

# EC9AA Term 3: Lectures on Economic Inequality

**Debraj Ray**, University of Warwick, Summer 2023

---

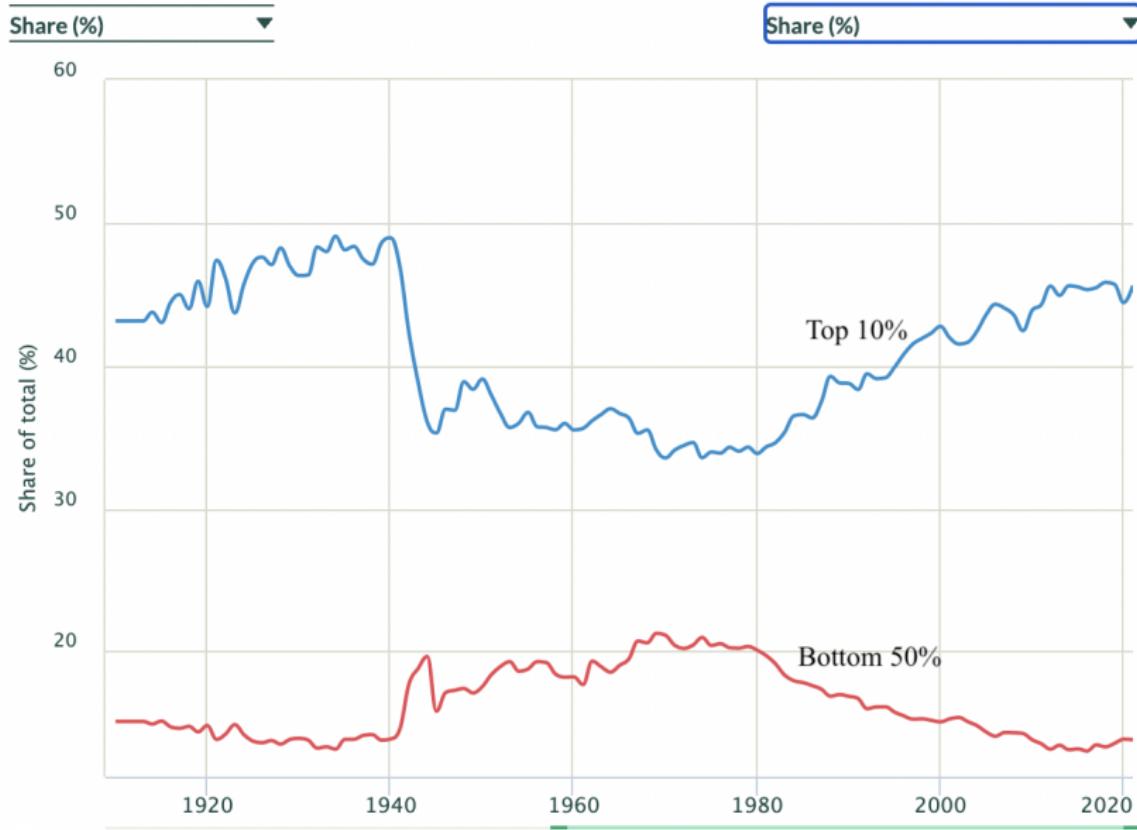
- **Slides 1:** Growing Inequality: An Introduction

## Growing Inequality

- The financial crisis sparked a new interest in inequality.
- But inequality has been historically high
- Growing steadily through late 20th century

