

# Public Economics and Inequality: Uncovering our Social Nature

AEA Distinguished Lecture  
(paper) (video)

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January 2021

## INTRODUCTION

Standard economics is based on rational and self-centered individuals interacting through markets

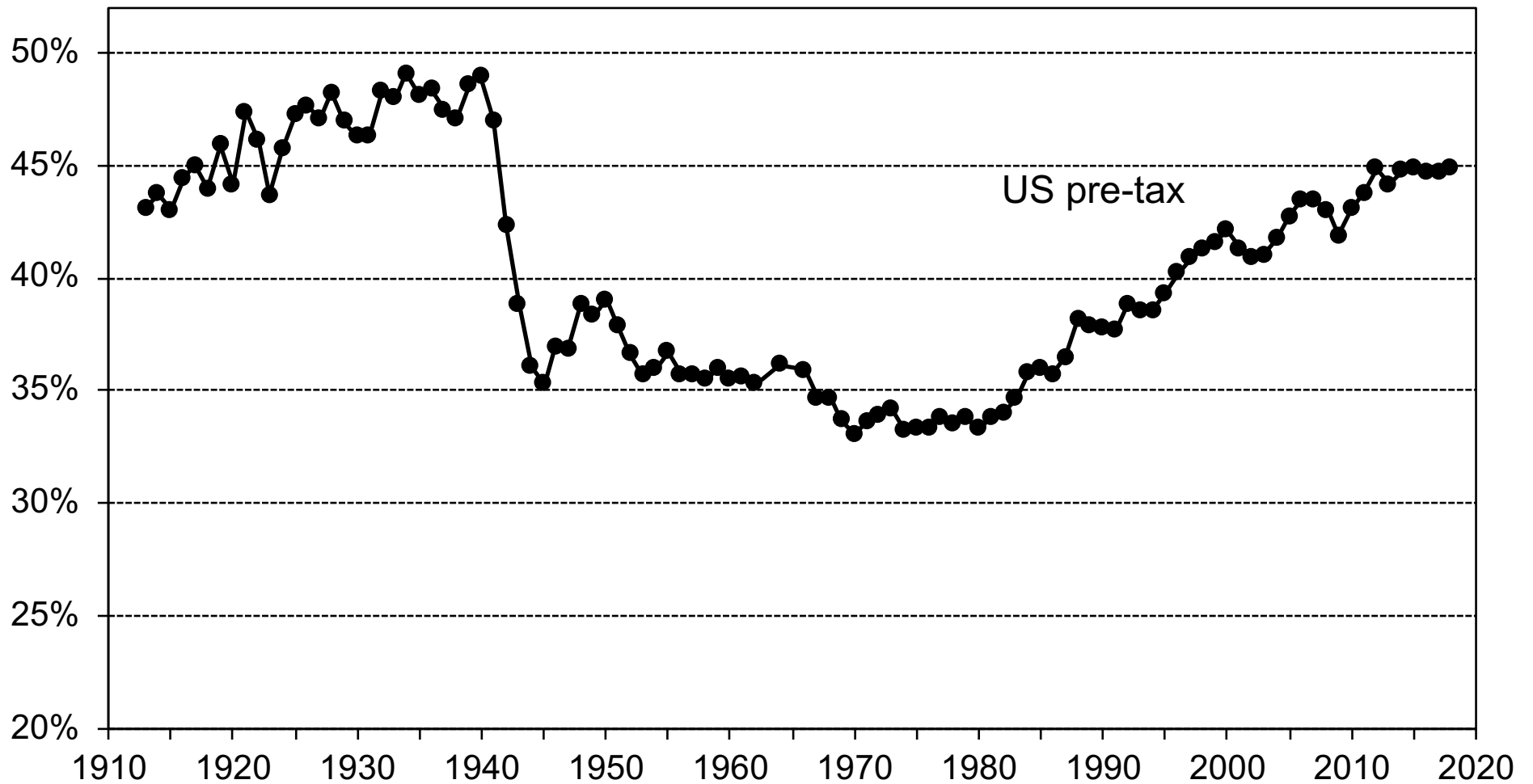
But we are also social individuals at many levels (families, workplaces, communities, nations) who care about inequality

In advanced economies, we pool 30-50% of incomes through government using taxes to fund public goods and transfers

Standard public economics: government intervention justified to address (a) market failures, (b) inequality

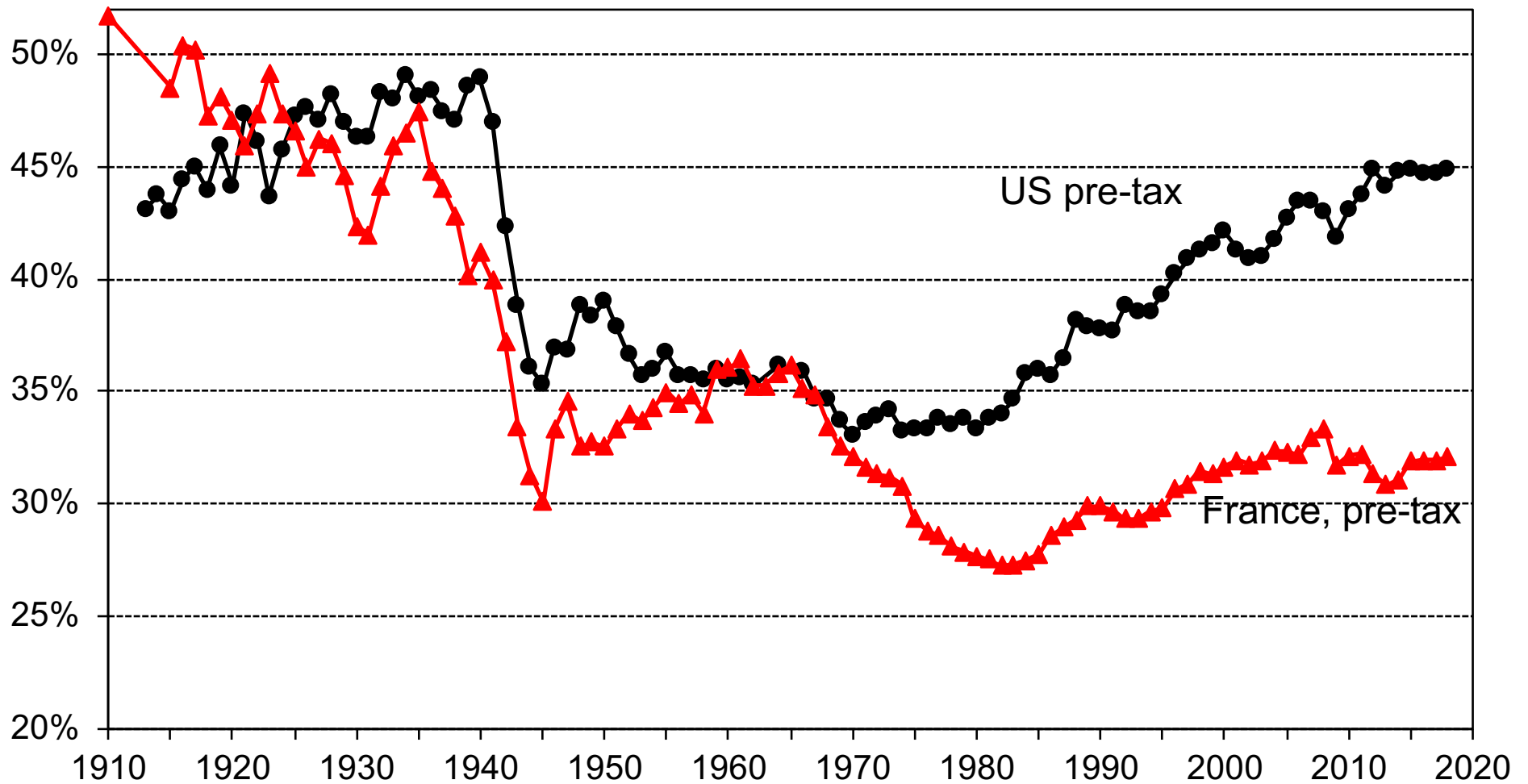
**This lecture:** Our social nature helps understand public economics in action and concerns for inequality

## Top 10% Pre-tax Income Share in the US, 1913-2018



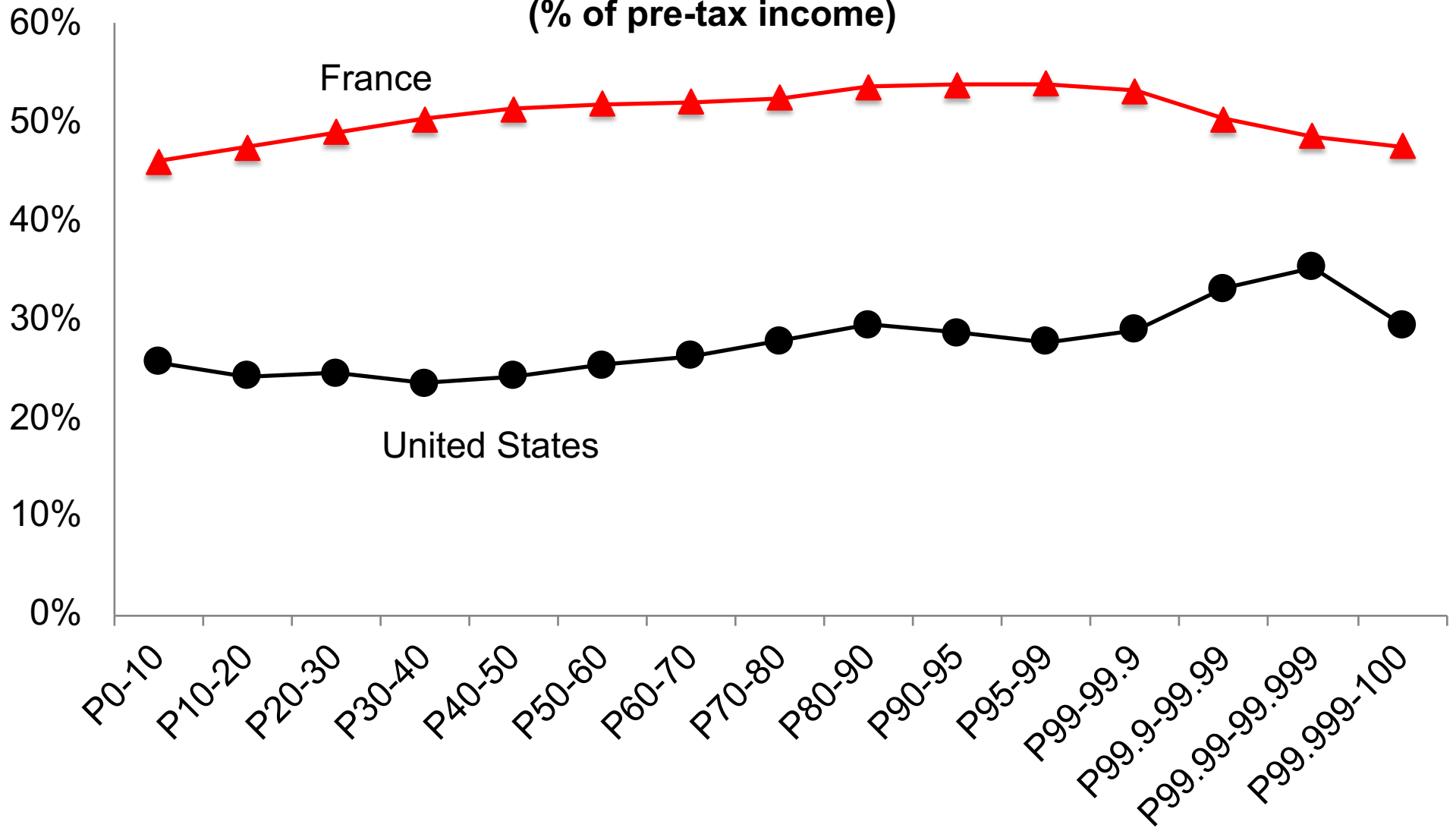
Top income shares of pretax national income among adults aged 20+ (income within couples equally split).  
Source is World Inequality Database wid.world (from Piketty, Saez, Zucman 2018).

