Collaborators

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- Credit Suisse Global Wealth Databook 2010, 2011
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 – 2012
- global distribution pattern for 2000, 2010 - 2012
- compared across countries using official exchange rates
- comparisons for adult population
Some details regarding methods

(1) adult population

(2) average wealth level: based on

• Complete household balance sheets and wealth survey data (covering 20 countries, 53% of world pop., 83% of world wealth)
• Financial balance sheets for 31 countries
• extended by regression methods; total of 150 countries
• region-income class averages imputed to 16 countries

(3) distribution of wealth: based on

• distribution data for 20 countries
• wealth dist estimated from income distribution for most other countries
• region-income class averages imputed to remaining countries
Estimating Wealth Levels

• Household Balance Sheet Data - - 17 countries complete, 31 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 - - 3 countries
  – Used when HBS data unavailable
    - Financial Assets adjusted, based on regressions
## Log Financial Assets Per Capita regression (SUR) with year and region dummies, 2000-2008

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Standard Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Log Consumption per capita</td>
<td>1.2157</td>
<td>.0861</td>
</tr>
<tr>
<td>GDP per capita growth rate</td>
<td>-0.0122</td>
<td>.0031</td>
</tr>
<tr>
<td>Log Market Capitalization Rate</td>
<td>0.1168</td>
<td>.0357</td>
</tr>
<tr>
<td>% Urban Population</td>
<td>.0088</td>
<td>.0023</td>
</tr>
<tr>
<td>Survey Dummy</td>
<td>-2.6763</td>
<td>.3581</td>
</tr>
</tbody>
</table>

“R2” = .9369
329 Observations
Aggregate Global Wealth, 2000-2012

Source: Credit Suisse Global Wealth Databook, Shorrocks/Davies/Lluberas
Global trends in wealth per adult, 2000-2012

USD per adult

- **Net worth**
- **Net worth at constant exchange rates**
- **Financial wealth**
- **Non-financial wealth**
- **Debt**
World wealth levels, 2012
## Wealth levels across Countries

<table>
<thead>
<tr>
<th>Year</th>
<th>Average wealth per adult</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>end 2010</td>
</tr>
<tr>
<td>Switzerland</td>
<td>$420,000</td>
</tr>
<tr>
<td>USA</td>
<td>$247,000</td>
</tr>
<tr>
<td>Japan</td>
<td>$215,000</td>
</tr>
<tr>
<td>China</td>
<td>$18,000</td>
</tr>
<tr>
<td>Indonesia</td>
<td>$11,000</td>
</tr>
<tr>
<td>India</td>
<td>$5,100</td>
</tr>
</tbody>
</table>

### Global household wealth using official exchange rates

<table>
<thead>
<tr>
<th>Year</th>
<th>Average wealth per adult</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>$30,672</td>
</tr>
<tr>
<td>2010</td>
<td>$47,720</td>
</tr>
<tr>
<td>2011</td>
<td>$51,078</td>
</tr>
</tbody>
</table>
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
## Wealth distribution data

<table>
<thead>
<tr>
<th>Country</th>
<th>Year</th>
<th>Unit</th>
<th>Share of top</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>2006</td>
<td>household</td>
<td>61.2</td>
</tr>
<tr>
<td>Canada</td>
<td>2005</td>
<td>family</td>
<td>69.0 50.4 35.8 15.5</td>
</tr>
<tr>
<td>Chile</td>
<td>2007</td>
<td>household</td>
<td>65.5 44.0</td>
</tr>
<tr>
<td>China</td>
<td>2002</td>
<td>person</td>
<td>59.3 41.4</td>
</tr>
<tr>
<td>Denmark</td>
<td>1996</td>
<td>family</td>
<td>98.7 76.4 56.0 28.8 22.3 11.7</td>
</tr>
<tr>
<td>France</td>
<td>2010</td>
<td>adult</td>
<td>62.0 24.0</td>
</tr>
<tr>
<td>Germany</td>
<td>2003</td>
<td>household</td>
<td>67.4 46.7</td>
</tr>
<tr>
<td>India</td>
<td>2002-3</td>
<td>household</td>
<td>69.9 52.9 38.3 15.7</td>
</tr>
<tr>
<td>Indonesia</td>
<td>1997</td>
<td>household</td>
<td>78.9 65.4 56.0 28.7</td>
</tr>
<tr>
<td>Italy</td>
<td>2008</td>
<td>household</td>
<td>59.4 42.3 29.6 12.2</td>
</tr>
<tr>
<td>Japan</td>
<td>1999</td>
<td>household</td>
<td>57.7 39.3</td>
</tr>
<tr>
<td>Korea,</td>
<td>1988</td>
<td>household</td>
<td>60.1 43.1 31.0 14.0</td>
</tr>
<tr>
<td>Netherlands</td>
<td>2008</td>
<td>household</td>
<td>78.5 62.7</td>
</tr>
<tr>
<td>New Zealand</td>
<td>2001</td>
<td>tax unit</td>
<td>67.0 48.0</td>
</tr>
<tr>
<td>Norway</td>
<td>2004</td>
<td>household</td>
<td>80.1 65.3</td>
</tr>
<tr>
<td>Spain</td>
<td>2005</td>
<td>household</td>
<td>64.2 41.6</td>
</tr>
<tr>
<td>Sweden</td>
<td>2007</td>
<td>adult</td>
<td>67.0 49.0 24.0</td>
</tr>
<tr>
<td>Switzerland</td>
<td>1997</td>
<td>family</td>
<td>71.3 58.0 34.8 27.6 16.0</td>
</tr>
<tr>
<td>Thailand</td>
<td>2006</td>
<td>household</td>
<td>69.5</td>
</tr>
<tr>
<td>UK</td>
<td>2005</td>
<td>household</td>
<td>62.8 44.3 30.5 12.5</td>
</tr>
<tr>
<td>USA</td>
<td>2007</td>
<td>family</td>
<td>83.4 71.5 60.4 33.8</td>
</tr>
</tbody>
</table>
Estimating shape of wealth distributions