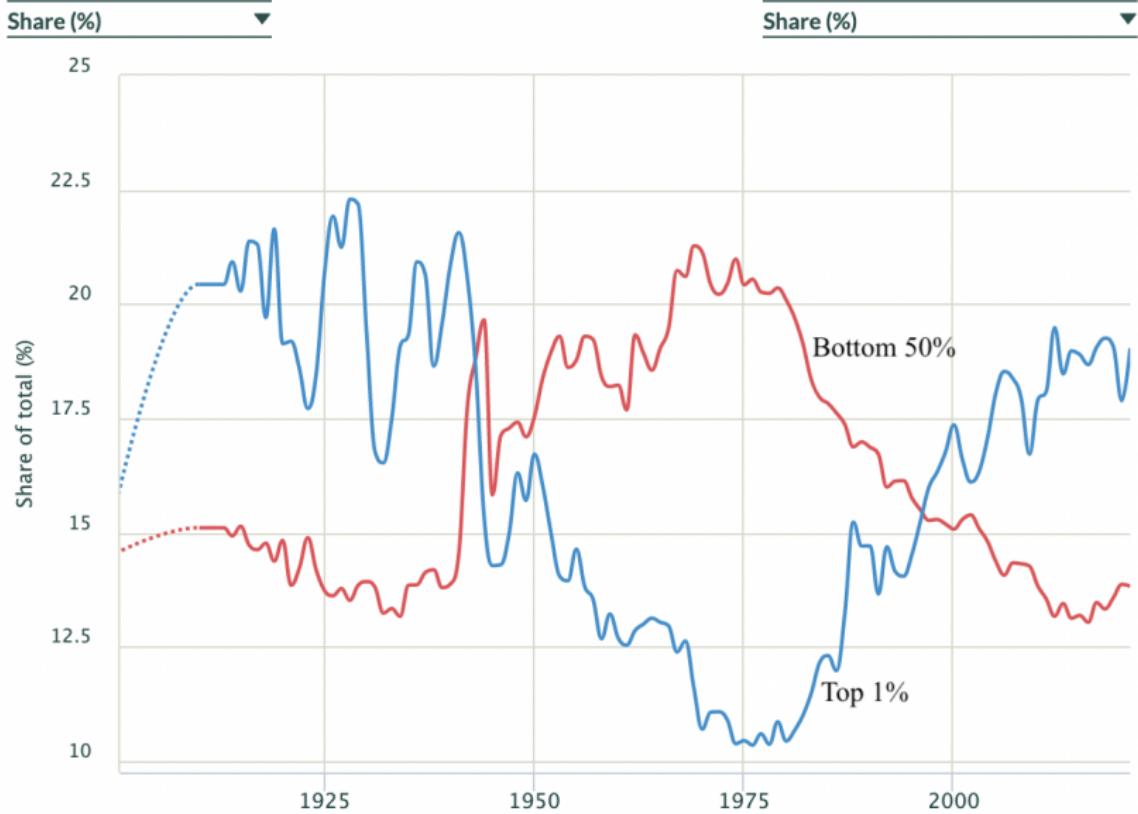
Wolff, Piketty, Saez, Atkinson, many others

