

UNU/WIDER Conference on Inequality –  
Measurement, Trends, Impacts and Policies

**Global Wealth Distribution: Recent  
Evidence**

James Davies, Rodrigo Lluberas, and  
Anthony F. Shorrocks  
Helsinki, September 6 2014

# History of our Estimates

Jim Davies, Susanna Sandström, Tony Shorrocks, Ed Wolff

- “The world distribution of household wealth” in J.B. Davies (ed.) *Personal Wealth from a Global Perspective* (OUP, 2008)
- “The level and distribution of global household wealth”, *Economic Journal*, March 2011

Tony Shorrocks, Jim Davies, Rodrigo Lluberas

- Credit Suisse Global Wealth Report & Databook 2010, 2011, 2012, 2013, 2014 (forthcoming).
- [http://resistir.info/varios/global\\_wealth\\_report\\_2013.pdf](http://resistir.info/varios/global_wealth_report_2013.pdf)
- <http://www.international-adviser.com/ia/media/Media/Credit-Suisse-Global-Wealth-Databook-2013.pdf>

# Objective

To measure the world distribution of *household wealth* across individuals, countries and regions

- wealth = **real assets + financial assets – debts**
- wealth level results for years **2000 – 2013**
- global distribution pattern for **2000, 2010 - 2013**
- compared across countries using **official exchange rates**
- comparisons for **adult** population

# Special topics in our annual reports

2010: Gender dimensions

Wealth Composition

2011: Long-run trends in levels

Wealth & Age

2012: Debt

Inheritance

2013: Mobility

Wealth in the Eurozone

2014: Inequality trends since 2000

# Some details regarding methods

## (1) **adult population**

## (2) **average wealth level:** based on

- Complete household balance sheets and wealth survey data (covering 17 countries, 53% of world pop., 83% of world wealth)
- Financial balance sheets for additional 30 countries
- extended by regression methods; 120 countries
- region-income class averages imputed to 39 countries

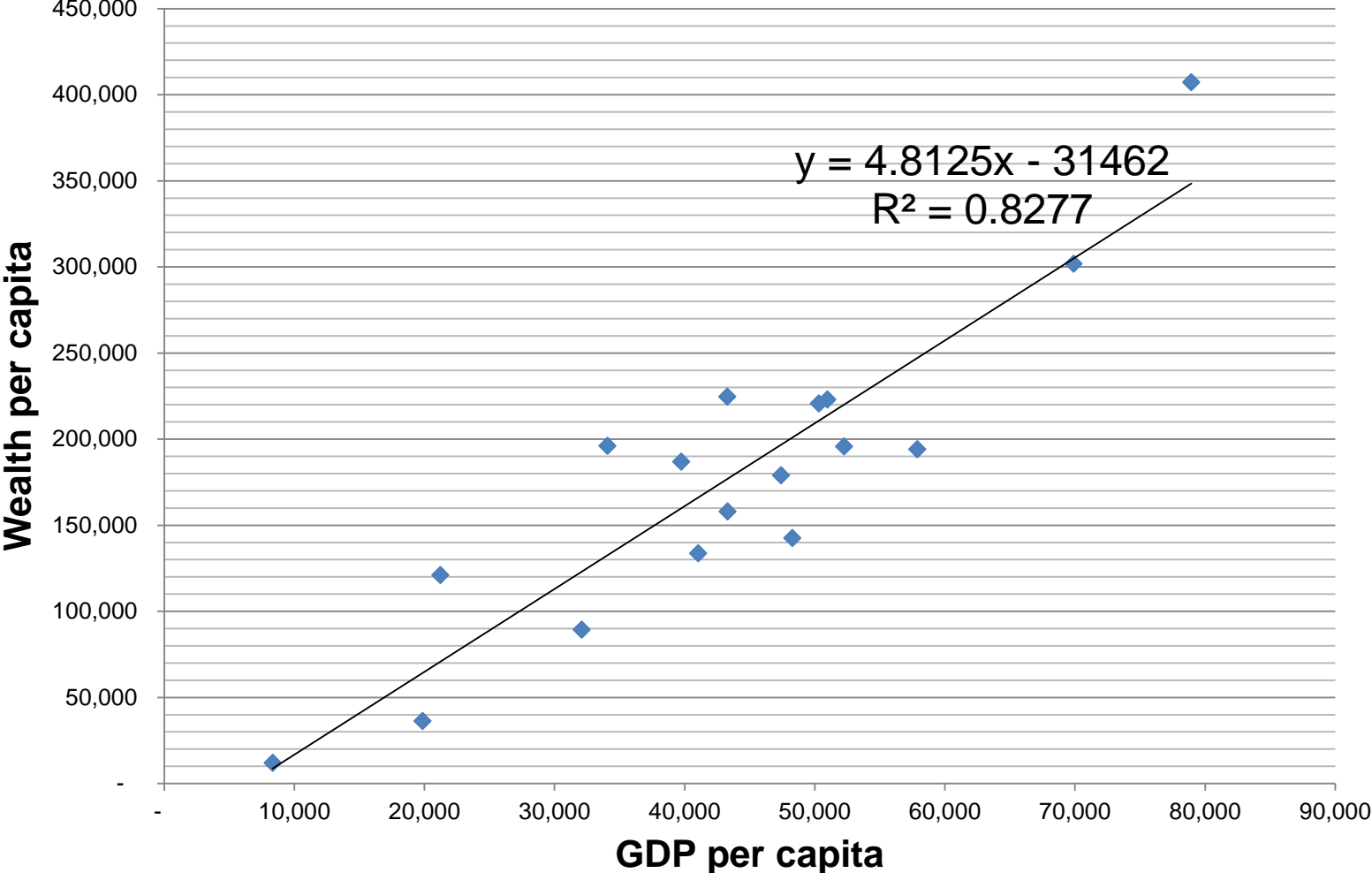
## (3) **distribution of wealth:** based on

- distribution data for 31 countries
- wealth distribution estimated from income dist'n for most others
- region-income class averages imputed to remaining

# Estimating Wealth *Levels*

- Household Balance Sheet Data - - 17 countries complete, 30 with financial data only
  - Est'd by national statistical organizations, central banks, ministries of finance, using multiple sources
    - Counterparty data for most financial assets
    - Surveys, perpetual inventories for non-financial
- Household Survey Data - - 4 countries
  - Used when HBS data unavailable
    - Financial Assets adjusted, based on regressions

