



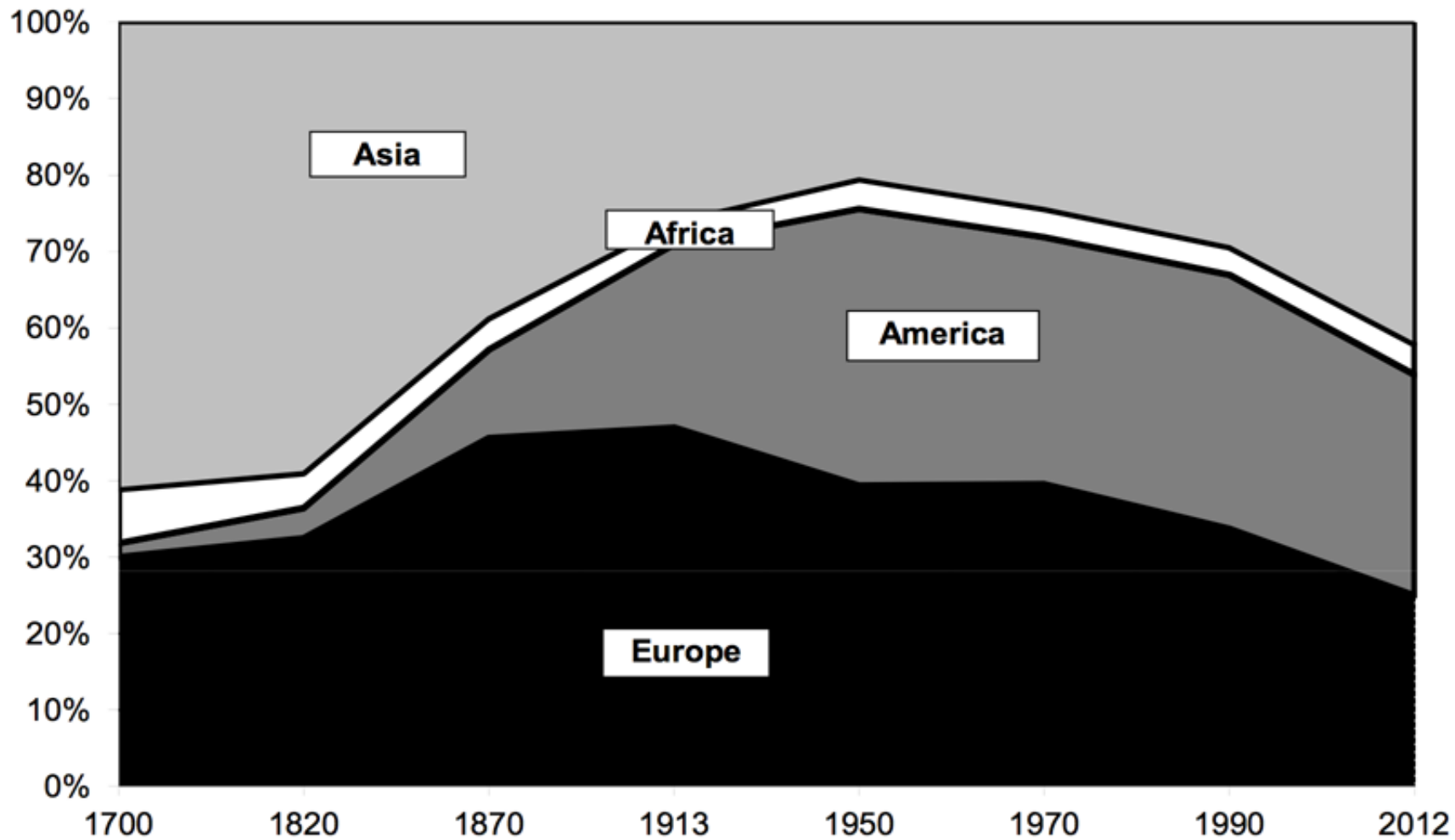
The background of the slide is a light gray gradient, decorated with numerous realistic water droplets of various sizes. The droplets are rendered with soft shadows and highlights, giving them a three-dimensional appearance. They are scattered across the frame, with a higher concentration in the upper left and lower right corners.

# CAPITAL IN THE TWENTY-FIRST CENTURY

- THOMAS PIKETTY

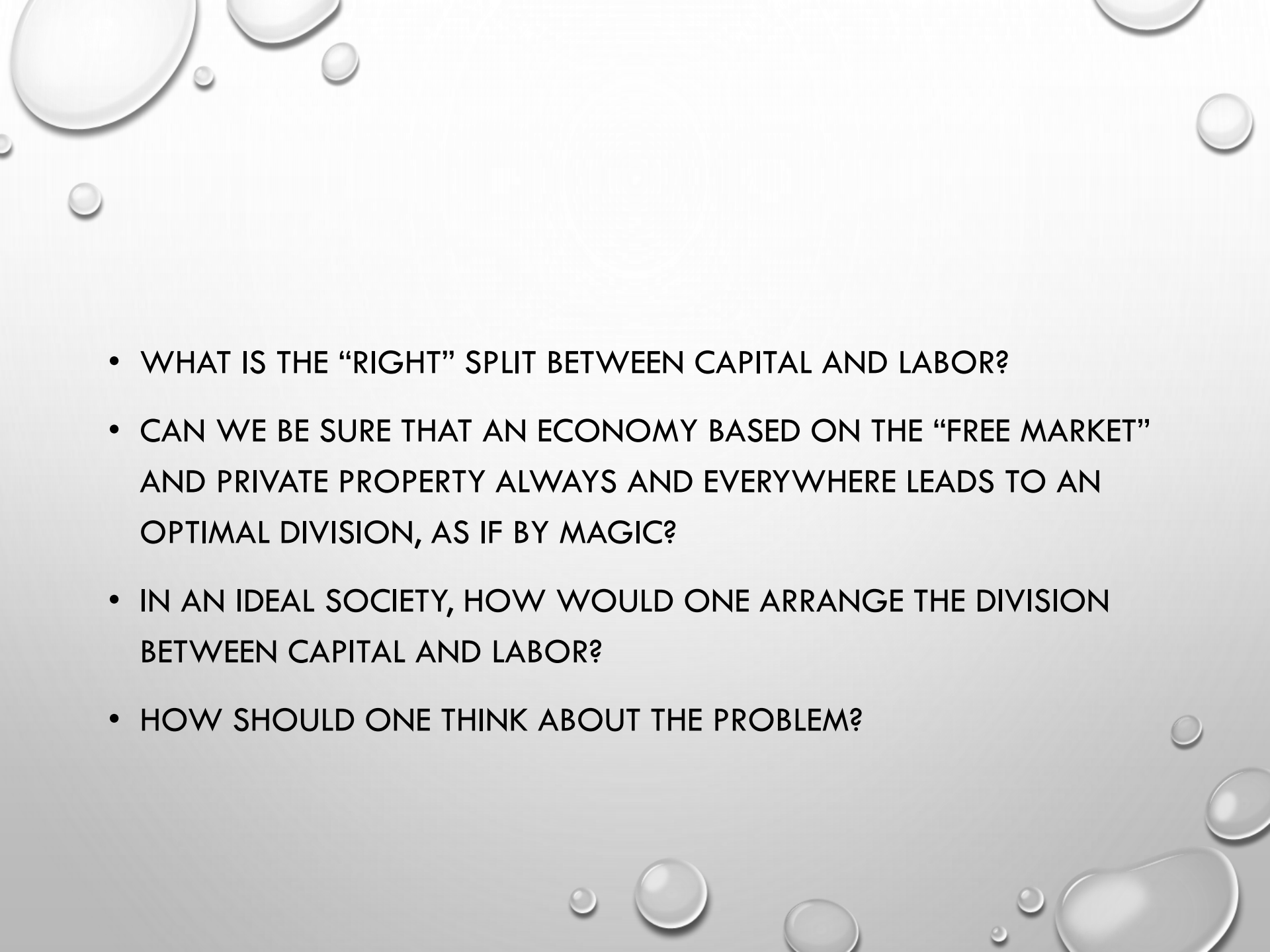
- ECONOMISTS USED TO STUDY INEQUITY BUT STOPPED MID 20TH CENTURY AND FELL IN LOVE WITH ABSTRACT MATH.
- PIKETTY AND COLLABORATORS HAVE SPENT THE LAST DECADE GATHERING DATA FROM MANY COUNTRIES.
- THE MATH AND DATA TOGETHER SAY INEQUITY WILL GET WORSE AND THE RISE OF THE MIDDLE CLASS WAS AN EFFECT OF THE SHOCKS OF THE WORLD WARS AND THE GREAT DEPRESSION.
- NOW WE ARE RETURNING TO A MORE HISTORICALLY TYPICAL SITUATION, WHERE GROWTH IS LOW AND RETURN ON CAPITAL OVERCOMES RETURN ON LABOR AND INEQUITY WILL SURPASS THE GILDED AGE UNLESS WE CHANGE SOME OF THE DETAILS OF OUR TAX SYSTEM

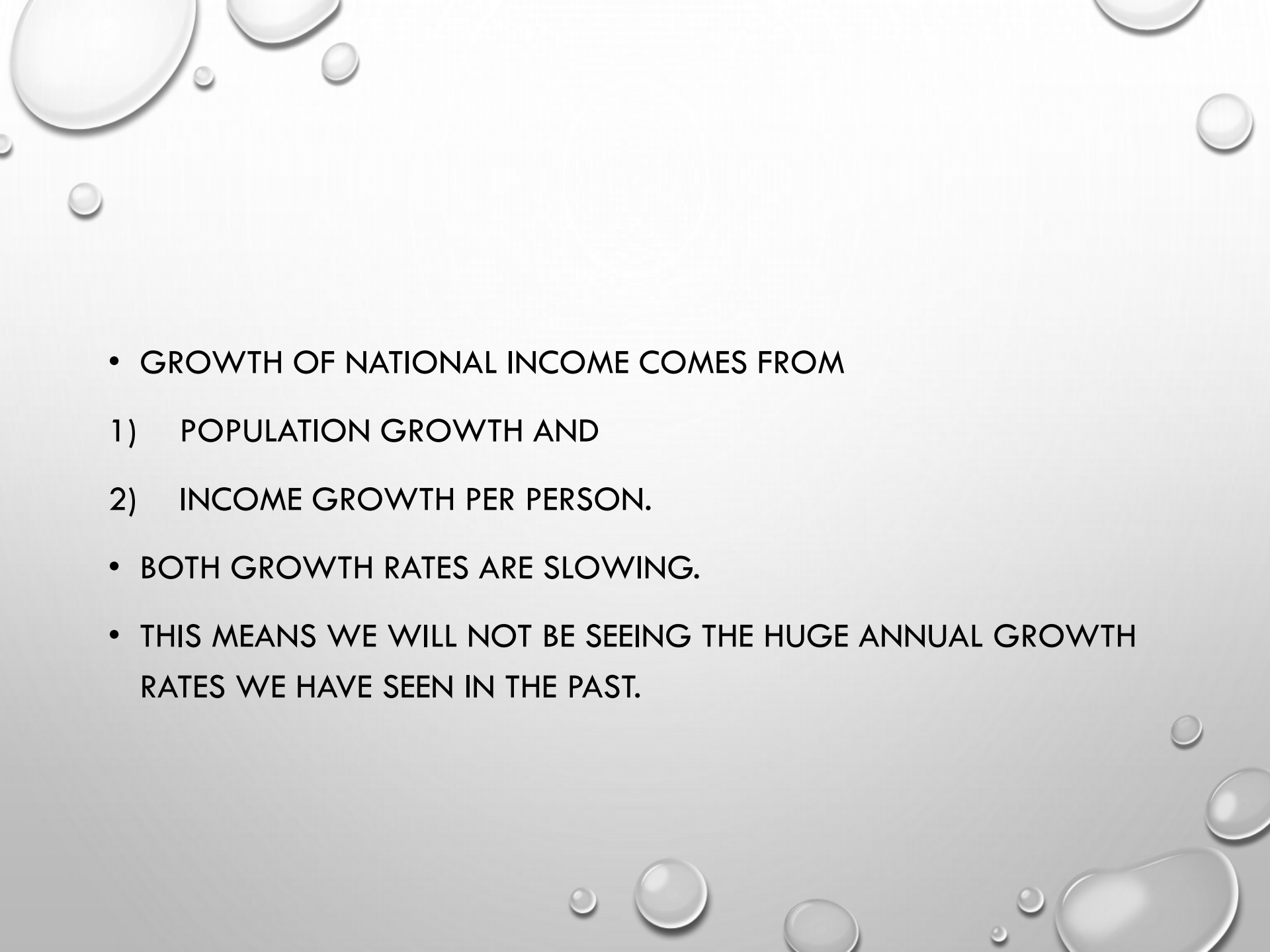
**Figure 1.1. The distribution of world output 1700-2012**