# Income inequality, USA, 1908-2021



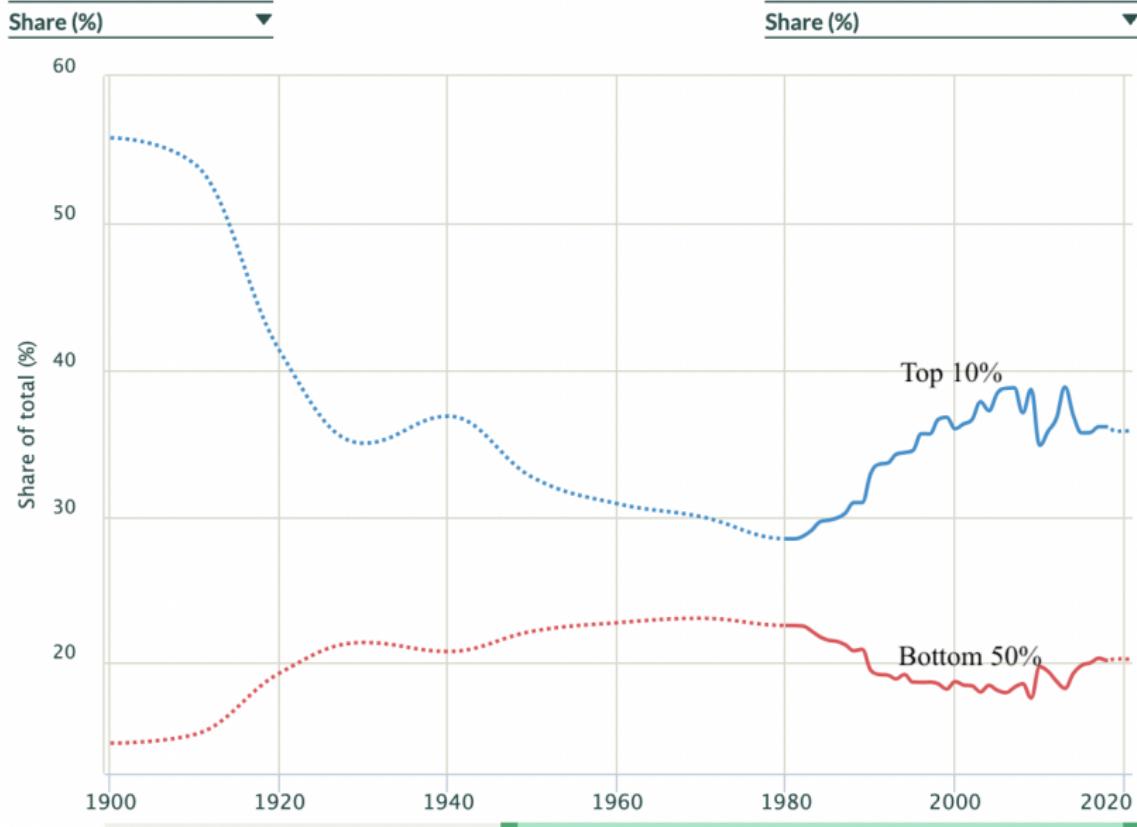
Source: World Inequality Database

# Income inequality, USA, 1901-2021



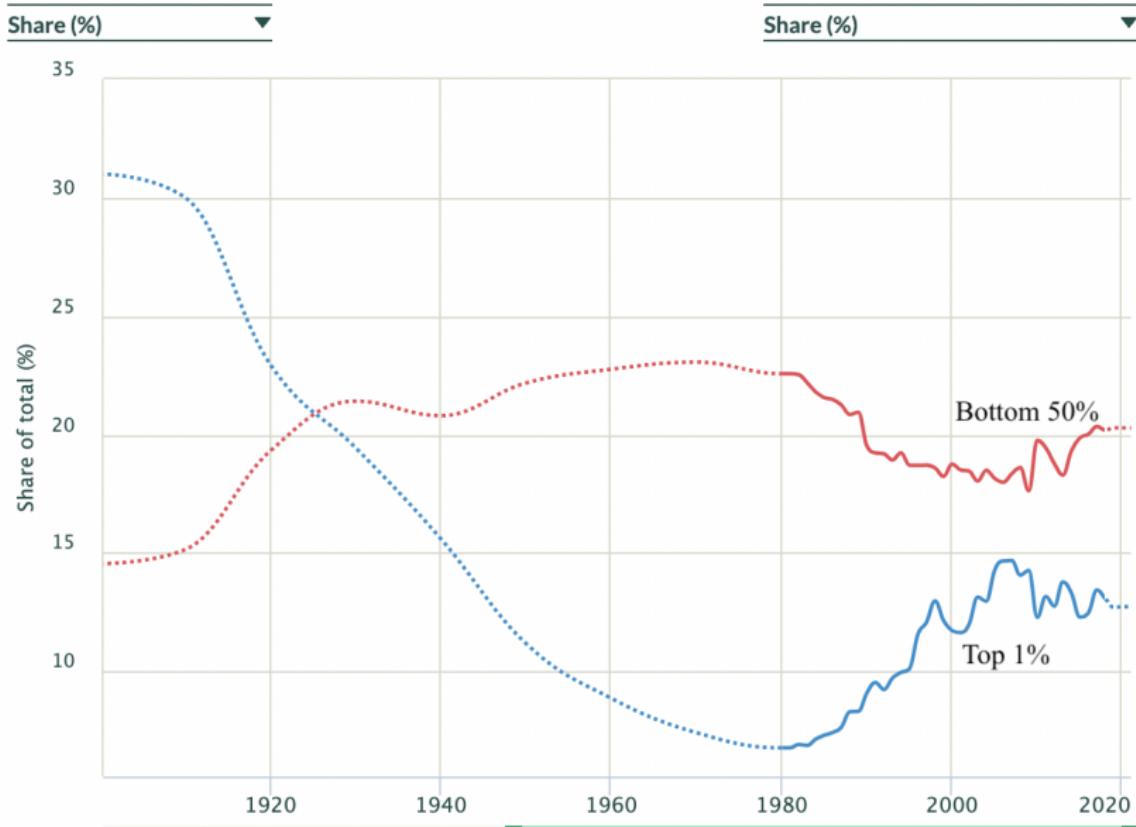
Source: World Inequality Database

# Income inequality, United Kingdom, 1900-2021



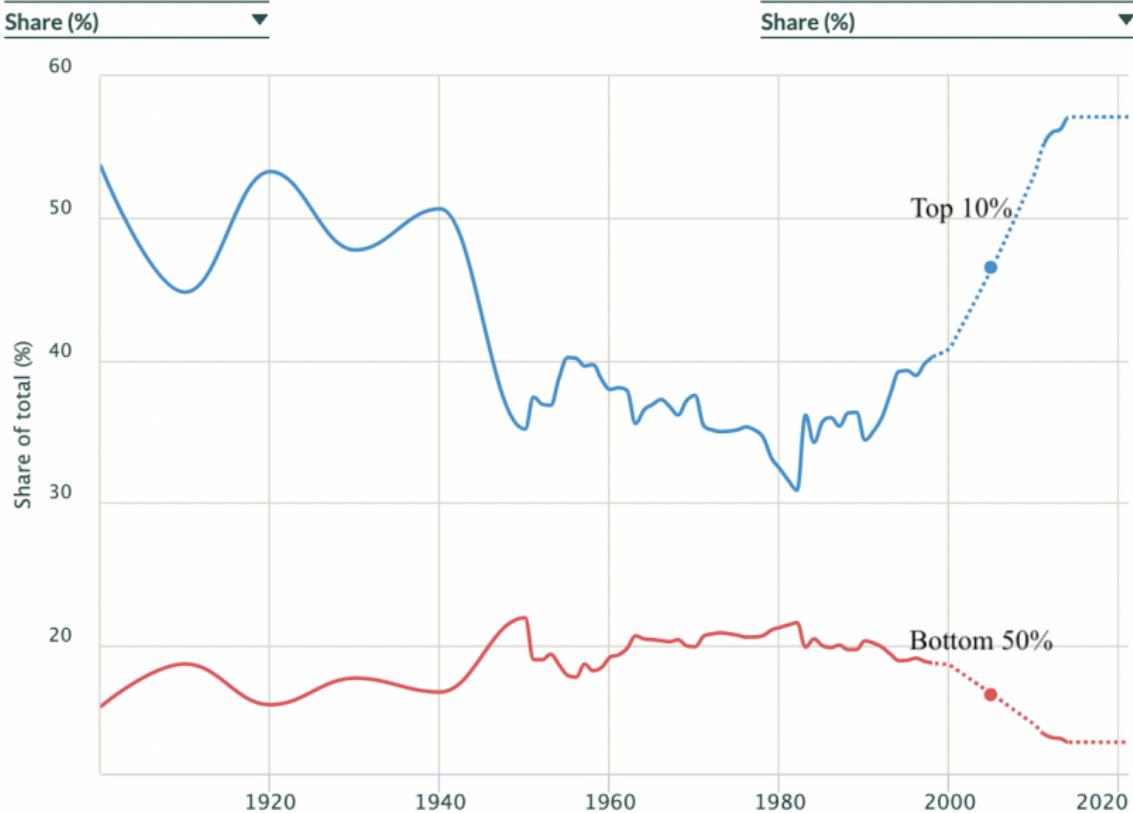
Source: World Inequality Database

# Income inequality, United Kingdom, 1901-2021



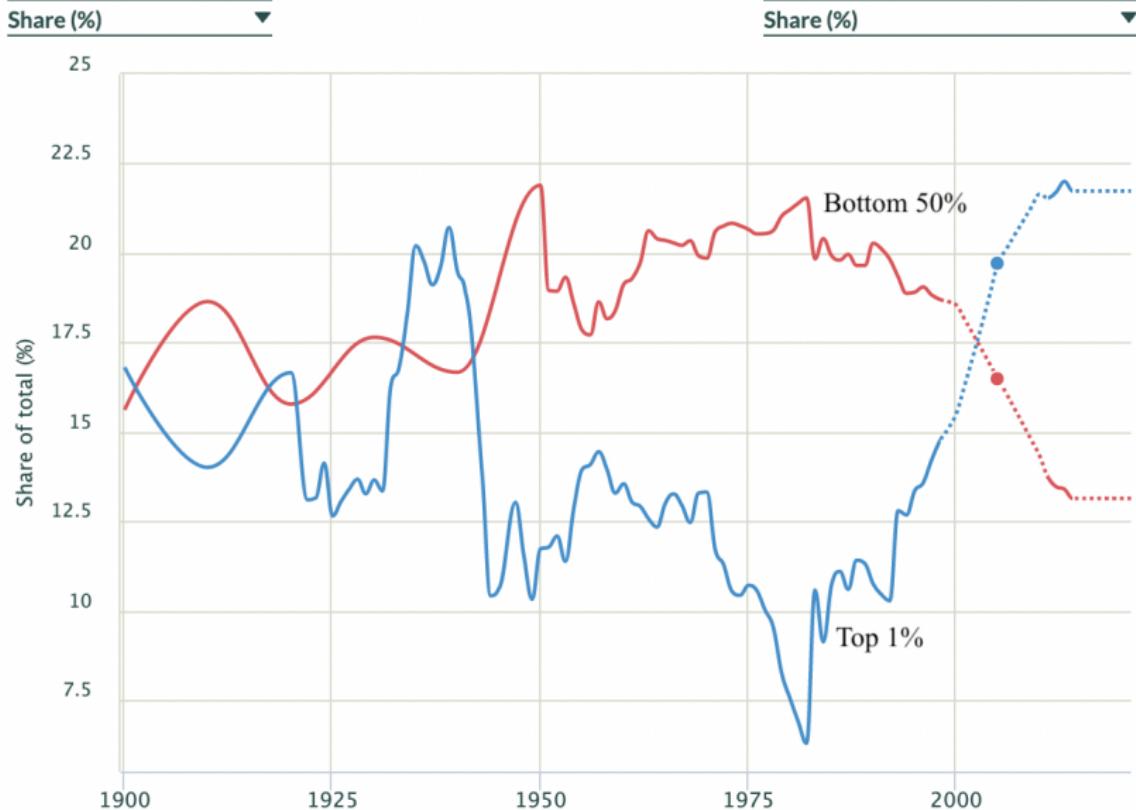