# Wealth vs. GDP per capita, 2013



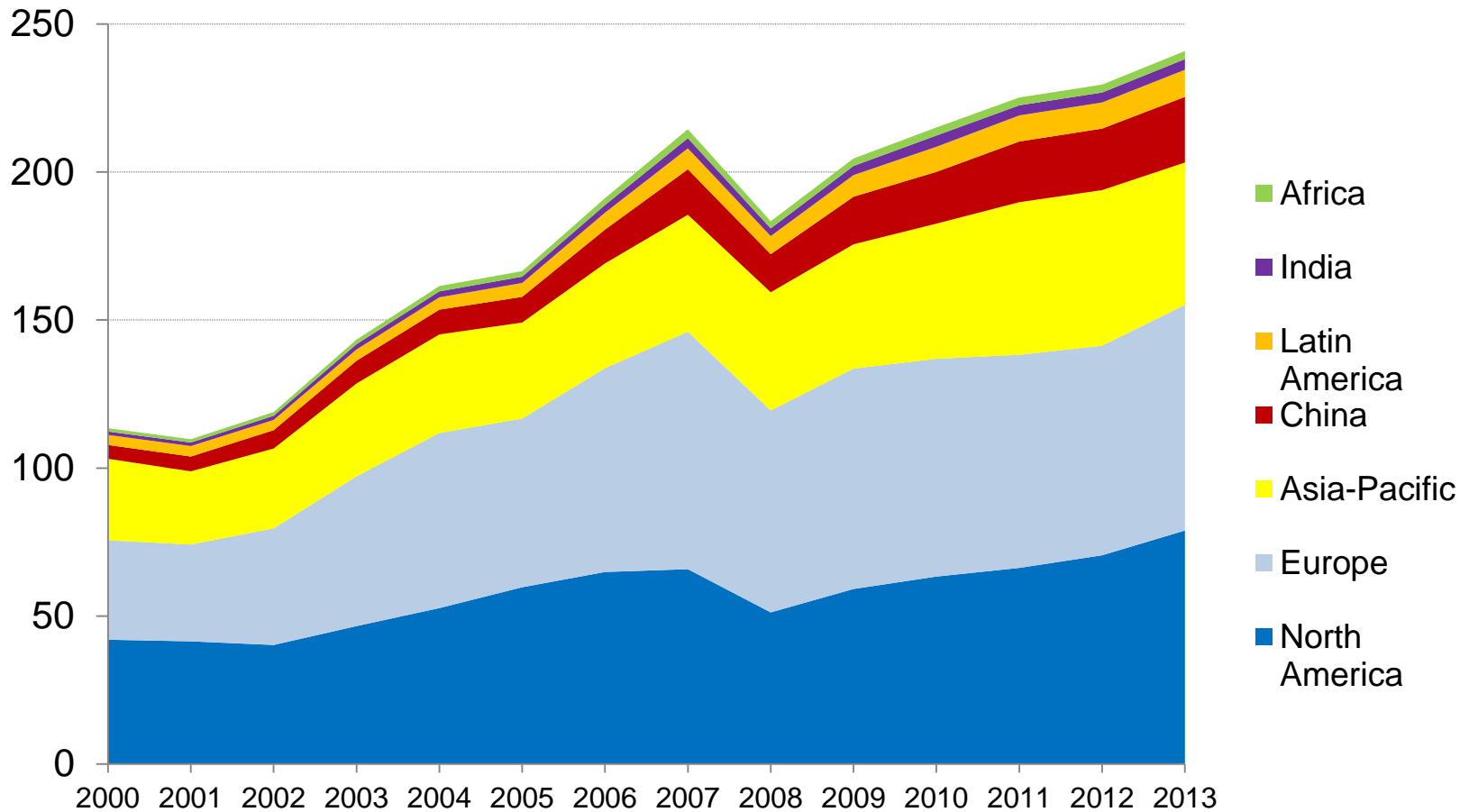
# Log Financial Assets Per Capita regression (SUR) with year and region dummies, 2000-2008

Variable	Coefficient	Standard Error
Log Consumption per capita	1.2157	.0861
GDP per capita growth rate	-0.0122	.0031
Log Market Capitalization Rate	0.1168	.0357
% Urban Population	.0088	.0023
Survey Dummy	-2.6763	.3581
"R2" = .9369 329 Observations		



