Sociology of inequalities
Lecture 1. Introduction.
Economic inequalities: Normatives approaches, Empirical measures, and global development

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Sciences Po – M1 Sociology
2023-2024

Organization of the course

Class 1. September 15. Introduction. Economic inequalities: Normative approaches, Empirical measures, and global development (Godechot)
Class 2. September 22. Wealth inequalities (Godechot)
Class 3. September 29. Wage inequalities (Godechot)
Class 4. October 6. Employment and labor market inequalities (Godechot)
Class 5. October 13. Welfare Regimes: Esping-Andersen and Beyond (Panico)
Class 6. October 20. Social stratification and class analysis (Panico)
Class 7. October 27. Class inequalities in education (Panico)
Class 8. November 10. Social inequalities, health and well-being (Panico)
Class 9. November 17. Social categorization and intersectional inequality (Safi)
Class 10. November 24. Discrimination and inequality: concepts and mechanisms (Safi)
Class 11. December 01. Discrimination and inequality: measurements and empirical evidence (Safi)
Class 12. December 08. Conclusion: unmaking inequality (Safi) - **EXAM**

The team

- Olivier Godechot (CRIS, AxPo)
  - Economic sociology, Finance, Wages, Labor market
- Lidia Panico (CRIS)
  - Socio-economic inequalities in child health, development, and well-being
- Mirna Safi (CRIS, LIEPP)
  - Immigration, ethnic and racial inequality, discrimination and segregation

Requirements: Readings

- Discussion readings
  - Compulsory to read every paper
  - One presentation
- Background readings
  - Compulsory to read every paper
- Suggested readings
  - To go further

Grading

- Oral presentation (25% of final grade)
- Final exam (75% of final grade, one hour, consisting of MCQ and open questions during the final session)

Organization of this lecture

I. Normative underpinnings
II. Measures of income inequality
III. Evolution of global income inequalities
IV. Evolution of inequality within societies
V. Evolution of inequality between societies
→ Discussion of Pomeranz

I. Philosophical and normative background

- Do we need normative/philosophical foundations for studying inequalities?
  - No. Study is descriptive / causal and distinct from normative approaches
  - Yes. Description & prescription tied.
    - Describing/measuring inequality → criticizing inequality
    - Deviation from benchmark
      - What is the benchmark? Merit? Market efficiency? Strict Equality, etc.

Egalitarianism

- Equality, a new idea…
  - Thomas More, Levellers, Babeuf, Early 19th Century
- Two theories of justice with Marx (The Critique of the Gotha Programme)
  - Socialism: "To each according to his contribution"
    - Not very different from wage = marginal productivity or from meritocratism
  - Communist phase: "From each according to his ability, to each according to his needs"
    - Very much tied to an utopia of abundance
    - However some sector try to implement this principle (Health, in the Welfare state). Cf. Elster *Local Justice*.

Modern egalitarianism

- Analytical Marxism (Roemer, Elster, Cohen, Dworkin)
  - Equality of what?
    - Ressources, income, opportunity, etc.
    - When, how and what to redistribute
    - Constraint and freedom
      - Freedom of giving
- Different criteria of equal distribution / fair compensation
  - Compensation for "brute luck" but not for "option luck" (due to individual choices)
  - No-envy criteria
  - Max U / $u_i = u_j$ whatever i and j

Utilitarianism

- History in very brief
  - Classical utilitarianism: Bentham, John Stuart Mill
  - Modern: John Harsanyi.
- A possible benchmark for inequality
  - Maximizing the common good: Max U= Max Σ_i (a_i . u_i)
  - Inequality is not rejected as long it is useful to the collectivity
- Hidden utilitarianism of many scholar pro or against inequality reduction
  - Inequality collectively useful as : incentives & trickle down mechanisms.
  - Inequality collectively harmful. Piketty (2014) incipit: "Les distinctions sociales ne peuvent être fondées que sur l'utilité commune"
- Measure and implementation

Rawls. 1971. *Theory of justice*

- A key critic of merit: "merit" is always due to things you do not merit
- A social contract thought experiment . Veil of ignorance
- 2. Principles of justice
  - 1. "Each person is to have an equal right to the most extensive total system of equal basic liberties compatible with a similar system of liberty for all.
  - 2. "Social and economic inequalities are to be arranged so that they are both:
    - (a) to the greatest benefit of the least advantaged, consistent with the just savings principle, and
    - (b) attached to offices and positions open to all under conditions of fair equality of opportunity."
- Maximin approach: Max U= Max[Min(u_i)]

Libertarianism. An anti-egalitarian approach?

- Nozick, 1974, *Anarchy, State and Utopia*
- Two principles
  - Full ownership of oneself
  - Do not owe anything to anybody unless voluntarily (consent)
- Consequences
  - Moral primacy of free contracts
  - Any redistribution scheme that goes against my will is immoral
  - Against all coercive social institutions: State, etc.

How to be left wing libertarian? The question of initial appropriation

- Vallentyne, P. (1999). "Le libertarisme de gauche et la justice". *Revue économique*, 859-878.
- "This is mine!" (Rousseau). Do we have a right to appropriate natural resources without other's consent?
  - Far-right approach: unconditional right to initial appropriation without any consent of others
  - Right: Lockian provisio. OK to appropriate without consent unless somebody worseoff
  - Left: No, it's not possible without consent
  - Further left: you need future generations' consent. Or even it's not possible if non humans have their own dignity.
- Consequence of left wing libertarianism : –> taxation for compensating for unfair initial appropriation

Perfect markets as benchmark

- Proponent of markets
  - Principle of efficiency. Pareto efficiency (Market equilibrium)
    - Incentive
  - Principle of justice: remuneration of factors to marginal productivity ≈ meritocratism.
    - Even if due to "brute luck" → full ownership of oneself, who else than me should benefit from my brute luck
- No place for redistribution? No
  - If markets do not work perfectly → Rents
  - Rents easy to measure (benchmark being the perfect market)
  - Rents to be redistributed
  - Moral & efficient to do so
- Many research on inequality adopt *de facto* the no-rent benchmark to show unjust and inefficient distribution

Bounding inequalities. Sufficientarianism and limitarianism

- Inequality have detrimental effects beyond some thresholds
  - Ex. Rousseau: "in respect of riches, no citizen shall ever be wealthy enough to buy another, and none poor enough to be forced to sell himself" / "*Quant à la richesse, que nul citoyen ne soit assez opulent pour en pouvoir acheter un autre, et nul assez pauvre pour être contraint de se vendre*"
- Sufficientarianism
  - Principle: all should have enough. Linked to a sufficiency threshold
- Limitarianism
  - Principle: some should not have "too much".
  - Cf. Robeyns. 2022. Why Limitarianism?*

II. Measuring economic inequality

- Economic inequality have many dimensions
  - (Permanent) Income is the best summary
  - Good data
    - Fiscal data (WID : https://wid.world/)
    - Surveys (LFS, EU-SILC)
    - Luxembourg Income Survey: (https://www.lisdatacenter.org/)

Problem with continuous inequalities

- Distribution
  - Need for a norm. One (or several) metrics to summarize distribution
  - Inequality like accordion
    - Some bellows can spread while others get closer: increase or decrease in inequality

Photo: Vincent Peirani

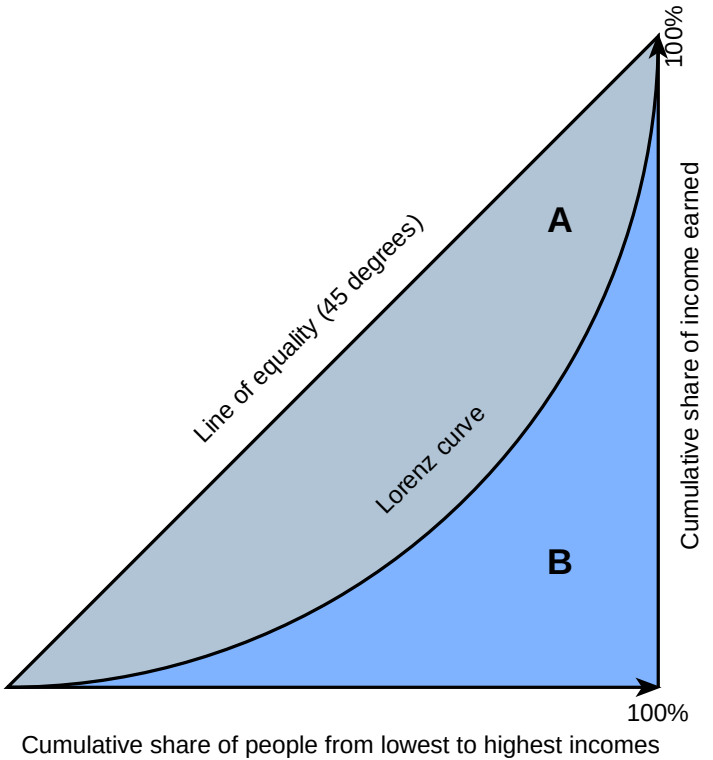
Classical synthetic indicators. Variance based

