Trends in global income inequality and their political implications

Branko Milanovic
LIS Center; Graduate School City University of New York
Winter 2015
A. Within-national inequalities
<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 increases</td>
<td>30.6</td>
<td>36.0</td>
<td>+5.4</td>
</tr>
<tr>
<td>(41)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Countries with Gini decreases</td>
<td>45.0</td>
<td>41.4</td>
<td>-3.6</td>
</tr>
<tr>
<td>(22)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

From final-complete3.dta and key_variables_calcul2.do (lines 2 and 3; rest from AlltheGinis)
Ginis in 1988 and 2011 (population-weighted countries)

Using final11\combine88_11.dta

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

Define_variables.do using data_voter_checked.dta
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
How to think of within-national inequalities: Introducing the Kuznets waves
The second chapter of my forthcoming book (April 2016)
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

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.

GDP per capita and rent-wage ratio: Spain 1325-1840

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).
Gini coefficient in Chile 1850-1970: based on dynamic social tables

Northern Italy: wealth inequality in Ivrea, 1520-1649

From Guido Alfani, Economic inequality in Northwestern Italy
A2. Kuznets’ cycles in societies with a rising mean income
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></td>
<td>Idiosyncratic events: wars (though destruction), epidemics, civil conflict</td>
<td>Cultural and ideological (e.g. Christianity?)</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?) |
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

What drives 1\textsuperscript{st} Kuznets cycle down and 2\textsuperscript{nd} Kuznets cycle up?

| Downward portion of Kuznets 1  
| ~1900 to 1980 | Upward portion of Kuznets 2  
| 1980-? |
|-----------------|-----------------|
| • Wars          | • Movement of labor from manufacturing into heterogeneous services |
| • Hyperinflation (against creditors) | • Rents from tech innovations |
| • Social pressure through politics (socialism, trade unions) | • Globalization |
| • High taxation | • Free global movement of capital |
| • Widespread education | • Policy changes (endogenous) |
| • Aging (demand for social protection) | • **TOP impossible to disentangle** |
## Downswing of Kuznets first cycle and upswing of the second Kuznets cycle in advanced economies

<table>
<thead>
<tr>
<th>Country</th>
<th>Level of maximum inequality (peak of Wave 1)</th>
<th>Level of minimum inequality (trough of Wave 1)</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)
Average per decade real per capita growth and Gini change during the upward portion of the second Kuznets wave (the Great Divergence)
Brazil, China’s inequality in the Kuznets framework

twoway (scatter Giniall gdpppp if contcod=="CHN" & year>1960, connect(l) ylabel(40(10)60)  xtitle(2000 6000 12000) ytitle(Gini) xtitle(year)) (scatter Giniall gdpppp if contcod=="BRA", connect(l) text(62 12000 "Brazil") text(48 12000 "China") legend(off))
Using gdpppreg5.dta
The Kuznets relationship for Brazil, 1839-2013

GDP per capita (in 1990 international dollars)
Urban Gini in China: 1981-2014 (based on official household surveys)
Where are now China and the US?

Gini

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)
My 2008 data presented by *Avenir Suisse*
How to think of between-national inequalities: Convergence economics
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 gdpppp if contcod=="CHN" & year>1980) (lowess growth gdpppp if contcod=="USA" & gdpppp<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

Large emerging economies are India, South Africa, Brazil, Indonesia and Vietnam.

Using gdpmpreg5.dta
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?
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

Top-heavy allocation of the gap + Pareto adjustment

Survey data only

Summary_data.xls
How to think of global inequality: Interaction of Kuznets waves and mean-income convergence
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)

Estimated at mean-over-mean

From twenty_years\final\summary_data

“China’s middle class”

“US lower middle class”

Branko Milanovic
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)

Cumulative real per capita growth in % between 1988 and 2008

Percentile of global income distribution

Branko Milanovic
Global income distributions in 1988 and 2011

Figure 3. Global income distribution in 1988 and 2011

Emerging global “middle class” between $3 and $16
La longue durée: From Karl Marx to Frantz Fanon and back to Marx?
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.
• 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>

Branko Milanovic
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>
• 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

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

Branko Milanovic
Final conclusion

• To reduce global inequality: fast growth of poor countries + migration

• 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

Concept 2: 1960-1980 from Bourguignon & Morrisson

Defines.do using gdppppreg5.dta

Branko Milanovic
Global and international inequality 1952-2014

Concept 2

Concept 2 without China

Concept 3

Gini coefficient


year
### Population coverage

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa</td>
<td>48</td>
<td>76</td>
<td>67</td>
<td>77</td>
<td>78</td>
<td>78</td>
<td>70</td>
</tr>
<tr>
<td>Asia</td>
<td>93</td>
<td>95</td>
<td>94</td>
<td>96</td>
<td>94</td>
<td>98</td>
<td>96</td>
</tr>
<tr>
<td>E.Europe</td>
<td>99</td>
<td>95</td>
<td>100</td>
<td>97</td>
<td>93</td>
<td>92</td>
<td>87</td>
</tr>
<tr>
<td>LAC</td>
<td>87</td>
<td>92</td>
<td>93</td>
<td>96</td>
<td>96</td>
<td>97</td>
<td>97</td>
</tr>
<tr>
<td>WENAO</td>
<td>92</td>
<td>95</td>
<td>97</td>
<td>99</td>
<td>99</td>
<td>97</td>
<td>96</td>
</tr>
<tr>
<td>World</td>
<td>87</td>
<td>92</td>
<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)
Global and US Gini over two centuries

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

Branko Milanovic
 Shares of global income received by top 10% and bottom 60% of world population

- **Top 10% (B-M data)**
- **Top 10% (L-M data)**
- **Bottom 60% (B-M data)**
- **Bottom 60% (L-M data)**
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

Share of the between component in global Theil (0)

From thepast.xls under c:\history

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

Concept 2: 1960-1980 from Bourguignon & Morrisson

Branko Milanovic
From Karl Marx to Frantz Fanon and back to Marx?
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

log of annual PPP real income

density

0 0.2 0.4 0.6 0.8

1988 2011
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

Branko Milanovic
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?