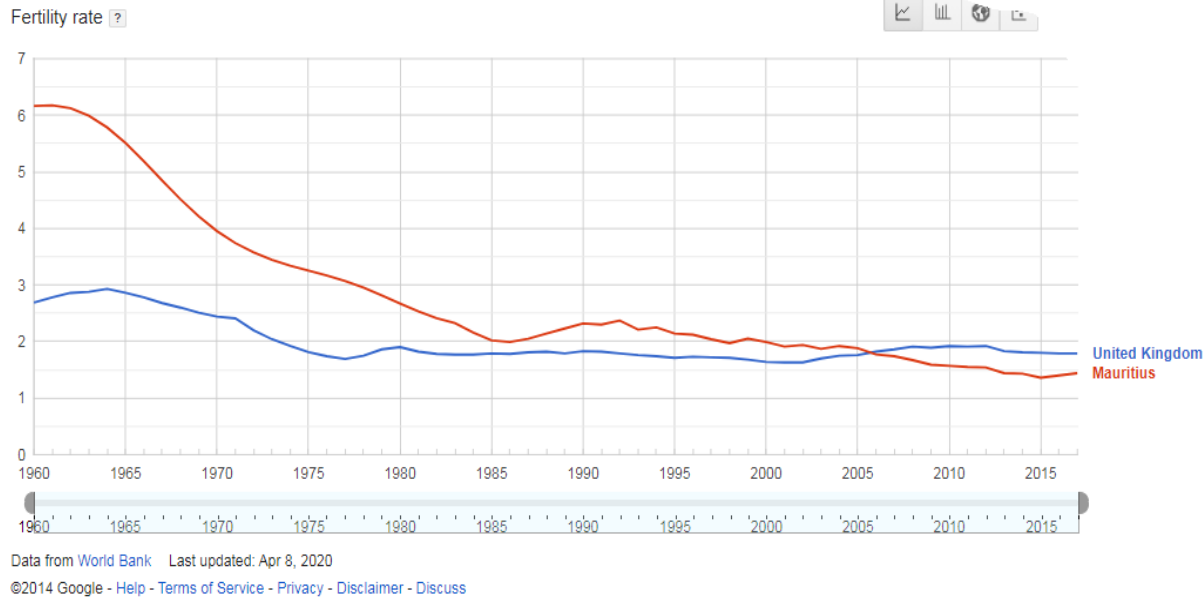
# An example: Mauritius (CBT start 1958, finish 2009)

## Total Fertility Rate, UK and Mauritius



Data from World Bank Last updated: Apr 8, 2020

# An example: Mauritius (CBT started 1958)

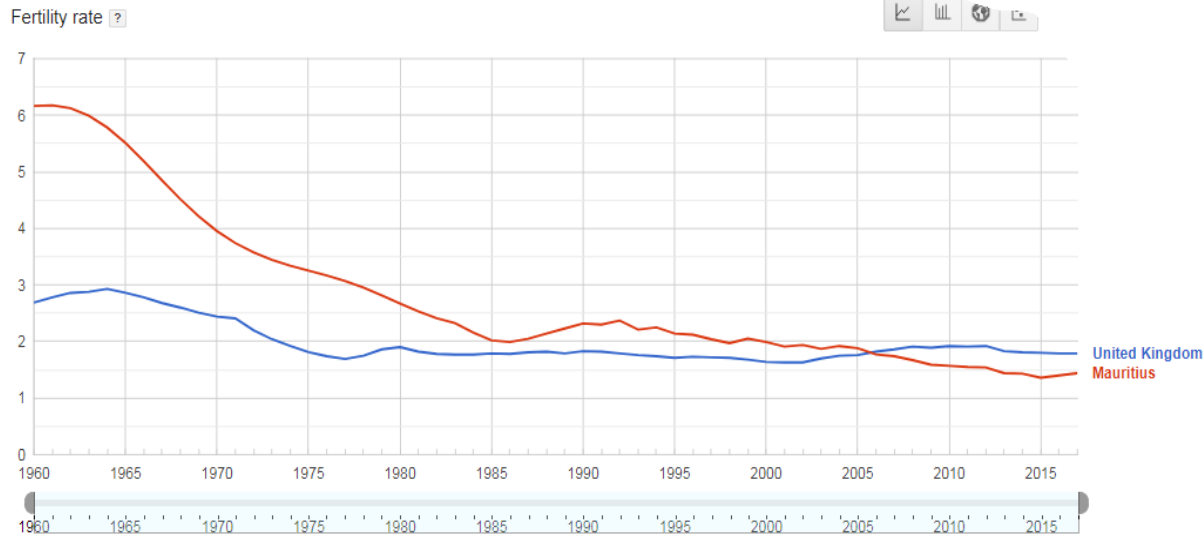


*6 to 2 children per woman in 25 years!*  
How would the model explain this?

