Recent trends in global income inequality and their political implications

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A. Within-national inequalities

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Ginis in the late 1980s and around now

	~1988	~2011	Change
Average Gini	35.9	38.4	+2.5
Pop-weighted Gini	33.7	36.5	+2.8
GDP-weighted Gini	32.2	36.4	+4.2
Countries with Gini increases (41)	30.6	36.0	+5.4
Countries with Gini decreases (22)	45.0	41.4	-3.6

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From final-complete3.dta and key_variables_calcul2.do (lines 2 and 3; rest from AlltheGinis)
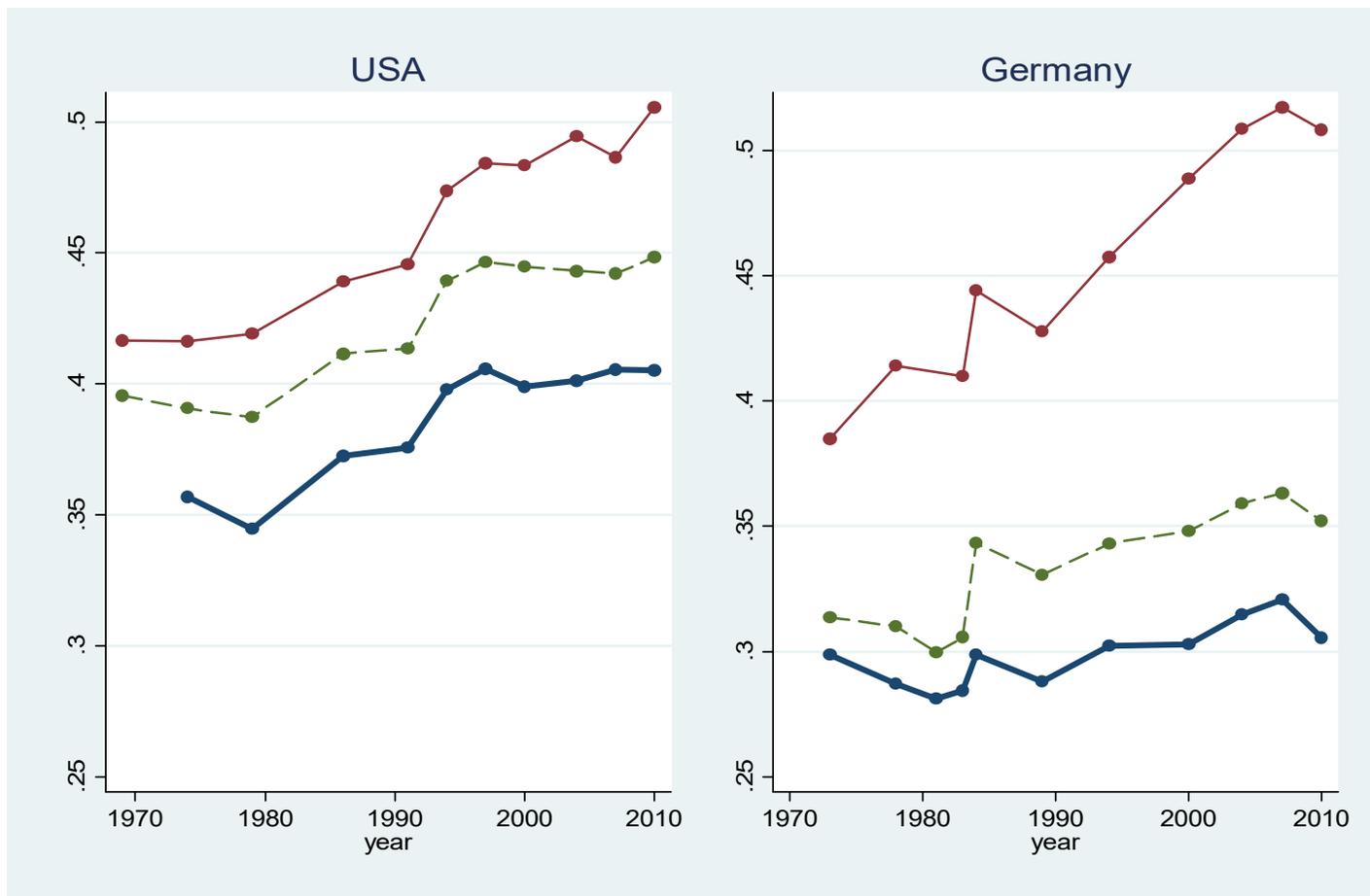
Ginis in 1988 and 2011 (population-weighted countries)
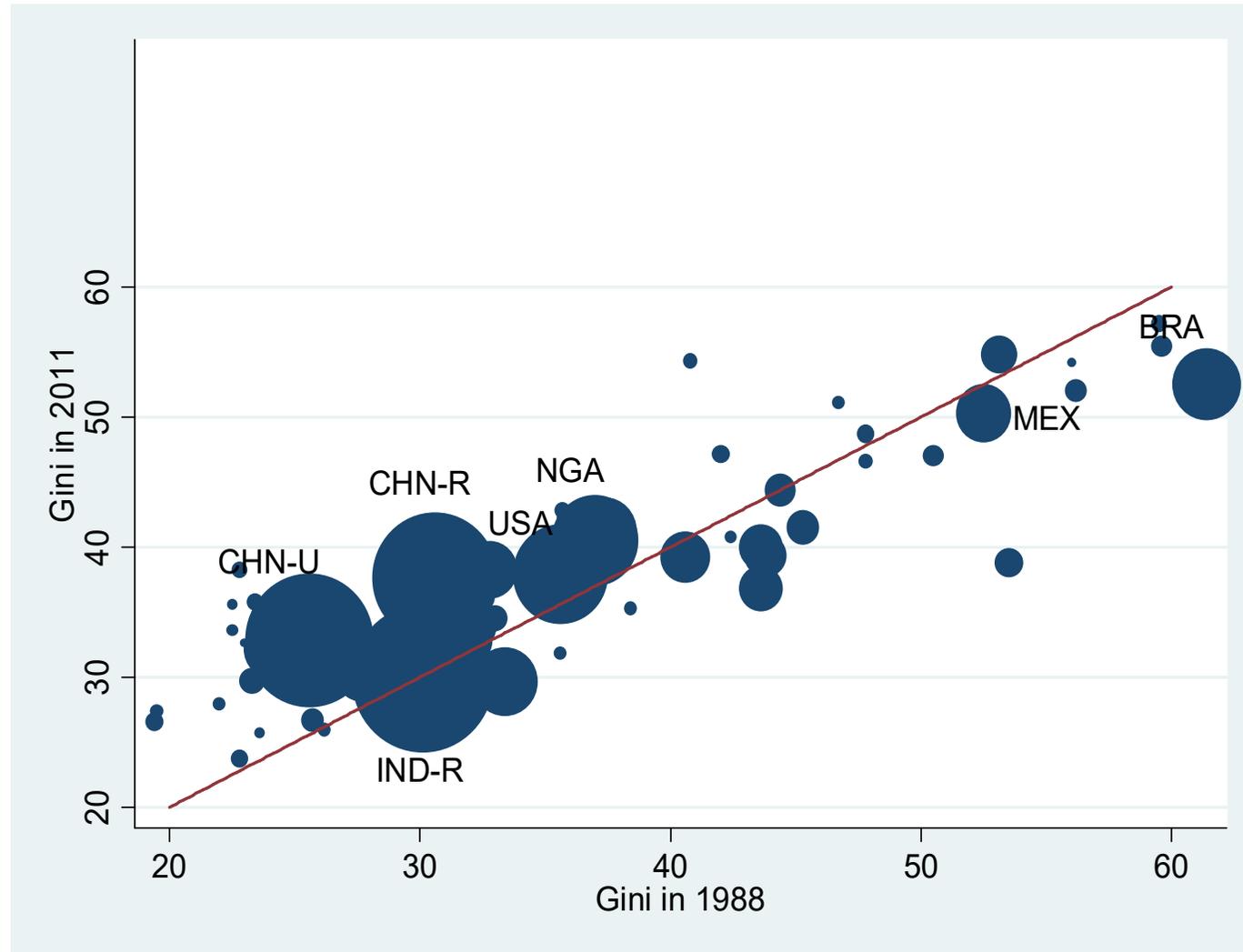
twoway (scatter gini gini_88 if bin_year==2011 & keep==1 & mysample==1 & group==1 [w=totpop], text(50 55 "MEX") text(57 60 "BRA") text(42 34 "USA") text(23 30 "IND-R") text(46 36 "NGA") text(39 24 "CHN-U") text(45 30 "CHN-R") ylabel(20(10)60)) (function y=x, range(20 60) legend(off) ytitle(Gini in 2011) xtitle(Gini in 1988))
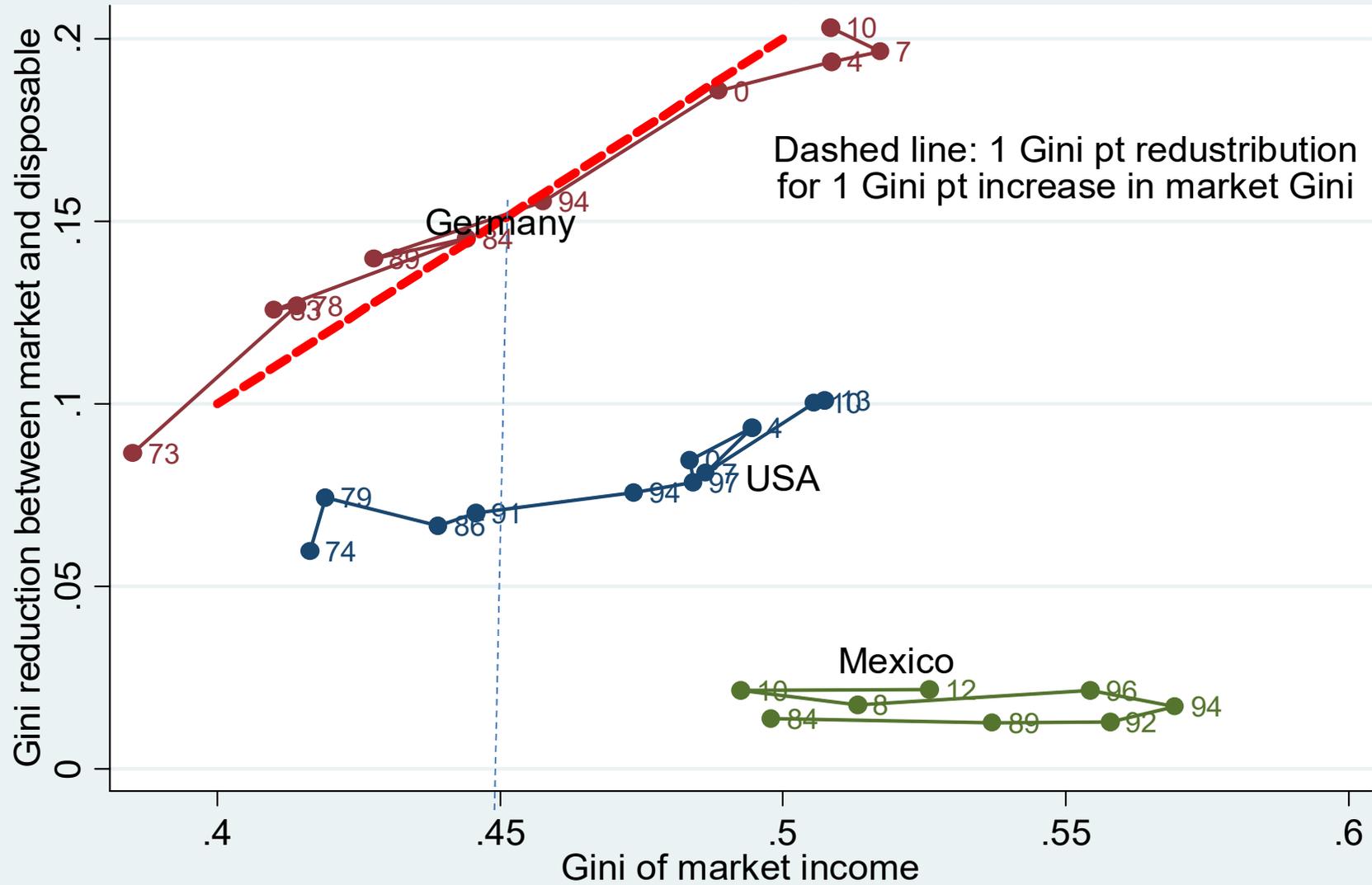Using final11\combine88_11.dta

Redistribution vs. inequality of market income (LIS data)
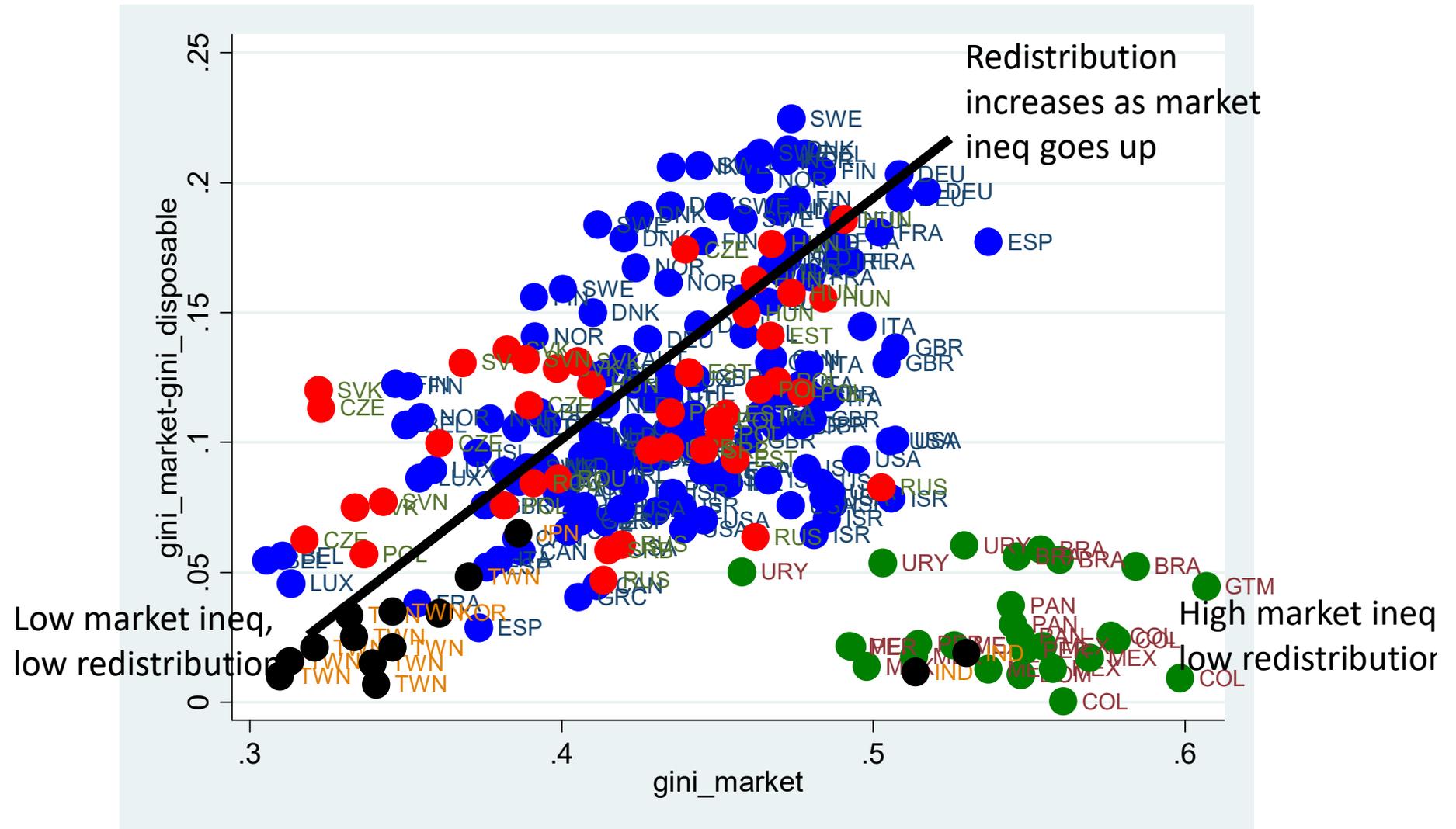
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Market, gross and disposable income Ginis in the US and Germany

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Market income inequalty and redistribution

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

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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 book
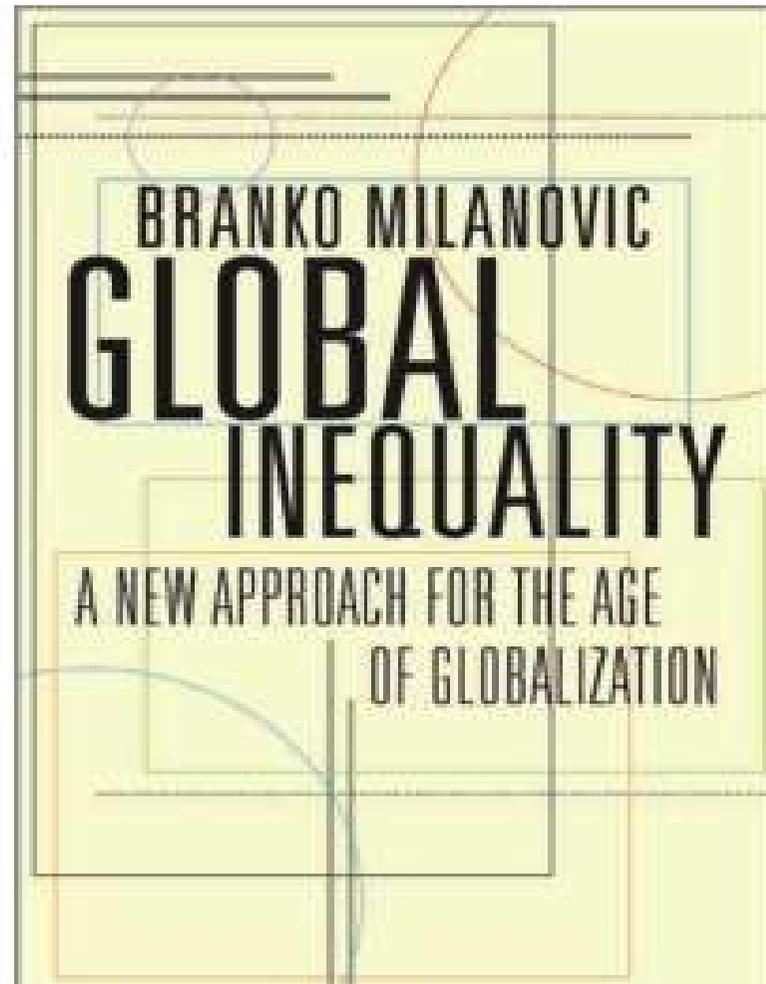
Kuznets cycles defined

- 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)

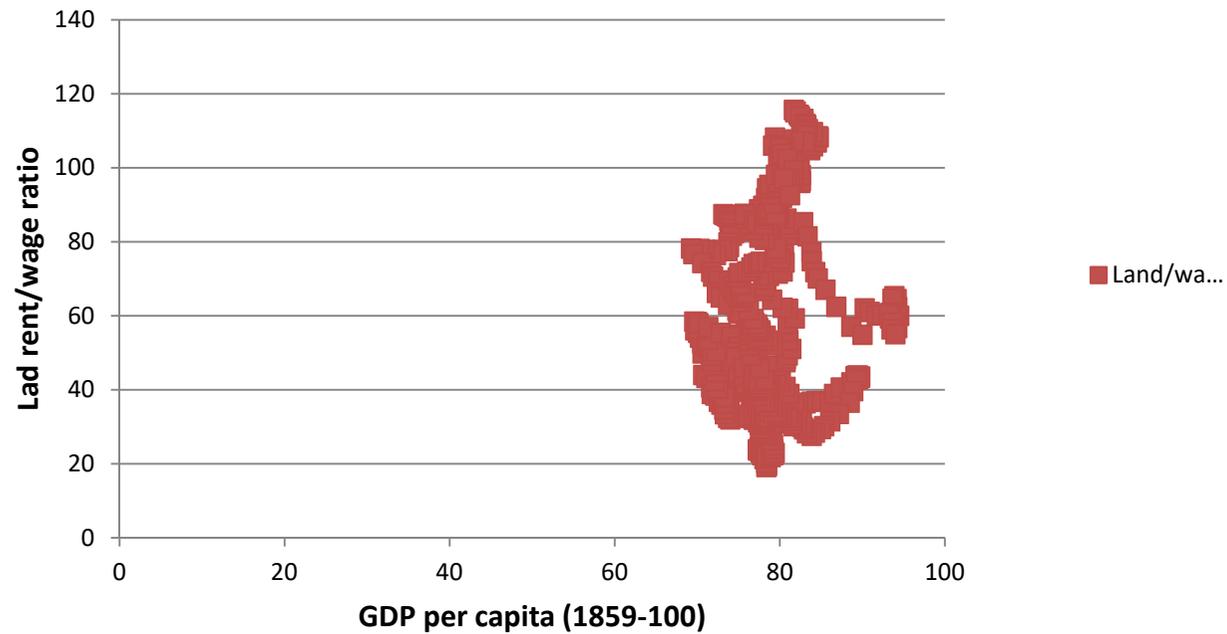|	Malign	Benign
Societies with stagnant mean income	Idiosyncratic events: wars (though destruction), epidemics, civil conflict	Cultural and ideological (e.g. Christianity?)
Societies with a rising mean income	Wars (through destruction and higher taxation: *War and Welfare*), civil conflict	• Widespread 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?)

Cyclical nature of the Kuznets curve:
Land rental/wage ratio over the long-term in Spain, 1282-1842
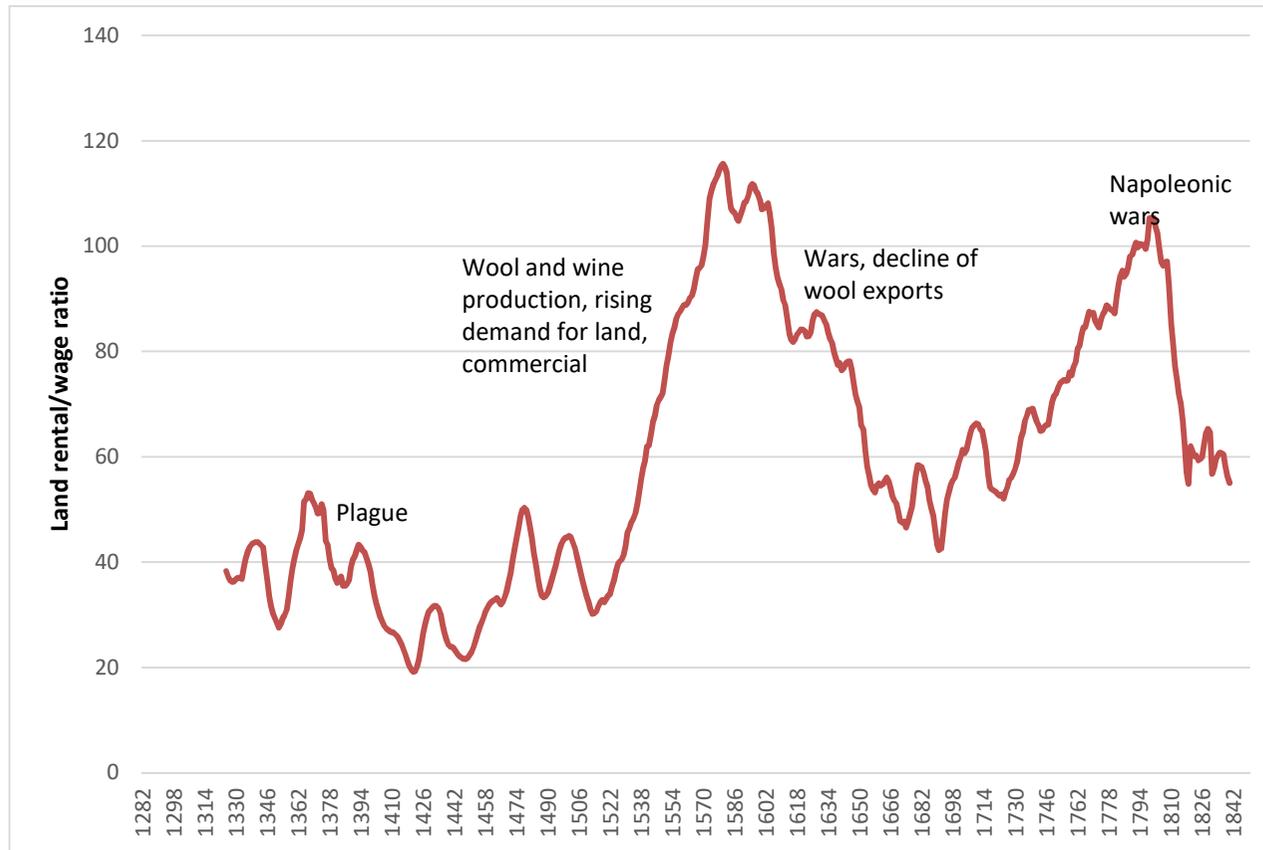
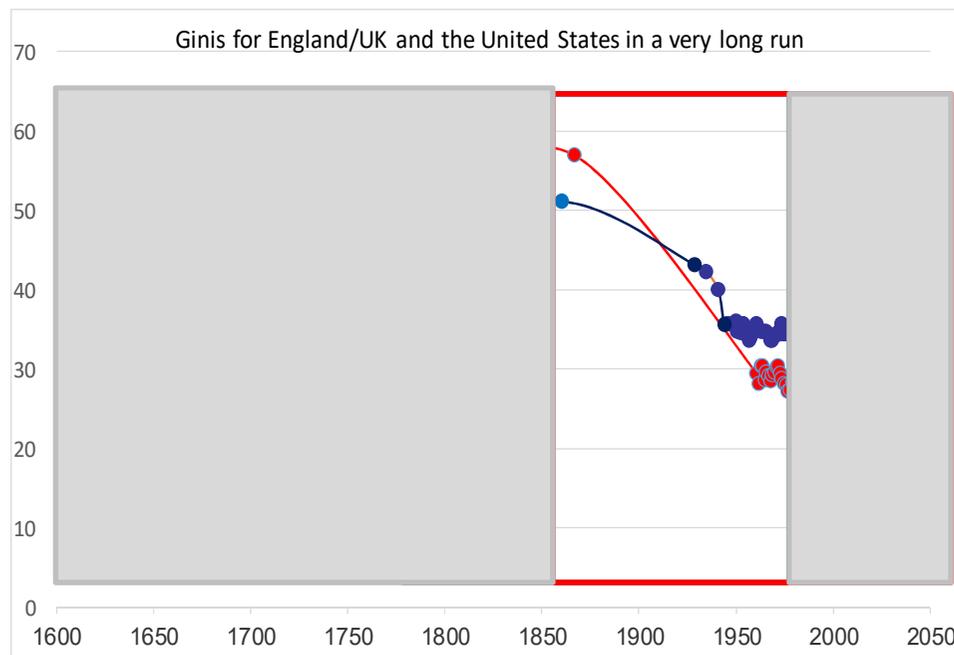From Prados de la Escosura & Alvarez-Nogal, "The rise and fall of Spain 800-1850"

Kuznets curve here? No.

