Global inequality: A new approach for the age of globalization

A book talk
Branko Milanovic
May 1, 2016
The structure of the book

Chapter 1: how global inequality changed in the past 25 years (greatest reshuffle of individual incomes since the Industrial Revolution)

Global inequality divides into within-national inequalities and gaps between mean national incomes

Chapter 2: What determines long-run evolution of within-national inequalities (the Kuznets cycles); inequality cycles over past several centuries in major countries

Chapter 3. How have income gaps between nations evolved in the past two centuries (the role of economic convergence); global inequality of opportunity; migration

Chapter 4. Bring together what we have learned from Chapters 2 and 3 (Kuznets cycles + economic convergence) to forecast and discuss the evolution of global inequality in this century
Chapter 1. Current globalization, mid-1980s to today: The rise of the global middle class and global plutocrats
Real income growth at various percentiles of global income distribution, 1988-2008 (in 2005 PPPs)

From twenty_years\final\summary_data

Estimated at mean-over-mean
Why we do it? Political implications

• The objective of the work on global inequality is not just a description of the changes but drawing lessons on their political implications
• Point A raises the issue of future political inclusion of the Chinese middle class
• Point B, of rich countries’ democracy in condition of income stagnation among many relatively poorer groups
• Point C, of global plutocracy

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Global growth incidence curve, 1988-2008 (by percentile)
Real income growth over 1988-2008 and 1988-2011 (based on 2011 PPPs)
Quasi-non-anonymous growth incidence curve 1988-2008

Solid line: kernel-weighted local polynomial regression (default bw, epanechnikov, cube polynomial).
Dashed line shows growth rate in mean of 1.72% p.a.. Lakner-Milanovic data, population-weighted.
Global income distributions in 1988 and 2011

Figure 3. Global income distribution in 1988 and 2011

Emerging global “middle class” between $3 and $16

Using Branko\Income_inequality\final11\combine88_08_11_new.dta
Chapter 2. Inequality within countries: introducing Kuznets waves (cycles) to explain long-term trends in income inequality
A1. Kuznets’ cycles in societies with a stagnant mean income
How do societies with stagnant mean income look like?

![Seven centuries of GDP per capita in Italy, 1300-2011](image)

Data provided by Giovanni Vecchi.
Cyclical nature of the Kuznets curve:
Land rental/wage ratio over the long-term in Spain, 1282-1842

From Prados de la Escosura & Alvarez-Nogal, “The rise and fall of Spain 800-1850”
Kuznets curve here? No.

From Prados de la Escosura & Alvarez-Nogal, “The rise and fall of Spain 800-1850”
Key idea & key difference between pre-industrial and industrial societies

• Kuznets cycles in pre-industrial societies are visible only over time (since income is quasi fixed). They are mostly driven by non-economic changes: conquests, wars, epidemics.

• Link between Kuznets and Malthusian cycles in pre-industrial societies; but Kuznets cycles are broader because they are not necessarily driven by demographic changes

• Little room for large increases in inequality because the average income level was very low (recall the inequality extraction ratio: inequality is limited by the level of average income)
A2. Kuznets’ cycles in societies with a rising mean income
Kuznets waves defined

• Kuznets waves in modern societies are visible when plotted against income per capita. Inequality driven by technological innovation and structural transformation (two technological revolutions), globalization and politics and policies. But also wars.

• Cyclical movement of inequality: long Kuznets waves, often over fifty years

• Kuznets saw just one curve. We now know there may be many more.
Malign and benign forces reducing inequality (downward portion of the Kuznets wave)

<table>
<thead>
<tr>
<th></th>
<th>Malign</th>
<th>Benign</th>
</tr>
</thead>
<tbody>
<tr>
<td>Societies with stagnant</td>
<td>Idiosyncratic events: wars (though destruction), epidemics, civil conflict</td>
<td>Cultural and ideological (e.g. Christianity?)</td>
</tr>
<tr>
<td>mean income</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Societies with a rising</td>
<td>Wars (through destruction and higher taxation: <em>War and Welfare</em>), civil conflict</td>
<td>• Widespread education (reflecting changing returns)</td>
</tr>
<tr>
<td>mean income</td>
<td></td>
<td>• Social pressure through politics (socialism, trade unions)</td>
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<tr>
<td></td>
<td></td>
<td>• Aging (demand for social protection)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Low-skill biased TC</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Cultural and ideological (pay norms?)</td>
</tr>
</tbody>
</table>
**Kuznets relationship for the UK, 1688-2010**

