

Social capital and sustainability

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In the last few years much new research has taken place in the “soft” areas of development related to the large differences between the “civic society” of countries. The field is still full of wooly concepts and ideas. However, it increasingly looks as if the underlying concept of *social capital* can be developed into something well understood and empirically applicable. Several new findings suggest that this may help to solve some of the main development puzzles.

Broadly speaking social capital is the ability of people to organize themselves to solve local problems. Many problems of sustainability are common pool problems. They may be solved by either public steering or by the affected people organizing a solution themselves. The condition for the latter is that people are aware of the problem and have enough social capital.

The following discusses the main definitions of social capital, the problems of measurement, and lists some of the empirical results reached. The last section will deal with the policy problem: can social capital be changed?

1. Definitions and the two dreams

Social capital is the word that is currently applied to a whole spectrum of closely related concepts, some of which are old.²⁾ The concepts belong to three main types as listed in Table 1.

Table 1. The three families of social capital definitions

sc1	Trust. It can be divided into (a) generalized trust and (b) special trust, such as (b1) trust in the law enforcement system, (b2) trust in the political and administrative system and (b3) local trust
sc2	Cooperative ability. Peoples ability to work together
sc3	Network. The density of voluntary networks

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1. I am grateful to the participants in the workshop “Sustainable Development with a Dynamic Economy” at the DSE forum in Berlin July 2001 and to Gert Tinggaard Svendsen.
 2. This section and the next is a brief summary of Paldam (2000), which contains the key references.

The reader can immediately see that the three definitions are closely related. It is (much) easier for people to cooperate if they trust each other, and cooperation generates trust. Networks operate on trust and in a locality with many networks it is easier to establish cooperation.

The two social capital dreams are: (D1) The three definitions are basically the same. (D2) Social capital is a powerful variable that can explain some of the mysteries in economic development. The empirical work I know of – including my own – suggests that both dreams may come true at least partially. However, much research is still needed. Before we leave the definitions, four main issues that have played a big role in the literature should be mentioned:

(1) Social capital does not need to be benign. People may have much trust within a group (a tribe or a gang) and none between groups. They may even fight. Also, when people cooperate and create networks they may do it for good and bad purposes. Clearly, we are dealing with a concept that may be as well *benign as malign*. Discussions of social capital have a strange propensity to concentrate on the benign part of the story.

(2) All three definitions are on the *micro level*. They may be generalized (aggregated) to the macro level, but it is always difficult to *aggregate*, especially if the groups of society are very different.

(3) Social capital has a neat translation into the language of game theory – loved by economic theoreticians, as it allows fruitful formalisations into models that can be solved. However, in experiments and in practice people free ride (much) less than they do in the solutions. The *excess cooperation* in such games is social capital. Several explanations exist for this phenomenon, and it is neat indeed to build theories around this well known fact.

(4) Social capital is trust between the agents, so it is difficult for third parties such as governments and development aid institutions to build it. If outsiders change the rules of the game, it may prevent the voluntary cooperation of people and teach them to expect side payments. This is known as the *dilemma of third party enforcement*.

2. Measurement: the emergence of simple methods³⁾

During the last five years social capital has advanced rapidly upward on the agenda of many research institutions and international organizations. The main reason probably is that simple methods of measurement have been developed. The most easily applicable is:

Putnam's Instrument: The density of voluntary organizations.

When people are asked in polls, a clear pattern emerges: In DC's the average person belongs to 1.5 to 2.5 voluntary organizations. The corresponding numbers in the post-communist countries of Eastern Europe are as low as 0.4 to 0.7. The numbers for the LDC's examined are typically even lower. Some LDC's (eg, India) have so few voluntary organizations that Putnam's Instrument fails. Where it works, it is easy to apply. It is

3. A measure can be *near* to the theory or a more distant *proxy*. That is, it may catch some aspects, but not all of a definition. Proxies are used either because they are already available or because they are easy to use. *Theory near* measures are, of course, preferable, but they may be too abstract for people to answer.

a question about facts, which people normally answers.⁴⁾

It is interesting to contemplate if Putnam's Instrument is closest to definition 1, 2 or 3. It is arguable that it is a *proxy* to each of them. However, it is not very *near* to either of them. However, most researchers who have tried measuring social capital have found that Putnam's Instrument is a rather good measure, as will be discussed below.

It is more difficult to ask people about the abstract subjects of trust and network in polls, but several methods exist. An important purpose of building trust and network to other people is to obtain a resource to use in times of need. The most concrete possibilities are therefore payoff questions:

Payoff questions. People are asked about the resources they believe they can draw on from their friends/network in times of their own need, or will supply to their friends/network when they need.

This is still (almost) concrete, and it is likely that people will answer. However, my experience is that this question works less well than Putnam's Instrument.

Trust: The most "*theory near*" measurement is the generalized trust question used in many studies: "Do you think that people in general can be trusted, or do you think that one cannot be too careful in dealing with people?" It has been used in at least 40 countries and the answers differ widely. In our own work we have compared Denmark (74% trust) and Russia (35% trust). In several LDC's even lower numbers have been reached.

When it comes to special trust, the differences are even larger: In Denmark no less than 95% answer that they have either "a great deal" or "quite a lot" of trust in the police, while the corresponding number for Russia is 22%. It appears that the results found for Russia are rather typical for the answers given in middle income to poor countries.

People from rich countries often overlook a simple fact when they (we) discuss development problems. While they (we) trust public institutions and the authorities this is not the case in most poor countries. It is also an interesting finding that the level of trust found in questionnaires in different countries is closely correlated with the level of corruption measured for the same countries. With more corruption trust is less. When people do not trust institutions, it is actually for good reasons. In fact the best existing proxy for low trust I have been able to find is corruption.