- Reminder:
  - $var(x) = \Sigma[(xi-(\Sigma ixi/n))^2)]/(n-1)$
- Standard deviation ($\sqrt{var(x)}$) → scale problem
  - Not comparable if scale differs (growth, inflation,e etc.
- Descaling techniques
  - std(income)/mean(income)
  - var(log(income))

- Interesting properties:
  - Takes into account whole distribution
  - Varies between 0 (equality) and ∞
  - Easy to compute
- Limit
  - Good representation of log normal distribution
  - Bad representation of Paretian ones

Classical synthetic indicator. Gini

- Corrado Gini(1884-1965). Sociologist (and fascist)
- Measures distance to perfect equality
  - Varies between 0 (equality) and 1 (absolute inequality: winner-take-all)
- Calculated based on surfaces, delimitated by Lorenz Curve and line of equality
  - Gini = A/(A + B) = 2A = 1- 2B
- Computation a little more complex (algorithm are there)
- Not intuitive to sell to wider audience
- But widely used



Decile/quantile ratios

- Divide society into deciles/quantiles
- Deciles/quantiles are thresholds
  - D1 (or P10): income threshold under which 10% lives
  - D5 (or P50 or median): income threshold under(over) which 10% lives
  - D9 (or P90): income threshold under which 90% lives
- Classical ratios
  - D9/D1 ; D9/D5 ; D5/D1, Q3/Q1 (e.g. P75/P25)
  - Sometimes : P99/D5; P99/D1
- Do not take into account what is happening beyond the thresholds!
  - It's bad: most inequality at the extreme
  - It's good: surveys are very bad and we don't represent well extremes

A Piketty et al. Moment in Social Sciences

- Use of "fractile" shares
  - Bottom 50%, F50-90 Top10%, 5%, 1% shares
- Take into account the whole distribution above [resp. below] the threshold
- Captures extreme concentration
- Not a single indicator to describe inequality
- Indicators adapted to the type of inequality you want to focus on
- Adapted to fiscal data
- A standardization of heterogeneity
- Enables to give some content to "upper class", "bourgeoisie", "capitalist class" you don't get in surveys
- Calculation with Pareto laws
  - Or linear interpolation in a log figure as Kuznets
- DINA → Distributional National Accounts

Revenu fiscal de référence par tranche (en euros)	Nombre de foyers fiscaux	Revenu fiscal de référence des foyers fiscaux	Impôt net (total)*	Nombre de foyers fiscaux imposés	Revenu fiscal de référence des foyers fiscaux imposés	Traitements et salaires		Retraites et pensions	
						Nombre de foyers concernés	Montant	Nombre de foyers concernés	Montant
0 à 10 000	8,781,910	33,443,966	-384,145	143,645	754,921	3,404,853	21,562,473	2,424,331	20,430,085
10 001 à 12 000	1,945,192	21,468,907	-148,487	40,952	452,069	1,145,187	13,619,767	833,611	11,520,166
12 001 à 15 000	3,034,699	41,123,056	-179,109	59,701	801,881	2,199,304	32,651,810	908,430	13,875,065
15 001 à 20 000	6,217,847	108,454,760	556,710	2,852,403	50,803,912	4,195,890	77,984,673	2,223,531	42,597,331
20 001 à 30 000	7,644,482	187,118,834	4,582,273	4,601,474	112,552,313	5,261,743	131,361,067	2,820,863	69,039,754
30 001 à 50 000	7,416,702	284,624,156	12,557,096	5,708,697	221,613,991	5,156,033	195,349,088	3,000,743	99,889,820
50 001 à 100 000	4,165,465	276,142,736	23,591,571	3,892,958	259,207,087	3,257,965	203,840,831	1,325,358	60,991,452
Plus de 100 000 dont:	1,050,883	222,342,800	40,250,001	1,022,009	217,692,023	869,406	112,522,283	266,388	16,155,688
100 001 à 200 000	*820,697*	*107,858,940*	*16,779,749*	*795,808*	*104,634,546*	*678,127*	*72,746,815*	*210,353*	*12,388,654*
200 001 à 300 000	*124,803*	*29,903,108*	*6,119,414*	*122,138*	*29,270,212*	*103,019*	*16,278,849*	*29,748*	*1,881,551*
300 001 à 400 000	*42,546*	*14,579,760*	*3,208,158*	*41,832*	*14,336,183*	*35,192*	*6,861,004*	*10,076*	*662,037*
400 001 à 500 000	*20,341*	*9,054,270*	*2,026,306*	*20,061*	*8,930,454*	*16,956*	*3,788,608*	*5,062*	*347,968*
500 001 à 600 000	*11,232*	*6,125,501*	*1,365,138*	*11,089*	*6,047,429*	*9,383*	*2,355,426*	*2,909*	*205,965*
600 001 à 700 000	*6,907*	*4,468,138*	*997,416*	*6,843*	*4,426,544*	*5,781*	*1,609,520*	*1,729*	*129,296*
700 001 à 800 000	*4,512*	*3,368,237*	*744,366*	*4,482*	*3,345,781*	*3,802*	*1,140,709*	*1,152*	*84,328*
800 001 à 900 000	*3,189*	*2,702,627*	*596,002*	*3,170*	*2,686,427*	*2,690*	*863,130*	*802*	*62,561*
900 001 à 1 000 000	*2,325*	*2,204,956*	*479,825*	*2,310*	*2,190,903*	*1,961*	*646,676*	*656*	*53,179*
1 000 001 à 2 000 000	*8,797*	*12,033,051*	*2,554,736*	*8,764*	*11,984,270*	*7,566*	*3,041,873*	*2,412*	*207,134*
2 000 001 à 3 000 000	*2,402*	*5,838,312*	*1,145,804*	*2,388*	*5,803,736*	*2,108*	*1,054,138*	*628*	*49,528*
3 000 001 à 4 000 000	*1,056*	*3,615,975*	*668,930*	*n.c.*	*n.c.*	*940*	*492,954*	*306*	*29,256*
4 000 001 à 5 000 000	*548*	*2,432,471*	*456,285*	*n.c.*	*n.c.*	*497*	*293,286*	*153*	*15,654*
5 000 001 à 6 000 000	*375*	*2,039,575*	*377,626*	*375*	*2,039,575*	*338*	*241,236*	*102*	*8,987*

III. Global inequalities. Levels & evolution

- World inequalities are high
- World inequality equivalent to South Afr
- Chancel, Piketty, et al. 2021

