

Day 1: Introduction and Core Concepts

New Climate Economy Training Course

World Resources Institute

July 2021

Motivation

This is the first set in a 5 lecture series on income distribution.

The objective of the course is to provide attendants with theoretical and practical knowledge on distributional analysis, with an emphasis on capacity building for impact evaluation

Daily Topics

The topics for each day are:

- Day 1: Introduction and Core Concepts
- Day 2: Poverty
- Day 3: Inequality and Introduction to Impact Evaluation
- Day 4: Methods and Tools for Impact Evaluation
- Day 5: Practical Exercise

Lecturers

The course will be delivered by three Chilean economists:

- Cristian Jara, at the Chilean Institute of Statistics
- Javiera Petersen, at University College London
- Raimundo Smith, at the World Bank

Motivation

This presentation is organized as follows.

- Motivation
- Income Distribution and Economic Thought
- Methods and Data for Income
- Trends in Income Distribution
- Case Studies

Income Distribution and Economic Thought

The question on to *Why are some people rich and some poor?* generally precedes that of *Why are some countries rich and some poor?*

This section will present views on income distribution and its composition by different schools of thought. In particular:

- Classical
- Marxian
- Neoclassical

Classical Economics

Ricardo¹ asserted that income distribution is “the principal problem in Political Economy”.

The theoretical approach of classical economists focused on the functional distribution of income, this is, between the main factors of production:

- Labor ⇒ Wages
- Capital ⇒ Profits
- Land ⇒ Rent

Which reflects 18th and 19th century class divisions between workers, capitalists, and landowners.

¹Ricardo (1891)

Classical Economics

Wages

Adam Smith² pointed out that the division of labor increased productivity, but not necessarily wages.

As the demand side of the market limits the degree of specialization, the mobility of workers between industries puts a threshold on steep sectoral wages increases.

This is in line with contemporary wage determination theories of supply and demand for labor.

²Smith (1937)

Classical Economics

Wages

Thomas Malthus³, a demographer, developed the theory of *subsistence wages*. Malthus noted that:

- Population \Rightarrow Geometric Growth
- Agricultural Production \Rightarrow Arithmetic Growth

If a temporary wage increase promotes fertility, as population grows at a faster rate than agricultural production, wages will fall in the long run. This steady state was named *the natural price of labor* by Ricardo.

³Malthus (1872)

Classical Economics

Wages



Figure: Malthusian Wages

Classical Economics

Profits

Profits are the rate of return on capital. They are decomposed as:

- Interest Rate \Rightarrow Fixed
- Risk Premium \Rightarrow Capital Specific

Profits represents a premium on abstinence from current consumption. As the risk premium varies across industries and projects, the return on capital is highly variable, even in competitive markets.

Classical Economics

Rent

Rent is the landowners income, and corresponds to lands rental rate. It is determined by capital and labor costs on land exploitation, as measured in the less productive lots. According to Ricardo:

- *“Corn is not high because a rent is paid, but a rent is paid because corn is high”*

Classical Economics

The Structure of Wages

Adam Smith wage theory is called *compensating variations*, and it draws on the idea that wages reflect the particularities of professions, both in terms of skill required and risk taken. An example pertaining training risks:

- Shoemaker ⇒ Low training risk and low wages
- Lawyer ⇒ High training risk and high wages

As it is expected that a shoemaker can be reliably trained, as opposed to a lawyer, whose successful training depends on a wider variety of factors.

Classical Economics

The Structure of Wages

Consider two labor markets with an identical demand for labor on which the nature of labor only differs in the riskiness of the job.

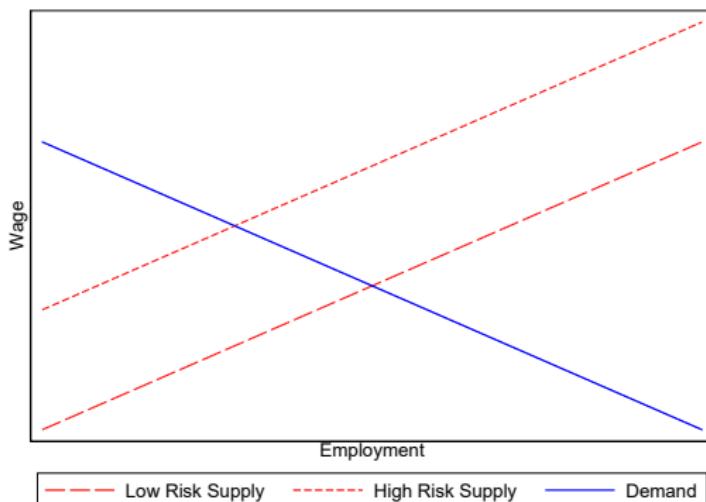


Figure: Compensating Wage Differentials

Classical Economics

The Structure of Wages

John Stuart Mill⁴ disagreed with Smith and posited that “the hardships and the earnings” were inversely related.

According to this theory labor markets are segmented by class background, limiting the set of occupations available for each individual.

This implies that inequality of opportunities leads to inequality in wages.

⁴Mill (1965)

Classical Economics

The Structure of Wages

Laurison and Friedman (2016) analyses British workers and their parents occupations. They find high persistence within groups:

Parents Occupational Group	Occupational Group		
	(1)	(2)	(3)
Higher Managers and Professionals (1)	1.709	2.102	2.564
Lower Managers and Professionals (2)	1.321	2.318	3.171
Other (3)	3.389	6.954	21.837

Marxian Economics

Wages

Marx⁵ proposed that equilibrium wages were higher than the malthusian *subsistence wage* or the ricardian *natural price of labor*, leading to persistent unemployment. This unemployed group could be utilized by the capitalist class during labor demand surges.

This theory argues that a fundamental characteristic of capitalist economic systems is its ability to grow and accumulate capital. This affects wages by:

- Increasing Productivity ⇒ Higher wages
- Increasing Industrial Concentration ⇒ Lower Wages

⁵Marx (2007)

Marxian Economics

Exploitation

Another feature of the marxian perspective is that of exploitation.

- Labor is considered the primary factor of production, as non-labor factors are a product of past labor.
- Workers are paid subsistence wages
- The difference between a workers productivity and its wage is the surplus value that characterizes capitalist exploitation

Neoclassical Economics

The neoclassical school is characterized by its reliance on optimization theory, anchoring their analysis on models that characterize the behaviour of individual economic agents.

General Equilibrium theory is highly general, and it makes no distinction between consumer goods and production factors, thus distributional analysis is not a central feature of the basic version of this models.

Also, competitive market assumptions imply that both workers and firms take wages as given.

Non-Marginalist Approaches

The Pareto Curve

Wilfredo Pareto⁶ analysed income distributions and concluded that they can be generalized by the following power law:

$$\log N = \log A + \alpha \times \log y$$

Where N is the number of individuals whose income is at least y and A reflects population size. Pareto estimated that $\alpha \approx 1.5$.

This approximation represents a good fit for income distributions, specially in the upper tail, and it is still used in extrapolation exercises.

⁶Pareto (1964)

Value Judgements

Can inequality be justified?

If so, to what extent.

- This section will present normative approaches to the study of income distribution
- Modern economic theory has produced novel methods for modelling and measuring economic dynamics, but its high degree of generality entails a positive approach to research and policy

Value Judgements

Classical Economists

According to Adam Smith:

... what improves the circumstances of the greater part can never be regarded as an inconveniency to the whole. No society can surely be flourishing and happy, of which the far greater part of the members are poor and miserable. It is but equity, besides, that they who feed, cloath and lodge the whole body of the people, should have such a share of the produce of their own labor...

Value Judgements

Neoclassical Economists

According to John Bates Clark⁷:

... It is the purpose of this work to show that the distribution of the income of society is controlled by a natural law, and that this law, if it worked without friction, would give to every agent of production the amount of wealth which that agent creates...

⁷Clark (1908)

Value Judgements

Utilitarianism

By applying the law of diminishing returns, Pigou⁸ concluded:

...it is evident that any transference of income from a relatively rich man to a relatively poor man of similar temperament, since it enables more intense wants to be satisfied at the expense of less intense wants, must increase the aggregate sum of satisfaction...

⁸Pigou (2013)

Value Judgements

Utilitarianism

Under concave utility functions, there are social preferences for redistribution:

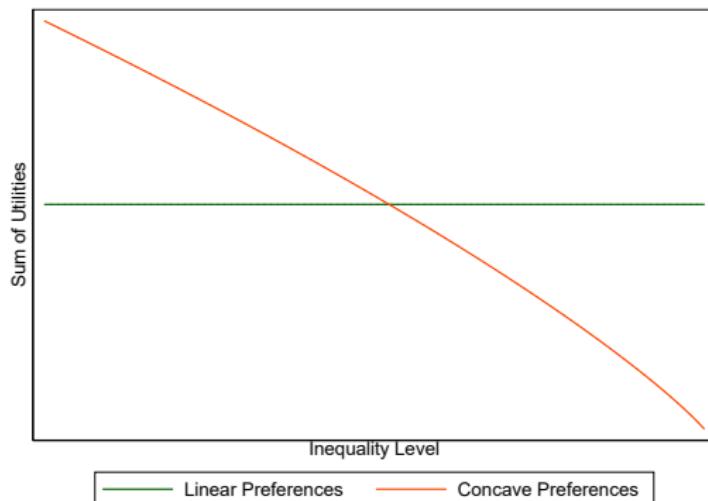


Figure: Sum of Utilities

Value Judgements

Equal Sacrifice Principle

The equal sacrifice principle can be stated as:

$$U(Y) - U(Y - T) = k$$

Where Y is pretax income, T are taxes and k is constant for all individuals.

This formulation does not imply directly that progressive taxes are optimal, even under concave utility function. This will depend on the functional form of the utility function and the corresponding elasticity of income after taxes with respect to income before taxes.⁹

⁹For example, if the utility function is logarithmic, optimal taxes are proportional rather than progressive.

Value Judgements

The Benefit Principle

This concept states that individual tax contributions should be proportional to the revenue they provide to the individual. This represents a market oriented tax solution to the provision of public goods. Examples of this approach are:

- Highway tolls
- Bus fares
- Earmarked taxes

Methods and Data for Income Distribution Analysis

To study income distribution one first needs to define two basic things:

- How is income defined
- What is the population of interest

Income Definition

The most common form of income measurement used in distributional analysis is that of total gross income. This represents the sum of income from all sources, before taxes and transfers, and net of deductions such as interest payments. Elements in this definition are:

- Market income
 - Factor income
 - Labor income
 - Capital income
 - Occupational pensions
- Taxable transfer income
 - Public pensions
 - Social benefits

Income Definition

There are different methods on how to obtain income estimates:

- Through individual tax returns
- Through national accounting “Total Personal Sector Income”, and deduct non-relevant items
- Household Surveys

If possible all calculations are desirable, as this gives hints on the potential biases of using one source over the other.