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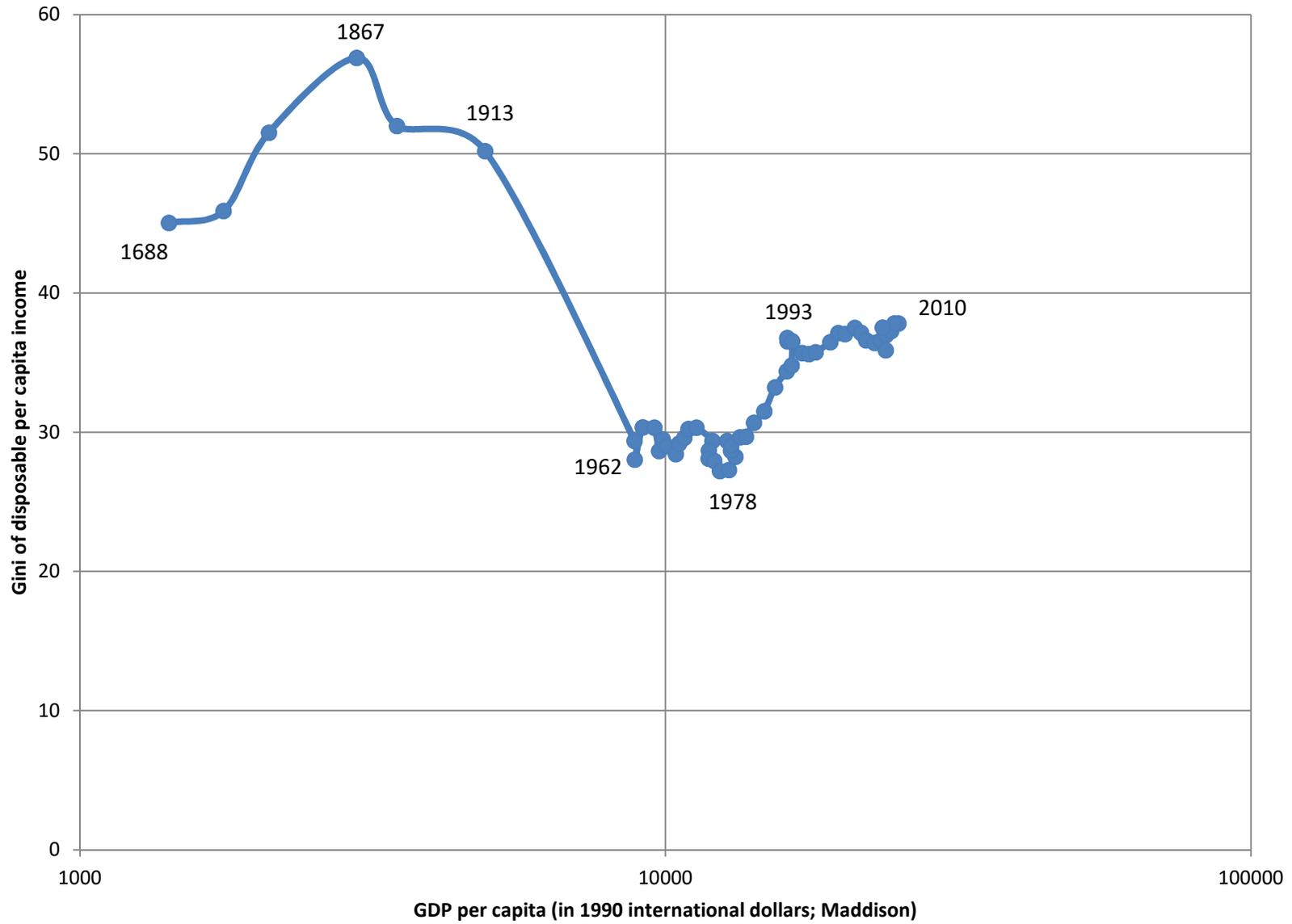

From Prados de la Escosura & Alvarez-Nogal, "The rise and fall of Spain 800-1850"

14

Kuznets and Piketty "frames" and the Kuznets waves
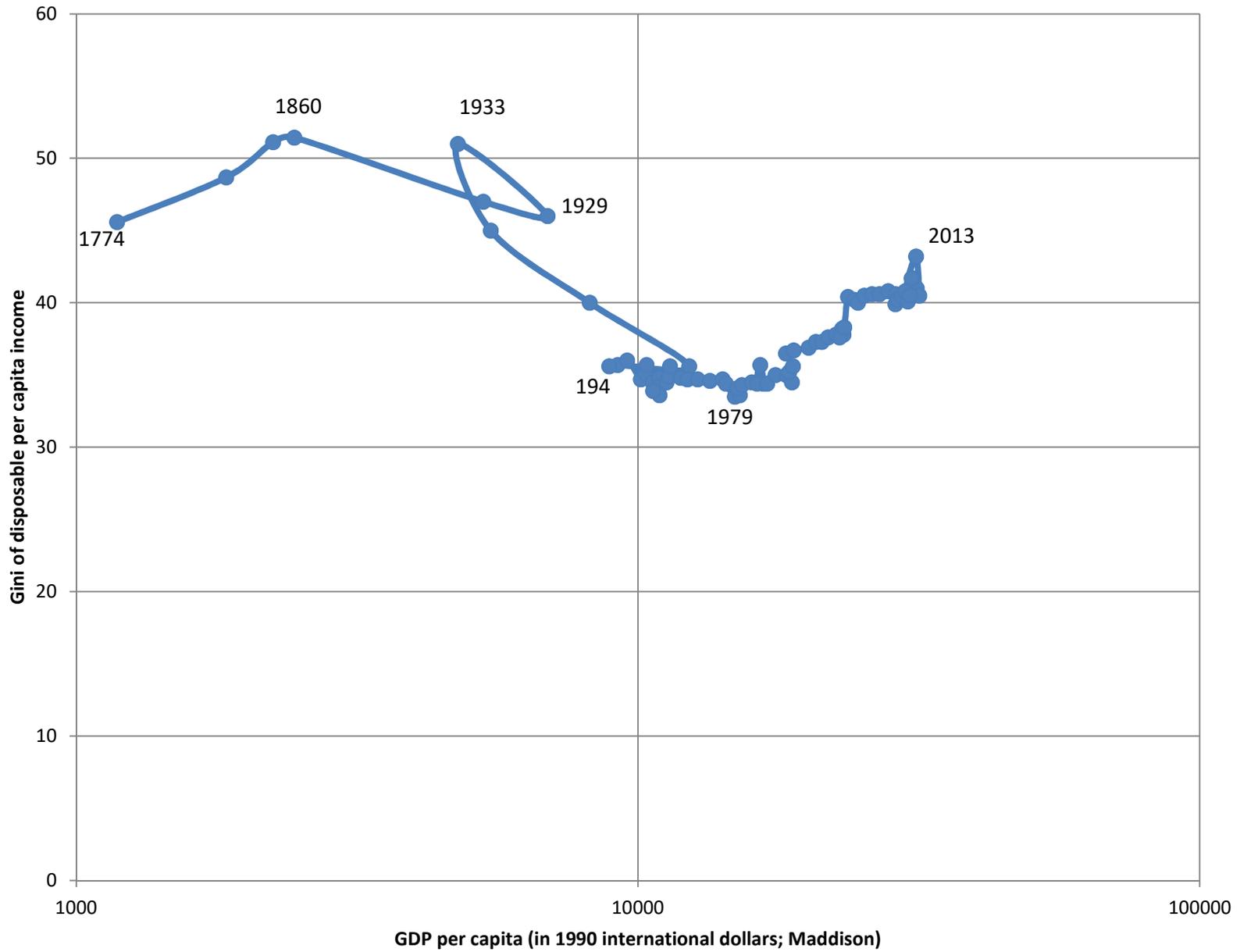

Ginis for England/UK and the United States in a very long run

From uk_and_usa.xls

Kuznets relationship for the UK, 1688-2010

GDP per capita (in 1990 international dollars; Maddison)

Gini of disposable per capita income

Kuznets relationship for the United States, 1774-2013

GDP per capita (in 1990 international dollars; Maddison)

Gini of disposable per capita income

1774
1860
1933
1929
194
1979
2013

What might drive the 2nd 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
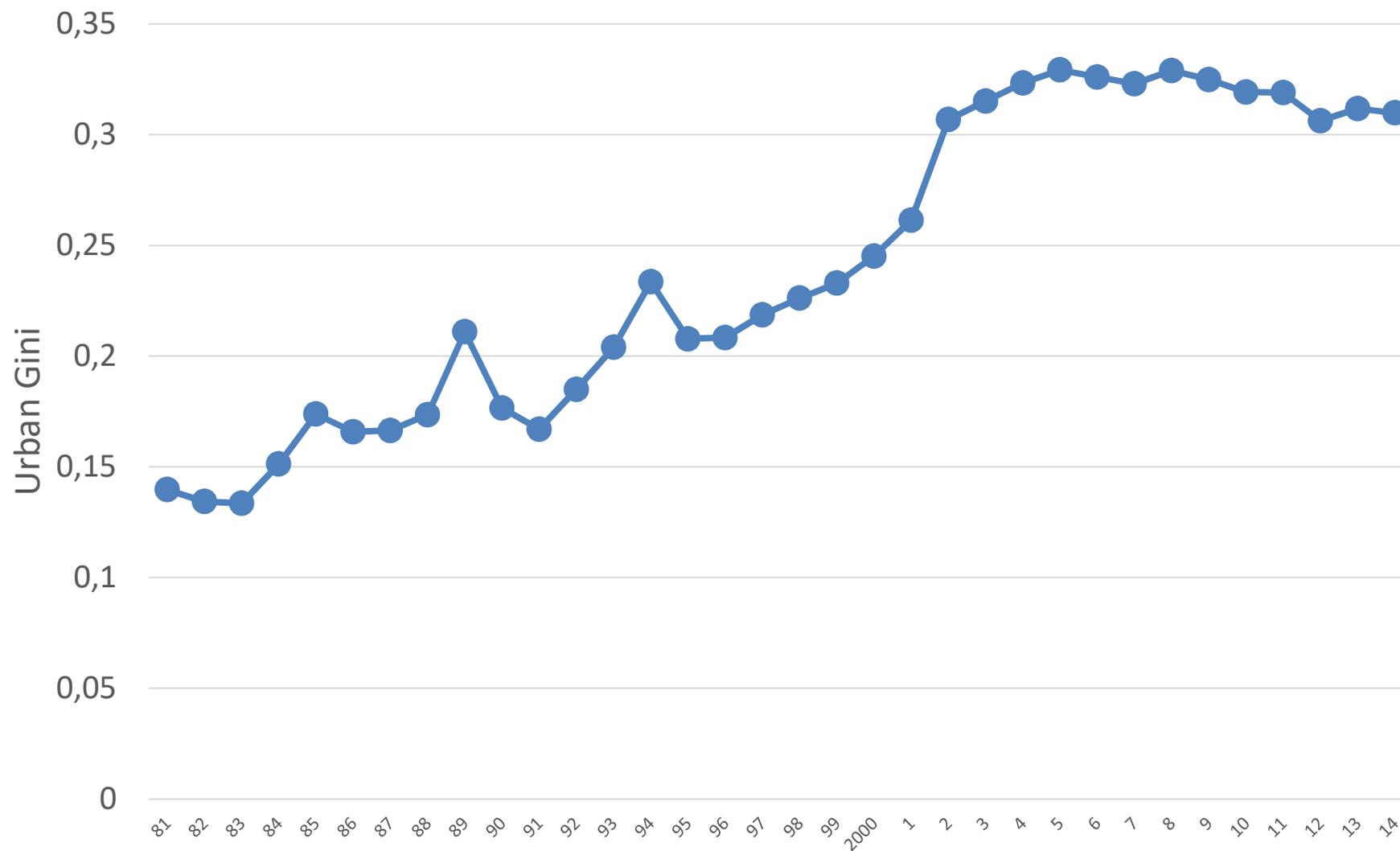
The Kuznets relationship for Brazil, 1839-2013

1991

1972

1930

1885

2013

Gini

GDP per capita (in 1990 international dollars)
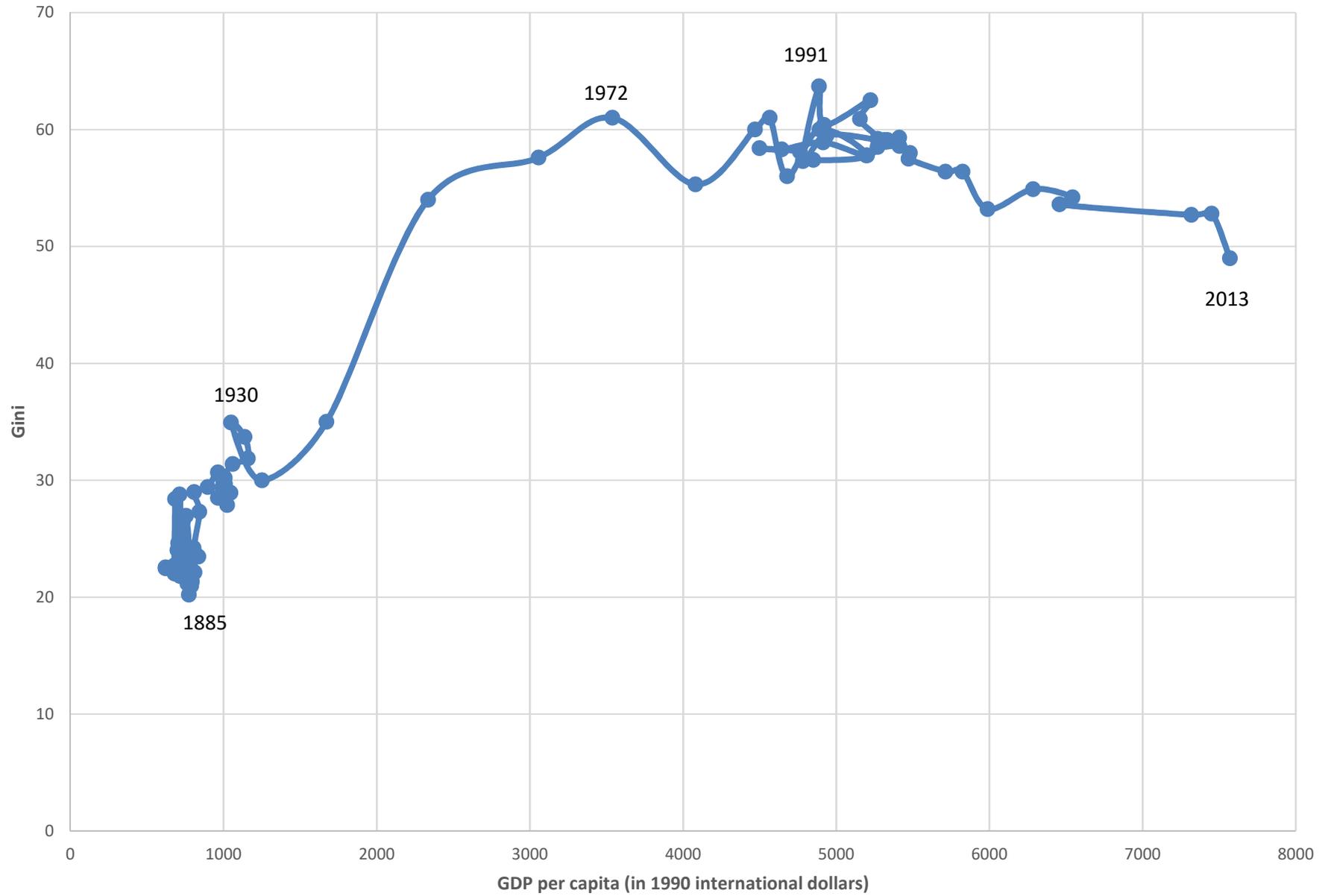
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Downswing of Kuznets first wave and upswing of the second Kuznets wave in advanced economies
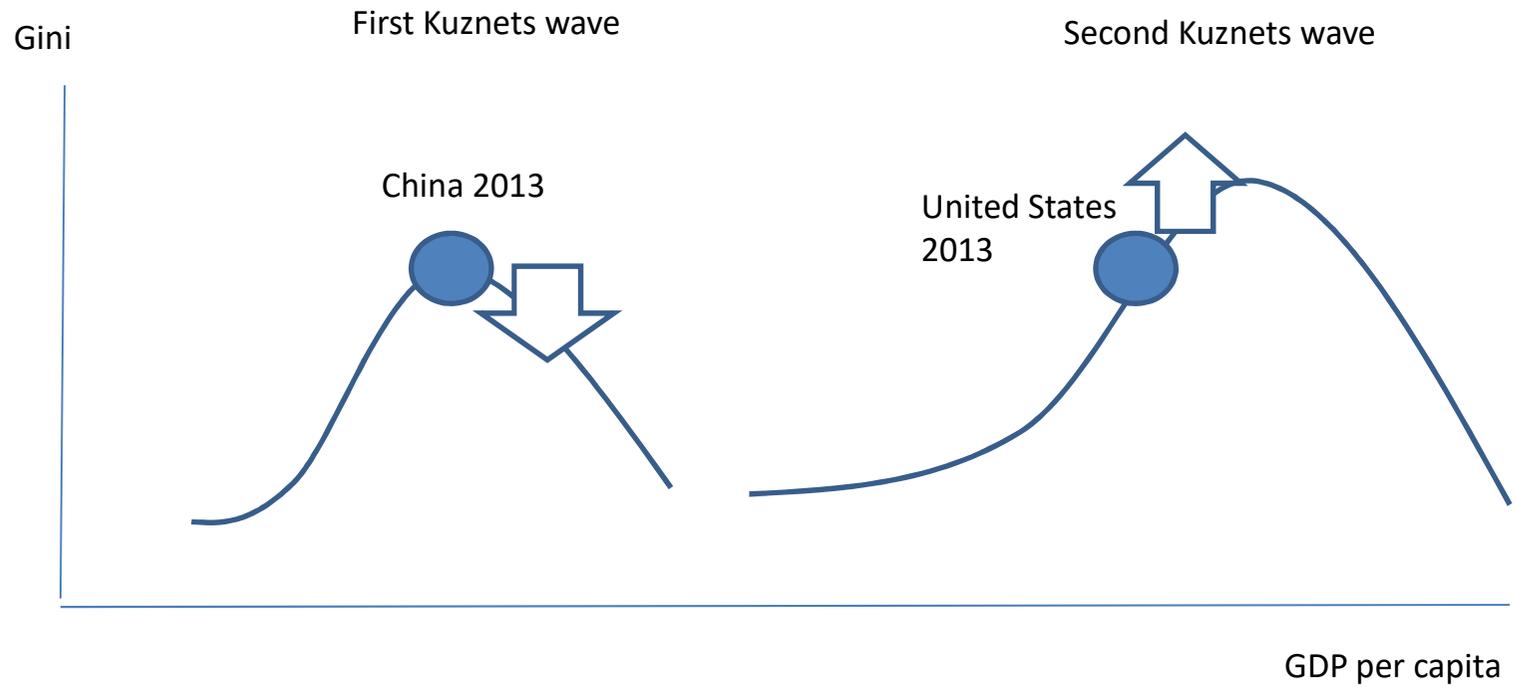
	Level of maximum inequality (peak of Wave 1) Gini points (year)	Level of minimum inequality (trough of Wave 1) (year)	Approximate number of years of downswing of the Kuznets wave	Reduction in inequality (Gini points)	GDP increased (how many times) during the downswing	The second Kuznets wave (increase in Gini points)
United States	51 (1933)	35 (1979)	50	16	4	Strong (+8)
UK	57 (1867)	27 (1978)	110	30	>4	Strong (+11)
Spain	53 (1918)	31 (1985)	70	22	<5	Modest (+3)
Italy	51 (1851)	30 (1983)	120	21	<9	Strong (+5)
Japan	55 (1937)	31 (1981)	45	24	6	Modest (+1)
Netherlands	61 (1732)	21 (1982)	250	35	7	Modest(+2)

Table2_data.xls

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

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Where are now China and the US?