Source: World Inequality Database

# Income inequality, India, 1901-2021



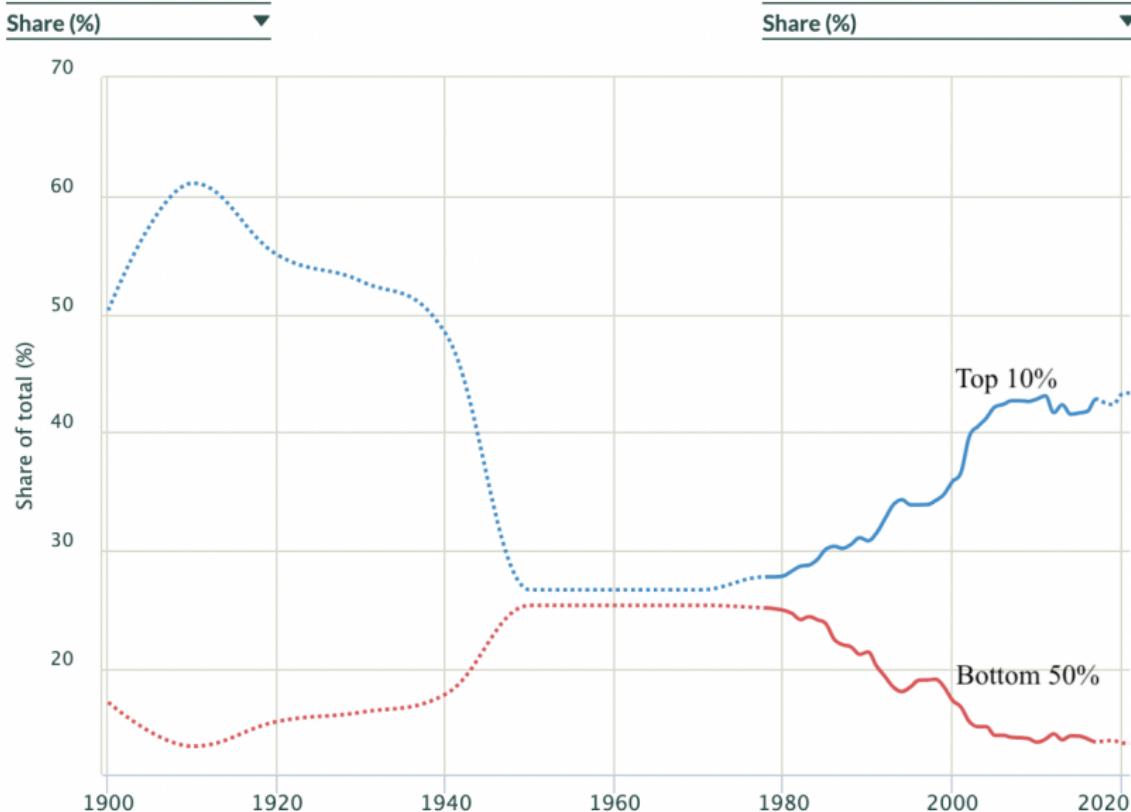
Source: World Inequality Database

# Income inequality, India, 1900-2021



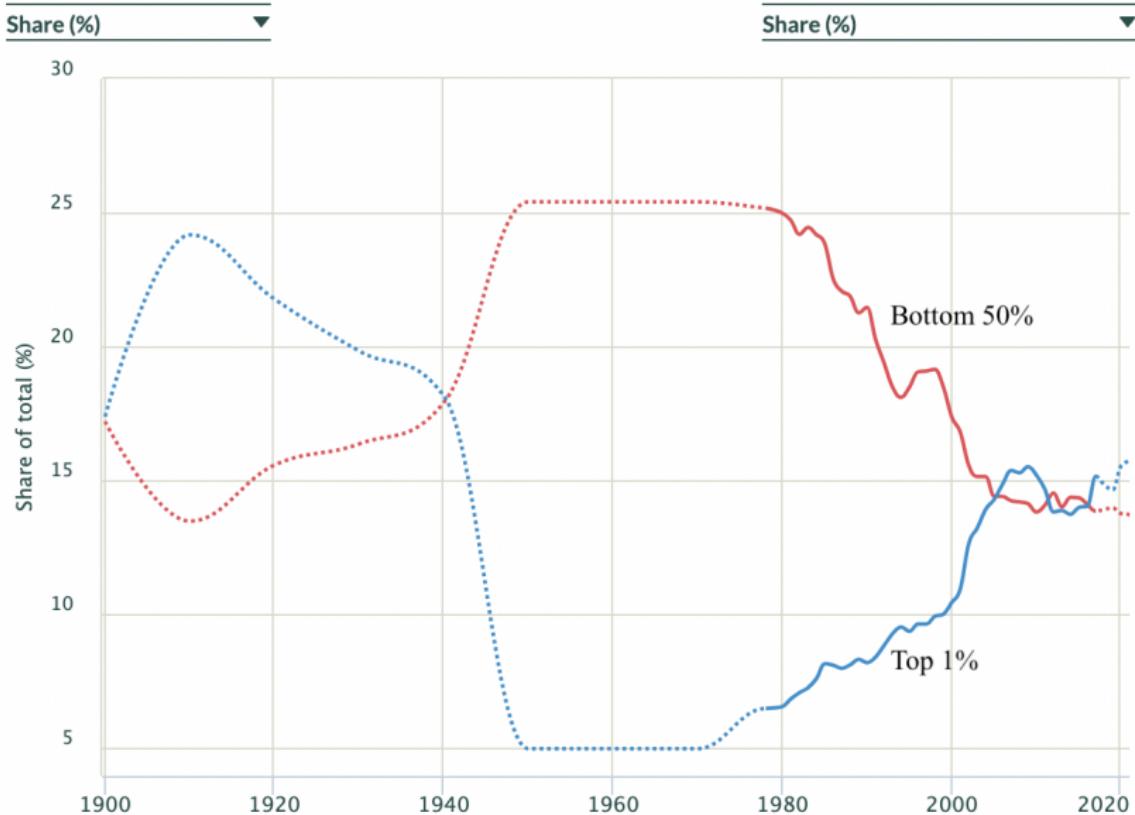
Source: World Inequality Database

# Income inequality, China, 1900-2021



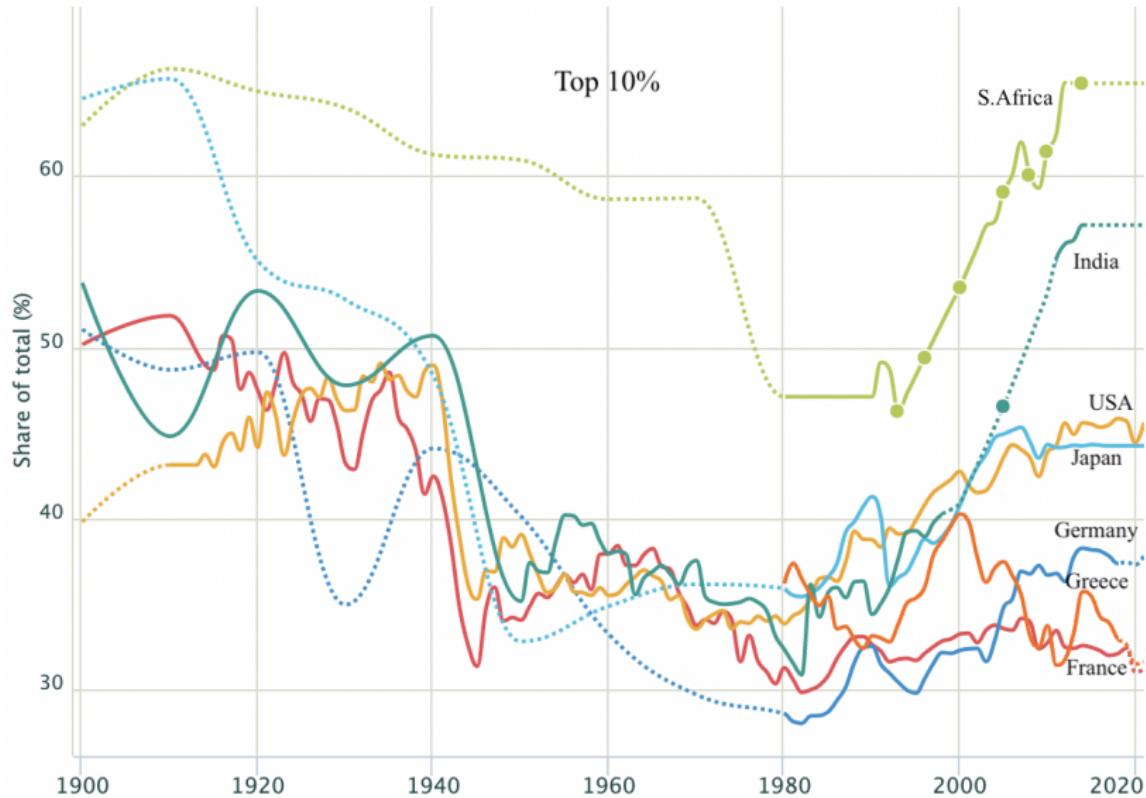
Source: World Inequality Database