Figure 1.1 *Global income and wealth inequality, 2021*

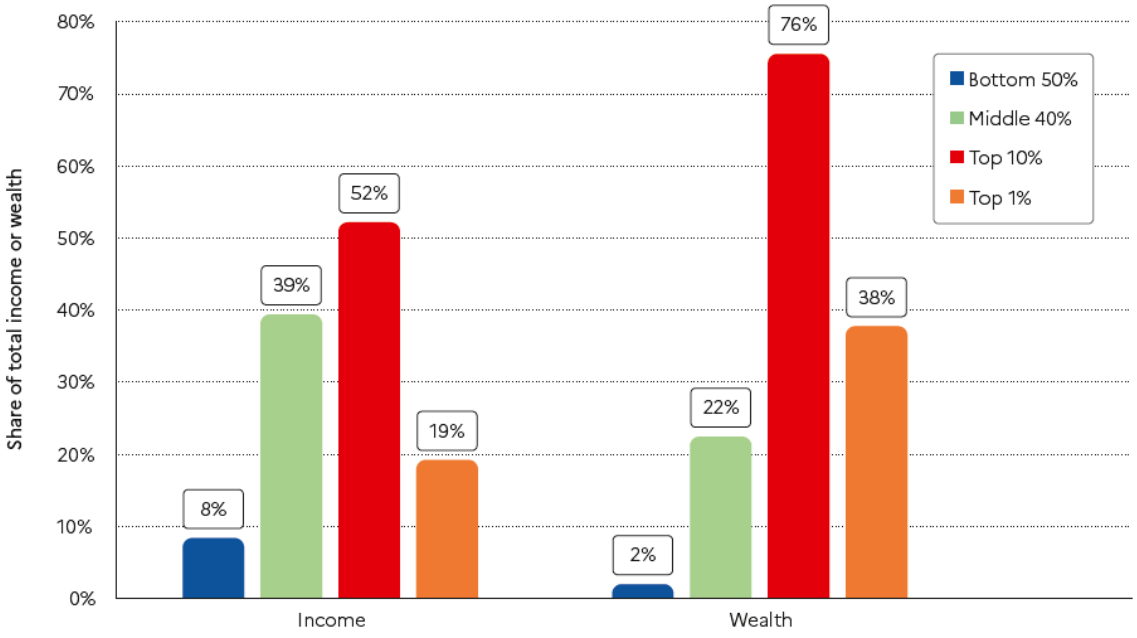
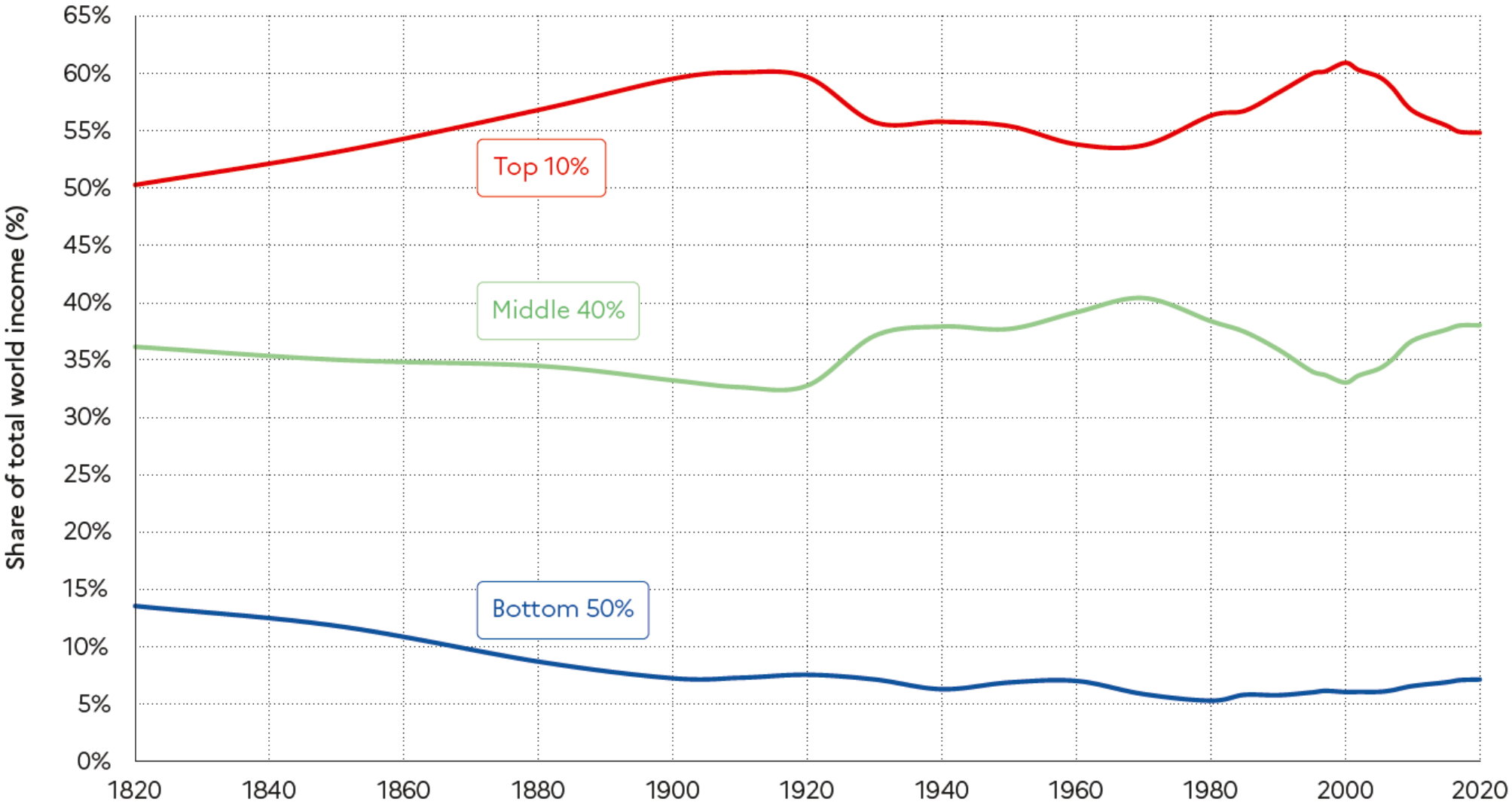


Figure 2.1 *Global income inequality: bottom 50%, middle 40% and top 10%, 1820-2020*



Declining inequalities in the last 20 years?

Figure 2.2 *Global income inequality: T10/B50 ratio, 1820-2020*

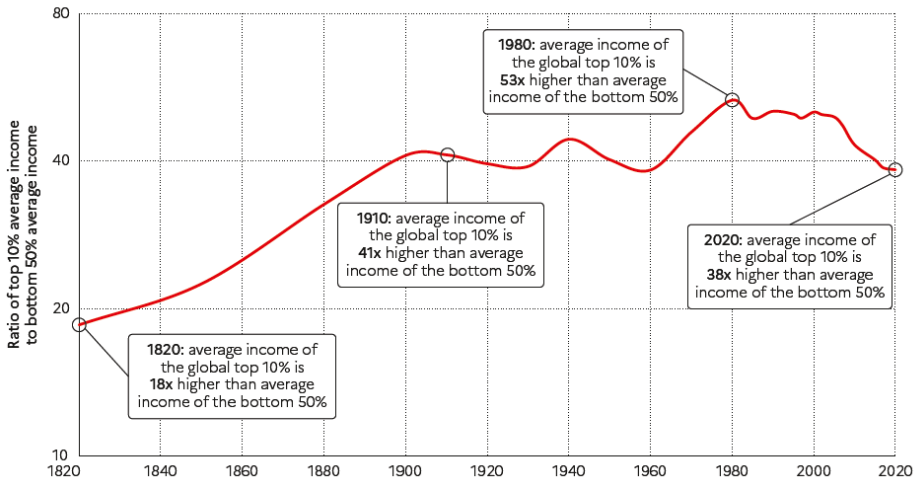
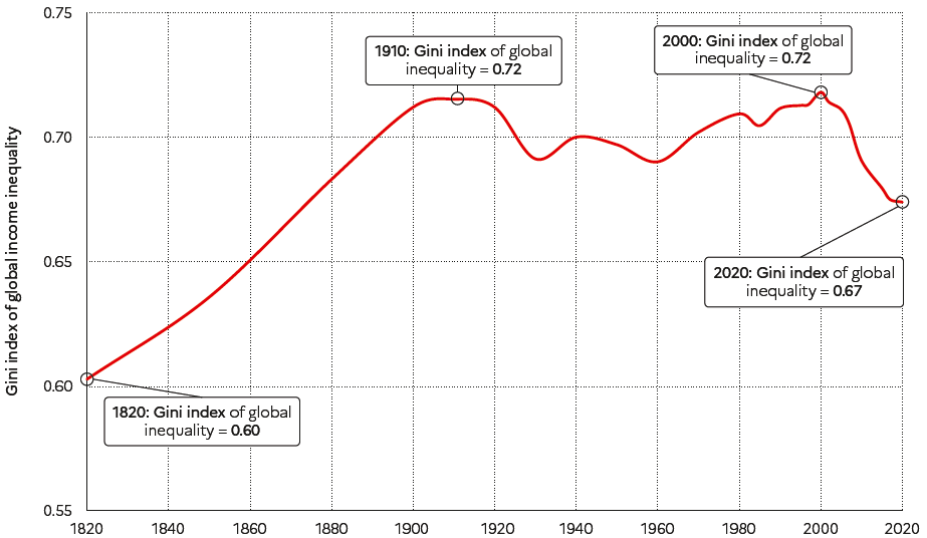
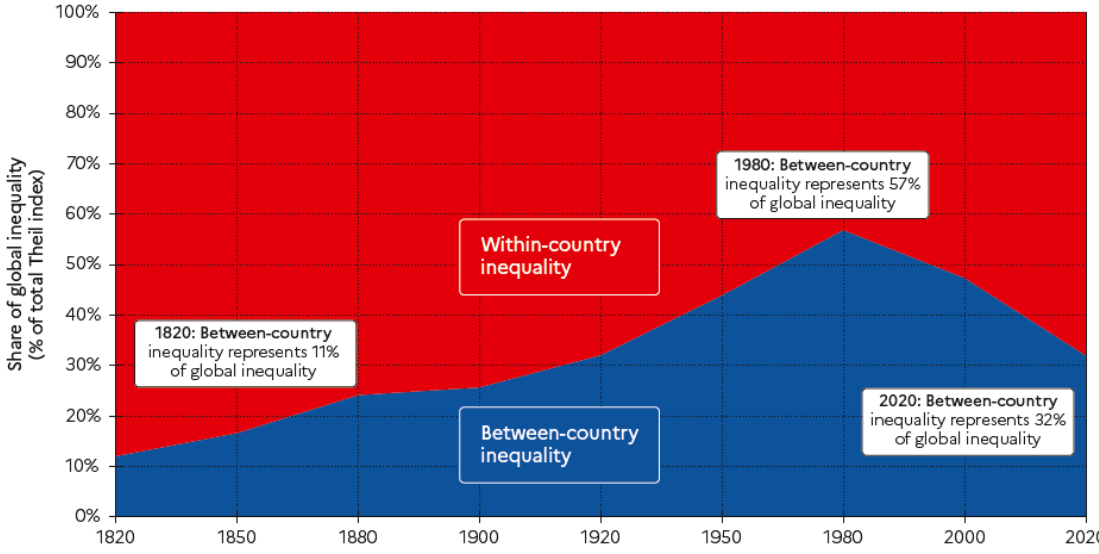