Gini

First Kuznets wave

Second Kuznets wave

China 2013

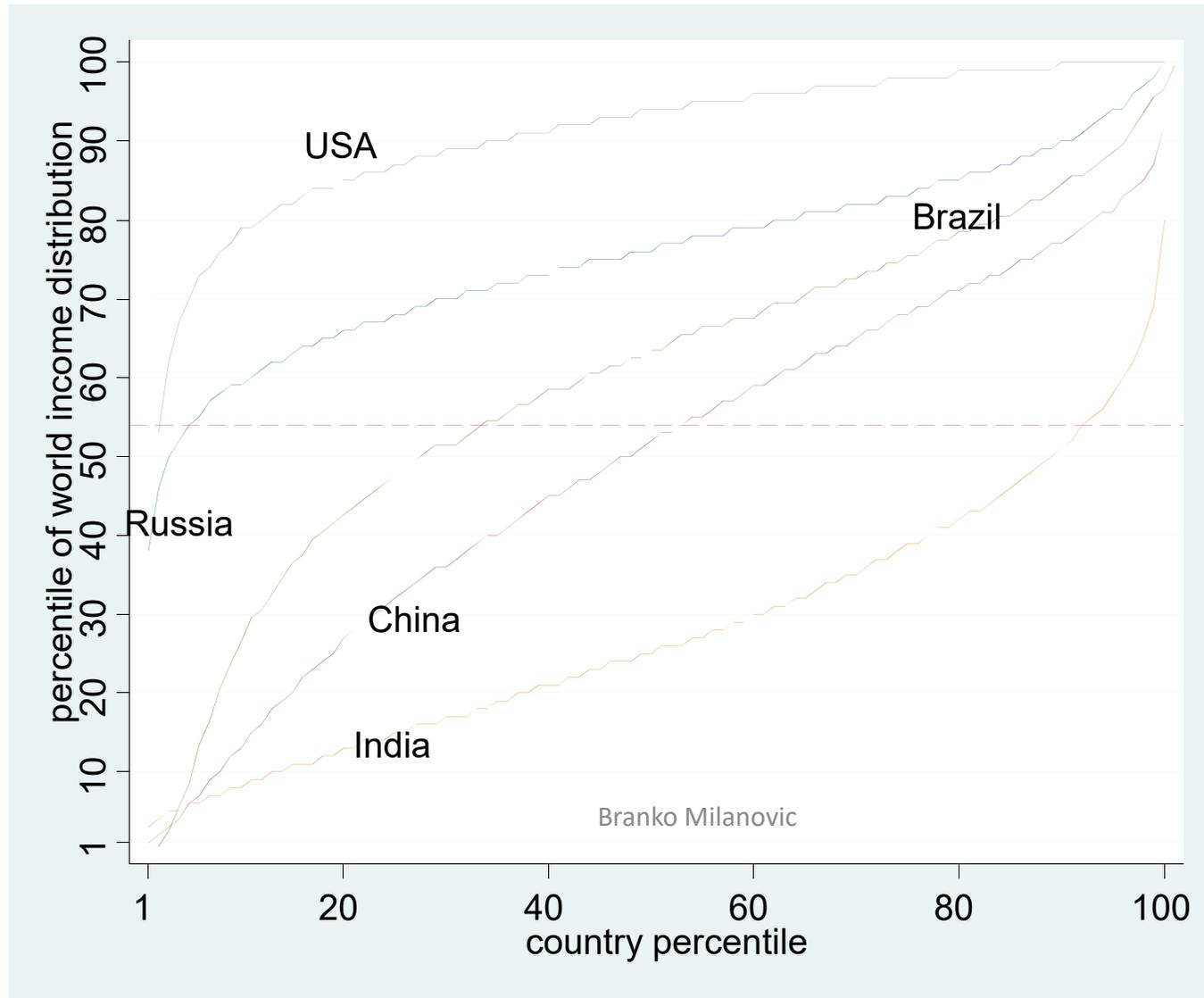United States 2013

GDP per capita

B. Between national inequalities

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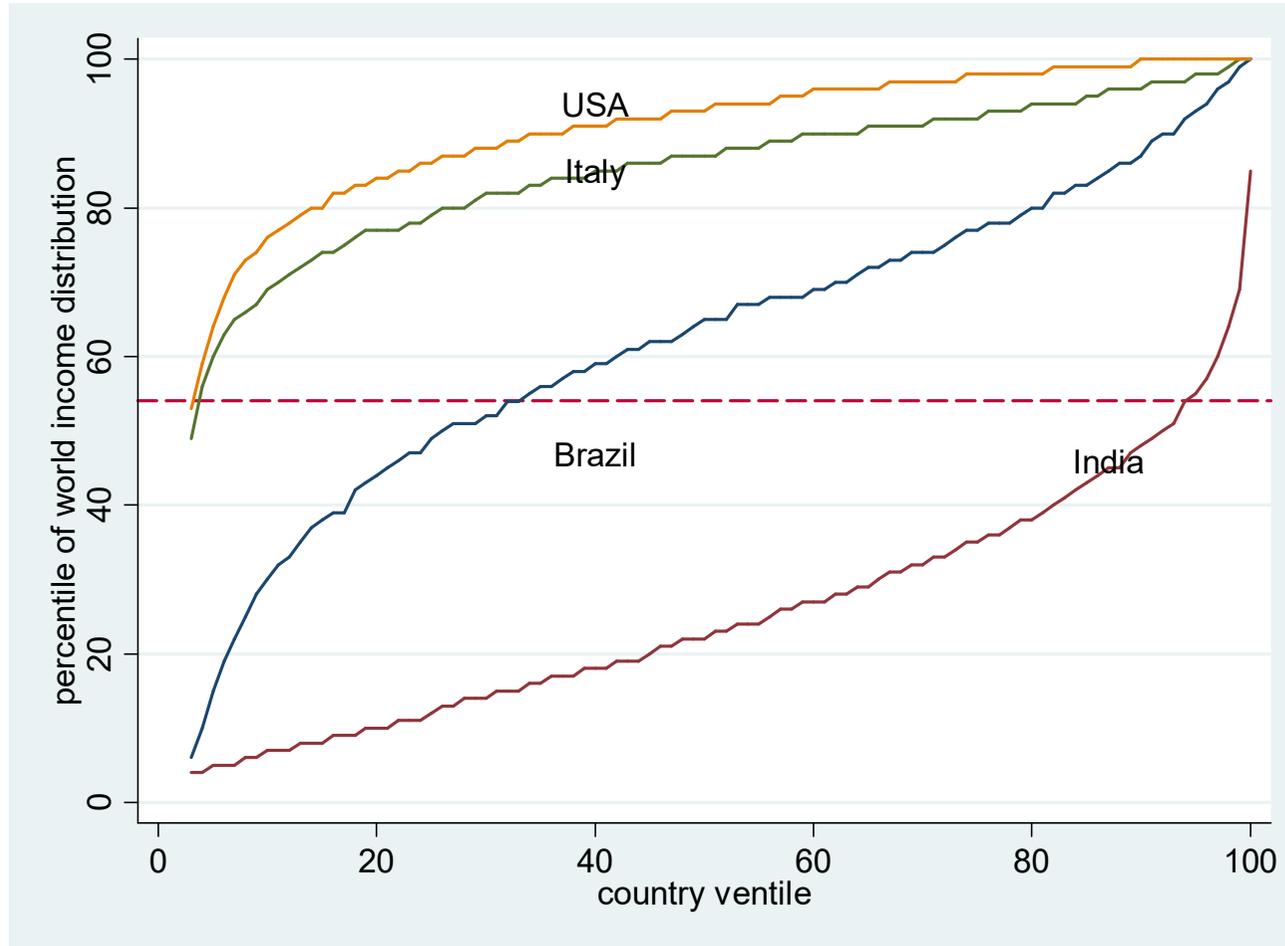# The third chapter of my book
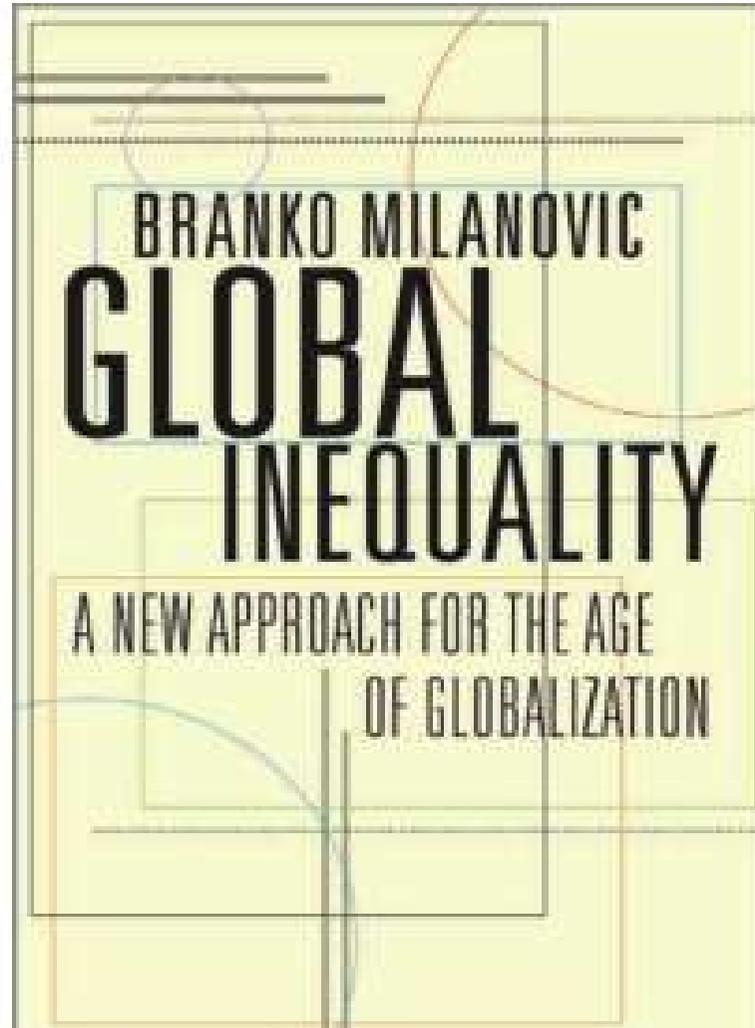
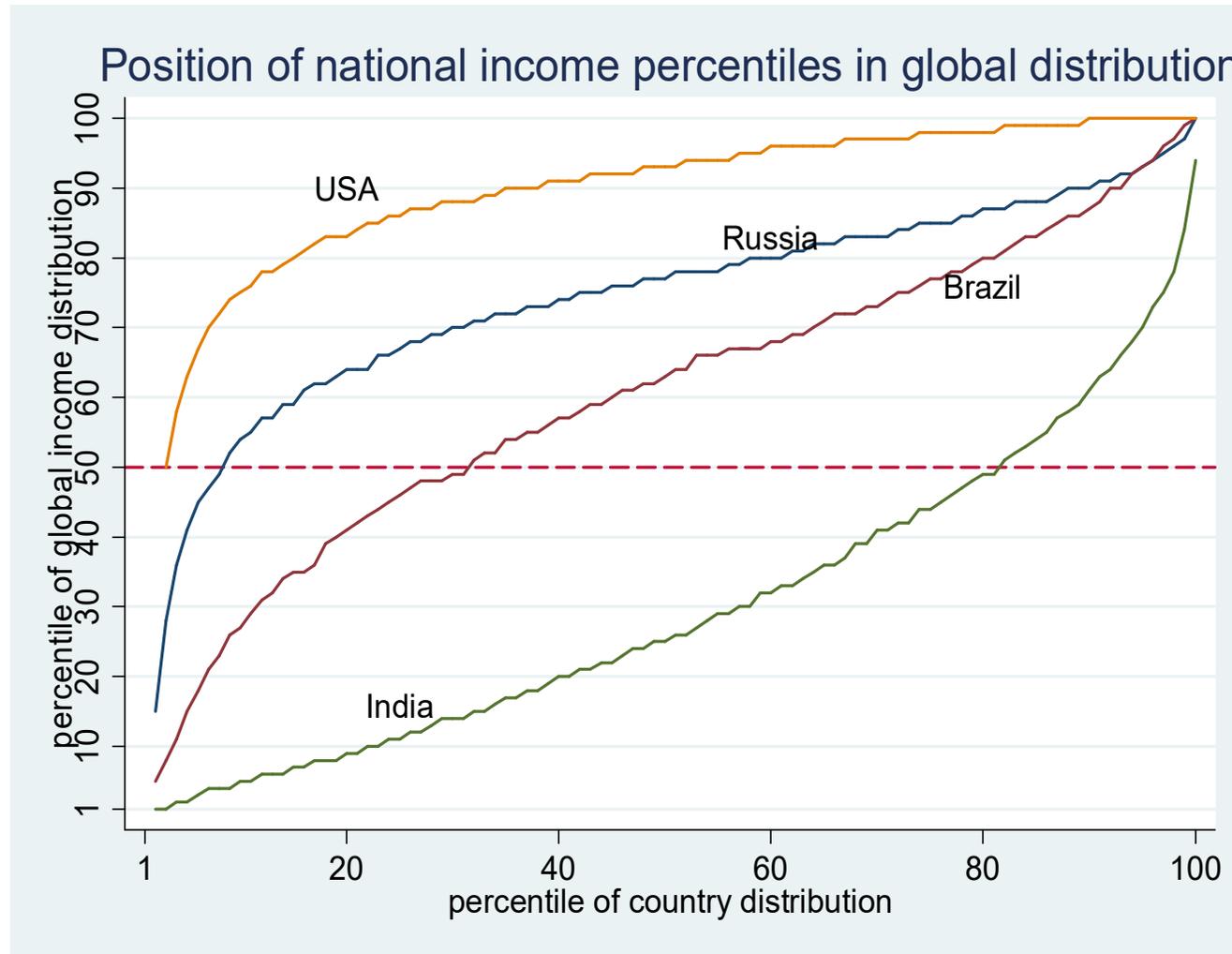# Different countries and income classes in global income distribution in 2008

From calcu08.dta

USA, India, Italy, Brazil in global income distribution in 2011

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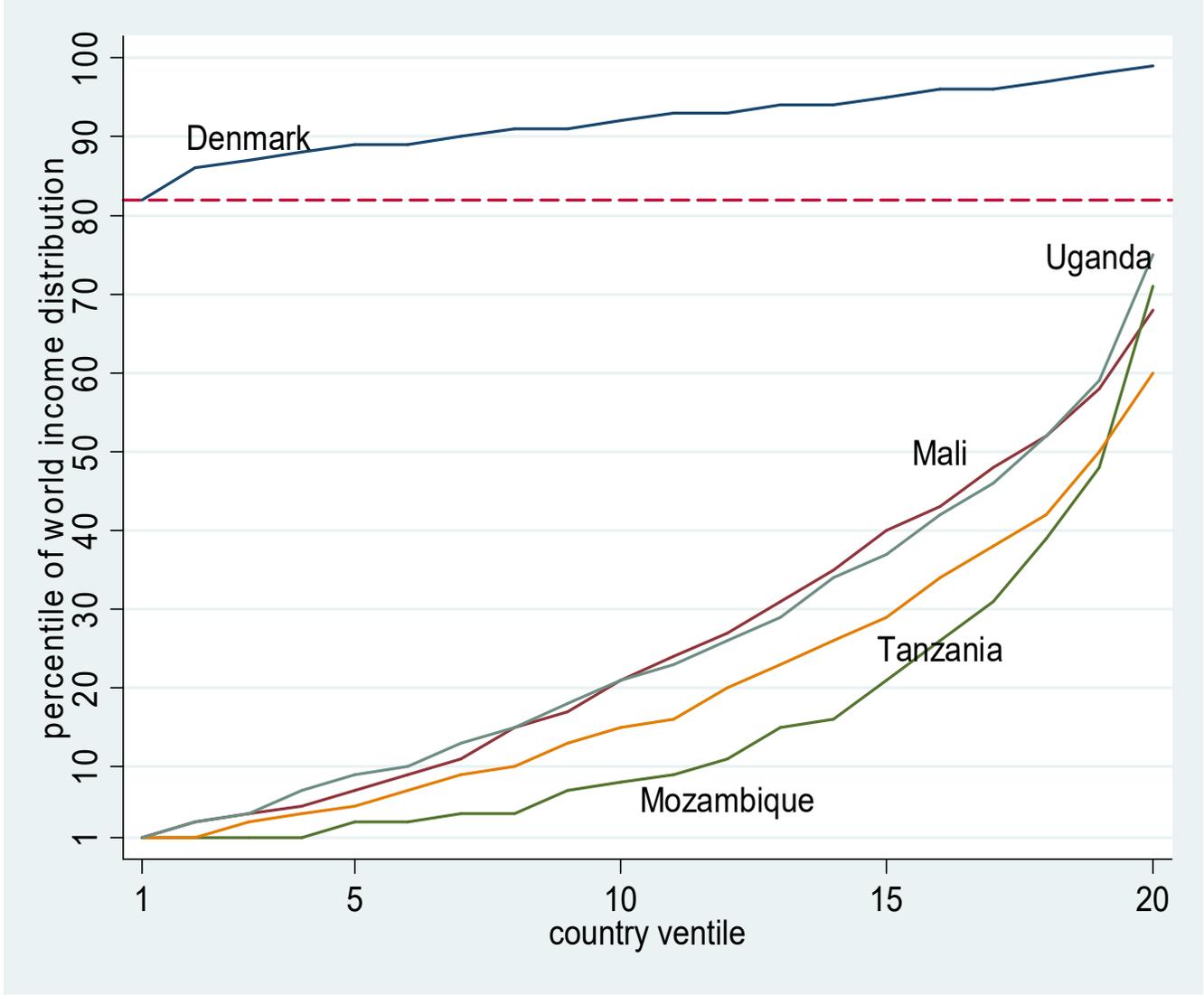
Different countries and income classes in global income distribution in 2011 (India: income data; Maryland + NCAR)

Position of national income percentiles in global distribution

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Replacing NSS data w/ income data for 2011

Figure: Line chart showing "Annual per capita after-tax income in international dollars" (y-axis, from 500 to 5000) versus years (x-axis: 1988, 1993, 1998, 2003, 2008, 2011). The red line labeled "US 2nd decile" stays roughly flat above 5000. The blue line labeled "Chinese 8th urban decile" rises steeply from below 1000 in 1988 to above 5000 in 2011.
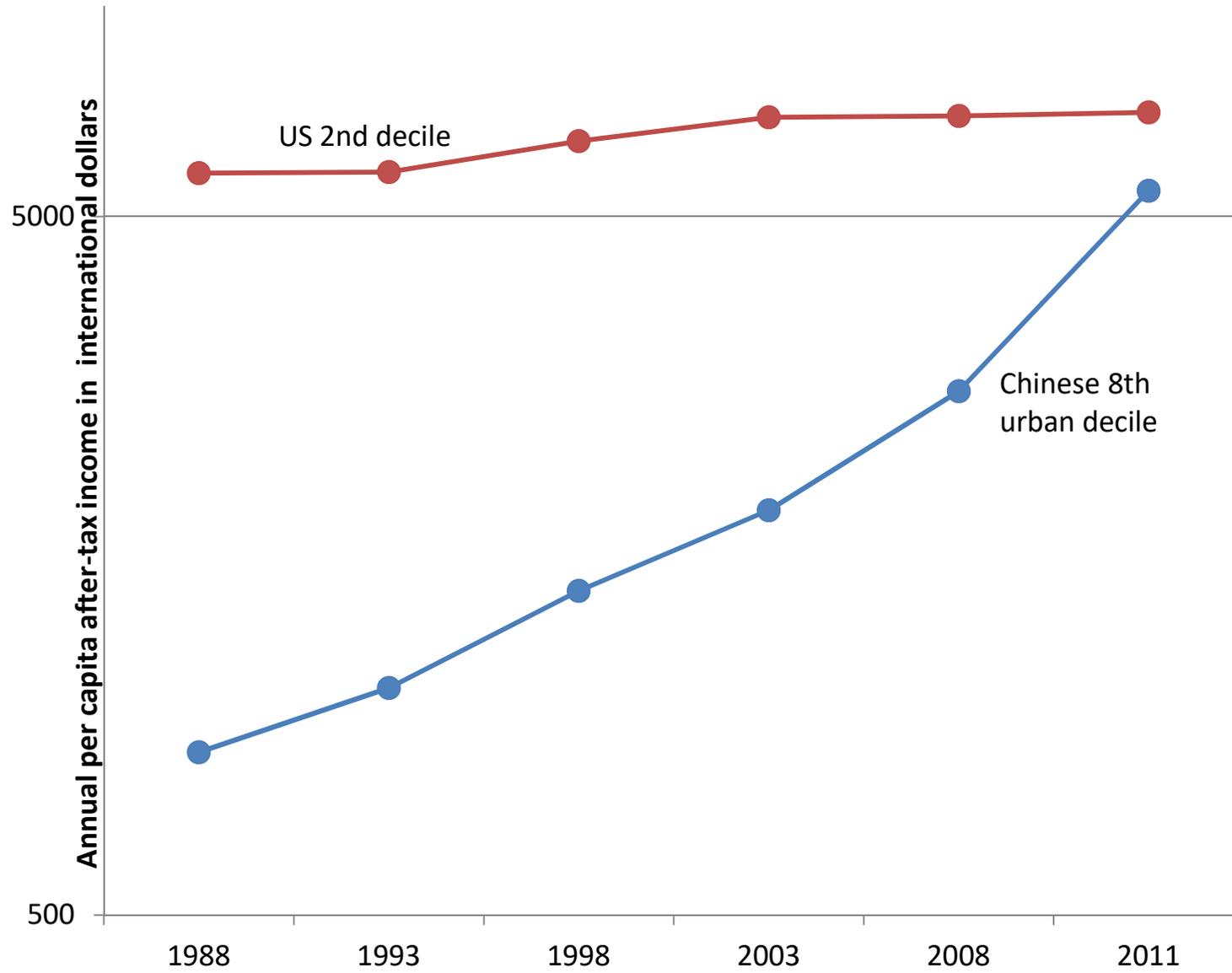
From summary_data.xls

Large gaps in mean country incomes raise two important issues

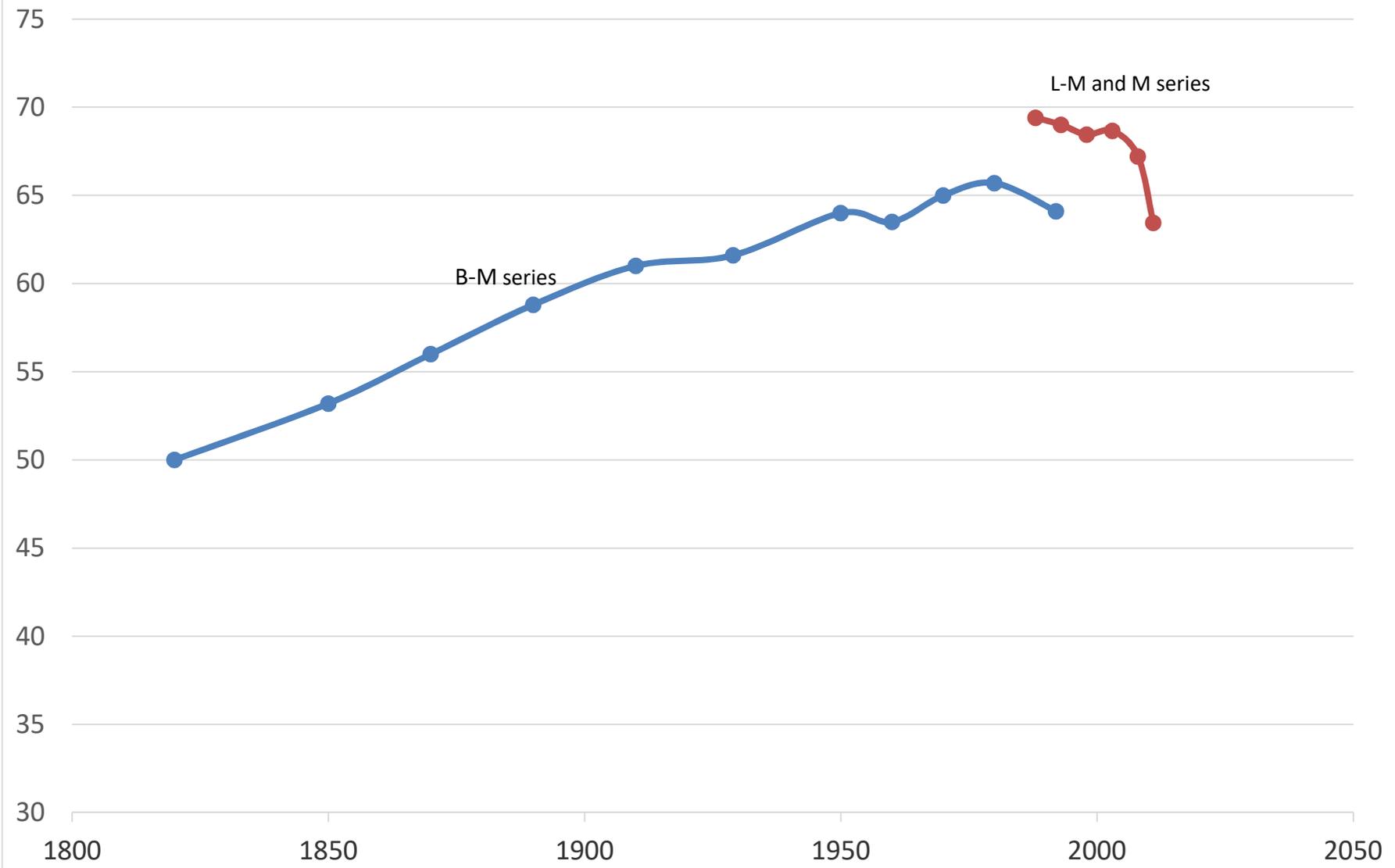- Political philosophy: is the "citizenship rent" morally acceptable? Does global equality of opportunity matter?

- Global and national politics: Migration and national welfare state

- (will address both at the end)

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C. Global inequality

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Global Gini 1820-2011

L-M and M series

B-M series

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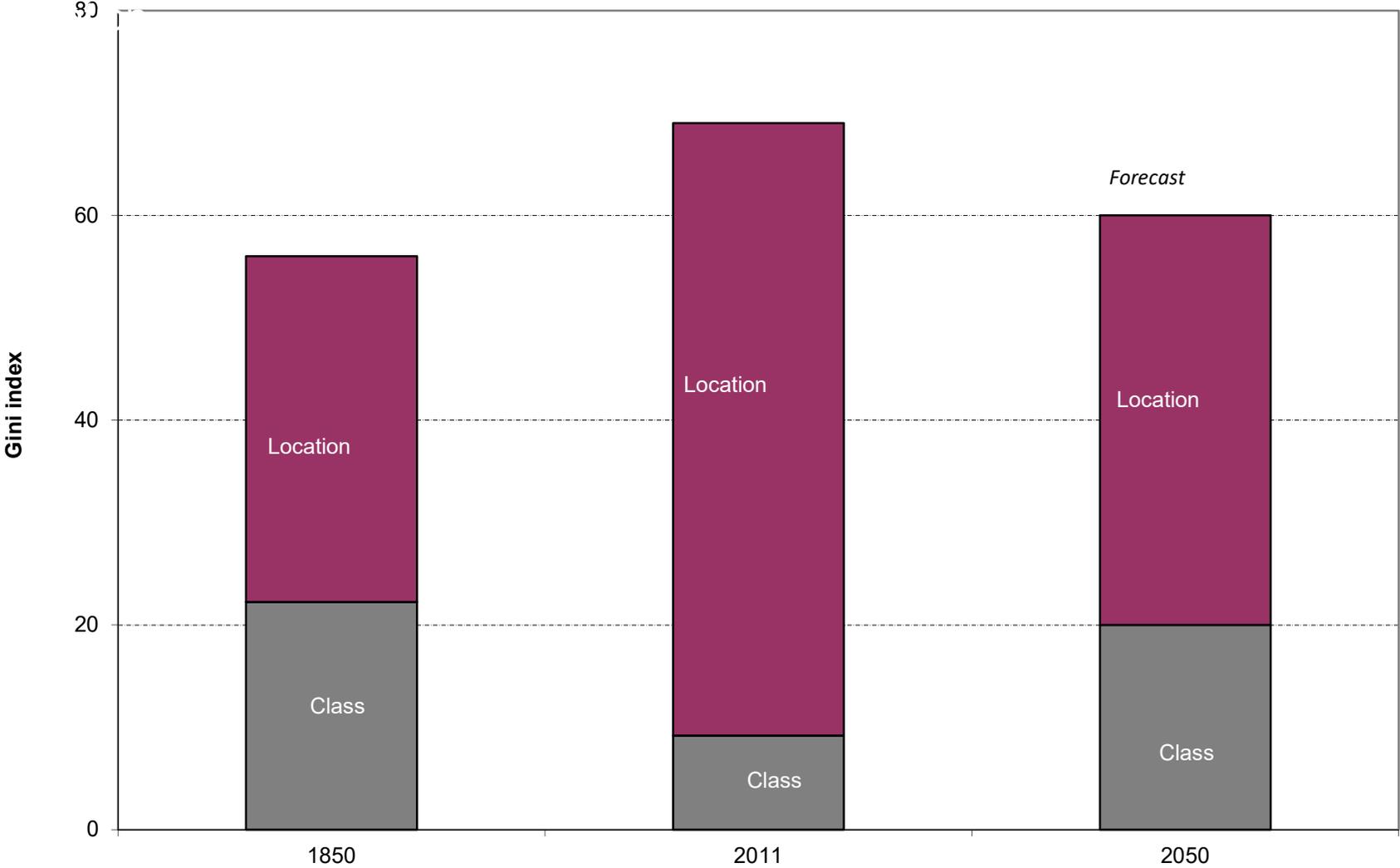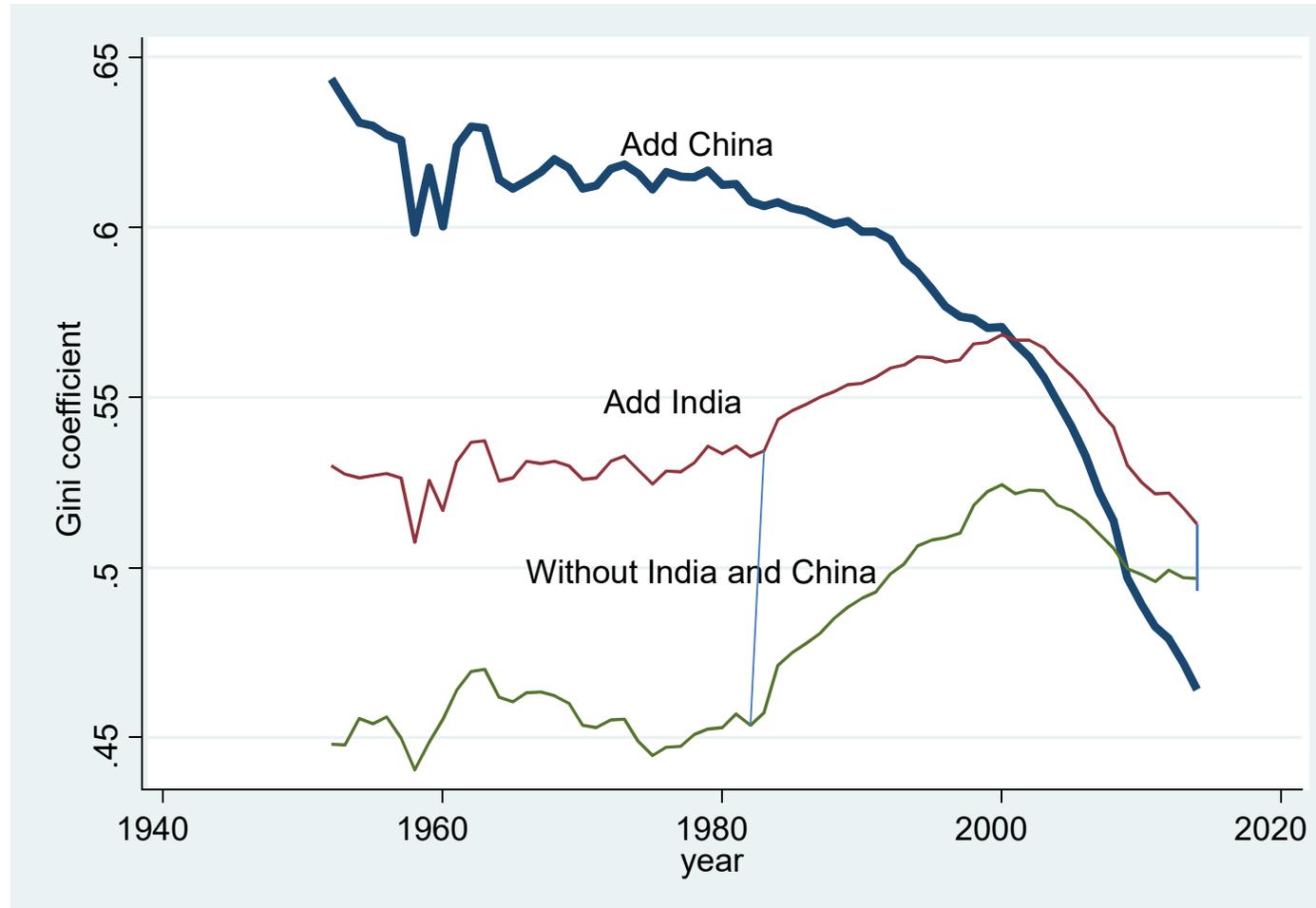