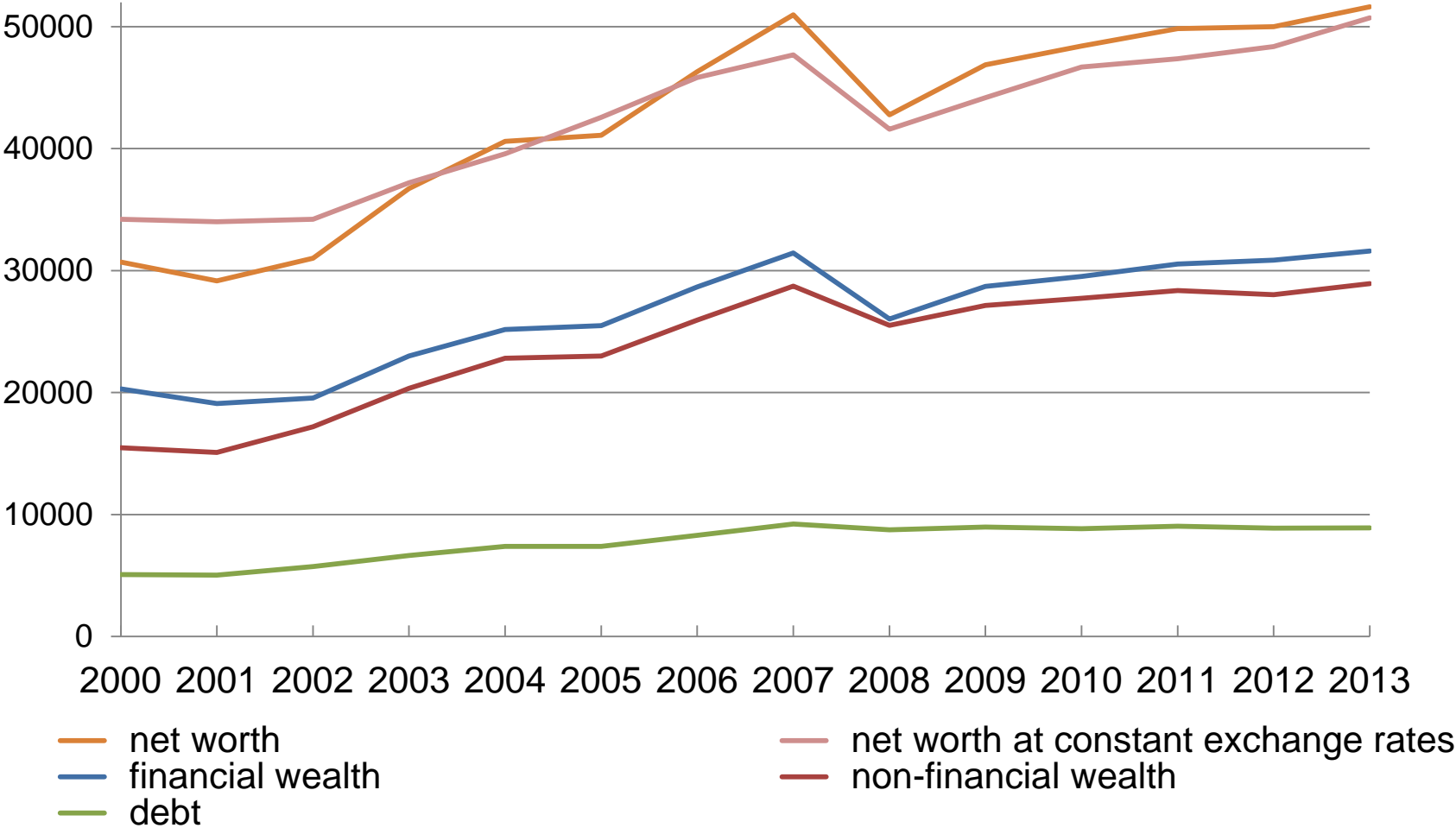
# Aggregate global wealth, 2000-2013

trillion USD

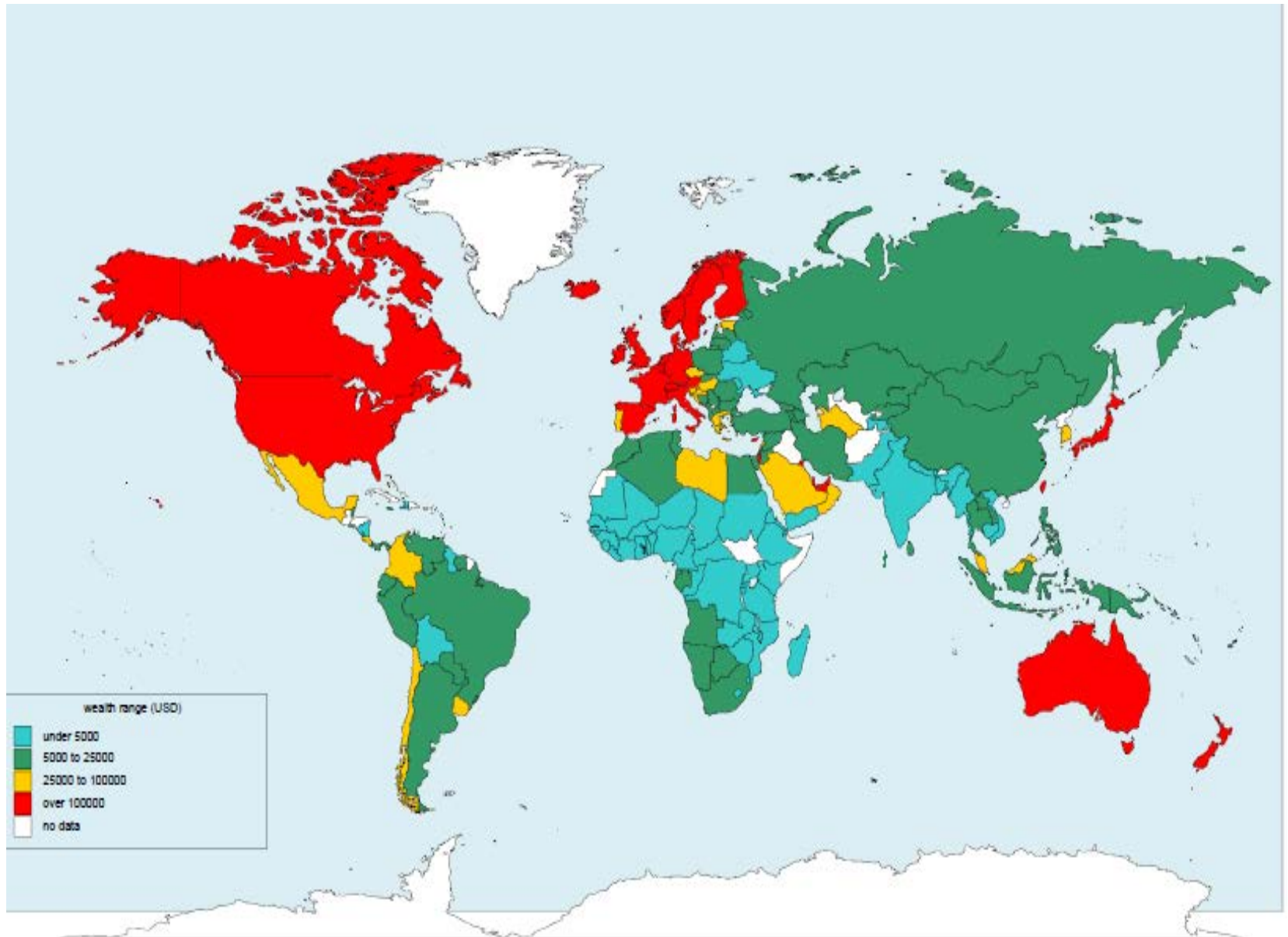


# Global trends in wealth per adult, 2000-2013

USD per adult



# World wealth levels, 2013



# Wealth levels across Countries

## Global wealth per adult using official exchange rates (USD)

2000	\$ 30,700	
2007	\$ 51,000	
2013	\$ 51,600	

Wealth per adult(USD)	(end 2007)	mid 2013
Switzerland	\$ 384,000	\$ 513,000
USA	\$ 269,000	\$ 301,000
Japan	\$ 177,000	\$ 217,000
China	\$ 17,000	\$ 22,000
Indonesia	\$ 9,000	\$12,000
India	\$ 5,100	\$ 4,700

## Wealth distribution survey data – top 25%

Country	Year	Unit	Share of top								
			25%	20%	10%	5%	2%	1.0%	0.5%	0.10%	
Australia	2010	household		61.8							
Austria	2011	household		77.1	61.7						
Belgium	2010	household		61.2	44.1						
Canada	2005	family		69.0	50.4	35.8			15.5		
Chile	2007	household		65.5	43.9						
China	2002	person		59.3	41.4						
Cyprus	2011	household		72.4	56.8						
Denmark	2009	family		92.9	69.4						
Finland	2010	household		64.9	45.0						
France	2010	household		67.5	50.0						
Germany	2011	household		76.3	59.2						
Greece	2009	household		56.7	38.8						
India	2002	household		69.9	52.9	38.3			15.7		
Indonesia	1997	household		78.9	65.4	56.0			28.7		
Italy	2010	household	68.9	62.6	45.7	32.9	21.0		14.8		
Japan	2009	household	62.8	55.3	34.3	19.3			4.3		

## Wealth distribution survey data – top 25% (cont'd.)

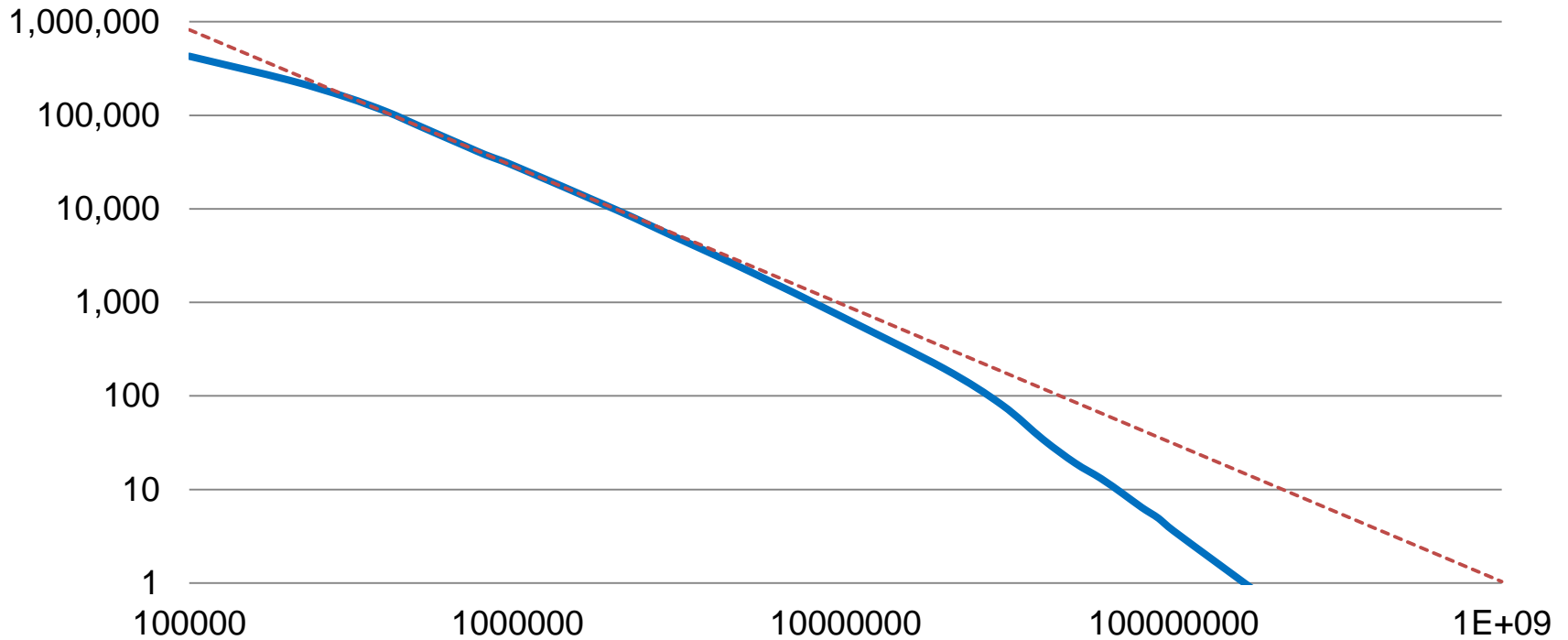
Country	Year	Unit	Share of top								
			25%	20%	10%	5%	2%	1.0%	0.5%	0.10%	
Korea, Rep.	2011	household		63.9							
Luxembourg	2011	household		66.7	51.3						
Malta	2011	household		62.0	46.9						
Netherlands	2010	household		61.3	40.2						
New Zealand	2001	tax unit		67.0	48.0						
Norway	2004	household		80.1	65.3						
Portugal	2010	household		67.9	52.7						
Slovakia	2010	household		48.9	32.8						
Slovenia	2010	household		54.3	36.2						
Spain	2008	household	67.3	61.3	45.0	32.6	21.7	16.5			
Sweden	2007	adult			67.0	49.0		24.0			
Switzerland	1997	family			71.3	58.0		34.8	27.6	16.0	
Thailand	2006	household		69.5							
UK	2008	adult		62.8	44.3	30.5		12.5			
USA	2010	family	90.3	86.7	74.4	60.9	44.8	34.1			