Income Definition

Survey Data

Most household surveys are not designed to measure income distribution. Common objectives of household surveys are to define:

- Poverty Status
- Labor Status

Surveys often have top-coding methodologies, which consist of a winsorization procedure over some percentile at the top of the income distribution tail.

Income Definition

Survey Data

Recent trends of increasing inequality driven by top income shares reduce the informative content of survey based inequality indicators.

- Fail to correctly measure income in high income brackets
- Relation between gini and top income shares has become weaker
- Prudence in extrapolation methods based on survey data

Surveys often have top-coding methodologies, which consist of a winsorization procedure over some percentile at the top of the income distribution tail.

Income Definition

Top Coding

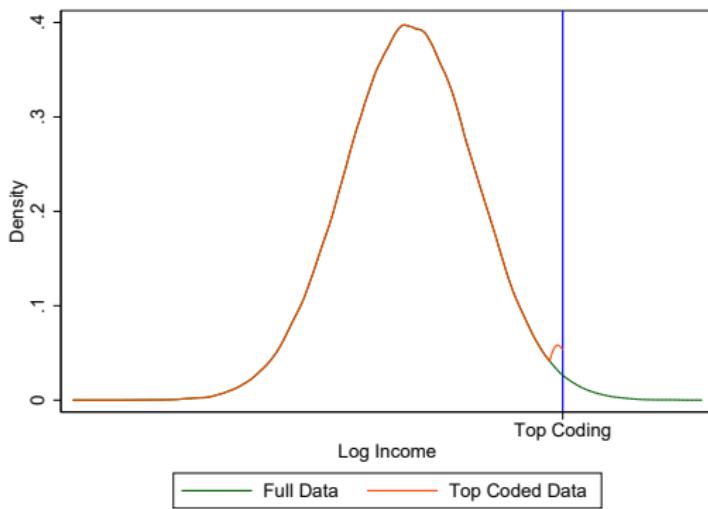


Figure: Top Coding

Tax Unit

The reference population in distributional analysis corresponds to that of total tax units. Countries differ in their treatment and definition of tax units.

- Taxes filled individually ⇒ Reference group is whole adult population
- Taxes filled per family ⇒ Reference group is total households

Tax Unit

Is the tax unit relevant in distributional analysis? According to Atkinson and Piketty (2007)

- If the top 1 percentile share were 10% with an age cutoff at 20, it would thus be 10.6% with a cutoff at 15
- A top 1% share of 10% can be reduced or increased when moving from joint to individual taxation
 - To 8.3% if we assume top couples have equal earnings
 - To 11.8% if we assume top couples have only one earner

Taxes and Inequality

Transfers reduce inequality in every country, but redistribution levels are variable. For example:

- Finland has a very unequal market income distribution, but one the lowest inequality levels after taxes and transfers
- South Korea has a very low market income distribution, and taxes and transfers don't reduce it much further
- The US has high market income inequality and very low levels of redistribution

Taxes and Inequality

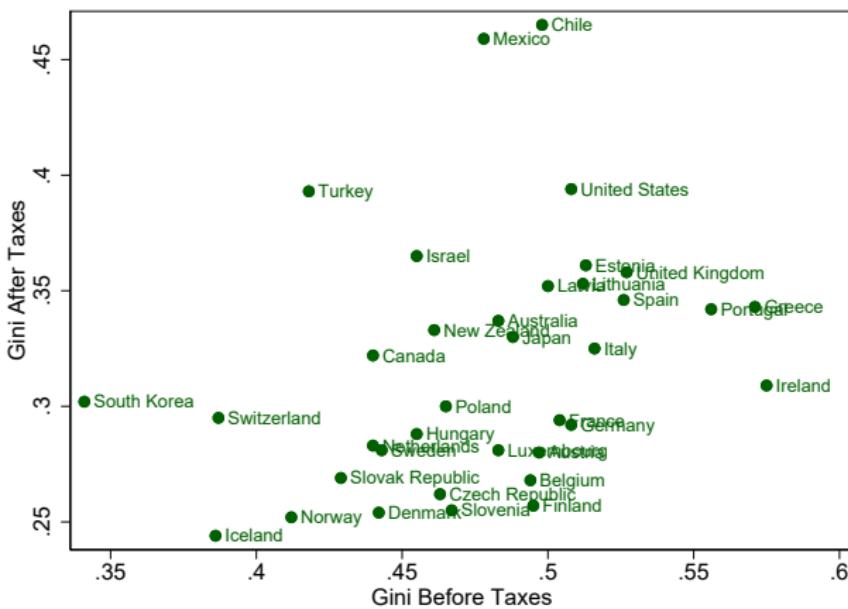


Figure: Taxes and Redistribution¹⁰

¹⁰Source: OECD, Social Protection & Well-Being, Income Distribution Database

Tax Avoidance and Tax Evasion

Tax avoidance and tax evasion generate a distortion if tax filings or national accounts are used for inequality calculations. In general:

- Lower income brackets \Rightarrow Tax Avoidance
- Upper income brackets \Rightarrow Tax Evasion

Tax Avoidance and Tax Evasion

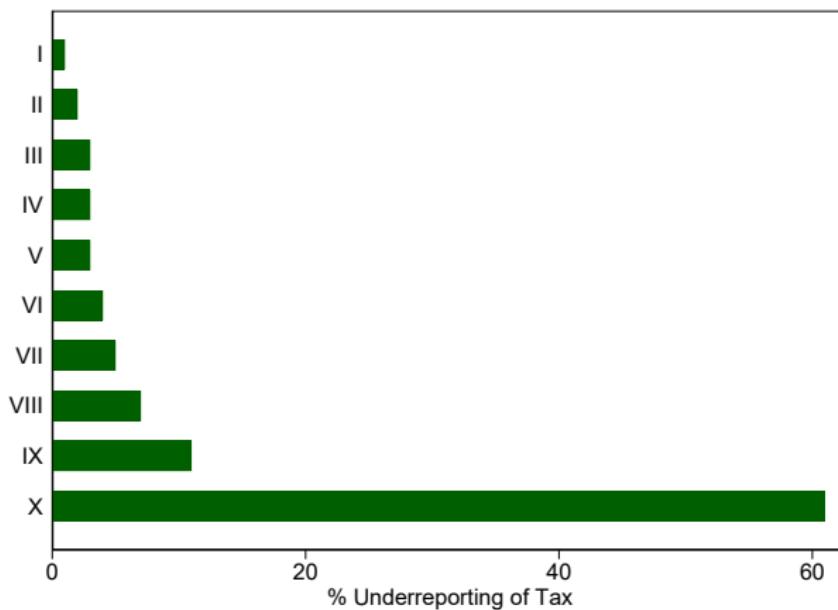


Figure: Taxes Underreporting by Income Decile¹¹

¹¹Source: Johns and Sleath, 2010

Capital Income

A recent result on income inequality research is that capital income is extremely important in the long run.

- Wages represent the larger fraction of income in the lower percentiles
- The top of the income distribution receives both capital and labor income

A persisting issue is the difficulty in observing and measuring capital gains. This has led income inequality researchers to often exclude capital gains from their analysis.

Capital Income

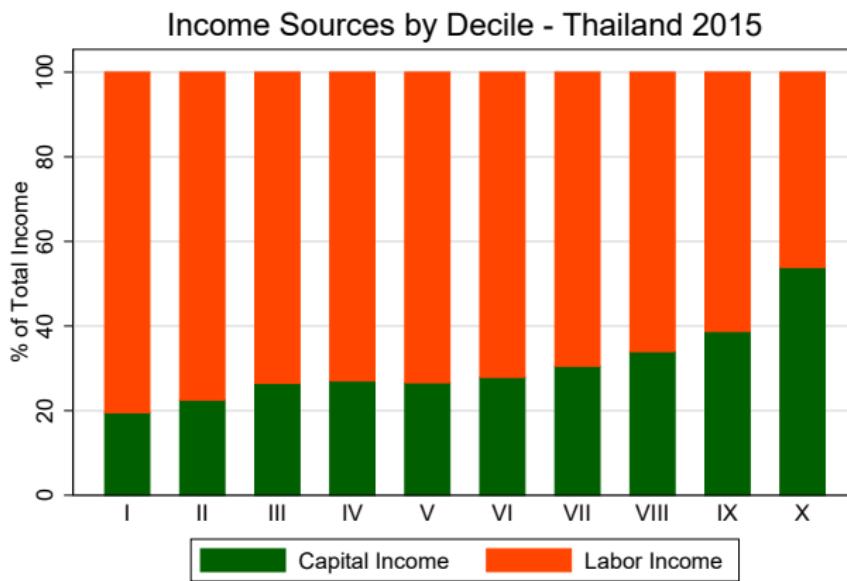


Figure: Income Source by Decile

Consumption

Consumption is sometimes regarded as a better welfare measure than income, specially in developing countries.

- A large fraction of the current evidence on income inequality is actually based on consumption based calculations
- Survey data tends to focus on consumption rather than income

Trends in Income Distribution

This section will focus on evidence and theories regarding the evolution of income inequality. Covering topics such as:

- Kuznets Curve
- The impact of Globalization
- Income distribution past and present trends

Kuznets Curve

Simon Kuznets¹² posited an inverted U-shaped relation between inequality and income.