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Global and inter-national inequality 1952-2014
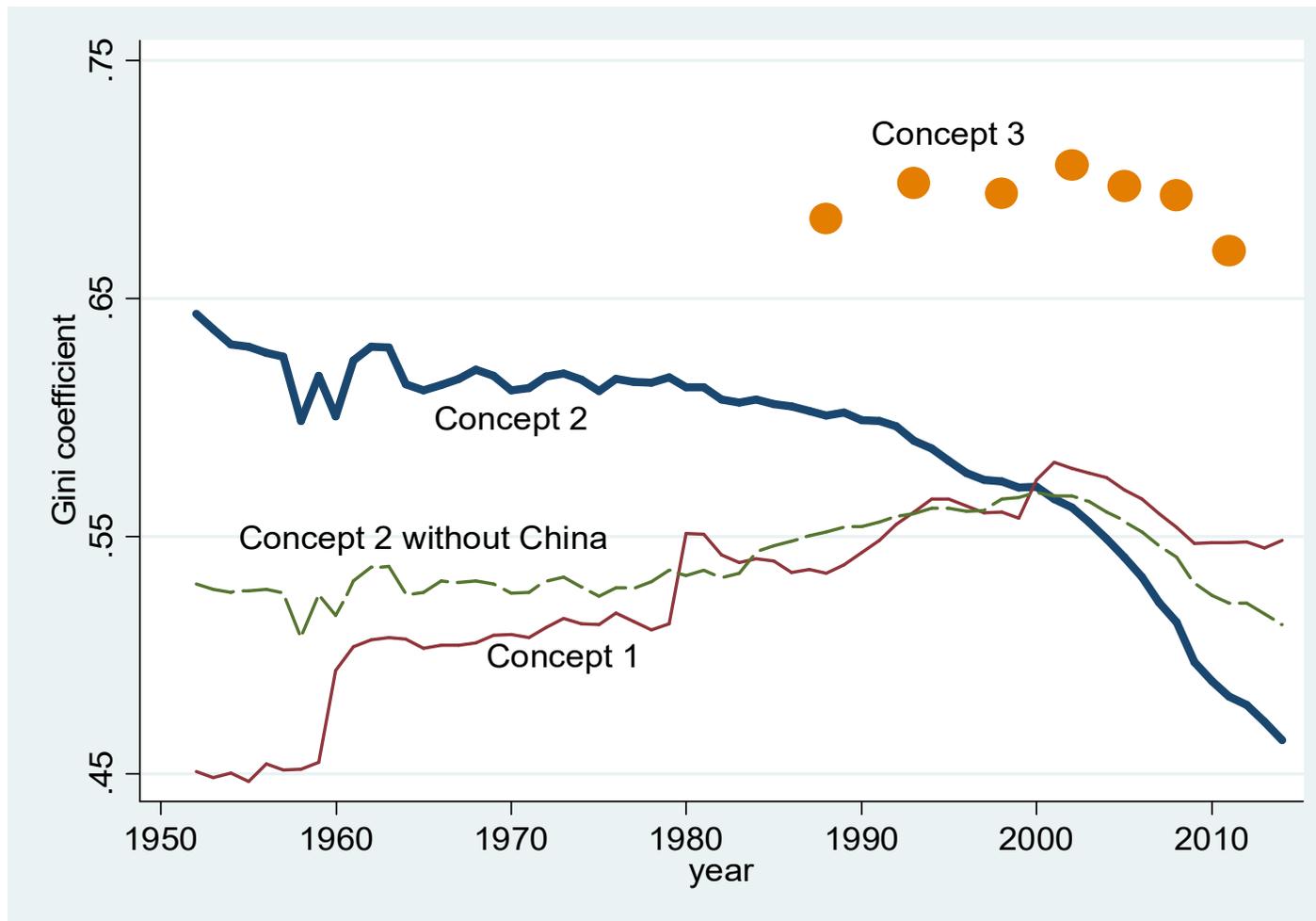
Concept 2 inequality and the role of India and China (using GDPpc in $ppp)

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Change in China's contribution to Concept 2 inequality (three-year moving average)

As China becomes richer moves towards zero

China's inequality reducing effect strongest here
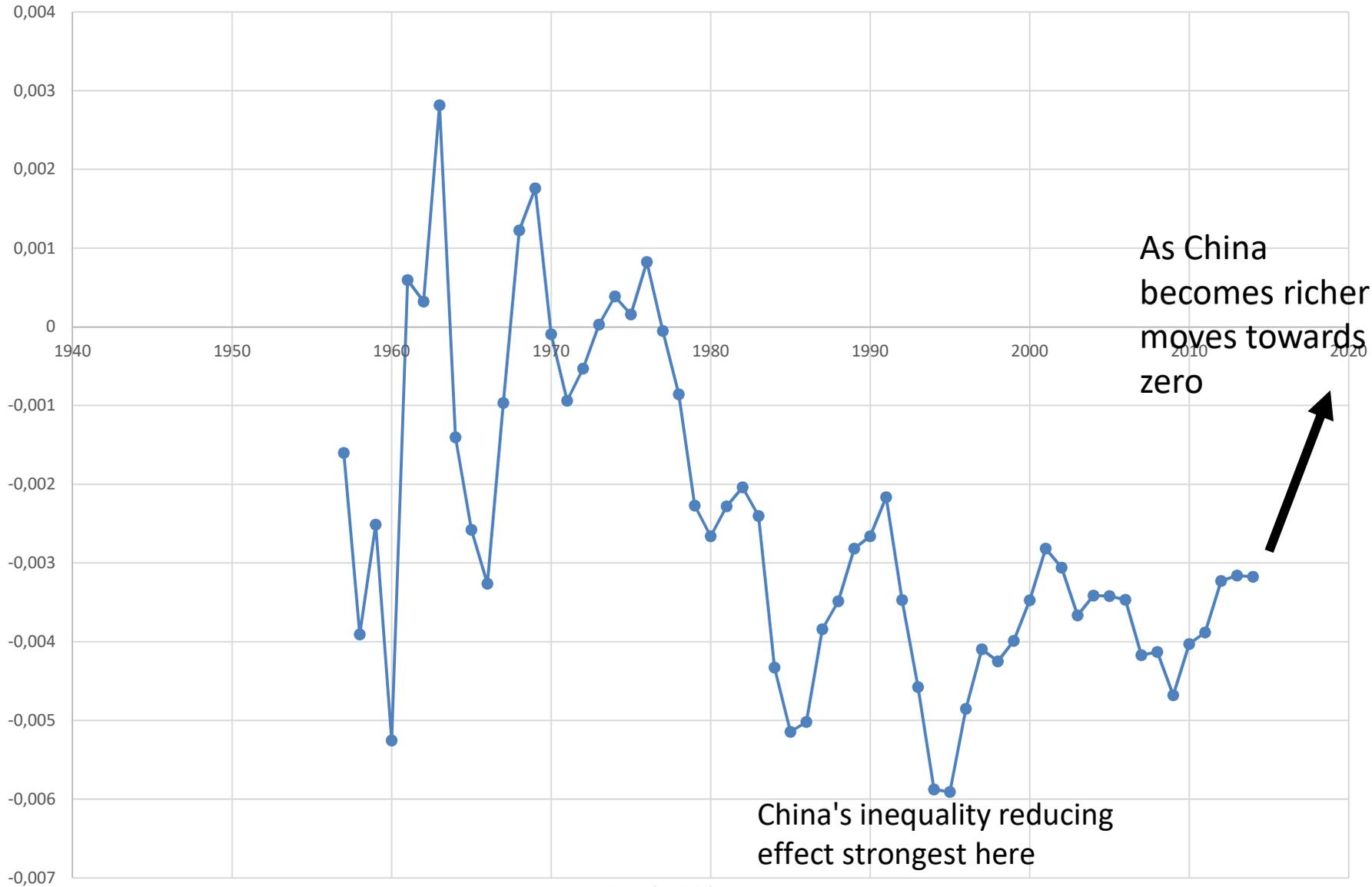
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Essentially, global inequality is determined by three forces

- 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?

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C1. Technical issues in the measurement of global inequality

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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)

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The issue of PPPs

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The effect of the new PPPs on countries' GDP per capita

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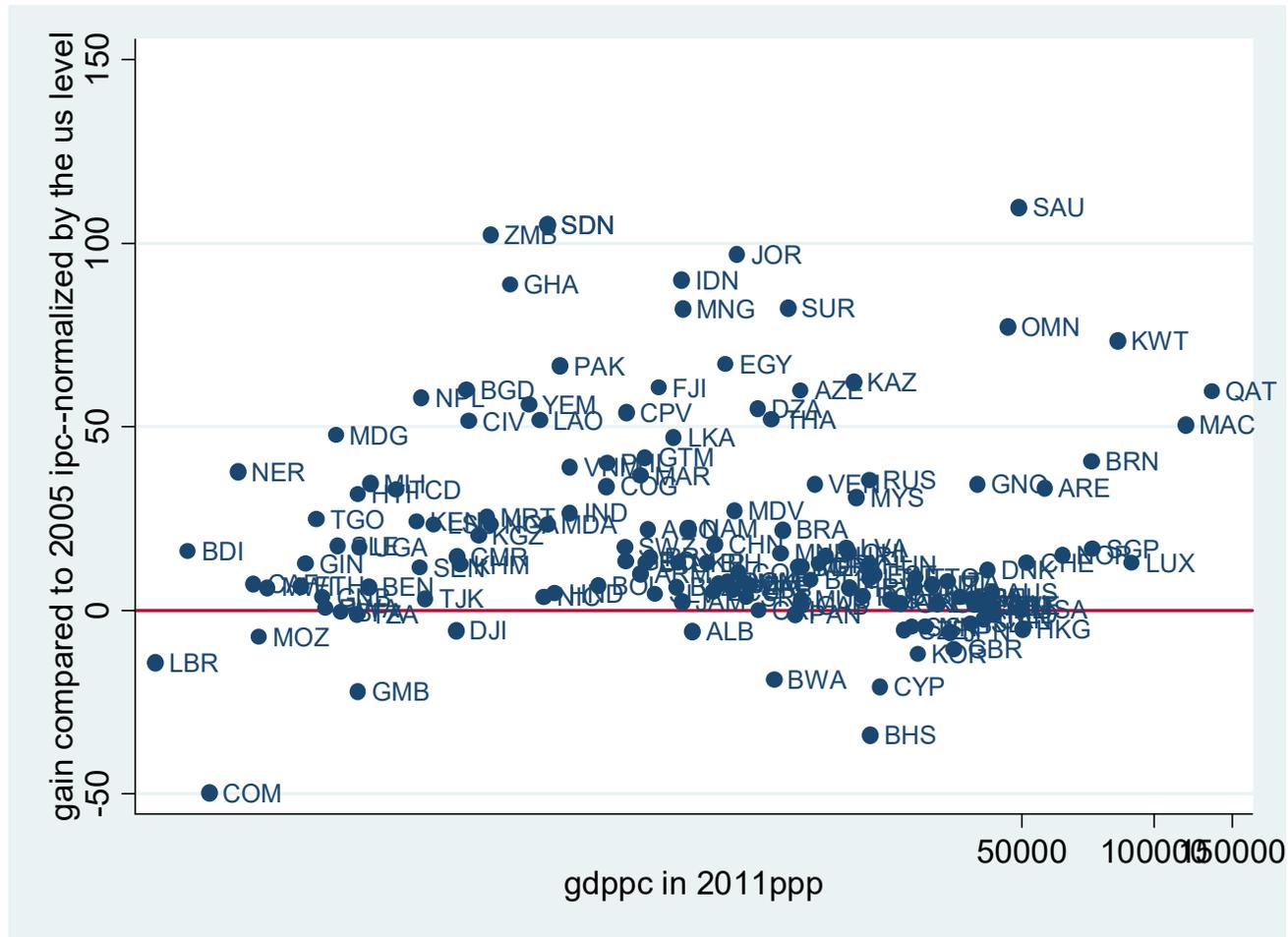
The effect of new PPPs

Country	GDP per capita increase (in %)	GDP per capita increase population-weighted (in %)
Indonesia	90	---
Pakistan	66	---
Russia	35	---
India	26	---
China	17	---
Africa	23	32
Asia	48	33
Latin America	13	17
Eastern Europe	16	24
WENAO	3	2

Use of 2011 PPPs reduces global inequality by about 3 Gini points but leaves the trends the same

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Using summary_data.xls
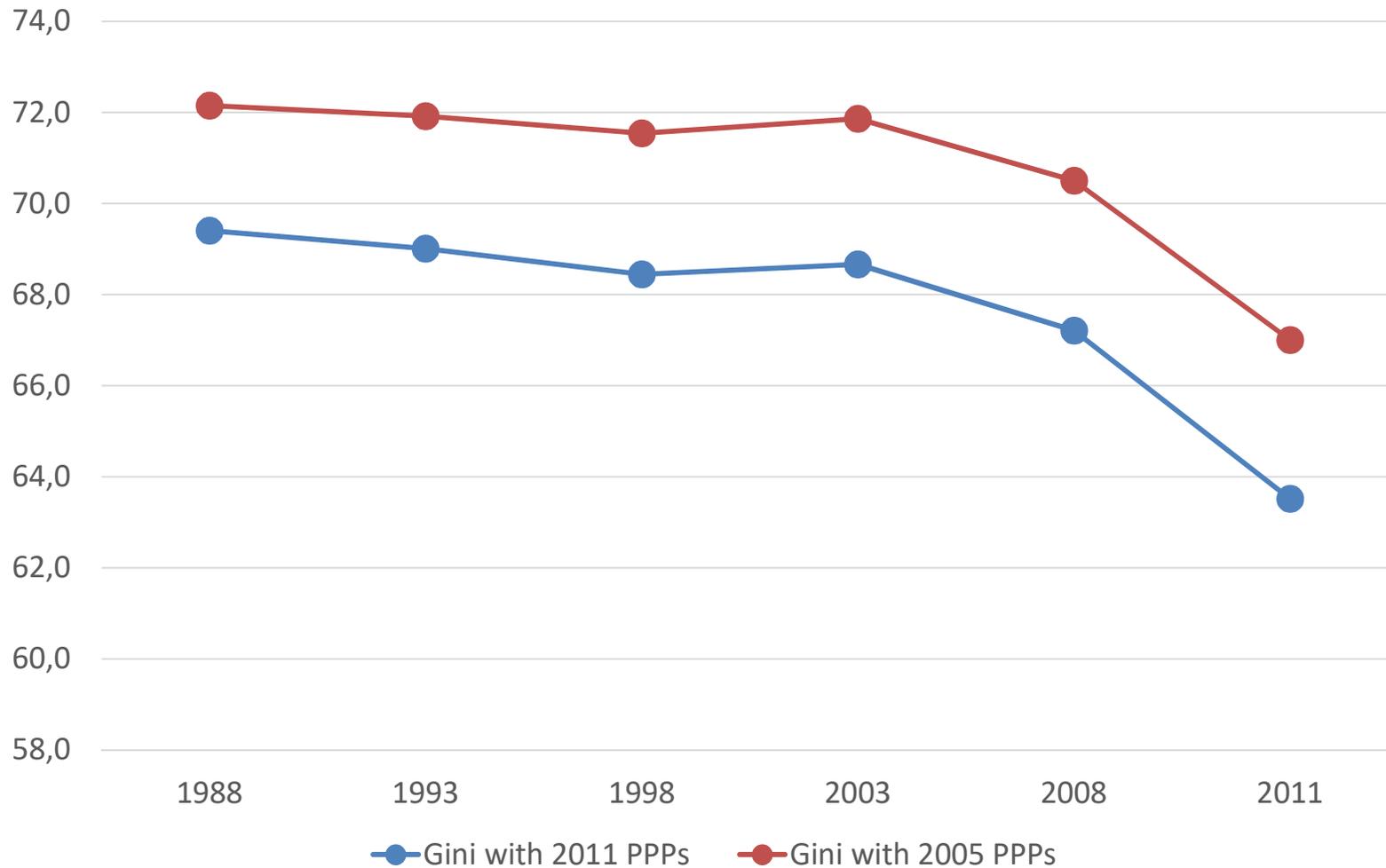
The gap between national accounts and household surveys

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Global Gini with different definitions of income

Summary_data.xls

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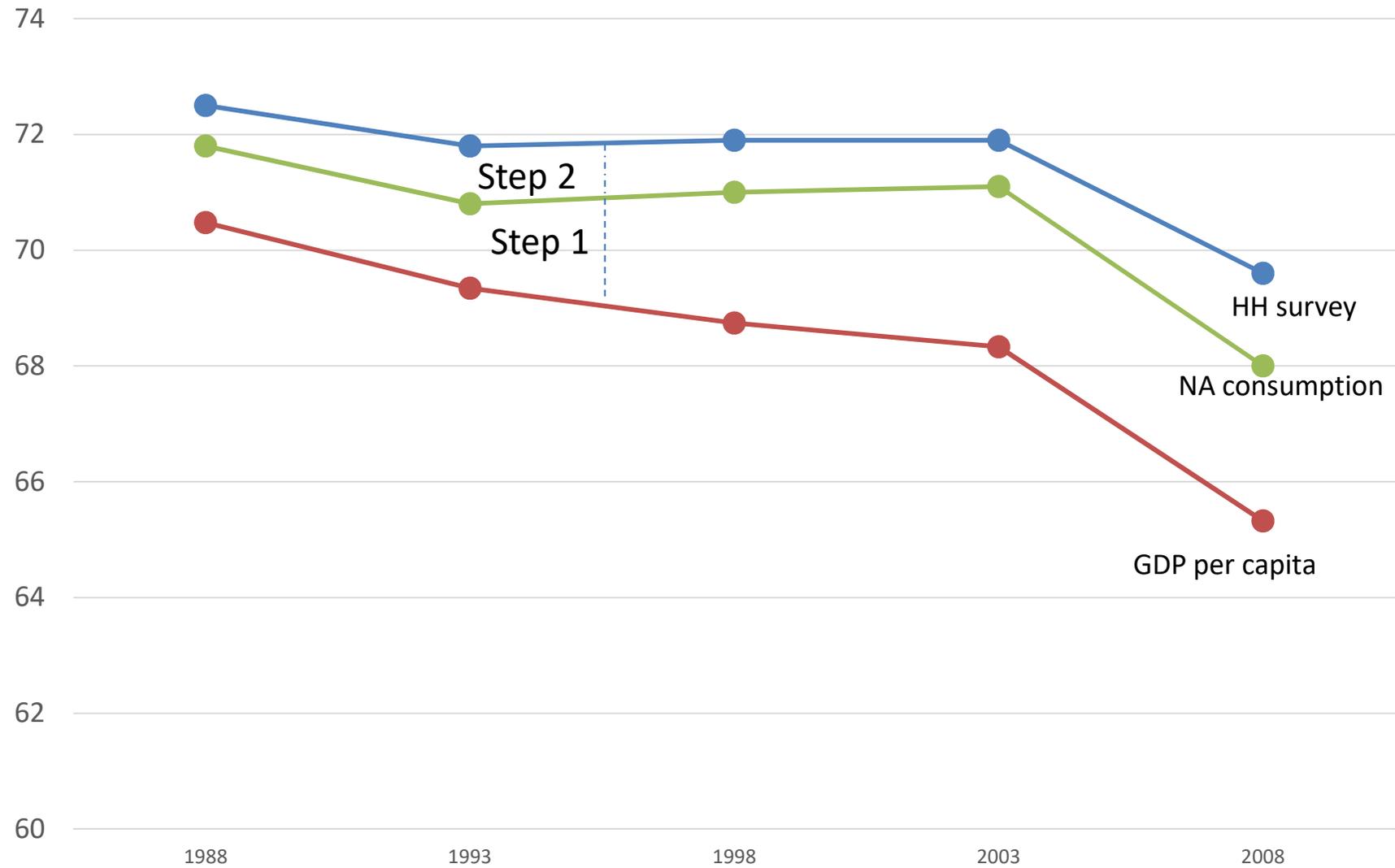
Step 1 driven by low consumption shares in China and India
(although on an unweighted base C/GDP decreases with GDP)

C/GDP from national accounts in year 2008

share of consumption in GDP (y-axis: .2, .4, .6, .8, 1, 1.2)

USA

India

China

GDP per capita in ppp (x-axis: 1000, 10000, 50000)

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Step 2. No clear (weighted) relationship between survey capture and NA consumption
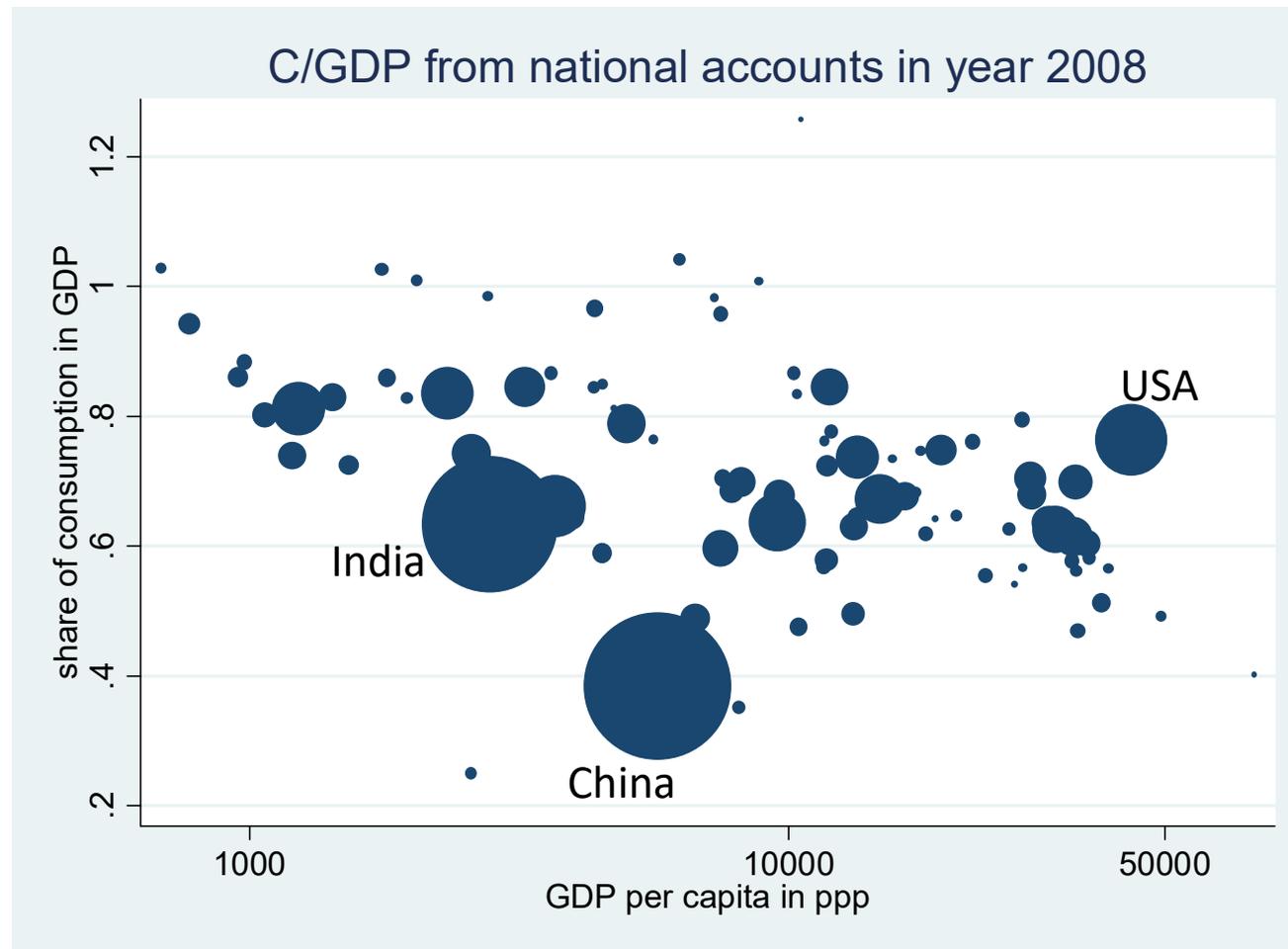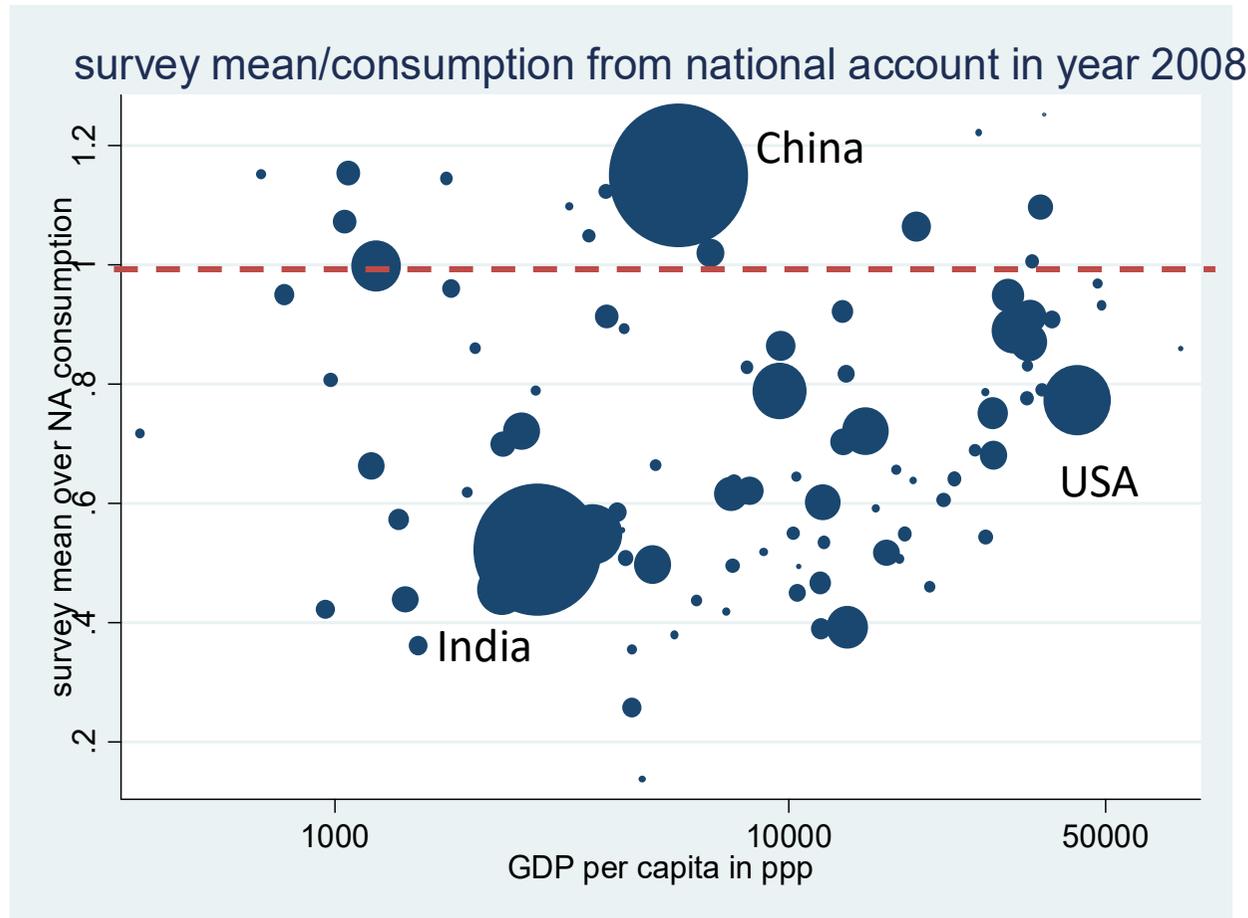
twoway scatter scale2 gdpppp if group==1 & scale2<1.5 [w=totpop], xscale(log) xtitle(GDP per capita in ppp) xlabel(1000 10000 50000) ytitle(survey mean over NA consumption) title(survey mean/consumption from national account in year 2008)

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The issue of top underestimation

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Rising NAC/HS gap and top underestimation

- If these two problems are really just one & the same problem.