Finally questions have been formulated to measure **networks**. The most refined techniques lead to network maps, where the individual links are classified according to strength, but these methods are difficult to apply in questionnaires. Therefore, my own approach is to use payoff questions.

Fortunately, most of the measures produce broadly similar results, eg we have found that the ratio between social capital in Denmark and the USA is around 0.75 to 1.5 by all measures. Between Denmark and Russia the ratios are in the range from 2.5 to 5, where the low scores are in Russia. However, in some other countries the variations between the measures are larger.

Note that all of these measures tend to catch good social capital only. To catch bad social capital one needs to use proxies - proxies often only available at the macro level. At the existing level of knowledge I think

4. They are unlikely to say that they belongs to a criminal organization even if they do! So Putnam's instrument will only catch positive social capital.

that corruption is the best available measure of negative social capital. Corruption is known at the macro level for about 100 countries.⁵⁾ More than 60% of the cross-country variation in corruption can be explained simply by GDP per capita. The poorer a country is, the more corrupt it generally is. As the GDP-level changes slowly, so does the level of corruption. Of the remaining 40% another 8% can be explained by various measures for “culture”. This leaves a little more than 30% of the variation of which we can explain about half by the best models. The strongest of the other variables found to influence corruption is here inflation that is a volatile variable. If inflation rises by a factor 10 corruption increases by almost 1 point on Transparency International’s 10 point scale. This quickly undermines trust in the institutions.

3. Some empirical results: a powerful variable?

The next question concerns the power of social capital as an explanatory variable. Political scientists study social capital in order to show that it is a necessary prerequisite for developing political and civil rights – they have reached interesting results (see Deth et al, 1999). Environmentalists study social capital to see if sustainable organizations are likely to be formed steering common pool problems.⁶⁾ Economists study social capital to explain production and growth.

I shall consider the last literature: When micro data are collected for social capital they are easy to use in models explaining the earnings of households (earnings functions). That is, questionnaires measuring social capital have background questions about household income and education.

These items can be used to explain the earnings differences. It is typically found that the length of education explains app 7-8% of the income differences. This looks low, but it is a short-run result with many measurement problems. Thousands of studies exist on the impact of human capital, and all the links between the micro and macro level have been explored, so here we are on reasonably firm ground. We know that the seemingly modest micro result “translates” into a macro-growth result where human capital “explains” something like half of GDP.

Till now only a handful of studies have entered social capital as an additional variable in the earnings function besides human capital. Some of the networks, we all have, are to our old classmates, so the two variables are dependent. However, the correlation is not so small that we are able to sort out the two effects. It appears that social capital explains between 40 and 100% as much as human capital in these functions. The results suggest that the effect of social capital in the earnings function are larger in poor than in rich countries.

The few available results are thus promising, and even if social capital is “only” half as powerful as human capital, it is still a potentially important variable. It is interesting that Putnam’s Instrument normally is the social capital measure that works best in explaining income differences.

Other social capital results concern the importance of social capital for institution building. It is a large problem for development aid that many projects succeed only if an institution can be developed running the project. It is also well known that the ease with which such institutions can be built differs greatly between

5. Once more I have to refer to other work for details, references, etc. The reader may here consult Paldam (2001).

6. The largest project in this field is probably CIPEC, at Indiana University, Bloomington. It uses an earlier terminology, but many results reached (see Ostrom & Walker, 1997) are easy to recast in a social capital terminology.

countries. It appears likely that this depends on the amount of social capital available in the project location prior to the project. Some empirical results confirm this suggestion. A related approach, which has been successfully tried, is to compare social capital measures for villages in a district and the assessed success of the villages in various fields.

Overall these findings suggest that social capital is a variable that can be measured and used as a fairly powerful variable for a number of purposes. However, our knowledge has a glaring gap.

4. Policy aspects: Changing social capital

It has proved difficult to demonstrate how social capital is built and how it can be increased.⁷⁾ Hence it is difficult to use social capital as a policy variable. This is likely to change, but in the meantime it is important to obtain measurement and study the effects of the variable.

Robert D. Putnam has argued that social capital is a variable that develops from historical experiences over centuries, and hence it is difficult to change. If this is true, it is a troubling result. Putnam's conjecture builds on a comparison of North and South Italy, where the South has a long history of authoritative rule. His point is that the difference in social capital persists even 1½ century after the Italian unification. Fortunately, cross-country comparisons of social capital related variables generally do not show such a persistent effect of history. So my guess is that 2-4 decades can make a big difference.

This can be generalized into the theory that dictatorship destroys positive social capital and may even generate negative social capital.⁸⁾ The reason is that network and voluntary organizations are possible focal points for anti government movements. Therefore dictators normally try to create distrust among people, to "spy" on networks, and to replace voluntary organizations by state-controlled ones. As a reaction secret network tends to emerge. Such networks may develop into criminal organizations, which can survive even long after a change to a democracy.

This all argues that social capital may have a ratchet like effect. It is hard to improve, but it can be quickly destroyed and turned negative.

Finally, there is one important point: social capital measures the ability of peoples to organize themselves and manage local problems and opportunities. This tie in social capital to sustainability in a direct way. If all kinds of "commons" have to be rationally exploited only local people can do it and that demands that they can cooperate and thus trust each other.

Hence it would be a major breakthrough if we could discover ways in which social capital can be increased.

7. Several of the leading figures in growth and capital theory have argued that social capital is not a "capital" before we can demonstrate that it is accumulated from a flow of something produced.

8. This theory is developed from the one of Putnam in Paldam & Svendsen (2000, 2002).

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