Recent trends in global income inequality and their political implications

Branko Milanovic
LIS Center; Graduate School City University of New York
Litowitz Lecture, Yale April 7, 2016
A. Within-national inequalities
### Ginis in the late 1980s and around now

<table>
<thead>
<tr>
<th></th>
<th>~1988</th>
<th>~2011</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Gini</td>
<td>35.9</td>
<td>38.4</td>
<td>+2.5</td>
</tr>
<tr>
<td>Pop-weighted Gini</td>
<td>33.7</td>
<td>36.5</td>
<td>+2.8</td>
</tr>
<tr>
<td>GDP-weighted Gini</td>
<td>32.2</td>
<td>36.4</td>
<td>+4.2</td>
</tr>
<tr>
<td>Countries with Gini</td>
<td>30.6</td>
<td>36.0</td>
<td>+5.4</td>
</tr>
<tr>
<td>Countries with Gini</td>
<td>45.0</td>
<td>41.4</td>
<td>-3.6</td>
</tr>
<tr>
<td>Countries with Gini</td>
<td>45.0</td>
<td>41.4</td>
<td>-3.6</td>
</tr>
</tbody>
</table>

*From final-complete3.dta and key_variables_calcul2.do (lines 2 and 3; rest from AlltheGinis)*

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Ginis in 1988 and 2011 (population-weighted countries)

Using final11\combine88_11.dta

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Market, gross and disposable income Ginis in the US and Germany

Define_variables.do using data_voter_checked.dta

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Market income inequality and redistribution

Dashed line: 1 Gini pt redistribution for 1 Gini pt increase in market Gini

From voter/..define_variables
Issues raised by growing national inequalities

• Social separatism of the rich
• Hollowing out of the middle classes
• Inequality as one of the causes of the global financial crisis
• **Perception** of inequality outstrips real increase because of globalization, role of social media and political (crony) capitalism (example of Egypt)
• Hidden assets of the rich

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How to think of within-national inequalities: Introducing the Kuznets waves

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The second chapter of my forthcoming book (April 2016)
Kuznets cycles defined

- Kuznets cycles in industrial societies are visible when plotted against income per capita. Inequality driven by technological developments (two technological revolutions), globalization and policies. Also wars.
- They reflect predominantly economic forces of technological innovation and structural transformation. But also wars and policy changes.
- Cyclical movement of inequality: long Kuznets cycles.
- 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>Societies with stagnant mean income</th>
<th>Malign</th>
<th>Benign</th>
</tr>
</thead>
<tbody>
<tr>
<td>Idiosyncratic events: wars (though destruction), epidemics, civil conflict</td>
<td>Cultural and ideological (e.g. Christianity?)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Societies with a rising mean income</th>
<th>Malign</th>
<th>Benign</th>
</tr>
</thead>
</table>
| Wars (through destruction and higher taxation: *War and Welfare*), civil conflict | •Widespread education (reflecting changing returns)  
•Social pressure through politics (socialism, trade unions)  
•Aging (demand for social protection)  
•Low-skill biased TC  
•Cultural and ideological (pay norms?) |
Kuznets and Piketty “frames” and the Kuznets waves

Ginis for England/UK and the United States in a very long run

From uk_and_usa.xls
Kuznets relationship for the UK, 1688-2010

Source: Ginis: 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 the UK, 1688-2010

Gini of disposable per capita income

GDP per capita (in 1990 international dollars; Maddison)
Kuznets relationship for the United States, 1774-2013

Gini of disposable per capita income

GDP per capita (in 1990 international dollars; Maddison)
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)
• Reduced gap in education (but it is not a silver bullet)
• Global income convergence: Chinese wages catch up with American wages: the hollowing-out process stops
• Note that all are all endogenous
The Kuznets relationship for Brazil, 1839-2013
Downswing of Kuznets first cycle and upswing of the second Kuznets cycle

<table>
<thead>
<tr>
<th>Country</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>

Table2_data.xls
Urban Gini in China: 1981-2014 (based on official household surveys)
Where are now China and the US?

First Kuznets wave

China 2013

Second Kuznets wave

United States 2013

GDP per capita
B. Between national inequalities
The third chapter of my forthcoming book (April 2016)
Different countries and income classes in global income distribution in 2008

From calcu08.dta
The graph shows the percentiles of world income distribution for various countries, labeled as Denmark, Uganda, Mali, Tanzania, and Mozambique. The x-axis represents the country ventile, ranging from 1 to 20, while the y-axis represents the percentiles from 1 to 100. Each country's income distribution is indicated by a different line, with Denmark having the highest income distribution across all percentiles.
Annual per capita after-tax income in international dollars

- US 2nd decile
- Chinese 8th urban decile

From summary_data.xls
La longue durée: From Karl Marx to Frantz Fanon and back to Marx?