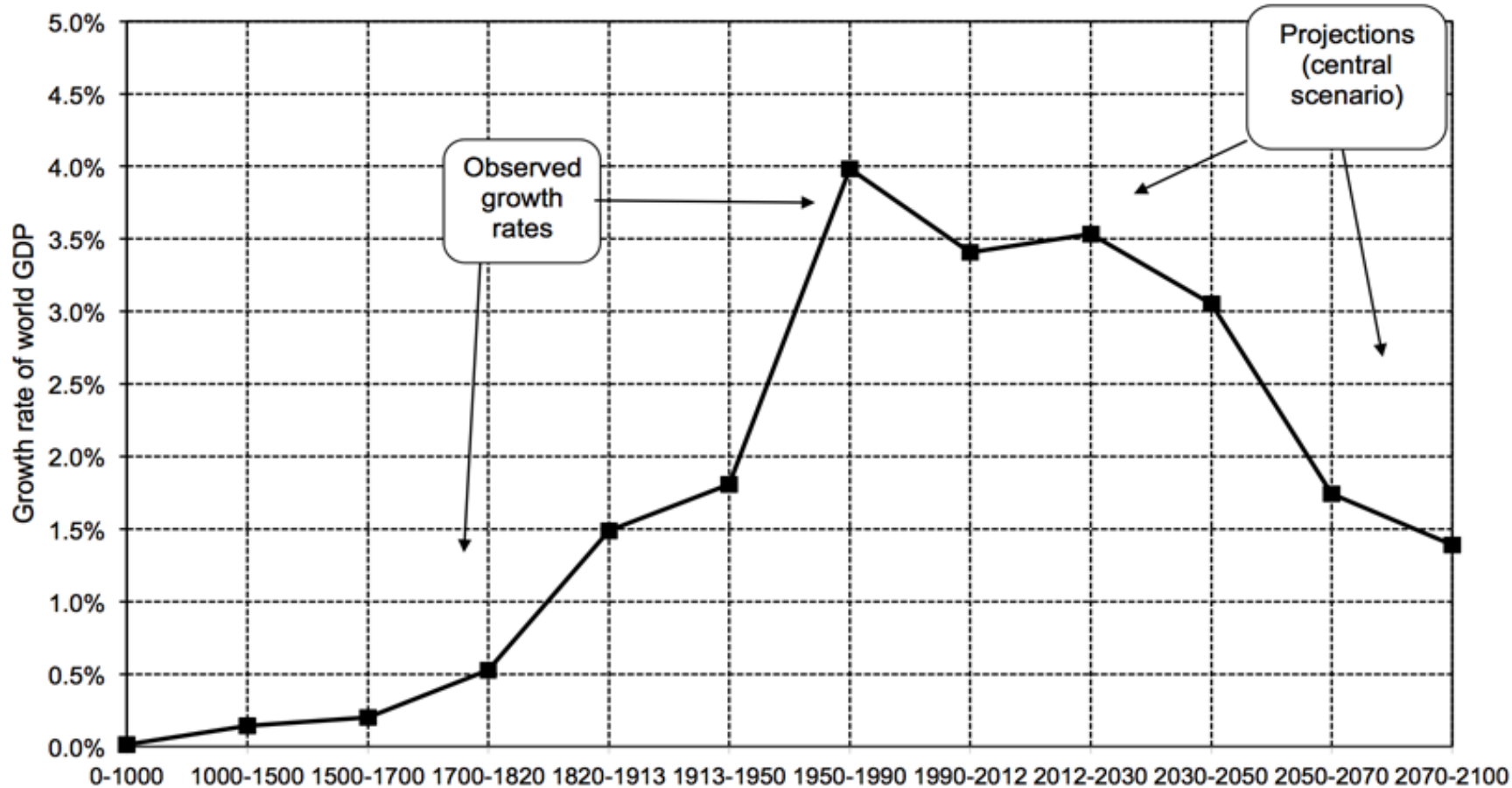
Europe's GDP made 47% of world GDP in 1913, down to 25% in 2012.

Sources and series: see [piketty.pse.ens.fr/capital21c](http://piketty.pse.ens.fr/capital21c).

- 
- WHAT IS THE “RIGHT” SPLIT BETWEEN CAPITAL AND LABOR?
  - CAN WE BE SURE THAT AN ECONOMY BASED ON THE “FREE MARKET” AND PRIVATE PROPERTY ALWAYS AND EVERYWHERE LEADS TO AN OPTIMAL DIVISION, AS IF BY MAGIC?
  - IN AN IDEAL SOCIETY, HOW WOULD ONE ARRANGE THE DIVISION BETWEEN CAPITAL AND LABOR?
  - HOW SHOULD ONE THINK ABOUT THE PROBLEM?

- 
- GROWTH OF NATIONAL INCOME COMES FROM
    - 1) POPULATION GROWTH AND
    - 2) INCOME GROWTH PER PERSON.
  - BOTH GROWTH RATES ARE SLOWING.
  - THIS MEANS WE WILL NOT BE SEEING THE HUGE ANNUAL GROWTH RATES WE HAVE SEEN IN THE PAST.

**Figure 2.5. The growth rate of world output from Antiquity until 2100**



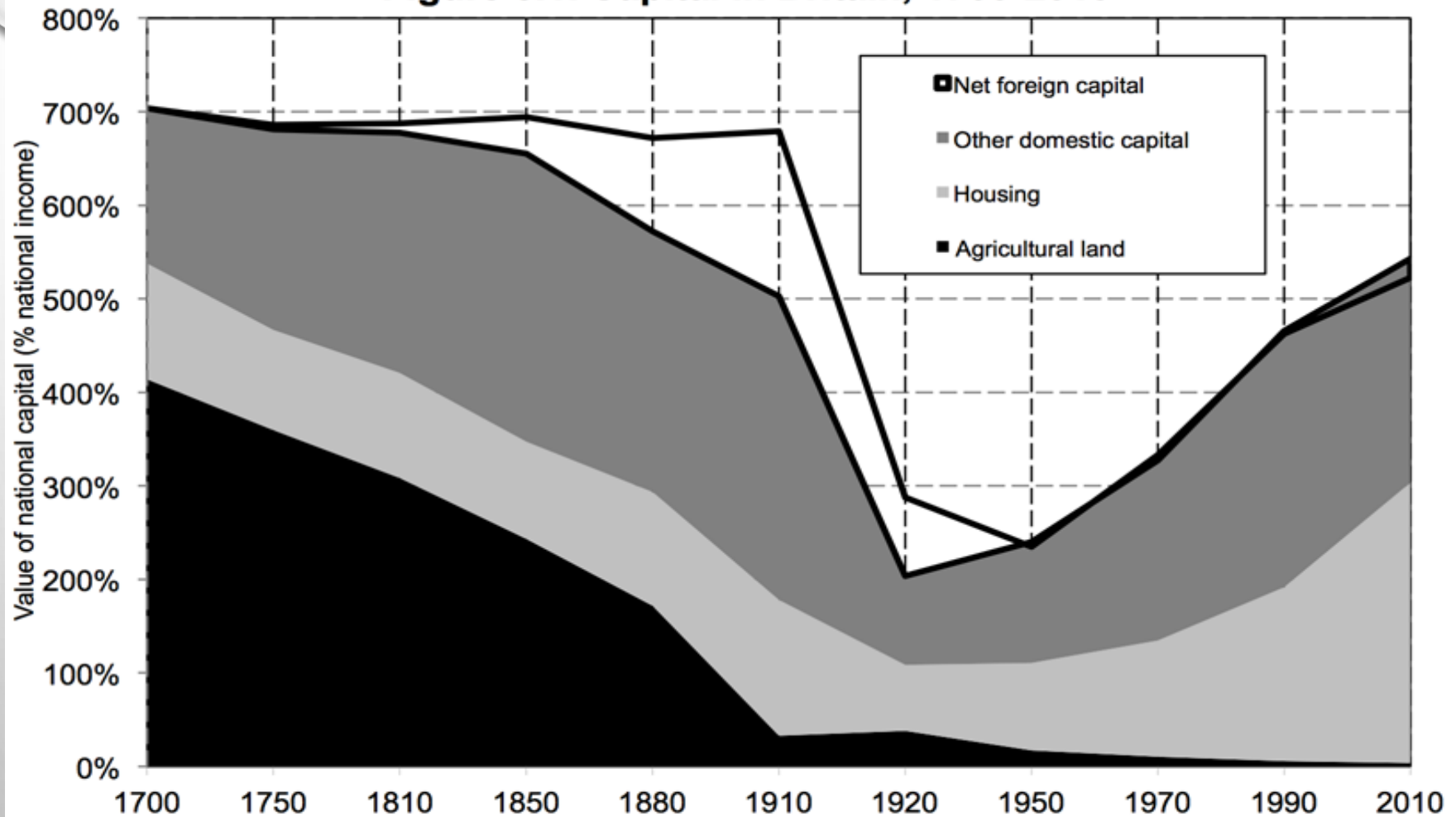
The growth rate of world output surpassed 4% from 1950 to 1990. If the convergence process goes on it will drop below 2% by 2050. Sources and series: see [piketty.pse.ens.fr/capital21c](http://piketty.pse.ens.fr/capital21c).

- ACCORDING TO THE BEST AVAILABLE ESTIMATES, GLOBAL OUTPUT GREW AT AN AVERAGE ANNUAL RATE OF 1.6 PERCENT BETWEEN 1700 AND 2012, 0.8 PERCENT OF WHICH REFLECTS POPULATION GROWTH, WHILE ANOTHER 0.8 PERCENT CAME FROM GROWTH IN OUTPUT PER HEAD

# THE METAMORPHOSES OF CAPITAL

- A HISTORY OF THE SIZE AND MAKEUP OF CAPITAL IN BRITAIN AND FRANCE.
- CAPITAL AND INCOME IN THE EIGHTEENTH CENTURY WERE VIEWED AS SYNONYMS WITH AN IMPLICIT MULTIPLIER BECAUSE A CONSTANT RETURN WAS AVAILABLE TO OWNERS OF CAPITAL.
- BOTH BRITAIN AND FRANCE SHOW THE SAME PATTERN WHERE CAPITAL TOOK IT ON THE CHIN IN THE 20TH CENTURY DUE TO SHOCKS, AND INDEPENDENTLY LAND STOPPED BEING THE MAIN TYPE OF CAPITAL, BUT CAPITAL HAS MADE A HUGE COMEBACK OF LATE.
- IT WAS THE WARS OF THE TWENTIETH CENTURY THAT WIPED AWAY THE PAST TO CREATE THE ILLUSION THAT CAPITALISM HAD BEEN STRUCTURALLY TRANSFORMED

**Figure 3.1. Capital in Britain, 1700-2010**



National capital is worth about 7 years of national income in Britain in 1700 (including 4 in agricultural land).

Sources and series: see [piketty.pse.ens.fr/capital21c](http://piketty.pse.ens.fr/capital21c).