# Estimating *shape* of wealth distributions

- published wealth (and income) dist data for 31 countries
- impute missing quantile shares using “ungrouping” program
- compare wealth to income shares
- estimate wealth dist from income dist data for most other countries
  
- generate synthetic wealth samples for each country
  - 1 observation per 10,000 adults bottom 90%
  - 1 observation per 1,000 adults top 10%
  - 1 observation per 100 adults top 1%
  
- scale up wealth values to match average wealth
- adjust top tail to match number of Forbes billionaires by country

# Pareto Top Tail

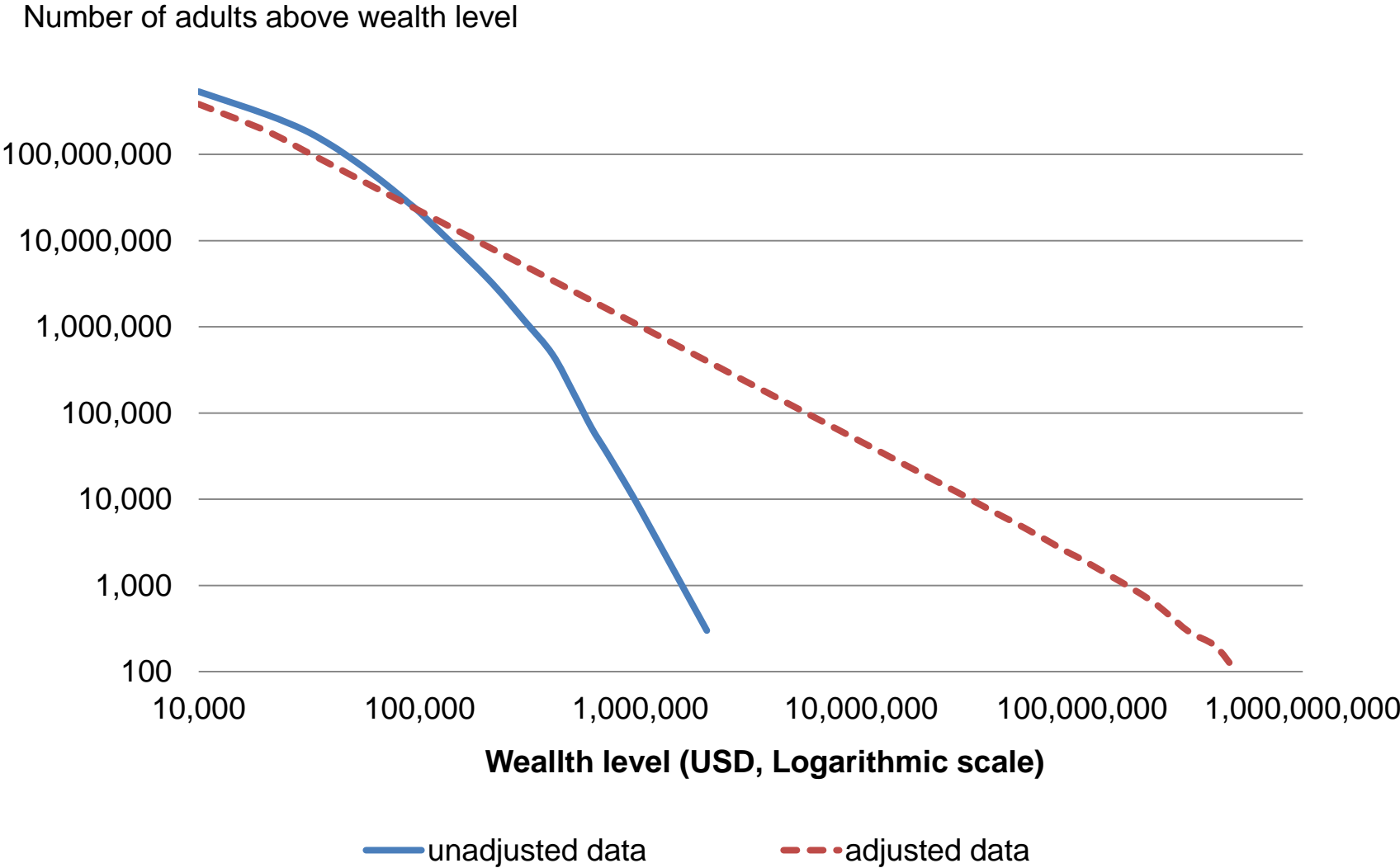
Thousands of adults above wealth level  
(logarithmic scale)



— Unadjusted wealth estimates      - - - Fitted Pareto



# Unadjusted and adjusted wealth values for China



## Survey data versus our estimates– top 25%

Country	Survey Data			Our Estimates		
	Share of top					
	20%	10%	1%	20%	10%	1%
Australia	61.8			65.5		
Canada	69.0	50.4	15.5	73.4	57.4	24.7
Chile	65.5	43.9		83.7	72.5	
China	59.3	41.4		72.9	60.8	
Denmark	92.9	69.4		93.3	72.2	
Finland	64.9	45.0		64.4	44.9	
France	67.5	50.0		68.6	51.8	
Germany	76.3	59.2		77.8	61.7	
India	69.9	52.9	15.7	83.3	73.8	48.7
Indonesia	78.9	65.4	28.7	84.8	75.0	47.9
Italy	62.6	45.7	14.8	65.5	49.8	19.9
Japan	55.3	34.3		65.4	49.1	

## Survey data versus our estimates– top 25%

Country	Survey Data			Our Estimates		
	Share of top					
	20%	10%	1%	20%	10%	1%
Netherlands	61.3	40.2		71.1	54.6	
New Zealand	67.0	48.0		72.9	57.6	
Norway	80.1	65.3		80.2	65.9	
Spain	61.3	45	16.5	57.7	54.0	25.1
Sweden		67.0	24.0		71.1	29.9
Switzerland		71.3	34.8		71.5	35.3
Thailand	69.5			83.9		
UK	62.8	44.3	12.5	68.9	53.3	22.5
USA	86.7	74.4	34.1	87.2	75.4	36.6
Average	65.6	50.7	19.7	71.0	58.6	29.1