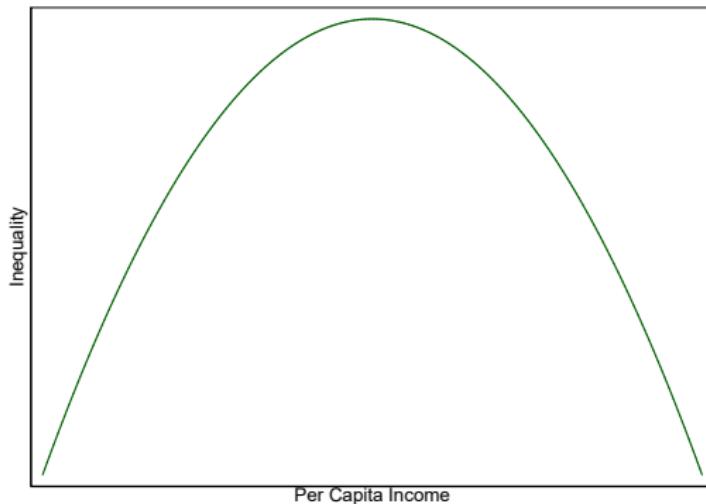


Figure: Kuznets Curve

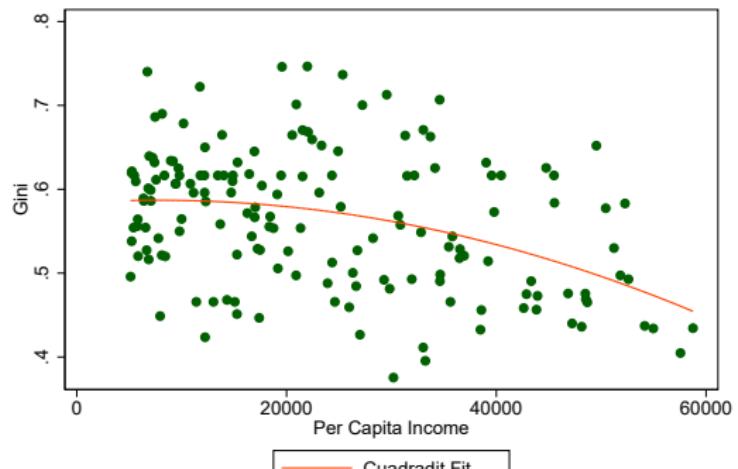
¹²Kuznets (1955)

Kuznets Curve

While influential in developing theories on the fundamentals of income inequality, factual evidence of an inverted U-shaped relation between inequality and income remains inconclusive.

- Kuznets early calculations evidence of high inequality and medium income countries are mostly Latin American, a region characterized by high levels of income inequality
- Conversely, high income and low inequality countries are mostly Western European or belong to the Commonwealth

Kuznets Curve



Source: WID.world

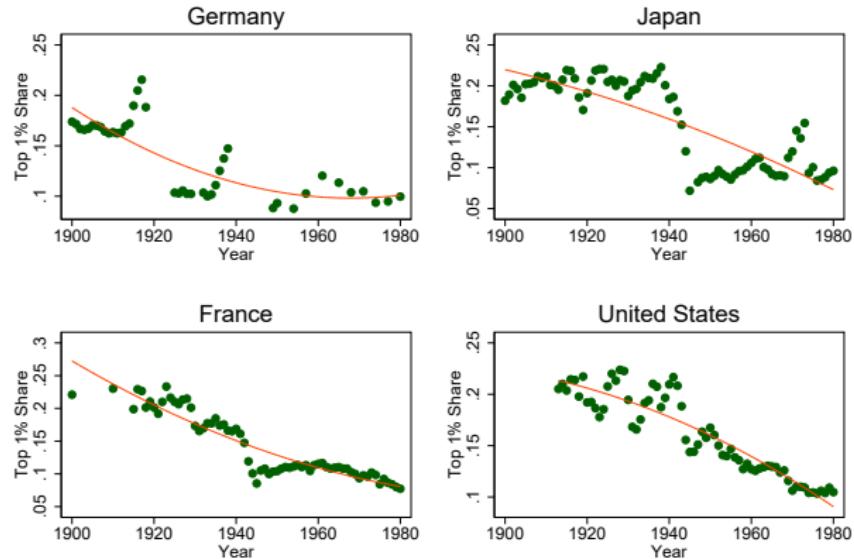
Figure: Kuznets Curve in 2015

Past Trends

During the 20th century, and until the 80's, most countries show decreasing levels of income inequality.

- Income inequality reductions are tightly paired with crises such as the Great Depression and World War II
- The decline is substantial, the top 1% share drops from around 20% to 5% to 10% of total income

Past Trends



Source: WID.world

Figure: Top 1% Shares

Globalization

The relation between inequality and globalization depends on the framework of analysis.

- Heckscher-Ohlin¹³ models of trade predict that countries with abundant capital and skilled labor should see inequality increases
- Modern trade theories are more heterogeneous in their implications
 - Efficiency gains in large and productive firms ⇒ Less inequality
 - Increasing returns in the top ⇒ More inequality

¹³Ohlin (1935)

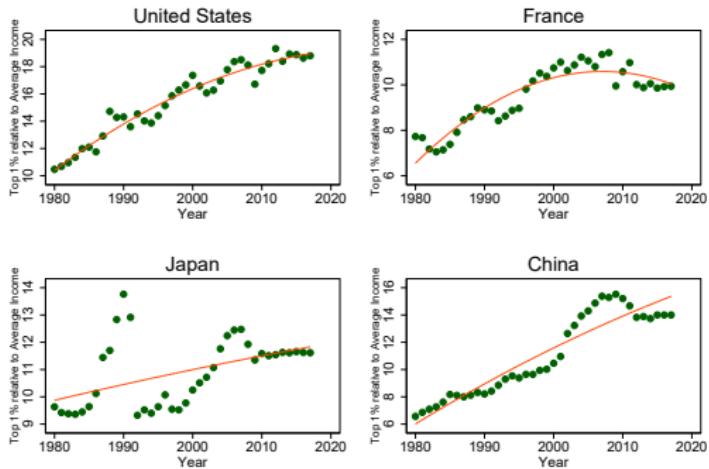
Globalization

Recent increases in income inequality are mostly related to increasing top wages.

- Theories that skilled vs. unskilled labor need additional mechanisms to explain higher increases at the top
- How top earnings increase relative to average earnings are heterogeneous across countries, common global shift theories need to account for cross-country differentials

The evidence points out that the mechanisms by which globalization affect income distribution are country, time and case specific. This implies that market oriented reforms and trade liberalization must be analysed in a broader context of reforms.

Globalization



Source: WID.world

Figure: Top 1% Income relative to Average Income

Recent Trends

There is heterogeneity in results with respect to our definition of inequality.
For example:

- The income shares of percentiles 90-99% are stable
- The income share of the top 1% fluctuates considerably

Recent Trends

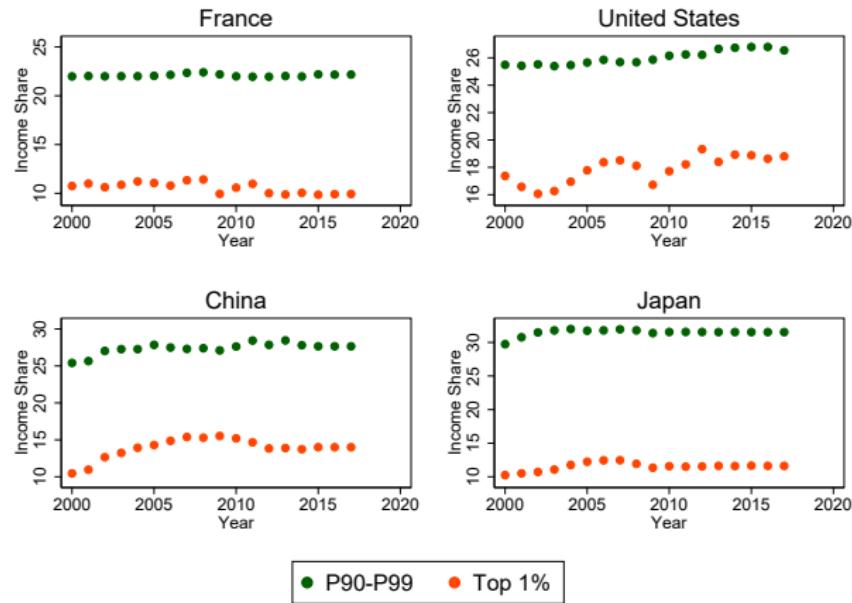


Figure: Top Income Shares

Recent Trends

Inequality remains mainly a national issue, even if globalization raises concerns regarding world level income distribution.

- Most cross-country comparisons use non population-weighted calculation
- If calculations are population weighted, regional indicators will be heavily dependant on large countries, such as Brazil in Latin America
- At the world level, population weighting is extremely important when China and India are taken in to account

Recent Trends

Inequality variation across countries is large when compared with changes within country over time.

- Inequality rankings are stable over time
- The spearman correlation coefficient is 0.68 when comparing Gini coefficients in 1981 and 2010
- It rises to 0.74 when comparing 1990 and 2010

Recent Trends

Inequality Stability within Country

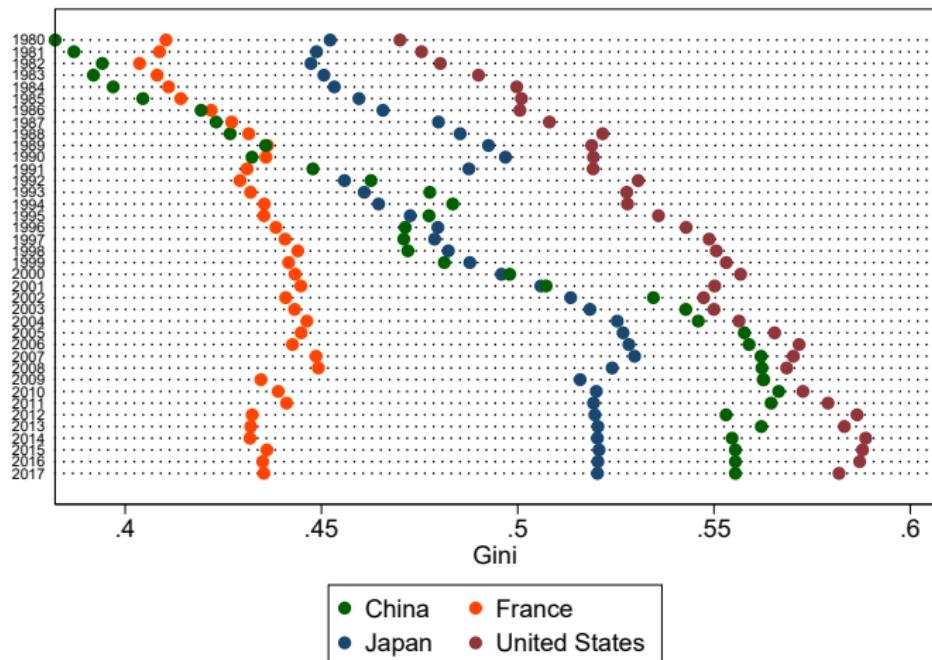
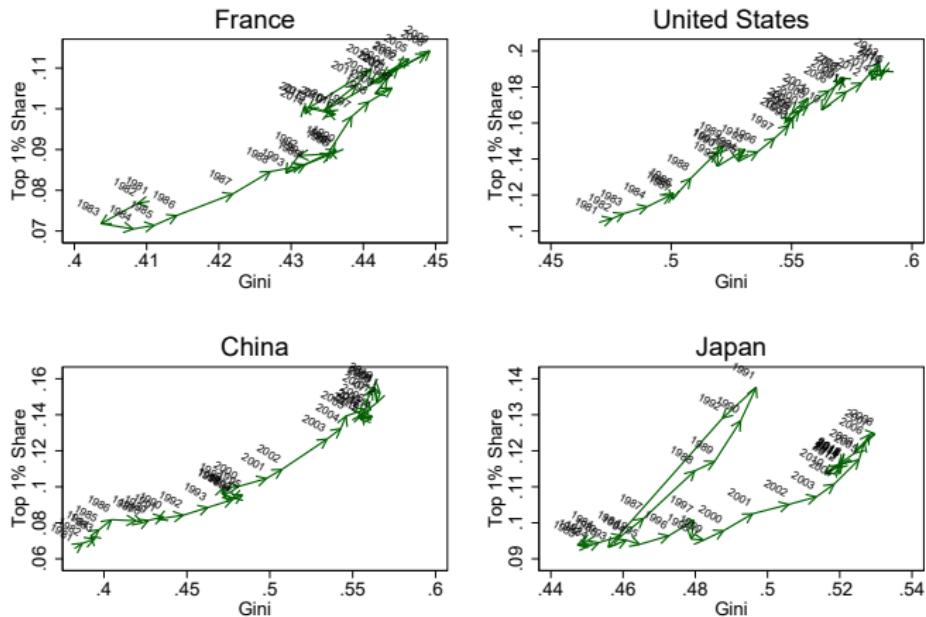