## Top 10% Income Shares in the US and France, 1910-2018

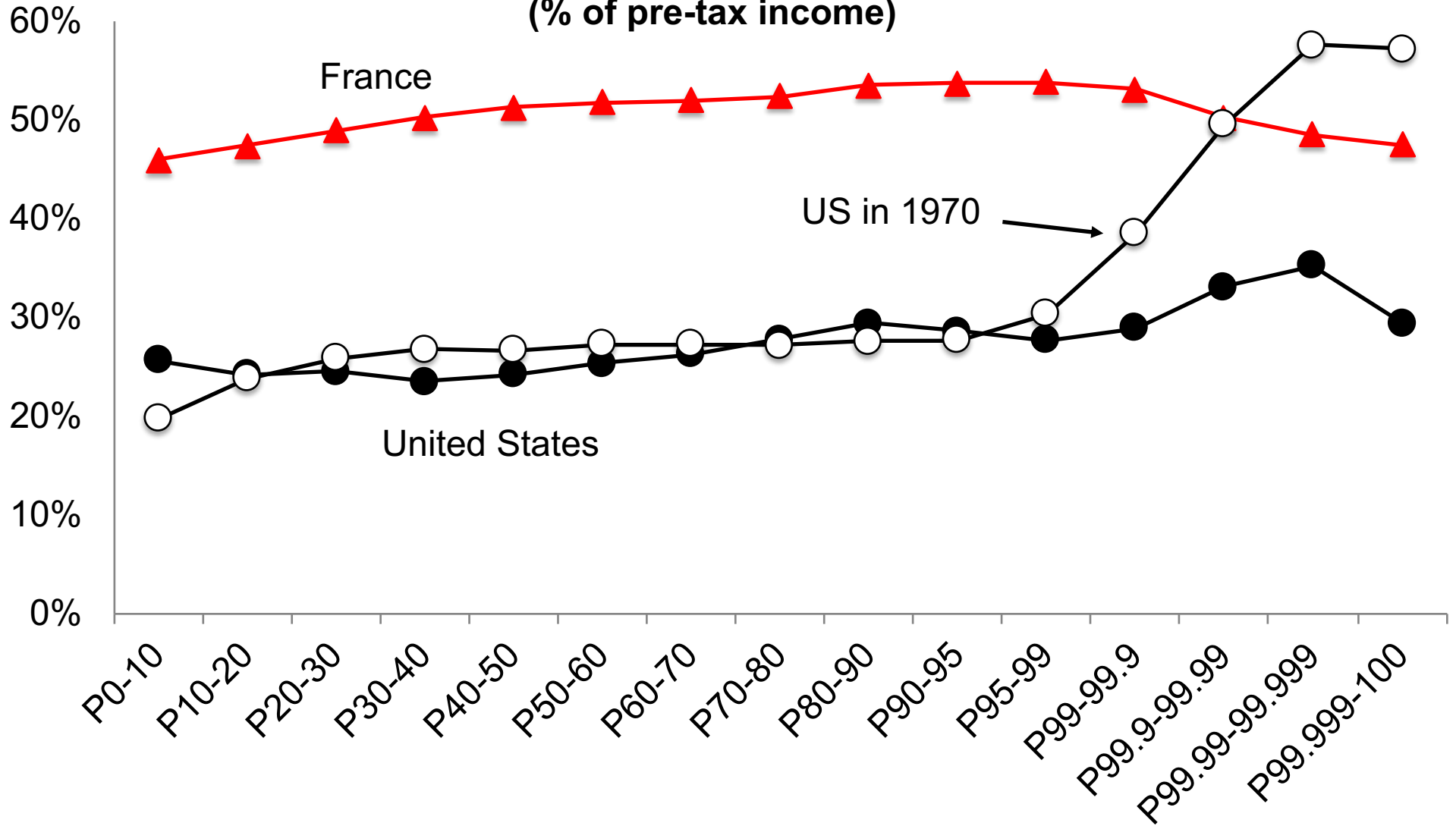


Top income shares of pretax national income among adults (income within married couples equally split). Source is Piketty, Saez, Zucman (2018) for US and Piketty et al. (2020) for France.

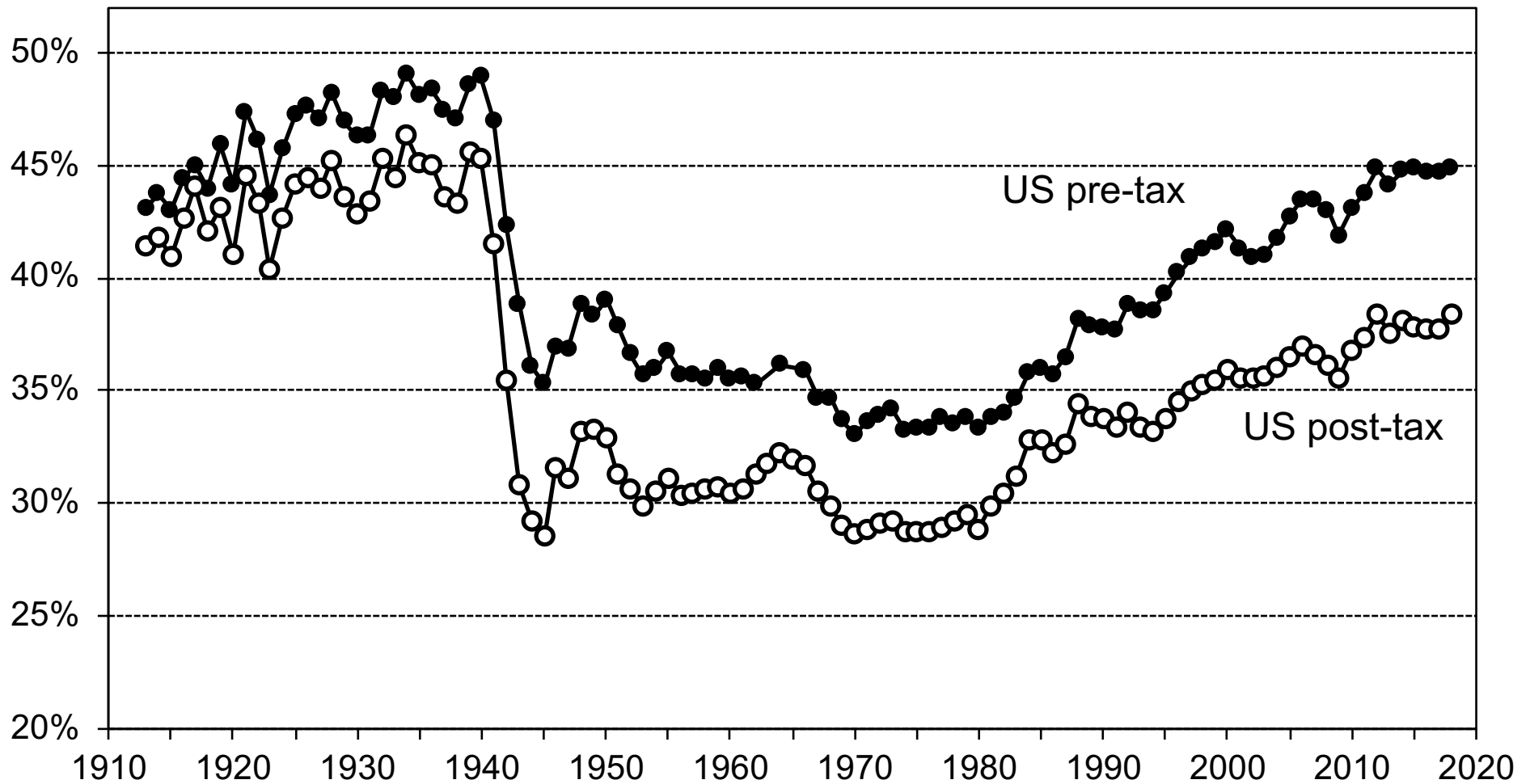
**Average tax rates by income group in 2018: US vs. France**  
(% of pre-tax income)



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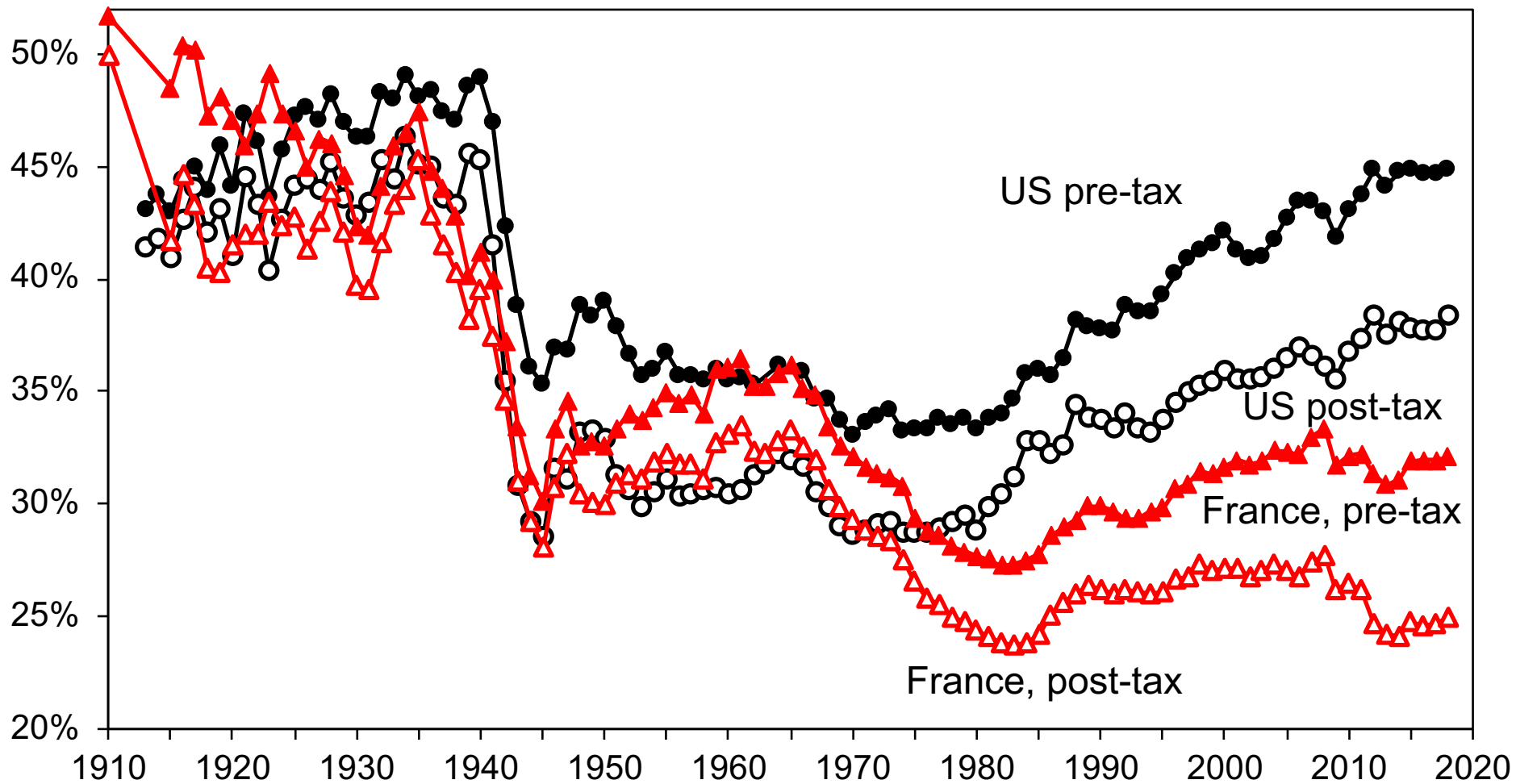


## US Top 10% Income Shares pre-tax vs. post-tax, 1913-2018



Top income shares of pretax and posttax national income among adults (income within married couples equally split). Source is Piketty, Saez, Zucman (2018) for US and Piketty et al. (2020) for France.

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Top income shares of pretax and posttax national income among adults (income within married couples equally split). Source is Piketty, Saez, Zucman (2018) for US and Piketty et al. (2020) for France.



# PREHISTORY: HUNTER-GATHERER SOCIETIES

Hunter-gatherer societies span over 90% of human history

Small and fairly egalitarian with minimal private wealth and leaders with limited power (Boehm 1999)

Community cooperation and sharing common for many tasks: hunting, access to natural resources, warfare

Sharing norms through customs and reciprocity (not markets)

Children, elderly, and sick care mix of family and community

Implicit pooling of economic resources likely high ( $\simeq$  50%)

Labor supply motivated by reciprocity, joy of work, social approbation and status

## HISTORY: RISE OF FORMAL STATE

**1) Rise of coercive state** in 3000BC: agricultural communities become despotic kingdoms, invent taxes and forced labor to serve power of hierarchical state (Scott 2017)

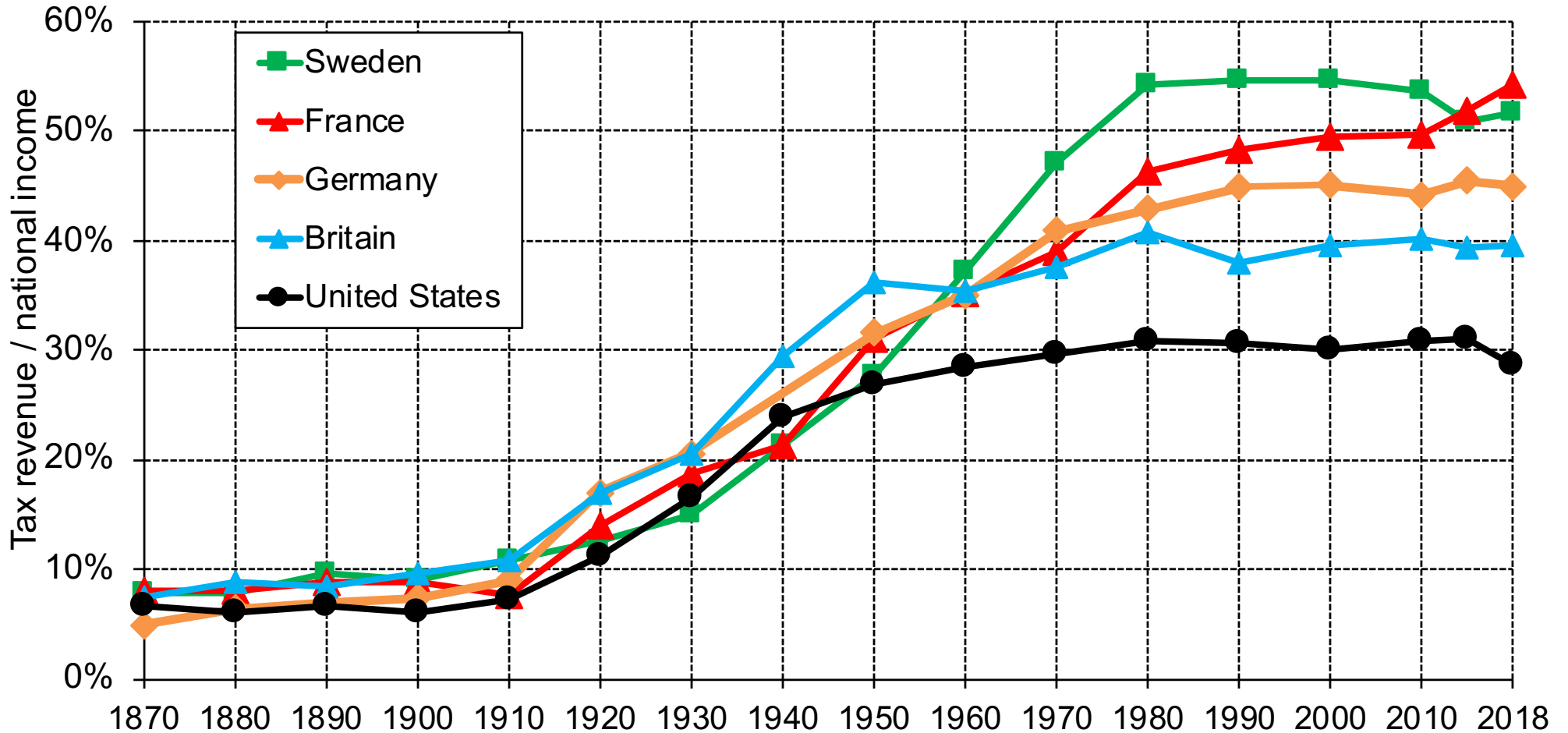
Size of government fairly small up to 1900: taxes less than 10% of output to support state public goods not social state