Gini of disposable per capita income

GDP per capita (in 1990 international dollars; Maddison)

Source: Gini: for 1688, 1759, 1801, and 1867 from social tables for England/UK (as reported in Milanovic, Lindert and Williamson); for 1880 and 1913, from Lindert and Williamson (1983, Table 2); from 1961 to 2010, official UK data (disposable income per capita) kindly calculated by Jonathan Cribb, Institute for Fiscal Studies. GDP per capita from Maddison project 2014 version.
Kuznets relationship for the United States, 1774-2013

Kuznets relationship for Italy, 1861-2010

Source: Gini: from 1861 to 2008 from Brandolini and Vecchi (2011) and personalu communication; for 2010 from LIS. GDP per capita from Maddison project 2014 version.
Kuznets waves look more dramatic in logs...

Kuznets relationship for the United States, 1774-2013

GDP per capita (in 1990 international dollars; Maddison)
Kuznets relationship for the UK, 1688-2010

GDP per capita (in 1990 international dollars; Maddison)

Gini of disposable per capita income
### Downswing of Kuznets first cycle and upswing of the second Kuznets cycle in advanced economies

<table>
<thead>
<tr>
<th></th>
<th>Level of maximum inequality (peak of Wave 1) Gini points (year)</th>
<th>Level of minimum inequality (trough of Wave 1) Gini points (year)</th>
<th>Approximate number of years of downswing of the Kuznets wave</th>
<th>Reduction in inequality (Gini points)</th>
<th>GDP increased (how many times) during the downswing</th>
<th>The second Kuznets wave (increase in Gini points)</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>51 (1933)</td>
<td>35 (1979)</td>
<td>50</td>
<td>16</td>
<td>4</td>
<td>Strong (+8)</td>
</tr>
<tr>
<td>UK</td>
<td>57 (1867)</td>
<td>27 (1978)</td>
<td>110</td>
<td>30</td>
<td>&gt;4</td>
<td>Strong (+11)</td>
</tr>
<tr>
<td>Spain</td>
<td>53 (1918)</td>
<td>31 (1985)</td>
<td>70</td>
<td>22</td>
<td>&lt;5</td>
<td>Modest (+3)</td>
</tr>
<tr>
<td>Italy</td>
<td>51 (1851)</td>
<td>30 (1983)</td>
<td>120</td>
<td>21</td>
<td>&lt;9</td>
<td>Strong (+5)</td>
</tr>
<tr>
<td>Japan</td>
<td>55 (1937)</td>
<td>31 (1981)</td>
<td>45</td>
<td>24</td>
<td>6</td>
<td>Modest (+1)</td>
</tr>
<tr>
<td>Netherlands</td>
<td>61 (1732)</td>
<td>21 (1982)</td>
<td>250</td>
<td>35</td>
<td>7</td>
<td>Modest (+2)</td>
</tr>
</tbody>
</table>
Average per decade real per capita growth and Gini change during the downward portion of the first Kuznets wave (the Great Levelling)
What drives 1st Kuznets cycle down and 2nd Kuznets cycle up?

|                      | Downward portion of Kuznets 1  
|                      | ~1900 to 1980                   | Upward portion of Kuznets 2  
<table>
<thead>
<tr>
<th></th>
<th></th>
<th>1980-?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Malign forces</td>
<td>• Wars</td>
<td></td>
</tr>
<tr>
<td>(wars)</td>
<td>• Hyperinflation (against creditors)</td>
<td></td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>Benign forces</td>
<td>• Social pressure through politics</td>
<td></td>
</tr>
<tr>
<td>(economics,</td>
<td>(socialism, trade unions)</td>
<td></td>
</tr>
<tr>
<td>social, demography)</td>
<td>• High taxation</td>
<td></td>
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<tr>
<td></td>
<td>• Widespread education</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Aging (demand for social protection)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Movement of labor from manufacturing into heterogeneous services</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Rents from tech innovations</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Globalization</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Technological change</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Free global movement of capital</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Policy changes (endogenous)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• <strong>TOP impossible to disentangle</strong></td>
</tr>
</tbody>
</table>
Brazil, China’s inequality in the Kuznets framework