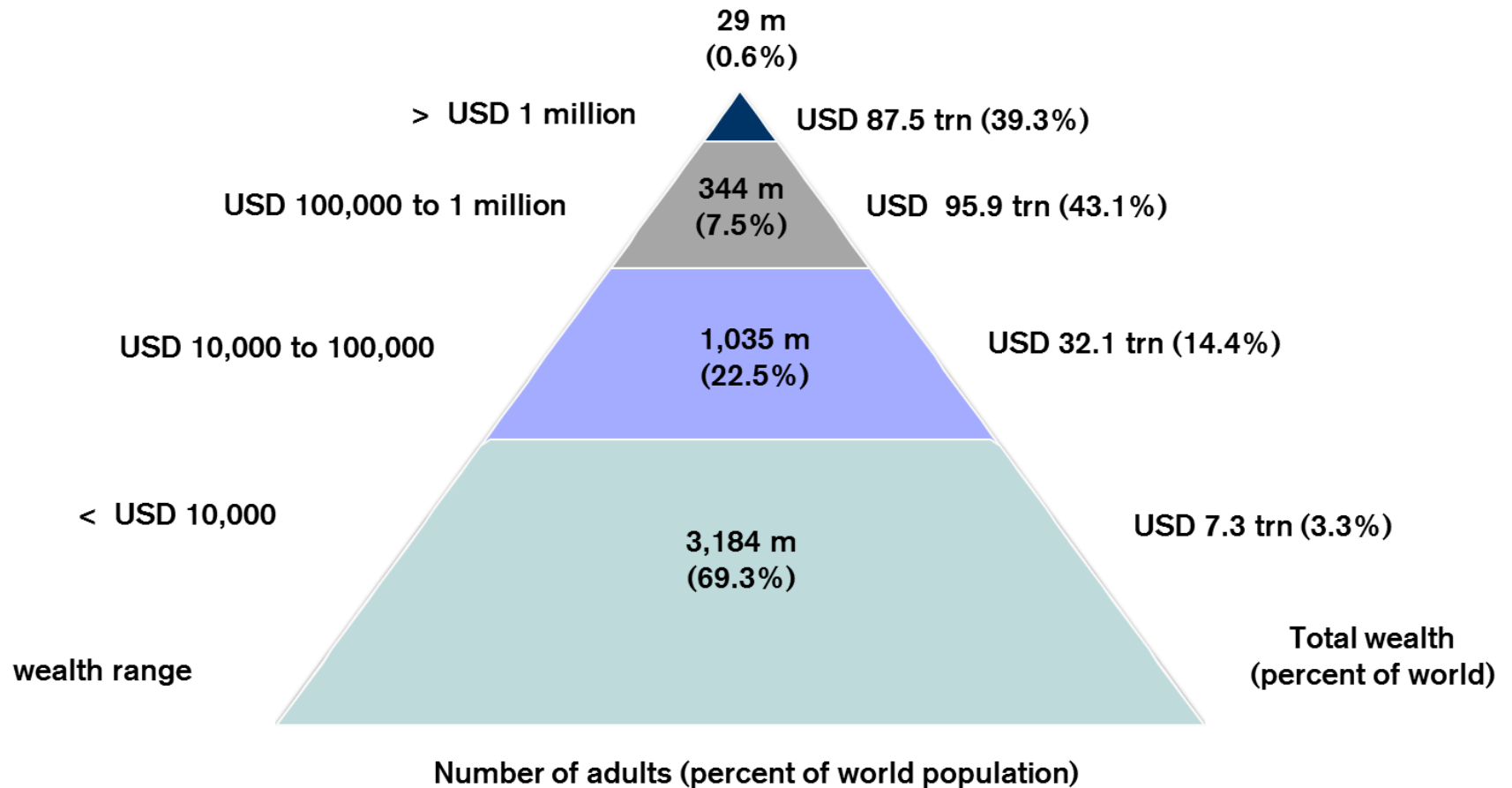
# Wealth inequality is very high, in 2013...

- World share of the top 10% was 86%; top 1% had 46%
  - Top 10% had 61% in China, 75% in US, more in some other countries
- even higher for world as a whole
  - richest 2% of adults own more than half global wealth
  - global wealth Gini for adults is 0.905, vs 0.70 → 0.75 for income (Lakner & Milanovic, 2013)
- wealth more unequally distributed than income *across countries*
  - high income countries have bigger share of wealth than GDP
  - reverse for middle- and low-income nations
  - exceptions in Nordic and Eastern Europe transition countries

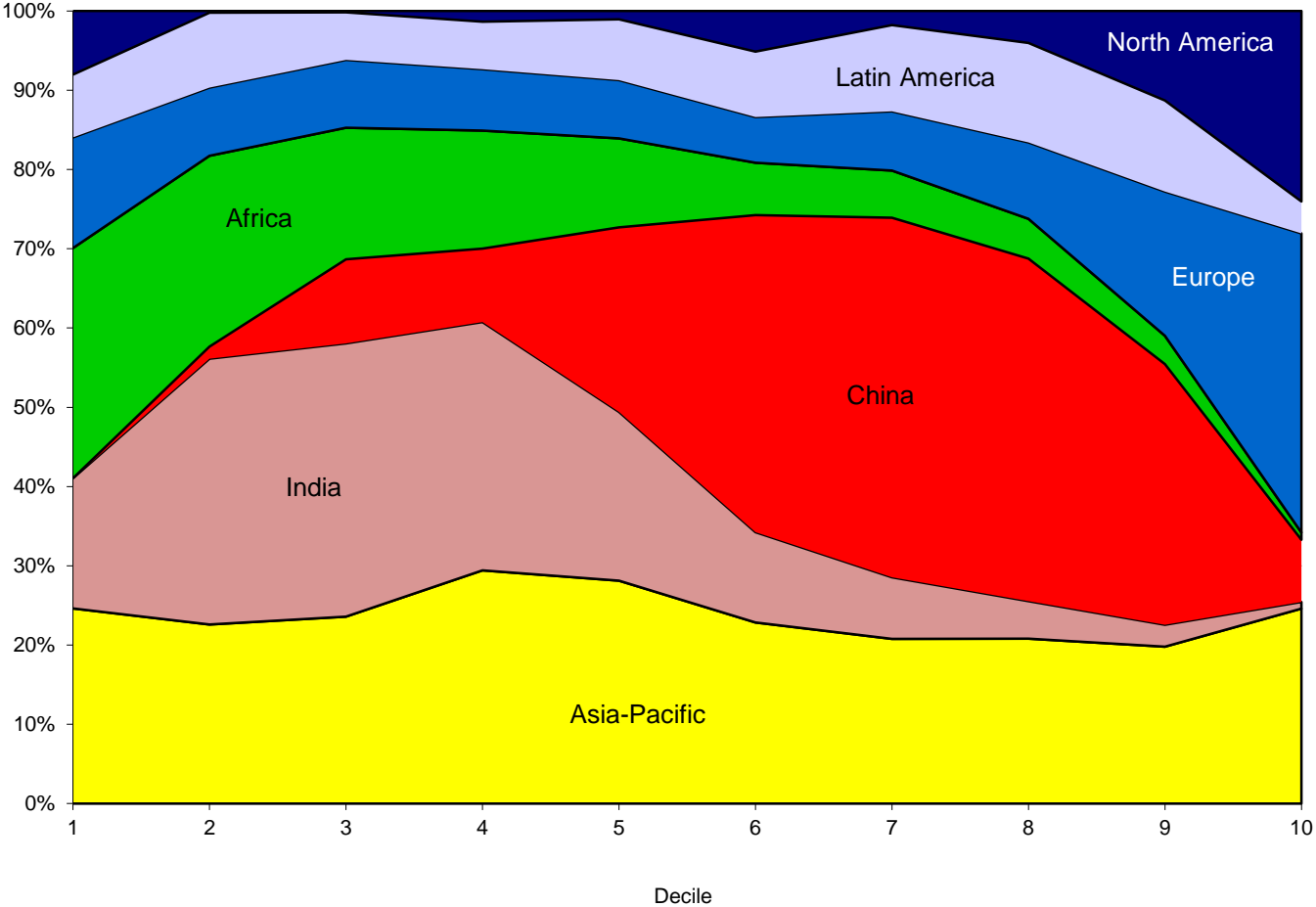
# Global wealth distribution 2013, adults

Decile	Share (%)	Decile	Share (%)
1	-0.4	8	3.0
2	0.1	9	7.8
3	0.1	10	85.9
4	0.3	Top 5%	74.0
5	0.6	Top 1%	46.4
6	1.0	Gini	0.905
7	1.6	Mean	\$51,634

