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## Does social capital affect foreign aid allocations?

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by

**Stephen Knowles**

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by

**Stephen Knowles**

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# **Does Social Capital Affect Foreign Aid Allocations?**

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## **Abstract**

This paper explores the issue of whether countries with high levels of social capital give more foreign aid than others. It is often argued that in countries with high levels of social capital (as measured, for example, by trust, civic norms and membership of community groups) levels of cooperation and altruistic behaviour will be higher. This paper explores whether such altruistic behaviour extends to giving foreign aid. Cross-country data are used to assess whether countries with high levels of social capital give more foreign aid, as a proportion of GDP, than countries where social capital is lower.

## **Outline**

1. Introduction
2. The Equation to be Estimated and Data Issues
3. Empirical Results
4. Discussion of Results
5. Conclusion and Suggestions for Further Research



## I. INTRODUCTION

Social capital can be thought of as the extent of interaction, trust and mutual co-operation that exists between individuals in a society (Knack and Keefer, 1997; Whiteley, 2000). Putnam (1993) argues that differences in social capital can explain the divergent economic performance of Southern and Northern Italy. Knack and Keefer (1997) and Zak and Knack (2001), using cross-country data, show that social capital is positively correlated with economic growth across countries. Whiteley (2000), also using cross-country data, finds that social capital has at least as strong an effect on economic growth as does human capital.

The aim of this paper is to ask a different question about social capital: do differences in social capital explain why some countries give more foreign aid, as a proportion of GNP, than others. It is typically argued that higher levels of social capital will lead to improved economic performance, because high degrees of trust, co-operation and interaction allow agents to solve collective action problems and to minimise transaction costs (see, for example, Knack and Keefer, 1997). *A priori*, we might also expect higher levels of trust and co-operative behaviour towards other members of the same society to spill over to altruistic behaviour towards the citizens of other countries. However, whether this actually occurs will depend on how wide the radius of trust and co-operation is. It may be that people who trust those they interact with regularly are suspicious of strangers. Therefore, whether higher levels of trust, co-operation and associational activity do lead to more altruistic behaviour towards foreigners remains an empirical question.

There is a significant empirical literature examining the effects of foreign aid on variables such as economic growth and infant mortality (see, for example, Boone, 1996; Burnside and Dollar, 2000; Hansen and Tarp, 2000; Hansen and Tarp, 2001; Morrissey, 2001; Dalgaard, Hansen and Tarp, 2002). There is also a substantial literature that looks at why some countries receive more aid than others (see, for example, McKinley and Little, 1979; Maizels and Nissanke, 1984; Trumbull and Wall, 1994; Alesina and Dollar, 2000; Burnside and Dollar, 2000). Some of these studies also examine why individual countries favour giving aid to some countries, rather than others. However, I am



unaware of any empirical work that focuses on why some countries disburse more aid, to all countries in total, than do other countries.

## II. THE EQUATION TO BE ESTIMATED AND DATA ISSUES

The main aim of this paper is to assess the effect of social capital on foreign aid allocations. However, it is important to control for the effects of other variables that may have an impact on foreign aid allocations. Unfortunately, it will not be possible to control for every variable that may impact on aid, due to the limited sample size. There are only a small number of countries who give foreign aid, which gives limited degrees of freedom to work with in a cross-country context.<sup>1</sup> For this reason, the only control variable considered is income per capita.<sup>2</sup>

If income is subject to diminishing marginal utility, this implies that the higher is income per capita, the less utility donor countries are likely to lose from giving aid, suggesting that aid allocations may well be greater from high income per capita countries. The equation to be estimated is given by

$$(1) \text{AID}_{it} = \alpha + \beta_1 \text{SOC}_{it} + \beta_2 \text{YP}_{it} + e_{it}$$

Where AID is the proportion of GNP allocated in foreign aid, SOC is a measure of social capital, YP is income per capita and  $e_{it}$  is the error term.

Three different proxies of social capital will be used: TRUST, CIVIC and ASSOC. These three measures of social capital are derived from the World Values Survey (Inglehart et al., 2000). TRUST measures the percentage of individuals in a country who

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1 Foreign aid data are available that have a time-series dimension. However, this is not the case for the social capital variables, for which the data are only available for most countries at one point in time. This precludes panel-data analysis.