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twoway (scatter Giniall gdpppp if contcod=="CHN" & year>1960, connect(l) ytitle(40(10)60) xttitle(2000 6000 12000) ytitle(Gini) xttitle(year)) (scatter Giniall gdpppp if contcod=="BRA", connect(l) text(62 12000 "Brazil") text(48 12000 "China") legend(off))
Using gdppppreg5.dta
```
“Endogeneity” of World War I

• Domestic maldistribution of income => High profits and insufficient domestic demand => Foreign investment => Need to control territories where investments are made => Large armies

• The same logic applied by each power leads to conflict

• “The actual practice has been for business men to secure the assistance of their governments in pushing for markets, investments, and concessions outside their own country, in competing with business men of other nations similarly supported by their governments, and in bringing diplomatic or political pressure to bear on the government or people of any weak country where their trading or other economic interests are threatened. It is this illicit and underhand use of foreign policy by private business interest which has converted economic internationalism into the peril it has shown to be. (Hobson, *The evolution of modern capitalism: a study of machine production*, pp. 492-3)
Military Expenditures and Foreign Wealth, 1845–1913

Countries included: DEU, DNK, FRA, GBR, SWE, USA

From Thomas Hauner
Chapter 3. Inequality between countries: from Karl Marx to Frantz Fanon and back to Marx?
La longue durée: Global inequality From Karl Marx to Frantz Fanon and back to Marx?

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Issues of justice and politics

1. Citizenship rent
2. Is global equality of opportunity an objective to pursue?
3. Migration, citizenship and national welfare state
Global inequality of opportunity

• Regressing (log) average incomes of 118 countries’ percentiles (11,800 data points) against country dummies “explains” 77% of variability of income percentiles

• Where you live is the most important determinant of your income; for 97% of people in the world: birth=citizenship.

• Citizenship rent or citizenship premium

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Is citizenship a rent?

• If most of our income is determined by citizenship, then there is little equality of opportunity *globally* and citizenship is a rent (unrelated to individual desert, effort)

• **Key issue:** *Is global equality of opportunity something that we ought to be concerned or not?*

• Does national self-determination dispenses with the need to worry about GEO?
Rawls’ views on inter-generational transmission of wealth

<table>
<thead>
<tr>
<th>Group</th>
<th>Inter-generational transmission of collectively acquired wealth</th>
<th>Argument</th>
<th>Policy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family</td>
<td>Not acceptable Or at least to be limited</td>
<td>Threatens equality of citizens</td>
<td>Moderate to very high inheritance tax</td>
</tr>
<tr>
<td>Nation</td>
<td>Acceptable</td>
<td>Affirms national self-determination (moral hazard)</td>
<td>International aid</td>
</tr>
</tbody>
</table>

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Migration: a different way to reduce global inequality and citizenship rent

• How to view development: Development is increased income for poor people regardless of where they are, in their countries of birth or elsewhere

• Migration and LDC growth thus become the two equivalent instruments for development

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Growing inter-country income differences and migration:
Key seven borders today

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The logic of the migration argument

- Population in rich countries enjoys the citizenship premium
- They are unwilling to share, and thus possibly reduce (at least “locally”) this premium with migrants
- Currently, the premium is full or 0 because citizenship is (broadly) a binary variable
- Introduce various levels of citizenship (tax discrimination of migrants; obligation to return; no family etc.) to reduce the premium
- This should make native population more acceptant of migrants

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Trade-off between citizenship rights and extent of migration

* People who would like to migrate according to a world-wide Gallup poll

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Chapter 4. Global inequality in this century and the next
Interaction of mean income convergence and Kuznets waves

1. Will convergence economics spread to Africa?
2. Evolution of income inequality in the US and China
3. Hollowing out of the Western middle classes: populism vs. plutocracy