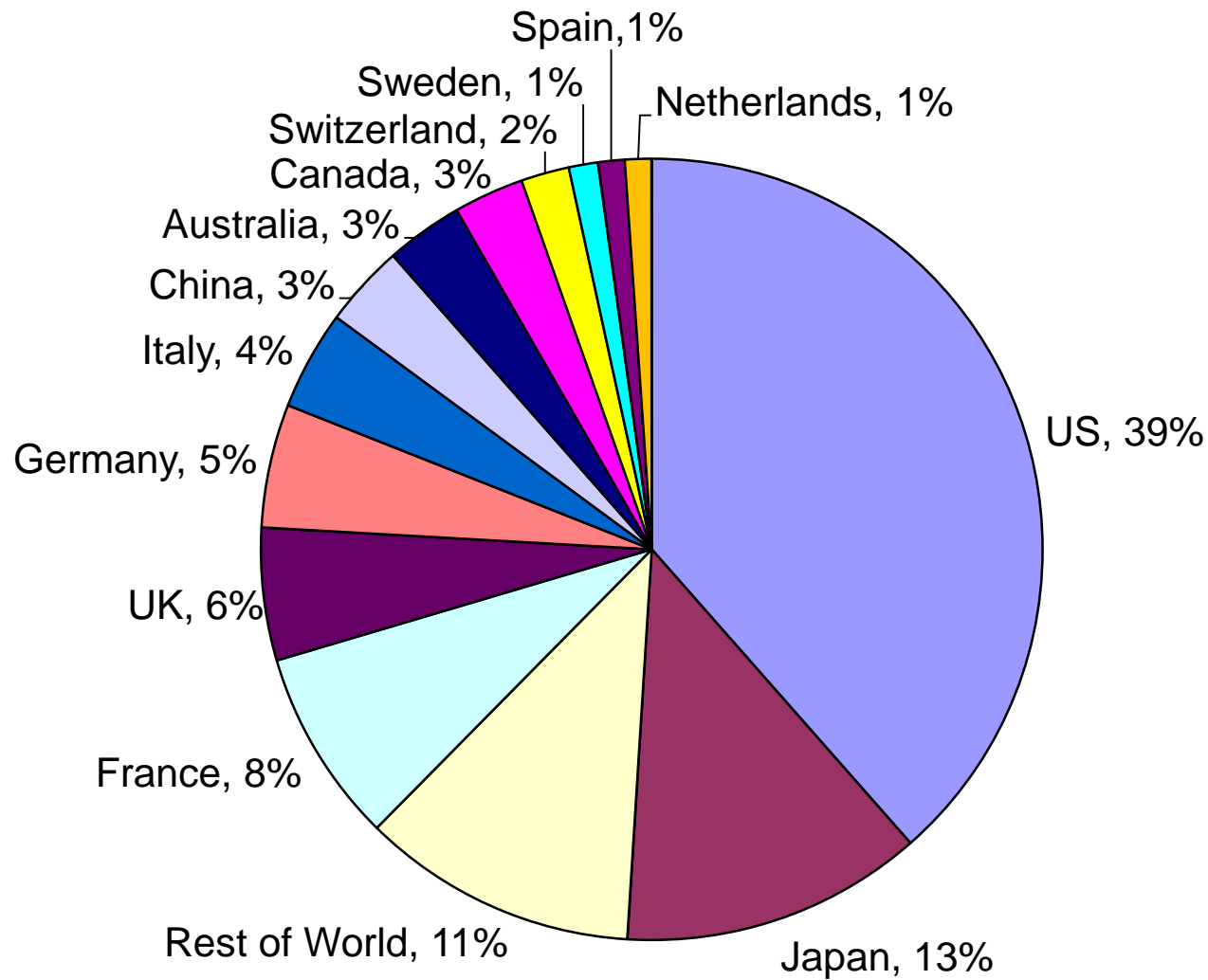
# The global wealth pyramid, 2012



# Regional composition of global wealth distribution, 2013



# Dollar millionaires by country of residence





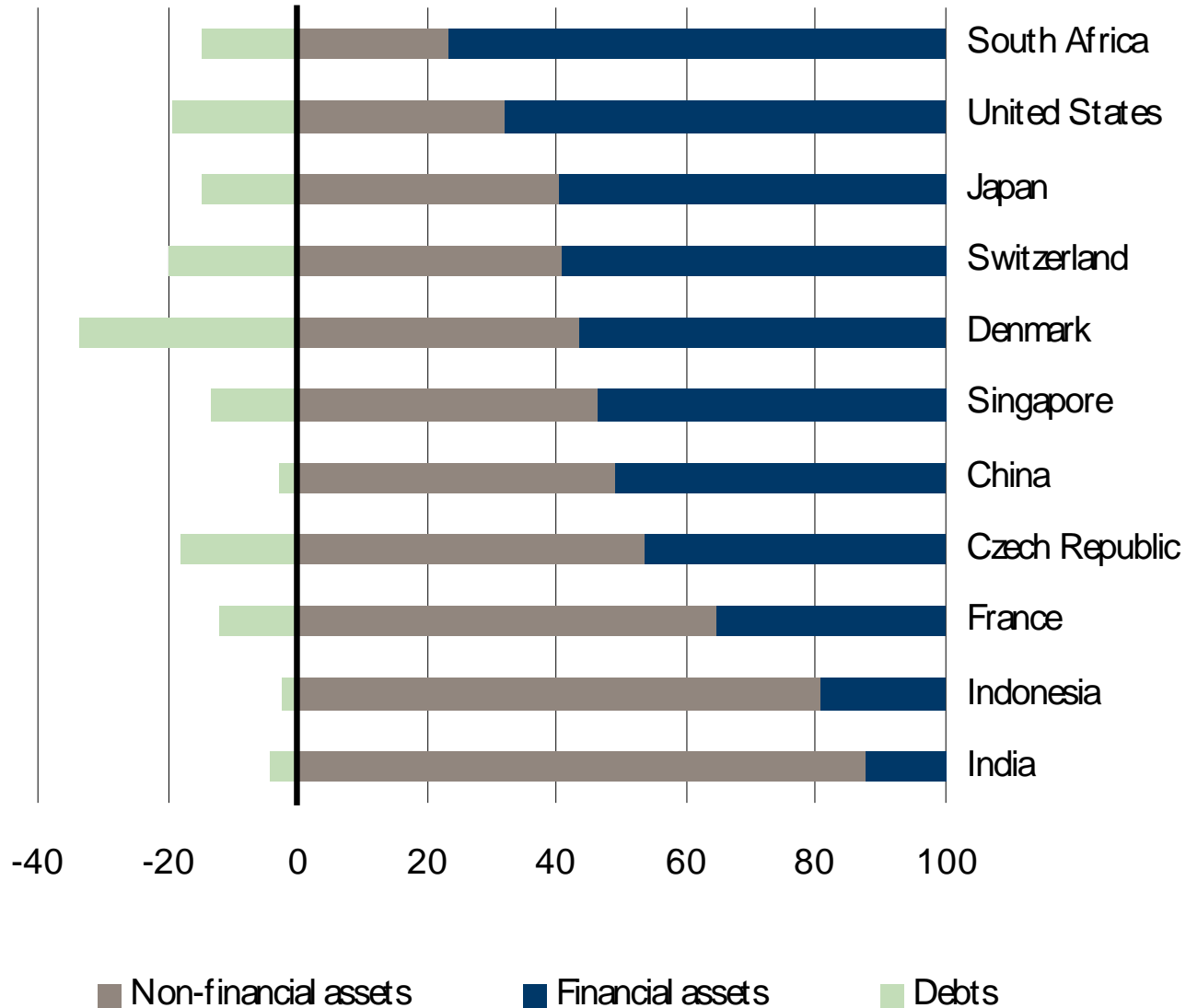
# Differences in wealth and in financial development

- Bottom 80% of countries by GDP in 2011:
  - Wealth/GDP: 1.95
  - Financial/Non-Financial Assets: 0.67
- Top 20% of countries by GDP in 2011:
  - Wealth/GDP: 4.04
  - Financial/Non-Financial Assets: 1.27