- Assign the entire positive (NA consumption – HS mean) gap to national top deciles

- Use Pareto interpolation to "elongate" the distribution

- No *a priori* guarantee that global Gini will increase

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The results of various adjustments

- Replacing HS survey mean with private consumption from NA reduces Gini by 1 to 2 points

- Elongating such a distribution (that is, without changing the consumption mean) adds less than ½ Gini point

- But doing the top-heavy adjustment (NA-HS gap ascribed to top 10% only) adds between 5 and 7 Gini points

- It also almost eliminates the decrease in global Gini between 1988 and 2008

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Gini: accounting for missing top incomes

	1988	1993	1998	2003	2008
Surveys only	72.5	71.8	71.9	71.9	69.6
NAC instead of survey mean	71.5	70.5	70.6	70.7	67.6
NAC with Pareto	71.8	70.8	71.0	71.1	68.0
NAC with top-heavy Pareto	76.3	76.1	77.2	78.1	75.9

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How Global Gini in 2008 changes with different adjustments (baseline=HSs only)

Changes for each "marginal" adjustment

Allocate the gap proportionally along each national income distribution

Allocate the gap proportionately and add a Pareto "elongation"

Allocate the gap to top 10% and add Pareto "elongation"

Summary_data.xls
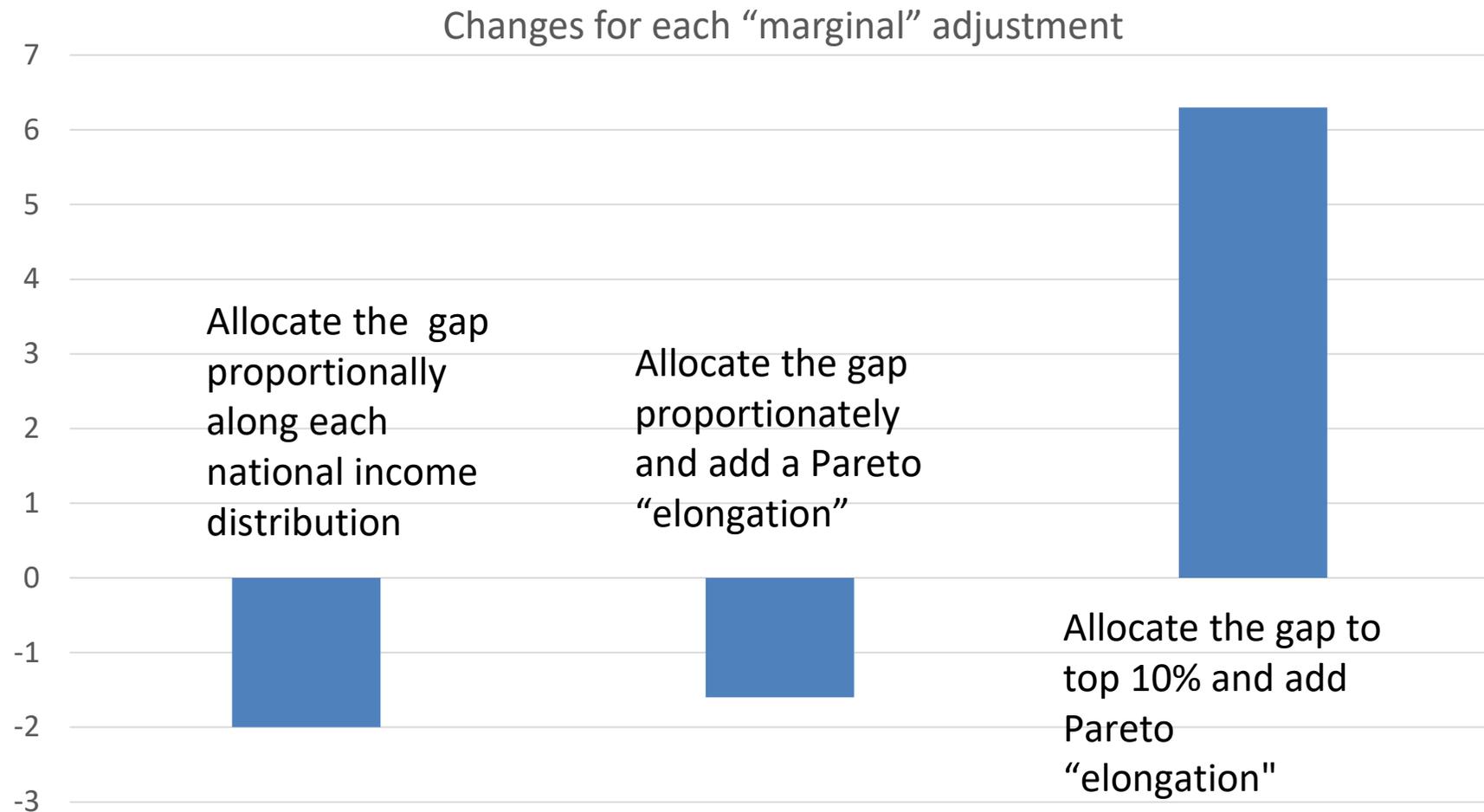
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With full adjustment (allocation to the top 10% + Pareto) Gini decline **almost vanishes**

Top-heavy allocation of the gap + Pareto adjustment

Survey data only

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Summary_data.xls
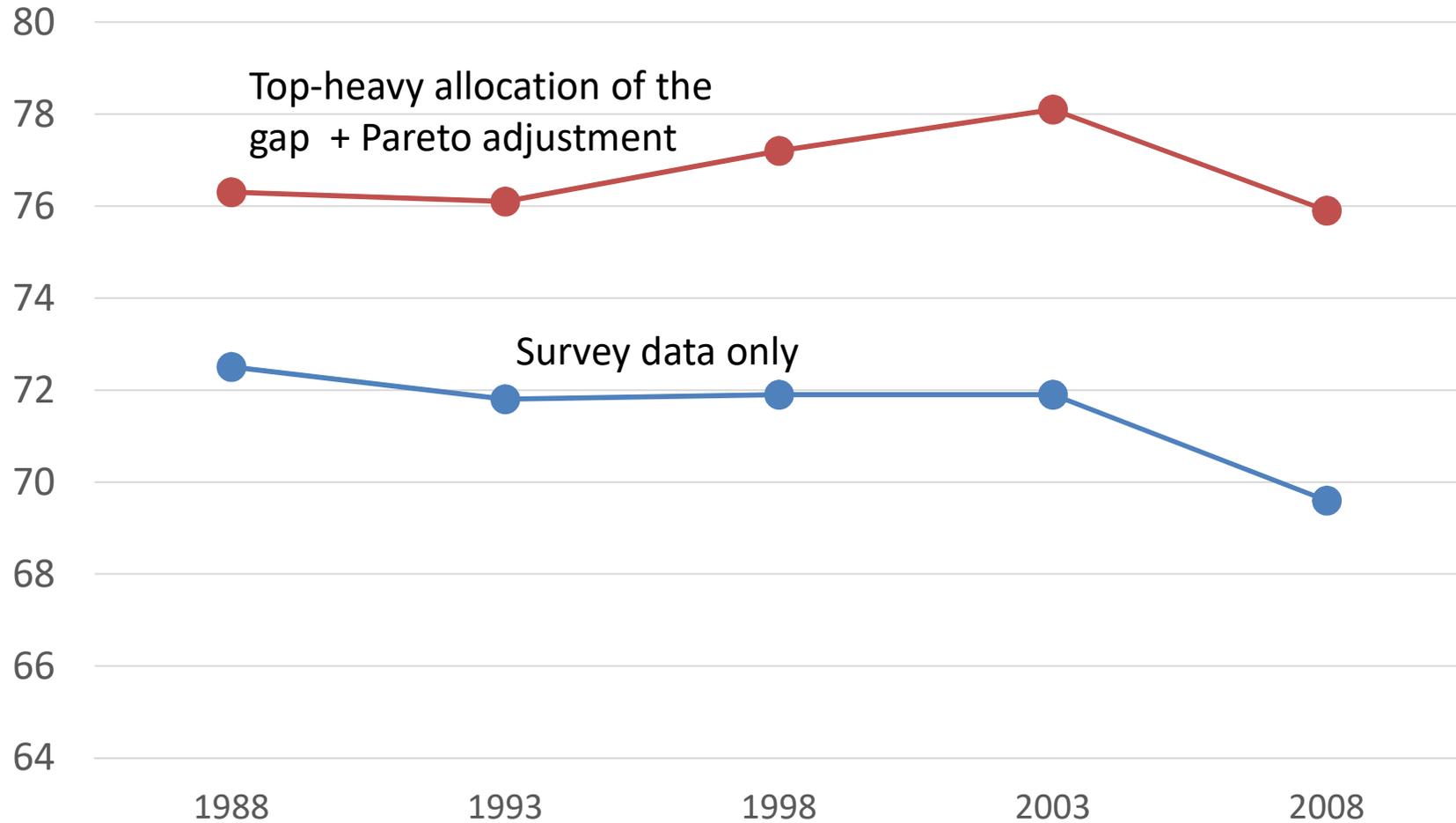
C2. How has the world changed between the fall of the Berlin Wall and the Great Recession

[based on joint work with Christoph Lakner]

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Number of surveys

	1988	1993	1998	2002	2005	2008	2011
Africa	14	30	24	29	32	23	29
Asia	19	26	28	26	23	27	22
E.Europe	27	22	27	25	27	27	24
LAC	19	20	22	21	18	18	18
WENAO	23	23	21	21	22	23	20
World	102	121	122	122	122	118	113

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Population coverage

|	1988	1993	1998	2002	2005	2008	2011
Africa	48	76	67	77	78	78	70
Asia	93	95	94	96	94	98	96
E.Europe	99	95	100	97	93	92	87
LAC	87	92	93	96	96	97	97
WENAO	92	95	97	99	99	97	96
World	87	92	92	94	93	94	92

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

GDI (US dollar) coverage

	1988	1993	1998	2002	2005	2008	2011
Africa	49	85	71	71	70	71	63
Asia	94	93	96	95	90	93	83
E. Europe	99	96	100	99	99	98	94
LAC	90	93	95	95	98	98	94
WENAO	99	96	96	100	100	97	95
World	96	95	96	98	97	95	90

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Global income distribution in 2011 with 2011 PPPs
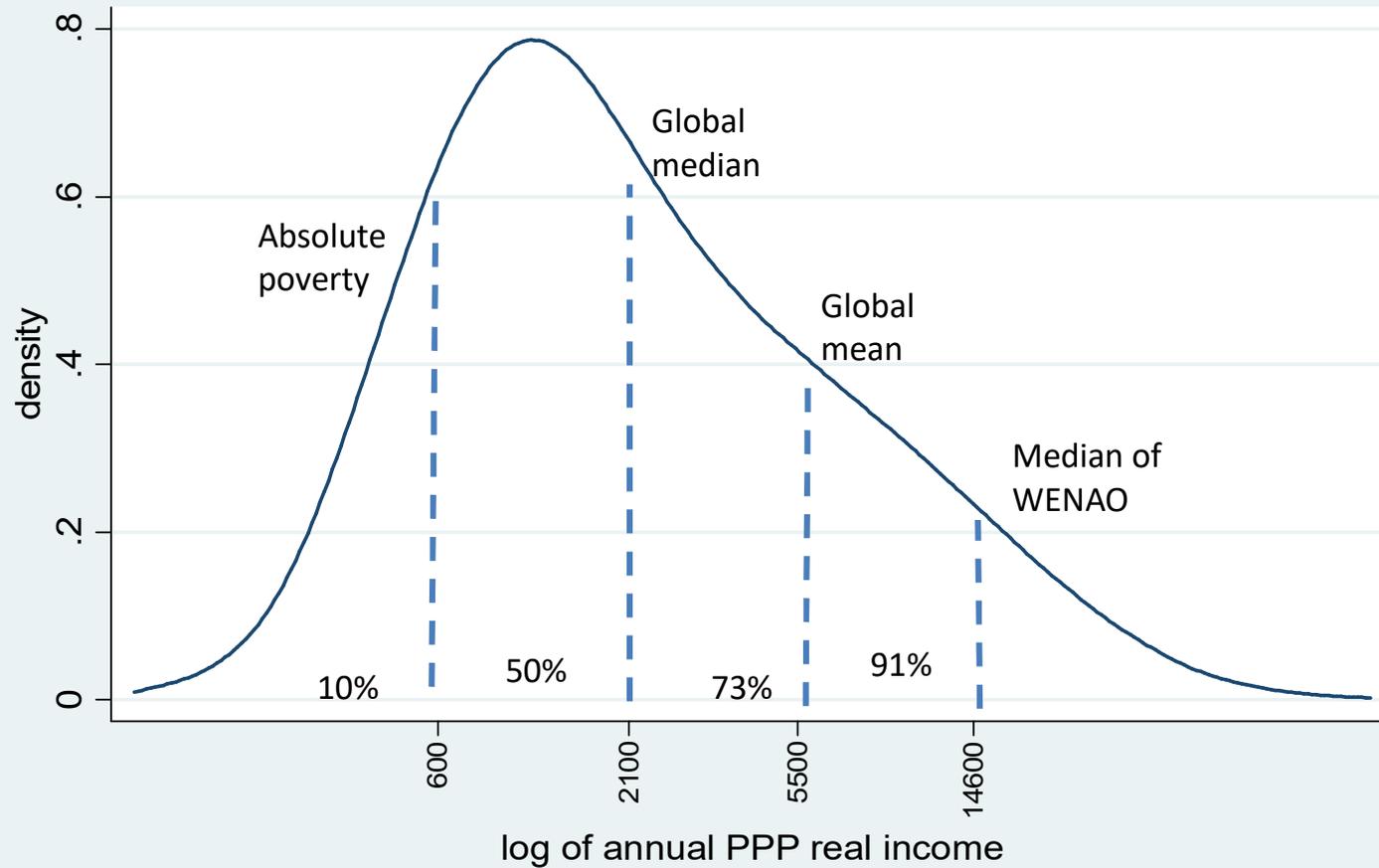
twoway (kdensity loginc_11_11 [w=popu] if loginc_11_11>2 & bin_year==2011, bwidth(0.2)) , legend(off) title(Global income distribution in 2011 with 2011 PPPs)
xtitle(log of annual PPP real income) ytitle(density) xlabel(2.8"600" 3.3"2100" 3.74"5500"   4.2"14600", labsize(small) angle(90))
Using combine88_11.dta

Real income growth at various percentiles of global income distribution, 1988-2008 (in 2005 PPPs)
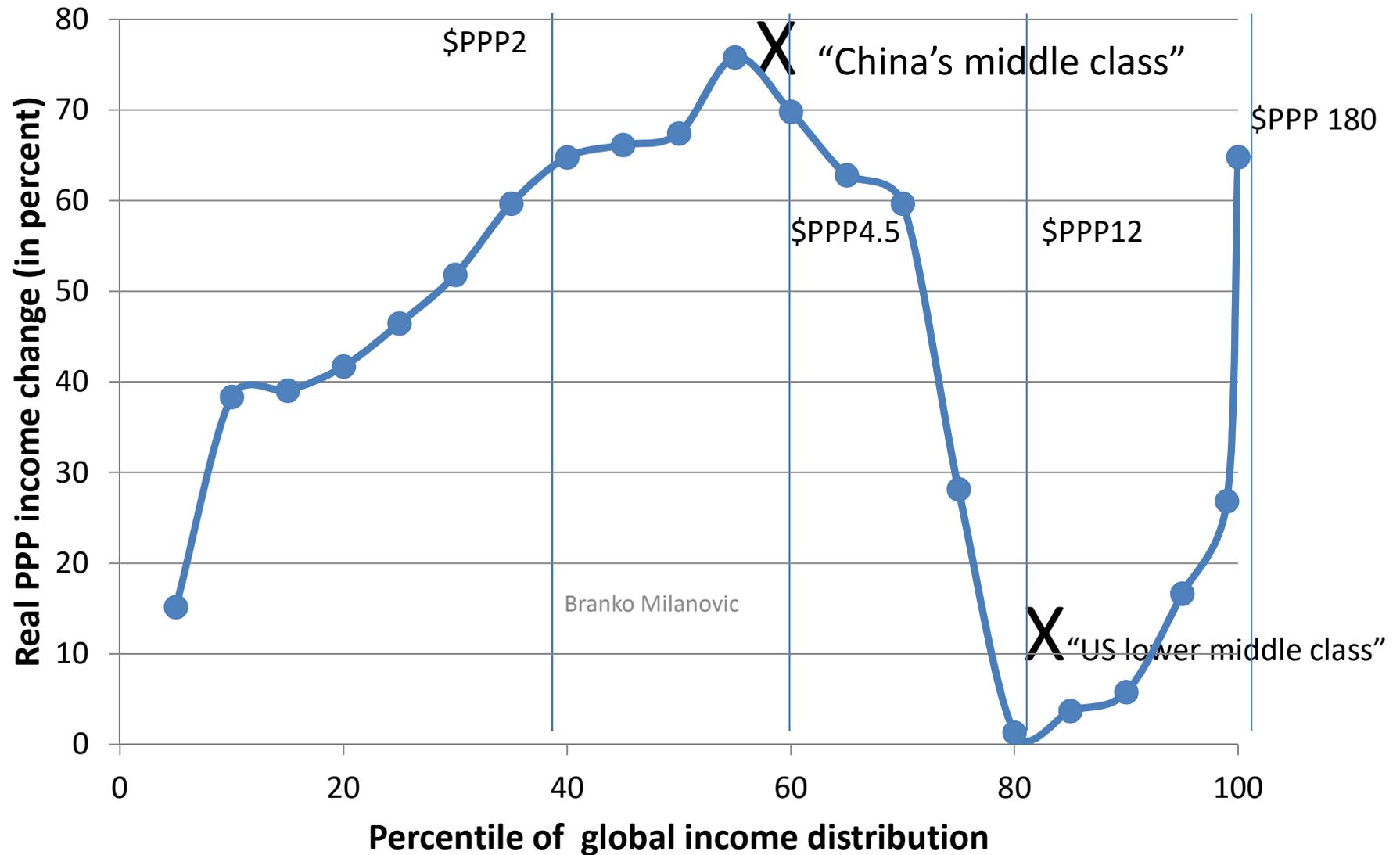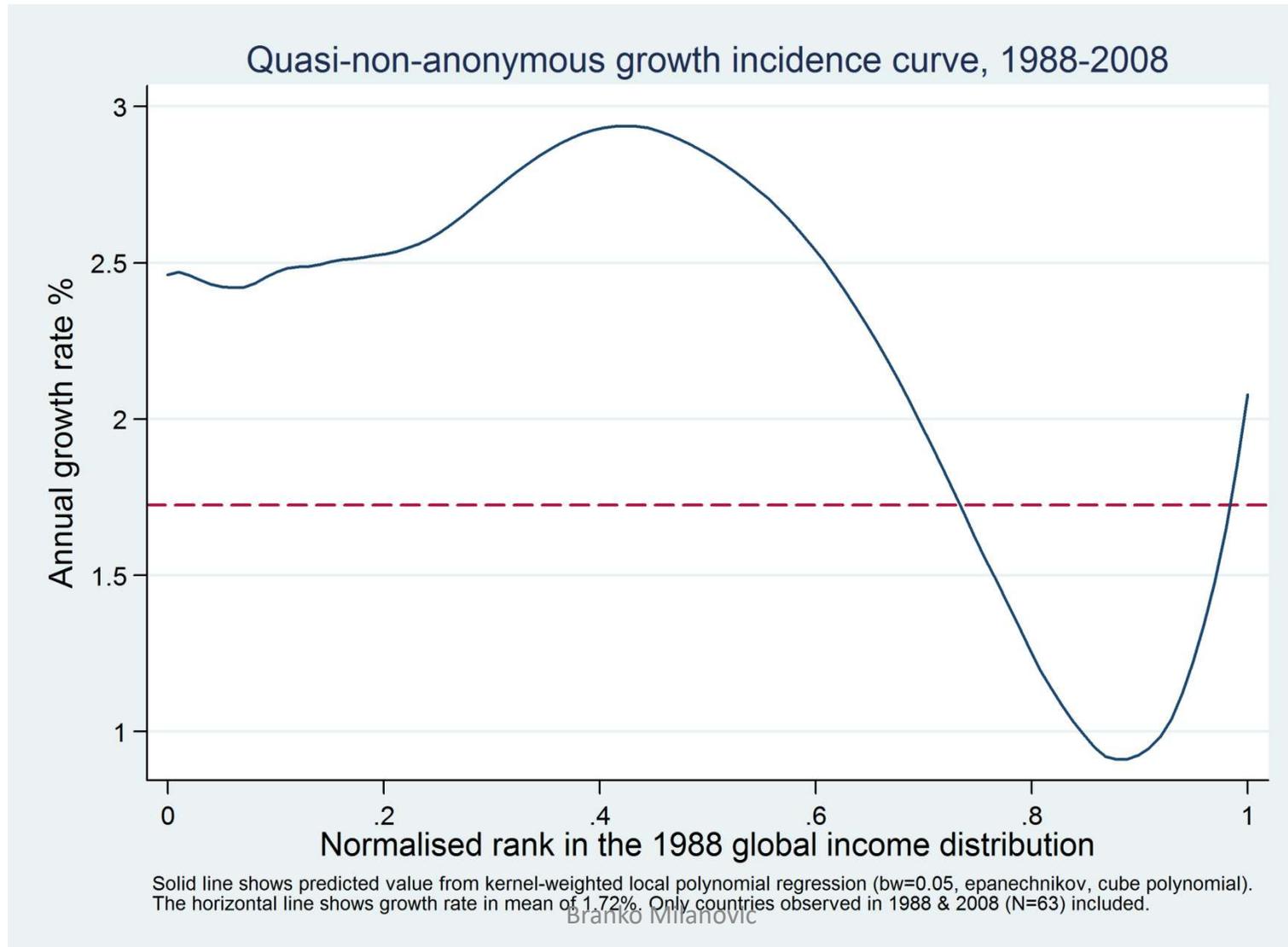
Why we do it? Political implications

- 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
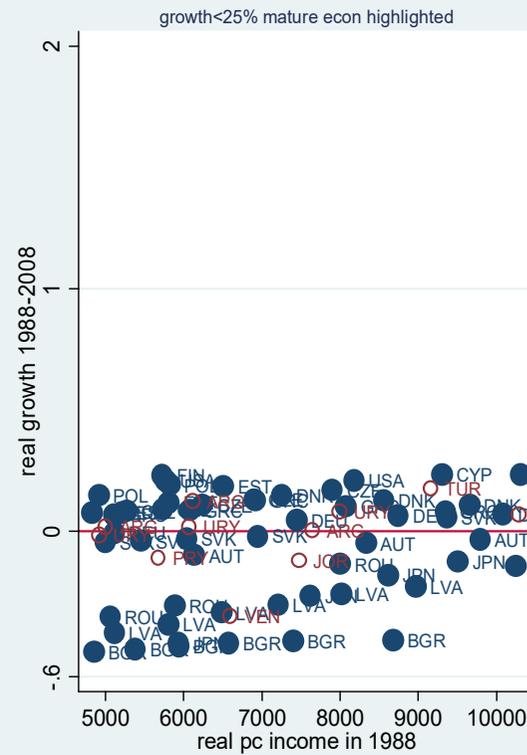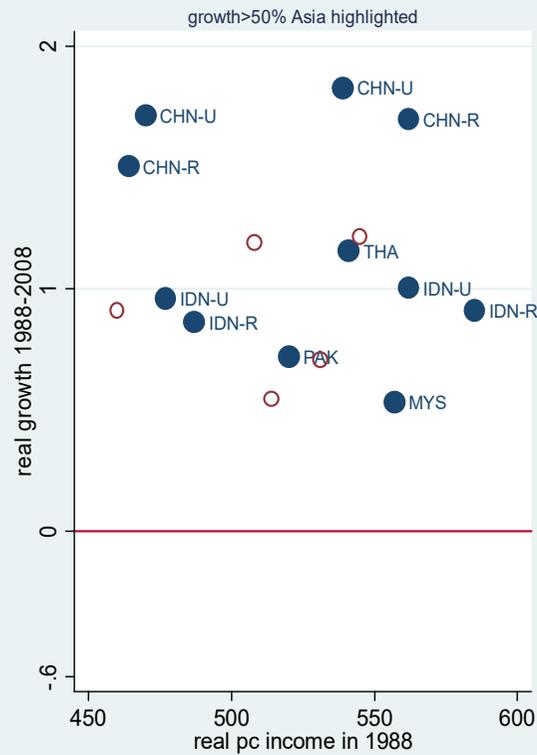- Point C, of global plutocracy

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Global growth incidence curve, 1988-2008 (by percentile)