Figure: Gini across Countries in Time

Recent Trends

Gini and Top 1 Share

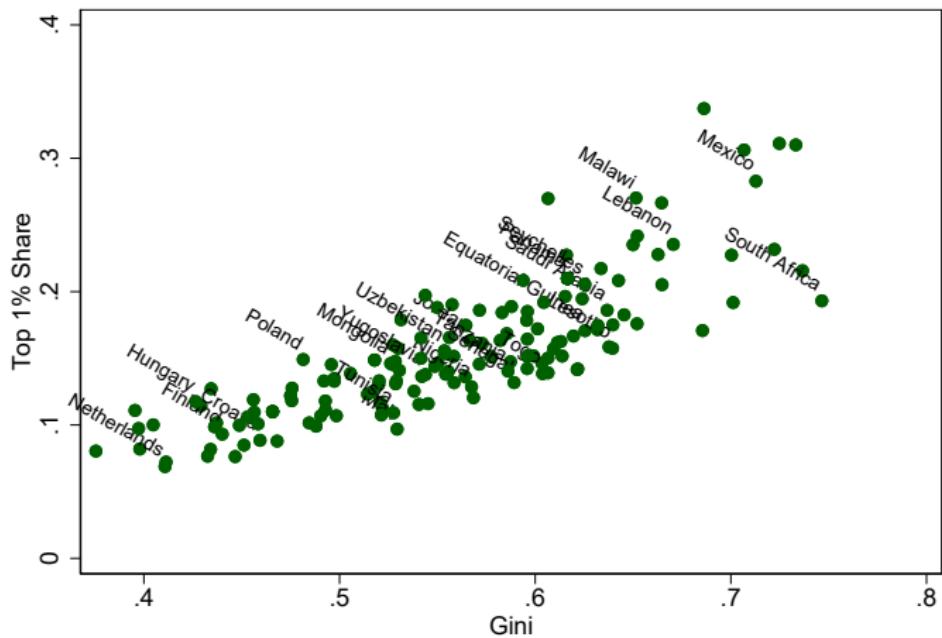


Source: WID.world

Figure: Gini and Top Income Shares¹⁴

Recent Trends

Gini and Top 1 Share



Source: WID.world

Figure: Gini and Top Income Shares¹⁵

Recent Trends

Rich and Middle Income Countries

Most countries have seen increasing income inequality.

- Long term increases in the Gini coefficient and P90/P10 ratios are evidenced in survey based calculations
- Tax data shows increasing top income shares

Among developed countries:

- English speaking countries are the most unequal, led by the United States and the United Kingdom
- Nordic countries are the less unequal

Recent Trends

Developing Countries

Poverty and inequality are main concerns in the developing world. Features of developing countries are large disparities in income and material well being.

- 30% of people in the developing world live with less than 2US\$ a day
- This is close to zero in developed countries

There is vast evidence of significant declines in poverty levels, both monetary and in non-income dimensions such as health and education. Trends in inequality are far less clear.

Recent Trends

Developing Countries

High levels of poverty and inequality are common in the developing world:

- The highest inequality levels are located in sub-saharan Africa, however this is the region with the largest dispersion in inequality.
- Latin America and the Caribbean are largely regarded as the most unequal regions in the world

But there is scope to action, through both market and fiscal policies. A pending issue remains that of relative poverty, as the rate at which developing countries bridge the income gap with industrialized countries is highly variable.

Recent Trends

Developing Countries

There is vast evidence on growth-driven poverty reduction:

- If the growth-poverty reduction elasticity is sufficiently high, then growth based policies on poverty reductions are justified
- If this elasticity is not high enough, then policies that include redistributive features are necessary

Recent Trends

Developing Countries

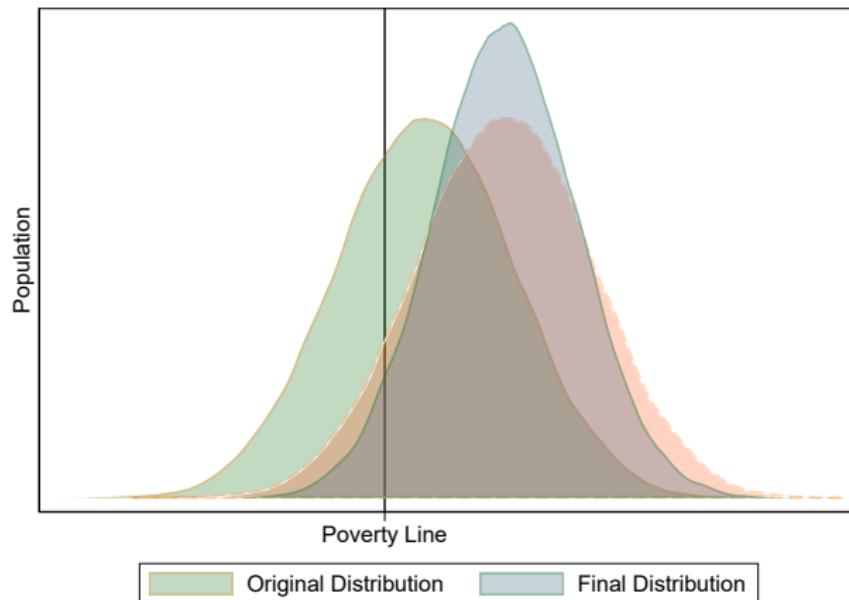


Figure: Growth and Poverty

Recent Trends

Developing Countries

There are signs of inequality convergence in the developing world.

- The gini coefficient for the 20 most unequal countries fell 11% between 1981 and 2010
- Conversely, it increased 58% in the less unequal countries

While convergence is well documented, the mechanisms behind remain unclear. Main theories focus on:

- A framework of standard growth models
- Convergence on policies and institutions, particularly market oriented reforms

Drivers of Inequality

Technology and education

Increases in education can counteract skill-biased technical changes a la Tinbergen. According to Bourgignon:

- Convexities in returns to education \Rightarrow Equalizing increase in education may lead to unequalising changes in the income distribution
- This phenomenon is called "the paradox of progress"

Drivers of Inequality

Technology and education

Acemoglu (2002) reviews the evidence of technical change favouring of skilled workers. Mechanization:

- Replaces tasks previously performed by unskilled workers
- Raises the average skill requirements
- Switches labor demand from blue-collar jobs to white-collar jobs

A recent example the case of computer's adoption in the workplace.

Drivers of Inequality

Market Reform and Social Policy

Most developing countries have implemented market oriented reforms:

- Public firms privatizations
- Regulation reduction

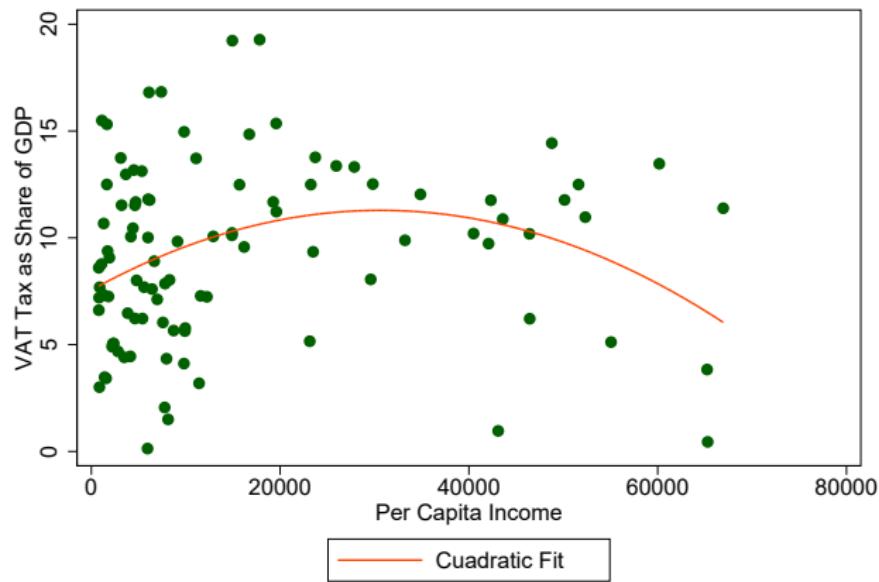
The evidence suggest stark inequality increases in the transition between centrally-planned to market-based economies. Also, developing countries are characterized by:

- Low taxation levels
- Over-reliance on regressive instruments such as value-added taxes

This limits the scope and effectiveness of redistributive policies.