Social support for children, elderly, sick, needy shrinks down to family (and church)

**2) Rise of social state** in 20th century: mass education, retirement benefits, modern health care, income support

Pooling of resources large again: taxes  $\simeq$  30-50% of income

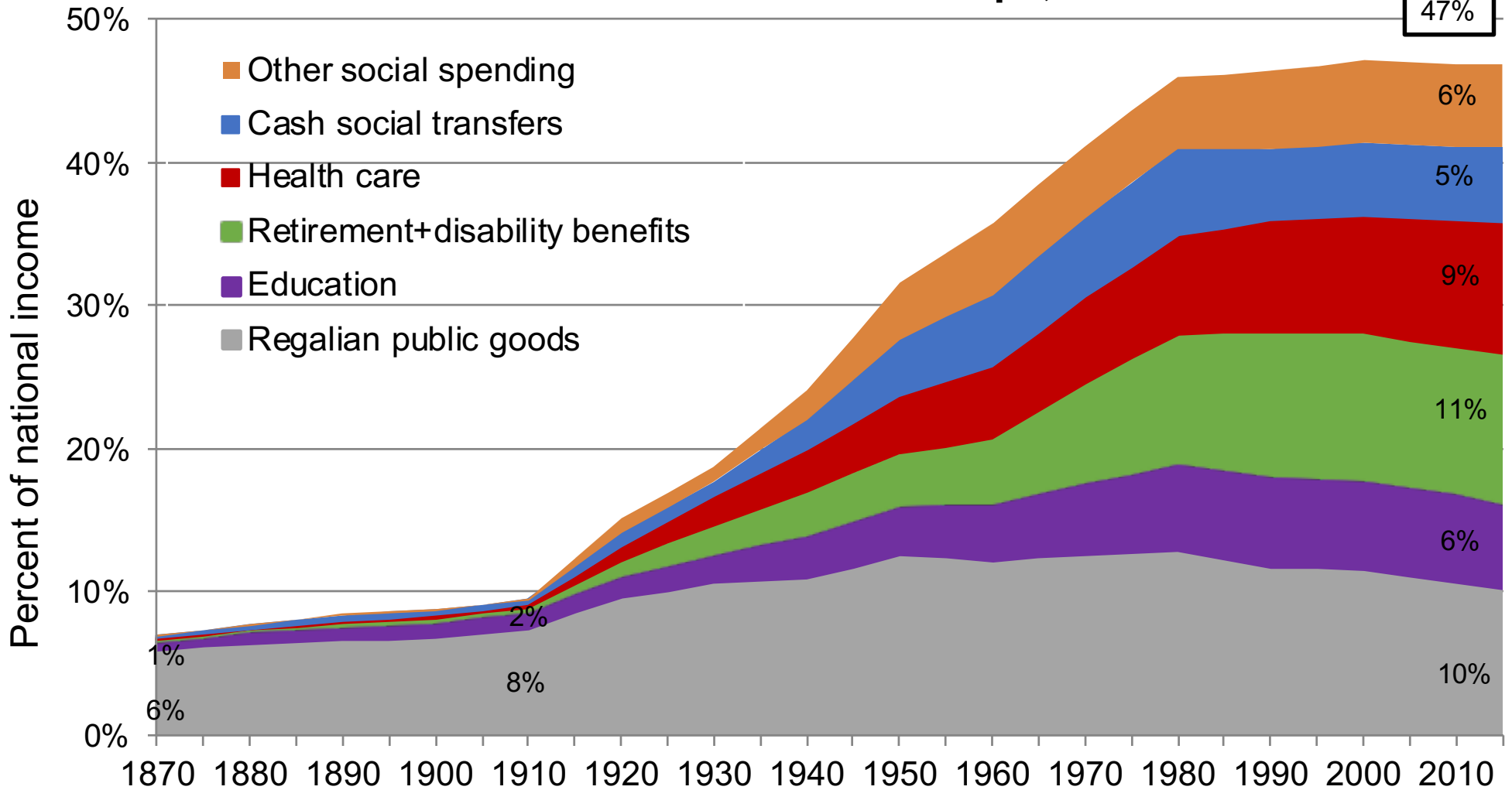
## The rise of the fiscal state in rich countries 1870-2018



Total tax revenue (all taxes and social contributions at all levels of government) divided by national income.

**Sources and series:** Piketty, Capital and Ideology, 2020, Figure 10.14, updated to 2018

## The Rise of the Social State in Europe, 1870-2015



**Source.** Piketty (2020, Figure 10.15). Average for Germany, France, Britain and Sweden.  
 Cash social transfers include unemployment benefits, family benefits, and means-tested benefits.  
 Other social spending includes in-kind spending such as public housing.  
 Regalian public goods includes defense, law and order, administration, infrastructure.

## RISE OF THE SOCIAL STATE IN 20TH CENTURY

Government growth due to rise of social state taking care of:

- 1) The **young** with public education and childcare
- 2) The **old** with public retirement benefits
- 3) The **sick** with universal health care
- 4) Those **in need** (disabled, unemployed, poor) with specific programs

Society supports those who cannot directly support themselves

⇒ Huge direct and indirect equalization effect

## **SOCIAL STATE VS. STANDARD ECON**

Standard economics: absent social state, rational individuals in a market economy can manage on their own:

- 1) Parents or young can borrow to pay for education
- 2) Workers can save for retirement
- 3) People can buy health care insurance
- 4) People can accumulate a buffer stock to absorb shocks

Empirical evidence and behavioral economics: Individuals are not good at making such plans on their own

# EDUCATION

Education most important driver of long-term economic growth

Mass modern education is always government driven:

**Compulsory schooling** which in turn requires **public funding**  
(otherwise low income parents can't pay)

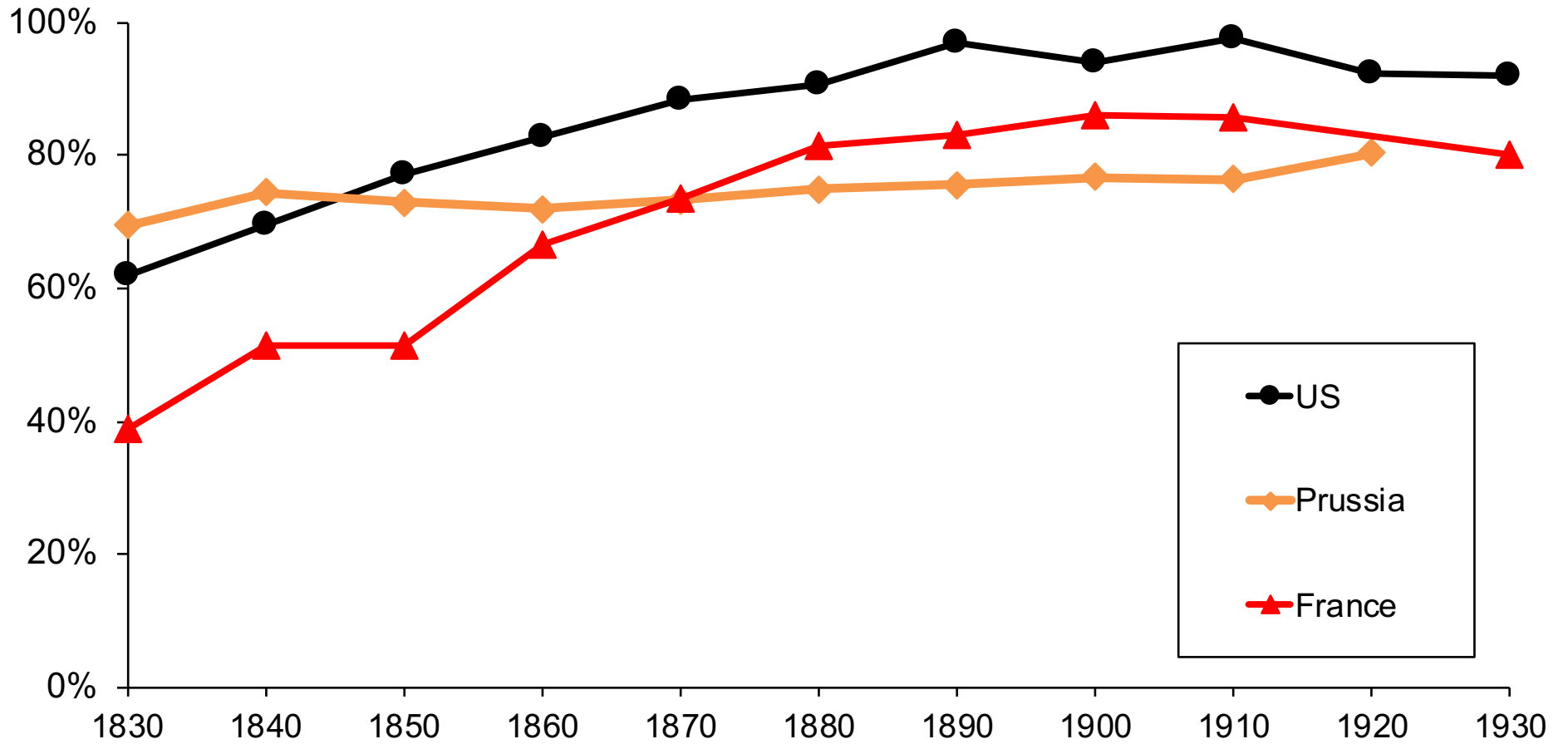
⇒ All children get basic education and opportunity

Higher education capacity built through public universities and is a key engine of social mobility

⇒ **Education choices made at social (not individual) level**

Privatization failures: (1) student debt often unbearable burden and (2) predatory for-profit schools

## School enrollment at ages 5-14, 1830-1930

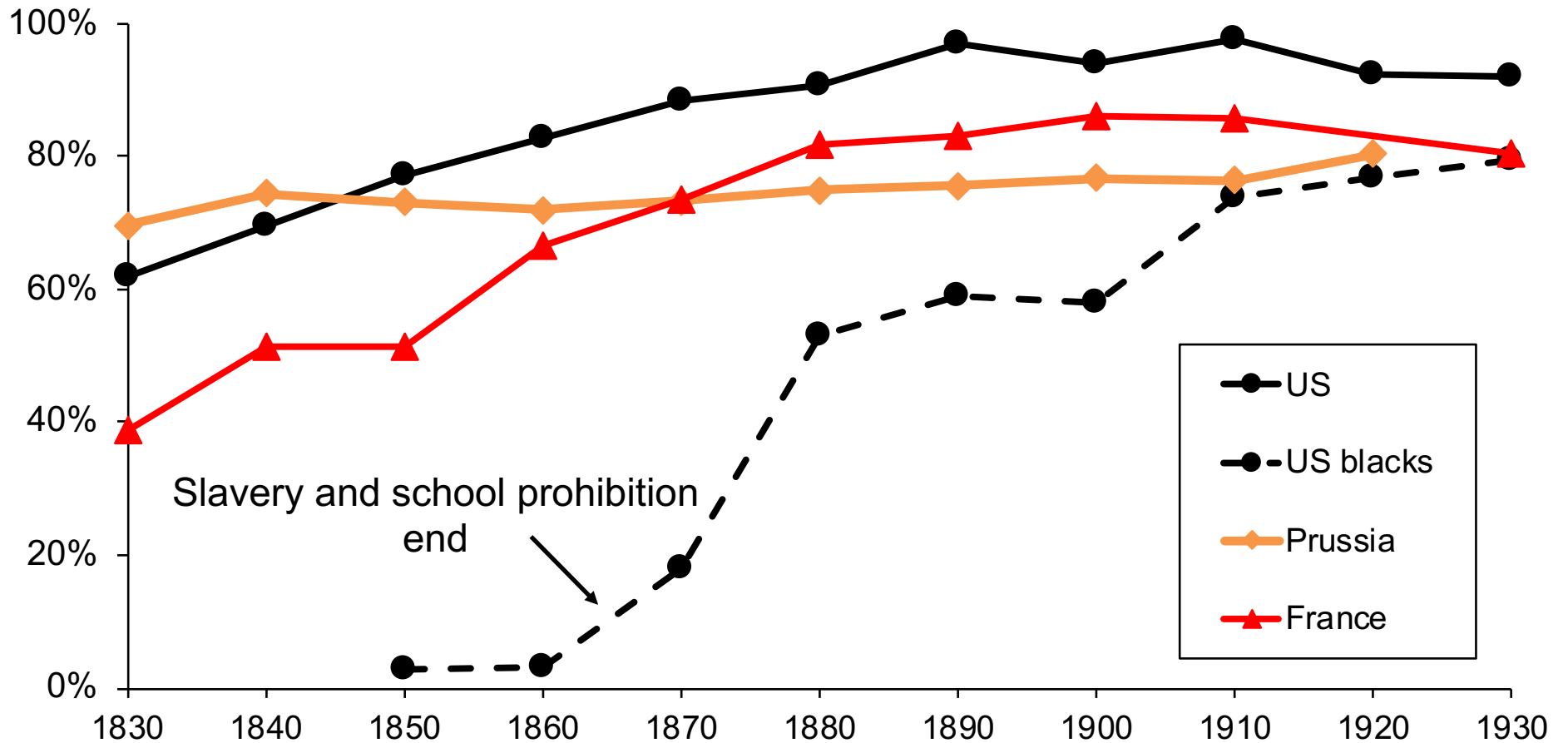


Fraction of children aged 5-14 enrolled in school (public or private).