Figure 2.3 *Global income inequality: Gini index, 1820-2020*

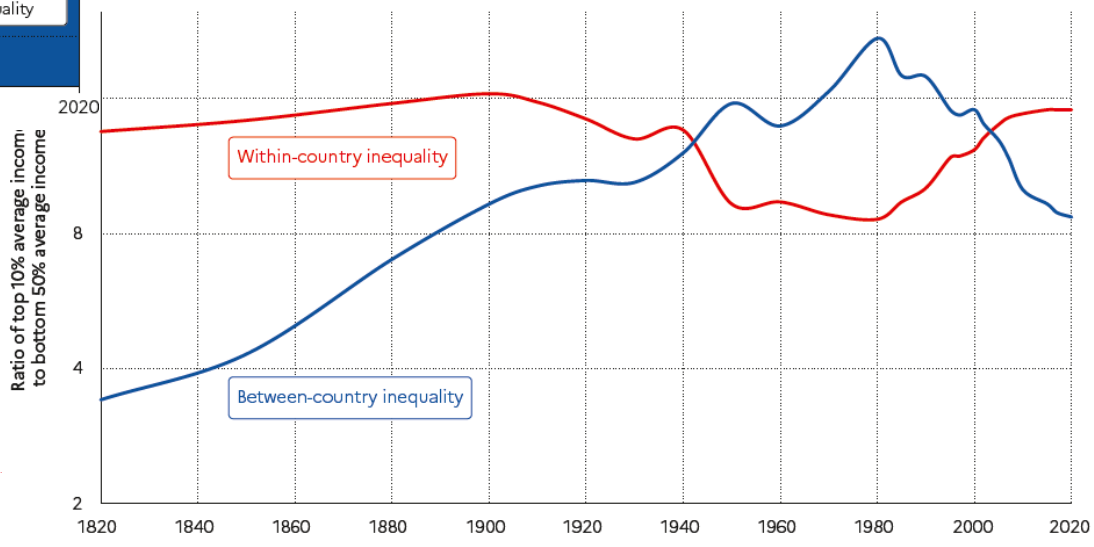


Inequality declined substantially between countries and creased substantially within

Figure 2.5 *Global income inequality: Between-country vs Within-country inequality (Theil index), 1820-2020*

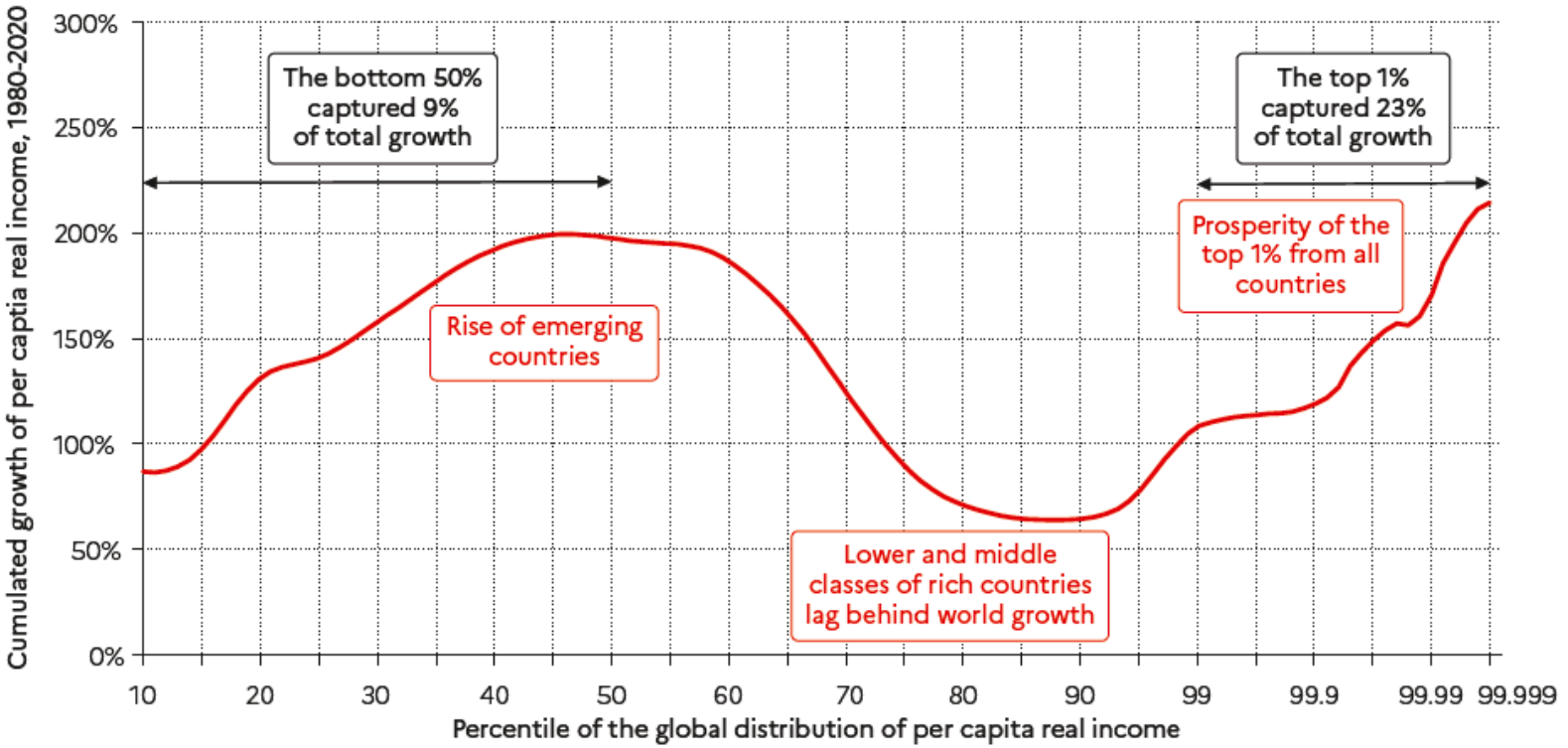


Global income inequality: Between-country vs Within-country inequality (ratio T10/B50), 1820-2020



Last 40 years evolution. The elephant curve

Figure 2.10 *The elephant curve of global inequality, 1980-2020*



IV. Within-society evolution in inequality

- Other species: Inequality among great apes in terms of access to food & reproduction success (Scheidel, 2017)
- Hunter-gatherers societies
  - Long term evolution in Homo species → Increase in sociality diminished inequality compared to great apes.
  - "primitive communism" (Morgan, Engels). No (or collective) property. Contemporary example: Hadza in Tanzania
  - Sign of inequality in grave heterogeneity.