Drivers of Inequality

Market Reform and Social Policy



Source: World Bank Open Data

Figure: VAT Taxes and Per Capita Income

Case Study I

Simplified Distributional National Accounts

The first problem set consists in the replication of key results in this paper: "Distributional national accounts: methods and estimates for the United States."¹⁶

¹⁶Piketty, Saez, and Zucman (2018)

Case Study I

Simplified Distributional National Accounts

Motivation:

- Distributional national income statistics can be used to study both growth and inequality in a consistent framework that aggregates cleanly to national income from national accounts
- In contrast, fiscal income or survey income aggregates display growth levels that are quite different from national income growth both in the short-term year-to-year fluctuations and in the long-term growth rates averaged over decades

Case Study I

Simplified Distributional National Accounts

Previous research, PSZ:

- The PSZ methodology starts from individual tax return data providing information on fiscal income at the micro-level and then imputes forms of income that are in national income but not in fiscal income
- These imputations are made at the individual level based on a number of assumptions and combining information from income tax data and auxiliary datasets such as survey data and national accounts data
- Because the number of assumptions made is very large, the methodology lacks simplicity

Case Study I

Simplified Distributional National Accounts

This paper:

- Develops a simplified methodology that starts from the fiscal income top income share series and makes very basic assumptions on how each income component from national income that is not included in fiscal income is distributed. This simplified methodology has two main goals
 - It can be used to create distributional national income statistics in countries where fiscal income inequality statistics are available but where there is limited information to impute other income at the individual level
 - The simplified methodology can also be used to assess the plausibility of the PSZ assumptions.

Case Study I

Simplified Distributional National Accounts

Methods:

- We focus solely on pretax national income defined as market income after the operation of public and private pension systems. Pretax national income is before all taxes and before any government transfers
- We consider tax units, as opposed to individual adults as in the main PSZ series

The following two assumptions are used in the simplified methodology:

- Untaxed labor and pension income and untaxed capital income earned on pension plans is distributed like taxable labor and pension income
- Other untaxed capital income is distributed like taxable capital income

Case Study I

Simplified Distributional National Accounts

Additional assumptions:

- The share of untaxed labor and pension income and untaxed capital income earned on pension plans accruing to top 1 percent earners is assumed to be the same as the share of labor and pension income in fiscal income accruing to top 1 percent earners
- The share of other untaxed capital income in national income accruing to top 1 percent earners is assumed to be the same as the share of taxable capital income in fiscal income accruing to top 1 percent earners

Case Study I

Simplified Distributional National Accounts

Results:

- This simplified top income share tracks very closely the corresponding sophisticated PSZ income share in both levels and trends
- The PSZ methodology delivers results that are about the same as the results one would obtain by decomposing national income into taxable income and three categories of untaxed income, and making simple assumptions about how these three categories are distributed
- The main difference is in the late 1970s and early 1980s when very little taxable capital income was reported (due to large business losses due in large part to the development of tax shelters)

Case Study I

Simplified Distributional National Accounts

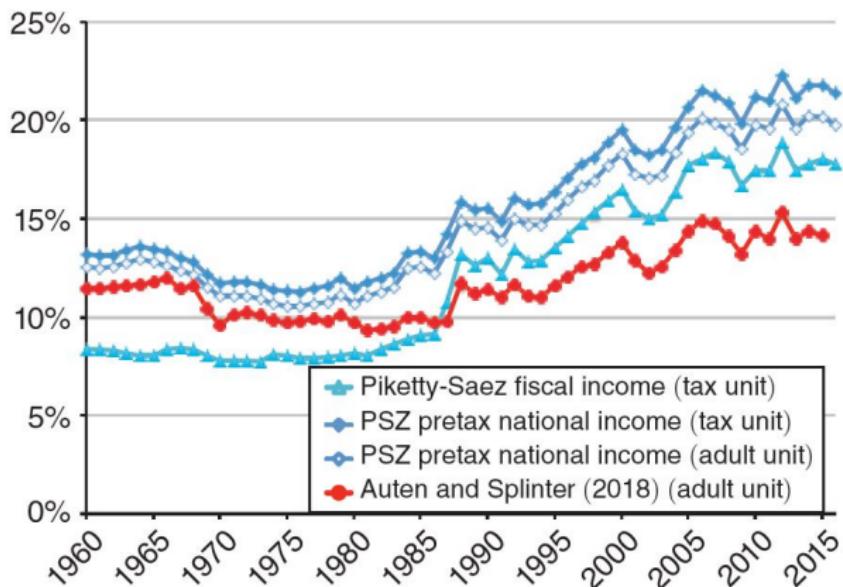
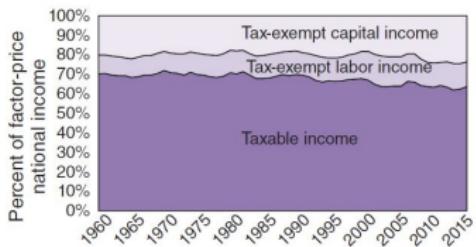


FIGURE 1. TOP 1 PERCENT INCOME SHARES, 1960–2016

Case Study I

Simplified Distributional National Accounts

Panel A. From taxable to total pretax national income



Panel B. Separating taxable labor and taxable capital income

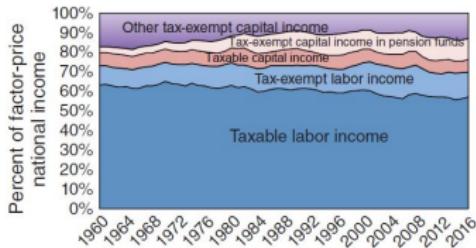


FIGURE 2. FROM TAXABLE TO TOTAL PRETAX NATIONAL INCOME, 1960–2016

Case Study I

Simplified Distributional National Accounts

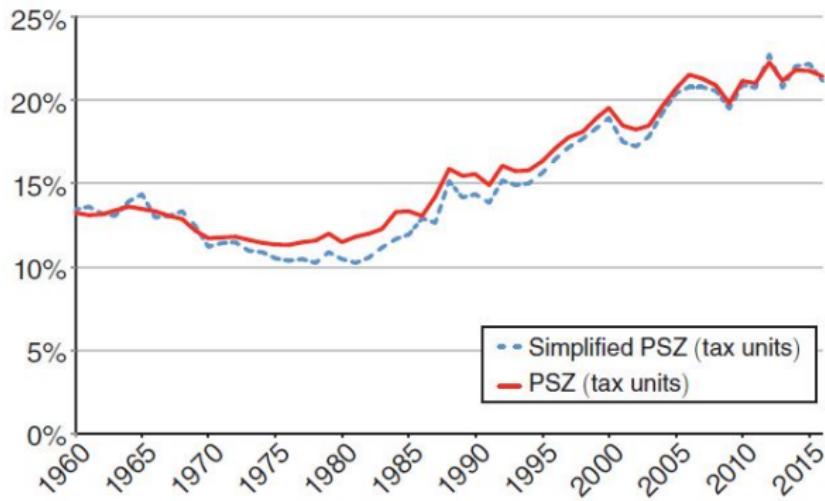


FIGURE 3. TOP 1 PERCENT PRETAX NATIONAL INCOME SHARE:
PSZ VERSUS SIMPLIFIED COMPUTATIONS

Case Study I

Simplified Distributional National Accounts

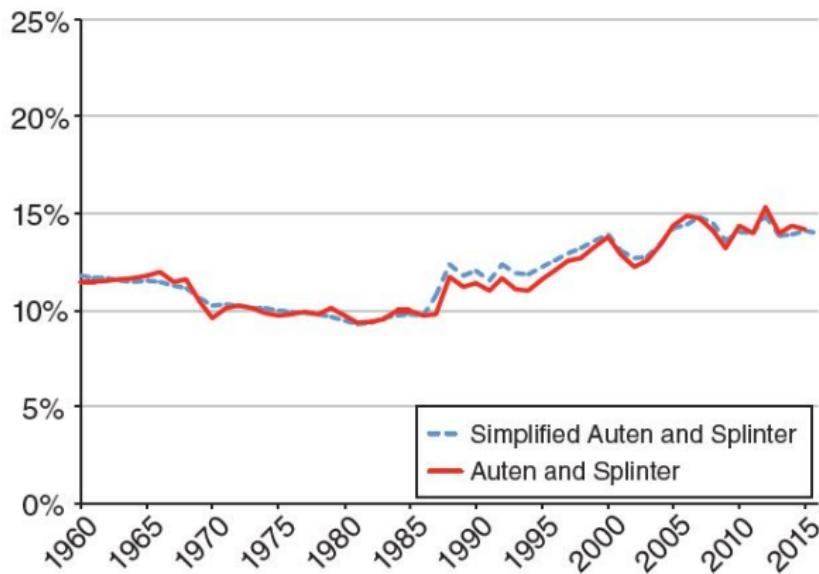


FIGURE 4. HOW TO RECOVER AUTEN AND SPLINTER TOP 1 PERCENT INCOME SHARE SERIES USING SIMPLIFIED COMPUTATIONS

Case Study I

Simplified Distributional National Accounts

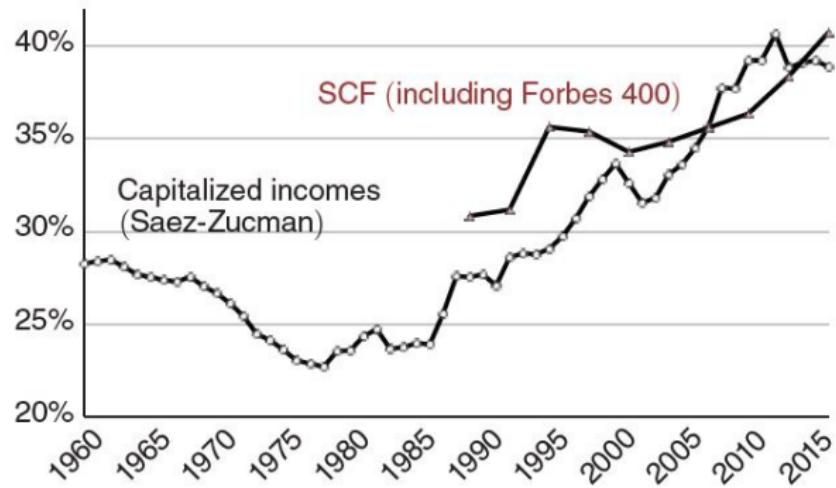


FIGURE 5. TOP 1 PERCENT WEALTH SHARE IN THE UNITED STATES: CAPITALIZED INCOMES AND SCF

Case Study II

Global Inequality Dynamics: New Findings from WID.world

The second problem set consists in the replication of key results in this paper:

"Global inequality dynamics: New findings from WID.world."¹⁷

¹⁷Alvaredo et al. (2017)

Case Study II

Global Inequality Dynamics: New Findings from WID.world

Motivation:

- Important limitations in our ability to measure the changing distribution of income and wealth, within and between countries and at the world level

WID.world project:

- The World Top Incomes Database (WTID) uses combined tax and national accounts data in a systematic manner to estimate longer and more reliable top income shares series than previous inequality databases. It evolved into the WID.world project in 2015
- The overall long-run objective is to produce Distributional National Accounts (DINA); that is, to provide annual estimates of the distribution of income and wealth using concepts that are consistent with the macroeconomic national accounts

Case Study II

Global Inequality Dynamics: New Findings from WID.world

Income Inequality:

- The combination of tax and survey data lead us to markedly revise upward the official inequality estimates of China. We find a corrected top 1 percent income share of around 13 percent of total income in 2015, versus 6.5 percent in survey data
- China had very low inequality levels in the late 1970s, but it is now approaching the United States, where income concentration remains the highest among the countries shown.
- We observe a complete collapse of the bottom 50 percent income share in the United States between 1978 and 2015, from 20 percent to 12 percent of total income, while the top 1 percent income share rose from 11 percent to 20 percent
- The bottom 50 percent share remains higher than the top 1 percent share in 2015 in China, and even more so in France.