**Sources and series:** Lindert (2004) Growing Public and Historical Statistics of the US



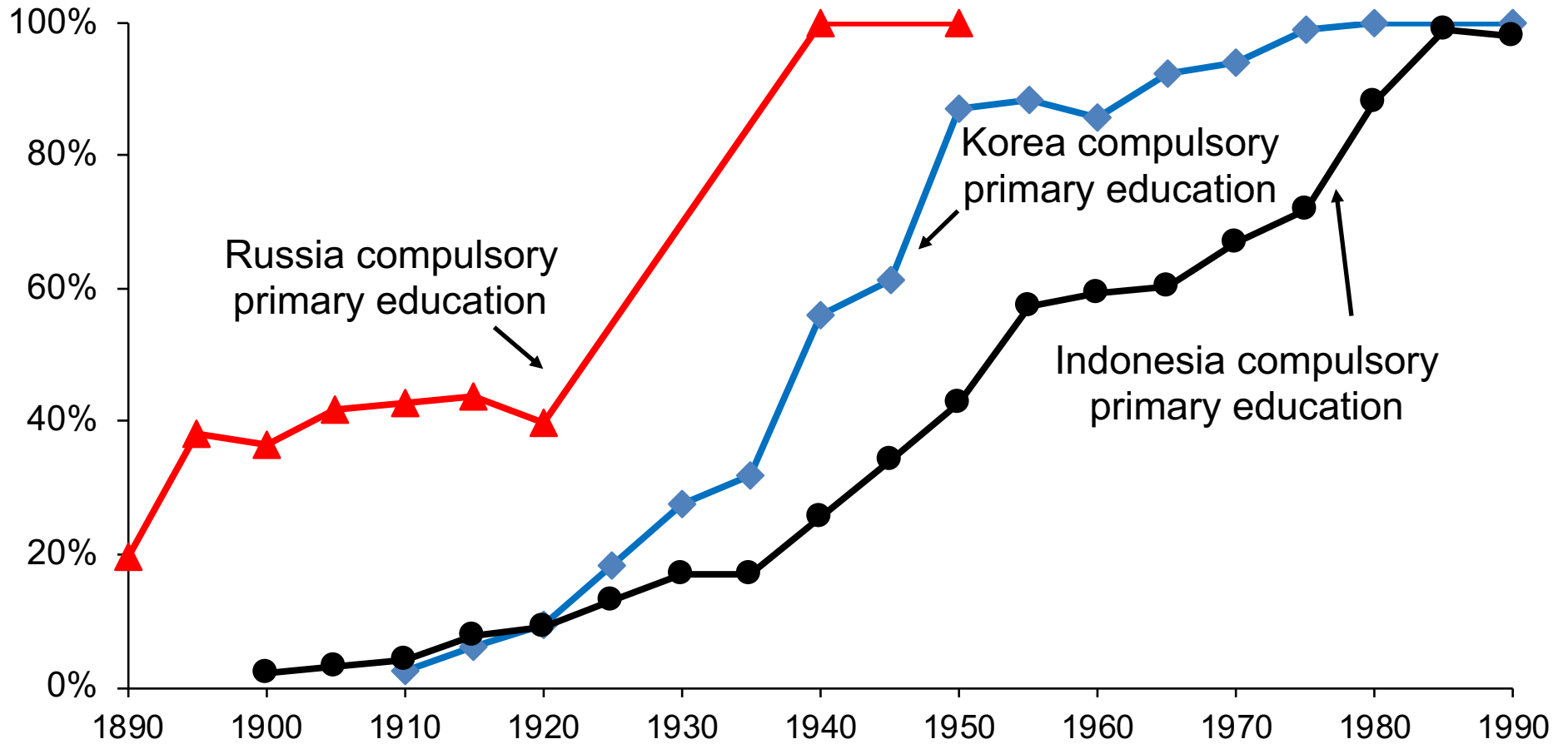
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## Primary School Enrollment in Russia, Korea and Indonesia



Fraction of children enrolled in primary school (public or private).

**Source:** Lee and Lee (2016).

## RETIREMENT BENEFITS

Elderly lose ability to work and hence need to be supported

Economists' solution: workers should save for retirement

Behavioral economics: individuals fail to save on their own

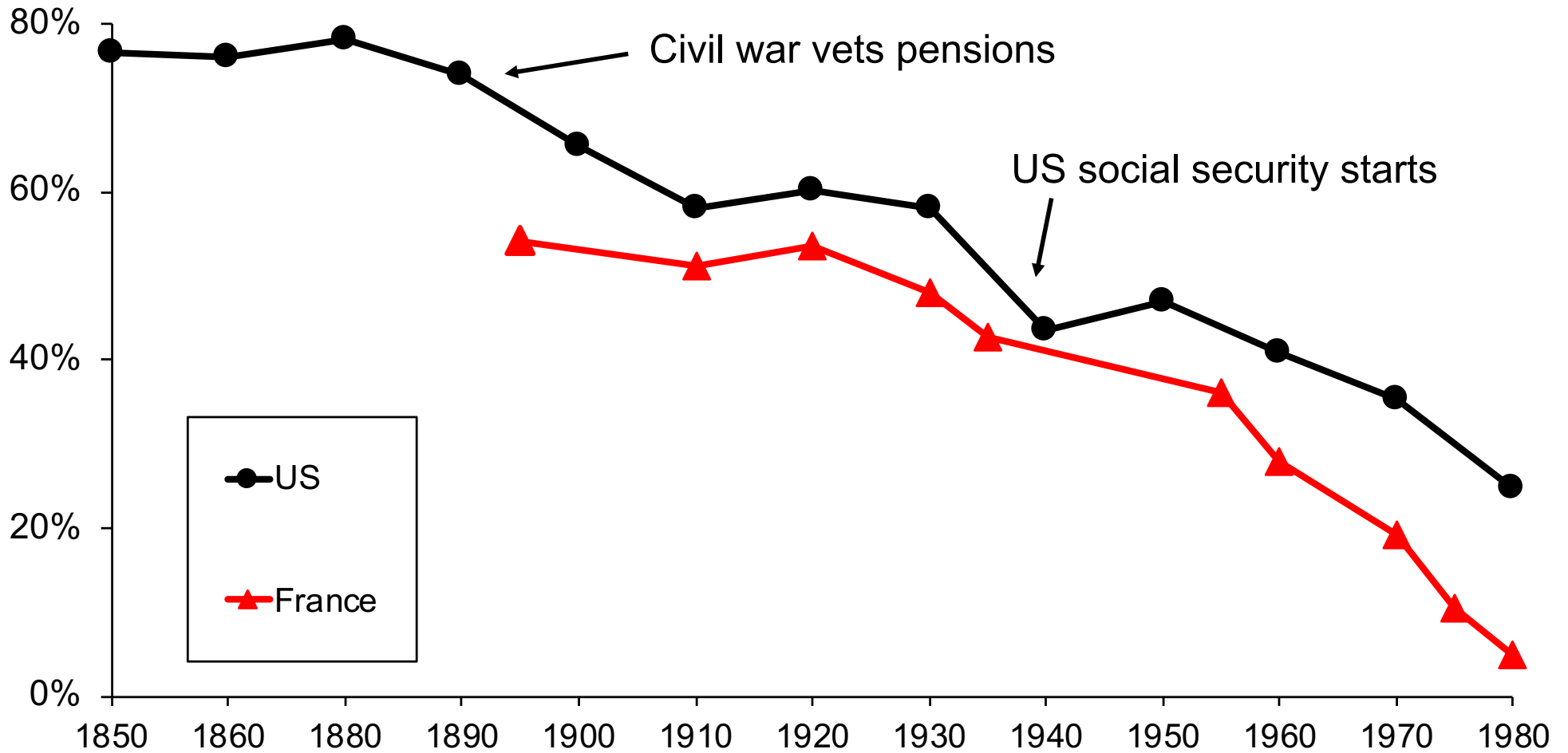
Actual solution: mandatory public retirement systems funded by taxes (replace older family based support)

Even privatized social security has mandatory contributions

**Retirement is solved at social (not individual) level**

Large cross sectional redistribution (even if lifetime redistribution modest as benefits related to prior earnings)

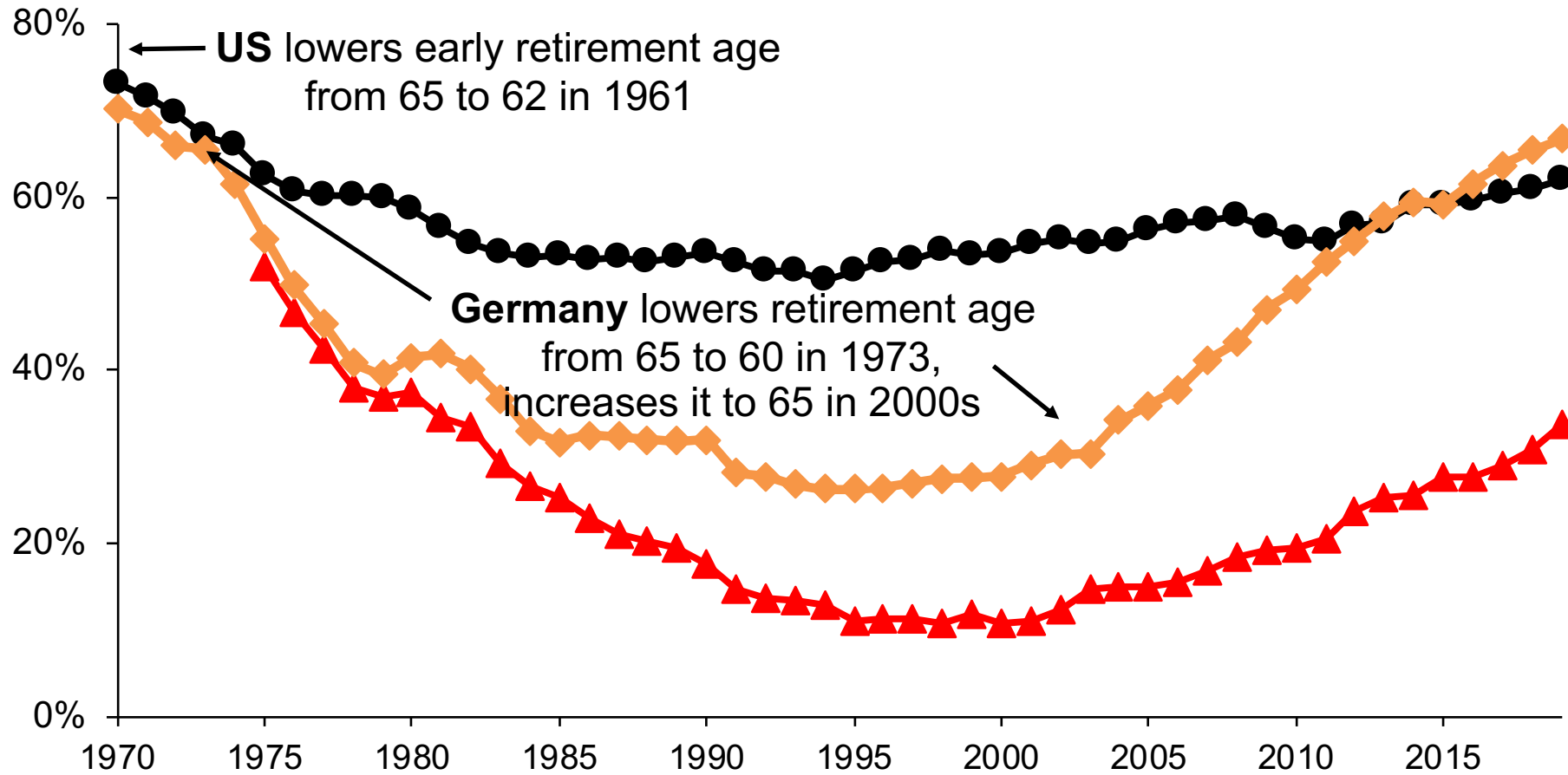
## Employment Rates of Men Aged 65+, 1850-1980



Gainful employment of men aged 65 and above.

**Sources:** Reproduced from Costa (1998), Table 2A.2

## Employment Rates of Men Aged 60-64, 1970-2019



Source: OECD database online.