- AN EXAMINATION OF THE HISTORY OF CAPITAL IN GERMANY, CANADA, AND THE UNITED STATES. EACH HAS A DIFFERENT PATTERN THAN ENGLAND AND FRANCE, AND AMONG THEMSELVES.
- THE CURRENT TREND IS THE SAME AS ENGLAND AND FRANCE BUT WITH THE VALUE OF CAPITAL NOT YET AT THE SAME HEIGHTS
- *CAPITAL IN THE NEW WORLD TOOK SOME QUITE UNUSUAL AND SPECIFIC FORMS,*
- *IN THE FIRST PLACE BECAUSE LAND WAS SO ABUNDANT THAT IT DID NOT COST VERY MUCH;*
- *SECOND, BECAUSE OF THE EXISTENCE OF SLAVERY; AND*
- *FINALLY, BECAUSE THIS REGION OF PERPETUAL DEMOGRAPHIC GROWTH TENDED TO ACCUMULATE STRUCTURALLY SMALLER AMOUNTS OF CAPITAL (RELATIVE TO ANNUAL INCOME AND OUTPUT) THAN EUROPE DID*

- There are many detailed treatments of privatization and foundations and the stock asset values

- *Capital share of national income* : a number,

$$\mathbf{ALPHA} = (\text{capital income}) / (\text{national income})$$

- *Capital income ratio* : a number,

$$\mathbf{BETA} = (\text{national capital}) / (\text{national income})$$

- *Savings rate*: a number

$s$  = fraction of total national income that is saved

- *Growth rate of national income*: a number

$g$  = the amount the income grows per year

- *Rate of return on capital* : an average number  $r$  (for example 0.05 if you get a 5% savings account)

# FIRST FUNDAMENTAL LAW OF CAPITALISM

- The first law of capitalism:

$$\mathbf{ALPHA = r * BETA}$$

- This is an accounting identity and is true by definition-- the share of income that is investment rather than labor is determined entirely by how much capital there is and what its average return is

# SECOND FUNDAMENTAL LAW OF CAPITALISM

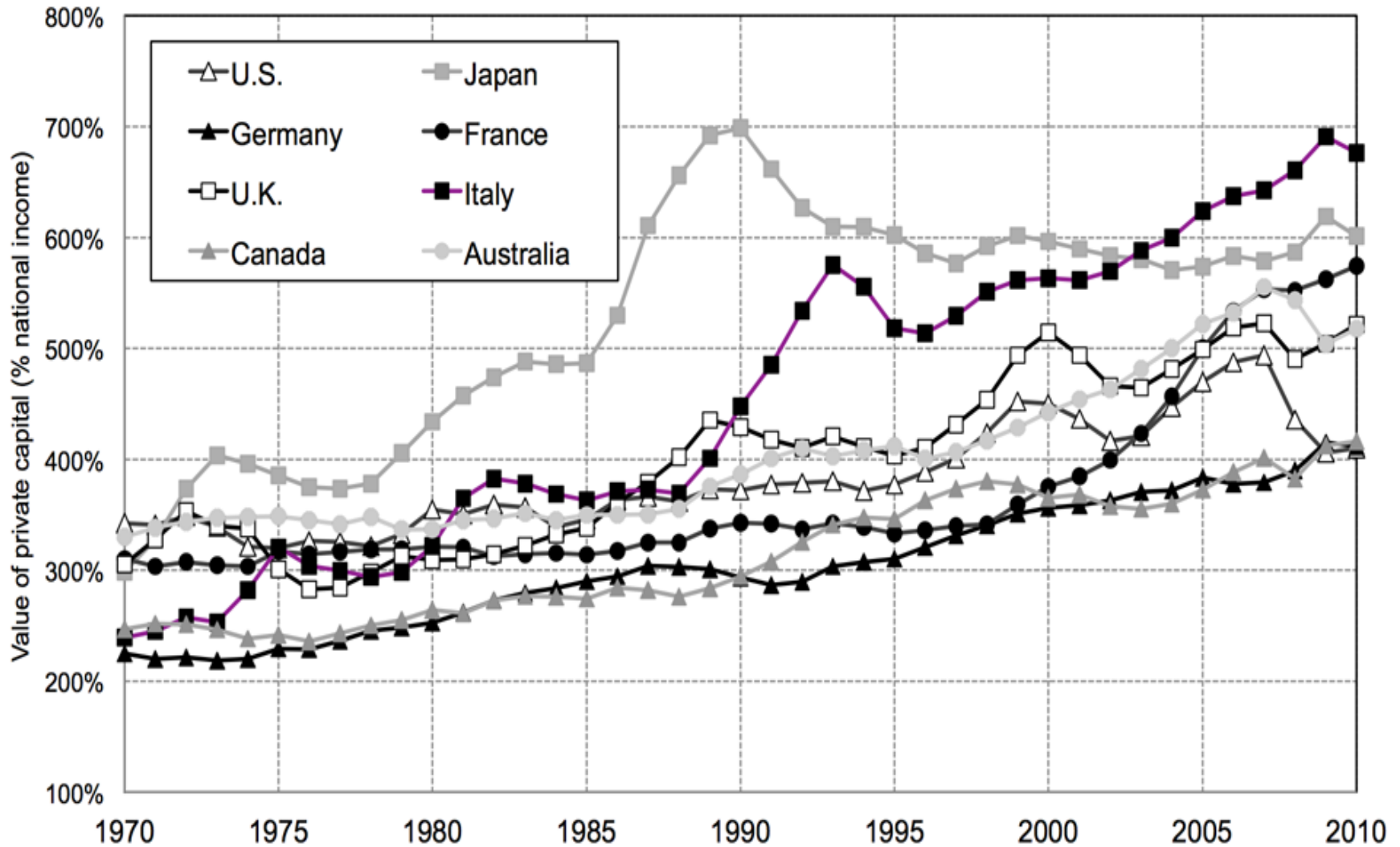
- Second fundamental law of capitalism:

$$BETA = s / g$$

- The second law is asymptotic and only true in the long run for the stable case of a certain  $s$  and a certain  $g$ .
- A key point is that **beta** goes up if savings  $s$  is large and/or growth  $g$  is small

- **BETA** SEEMS TO BE GOING UP A LOT THE LAST 40 YEARS
- GIVEN THE STRONG, STEADY INCREASE OF THE CAPITAL/ INCOME RATIO SINCE THE 1950S ,
- MOREOVER, IT IS NATURAL TO ASK WHETHER THIS INCREASE WILL CONTINUE IN THE DECADES TO COME AND WHETHER THE CAPITAL/ INCOME RATIO WILL REGAIN OR EVEN SURPASS PAST LEVELS BEFORE THE END OF THE TWENTY-FIRST CENTURY

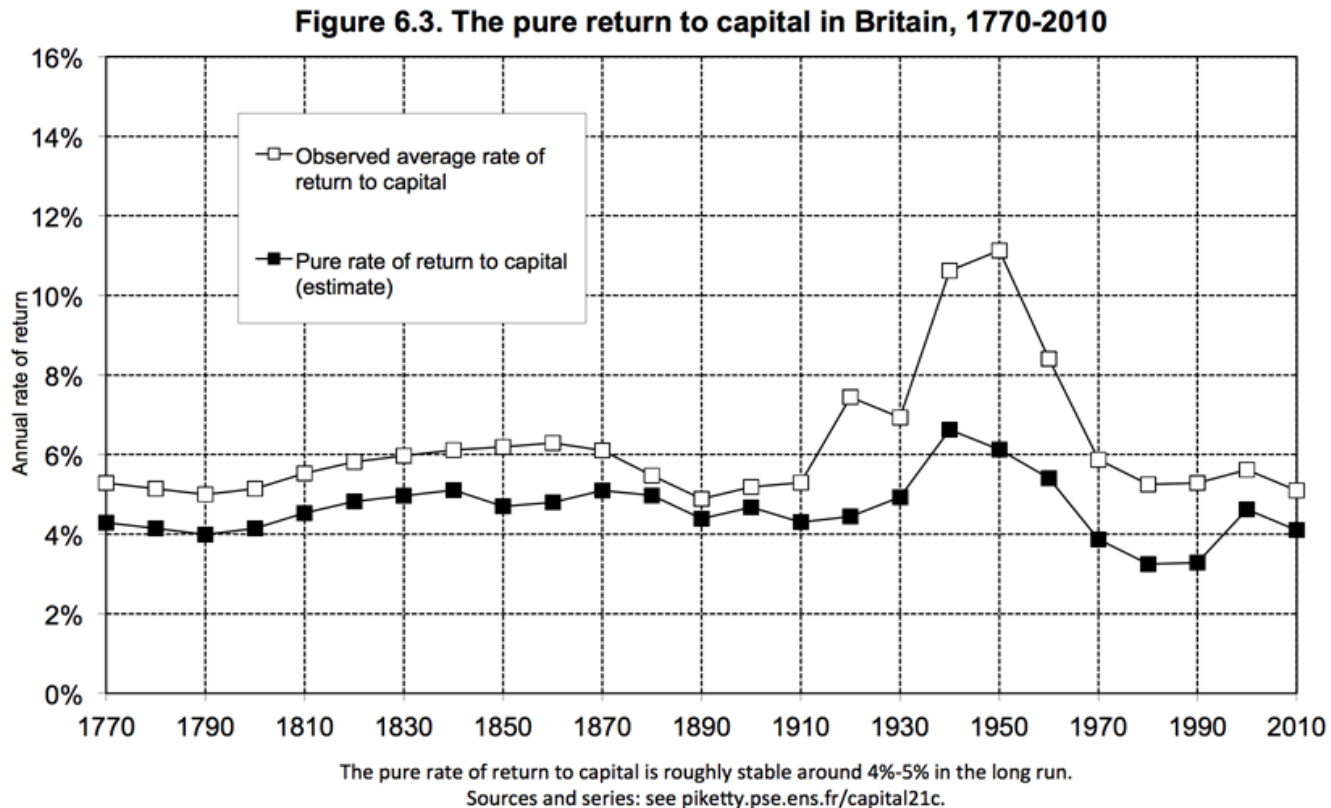
**Figure 5.3. Private capital in rich countries, 1970-2010**



Private capital is worth between 2 and 3.5 years of national income in rich countries in 1970, and between 4 and 7 years of national income in 2010. Sources and series: see [piketty.pse.ens.fr/capital21c](http://piketty.pse.ens.fr/capital21c).

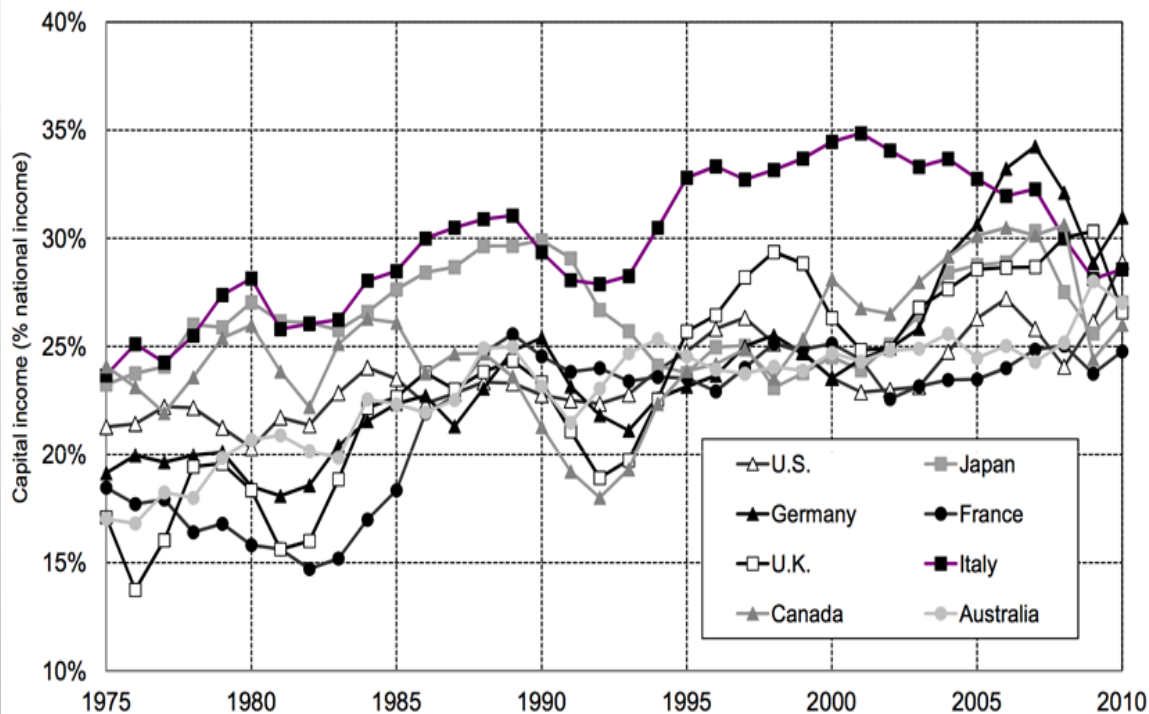
# THE CAPITAL-LABOR SPLIT

- The rate of return,  $r$ , seems to like 4-5% 200 years ago and 3-4% now as evidenced in Britain



- Since  $r$  is relatively stable and BETA is increasing, one would expect ALPHA (the share of income that is capital income) to be increasing
- The share of income going to capital rather than labor is going up

Figure 6.5. The capital share in rich countries, 1975-2010



Capital income absorbs between 15% and 25% of national income in rich countries in 1970, and between 25% and 30% in 2000-2010. Sources and series: see [piketty.pse.ens.fr/capital21c](http://piketty.pse.ens.fr/capital21c)