Case Study II

Global Inequality Dynamics: New Findings from WID.world

Income Inequality:

- There has been a clear pattern of rising inequality: top income groups enjoyed relatively more growth. In China, the top experienced very high growth rates, but average growth was so large that the bottom 50 percent average income also grew markedly by +401 percent
- There was no growth left at all for the bottom 50 percent in the United States (-1 percent)
- France illustrates another type of situation: very top incomes have grown more than average, but this pattern of rising inequality happened only for very high and numerically relatively negligible groups, so that it had limited consequences for the majority of the population

Case Study II

Global Inequality Dynamics: New Findings from WID.world

Wealth Inequality:

- We observe a general rise of the ratio between net private wealth and national income in nearly all countries in recent decades.
- This phenomenon was largely unaffected by the 2008 financial crisis.
- Rise of the ratio for China is notable: net private wealth was a little above 100 percent of national income in 1978, while it is above 450 percent in 2015. The private wealth-income ratio in China is now approaching the levels observed in the United States (500 percent), United Kingdom, and France (550–600 percent)

Case Study II

Global Inequality Dynamics: New Findings from WID.world

Wealth Inequality:

- We observe a large rise of top wealth shares in the United States and China in recent decades, and a more moderate rise in France and the United Kingdom
- A combination of factors explains these dynamics:
 - Higher income inequality and severe bottom income stagnation can explain higher wealth inequality in the United States
 - Unequal process of privatization and access by Chinese households to quoted and unquoted equity probably played an important role in the very fast rise of wealth concentration in China
 - Potentially large mitigating impact of high real estate prices should also be taken into account.
 - This middle class effect is likely to have been particularly strong in France and the United Kingdom, where housing prices have increased significantly relative to stock prices

Case Study II

Global Inequality Dynamics: New Findings from WID.world

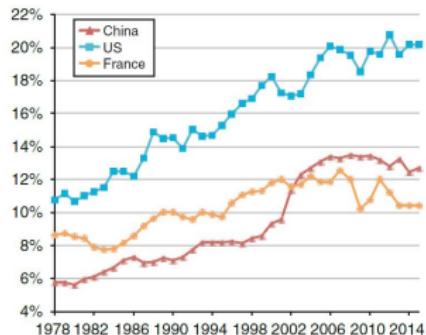
Remarks:

- Rising top income and wealth shares in nearly all countries in recent decades, but the magnitude varies substantially across countries, thereby suggesting that different country-specific policies and institutions matter considerably
- High growth rates in emerging countries reduce between-country inequality, but this does not guarantee acceptable within-country inequality levels to ensure the social sustainability of globalization
- Access to more and better data (administrative records, surveys, more detailed and explicit national accounts, etc.) is critical to monitor global inequality dynamics

Case Study II

Global Inequality Dynamics: New Findings from WID.world

Panel A. Top 1% income share



Panel B. Bottom 50% income share

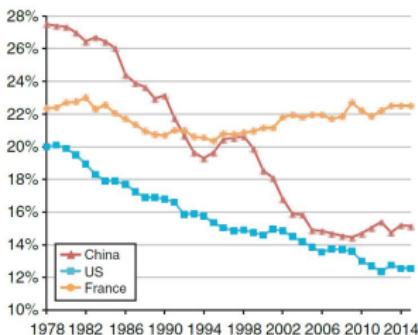


FIGURE 1. DISTRIBUTION OF INCOME IN CHINA, UNITED STATES, AND FRANCE, 1978–2015

Case Study II

Global Inequality Dynamics: New Findings from WID.world

TABLE 1—REAL INCOME GROWTH AND INEQUALITY,
1978–2015

Income group (distribution of per-adult pretax national income)	China (%)	United States (%)	France (%)
Full population	811	59	39
Bottom 50%	401	-1	39
Middle 40%	779	42	35
Top 10%	1,294	115	44
including Top 1%	1,898	198	67
including Top 0.1%	2,261	321	84
including Top 0.01%	2,685	453	93
including Top 0.001%	3,111	685	158

Case Study II

Global Inequality Dynamics: New Findings from WID.world

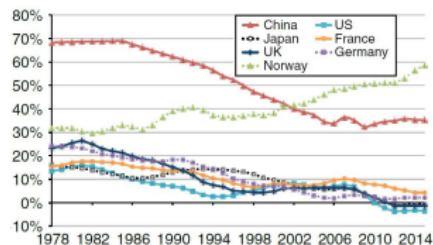


FIGURE 2. THE DECLINE OF PUBLIC PROPERTY VERSUS THE RISE OF SOVEREIGN FUNDS



FIGURE 3. TOP 1 PERCENT WEALTH SHARE IN CHINA, UNITED STATES, FRANCE, AND UNITED KINGDOM, 1890–2015

Case Study III

Exploring the WID Dataset

The third problem set consists in the exploration of the datasets retrievable through `WID.world`.

Type `help wid` in STATA to check how the command works.

Case Study III

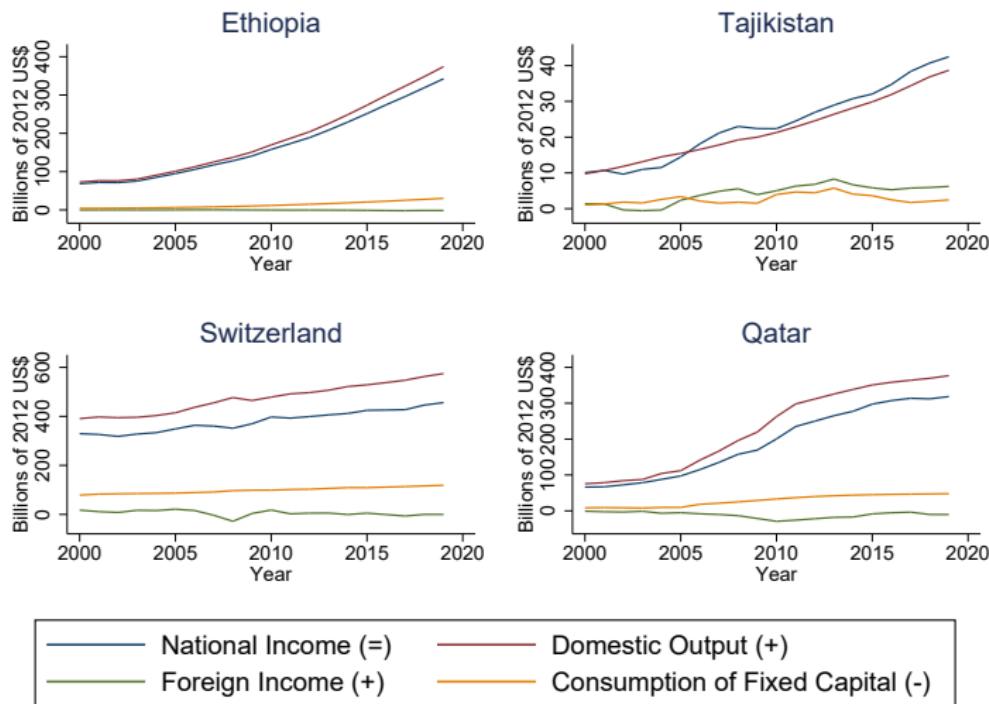
Exploring the WID Dataset

An example on the usage of the command:

```
# d ;
wid,
indicators(mnninc mgdpro mconfc mnnfin xlcuspl) // indicator list
areas(ET TJ CH QA) // location
perc(p0p100) // distributional parameter
ages(999) // age group
pop(_all) // population
clear
;
# d
```