4. Global reminder: capitalism the only existing social system

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Annual per capita after-tax income in international dollars

US 2nd decile

Chinese 8th urban decile

From summary_data.xls
US and China’s growth at the same income level
(GDPpc in Maddison’s 1990 $PPP)

twoway (lowess growth gdpppc if contcod=="CHN" & year>1980) (lowess growth gdpppc if contcod=="USA" & gdpppc<9000, text(0.07 1980 "China") text(0.015 1950 "USA") legend(off) xtitle(GDP per capita in 1990 G-K dollars) ytitle(growth rate))
Using Polity_Maddison_2013.dta
Difference in the combined (population-weighted) growth rates of the large emerging economies (excluding China) and rich countries, 1951-2014:
Since the mid 1980s rich economies have never grown faster than large emerging economies, even excluding China

Large emerging economies are India, South Africa, Brazil, Indonesia and Vietnam.
The US “perfect storm”

• Rising share of capital income in total net income
• Unchanged or increased concentration of capital ownership (Gini is in excess of 85)
• Increased association between high capital and labor incomes (see the next slide; Atkinson and Lakner)
• Continued or increased homogamy ( assortative mating): the process which goes on for some 30 years (Greenwood et al.)
• Continued or increasing ability of the rich to “buy” policies (Bartels, Page)
Based on LIS data;
us87_13_revised.xls
Probability (in percent) of being in top 10% by capital (labor) income if a person is in top 1% by labor (capital) income

Lakner and Atkinson (2015)
Stylized correlation between capital and labor income in history (across persons)

Classic capitalism

Capitalists begin to work; labor gets some K income

Socialism

"New capitalism"

Correlation coeff.
Policy responsiveness to the divergent preferences of the rich, middle class and the poor

From Martin Gilens, Affluence and Influence
The “plateaing” of the urban Gini in China, 1981-2014

Urban Gini in China: 1981-2014 (based on official household surveys)

Calculated from Chinese urban household surveys (published data)
Where are now China and the US?

- **First Kuznets wave**
  - China 2013

- **Second Kuznets wave**
  - United States 2013

- GDP per capita
- Gini
What might drive the 2\textsuperscript{nd} Kuznets cycle down?

• Progressive political change (endogenous: political demand)
• Dissipation of innovation rents
• Low-skilled biased technological progress (endogenous)
• Reduction of the skill premium as education expands further (but I am skeptical of its relevance)
• Global income convergence: Chinese wages catch up with American wages: the hollowing-out process stops (but other poor countries on the horizon...)
Is this an optimistic or pessimistic theory of changes in income inequality?

• The question boils down to whether there are endogenous forces that would curb and check increase in income inequality under capitalism

• Such forces can be benign: political pressure and greater taxation, ideology, low-skill biased technological change, greater supply of educated labor, aging population and demand for social services

• Or they can be malign: as they were in the run up to World War I where insufficient domestic demand led to the competition for control of colonies (imperialism) and ultimately war

• Such forces cannot be excluded today.
Chapter 5. What next? Ten short reflections on global inequality (here: only one)
The 21st century reduction of inequality should rely less on redistribution of current income and more on equalization of labor and capital endowments.
Policy implications (summarized)
• Focus on deconcentration of asset ownership (ESOPs, special tax benefits for small investors) and equalization of returns to education (public education)
• Thus, focus on pre-distribution and taxation of inheritance rather than increased redistribution of current income (i.e., working on equalization of stocks rather than on flows)
• European welfare state’s ability to combat increased inequality by “traditional tools” of taxes and transfers is limited by (i) increased ethnic and cultural heterogeneity and (ii) mobility of capital and high income earners
• Reform of political funding
• More diverse forms of citizenship (to allow for greater migration)
• Multilateral migration quotas
• Movement away from single-minded pursuit of horizontal equality
Glossary of new terms

• “Elephant graph”
• Kuznets waves in pre-modern and modern societies
• Malign and benign forces that reduce inequality
• Endogeneity of World War I
• Citizenship rent or premium
• Trade-off between citizenship as a binary category and reduction of global inequality and poverty
• Focus on deconcentration of asset ownership