- published wealth (and income) dist data for 20 countries
- impute missing quantile shares using “ungrouping” program
- compare wealth to income shares
- estimate wealth dist from income dist data for 143 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
Thousands of adults above wealth level (logarithmic scale)

Wealth level (USD, Logarithmic scale)

- Unadjusted wealth estimates
- Fitted Pareto
Unadjusted and adjusted wealth values for China

Number of adults above wealth level

Wealth level (USD, Logarithmic scale)

- unadjusted data
- adjusted data
Wealth inequality is very high, in 2011...

- share of the top 10% around
  - 60% in China, 71% in US, higher 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 0.893
  - most global inequality is *between country* inequality

- wealth more unequally distributed than income *across countries*
  - high income countries have bigger share of wealth than GDP
  - reverse is true of middle- and low-income nations
  - some exceptions in Nordic and Eastern Europe transition countries
### Global wealth distribution 2011, adults

<table>
<thead>
<tr>
<th>Decile</th>
<th>Share (%)</th>
<th>Decile</th>
<th>Share (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>-0.2</td>
<td>8</td>
<td>3.2</td>
</tr>
<tr>
<td>2</td>
<td>0.1</td>
<td>9</td>
<td>8.7</td>
</tr>
<tr>
<td>3</td>
<td>0.2</td>
<td>10</td>
<td>84.3</td>
</tr>
<tr>
<td>4</td>
<td>0.4</td>
<td>Top 5%</td>
<td>71.6</td>
</tr>
<tr>
<td>5</td>
<td>0.6</td>
<td>Top 1%</td>
<td>44.2</td>
</tr>
<tr>
<td>6</td>
<td>1.0</td>
<td>Gini</td>
<td>0.893</td>
</tr>
<tr>
<td>7</td>
<td>1.7</td>
<td>Mean</td>
<td>$51,078</td>
</tr>
</tbody>
</table>
The global wealth pyramid, 2012

Source: Credit Suisse Global Wealth Databook, Shorrocks/Davies/Lluberas
Regional composition of global wealth distribution, 2012
Owners of wealth above USD 100,000 by country, 2011

- 1% Netherlands
- 1% Korea
- 1% Taiwan
- 2% Brazil
- 3% Australia
- 3% Canada
- 3% Spain
- 6% China
- 6% France
- 7% UK
- 7% Germany
- 8% Italy
- 13% Rest of world
- 21% USA
- 16% Japan
- 1% Mexico
- 1% Belgium
Wealth-income ratios for France, UK and USA since 1900
Household wealth-income ratio in G7 countries
Household debt-income ratio in G7 countries

Canada
France
Germany
Italy
Japan
UK
USA
Conclusions

• **Levels** est’d. directly in 20 countries with 53% of global population & 83% of global wealth
  – 166 countries, 99% of pop. with regressions
• **Distribution** directly estimated in 20 countries, goes up to 163 countries with imputations
• Wealth differences between countries greater than income differences
• Wealth and income *imperfectly correlated* across countries: both for levels and inequality.