# Income inequality, China, 1900-2021



Source: World Inequality Database

## Top 10% Income Share, Selected Countries, 1900-2021



Source: World Inequality Database

## The Great U-Turn

- A classical view (due to Kuznets 1955, 1963)
  - Inequality rises and then falls with development

## The Great U-Turn

- A classical view (due to Kuznets 1955, 1963)
  - Inequality rises and then falls with development
- Instead: The Great U-Turn
  - Uneven versus compensatory changes

## Capital in the 21st Century

- Piketty's *Capital in the 21st Century*:
  - summarizes the evidence (compelling and useful)
  - describes **three “fundamental laws”**

## Piketty's Laws

- **First Fundamental Law** (or accounting identity):

$$\frac{\text{Capital Income}}{\text{Total Income}} = \frac{\text{Capital Income}}{\text{Capital Stock}} \times \frac{\text{Capital Stock}}{\text{Total Income}}.$$

## Piketty's Laws

- **First Fundamental Law** (or accounting identity):

$$\frac{\text{Capital Income}}{\text{Total Income}} = \frac{\text{Capital Income}}{\text{Capital Stock}} \times \frac{\text{Capital Stock}}{\text{Total Income}}.$$

- **Second Fundamental Law** (another accounting identity):

- “Growth rate equals savings rate divided by capital-output ratio.”