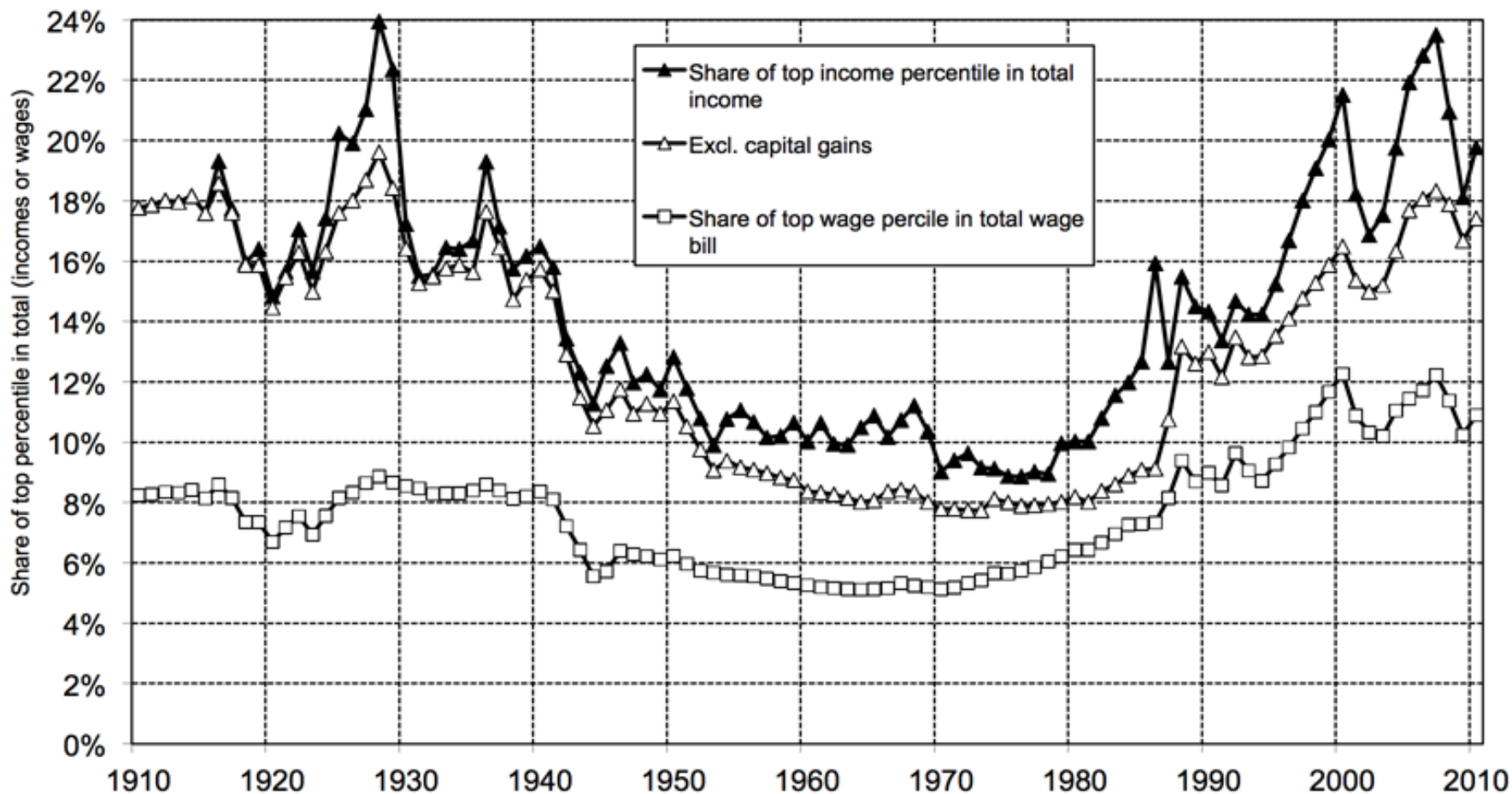
# THE STRUCTURE OF INEQUALITY

- How much has the structure of inequality with respect to both labor and capital actually changed since the nineteenth century?
- Piketty makes a careful argument that distribution tables are preferable to simpler numeric measures of inequality
- *Make no mistake: the growth of a true “patrimonial (or propertied) middle class” was the principal structural transformation of the distribution of wealth in the developed countries in the twentieth century*

# TWO WORLDS

- INCOME INEQUALITY IN FRANCE AND THE US FOLLOW A U-SHAPED CURVE IN THE 20TH CENTURY.
- A CHARACTERISTIC THAT IS NEW IN MODERN TIMES IS THAT HIGH SALARIES ARE AN IMPORTANT PART OF THE INEQUALITY STORY AS EVIDENT IN THE BOTTOM CURVE FOR THE US
- *THE SHOCKS OF THE PERIOD 1914– 1945 PLAYED AN ESSENTIAL ROLE IN THE COMPRESSION OF INEQUALITY, AND THIS COMPRESSION WAS IN NO WAY A HARMONIOUS OR SPONTANEOUS OCCURRENCE.*
- *THE INCREASE IN INEQUALITY SINCE 1970 HAS NOT BEEN THE SAME EVERYWHERE, WHICH AGAIN SUGGESTS THAT INSTITUTIONAL AND POLITICAL FACTORS PLAYED A KEY ROLE*

**Figure 8.8. The transformation of the top 1% in the United States**

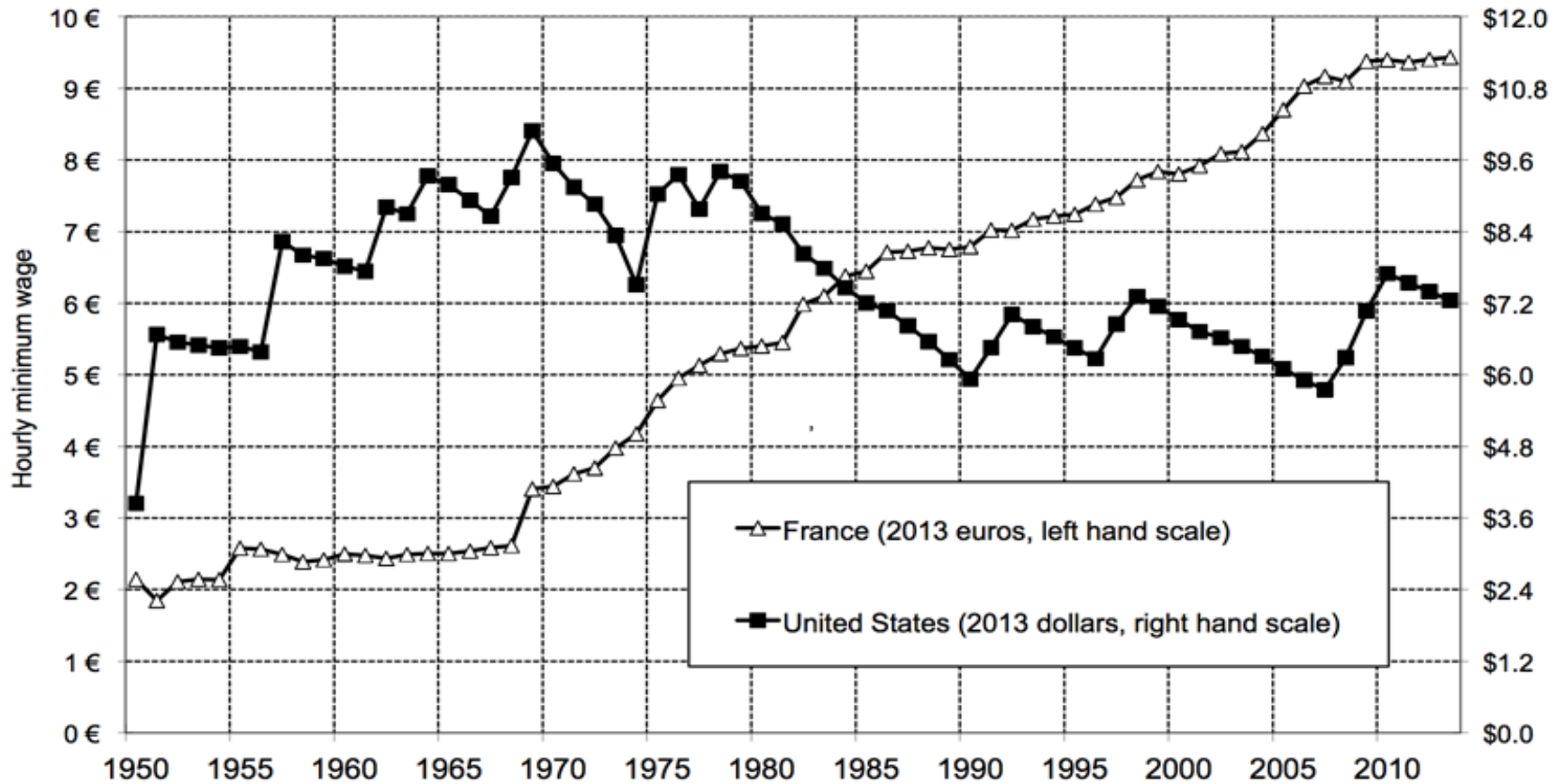


The rise in the top 1% highest incomes since the 1970s is largely due to the rise in the top 1% highest wages. Sources and series: see [piketty.pse.ens.fr/capital21c](http://piketty.pse.ens.fr/capital21c).

# INEQUALITY OF LABOR INCOME

- INTERESTINGLY A CENTURY AGO EUROPE WAS LESS EQUAL THAN THE US, BUT NOW THE US LEADS THE DEVELOPED WORLD IN INCOME INEQUALITY.
- LABOR INCOME TRENDS ARE INFLUENCED BY CULTURE AND INSTITUTIONS, ESPECIALLY AT THE BOTTOM AND TOP OF THE INCOME SCALES.
- THE BOTTOM OF THE SCALE FOLLOWS MINIMUM WAGE WHICH IS VERY DIFFERENT IN DIFFERENT COUNTRIES

**Figure 9.1. Minimum wage in France and the U.S., 1950-2013**



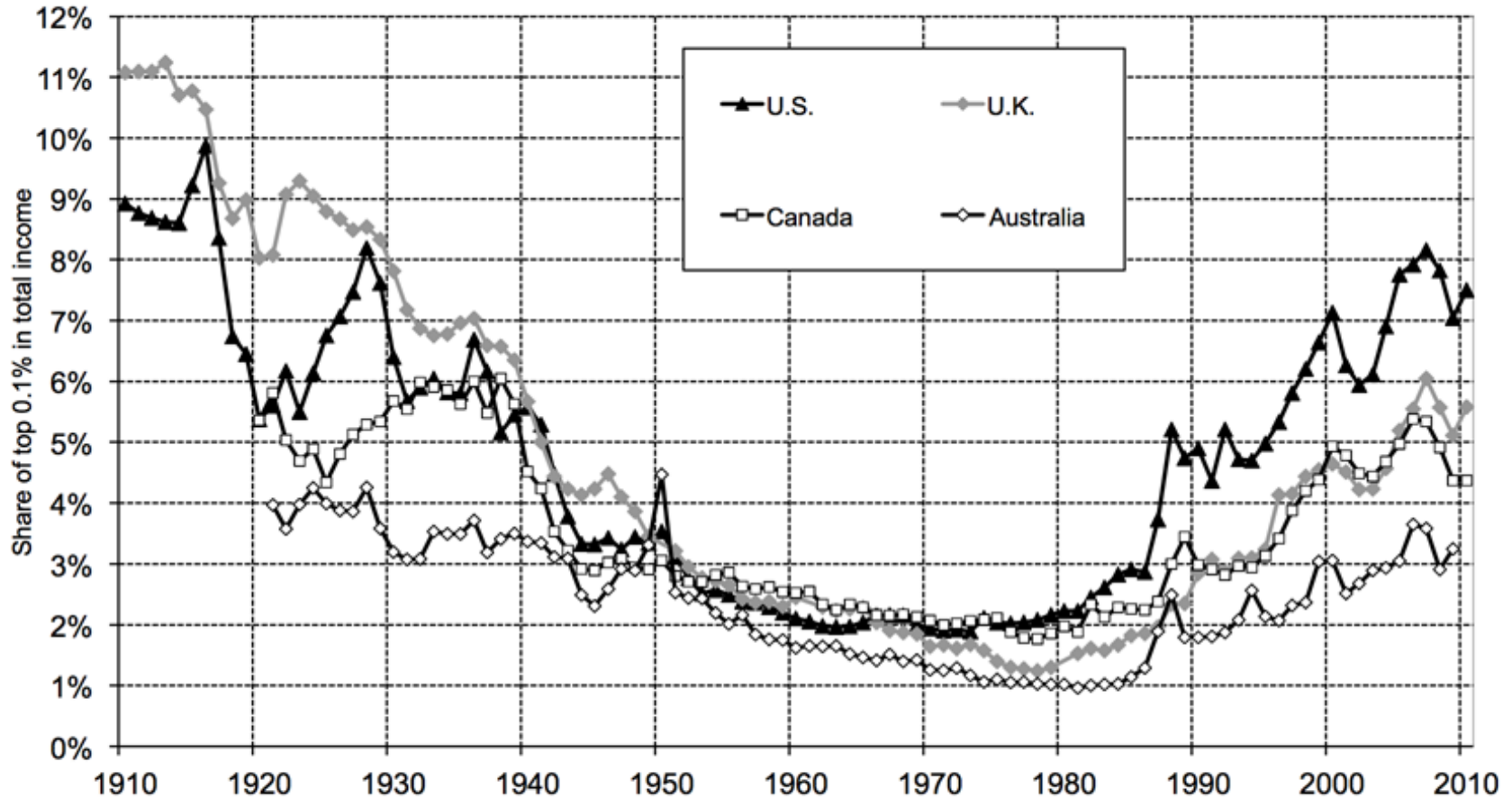
Expressed in 2013 purchasing power, the hourly minimum wage rose from \$3.8 to \$7.3 between 1950 and 2013 in the U.S., and from €2.1 to €9.4 in France. Sources and series: see [piketty.pse.ens.fr/capital21c](http://piketty.pse.ens.fr/capital21c).