The "great disequalization"

- Neolithics
  - Technological adaptation due to resource scarcity
  - Birth of agriculture / permanent settlement / storage capacity / private property
    - Also possible in fisher groups with storage capacities
- Inequality further exacerbates in early empires (Roman, Egyptian, Chinese, Persian, Inca, etc.) with
  - Urbanization
  - Military conquests
  - Slavery (tied military conquests)
  - Imperial concentration of power

Table 2.1 The development of the largest reported fortunes in Roman society and the population under Roman control, second century BCE to fifth century CE

(a)

Period	Fortunes*	Multiple
Mid/late second century BCE	4–5 million	1
Early first century BCE	25 million	5
60s BCE	100 million	20
60s/50s BCE	200 million	40
First century CE	300–400 million	80
Early fifth century CE	350 million	70

(b)

Period	Population	Multiple
Early second century BCE	7–8 million	1
Mid-first century BCE	25 million	3
First/early fifth century CE	60–70 million	9

* Expressed in imperial-era sesterces

Scheidel, 2017, p. 72

Pre-industrial inequalities near the "inequality possibility frontier"

Country/Territory year	Gini1	Gini2	Mean income in terms of s (s = \$300)	Maximum feasible Gini (IPF)	Inequality extraction ratio (in %)*
Roman Empire 14	36.4	39.4	2.1	52.6	75.0
Byzantium 1000	41.0	41.1	1.8	43.7	94.1
England & Wales 1290	35.3	36.7	2.1	53.0	69.2
Tuscany 1427		46.1	3.3	69.3	66.6
Holland 1561		56.0	3.8	73.4	76.3
England & Wales 1688	44.9	45.0	4.7	78.8	57.1
. . .					
Average	*44.8*	*45.7*	*3.1*	*61.2*	*76.8*
Modern counterparts					
Italy 2000		35.9	62.5	98.3	36.5
Turkey 2003		43.6	22.0	95.4	45.7
United Kingdom 1999		37.4	66.1	98.4	38.0
Netherlands 1999		28.1	72.0	98.5	28.5
. . .					
Average		*41.1*	*34.6*	*93.8*	*44.1*

Milanovic, Lindert, Williamson, 2011

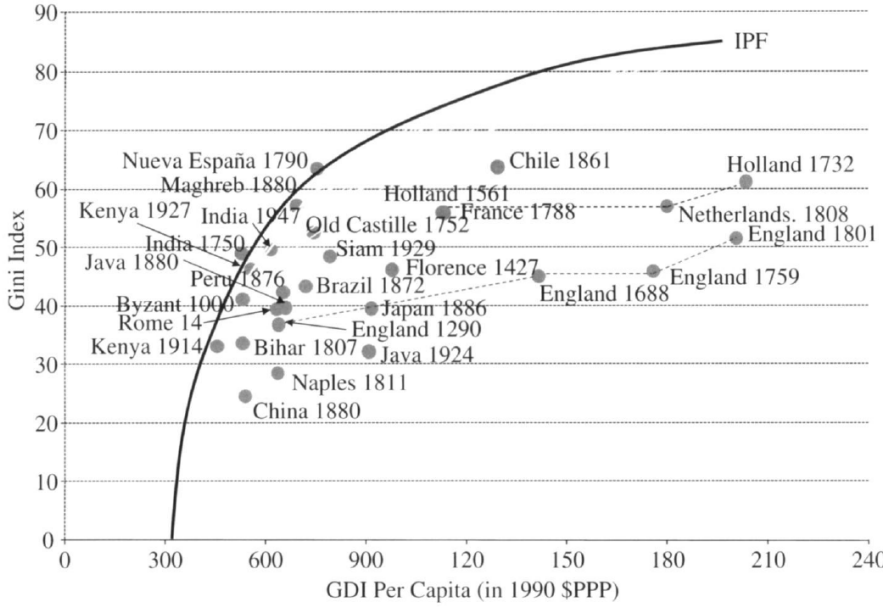


Fig. 2. *Pre-industrial Inequalities: Estimated Gini Coefficients, and the Inequality Possibility Frontiers*

The 4 horsemen of equalization (Scheidel, 2017)

- Epidemics
  - ex. 7th & 13th Plagues
- State collapse
  - ex. China warlords
- Revolution
  - ex. French and Russian revolution
- War
  - ex. WWI, WWII, successful land reform in occupied Japan
- Mechanisms
  - Malthusian violence : Death → Scarcity of manual labor
  - Compulsory transfers through taxes/expropriation

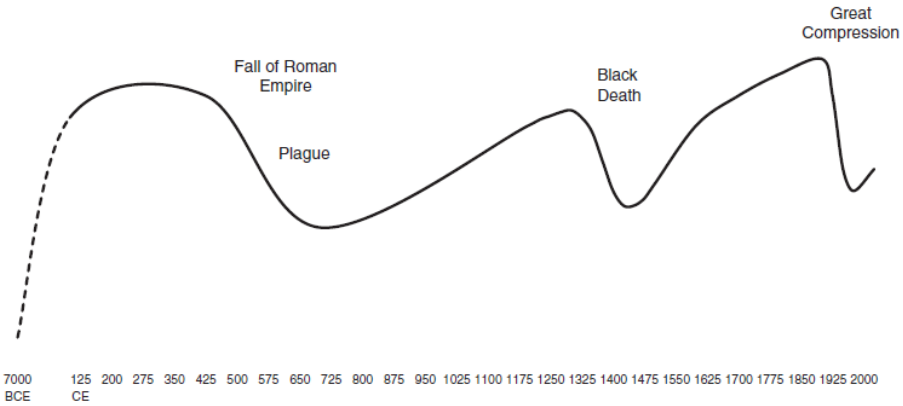
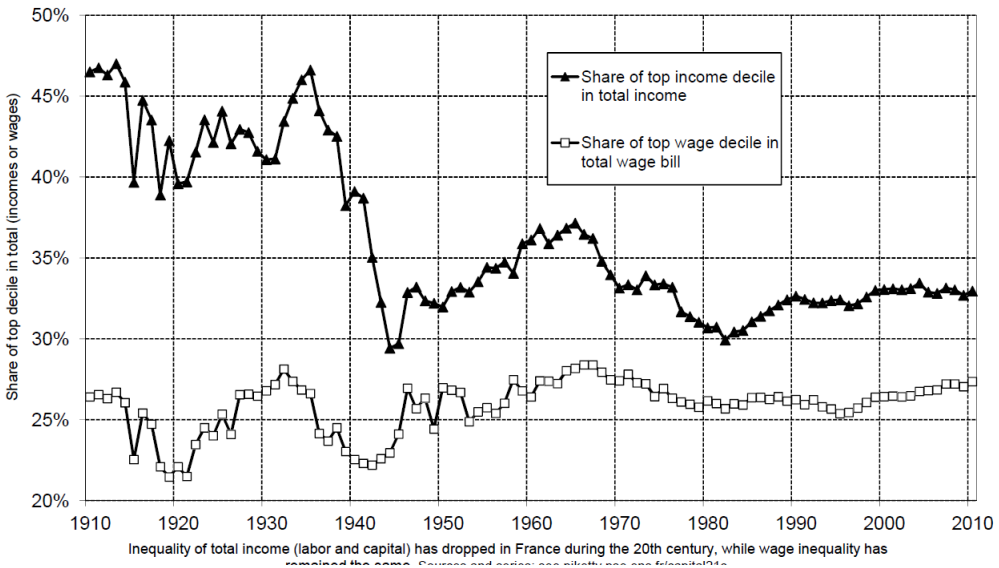


Figure 3.1 Inequality trends in Europe in the long run

- Limits
  - 20th century great compression not just due to wars
  - Starts before WWII (Sweden)

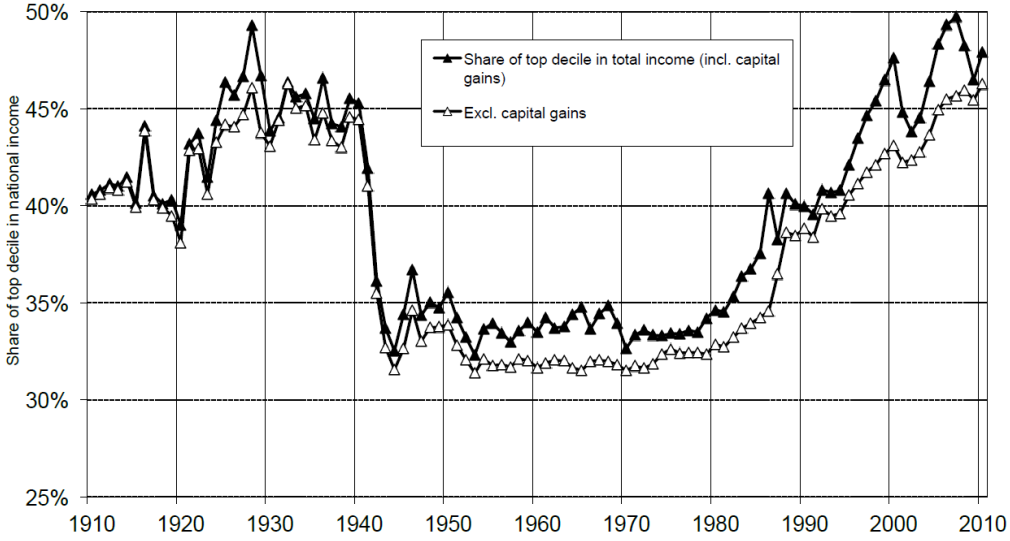
US / France income inequality patterns

Figure 8.1. Income inequality in France, 1910-2010



Inequality of total income (labor and capital) has dropped in France during the 20th century, while wage inequality has

Figure 8.5. Income inequality in the United States, 1910-2010



The top decile income share rose from less than 35% of total income in the 1970s to almost 50% in the 2000s-2010s.
Sources and series: see piketty.pse.ens.fr/capital21c.