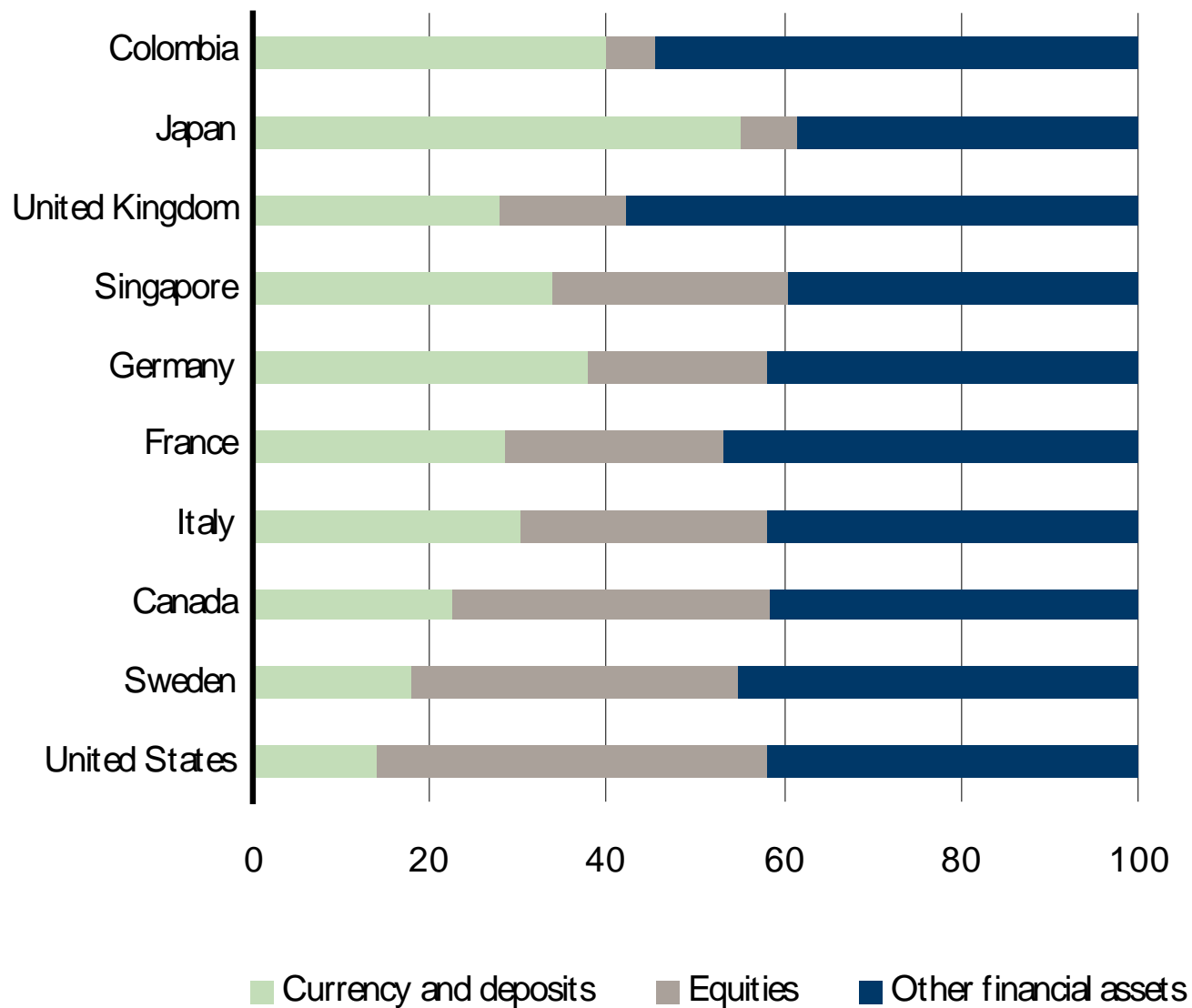
# Some further points on wealth composition

- Wealth dominated by Real Assets in low income countries
- Financial Assets more important in high income countries
- "Financial Interrelations Ratio" rises with development  
Goldsmith (1985) said:
  - Ratio = Financial Assets/Non-Financial Assets
  - Averages about 0.5 in LDCs
  - Approx 1.0 in Developed Countries
- Large differences in wealth composition for countries at similar income