## Piketty's Laws

- **First Fundamental Law** (or accounting identity):

$$\frac{\text{Capital Income}}{\text{Total Income}} = \frac{\text{Capital Income}}{\text{Capital Stock}} \times \frac{\text{Capital Stock}}{\text{Total Income}}.$$

- **Second Fundamental Law** (another accounting identity):

- “Growth rate equals savings rate divided by capital-output ratio.”

$$K(t+1) = K(t) + I(t) = K(t) + s(t)Y(t) \Rightarrow G(t) = \frac{s(t)}{\theta(t)}.$$

## Piketty's Laws

- **First Fundamental Law** (or accounting identity):

$$\frac{\text{Capital Income}}{\text{Total Income}} = \frac{\text{Capital Income}}{\text{Capital Stock}} \times \frac{\text{Capital Stock}}{\text{Total Income}}.$$

- **Second Fundamental Law** (another accounting identity):

- “Growth rate equals savings rate divided by capital-output ratio.”

$$K(t+1) = K(t) + I(t) = K(t) + s(t)Y(t) \Rightarrow G(t) = \frac{s(t)}{\theta(t)}.$$

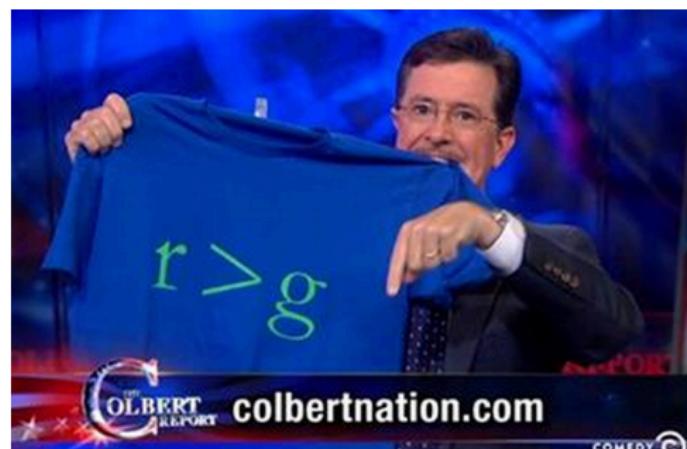
“One particularly clear case is that of Japan: with a savings rate close to 15 percent a year and a growth rate barely above 2 percent, it is hardly surprising that Japan has over the long run accumulated a capital stock worth six to seven years of national income. This is an automatic consequence of the [second] dynamic law of accumulation.” (p.175)

- Compare to [Harrod-Domar](#) or [Solow](#).

## Piketty's Laws

### ■ The Third Fundamental Law:

- $r > g$ : "Whenever the rate of return on capital is significantly and durably higher than the growth rate of the economy, ... wealth originating in the past automatically grows more rapidly than wealth stemming from work."
- This assertion is wrong; see **Supplement 1**.



## Two Aspects of Development and Distribution

- Personal:

- Tracks changes in the **ownership** of endowments
- Time preference and risk attitudes, higher rate of savings (**Supplement 2**)
- endogenous information-gathering (**Supplement 3**)
- issues of access: imperfect capital markets + lack of scaling

## Two Aspects of Development and Distribution

- Personal:

- Tracks changes in the **ownership** of endowments
- Time preference and risk attitudes, higher rate of savings (**Supplement 2**)
- endogenous information-gathering (**Supplement 3**)
- issues of access: imperfect capital markets + lack of scaling
- Functional:

- Tracks changes in the **prices** of endowments
- the falling labor share

## Two Aspects of Development and Distribution

- Personal:

- Tracks changes in the **ownership** of endowments
- Time preference and risk attitudes, higher rate of savings (**Supplement 2**)
- endogenous information-gathering (**Supplement 3**)
- issues of access: imperfect capital markets + lack of scaling

- Functional:

- Tracks changes in the **prices** of endowments
- the falling labor share
- **A theory of economic inequality** must address both components.