V. Between-country inequalities

Gross National Income per Capita PPP 2021

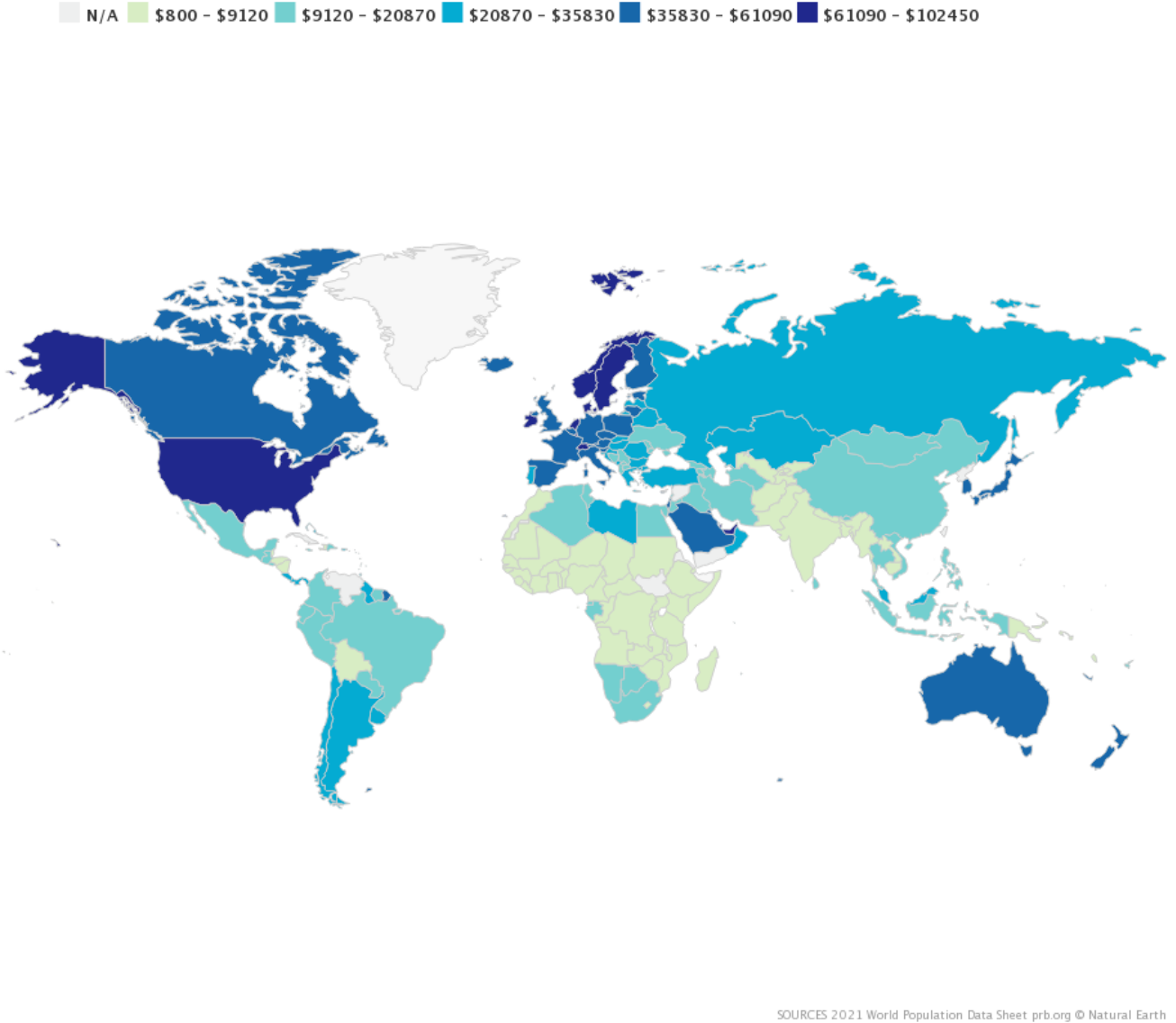
https://www.prb.org/international/indicator/gross-national-income/map/country

Big contrast Western Europe & western Europe former population colony

East Asia catching up (Japan, 1960, Korea, 1990, China now, India in a few years)

Contrast strong with former extraction colonies, notably Africa

Why? Source and origins of inequality among societies



The first divergence (Neolithics)

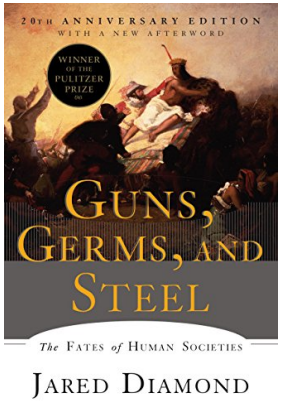
- Approach based on natural resources and geographical constraints
  - Domesticable species (cereals and herbivorous big mammals)
    - Grass: Wheat, Rice, Barley, etc.
    - Major five: Sheep, Goat, Cow, Pig, Horse
    - Failure: Zebra

TABLE 8.1 World Distribution of Large-Seeded Grass Species

Area	*Number of Species*	
West Asia, Europe, North Africa		33
Mediterranean zone	32	
England	1	
East Asia		6
Sub-Saharan Africa		4
Americas		11
North America	4	
Mesoamerica	5	
South America	2	
Northern Australia		2
	Total:	56

TABLE 9.2 **Mammalian Candidates for Domestication**

	Continent			
	Eurasia	**Sub-Saharan Africa**	**The Americas**	**Australia**
Candidates	72	51	24	1
Domesticated species	13	0	1	0
Percentage of Candidates domesticated	18%	0%	4%	0%



Circulation and transposition dynamics

- Possible transposability at the same latitude
  - Ex. Former France covered with forest. Large seeded grass absent, but transposable
- Eurasia. East-West circulation of agricultural innovations
  - From Fertile Crescent to Europe or to East Asia
  - Or from China to rest of Asia (rice)
- Africa and America
  - North-South circulation. Difficult/impossible transposition of innovation. Jungle/desert to cross

TABLE 5.1 Examples of Species Domesticated in Each Area

Area	*Domesticated*		
	Plants	*Animals*	*Earliest Attested Date of Domestication*
Independent Origins of Domestication			
1. Southwest Asia	wheat, pea, olive	sheep, goat	8500 B.C.
2. China	rice, millet	pig, silkworm	by 7500 B.C.
3. Mesoamerica	corn, beans, squash	turkey	by 3500 B.C.
4. Andes and Amazonia	potato, manioc	llama, guinea pig	by 3500 B.C.
5. Eastern United States	sunflower, goosefoot	none	2500 B.C.
? 6. Sahel	sorghum, African rice	guinea fowl	by 5000 B.C.
? 7. Tropical West Africa	African yams, oil palm	none	by 3000 B.C.
? 8. Ethiopia	coffee, teff	none	?
? 9. New Guinea	sugar cane, banana	none	7000 B.C.?