## HEALTH CARE

All advanced economies (but US) provide universal health care

Health care costs funded mostly by taxation (as lower incomes would not be able to pay)

⇒ Significant redistribution by income, health, and health risk

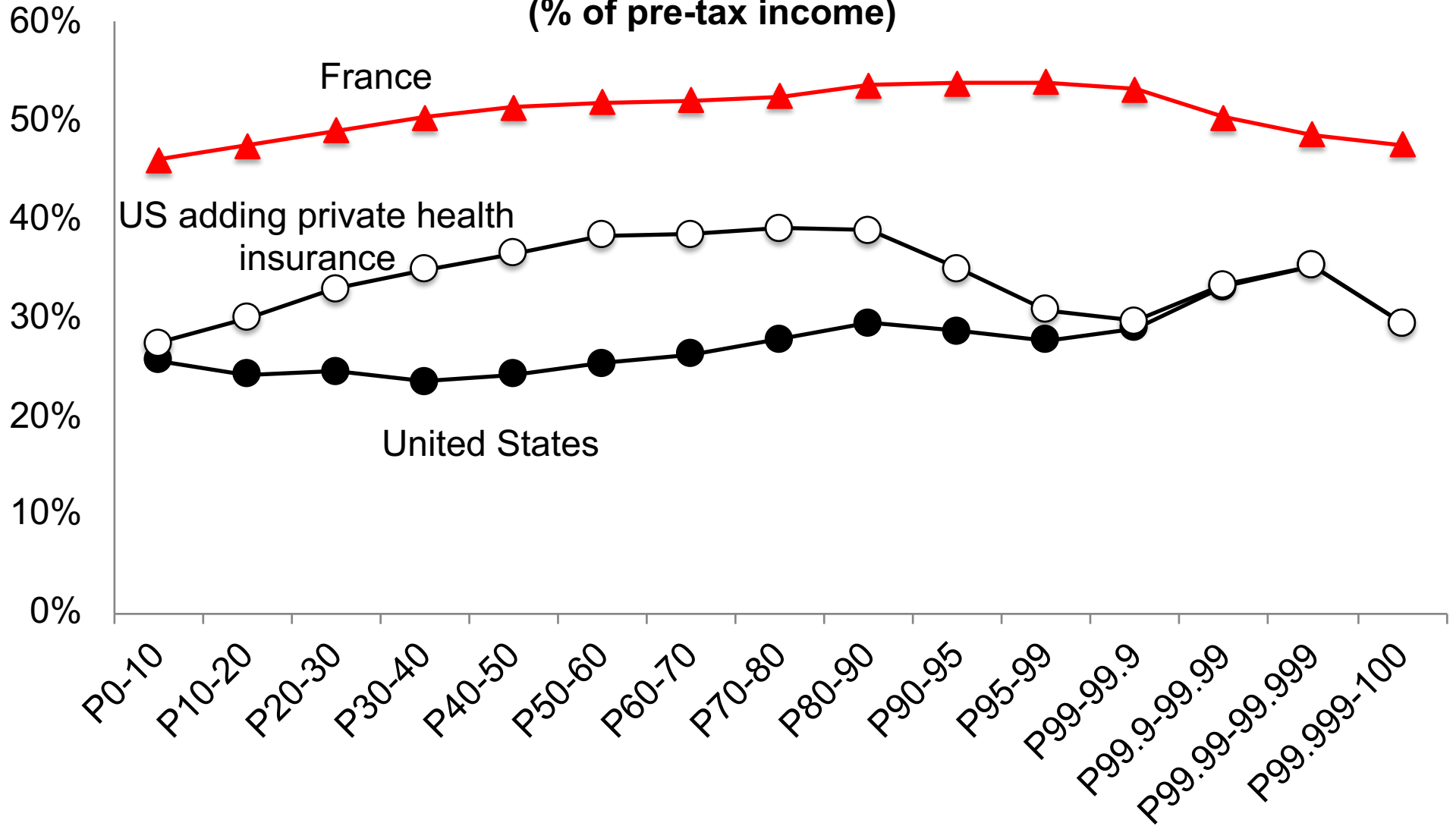
Why same health care for all? Saving actual lives is imperative

Even in US, private system relies heavily on employers. Obamacare employer mandate is a privatized poll tax on workers

⇒ **Health care is solved at social (not individual) level**

Behavioral economics shows that private health insurance challenging to navigate (Chandra et al. 2019)

### Average tax rates by income group in 2018: US vs. France (% of pre-tax income)



## INCOME SUPPORT PROGRAMS

Income support targeted to specific groups (unemployed, disabled, poor elderly, poor children)

Untargetted means-tested support generally modest, in-kind (housing, nutrition) and combined with job training help

Widespread social view that people who can support themselves do not deserve support (does not bode well for UBI)

Distribution and fairness more important than efficiency in public views (Stantcheva 2020)

Fairness (resenting “free loaders” or “tax cheats”) is our intuitive way to reduce efficiency costs of behavioral responses



## SCOPE OF REDISTRIBUTION: US VS. OTHERS

Pooling of resources through taxes is big within country but minuscule across countries

Direct foreign aid from rich countries is small (.25% of GDP in US), targeted to crises, security, development and **unpopular**

EU budget is only 1% of EU economy, transfers controversial

Social state smaller when country divided along ethnic lines (e.g. Alesina-Glaeser 2004 for US vs. EU)

⇒ Social group scope matters a lot and is malleable

## LABOR SUPPLY

Concern that taxes funding social state could discourage work

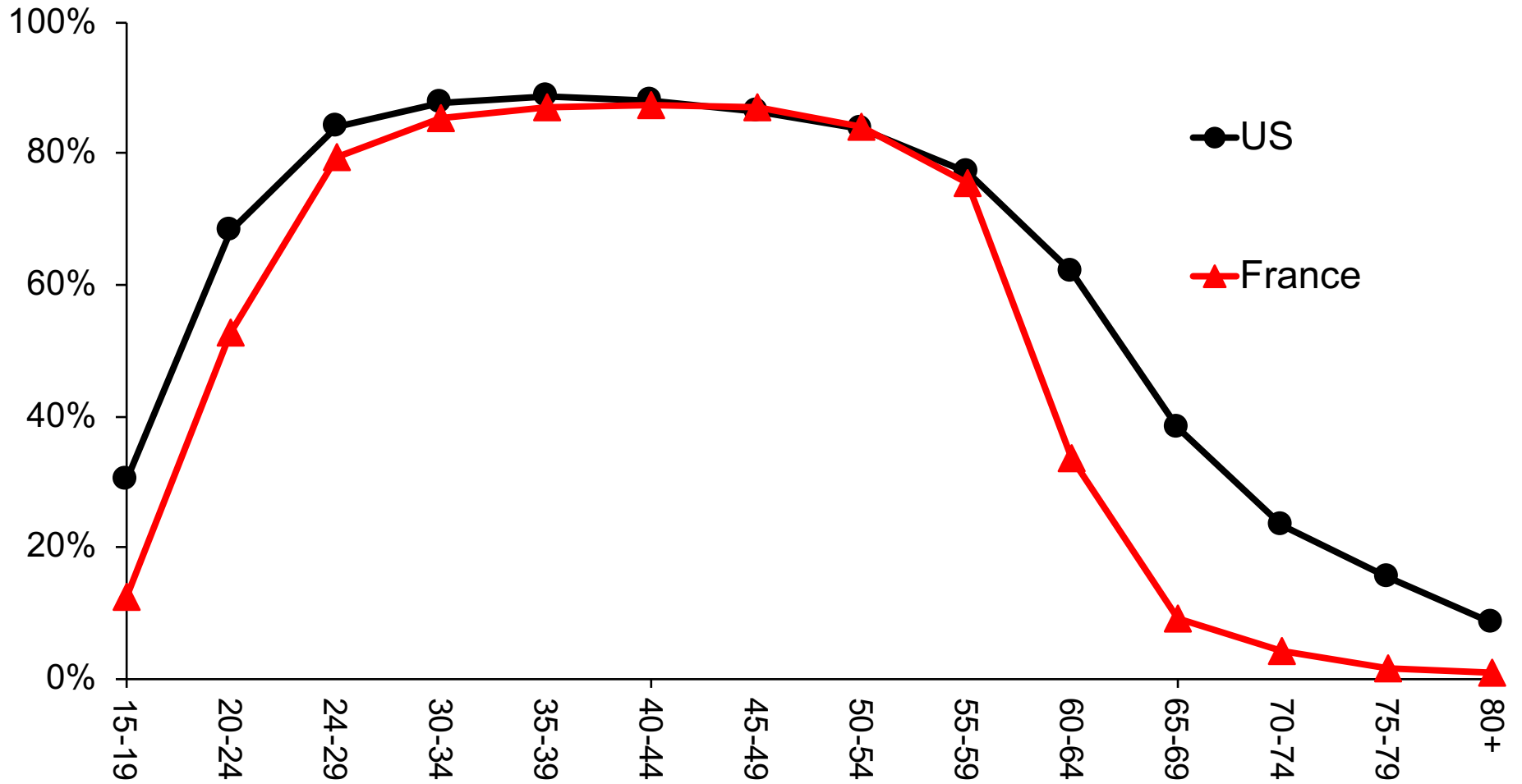
**Standard econ view:** labor supply  $l(w, R)$  coming out of  $\max_{c, l} u(c, l)$  st  $c = wl + R$  is highly incomplete

**Social determinants of labor supply:**

- a) Youth labor is regulated by labor laws/education
- b) Old age labor regulated by retirement programs
- c) Female market labor driven by norms + child care policy
- d) Hours of work regulated by overtime + vacation mandates

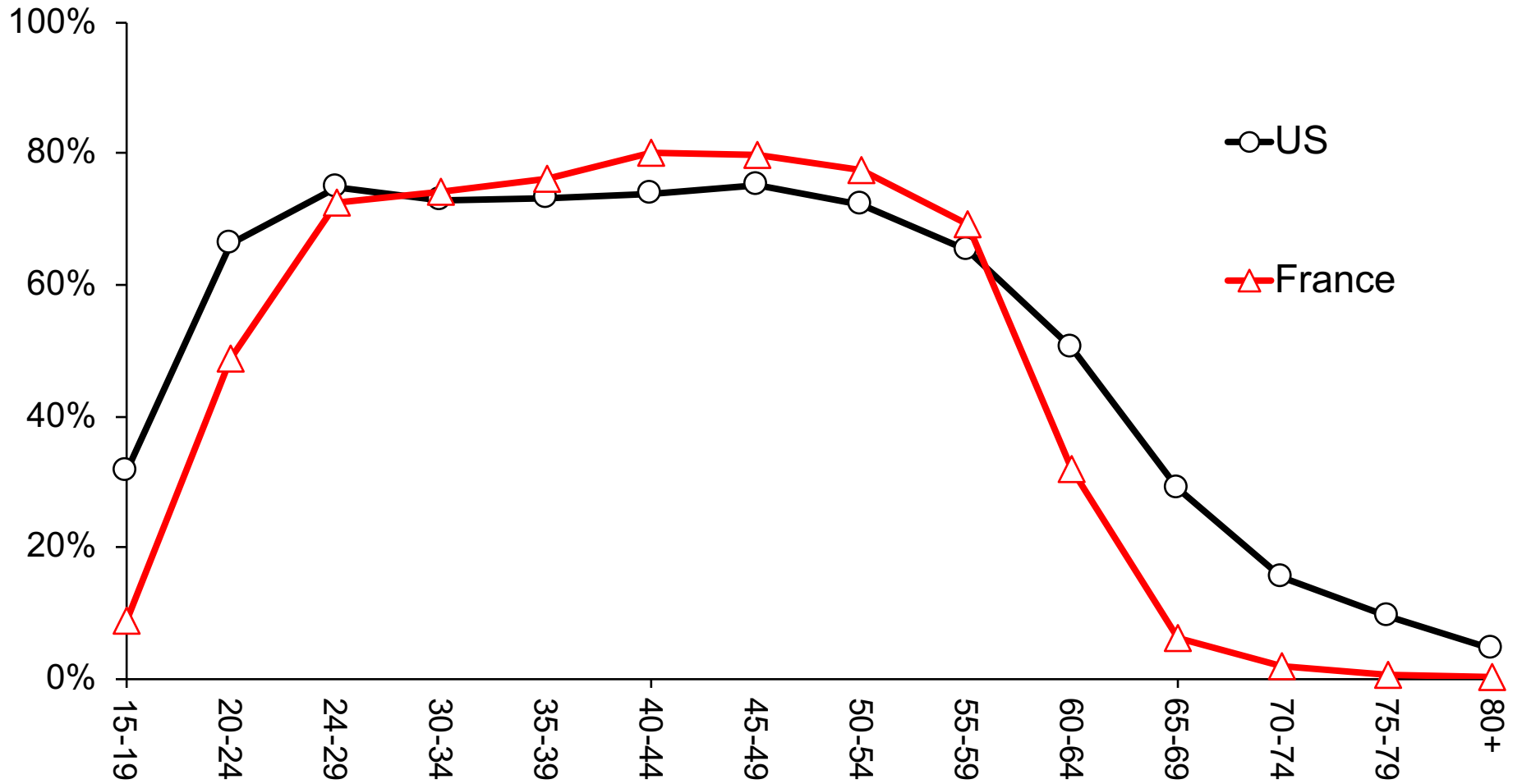
Social labor supply with disutility for youth, old, overtime labor

## Employment Rates of Men by Age, 2019



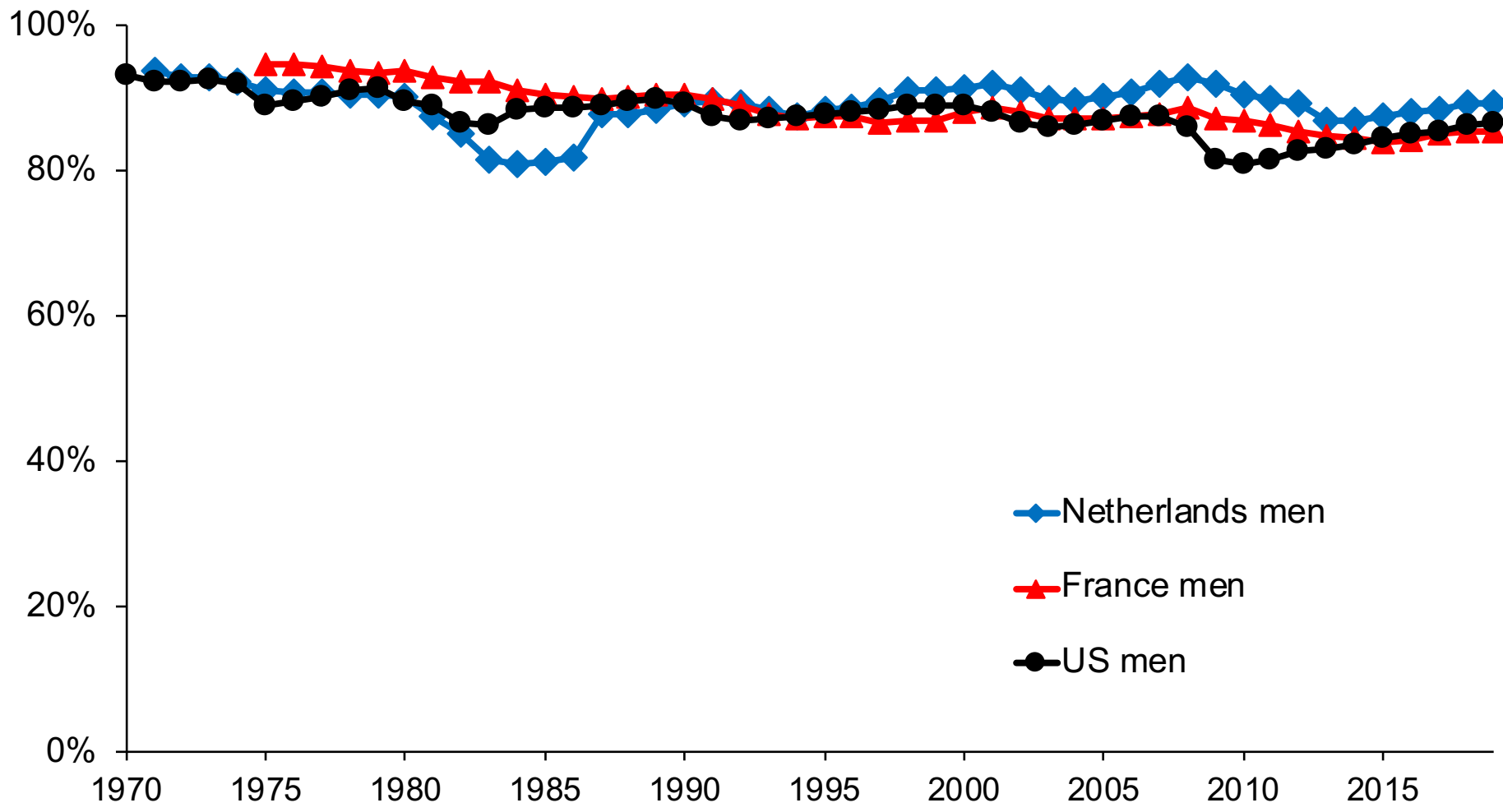
Source: OECD database online. Employment to population ratios.

