Economic growth and social capital: happily together ever after?

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Preliminary results

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Much of the economic literature refers to SC as a catalyst of economic interactions.

“Virtually every commercial transaction has within itself an element of trust, certainly any transaction conducted over a period of time. It can be plausibly argued that much of the economic backwardness in the world can be explained by the lack of mutual confidence.”

(Arrow, 1972, p. 357)
Many empirical works found evidence of a positive correlation between proxies of SC and economic growth. (La porta et al., 1999; Whiteley, 2000; Zak and Knack, 2001; Beugelsdijk et al., 2004;... just to name a few!)
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- Knack and Keefer (1997): trust and civic cooperation are strongly and positively associated with economic performance (1980 - 1992);
- Narayan and Pritchett (1997): higher levels of group membership are correlated with higher incomes.
There are many reasons to argue that SC supports economic growth:

- it reduces incentives for free-riding and moral hazard;
- it reduces transaction costs;
- it attenuates the principal-agent problem;
- it solves collective action problems.

Overall, higher social capital frees resources favouring new investments.
Economic growth and social capital

SC and GDP: an example

The threshold is about 3250 US$ per capita.
“If anyone here has anything against, speak now or forever hold your peace.”
Different views

A matter of lobbies:

- Olson (1982): associations can act as “distributional coalitions” that lobby for policies to protect interests of special groups inhibiting economic growth.

- the increase over time in associational strength, cohesion and influence tends to weaken economic growth.
Different views

A bad deal:
The US are characterized by a long-term decline in SC (Putnam, 2000).

- increase in business and time pressure, female participation to the labor market, residential mobility, disruption of marriage and family ties.
- the market tends “to reduce society to a desert” (Polanyi, 1968; Hirsch, 1976; Bartolini and Bonatti, 2008)
Different views

Some evidence:

- Putnam (2000): the decline of SC in US over the last 30 years;
- Helliwell (1996): evidence of a negative relationship between trust and productivity growth (1960 - 1992);
- Roth (2009): documents a negative correlation between trust and economic growth during the '90s.
The research question:

Does an increase in social capital go with economic growth?

My aim is to explore the relationship **over time** between social capital and economic growth overcoming the limitations of previous works:

- using a larger set of proxies of social capital;
The variables

**GDP:**

log of the GDP per capita (constant 2000 US $).

*Source: World Development Indicators*
The variables

**GDP:**

log of the GDP per capita (constant 2000 US $).

Source: World Development Indicators

**Social Capital:**

- group membership: share of the population participating in at least one group or association;
- trust in others: “generally speaking would you say that most people can be trusted, or that you can’t be to careful in dealing with people?”
- civic cooperation: observed through answers to questions the justifiability of:
  - “claiming government benefits which you are not entitled to”;
  - “avoiding a fare on public transport”;
  - “cheating on taxes if you have the chance”;
  - “accepting a bribe”.

Source: World Development Indicators
Is economic growth associated with an increase of social capital?
Is economic growth associated with an increase of social capital?
The answer seems to be...
Figure: Correlations between time trends of group membership and of the logarithm of GDP per capita.
Figure: Correlations between time trends of trust in others and of the logarithm of GDP per capita.
Figure: Correlations between time trends of the index of civicness and of the logarithm of GDP per capita.
Does the choice of the time-span matter?
Table: Correlations among long term trends of SC proxies and log of GDP per capita for periods of at least two years (standardized variables).

<table>
<thead>
<tr>
<th></th>
<th>group membership</th>
<th>trust in others</th>
<th>index of civicness</th>
</tr>
</thead>
<tbody>
<tr>
<td>log of GDP</td>
<td>−0.260**</td>
<td>−0.180</td>
<td>−0.289*</td>
</tr>
<tr>
<td></td>
<td>(−2.06)</td>
<td>(−0.72)</td>
<td>(−1.85)</td>
</tr>
<tr>
<td>Constant</td>
<td>0.202</td>
<td>−0.0502</td>
<td>−0.270*</td>
</tr>
<tr>
<td></td>
<td>(1.22)</td>
<td>(−0.24)</td>
<td>(−1.72)</td>
</tr>
<tr>
<td>Observations</td>
<td>43</td>
<td>50</td>
<td>49</td>
</tr>
<tr>
<td>t statistics in parentheses</td>
<td>* $p &lt; 0.10$, ** $p &lt; 0.05$, *** $p &lt; 0.001$</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table: Correlations among long term trends of SC proxies and log of GDP per capita for a time span longer than 15 years.