# INEQUALITY OF LABOR INCOME

- THE VERY HIGHEST EARNERS OR "SUPERMANAGERS" ARE MAINLY AN ANGO-SAXON PHENOMENON AND ARE NOT JUSTIFIED BY ANY ECONOMIC PRINCIPLES
- *ALL SIGNS ARE THAT THE SCANDINAVIAN COUNTRIES, WHERE WAGE INEQUALITY IS MORE MODERATE THAN ELSEWHERE, OWE THIS RESULT IN LARGE PART TO THE FACT THAT THEIR EDUCATIONAL SYSTEM IS RELATIVELY EGALITARIAN AND INCLUSIVE*

# INEQUALITY OF LABOR INCOME

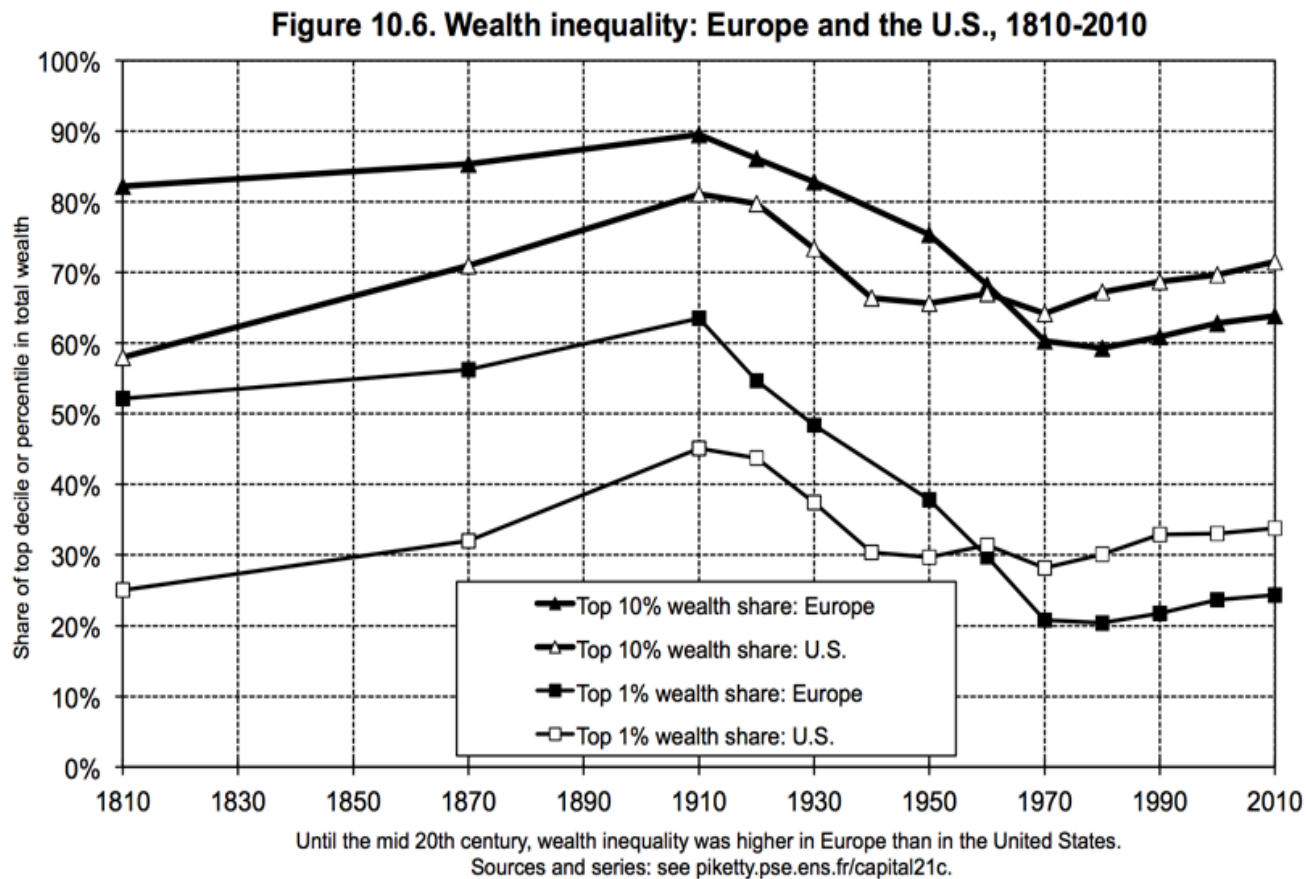
Figure 9.5. The top 0.1% income share in Anglo-saxon countries, 1910-2010



The share of the top 0.1% highest incomes in total income rose sharply since the 1970s in all Anglo-saxon countries, but with varying magnitudes. Sources and series: see [piketty.pse.ens.fr/capital21c](http://piketty.pse.ens.fr/capital21c).

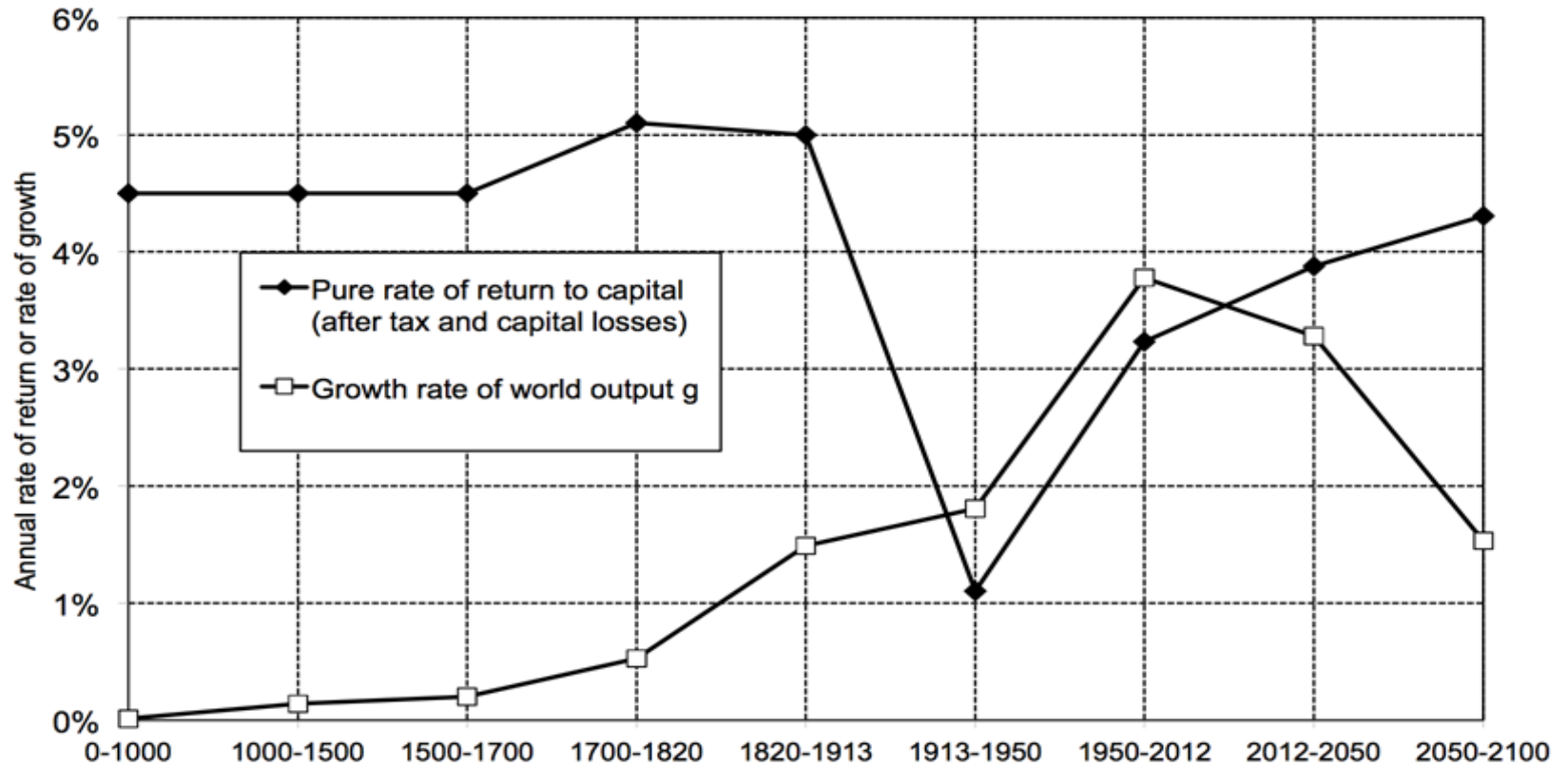
# INEQUALITY OF CAPITAL OWNERSHIP

- WE SEE THE UPWARD TREND IN EUROPE AND THE US IN WEALTH INEQUALITY



- Then Piketty proposes the mechanism for why wealth naturally concentrates and why we had the fluke of a propertied middle-class in the 20th century, and why it went last without external shocks or policy changes.
- The **return on investment** is  $r$ .
- **The growth of income** is  $g$ .
- If  $r > g$ , then pools of wealth will grow faster than the economy does.