Gini index

Class Location

Forecast

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Large gaps in mean country incomes raise two important issues

• Political philosophy: is the “citizenship rent” morally acceptable? Does global equality of opportunity matter?

• Global and national politics: Migration and national welfare state

• (will address both at the end)
C. Global inequality
Essentially, global inequality is determined by three forces

- What happens to within-country income distributions?
- Is there a catching up of poor countries?
- Are mean incomes of populous & large countries (China, India) growing faster or slower that the rich world?
Global Gini 1820-2011

B-M series

L-M and M series
C1. Technical issues in the measurement of global inequality
Three important technical issues in the measurement of global inequality

• The ever-changing PPPs in particular for populous countries like China and India
• The increasing discrepancy between GDP per capita and HS means, or more importantly consumption per capita and HS means
• Inadequate coverage of top 1% (related also to the previous point)
With full adjustment (allocation to the top 10% + Pareto) Gini decline **almost vanishes**

Survey data only

Top-heavy allocation of the gap + Pareto adjustment

Summary_data.xls
C2. How has the world changed between the fall of the Berlin Wall and the Great Recession
[based on joint work with Christoph Lakner]
Real income growth at various percentiles of global income distribution, 1988-2008 (in 2005 PPPs)

- $PPP2
- $PPP4.5
- $PPP12
- $PPP 180

“China’s middle class”
“US lower middle class”

Estimated at mean-over-mean

From twenty_years\final\summary_data
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
Global growth incidence curve, 1988-2008 (by percentile)
Real income growth over 1988-2008 and 1988-2011 (based on 2011 PPPs)
Global income distributions in 1988 and 2011

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

Figure 3. Global income distribution in 1988 and 2011
Cumulative quasi non-anonymous rate of growth 1970-1992
in percent; Bourguignon-Morrisson data

bandwidth = .3

Nonanom_growth.do using b_mdata.dta in data_central
Cumulative quasi non-anonymous rate of growth 1988-2008
in percent; Lakner-Milanovic data

bandwidth = .1

Key_variables_calcul2.do using final_complete7_1.dta

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Focus on point B of the “elephant graph”
(income stagnation and erosion of the middle class in advanced economies)

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The erosion of the Western middle classes’ income shares

Shares of deciles 4 to 7 in US market i.e. predistribution income

decile 4

decile 5

decile 6

decile 7

year

share in market income

year

share in market income

year

share in market income

year

share in market income
Shares of deciles 4 to 7 in UK market income

decile 4

decile 5

decile 6

decile 7

Share in market income

Year


Decile 4 to 7 shares in UK market income.
Shares of deciles 4 to 7 in German market income

**decile 4**

**decile 5**

**decile 6**

**decile 7**

<table>
<thead>
<tr>
<th>Year</th>
<th>Decile 4</th>
<th>Decile 5</th>
<th>Decile 6</th>
<th>Decile 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1990</td>
<td></td>
<td></td>
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<tr>
<td>2000</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>2010</td>
<td></td>
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</tr>
</tbody>
</table>

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The middle class defined as population with income between +/-25% of national median income (all in per capita basis; disposable income; LIS data).
Middle class income compared to the national mean in the early 1980s and 2010

- Spain
- Netherlands
- Germany
- Canada
- Australia
- Sweden
- UK
- USA

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D. Issues of justice and politics

1. Citizenship rent
2. Migration and national welfare state
3. Hollowing out of the rich countries’ middle classes
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.

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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?
The logic of the argument

- Citizenship is a morally-arbitrary circumstance, independent of individual effort
- It can be regarded as a rent (shared by all members of a community)
- Are citizenship rents globally acceptable or not?
- Political philosophy arguments *pro* (social contract; statist theory; self-determination) and *contra* (cosmopolitan approach)
# 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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The Rawlsian world

• For Rawls, global optimum distribution of income is simply a sum of national optimal income distributions

• Why Rawlsian world will remain unequal?
Global inequality in Real World, Rawlsian World, Convergence World...and Shangri-La World (Theil 0; year 2008)

<table>
<thead>
<tr>
<th>Mean country incomes</th>
<th>All equal</th>
<th>Different (as now)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual incomes within country</td>
<td></td>
<td></td>
</tr>
<tr>
<td>All equal</td>
<td>0</td>
<td>68 (all country Theils=0; all mean incomes as now)</td>
</tr>
<tr>
<td>Different (as now)</td>
<td>30 (all mean incomes equalized; all country Ginis as now)</td>
<td>98</td>
</tr>
</tbody>
</table>
Conclusion

• Working on equalization of within-national inequalities will not be sufficient to significantly reduce global inequality

• Faster growth of poorer countries is key and also...
Migration....
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
Growing inter-country income differences and migration:
Key seven borders today
Migration and implication for the welfare state:
Distribution-neutral growth rate needed to make people from a given income fractile indifferent between growth and favorable distributional change (= mean +1 standard deviation)
Distribution of migrants across income deciles of the receiving country