Comparative advantage in the conquest of America

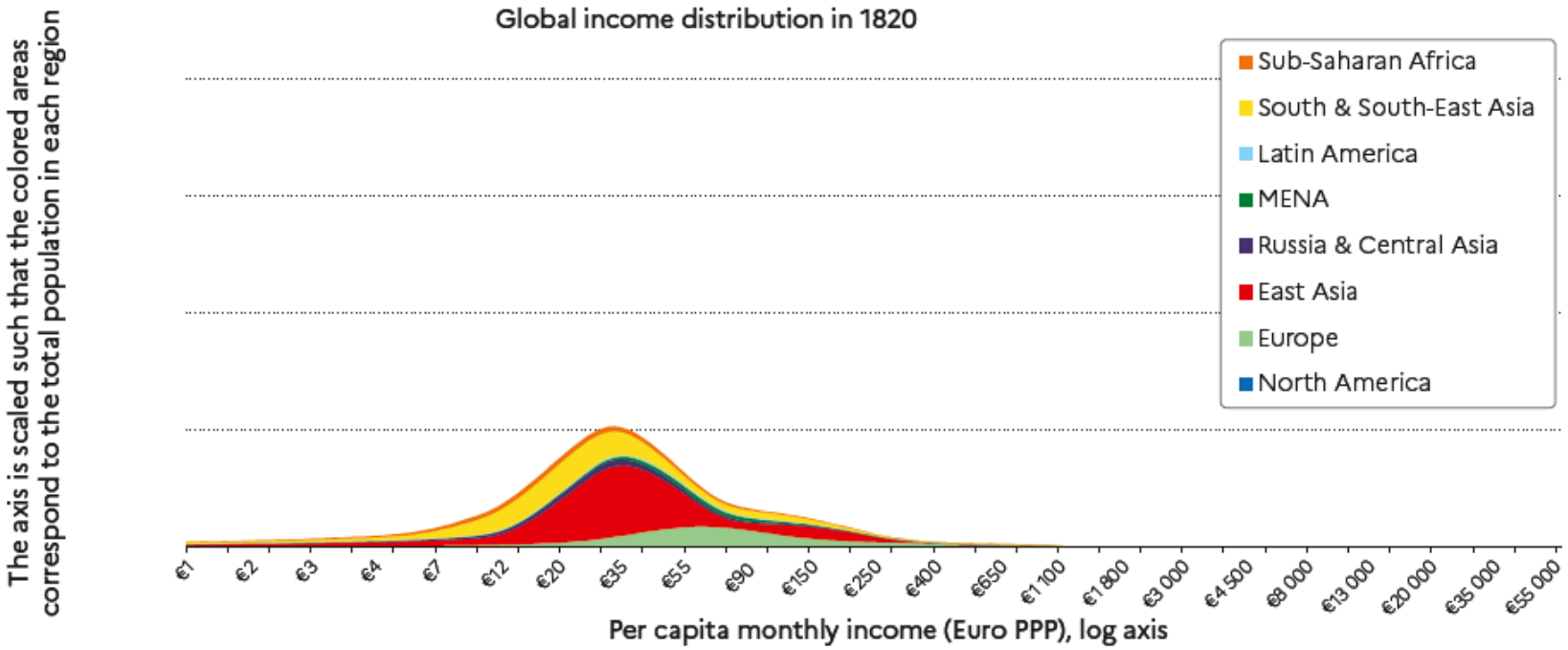
- 1532 Battle Cajamarca: Inca emperor Atahuallpa vs Spanish conquistador Francisco Pizarro.
- Victory of 168 soldiers versus several thousands
- Why?

- America devasted by European viruses
  - European immunity advantage: coevolution with livestock viruses
- Horses
- Weapon in steal

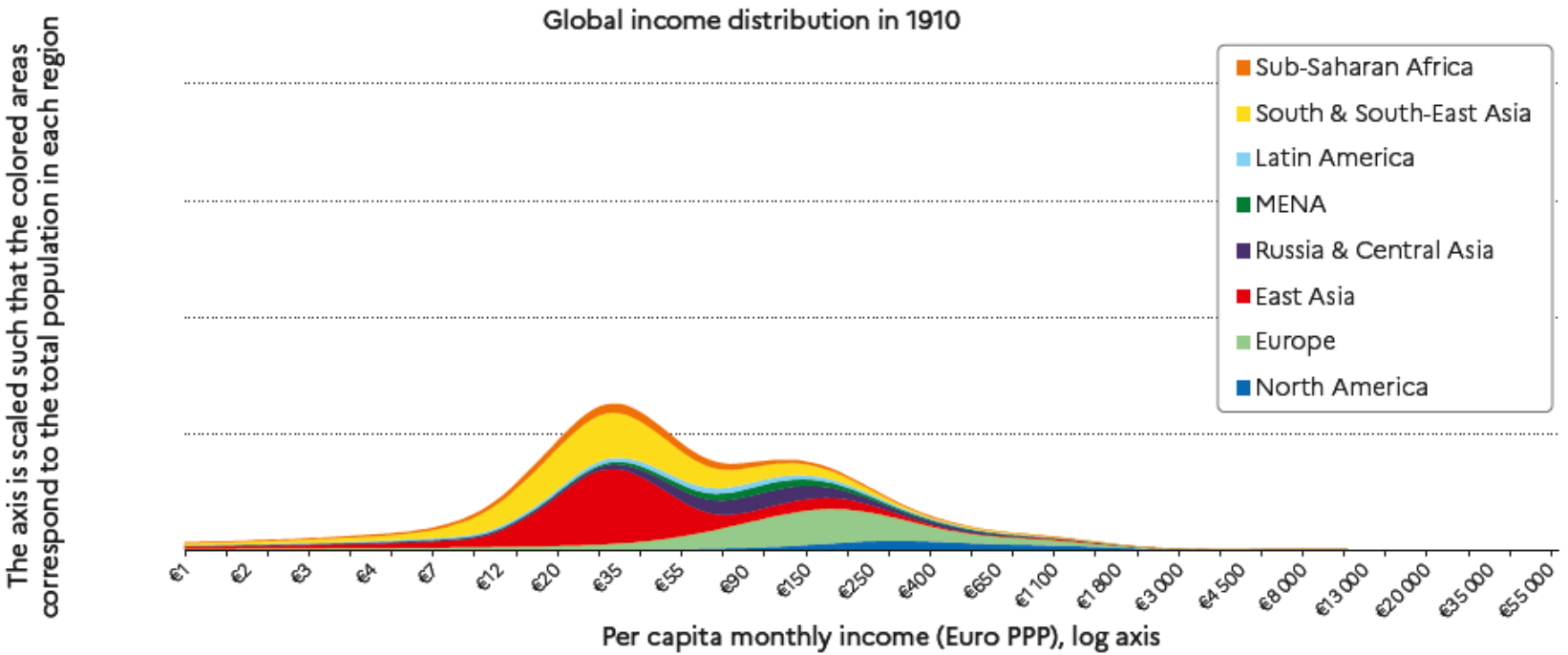
Great (Industrial) Divergence

- Explains well
  - Divergence between Eurasia and Africa/America
  - Mostly neolithics
- What about divergence between Europe and Asia and the role of industrial revolution

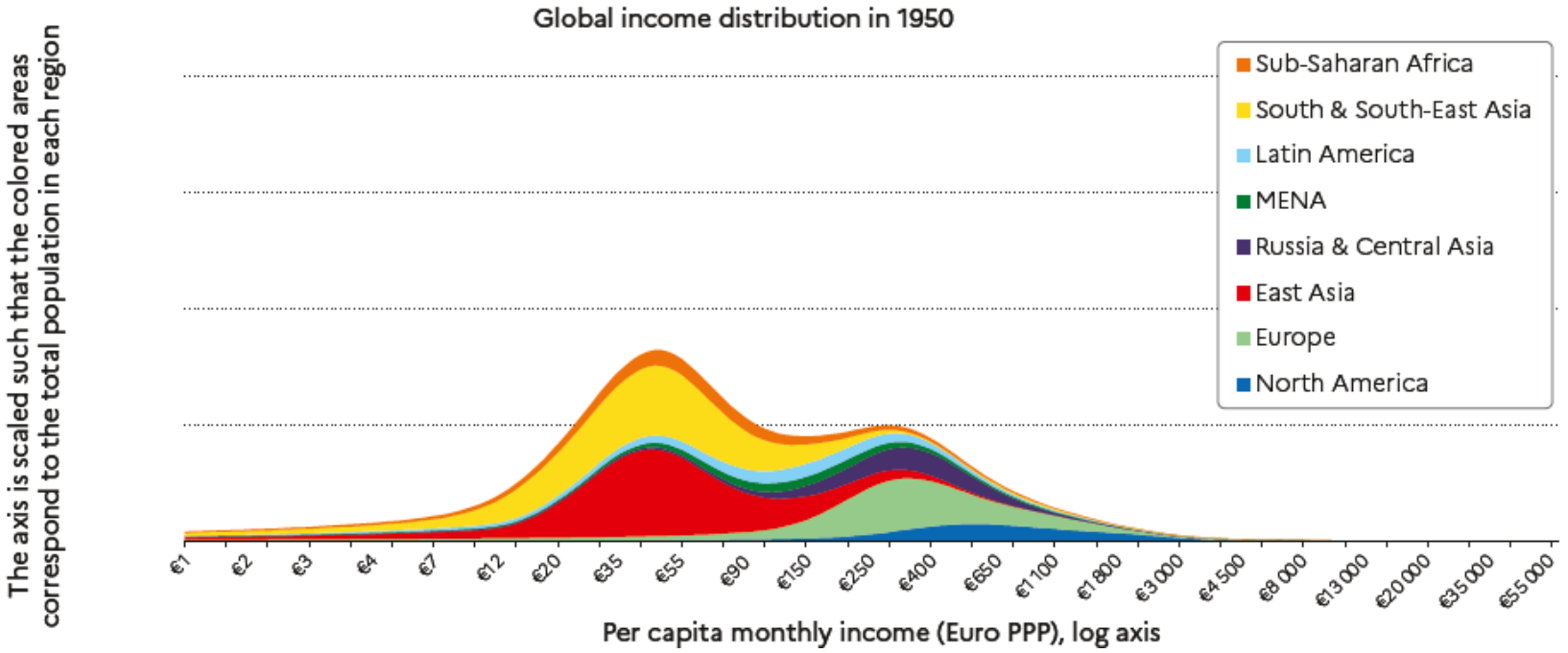
Inequality in 1820 (bell shape)