**Figure 10.10. After tax rate of return vs. growth rate at the world level, from Antiquity until 2100**



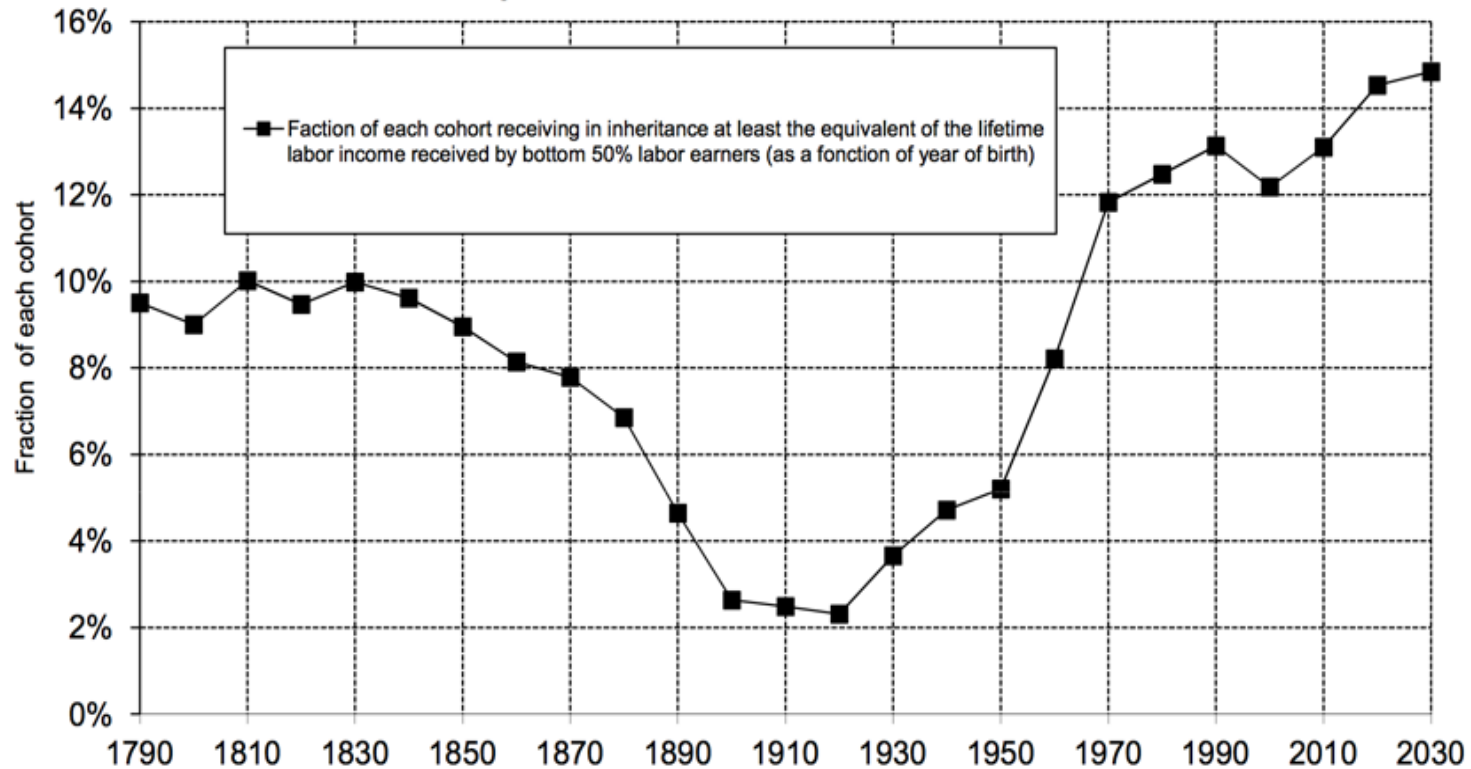
The rate of return to capital (after tax and capital losses) fell below the growth rate during the 20th century, and may again surpass it in the 21st century. Sources and series : see [piketty.pse.ens.fr/capital21c](http://piketty.pse.ens.fr/capital21c)

- *THE INEQUALITY  $R > G$  HAS CLEARLY BEEN TRUE THROUGHOUT MOST OF HUMAN HISTORY, RIGHT UP TO THE EVE OF WORLD WAR I, AND IT WILL PROBABLY BE TRUE AGAIN IN THE TWENTY-FIRST CENTURY.*
- *ITS TRUTH DEPENDS, HOWEVER, ON THE SHOCKS TO WHICH CAPITAL IS SUBJECT, AS WELL AS ON WHAT PUBLIC POLICIES AND INSTITUTIONS ARE PUT IN PLACE TO REGULATE THE RELATIONSHIP BETWEEN CAPITAL AND LABOR*

# **MERIT AND INHERITANCE IN THE LONG RUN**

- A TECHNICAL AND DETAILED DISCUSSION OF THE MATH OF INHERITANCE AND HOW IT CHANGES UNDER INCREASING LIFESPANS.
- WE ARE RETURNING TO MORE INHERITED WEALTH

**Figure 11.11. Which fraction of a cohort receives in inheritance the equivalent of a lifetime labor income?**



Within the cohorts born around 1970-1980, 12-14% of individuals receive in inheritance the equivalent of the lifetime labor income received by the bottom 50% less well paid workers. Sources and series : see [piketty.pse.ens.fr/capital21c](http://piketty.pse.ens.fr/capital21c)

- TO RECAPITULATE: THE FUNDAMENTAL FORCE FOR DIVERGENCE, WHICH PIKETTY HAS EMPHASIZED THROUGHOUT THE BOOK, CAN BE SUMMED UP IN THE INEQUALITY  $R > G$ , WHICH HAS NOTHING TO DO WITH MARKET IMPERFECTIONS AND WILL NOT DISAPPEAR AS MARKETS BECOME FREER AND MORE COMPETITIVE.
- THE IDEA THAT UNRESTRICTED COMPETITION WILL PUT AN END TO INHERITANCE AND MOVE TOWARD A MORE MERITOCRATIC WORLD IS A DANGEROUS ILLUSION .
- THE ADVENT OF UNIVERSAL SUFFRAGE AND THE END OF PROPERTY QUALIFICATIONS FOR VOTING (WHICH IN THE NINETEENTH CENTURY LIMITED THE RIGHT TO VOTE TO PEOPLE MEETING A MINIMUM WEALTH REQUIREMENT, TYPICALLY THE WEALTHIEST 1 OR 2 PERCENT IN FRANCE AND BRITAIN IN 1820–1840, OR ABOUT THE SAME PERCENTAGE OF THE POPULATION AS WAS SUBJECT TO THE WEALTH TAX IN FRANCE IN 2000– 2010), ENDED THE LEGAL DOMINATION OF POLITICS BY THE WEALTHY. BUT IT DID NOT ABOLISH THE ECONOMIC FORCES CAPABLE OF PRODUCING A SOCIETY OF RENTIERS

# GLOBAL INEQUALITY OF WEALTH IN THE TWENTY-FIRST CENTURY

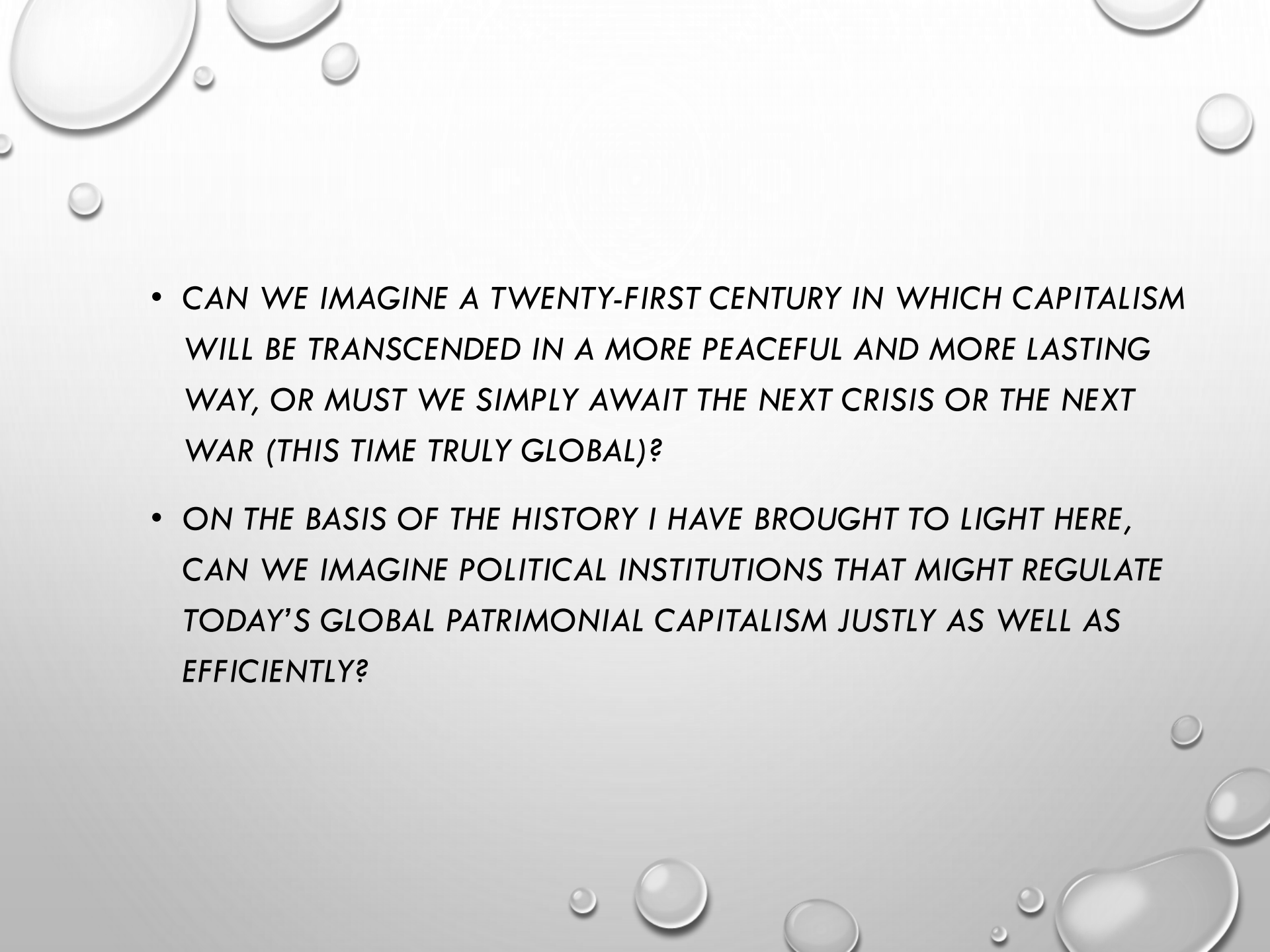
- WILL THE WEALTHIEST ENTITIES HAVE A HIGHER RETURN  $R$  THAN DO SMALLER ENTITIES?
- IF SO, THE FORCES OF DIVERGENCE WILL BE EVEN HIGHER.
- THIS IS PERHAPS ONE OF THE MOST IMPORTANT AND LEAST TALKED ABOUT PART OF THE BOOK.
- FIRST PIKETTY STUDIES BILLIONAIRES AND THEY DO PROVIDE SOME SUBJECTIVE EVIDENCE FOR THE HYPOTHESIS.
- UNFORTUNATELY THEY ARE NOT SUBJECT TO ENOUGH DISCLOSURE RULES IN THEIR INVESTMENTS TO KNOW FOR SURE.
- THEN SOVEREIGN WEALTH FUNDS AND US UNIVERSITY ENDOWMENTS ARE EXAMINED.
- UNIVERSITY ENDOWMENTS ARE SUBJECT TO DISCLOSURE RULES AND THEY IMPLY THAT  $R$  IS HIGHER FOR LARGER INVESTORS (AND MAINLY DUE TO BETTER STRATEGIES RATHER THAN CRONYISM).

**Table 12.2. The return on the capital endowments of U.S. universities, 1980-2010**

<i>Average real annual rate of return (after deduction of inflation and all administrative costs and financial fees)</i>	Période 1980-2010
All universities (850)	8.2%
incl.: Harvard-Yale-Princeton	10.2%
incl.: Endowments higher than 1 billion \$ (60)	8.8%
incl. Endowments between 500 millions and 1 billion \$ (66)	7.8%
incl. Endowments between 100 and 500 million \$ (226)	7.1%
dont: Endowments less than 100 million \$ (498)	6.2%

Between 1980 and 2010, U.S. universities earned an average real return of 8.2% on their capital endowments, and all the more so for higher endowments. All returns reported here are net of inflation (2.4% per year between 1980 and 2010) and of all administrative costs and financial fees.  
Sources: see [piketty.pse.ens.fr/capital21c](http://piketty.pse.ens.fr/capital21c).