## Employment Rates of Women by Age, 2019



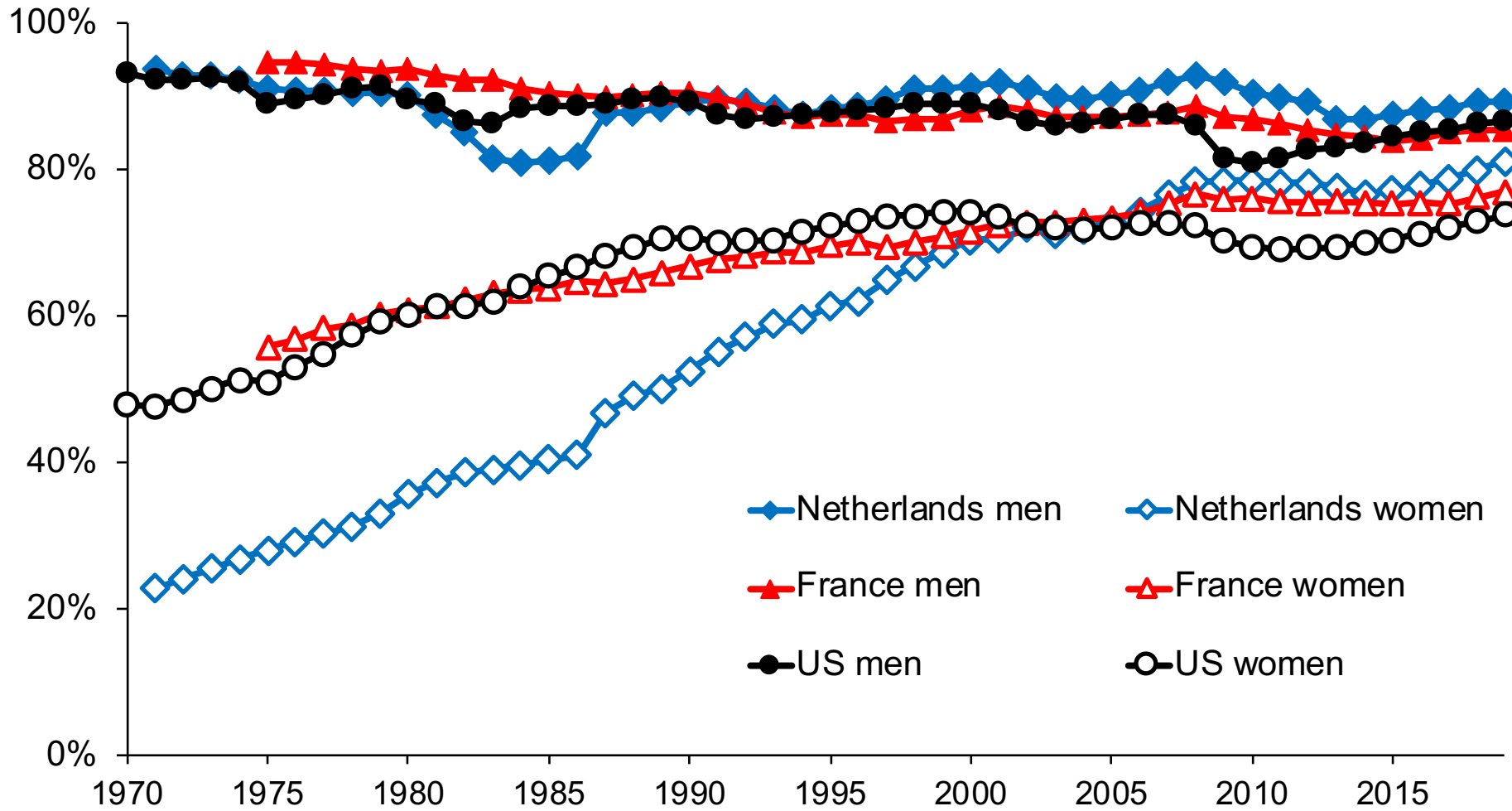
Source: OECD database online. Employment to population ratios.

# Employment Rates of Men and Women, aged 25-54



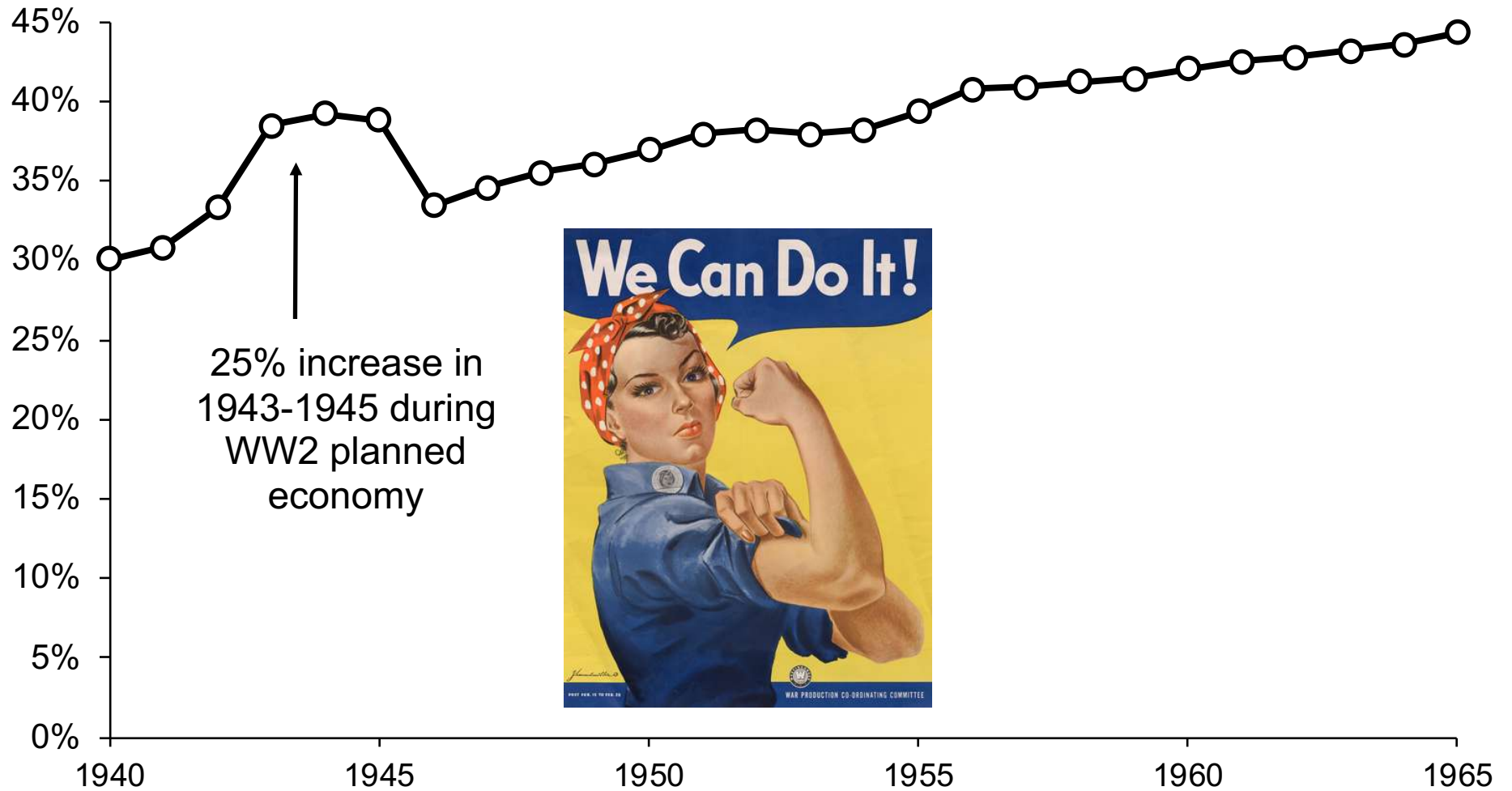
Source: OECD database online.

## Employment Rates of Men and Women, aged 25-54



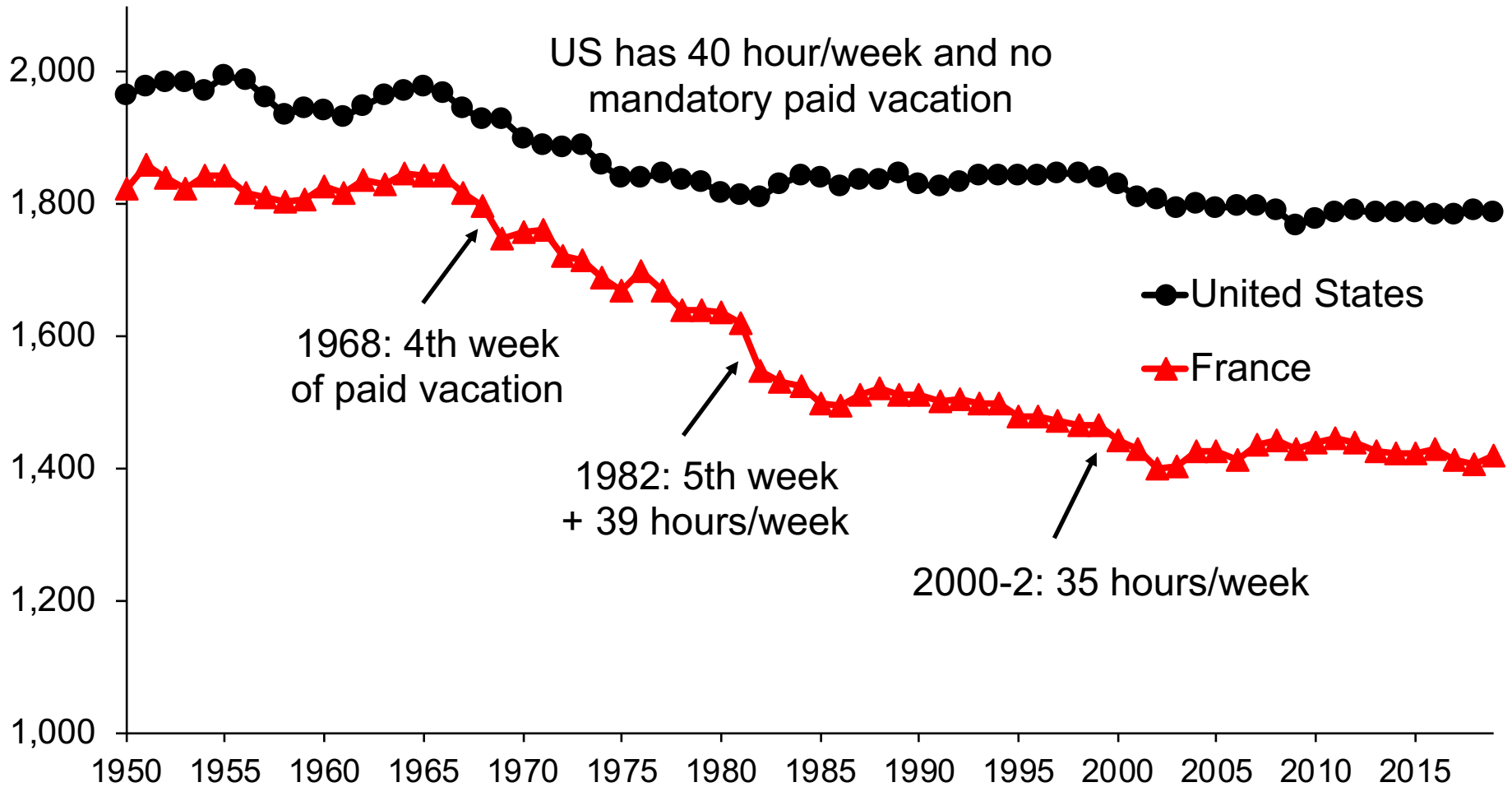
Source: OECD database online.