Figure 6a. Percentage of immigrants in each income decile. Spain, 2004

Figure 6b. Percentage of immigrants in each income decile. US, 1990

Source: Muñoz de Bustillo and Antón (2006b), and Borjas (2003)
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 and financially) 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

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Political issue: Global vs. national level

• Our income and employment is increasingly determined by global forces
• But political decision-making still takes place at the level of the nation-state
• If stagnation of income of rich countries’ middle classes continues, will they continue to support globalization?
• Two dangers: populism and plutocracy
• To avert both, need for within-national redistributions: those who lose have to be helped

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Final conclusion

• To reduce global inequality: fast growth of poor countries + migration
• To allow migration, discriminate the migrants
• To preserve good aspects of globalization: redistribution within rich countries
Additional slides
E. Global inequality over the long-run of history
Global and international inequality after World War II

Concepts:
1. **Concept 1**
2. **Concept 2**
3. **Concept 3**

<table>
<thead>
<tr>
<th>Year</th>
<th>Gini Coefficient</th>
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<tbody>
<tr>
<td>1950</td>
<td>.45</td>
</tr>
<tr>
<td>1960</td>
<td>.55</td>
</tr>
<tr>
<td>1970</td>
<td>.65</td>
</tr>
<tr>
<td>1980</td>
<td>.75</td>
</tr>
<tr>
<td>1990</td>
<td></td>
</tr>
<tr>
<td>2000</td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td></td>
</tr>
</tbody>
</table>

Within-national inequalities

Definitions:
- Defines.do using gdpppreg5.dta
- Branko Milanovic
Global and international inequality
1952-2014

Concept 2
Concept 2 without China
Concept 3

Gini coefficient

year

Defines.do using gdpppreg5.dta
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<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>Africa</td>
<td>48</td>
<td>76</td>
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<td>77</td>
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<td>WENAO</td>
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<tr>
<td>World</td>
<td>87</td>
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<td>92</td>
<td>94</td>
<td>93</td>
<td>94</td>
<td>92</td>
</tr>
</tbody>
</table>

Non-triviality of the omitted countries (Maddison vs. WDI)

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Global and US Gini over two centuries

From thepast.xls
Global income inequality, 1820-2008
(Source: Bourguignon-Morrisson and Milanovic; 1990 PPPs)
A non-Marxist world

• Over the long run, decreasing importance of within-country inequalities despite some reversal in the last quarter century
• Increasing importance of between-country inequalities (but with some hopeful signs in the last five years, before the current crisis),
• Global division between countries more than between classes
Composition of global inequality changed: from being mostly due to “class” (within-national), today it is mostly due to “location” (where people live)
Very high but decreasing importance of location in global inequality

From thepast.xls under c:\history

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Extra for Michigan
La longue durée
Global and international inequality after World War II

Concept 2: 1960-1980 from Bourguignon & Morrisson

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From Karl Marx to Frantz Fanon and back to Marx?

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La moyenne durée
Real income growth over 1988-2008 and 1988-2011 (based on 2011 PPPs)
Global income distributions in 1988 and 2011

Figure 3. Global income distribution in 1988 and 2011

Emerging global “middle class” between $3 and $16
Implications for global theories

• End of neo-Marxist theories focused on center-periphery and structural impediments to growth in the periphery (Prebisch, structuralism, dependency, AG Frank, Amin)

• Formerly peripheral capitalism appears more successful with the “core” growing slower or not at all.

• Complete worldwide dominance of capitalism as socio-economic formation
Implications for global theories

- Even pre-capitalist formation seem to be disappearing; less of “disarticulation” and “dualism” within states
- But disarticulation appears in the North
- Global nature of capitalism: multinationals, supply chains, transfer pricing
- Even in daily life greater commercialization of hitherto non-pecuniary relations
- Yet no grand theories explaining how it hangs together & where it leads
Implications for global theories

• Leaving aside theories of collapse due to environmental limits (climate change) or some vague return to “localism”. Both unrealistic.

• Or nostrums of “inclusiveness” (AR: Fukuyama + Washington consensus); at odds with reality

• But important Qs:
  • 1) Are peripheral and core capitalism the same?
  • 2) Are there contradictions between them or not? (Property right are not the same; working rules (trade unions) are not the same)
Implications for global theories

• 3) Will capitalism become more technocratic (China, EU) or plutocratic (US)?

• 4) What are the objectives of the global elite? How are they shaped?

• 5) Coincidence of interest between the global elite and the poor, when it comes to migration (a new coalition of forces): Davos and under $1 per day

• 6) What is the meaning of a *global* middle class?

• 6) Issue of under-consumptionism at national level, monopolies (patent rights)

• 7) Last time when we had a similar (but not nearly as complete) rule of capitalism, things ended with a World War. Now?