- *THE INEQUALITY  $R > G$ , COMBINED WITH THE INEQUALITY OF RETURNS ON CAPITAL AS A FUNCTION OF INITIAL WEALTH, CAN LEAD TO EXCESSIVE AND LASTING CONCENTRATION OF CAPITAL*
- *NO MATTER HOW JUSTIFIED INEQUALITIES OF WEALTH MAY BE INITIALLY, FORTUNES CAN GROW AND PERPETUATE THEMSELVES BEYOND ALL REASONABLE LIMITS AND BEYOND ANY POSSIBLE RATIONAL JUSTIFICATION IN TERMS OF SOCIAL UTILITY.*

- 
- *CAN WE IMAGINE A TWENTY-FIRST CENTURY IN WHICH CAPITALISM WILL BE TRANSCENDED IN A MORE PEACEFUL AND MORE LASTING WAY, OR MUST WE SIMPLY AWAIT THE NEXT CRISIS OR THE NEXT WAR (THIS TIME TRULY GLOBAL)?*
  - *ON THE BASIS OF THE HISTORY I HAVE BROUGHT TO LIGHT HERE, CAN WE IMAGINE POLITICAL INSTITUTIONS THAT MIGHT REGULATE TODAY'S GLOBAL PATRIMONIAL CAPITALISM JUSTLY AS WELL AS EFFICIENTLY?*

- THE HISTORY OF THE INCOME TAX AND THE CURRENT RACE TO THE BOTTOM FOR TOP TAX BRACKETS AS COUNTRIES COMPETE FOR CAPITAL. TOP TAX RATES MAY SOON BE REGRESSIVE IN MANY COUNTRIES. AN OPTIMAL TOP TAX RATE IS AROUND 80% BUT THIS IS POLITICALLY UNLIKELY
- PIKETTY PRESENTS THE IDEA OF A GLOBAL TAX ON CAPITAL HE DESCRIBES AS A "UTOPIAN IDEA".
- BUT HE MAKES SOME PRACTICAL SUGGESTIONS ON DOING THIS REGIONALLY AND IMPROVING GLOBAL FINANCIAL TRANSPARENCY
- WE HAVE LARGE PUBLIC DEBTS AND LARGE DEBTS FAVOR THE RICH (BETTER TO LEND THE GOVERNMENTS MONEY THAN TO PAY TAXES). REDUCING THE DEBT REQUIRES SOME COMBINATION OF TAXATION, INFLATION, AND AUSTERITY. PIKETTY FAVORS A TAX ON CAPITAL AS THE BEST TOOL

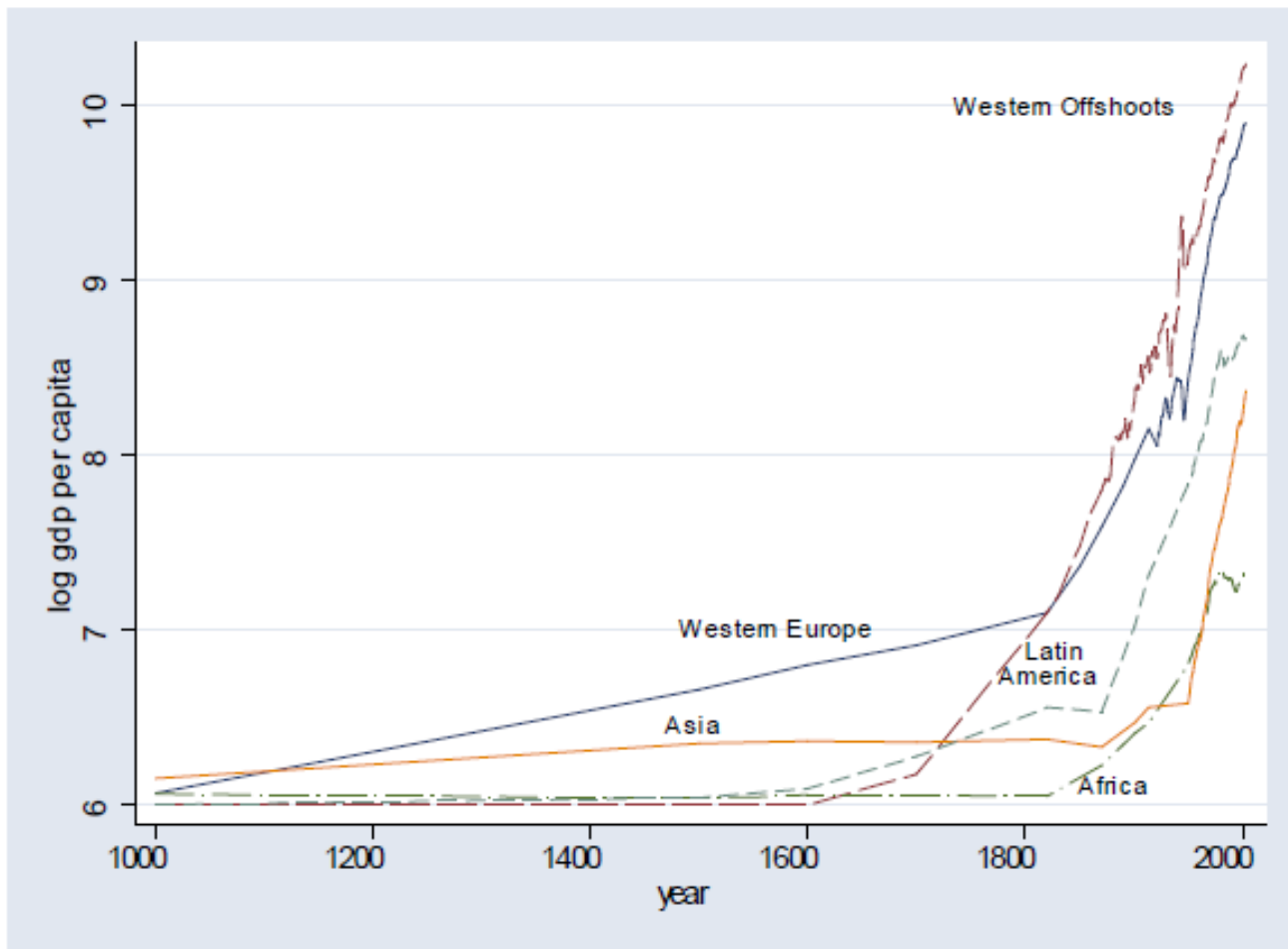
# CONCLUSION

- *THE INEQUALITY  $R > G$  IMPLIES THAT WEALTH ACCUMULATED IN THE PAST GROWS MORE RAPIDLY THAN OUTPUT AND WAGES.*
- *THIS INEQUALITY EXPRESSES A FUNDAMENTAL LOGICAL CONTRADICTION.*
- *THE ENTREPRENEUR INEVITABLY TENDS TO BECOME A RENTIER, MORE AND MORE DOMINANT OVER THOSE WHO OWN NOTHING BUT THEIR LABOR.*
- *ONCE CONSTITUTED , CAPITAL REPRODUCES ITSELF FASTER THAN OUTPUT INCREASES.*
- *THE PAST DEVOURS THE FUTURE*

# **WHY NATIONS FAIL**

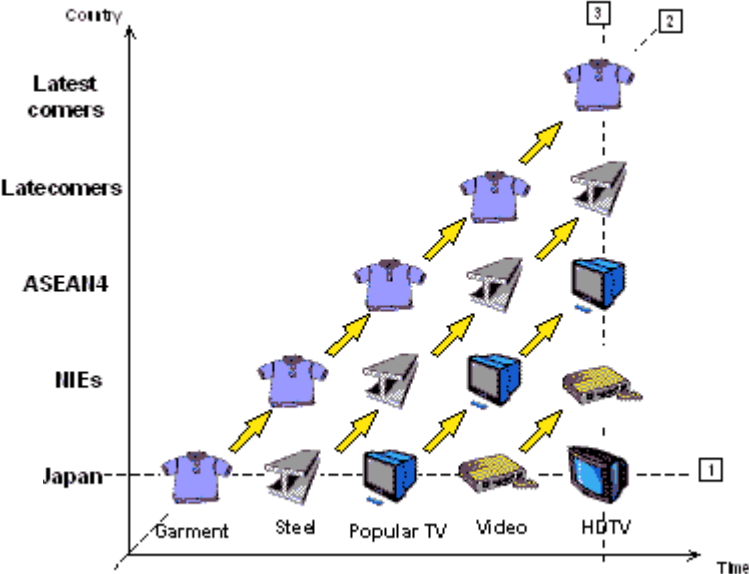
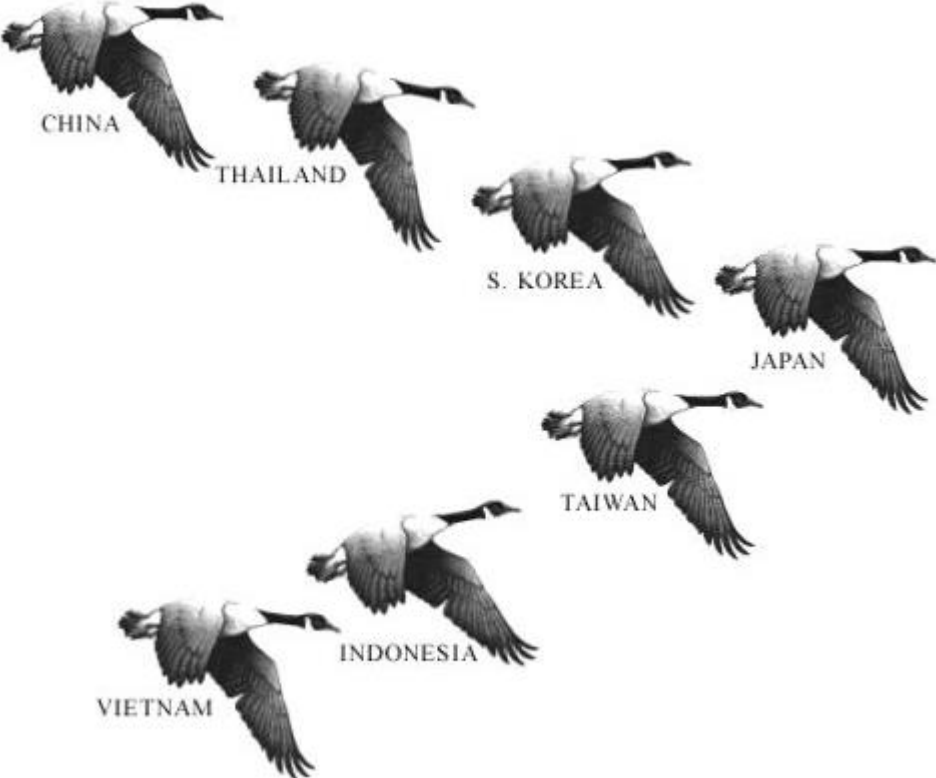
**THE ORIGINS OF POWER, PROSPERITY, AND  
POVERTY**

**DARON ACEMOGLU AND JAMES A. ROBINSON**



**Figure:** The evolution of average GDP per capita in Western Offshoots, Western Europe, Latin America, Asia and Africa, 1000-2000.

# Structural Transformation in East Asia



# WHY IS ONE RICH AND ONE POOR?

- **Nogales, Arizona (USA) and Nogales, Sonora (Mexico)**
- **A city divided by a border**
- **Same people, Same culture, Same location**
- **The part in the US has about three times higher household income than that in Mexico**



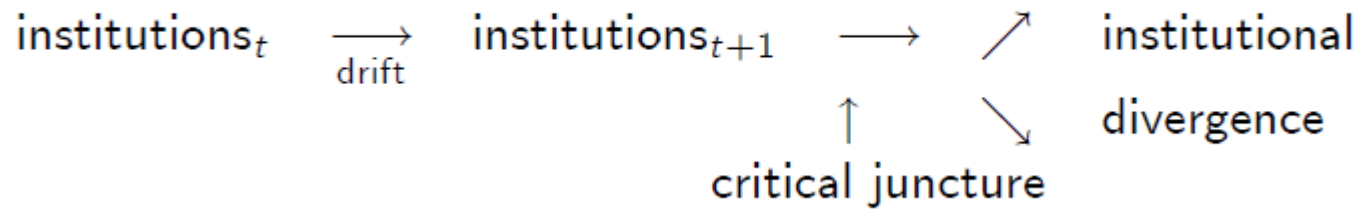
# THEORIES THAT WON'T WORK

- Many economists tried to explain why nations fail
- Three main hypotheses are used to explain
  1. The Geography Hypothesis
    - Climate affects agricultural productivity and there exists diseases that only occur in hot climate.
  2. The Culture Hypothesis
    - The specific culture that has an impact on how economy develops. For example, “Mañana” culture in Latin America
  3. The Ignorance Hypothesis
    - Simply because rulers **DO NOT KNOW** how to make poor countries rich

# THEORIES THAT WON'T WORK

- **However, these theories do not always work**
  1. The Geography Hypothesis
    - Nogales, Arizona and Nogales, Sonora are basically in the same place and therefore same geography.
  2. The Culture Hypothesis
    - Nogales has same group of people from the same root and hence same culture.
  3. The Ignorance Hypothesis
    - In the case of breakout of poverty, it is not because the ruler suddenly becomes less ignorant or better informed. For example, Chinese Communist Party did not suddenly realized that collective ownership created terrible economic incentives.

# THEORIES THAT WON'T WORK



# HOW POLITICS DETERMINES WHAT INSTITUTIONS A NATION HAS

- **Extractive and Inclusive Economic Institutions**
  - Incentives play a large role of how the economy works
  - Example: North Korea and South Korea
  - Inclusive economic institutions incentivized people to work hard and be innovative as they have a chance to live a better life and make the choices they wished.
  - Extractive economic institutions caused people to become ignorant in their improvement as they cannot do anything to improve their lives.