## US female labor force participation, age 16-64



**Source:** Historical Statistics of the United States (Current Population Reports).

## Average Annual Hours of Work of Employees



**Source:** OECD database online. Includes all ages, genders, and part-time, full-time, overtime.



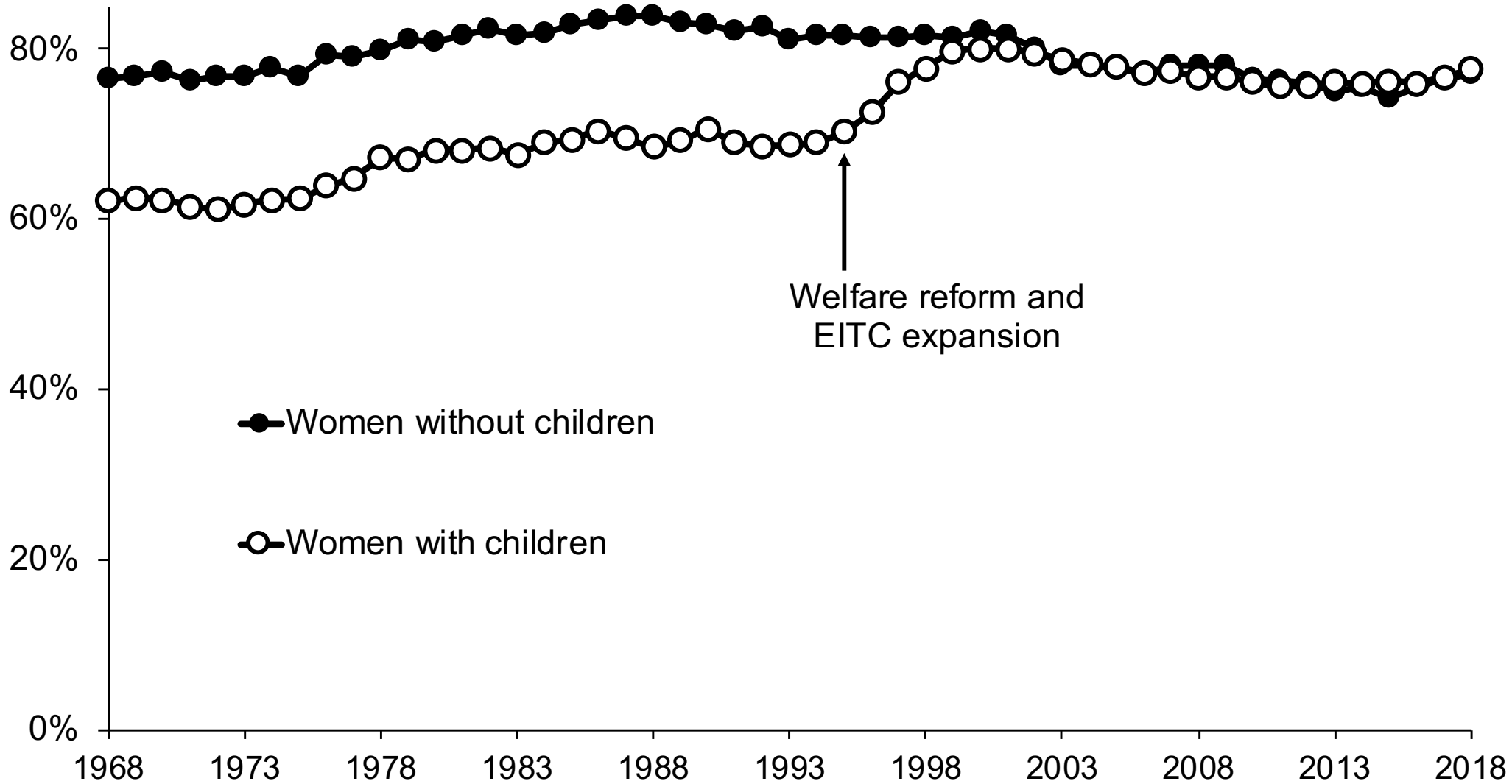
## LABOR SUPPLY AND TAXES/TRANSFERS

Labor supply responses to taxes/transfers generally modest for groups expected to work

Labor supply responses can be large for groups less attached (elderly, single mothers) but highly affected by social context:

- 1) German retirees heavily influenced by statutory retirement ages over and above financial incentives (Seibold 2020)
- 2) US single mothers responded strongly to welfare+EITC reforms of 1990s but not other EITC reforms (Kleven 2019)
- 3) Responses can be much larger when employers have incentives to accommodate responses

Panel C. Labor force participation of US single women, aged 20-50



## SUMMARY ON SOCIAL STATE

Education of the young, health care for the sick, retirement support for the old, and income support for the needy, are done through the social state

Humans struggle to solve these problems individually but are good at solving these issues collectively through social state

Social state leaves room for individual choice but shapes the overall outcome

Social state also has large impact on labor supply but a lot of it intentional (young, old, overtime) rather than unintended moral hazard

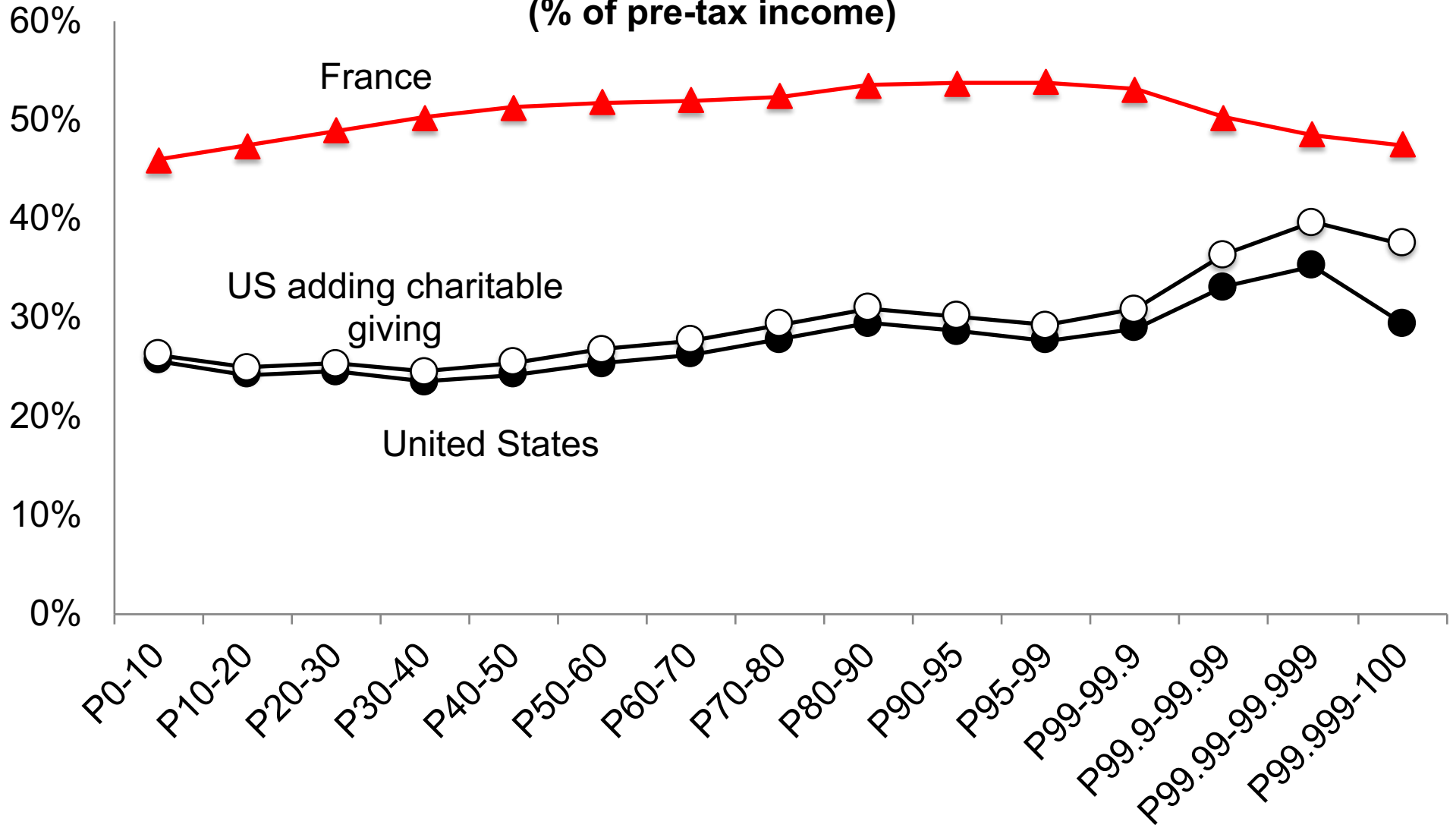
Our social nature is not limited to government and this shapes pre-tax inequality

## NON-GOVT SOCIAL INSTITUTIONS

Many private institutions preexist/supplement the social state:

- 1) Households (often modeled as single economic unit)
- 2) Villages in devo countries (Townsend); Common-pool resource groups to manage public goods (Ostrom); voluntary communes such as Israeli Kibbutz (Abramitzky)
- 3) Nonprofit organizations (charitable contributions and not-for-profit services/products)
- 4) Modern large employers:
  - (a) absorb risk and offer steady work and compensation
  - (b) fill gaps in social state (pensions and health in US)

### Average tax rates by income group in 2018: US vs. France (% of pre-tax income)



## SOCIAL BEHAVIOR

Social = taking a group perspective instead of individual

Household is the basic example standard in economics

But most economic behaviors have social aspects: teamwork production, etc.

Such contexts require cooperation with potential tension between group vs. individual goals

Cooperation can be **Authoritarian** or **Egalitarian**

Economics focuses on market solutions and pricing externalities but setting up markets is too costly in many contexts (Coase)

## HOW IS COOPERATION SUSTAINED?

Cooperation benefits group but faces 2 challenges:

- (a) the classic “social dilemma” (how to achieve efficiency)
- (b) how to distribute gains (equity issue).

Sustained through various ways:

- 1) Social preferences: Altruism and reciprocity (e.g. family)
- 2) Social authority (e.g. hierarchy, social norms, rules)
- 3) Fairness: Acceptable distribution
- 4) Resent and punish non-cooperators

# LAB EVIDENCE ON COOPERATION

## (a) COOPERATION IN PRODUCTION

**Public good game:** 50% contribute to public good instead of playing selfish Nash. Willingness to pay to punish the selfish