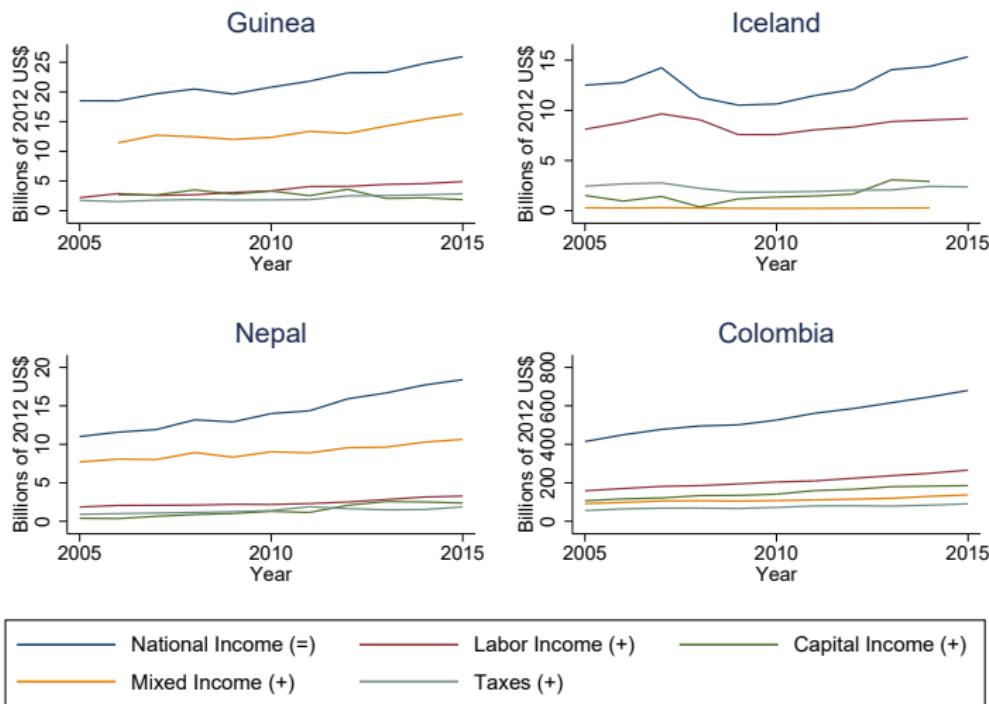
Case Study III

Exploring the WID Dataset



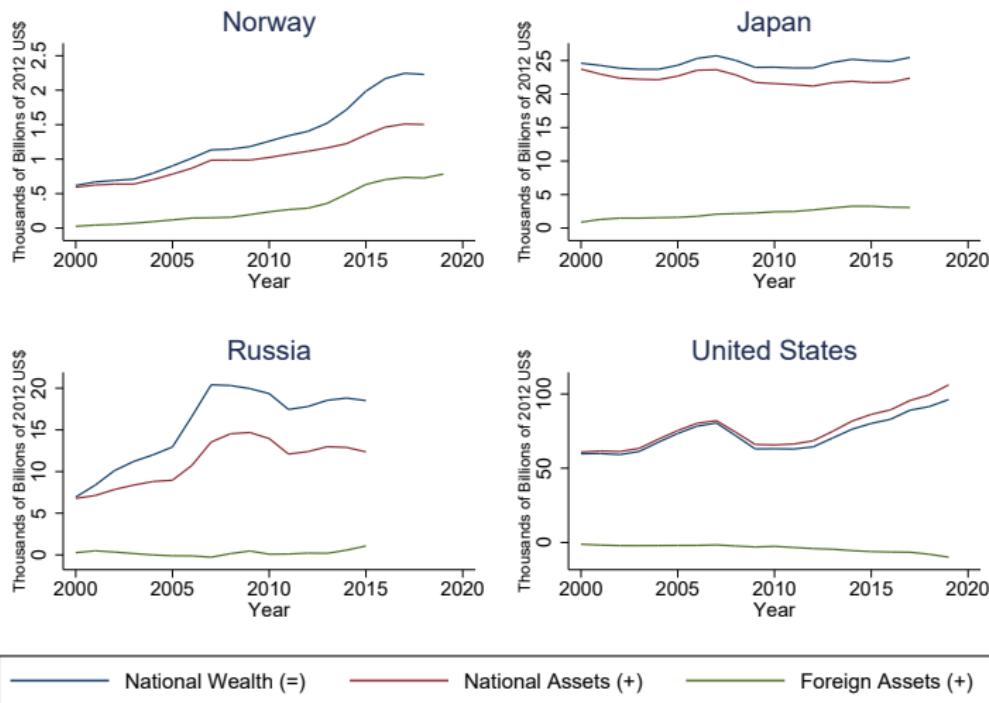
Case Study III

Exploring the WID Dataset



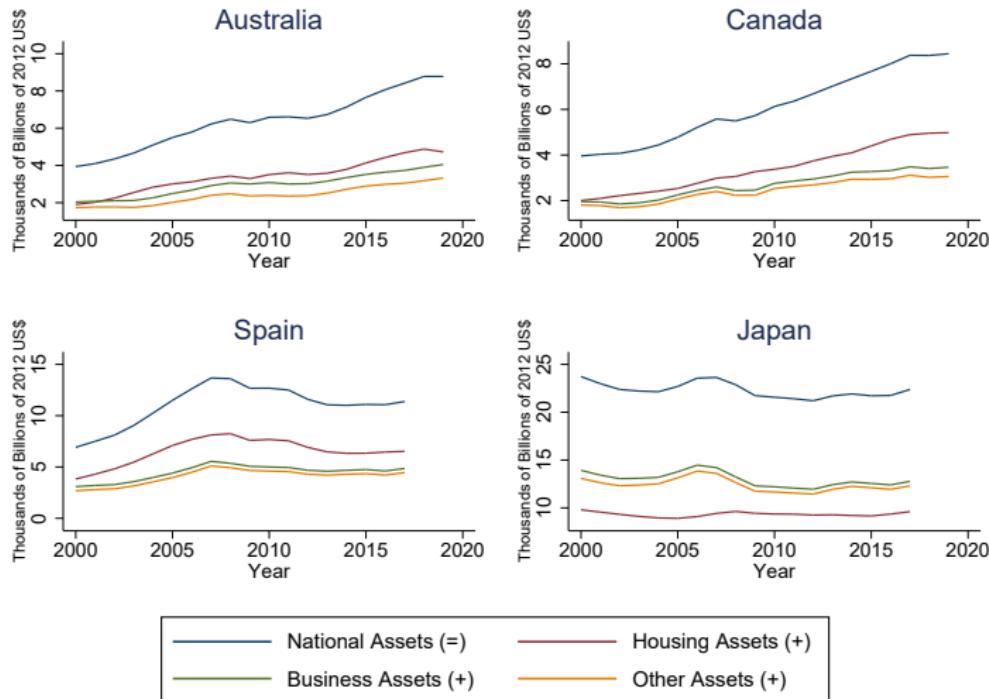
Case Study III

Exploring the WID Dataset



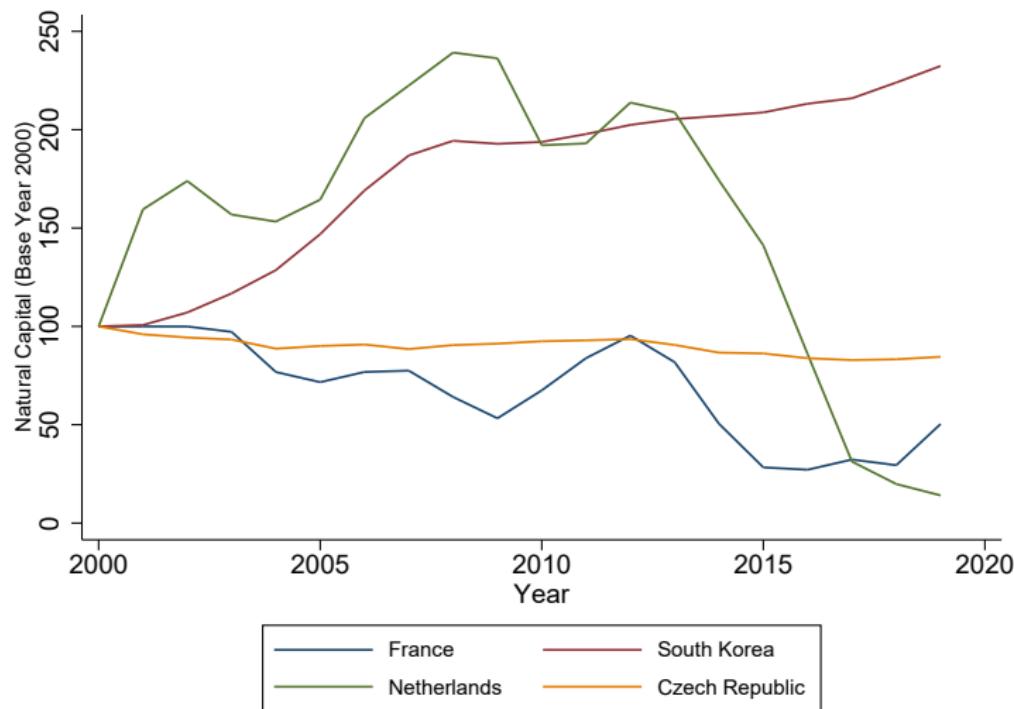
Case Study III

Exploring the WID Dataset



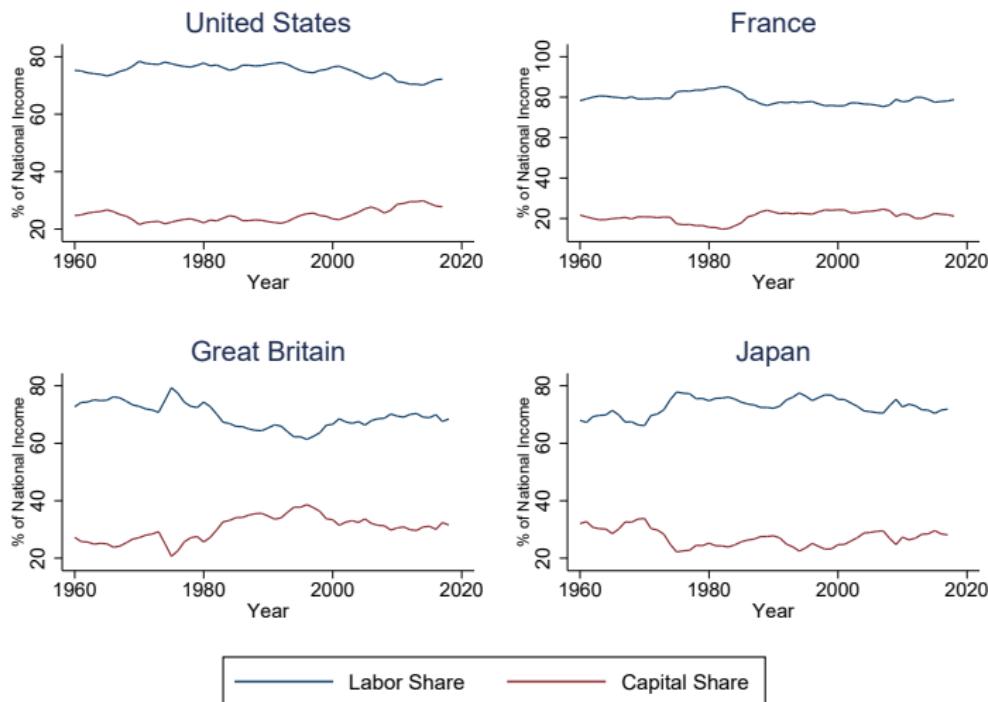
Case Study III

Exploring the WID Dataset



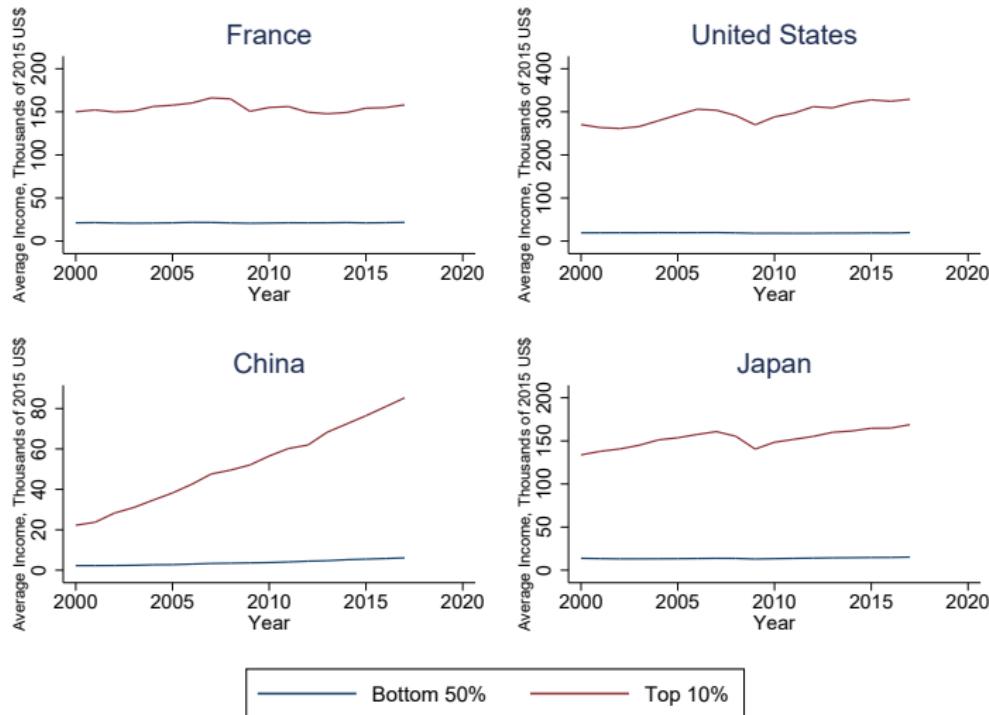
Case Study III

Exploring the WID Dataset



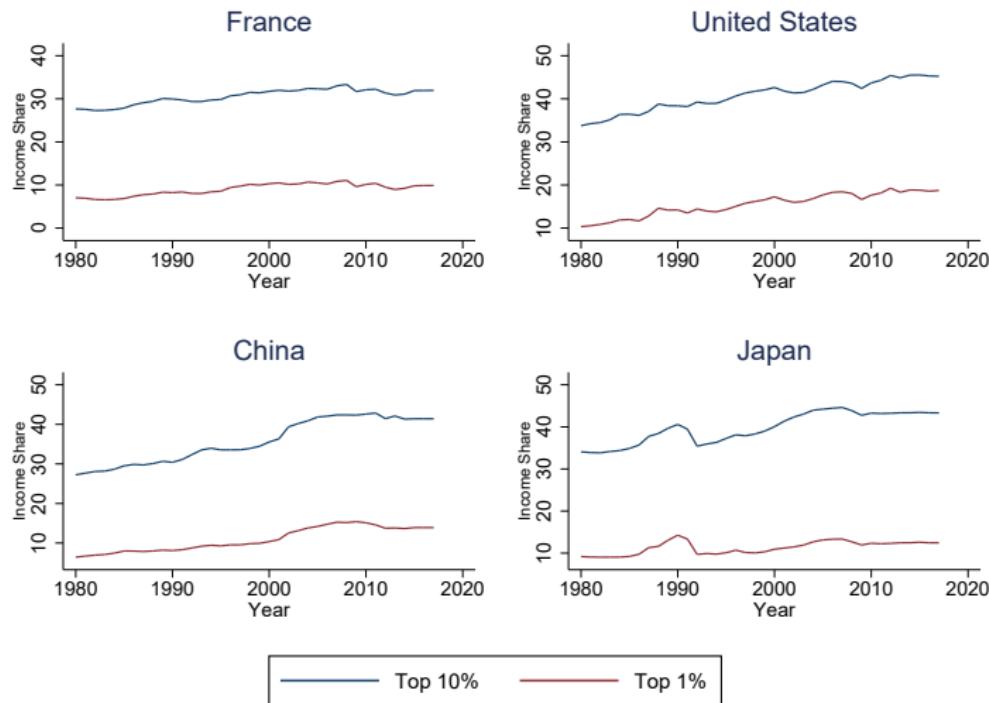
Case Study III

Exploring the WID Dataset



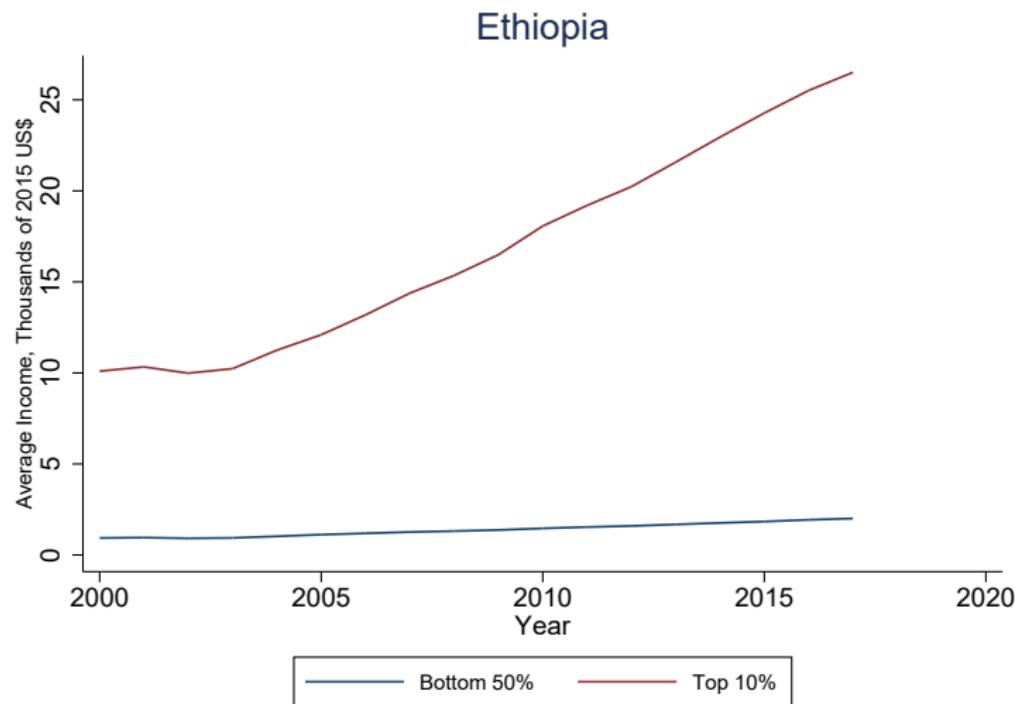
Case Study III

Exploring the WID Dataset



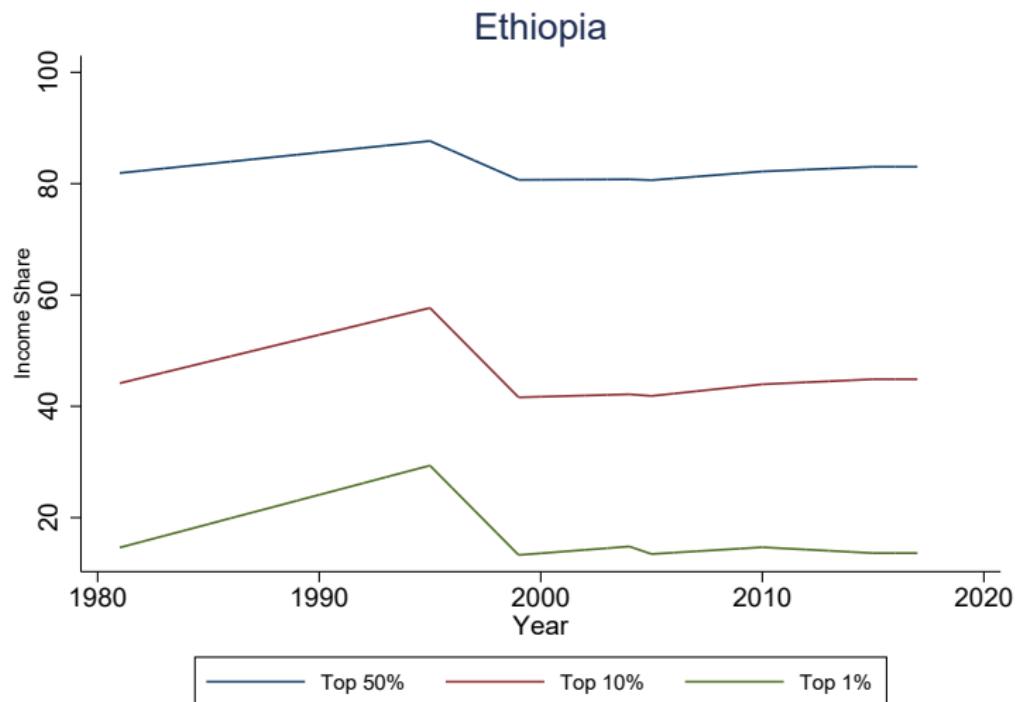
Case Study III

Exploring the WID Dataset



Case Study III

Exploring the WID Dataset



References |

-  Acemoglu, Daron (2002). "Technical change, inequality, and the labor market". In: *Journal of economic literature* 40.1, pp. 7–72.
-  Alvaredo, Facundo et al. (2017). "Global inequality dynamics: New findings from WID.world". In: *American Economic Review* 107.5, pp. 404–09.
-  Atkinson, Anthony Barnes and Thomas Piketty (2007). *Top incomes over the twentieth century: a contrast between continental european and english-speaking countries*. oup Oxford.