- Diffusion of **production** technologies from United Kingdom to Mauritius.
- *(Not about diffusion of contraceptive technologies).*
- But very different economies back then. Were the UK production technologies “relevant” for MRU? Sugar cane plantations. (Still now very different; e.g., seafood production, beach tourism...)



# An example: Mauritius (CBT started 1958)



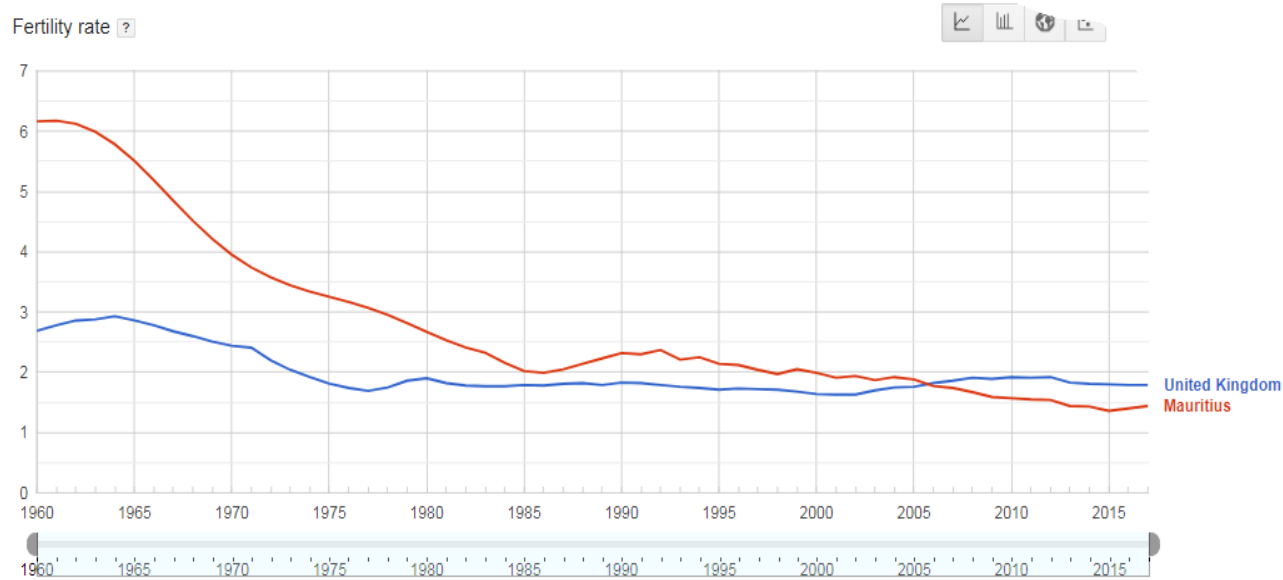
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How would the model explain this?

- Diffusion of **production** technologies from United Kingdom to Mauritius.
- *(Not about diffusion of contraceptive technologies).*
- But very different economies back then. Sugar cane plantations. (Still very different...)
- **What else was going on?**

**A lot.** Economist James Meade’s report for the Mauritian Government (1961) centred on “population problem”; Foundation of the Mauritian Family Planning Association (1958); World Bank missions to advise the government on organization of a family planning program; United Nations Fund for Population Activities; Mauritian Government’s Ministry of Health integrates family-planning services in maternal care; Global population-control movement in LDC: International Planned Parenthood Federation, Population Council. Source of “**Contagion**”? (Parenthesis: James Meade’s won Nobel Prize for his contributions to International Economics. **MRU closed econ?**)