# HOW POLITICS DETERMINES WHAT INSTITUTIONS A NATION HAS

- **How to be an inclusive economic institution**
  - Secure private property
  - An unbiased system of law
  - A provision of public services that provides a level playing field in which people can exchange and contract
  - Permit the entry of new businesses
  - Free career choices
- **An extractive economic institution is where the surplus of the economy is being extracted by rulers and people are not free to choose their economic choices.**

# **HOW POLITICS DETERMINES WHAT INSTITUTIONS A NATION HAS**

- **All economic institutions are created by society**
- **Politics is the process by which a society chooses the rulers that will govern it**
- **The political institutions of a society are the rules that govern incentives in politics.**
- **How the government is chosen and its rights to do what.**
- **Strong synergy between economic and political institutions. The elites in extractive political institutions usually choose extractive economic institutions to extract surplus for themselves.**

# **GROWTH UNDER EXTRACTIVE INSTITUTIONS**

- **Soviet Union in 1927 led by Joseph Stalin**
- **He created the State Planning Committee “Gosplan” to plan the economic development plan for 1928-1933.**
- **The plan was to develop industry by government command and obtain the necessary resources for this by taxing agriculture at very high rates.**
- **Abolition of private property rights to land and herding of all people in the country into collective farm run by the Communist Party.**
- **Easier for Stalin to grab the agricultural output to feed all people building and banning new factories.**

# **GROWTH UNDER EXTRACTIVE INSTITUTIONS**

- **Stalin understood that people did not have incentive to work hard.**
- **In 1931, Stalin gave up on the idea of creating “socialist men and women” who would work without monetary incentives.**
- **A bonus system was introduced. A firm had to meet an output target set.**
- **However, this created disincentive to technological change.**
- **Innovation would take resources away from current production risked the output target not being met.**

# **GROWTH UNDER EXTRACTIVE INSTITUTIONS**

- **Moreover, the output target was based on previous production levels.**
- **This created a huge incentive never to expand output.**
- **There was also a set of laws created criminal offenses for workers who were perceived to be avoiding the duty.**
- **The government built a powerful centralized state and used it to allocate resources toward heavy industry.**
- **There were no incentive for workers and no technological change.**
- **The growth was rapid at first but not sustained. Eventually, the growth slowed down and collapsed.**

# **BARRIERS TO DEVELOPMENT**

- **Industrial revolution created a critical juncture that affected almost every country.**
- **Many lagged behind as they blocked or did nothing to encourage the spread of industry.**
- **Political and economic institutions shaped the response to technological innovation.**
- **The fear of creative destruction and fear of losing power from those who control the power.**

# **BARRIERS TO DEVELOPMENT**

- **China under the Song dynasty (960-1279) led the world in many technological innovations with the invention of clocks, the compass, gunpowder, etc.**
- **The growth under the Song dynasty was under extractive institution. The great inventions were not spurred by market incentives but under auspices of the government.**
- **The absolutists emperor of China opposed change, sought stability, and feared creative destruction.**
- **In 1368, Emperor Hongwu of the Ming dynasty, concerned that overseas trade would be destabilizing of his power, allowed the international trade only if it involved tribute giving, and not commercial activity.**

# **BARRIERS TO DEVELOPMENT**

- **In 1425 Emperor Xuande banned all overseas trade and the ban was not lifted until 1567.**
- **These extractive events that prevented many economic activities had a fundamental impact on Chinese economic development.**
- **Just at the time when international trade and the discovery of the Americas were transforming the institutions of England, China was cutting itself off.**
- **The fear of creative destruction that would cause political instability resulted in a stagnant Chinese economy in the 19<sup>th</sup> century while other economies were industrializing.**
- **In 1949, China had become one of the poorest countries in the world**

# BARRIERS TO DEVELOPMENT

- Though growth is much more likely under inclusive institutions, it is still possible under extractive institutions.
- Why? → Generate output and resources to extract.
- Two types of growth under extractive political institutions:
  - ① extractive economic institutions allocating resources to high productivity activities controlled by the elites (e.g., Barbados, Soviet Union)
  - ② when relatively secure in their position, the elites may wish to allow the emergence of relatively inclusive economic institutions under their control (e.g., South Korea under General Park, China today).
- But big difference from growth under inclusive institutions: no creative destruction and dynamics very different. Consequently, even though growth is possible under extractive institutions, this will not be **sustained growth**.

# **ROOTS OF WORLD INEQUALITY**

- **The institutional dynamics ultimately determined which countries took advantage of the major opportunities present in the 19<sup>th</sup> century onward and which ones failed to do so.**
- **The roots of the world inequality today can be found in this divergence.**
- **The rich countries are those that embarked on the process of industrialization and technological change.**

# **ROOTS OF WORLD INEQUALITY**

- **Great Britain, France, the United States, Australia, and Japan are the examples of those countries that successfully grabbed the opportunity and changed its institution from extractive to inclusive.**
- **Meanwhile, Eastern European countries and China are the examples of those countries where its citizens lost in the fight of institution transformation and could not change from extractive institution to inclusive institution.**

# **HOW A FEW COUNTRIES CHANGED THEIR ECONOMIC TRAJECTORY BY CHANGING THEIR INSTITUTIONS**

- **Sometimes, critical juncture happened but the country failed to capture it.**
- **In most of sub-Saharan Africa, for example Sierra Leone and Zimbabwe, independence was an opportunity missed. It recreated the extractive institution that existed during the colonial period.**
- **This was very different for Botswana. It had some amount of state centralization and relatively pluralistic tribal institutions that survived colonialism.**
- **Seretse Khama and Quett Masire decided to contest power in elections rather than subvert the electoral system.**

# **HOW A FEW COUNTRIES CHANGED THEIR ECONOMIC TRAJECTORY BY CHANGING THEIR INSTITUTIONS**

- **The Tswana (which is used to call the people of Botswana) were led by the Botswana Democratic Party (BDP) founded in 1960 by Seretse Khama and Quett Masire.**
- **Botswana relied on meat exports in the early stage but things changed when diamonds were discovered.**
- **In many other sub-Saharan African nations (like Sierra Leone), diamonds fueled conflict between different groups and helped to sustain civil wars.**
- **However, before the discovery was announced, Khama instigated a change in the law so that all subsoil mineral rights were vested in the nation, not the tribe.**

# **HOW A FEW COUNTRIES CHANGED THEIR ECONOMIC TRAJECTORY BY CHANGING THEIR INSTITUTIONS**

- **In Botswana, diamond revenues were managed for the good of the nation.**
- **Moreover, the Chieftaincy Act of 1965 passed by the legislative assembly prior to independence, and the Chieftaincy Amendment Act of 1970, enshrining the power of the state and the elected president by removing the right to allocate land and enabling the president to remove a chief from office if necessary.**
- **The chiefs were kings for each tribes but their powers were removed.**
- **With many other policies to homogenize the society, Botswana successfully got rid of tribal conflicts.**

# **HOW A FEW COUNTRIES CHANGED THEIR ECONOMIC TRAJECTORY BY CHANGING THEIR INSTITUTIONS**

- **Botswana was able to seize a critical juncture and set up inclusive institutions.**
- **The BDP and traditional elites did not try to form a dictatorial regime or any extractive institutions.**
- **This was an outcome of the interplay between a critical juncture and existing institutions.**
- **Botswana already had tribal institutions that contained important pluralistic features.**
- **Botswana was lucky because Seretse Khama and Quett Masire were not Siaka Stevens (of Sierra Leone) and Robert Mugabe (of Zimbabwe).**

# REBIRTH IN CHINA

- **Mao Zedong came into power in 1949 with the Chinese Communist Party.**
- **Mao attempted to promote rapid development of industry through the use of “five-year plans”, modeled on those in the Soviet Union.**
- **The Chinese Communist Party had a monopoly over the sale of produce.**
- **The infamous Great Leap Forward, where China announced that it would catch up with British steel production in 15 years even though China did not have enough scrap metal.**
- **People had to melt their pots and pans and their agricultural implements leading to calamitous famine in the Chinese countryside.**

# REBIRTH IN CHINA

- One of the consequences of the Great Leap Forward was Deng Xiaoping had a change of heart.
- “No matter whether the cat is black or white, if it catches mice, it’s a good cat.” It did not matter whether the policies appeared communist or not; China needed policies that would encourage production so that it could feed its people.
- The Cultural Revolution soon started and Deng Xiaoping was jailed in 1967 but rehabilitated in 1974.
- After Mao’s death, Deng did not wish to abolish the communist regime as he was brought to power by the communist revolution.

# REBIRTH IN CHINA

- **Deng and his supporters had the model of growth under extractive political institution that would not threaten their power.**
- **They realized that economic growth would be possible only with significant moves toward inclusive economic institution.**
- **They wished to reform the economy and bolster the role of market forces and incentives and also the expansion of the scope for private ownership and reduction in the role of the Communist Part.**
- **China broke the mold even if it did not transform its political institution.**

# YOU CANNOT ENGINEER PROSPERITY

- **Many people believe in The Ignorance Hypothesis**
- **Two flavors of engineering attempts**
  1. International Organization
    - International Monetary Fund (IMF)
    - Poor development caused by bad economic policies and institutions
    - List of improvements poor countries should adopt
    - Fail to recognize the role of political institution
    - Do not take place why the bad policies were there at first
    - Result in policies not being adopted and implemented

# YOU CANNOT ENGINEER PROSPERITY

## 2. “Micro-market Failure”

- Economists believe that it could be readdressed with good advice.
- Small market failures everywhere in poor countries, for example education system, healthcare.
- These market failures may not be due solely to ignorance.
- They tried to fix these problems without considering the overall system and institutions.
- The symptom of deeper-rooted problems is a society functioning under extractive institutions.
- The institutional structure that creates market failures will also prevent implementation of interventions to improve incentives at the micro level.

# EMPOWERMENT

- **People break down the old regime and develop an inclusive institution.**
  - English Glorious Revolution in 1688
  - Declaration of Independence in 1776
  - French Revolution in 1789
  - Japanese Meiji Restoration in 1868
  - Brazilian labor movement in 1978
- **The question is what can be done to create such empowerment?**
  - Unfortunately, there is no recipe for building such institutions.
  - There are some obvious factors that would help the empowerment more likely to happen but there is no clear solution to it.

# CONCLUSION

Developed countries are wealthy because of 'inclusive economic institutions' – Basically a combination of state and free market in which

1. The state creates incentives for people to invest and innovate – (through guaranteeing private property rights and enforcing contract law)
2. The state enables investment and growth through providing education and infrastructure, which private business uses, and
3. The state is controlled by its citizens, rather than monopolised by a small elite. Crucially, there needs to be a democratic principle at work in which people in politics establish institutions and laws which work for the majority of people, rather than just working to make them rich.
4. The state also needs to maintain a monopoly on violence.

# CONCLUSION

**Extractive economic institutions:** Lack of law and order. Insecure property rights; entry barriers and regulations preventing functioning of markets and creating a nonlevel playing field.


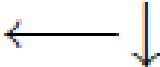


**Extractive political institutions.** in the limit .absolutism.: Political institutions concentrating power in the hands of a few, without constraints, checks and balances or .rule of law..

**Inclusive economic institutions:** Secure property rights, law and order, markets and state support (public services and regulation) for markets; open to relatively free entry of new businesses; uphold contracts; access to education and opportunity for the great majority of citizens.

**Inclusive political institutions:** Political institutions allowing broad participation. pluralism. and placing constraints and checks on politicians; rule of law (closely related to pluralism).

But also some degree of political centralization for the states to be able to effectively enforce law and order.

# CONCLUSION

		Economic	Institutions
		Inclusive	Extractive
Political Institutions	Inclusive		
	Extractive		

# CONCLUSION

- Main thesis is that growth is much more likely under inclusive institutions than extractive institutions.
- Growth, and inclusive institutions that will support it, will create both winners and losers. Thus there is a logic supporting extractive institutions and stagnation:
  - **economic losers:** those who will lose their incomes, for example their monopolies, because of changes in institutions or introduction of new technologies
  - **political losers:** those who will lose their politically privileged position, their unconstrained monopoly of power, because of growth and its supporting institutions—**fear of creative destruction.**
  - both are important in practice, but particularly political losers are a major barrier against the emergence of inclusive institutions and economic growth.