1910


Global income distribution in 1910
The axis is scaled such that the colored areas correspond to the total population in each region
Sub-Saharan Africa
South & South-East Asia
Latin America
MENA
Russia & Central Asia
East Asia
Europe
North America
€1
€2
€3
€4
€7
€12
€20
€35
€55
€90
€150
€250
€400
€650
€1 100
€1 800
€3 000
€4 500
€8 000
€13 000
€20 000
€35 000
€55 000
Per capita monthly income (Euro PPP), log axis

1950


Global income distribution in 1950
The axis is scaled such that the colored areas correspond to the total population in each region
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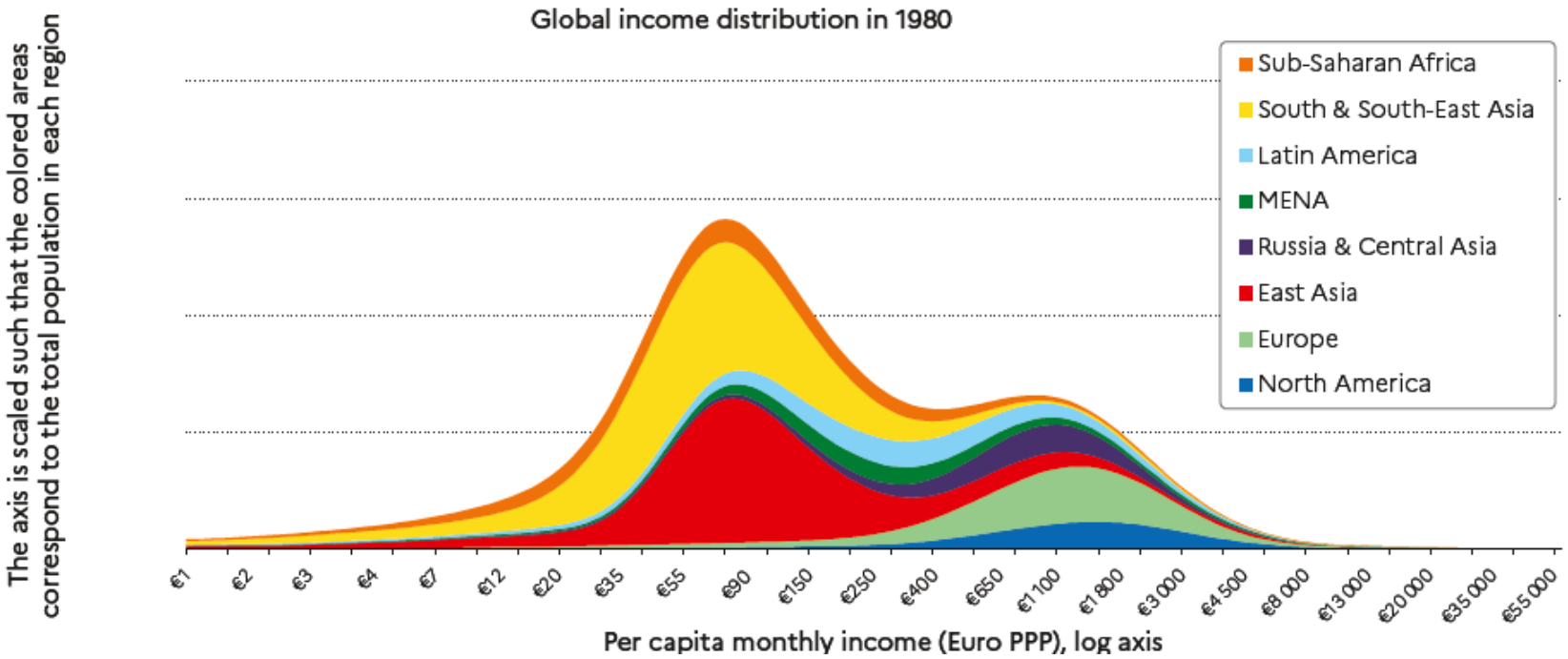
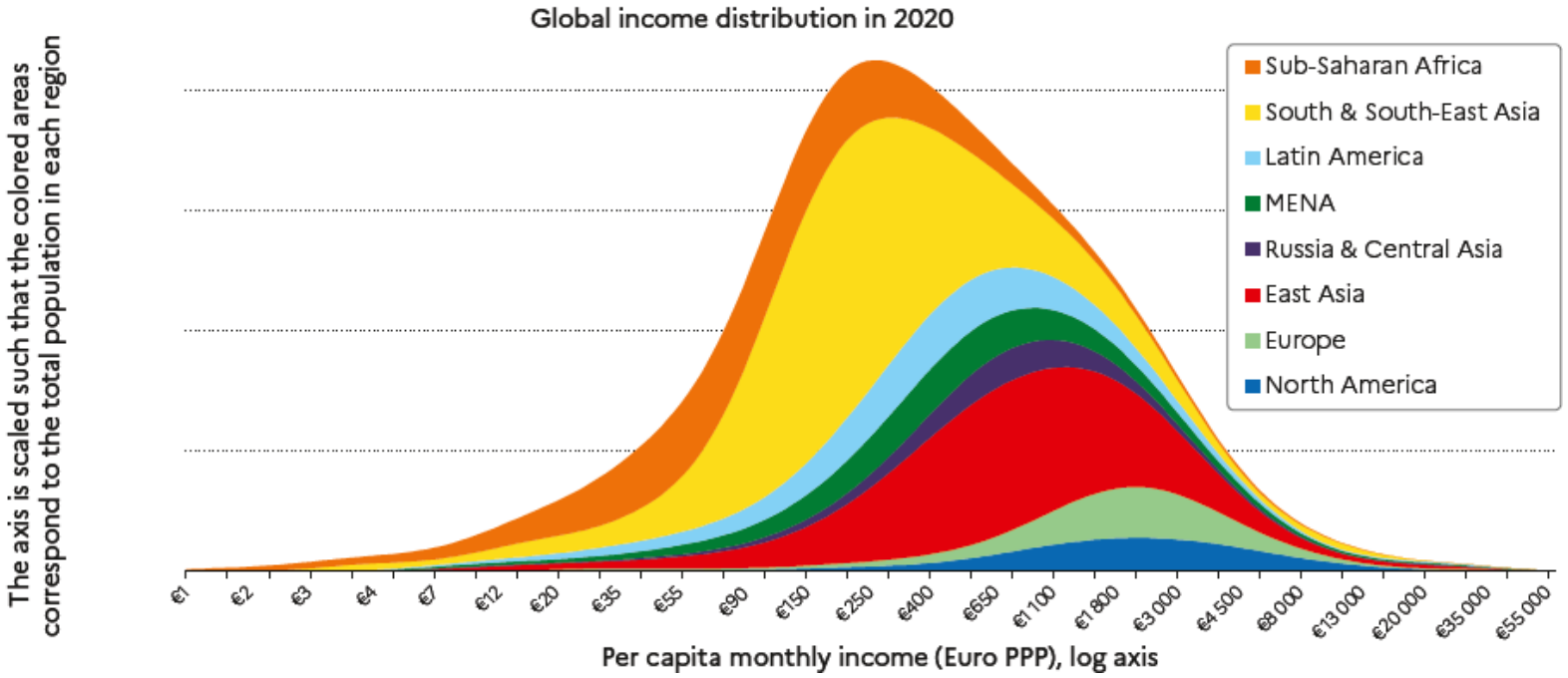
€8 000
€13 000
€20 000
€35 000
€55 000
Per capita monthly income (Euro PPP), log axis

1980 (almost bimodal curve)



2020. Return to a bell shape



Various explanations of this great divergence

- Max Weber : Religion (*Protestant Ethics)* & Rationalization (*Economic History*)
- Acemoglu Robinson (Why nation fails, 2012): Institutions
- Henrich 2020, The WEIRDest People in the World
  - Western, Educated, Industrialized, Rich, Democratic
- Teleological?

Pomeranz. A resource based approach

- Text discussion