**Effort reciprocity:** recipients work harder for employer when employer more generous (Fehr-Kirchsteiger-Riedl)

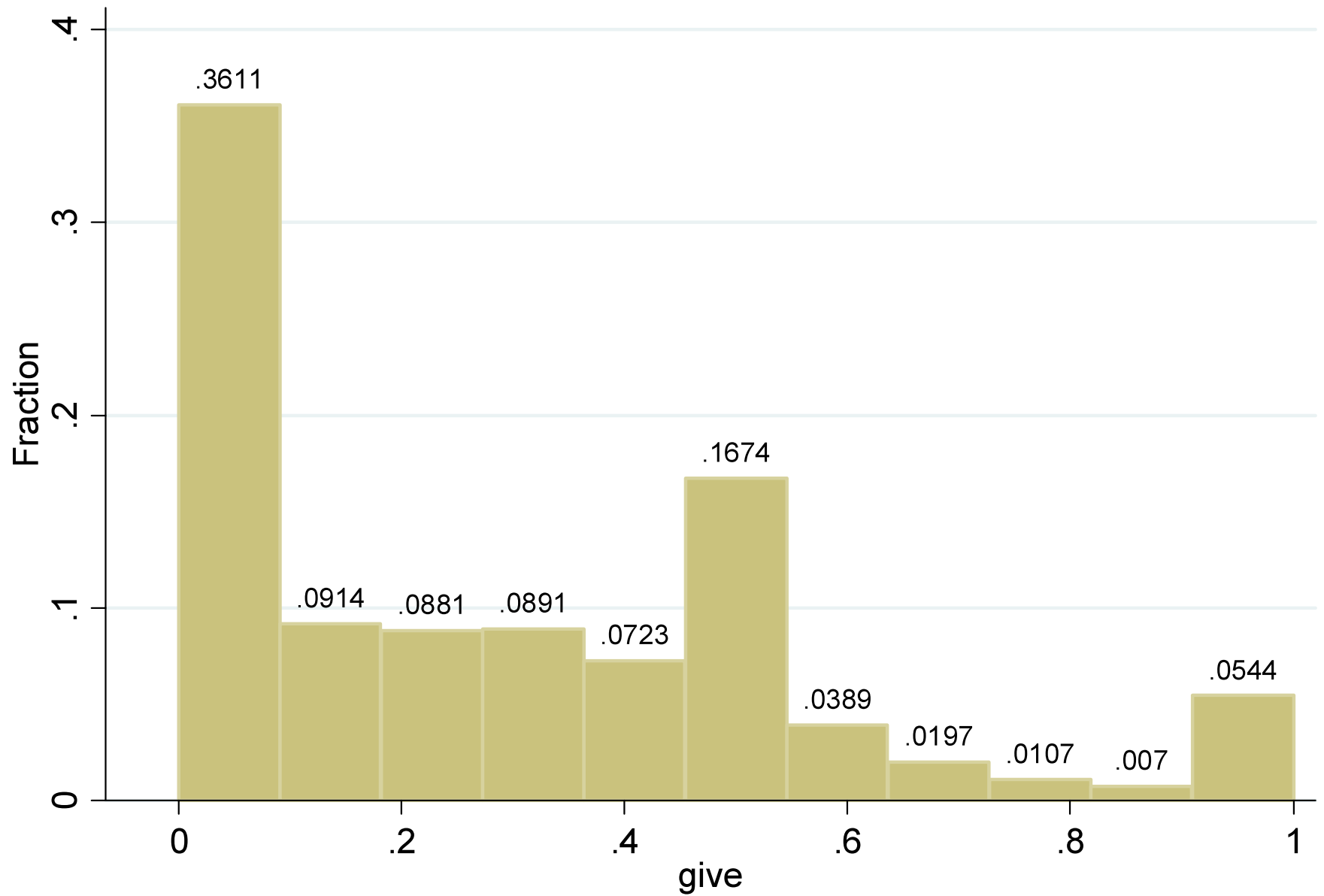
## (b) DISTRIBUTION OF SURPLUS

**Dictator game:** 2/3 of “dictators” share part of endowment with recipient (50/50 sharing most common)

More sharing if recipient helped create endowment or is needy

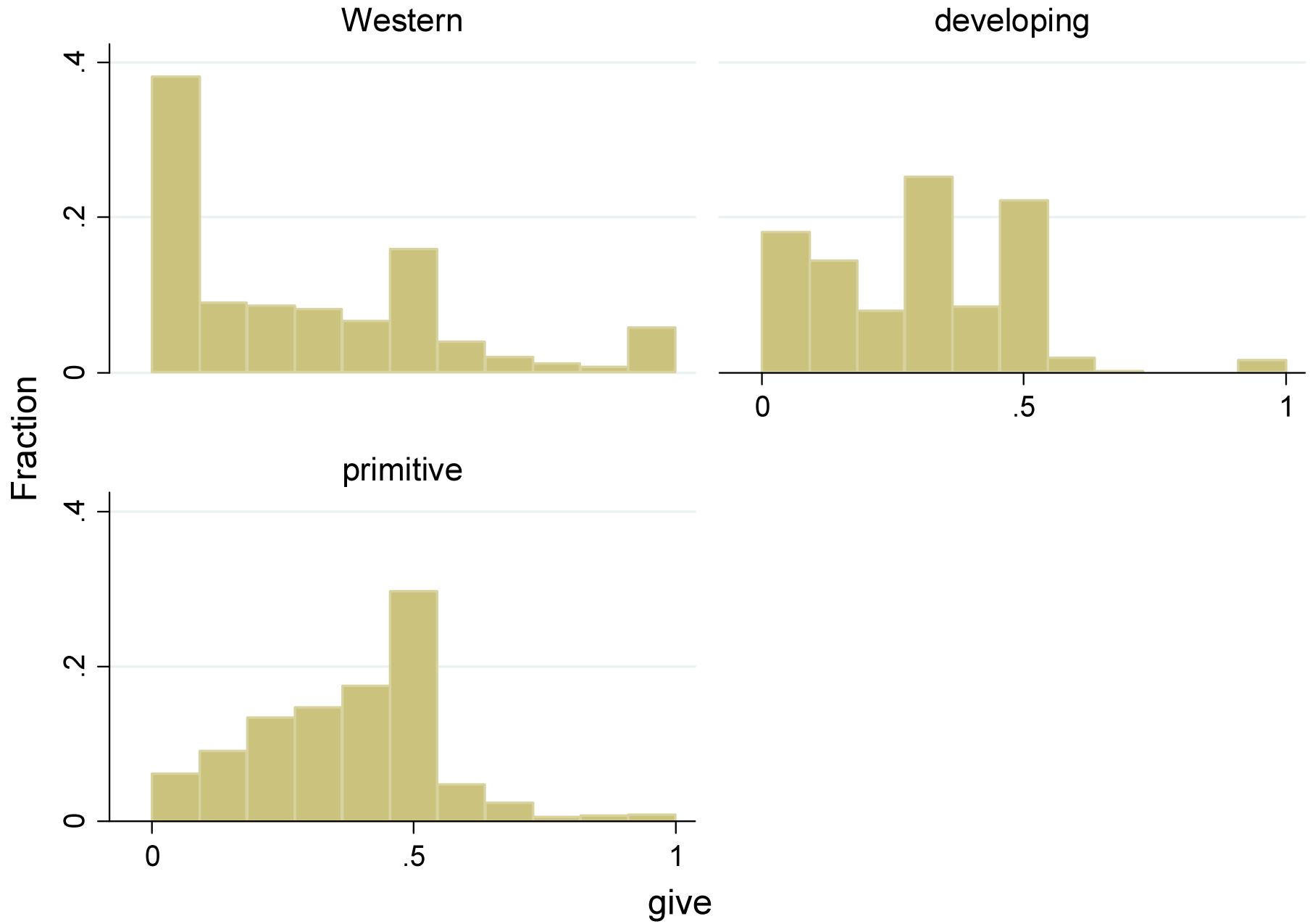
**Ultimatum game:** recipients refuse offers that are too unequal and proposers tend to offer close to equal split





data only from 328 treatments with full range information, N = 20813

**Fig. 2** Distribution of individual give rates



**Fig. 9** Society of origin

## INEQUALITY WITHIN THE FIRM

Production within firm requires cooperation and splitting of product

Standard theory: perfect cooperation in production and costless matching  $\Rightarrow$  wage = marginal product

Contract theory questions perfect cooperation and search theory introduces matching costs

With costly matching: wage can be anywhere in range defined by outside options

$\Rightarrow$  Leaves room for social effects and distributional conflict

## CONSEQUENCE: RIGID COMPENSATION RULES

Individual contributions to production often hard to measure and bargaining over surplus is costly

⇒ Rigid compensation rules are common

Pay scales, cost-of-living adjustments, uniform pay raises

Wages downward rigid even in recessions because pay cuts hurt morale and cooperation of workers (Bewley 1999)

Wages sticky to payroll taxes at individual level

But also 2/20 rules for hedge fund managers, equal sharing of credit among academic authors, etc.

The compensation rules affect pre-tax inequality

## **PRE-TAX DISTRIBUTION FIGHT IS CRUCIAL**

Owners+workers jointly create economic surplus within firms

⇒ Natural and historical place where distributional fight happens (with government being the partial referee)

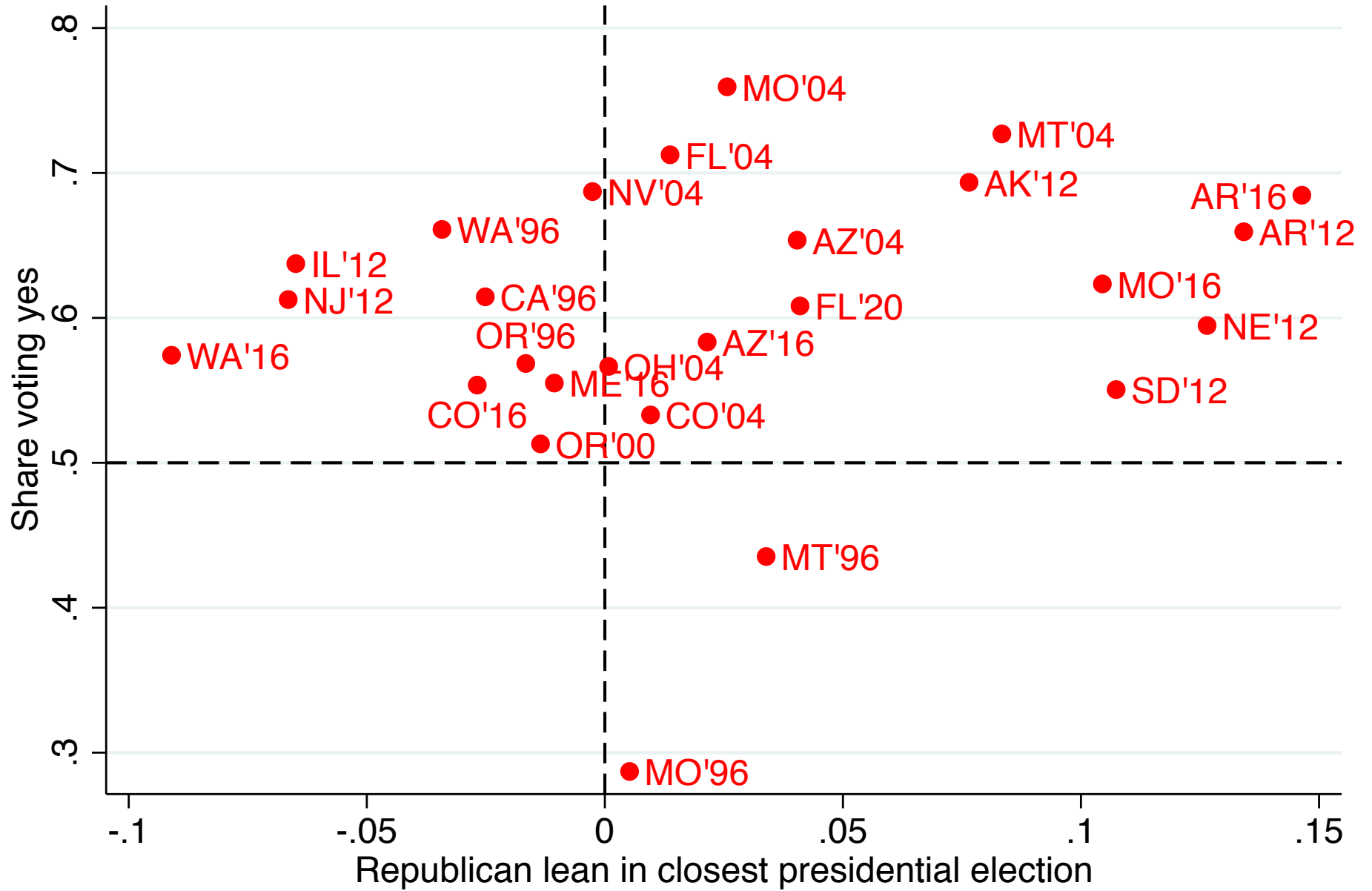
Union bargaining play(ed) central role in most countries in wage setting sometimes institutionalized through labor boards

US public: inequality should be solved by private sector rather than government, jobs should pay living wages (McCall '13)

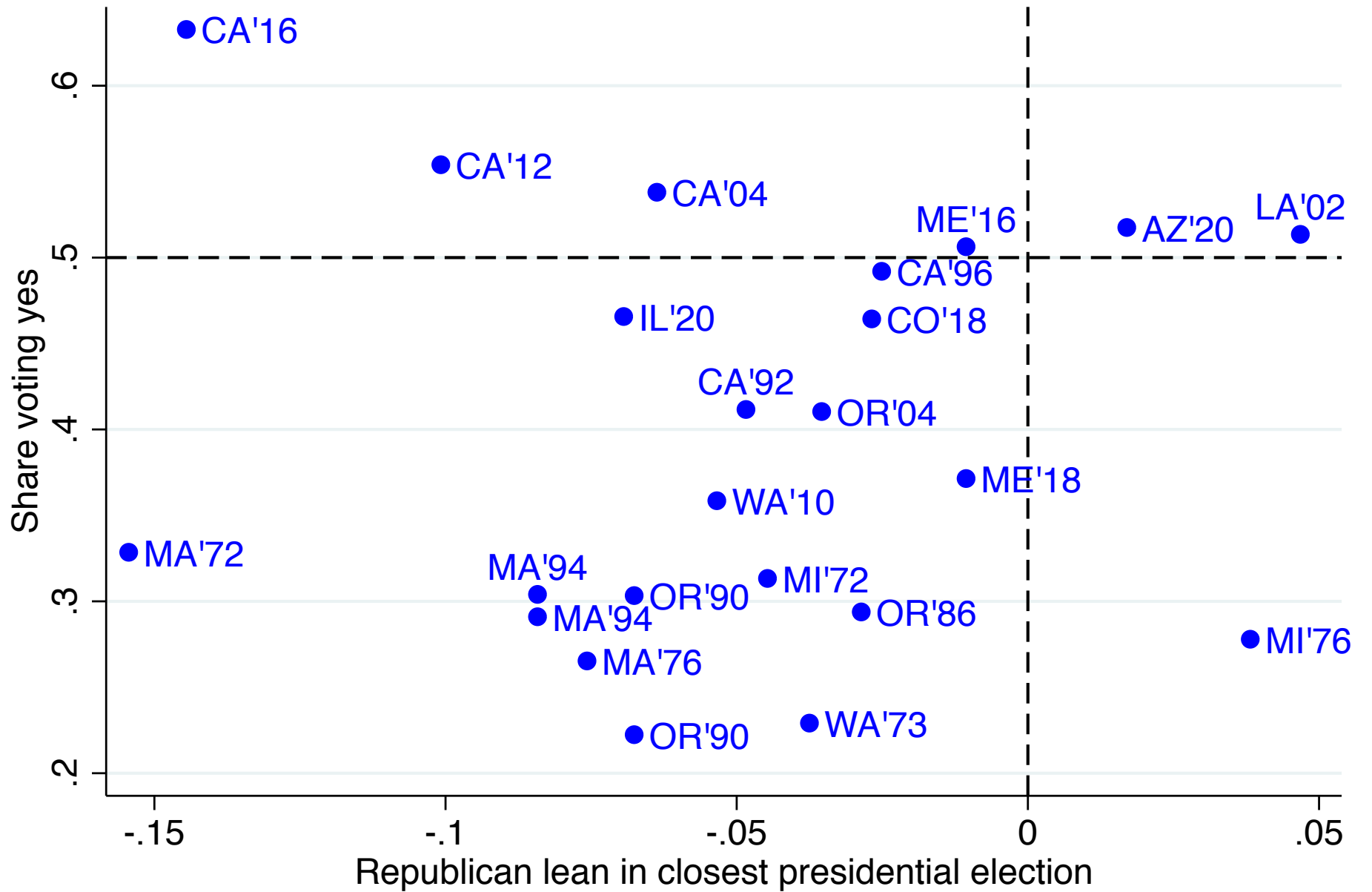
Minimum wage is popular across the board (in the US, 25/27 state level ballots won since 1996 in both red and blue states)

Tax the rich ballot initiatives much less successful

Panel A. Minimum wage ballots (since 1996)



# Panel B. Tax the rich ballots (since 1972)



## NORMATIVE CONSEQUENCES

1) Revealed individual preferences may not be informative of social preferences

2) Replacing social institutions by markets+individual choice might not always work well (e.g., retirement, education)

3) Social system functions best when individuals internalize the social objective

⇒ better to eliminate than face the equity-efficiency tradeoff

4) More possibilities than economists generally think