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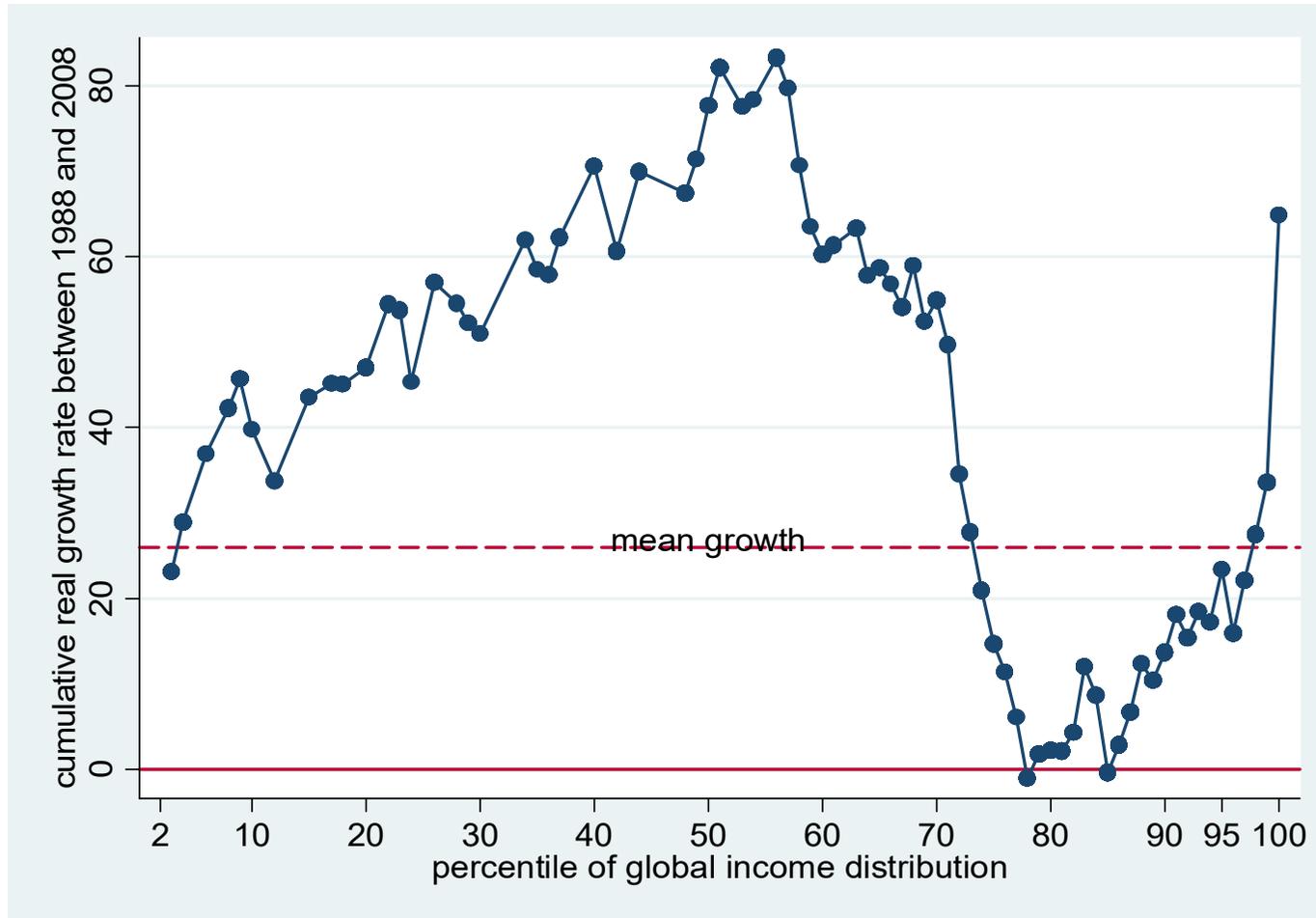
Quasi non-anonymous GIC: Average growth rate 1988-2008 for different percentiles of the **1988** global income distribution

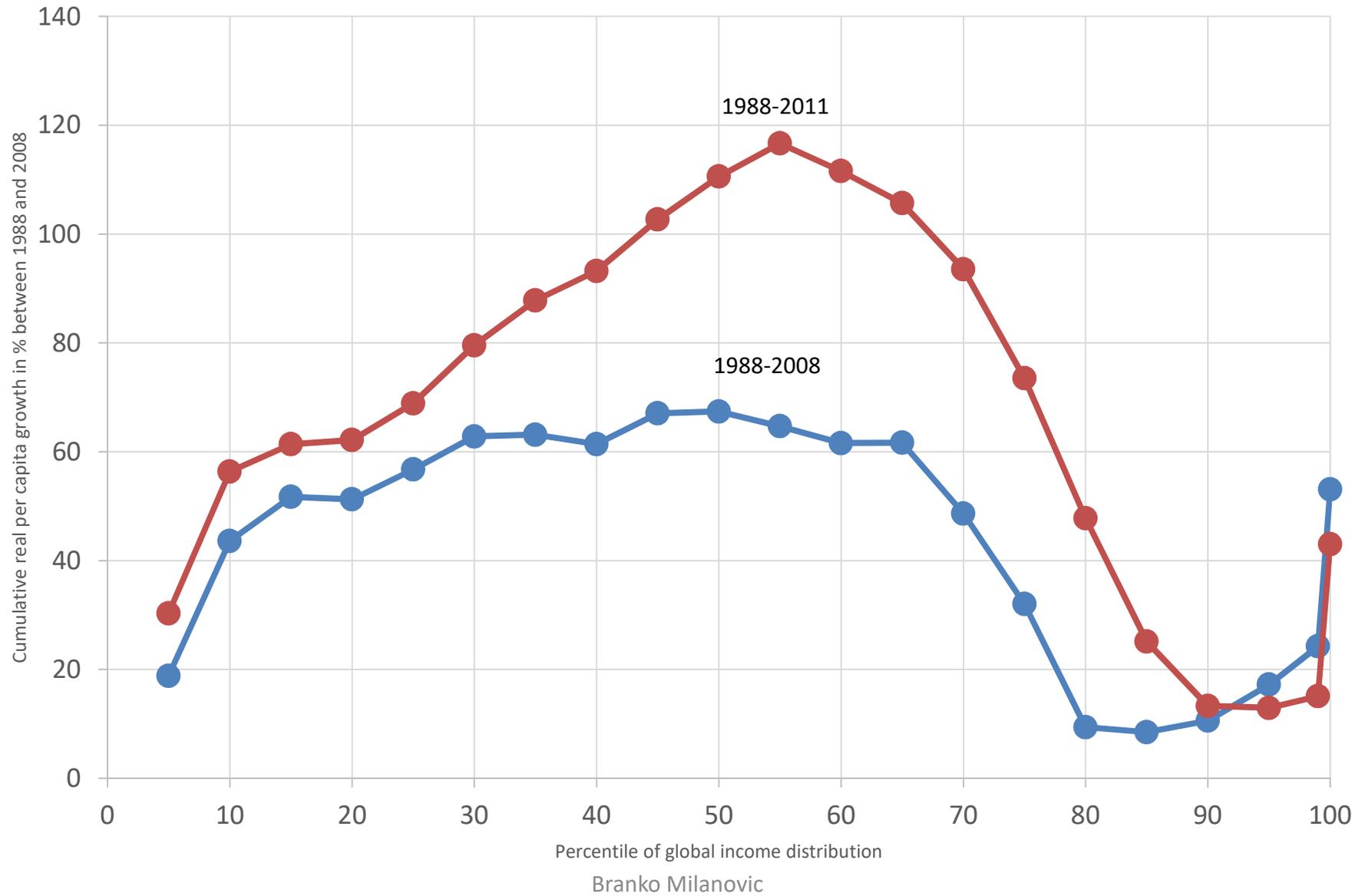Quasi-non-anonymous growth incidence curve, 1988-2008

Solid line shows predicted value from kernel-weighted local polynomial regression (bw=0.05, epanechnikov, cube polynomial). The horizontal line shows growth rate in mean of 1.72%. Only countries observed in 1988 & 2008 (N=63) included.

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Best and worst performing parts of the 1988 distribution

growth>50% Asia highlighted

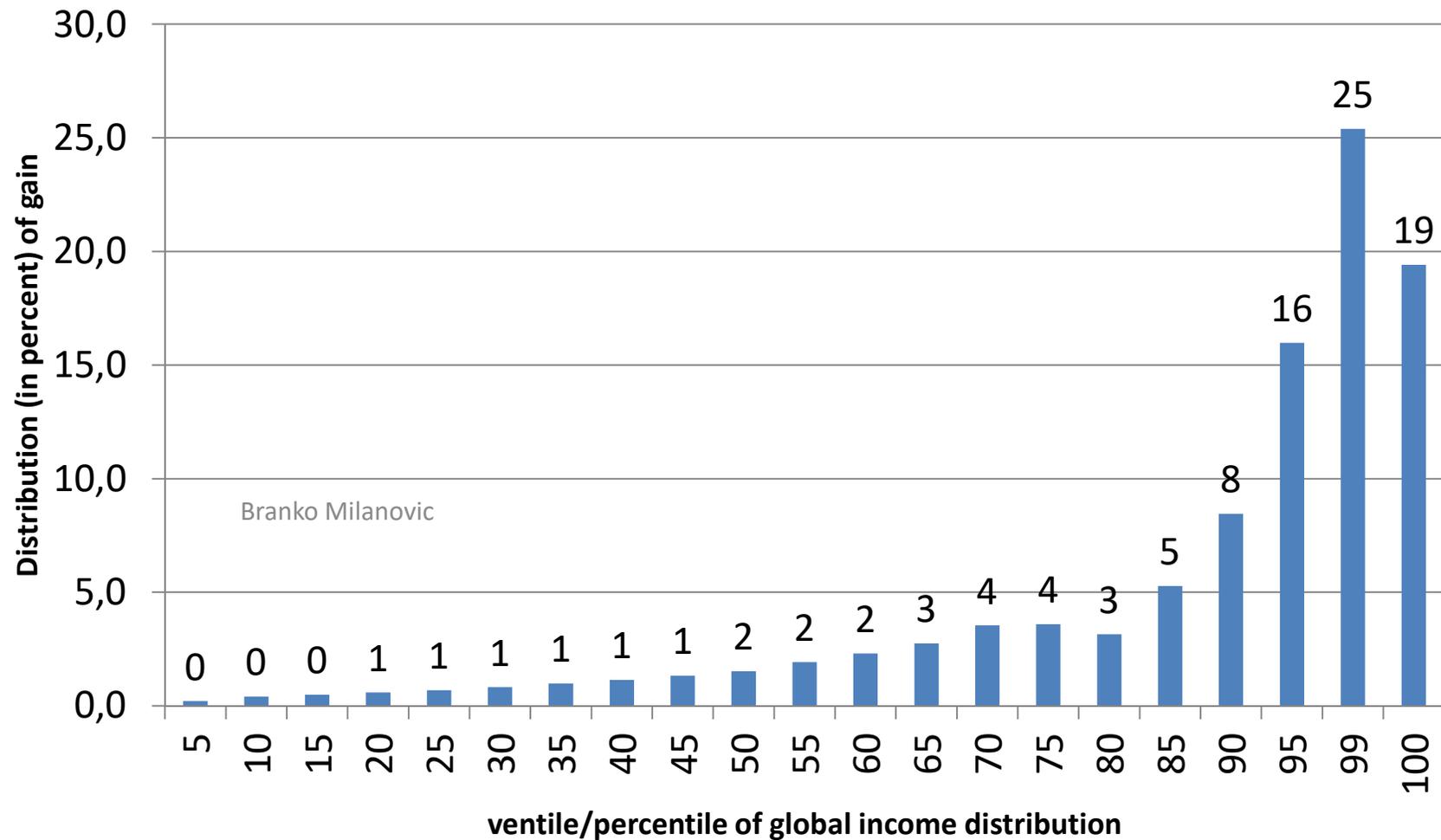growth<25% mature econ highlighted

From my_graphs.do

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Real income growth over 1988-2008 and 1988-2011 (based on 2011 PPPs)
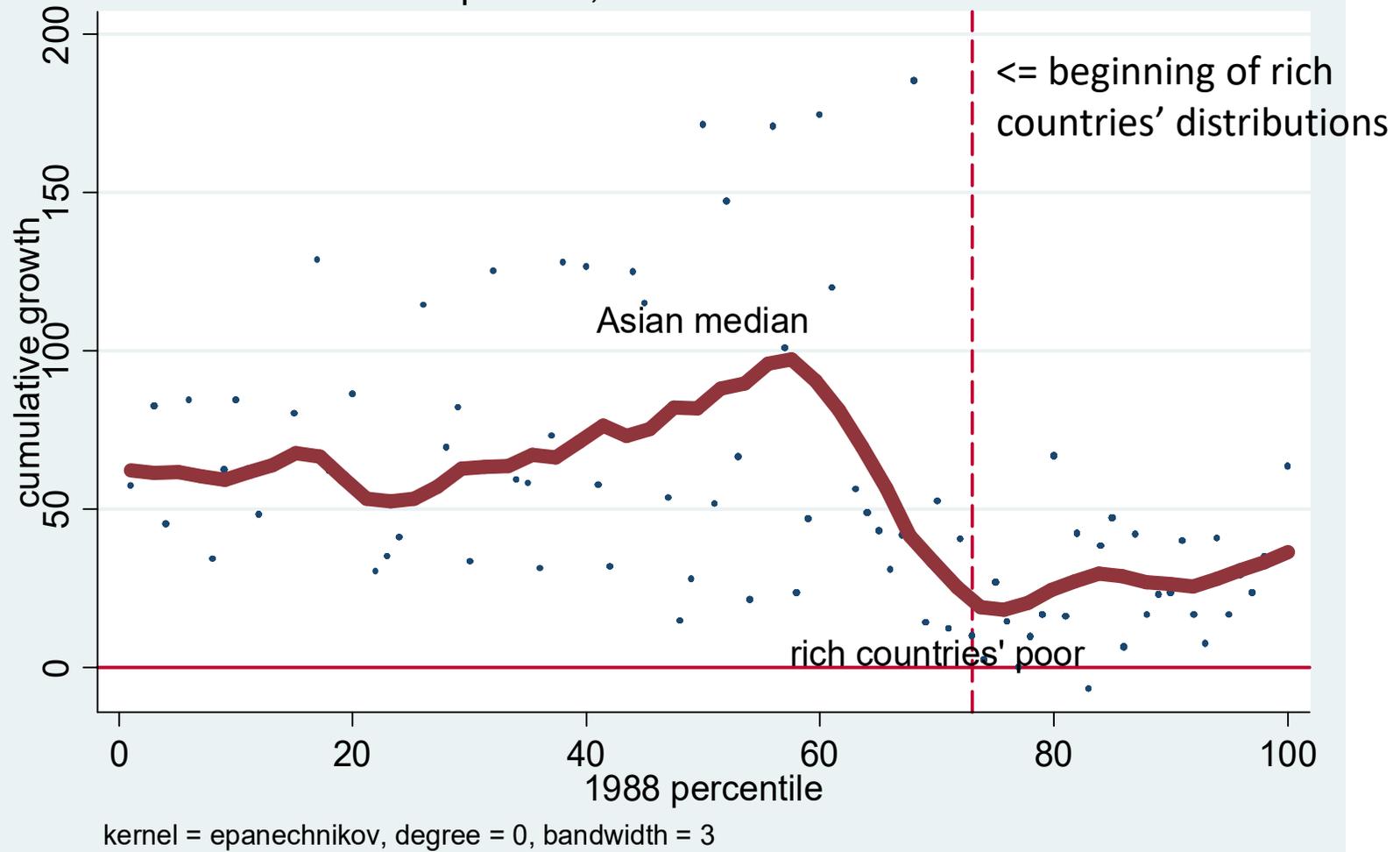
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Relative gains strongest among the middle of global distribution, but absolute gains strongest among the top

**Distribution of global absolute gains in income, 1988-2008**
(anonymous)

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From summary_data.xls

Cumulative quasi non-anonymous rate of growth 1988-2008

in percent; Lakner-MIlanovic data

Key_variables_calcul2.do using final_complete7_1.dta

Cumulative quasi non-anonymous rate of growth 1970-1992
in percent; Bourguignon-Morrisson data

kernel = epanechnikov, degree = 0, bandwidth = .8

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Nonanom_growth.do usinf b_mdata.dta in data_central
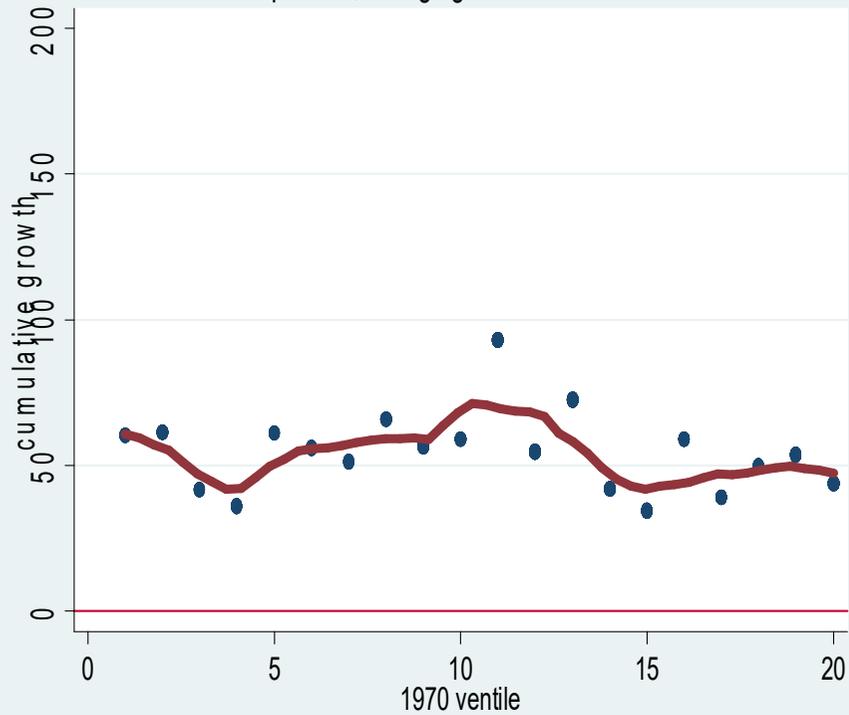
Cumulative quasi non-anonymous rate of growth 1970-1992

in percent; Bourguignon-Morrisson data
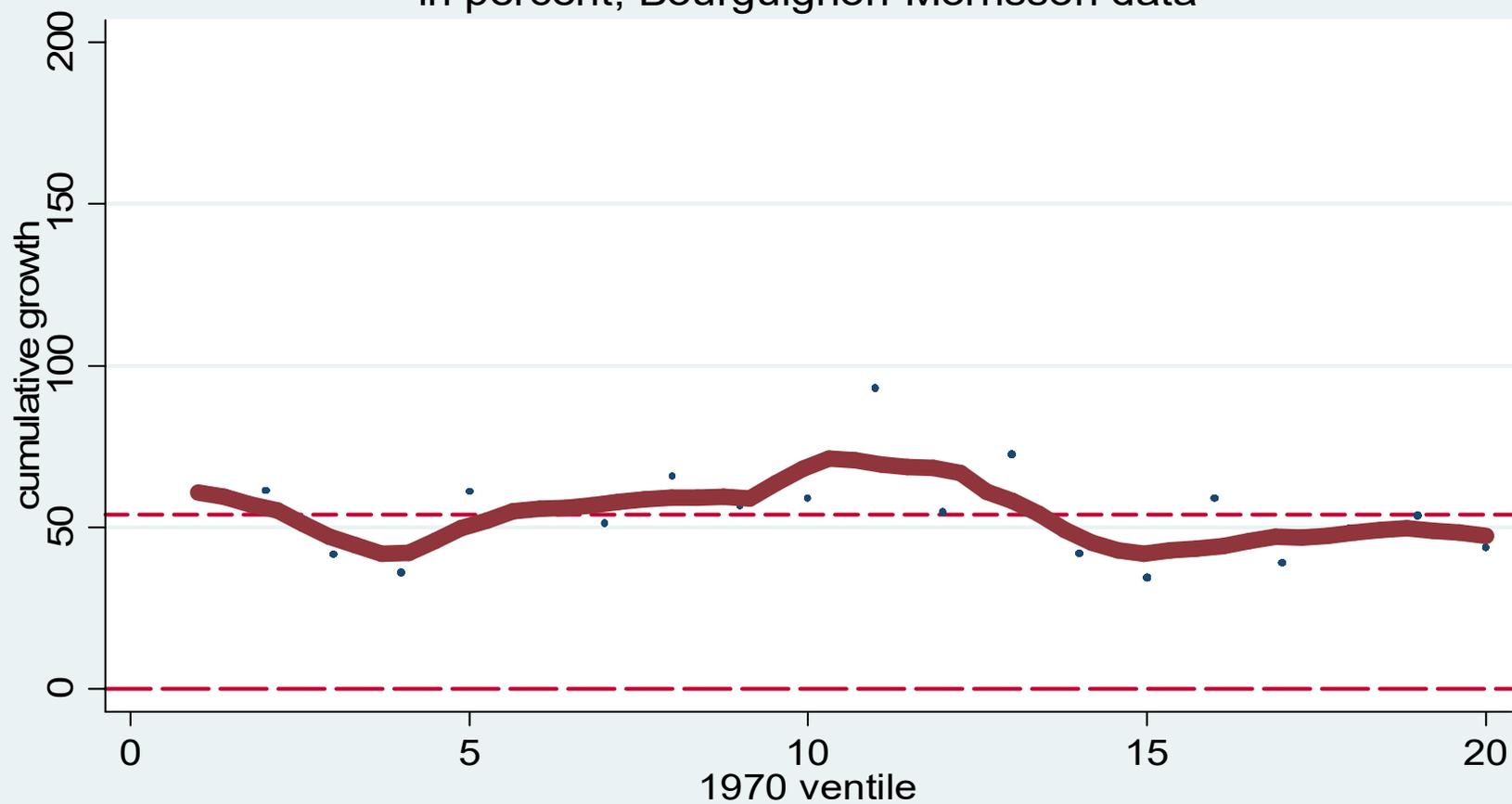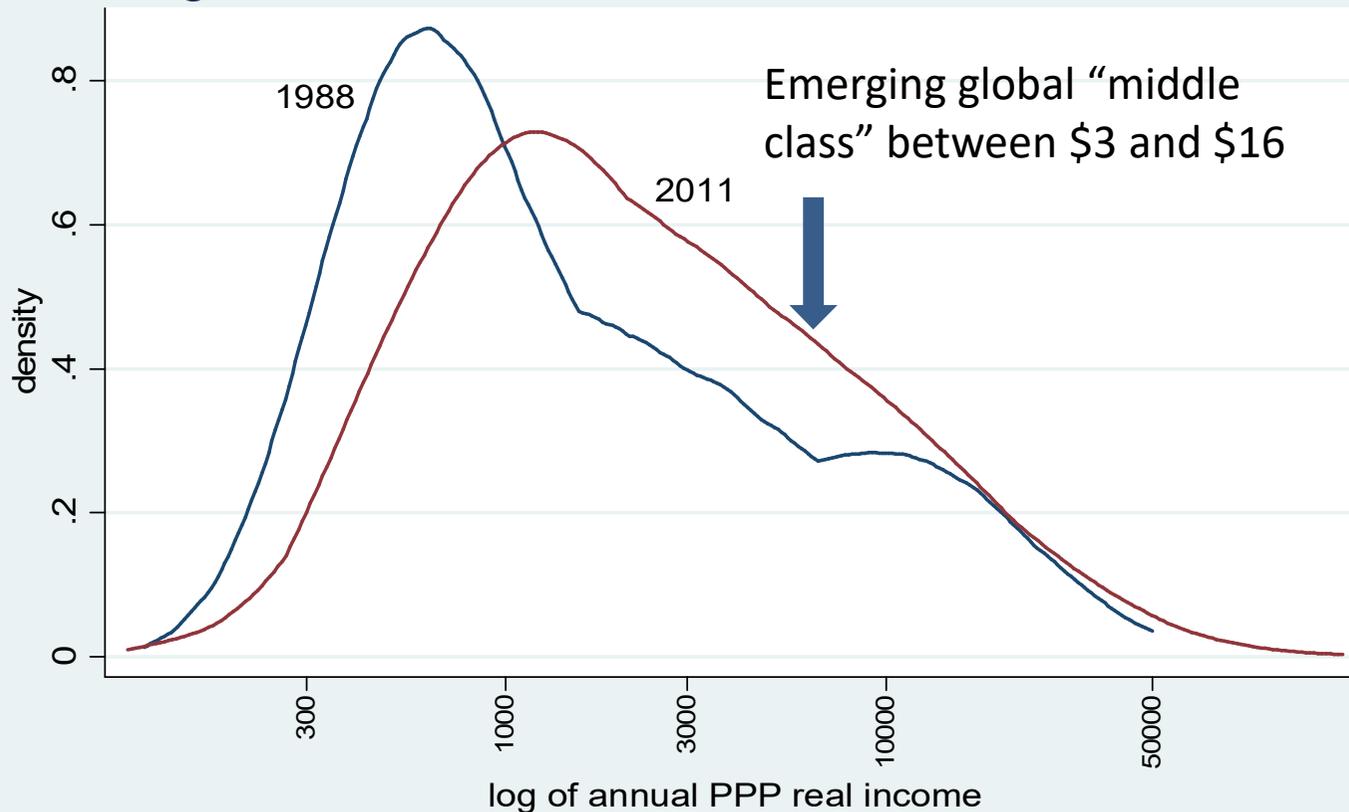
kernel = epanechnikov, degree = 0, bandwidth = .8

Cumulative quasi non-anonymous rate of growth 1988-2008

in percent; Lakner-MIlanovic data

Asian median

rich countries' poor
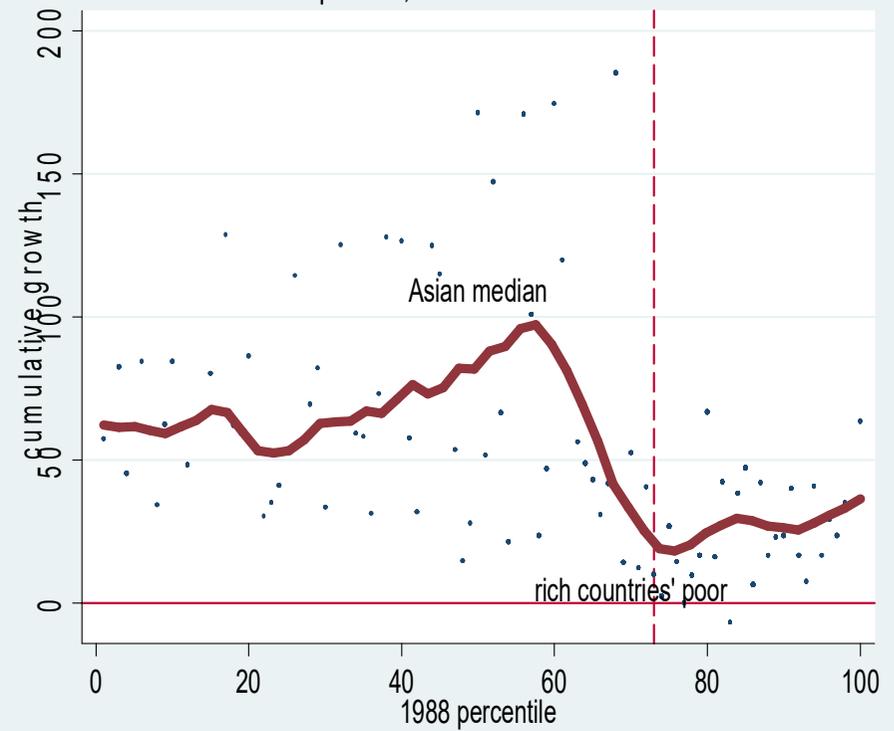
kernel = epanechnikov, degree = 0, bandwidth = 3

Global income distributions in 1988 and 2011

Figure 3. Global income dstribution in 1988 and 2011

twoway (kdensity loginc_11_11 [w=popu] if loginc_11_11>2 & bin_year==1988, bwidth(0.14) title("Figure 3. Global income distribution in 1988 and 2011"))
(kdensity loginc_11_11 [w=popu] if loginc_11_11>2 & bin_year==2011, bwidth(0.2)) , legend(off) xtitle(log of annual PPP real income) ytitle(density) text(0.78 2.5
"1988") text(0.65 3.5 "2011") xlabel(2.477"300" 3"1000" 3.477"3000" 4"10000" 4.699"50000", labsize(small) angle(90))
Using Branko\Income_inequality\final11\combine88_08_11_new.dta