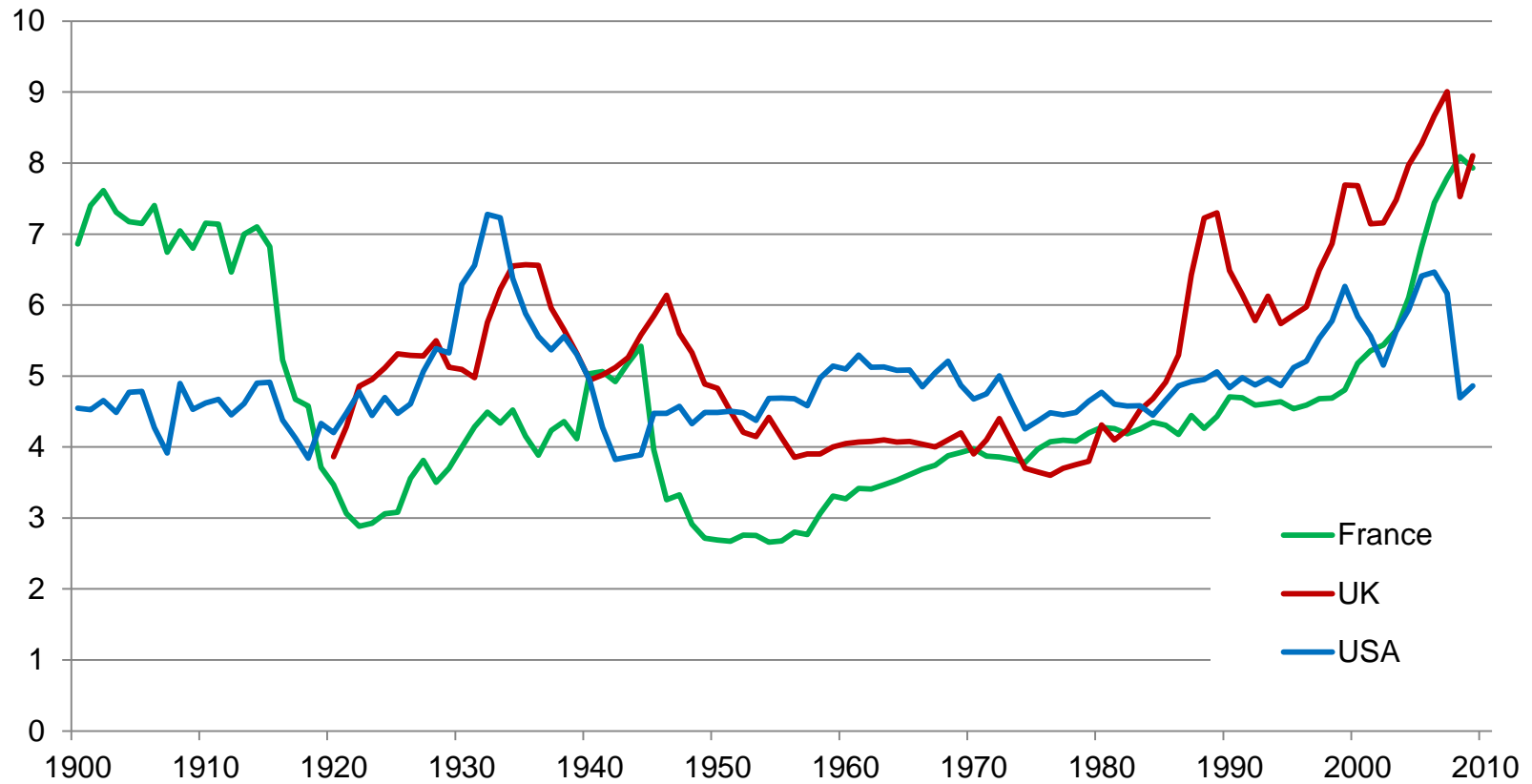
# Asset composition, 2011



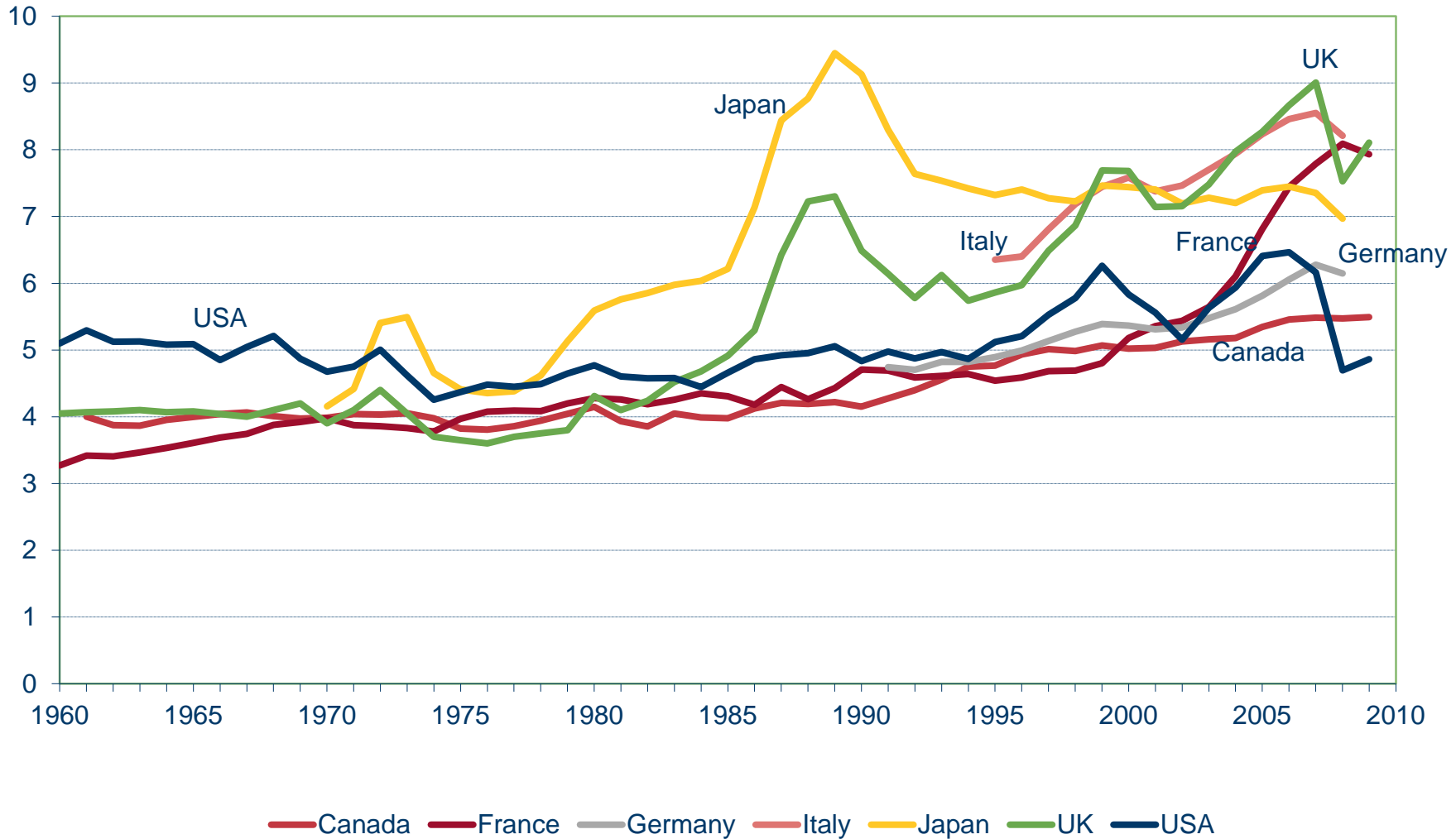
# Composition of financial assets, 2011



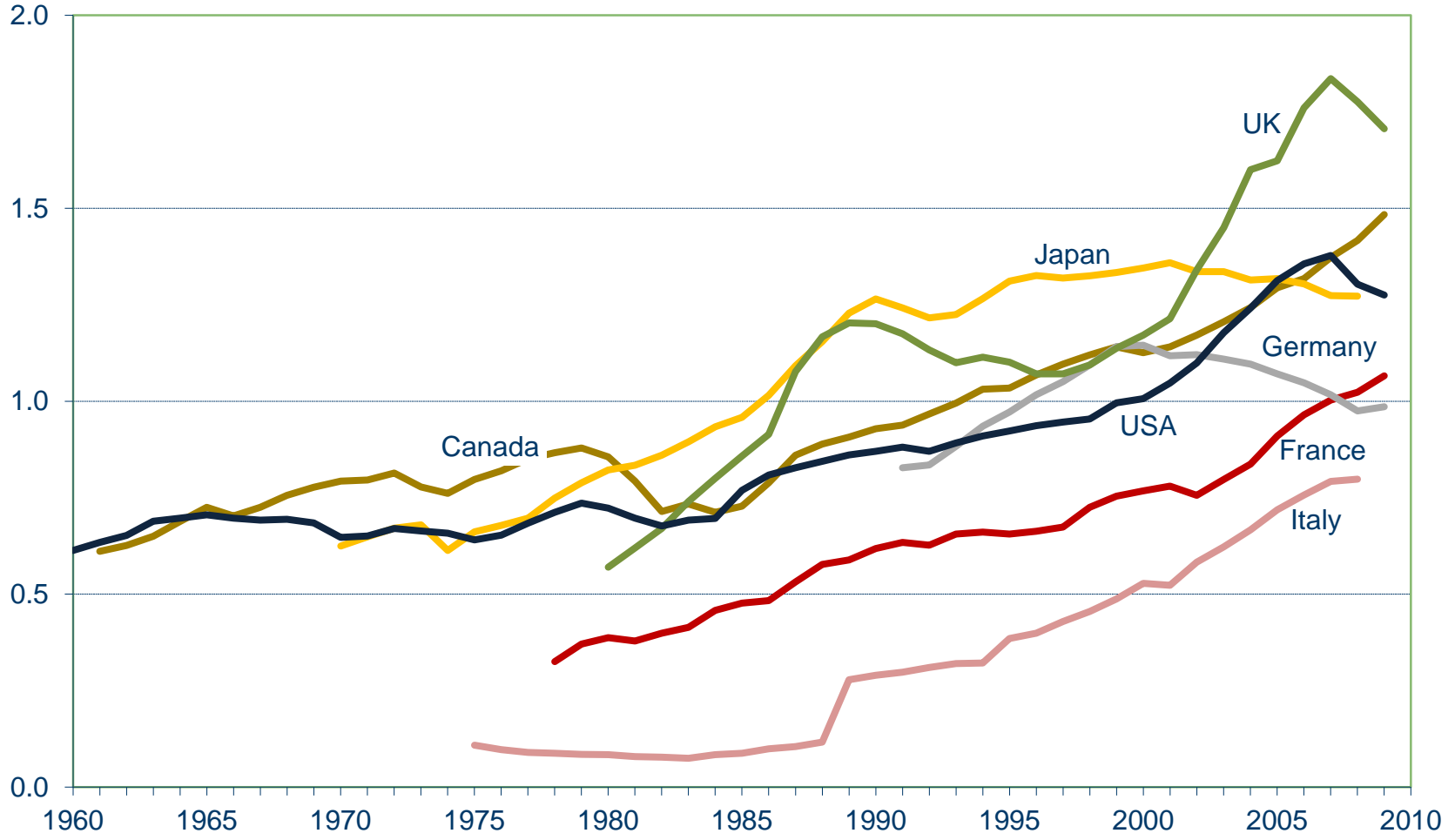
# Wealth-income ratios for France, UK and USA since 1900



# Household wealth-income ratio in G7 countries



# Household debt-income ratio in G7 countries



# Conclusions

- Wealth data getting stronger all the time; sufficient to estimate global distribution if care taken
- High global wealth inequality: Gini = 0.90, Share of top 1% = 46%
- Wealth differences between countries greater than income differences
- Wealth and income *imperfectly correlated* across countries: both for levels and inequality.
- Global wealth per adult grew 66% 2000 → 2007  
Little increase from 2007 to 2013.



## Conclusions (cont'd)

- Top tail adjustment important - - impact varies across countries
- Wealth/GDP  $\approx 2$  in low income countries; 4 in high income countries.
- Financial Assets/Real Assets  $\approx 2/3$  in low income countries;  $4/3$  in high income countries
- Wealth composition varies considerably across countries, even among those with similar income

# Extra Slides

# Log Liabilities Per Capita regression (SUR) with year and region dummies, 2000-2008

Variable	Coefficient	Standard Error
Log Consumption per capita	1.3313	.0774
Log Domestic Credit per capita	0.8158	.0485
% Urban Population	.0068	.0020
“R2” = .9572 329 Observations		

# Log Non-Financial Assets Per Capita regression with year and region dummies, 2000-2008

Variable	Coefficient	Standard Error
Log Consumption per capita	1.0656	.1333
Life Expectancy	4.5459	2.1360
Log Population Density	-0.0661	.0194
% Urban Population	.0068	.0020
R2 = .9105 132 Observations		