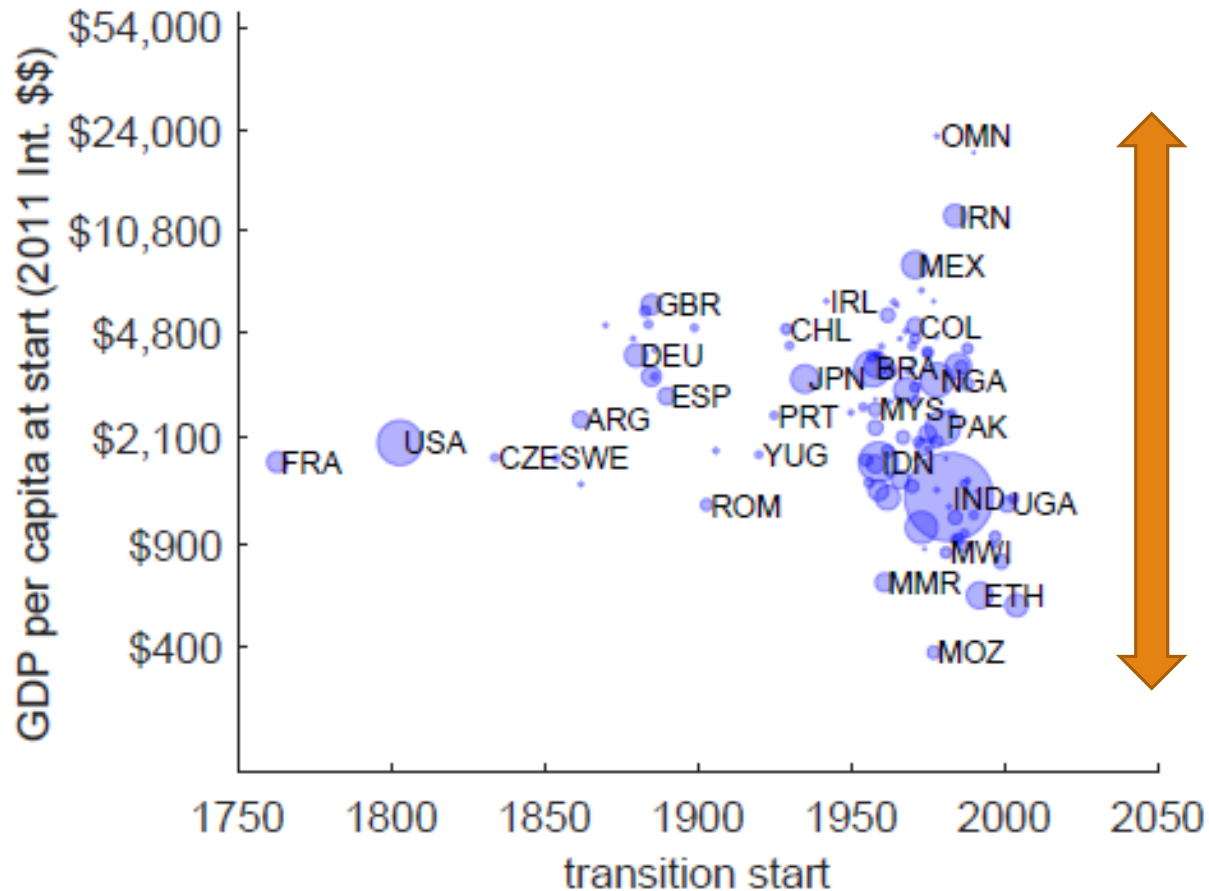
# Back to the facts

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1. **Length of transition has shortened over time.**
  - Paper: Diffusion of productive technologies. But transition happened in:
    - a) countries with very different production technologies; open economies with specialised sectors.
    - b) urban as well as rural areas (agriculture)
  - Omitted variable in theory and data: Active policies to facilitate contraception and change family size norms; focus on both rural and urban areas.
2. Income per capita at the start of the transitions is “more or less” constant
3. A country’s transition is associated to neighbours’ (**contagion**)

## 2. Income per capita at the start of the transitions is “more or less” constant

Log GDP<sub>pc</sub> at the start of the CBR transiti



- True in early transitions.
- But recent transitions, range goes from \$400 to \$24,000
- Countries with different levels of development lowered fertility to near 2.

### **3. A country's transition is associated to neighbours' (contagion)**

Mechanic contagion model. Perhaps captures:

- Global population control movement: common factor (contraceptive diffusion and public campaigns)
- Neighbours matter; e.g., regional cooperation on population strategies, facing similar challenges (e.g., religion, infrastructure, etc.)