-  Clark, John Bates (1908). *The distribution of wealth: a theory of wages, interest and profits*. Macmillan.
-  Kuznets, Simon (1955). "Economic growth and income inequality". In: *The American economic review* 45.1, pp. 1–28.
-  Laurison, Daniel and Sam Friedman (2016). "The class pay gap in higher professional and managerial occupations". In: *American Sociological Review* 81.4, pp. 668–695.

References II

-  Malthus, Thomas Robert (1872). *An Essay on the Principle of Population..*
-  Marx, Karl (2007). *Capital: A critique of political economy*. Duke University Press.
-  Mill, John Stuart (1965). *Principles of political economy*. Vol. 3.
-  Ohlin, Bertil (1935). *Interregional and international trade*. Harvard University Press, Cambridge.
-  Pareto, Vilfredo (1964). *Cours d'économie politique*. Vol. 1. Librairie Droz.
-  Pigou, Arthur Cecil (2013). *The economics of welfare*. Palgrave Macmillan.
-  Piketty, Thomas, Emmanuel Saez, and Gabriel Zucman (2018). “Distributional national accounts: methods and estimates for the United States”. In: *The Quarterly Journal of Economics* 133.2, pp. 553–609.

References III

-  Ricardo, David (1891). *Principles of political economy and taxation*. G. Bell and sons.
-  Smith, Adam (1937). *The wealth of nations [1776]*.