<table>
<thead>
<tr>
<th></th>
<th>group membership</th>
<th>trust in others</th>
<th>index of civicness</th>
</tr>
</thead>
<tbody>
<tr>
<td>log of GDP</td>
<td>$-0.243^*$</td>
<td>$-0.242^*$</td>
<td>$-0.346^{**}$</td>
</tr>
<tr>
<td></td>
<td>$(-1.91)$</td>
<td>$(-1.86)$</td>
<td>$(-2.60)$</td>
</tr>
<tr>
<td>Constant</td>
<td>$0.390^{**}$</td>
<td>$-0.0358$</td>
<td>$0.0321$</td>
</tr>
<tr>
<td></td>
<td>$(2.79)$</td>
<td>$(-0.23)$</td>
<td>$(0.19)$</td>
</tr>
<tr>
<td>Observations</td>
<td>30</td>
<td>30</td>
<td>30</td>
</tr>
</tbody>
</table>

$t$ statistics in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.001$
A possible interpretation

time series Vs. cross-country: a paradox

Hypothesis: social capital matters to trigger economic growth, but the latter erodes social capital when income inequality increases.
two groups of countries

**Figure:** List of countries by time trends of their Gini index. Data are from the Standardized World Income Inequality Database (SWIID).
A possible interpretation

Some preliminary evidence suggests that:
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country variations of the Gini index

+ gdp, - sc
A possible interpretation

Some preliminary evidence suggests that:

- country variations of the Gini index

The graph illustrates the relationship between GDP and social capital, showing that there is no significant correlation (gdp & SC: n.s.).
Across countries:

- a larger endowment of SC goes with a higher GDP. In some cases a U-shaped relationship is found;

- even if the early stages of economic development are associated with lower levels of SC, the growth process itself will solve the problem;
Hence, will raising GDP increase SC?

Over time, economic growth is negatively correlated with trends of SC (at least in countries with increasing economic inequalities).

This evidence is compatible with the hypothesis that SC is important to trigger economic growth. However, SC is eroded when economic growth turns into increasing economic inequality.
Thanks for your kind attention!

Any comments or suggestions are welcome
The availability of internationally comparable time series on social capital variables is the main limiting aspect.

- **WVS/EVS data**
  - collected in 6 waves between 1981 and 2009;
  - all available countries with at least 10 years (this constraint will be removed);
  - no transition economies (Roth, 2009; evidence from data);
  - 33 countries;
  - 186,000 observations.
Respondents were asked to mention whether they belonged or were performing unpaid voluntary work for any of the following groups or associations:

- social welfare service for elderly;
- religious organization;
- education, arts, music or cultural activities;
- labour unions;
- political parties;
- local political actions;
- human rights;
- conservation, the environment, ecology;
- other groups.

- animal rights;
- professional associations;
- youth work;
- sports or recreation;
- women’s group;
- peace movement;
- organization concerned with health;
- consumer groups;
Table: Descriptive statistics and missing values for the pooled data-set of countries with at least 10 years long time-spans.
### Descriptive statistics

<table>
<thead>
<tr>
<th>variable</th>
<th>wave 1</th>
<th>wave 2</th>
<th>wave 3</th>
<th>wave 4</th>
<th>wave 5</th>
<th>wave 6</th>
<th>total</th>
</tr>
</thead>
<tbody>
<tr>
<td>group membership</td>
<td>0</td>
<td>0.157</td>
<td>0.0341</td>
<td>0.119</td>
<td>0.00192</td>
<td>0.0467</td>
<td>199437</td>
</tr>
<tr>
<td>trust in others</td>
<td>0.0613</td>
<td>0.0688</td>
<td>0.0378</td>
<td>0.0291</td>
<td>0.0340</td>
<td>0.0316</td>
<td>205105</td>
</tr>
<tr>
<td>index of civicness</td>
<td>0.0576</td>
<td>0.0970</td>
<td>0.166</td>
<td>0.320</td>
<td>0.0987</td>
<td>0.0326</td>
<td>184050</td>
</tr>
<tr>
<td>ln of GDP per capita</td>
<td>0.0116</td>
<td>0.00659</td>
<td>0.0233</td>
<td>0.0220</td>
<td>0.0342</td>
<td>0.0187</td>
<td>210462</td>
</tr>
<tr>
<td>Gini index</td>
<td>0.0634</td>
<td>0.0303</td>
<td>0</td>
<td>0.0654</td>
<td>0.301</td>
<td>0.415</td>
<td>186626</td>
</tr>
</tbody>
</table>

**Table:** Percentage of data missingness across waves for the pooled data-set of countries with at least 10 years long time-spans.