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

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Income share of the middle four deciles 1980-2013
in percent

USA

UK

Germany

Canada
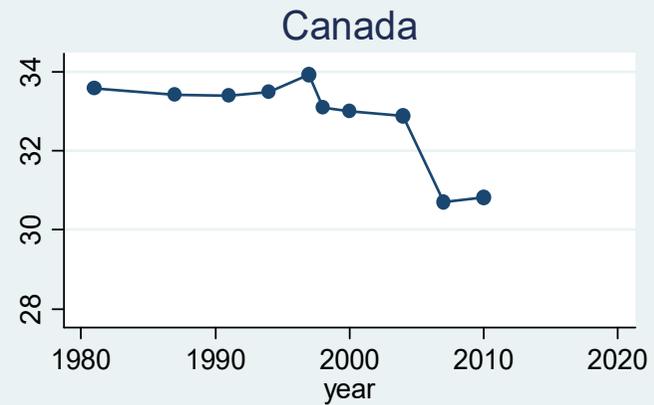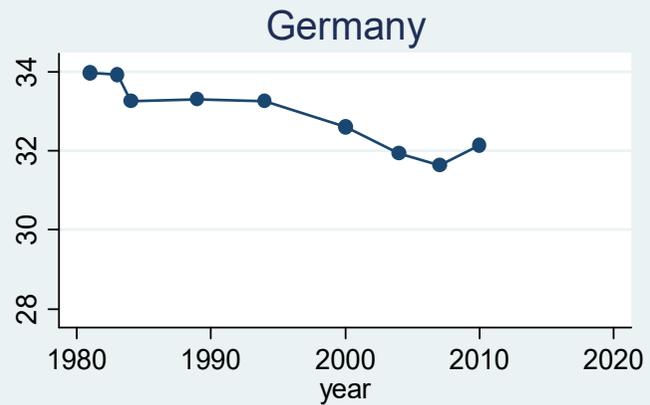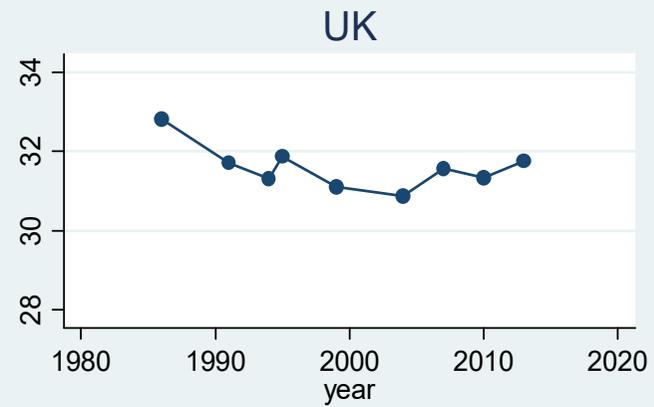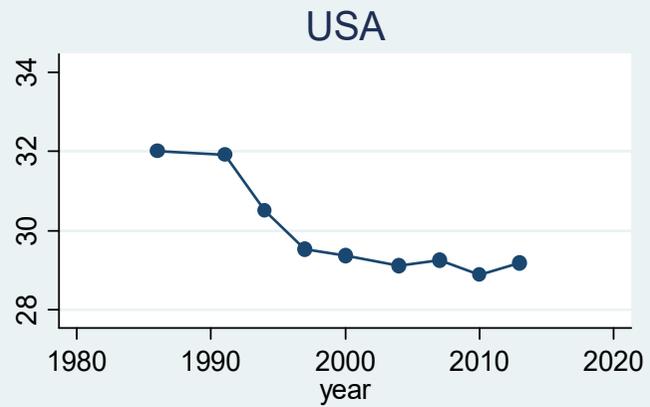
Middle class share in the early 1980 and 2010

Country	1980s	2010
Sweden	45	45
Netherlands	45	41
Germany	40	39
Canada	36	35
UK	40	33
Australia	36	32
Spain	34	31
USA	32	27

■ 1980s ■ 2010
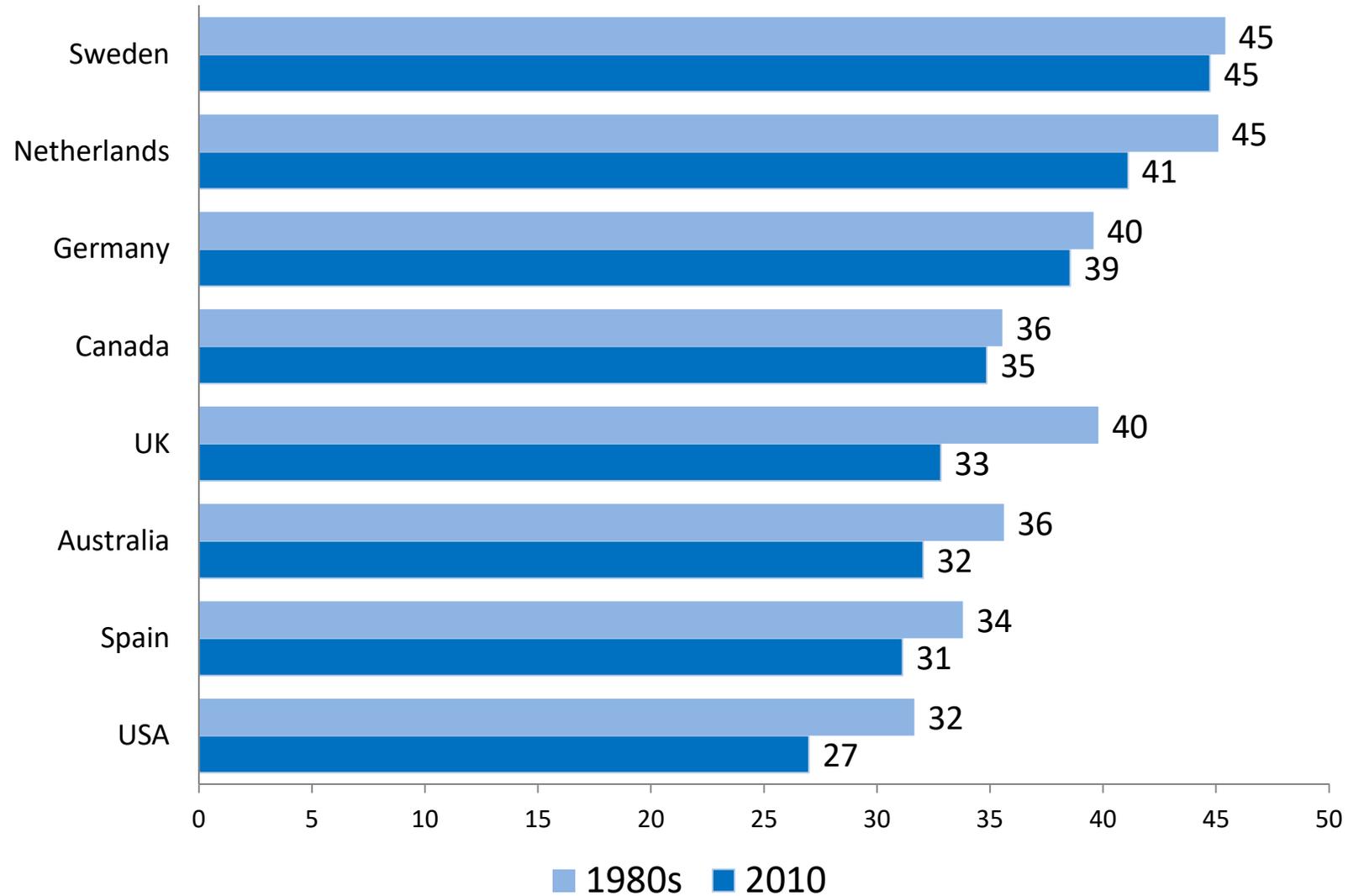
The middle class defined as population with income between +/-25% of national median income (all in per capita basis; disposable income; LIS data)

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Middle class income compared to the national mean in the early 1980 and 2010

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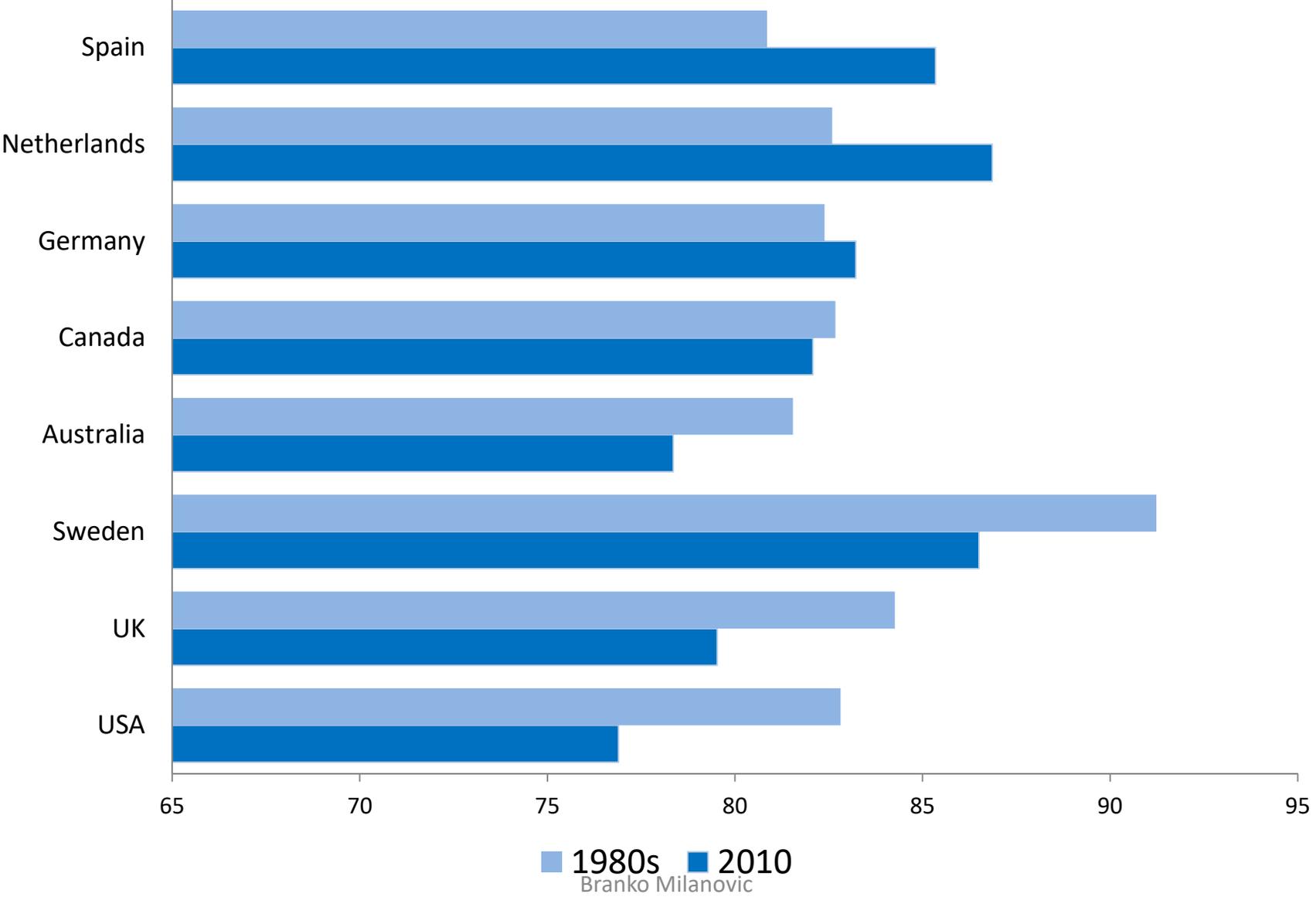
D. Issues of justice and politics

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

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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.

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?

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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)

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Rawls' views on inter-generational transmission of wealth

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

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?

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Global inequality in Real World, Rawlsian World, Convergence World…and Shangri-La World (Theil 0; year 2008)

Mean country incomes Individual incomes within country	All equal	Different (as now)
All equal	0	68 (all country Theils=0; all mean incomes as now)
Different (as now)	30 (all mean incomes equalized; all country Ginis as now)	98

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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…

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Migration….

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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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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)

Factile of national income distribution

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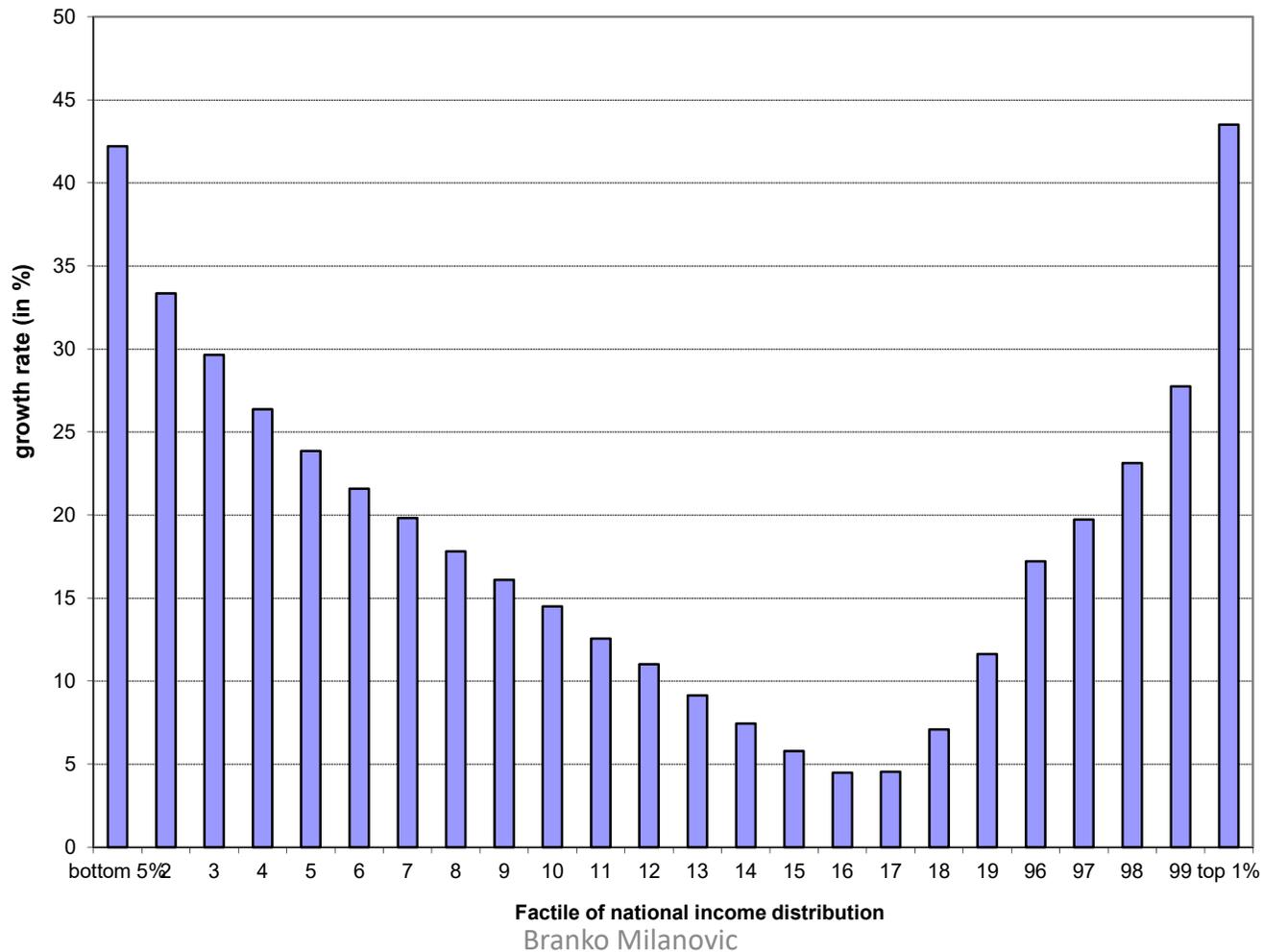
Distribution of migrants across income deciles of the receiving country

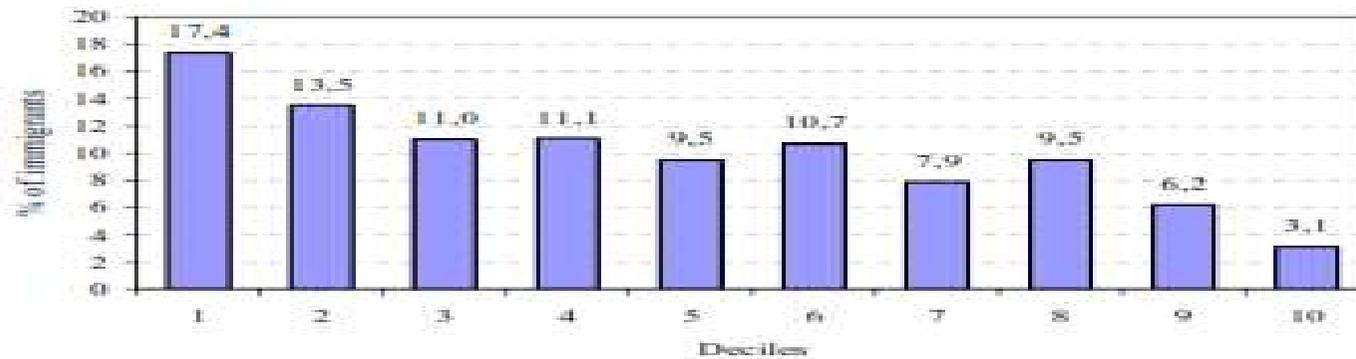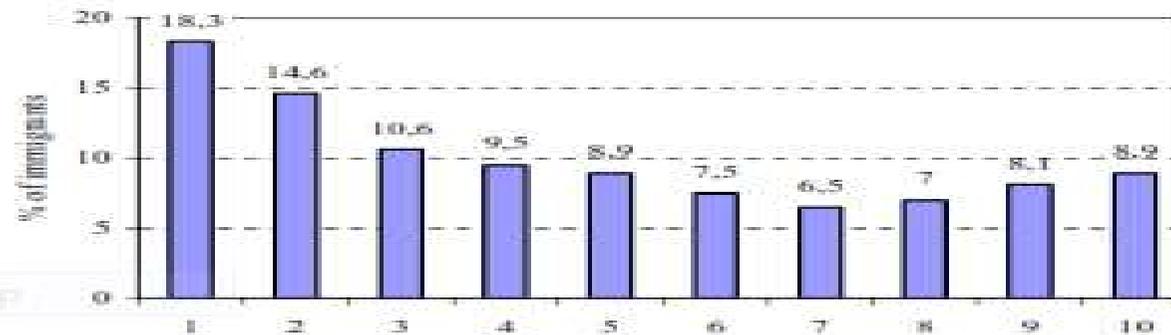Figure 6a. Percentage of immigrants in each income decile. Spain, 2004

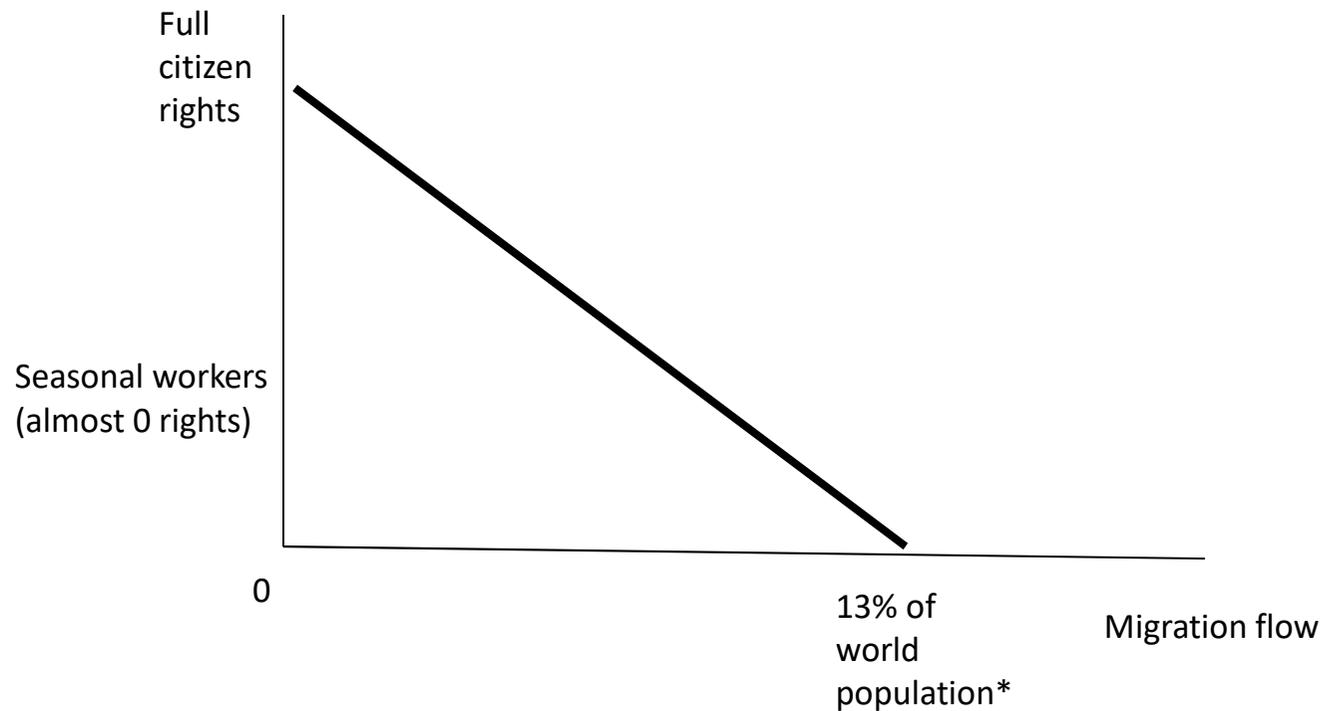Figure 6b. Percentage of immigrants in each income decile. US, 1990

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

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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 andfinancially) 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

Full citizen rights

Seasonal workers (almost 0 rights)

0

13% of world population*

Migration flow

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

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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

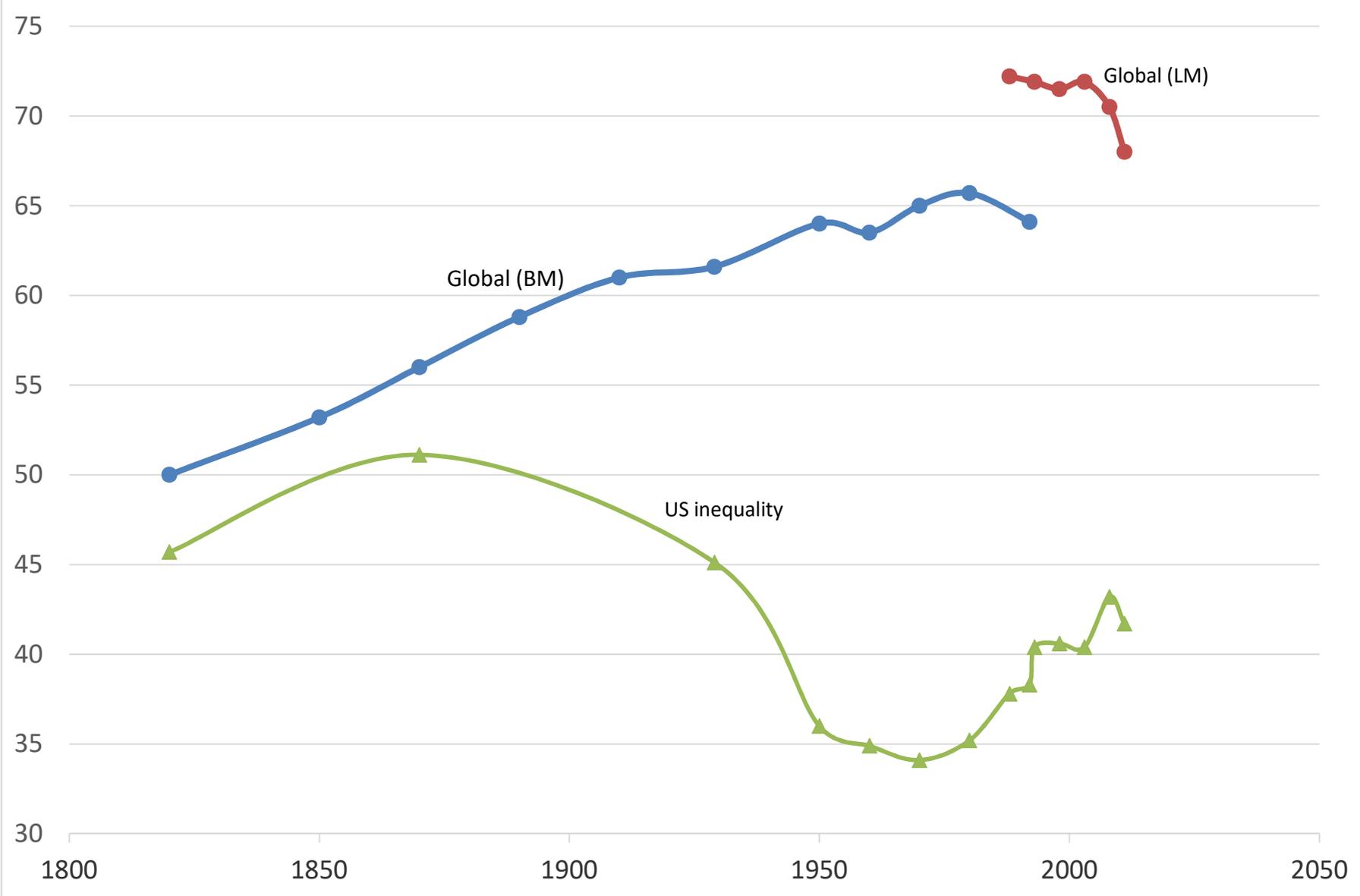- To preserve good aspects of globalization: redistribution within rich countries

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Additional slides

E. Global inequality over the long-run of history

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Global and inter-national inequality 1952-2014