# Wrap up + further thoughts

- A. Super interesting thesis. Carefully crafted. Paper could engage more with history.
  - Hard to think of China's population growth omitting one-child policy; by continuity, in thinking of cross section of countries, hard to omit their population policies.
- B. Unlike early transitions, recent ones happened at very different levels of development.
  - Across urban and rural areas within countries. “More or less” is more less than more”.
- C. Lower fertility affects income, GDP (and other outcomes)—not reflected in empirics (endogeneity bias). Regressions w gravity-equation flavour (Omitted factors? Specification?).
- D. Implications of model: Population growth is the decentralised, efficient outcome of development, as atomised agents optimise over the quality-quantity tradeoff. Not much scope for policy? But in practice, many externalities. No hope (or point) to change outcomes?



In the news today (The Guardian, 6 November)

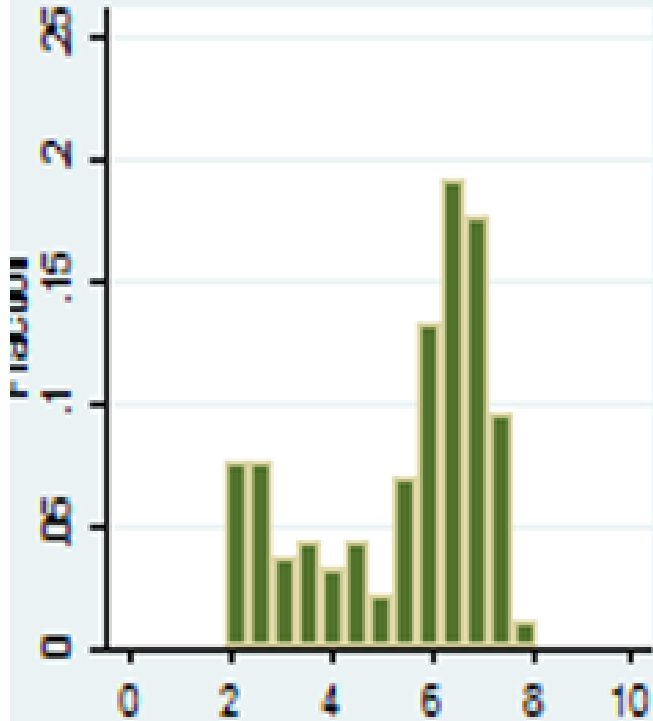
Example of country trying to affect fertility rates.

(Debatable whether this particular one is an effective measure.)

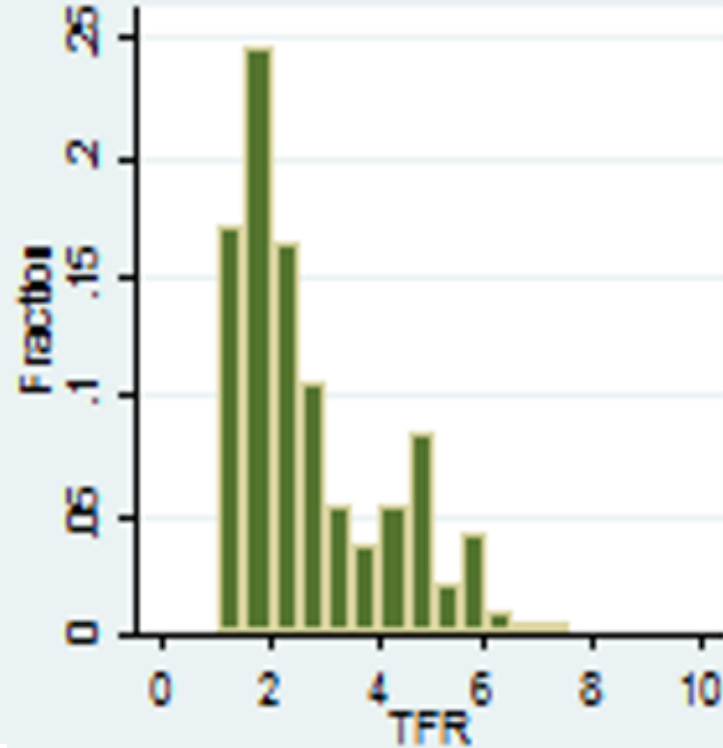
**Japan**

**Japan to help cover IVF costs in attempt to avert demographic crisis**

1960



2013



## Total Fertility Rate:

1960: more than 50% countries between 6-8 children pw

2013: Median at **2.2**