Defines.do using gdppppreg5.dta
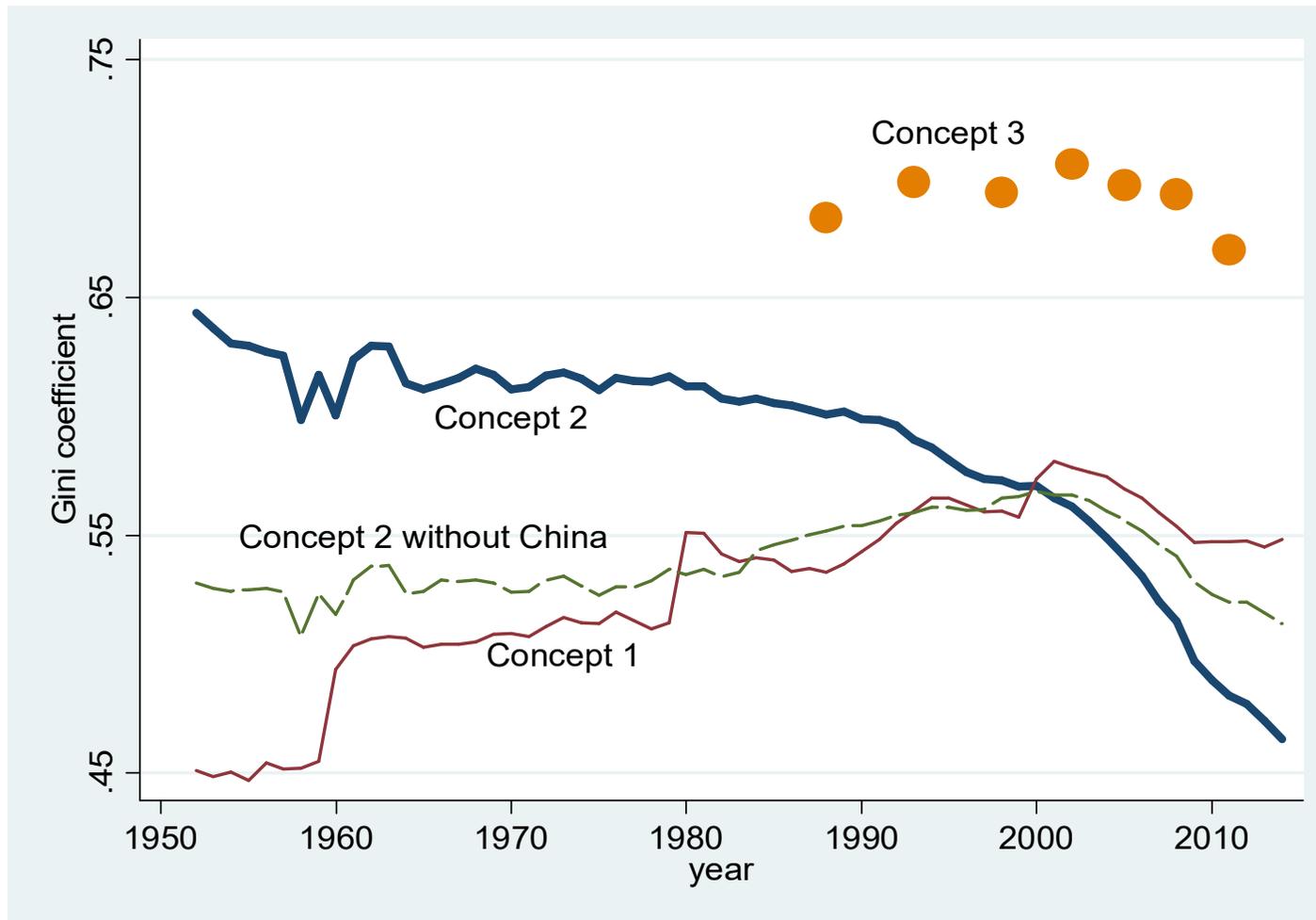
Global and US Gini over two centuries

Global (LM)
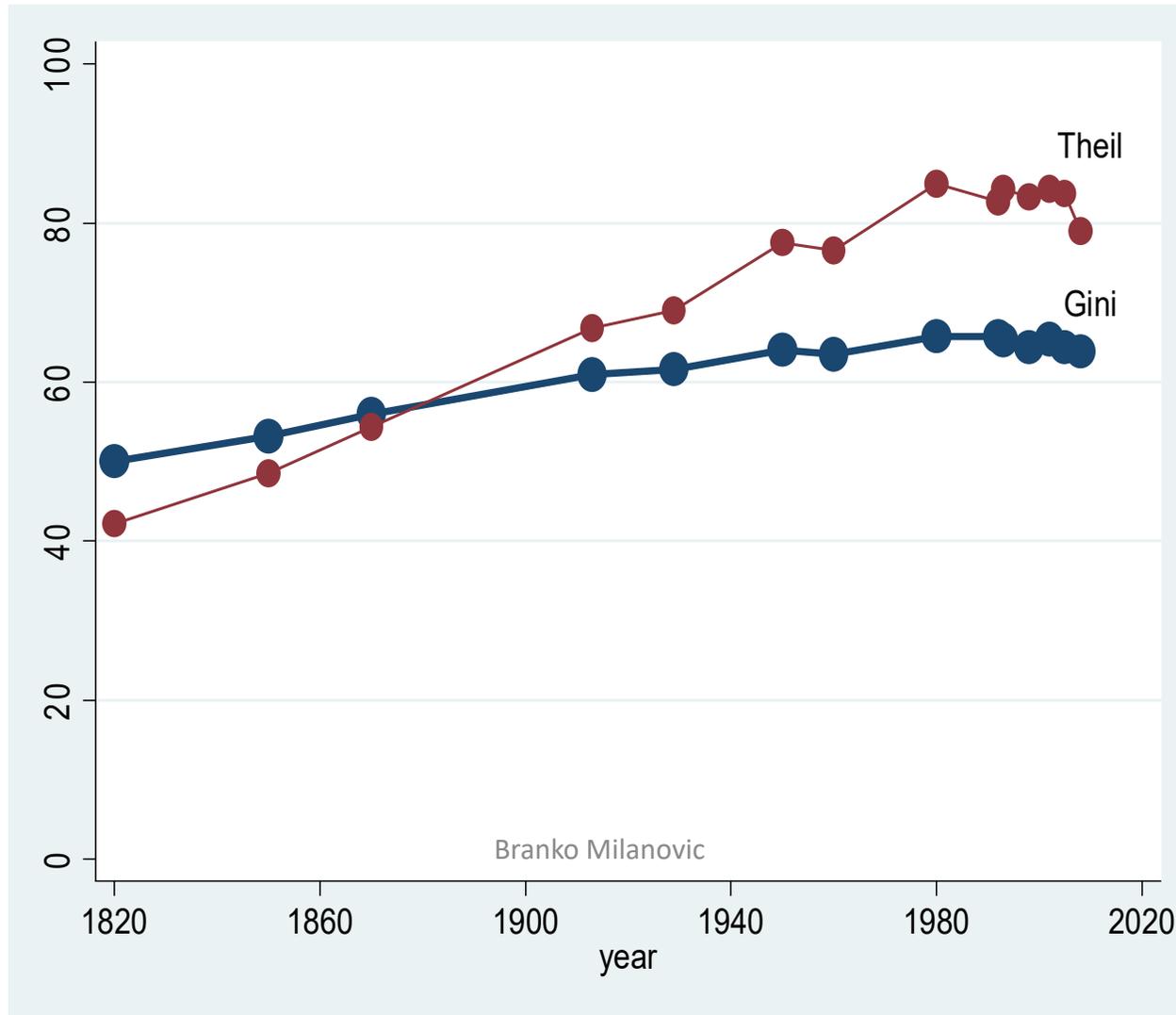
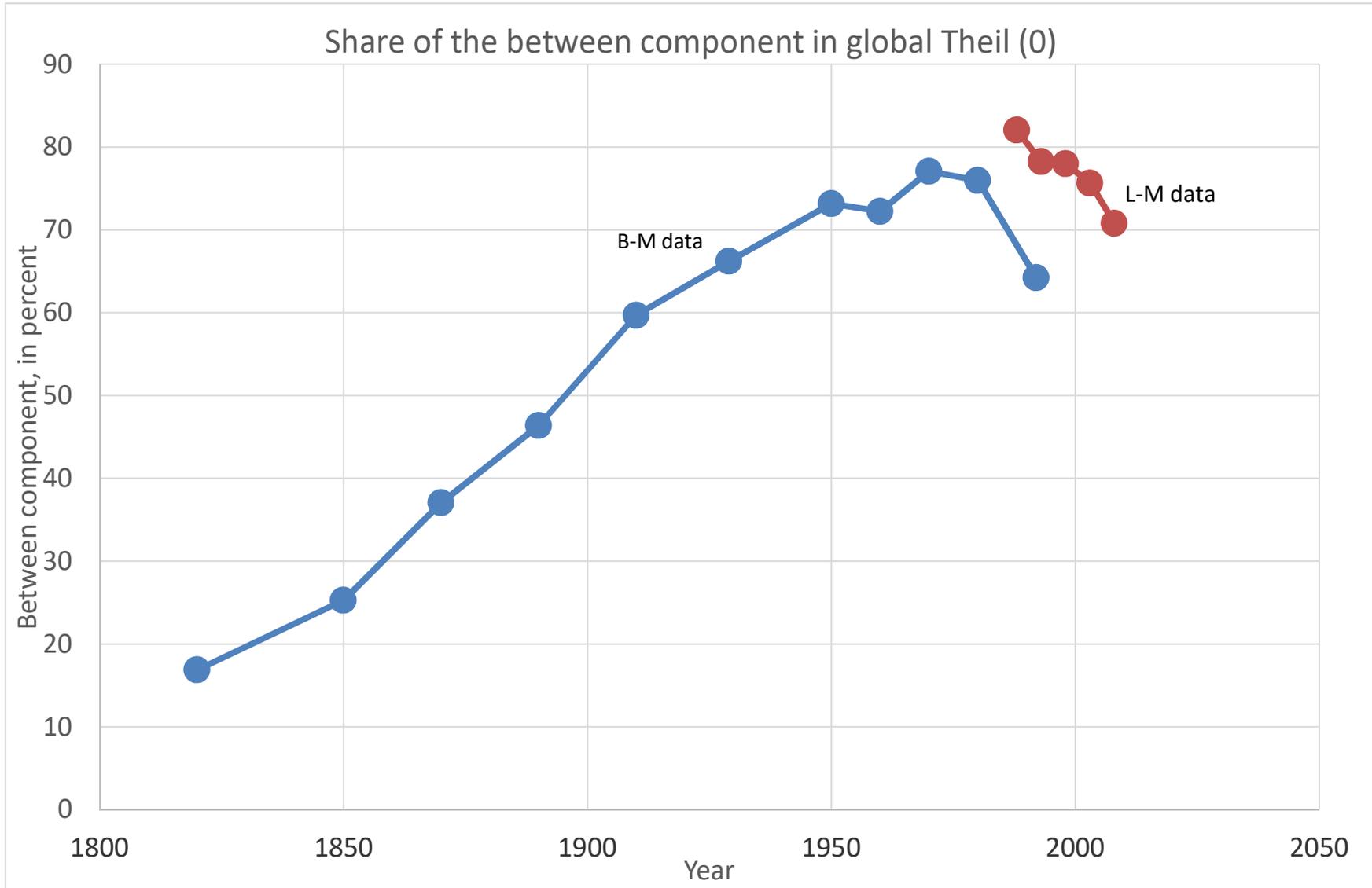Global (BM)

US inequality

From thepast.xls

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

twoway (scatter Gini year, c(l) xlabel(1820(40)2020) ylabel(0(20)100) msize(vlarge) clwidth(thick)) (scatter Theil year, c(l) msize(large) legend(off) text(90 2010 "Theil") text(70 2010 "Gini"))

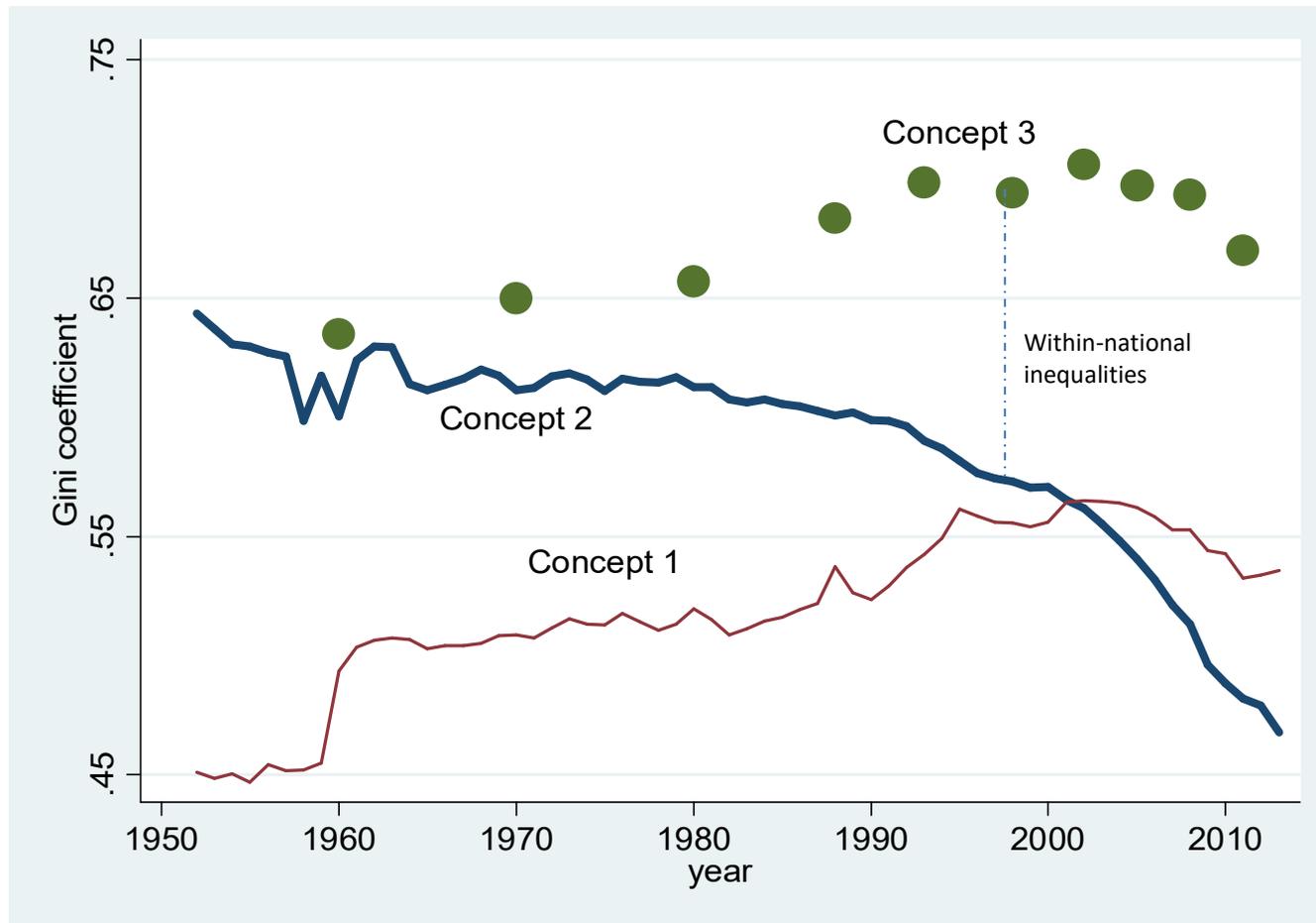# Very high but decreasing importance of location in global inequality

Share of the between component in global Theil (0)

B-M data

L-M data

Year

Between component, in percent

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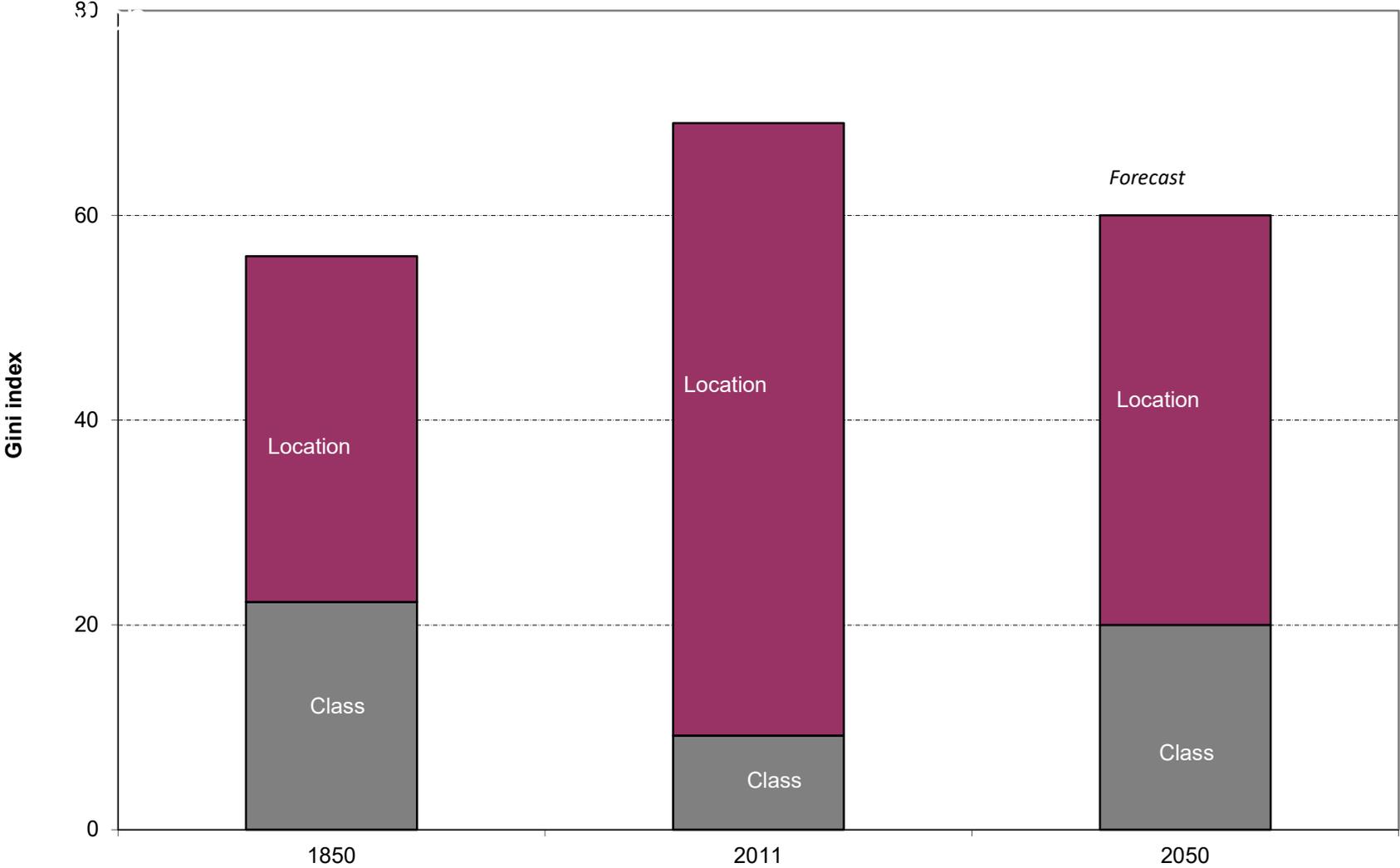# Extra for Michigan

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La longue durée

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Global and international inequality after World War II

Concept2: 1960-1980 from Bourguignon & Morrisson

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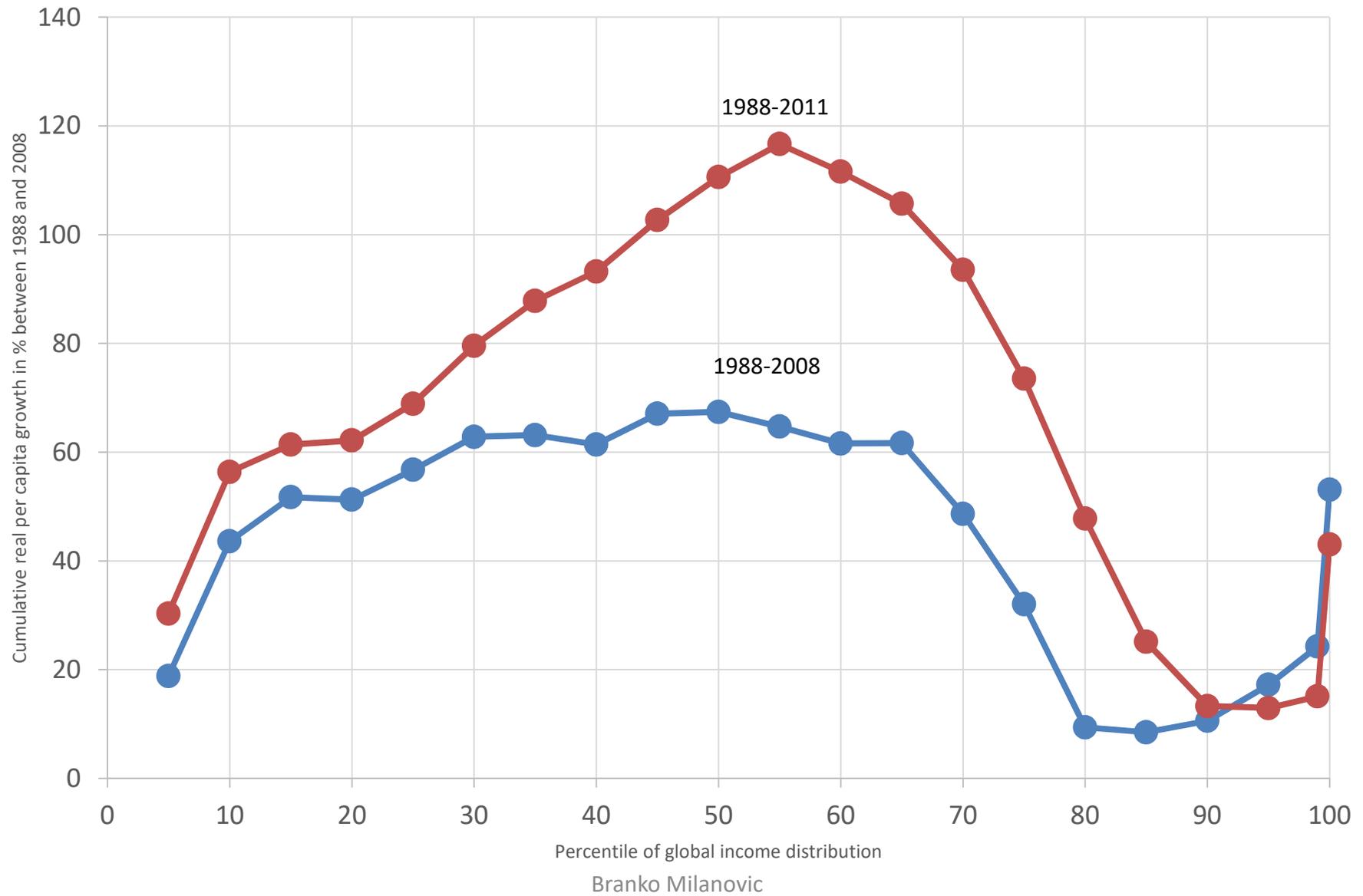
Defines.do using gdppppreg5.dta

From Karl Marx to Frantz Fanon and back to Marx?

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La moyenne durée

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Real income growth over 1988-2008 and 1988-2011 (based on 2011 PPPs)

Cumulative real per capita growth in % between 1988 and 2008

1988-2011

1988-2008

Percentile of global income distribution

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Global income distributions in 1988 and 2011

Figure 3. Global income dstribution in 1988 and 2011
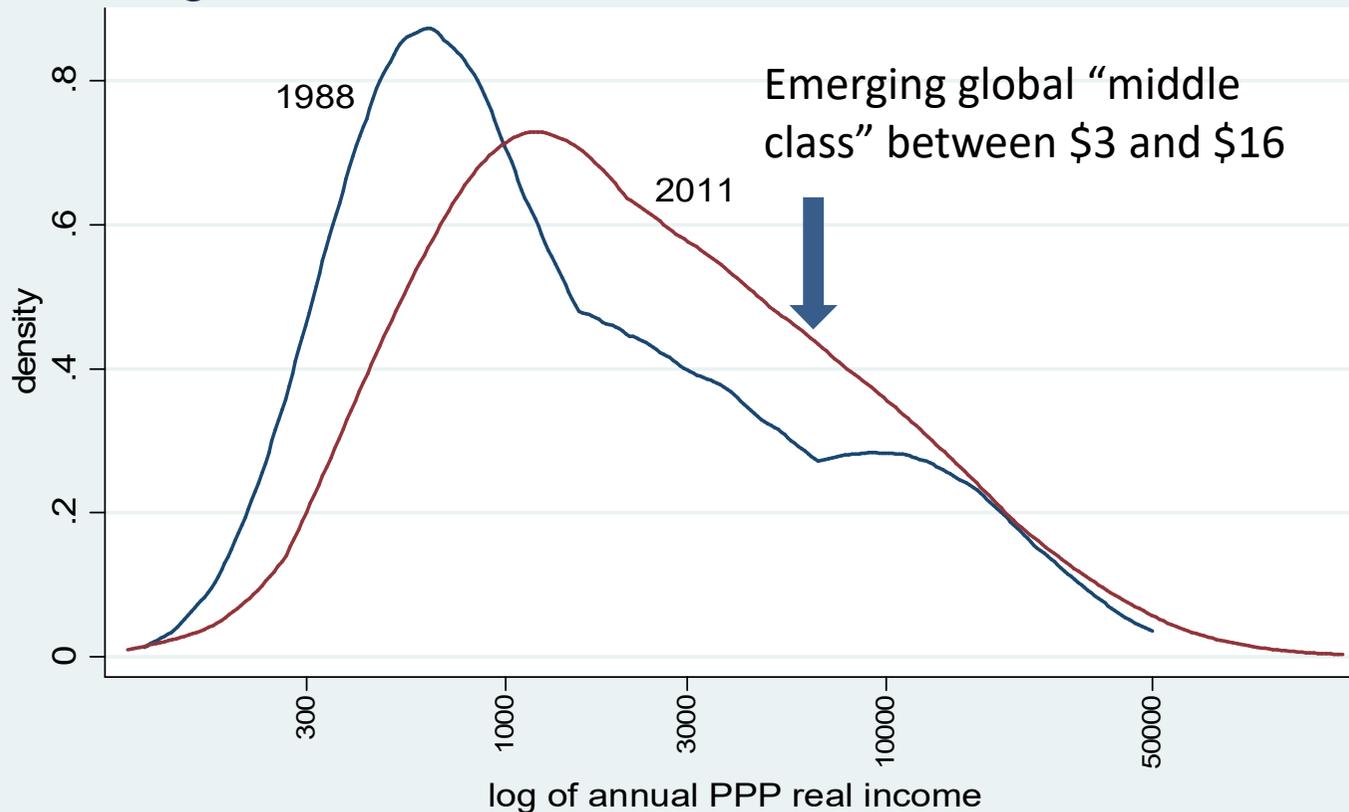
twoway (kdensity loginc_11_11 [w=popu] if loginc_11_11>2 & year==1988, bwidth(0.14) title("Figure 3. Global income dstribution in 1988 and 2011")) (kdensity loginc_11_11 [w=popu] if loginc_11_11>2 & year==2011, bwidth(0.2)) , legend(off) xtitle(log of annual PPP real income) ytitle(density) text(0.78 2.5 "1988") text(0.65 3.5 "2011") xlabel(2.477"300" 3"1000" 3.477"3000" 4"10000" 4.699"50000", labsize(small) angle(90)) Using Branko\Income_inequality\final11\combine88_08_11_new.dta

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

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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?

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