2 Note, however, that variables which may explain why some countries receive more aid, will not necessarily be important in explaining why some countries give more aid. Although political and strategic considerations may explain why country x gives more aid to country y than to country z, it is less likely that political factors will determine the amount of aid donated by country x to all countries in aggregate. It could, perhaps, be argued that countries with a more active foreign policy may give more aid in total than other countries, but this does not seem to be the case. For example, the Scandinavian countries give much more aid than does the United States (see Table One). Likewise, although it has been shown (for example, Alesina and Dollar, 2000) that former colonial powers tend to give more aid to their former colonies than to other countries, the data presented in Table One do not appear to show that former colonial powers give more aid to all countries in total.

agreed with the statement “most people can be trusted”, after deleting the “don’t know” responses. CIVIC is an index which ranges from 5 to 50, where respondents were asked to assign a score between 1 and 10 as to whether they agreed that certain behaviours were justified, with a 1 indicating the behaviour was never justified and a 10 indicating that the behaviour was always justified. The five behaviours are (1) claiming a government benefit to which you are not entitled, (2) avoiding a fare on public transport, (3) cheating on taxes if you have the chance, (4) buying something that you knew was stolen and (5) accepting a bribe in the course of one’s duties. For our purposes, the reported values of CIVIC are transformed so that a score of 50 indicates the *highest* possible level and a score of 5 indicates the *lowest* possible level of CIVIC. ASSOC is the sum of the proportion of people who were active members in four types of voluntary organisations: (1) church or religious, (2) sports or recreation, (3) music or educational organisation and (4) charitable organisation. The three social capital variables are all taken from wave two (1990-93) of the World Values Survey, as many of the OECD countries were not included in the most recent wave of the World Values Survey.

Although there is a precedence in the literature (e.g. Knack and Keefer, 1997; Zak and Knack, 2001; Whiteley, 2000) for using TRUST, CIVIC or ASSOC as proxies for social capital, it is important to acknowledge some potential problems with these measures of social capital. The coverage of the World Values Survey differs significantly from country to country. The sample size in the most recent survey has a range of 71 (Ghana) to 6000 (Colombia). In addition, the sample in some countries is not representative of the population as a whole. For example, in Argentina, the sample is limited to the urban population and in India only 10% of the sample is drawn from rural areas (Inglehart et al, 2000).

With respect to TRUST, Glaeser et al (2000) show that people’s answers to the trust question from the World Values Survey are not correlated with how trusting they are of others in economic experiments. However, there is evidence of a positive correlation between TRUST and how *trustworthy* the individual is. Therefore, it may be more appropriate to interpret TRUST as a measure of trustworthiness, rather than how trusting individuals are of others. The validity of TRUST as a measure of trustworthiness is also confirmed by an experiment conducted by the *Reader’s Digest*, who dropped a number of wallets in various countries around the world to see how many would be returned and

interpreted the proportion of wallets returned as a measure of trustworthiness. TRUST (from the World Values Survey) has a correlation of 0.67 with the *Reader's Digest* trustworthiness measure (Knack and Keefer, 1997). One potential weakness of the ASSOC variable is that it only takes into account the number of associations an individual belongs to, rather than taking into account the strength of membership. For example, active membership of a volunteer fire brigade is treated as equivalent to occasionally attending church.

Data on YP are from the World Bank (1997). The data measure income per capita in 1995, measured in international dollars (PPP).

The AID data are from the World Bank (1997) and are for 1994. This publication reports data for a variety of different categories of financial assistance, including bilateral grants, bilateral loans, contributions to multinational institutions and net grants by NGOs. The World Bank (1997, p.307) defines these types of assistance as follows. Bilateral grants are transfers in money or in kind for which no repayment is required. Bilateral loans are loans extended by governments or official agencies that have a grant element of at least 25 percent and for which repayment is required in convertible currencies or in kind. Contributions to multilateral agencies are concessional funding received by multilateral institutions from Development Action Committee members in the form of grants or capital subscriptions. Net grants by NGOs are grants made by non-government organisations, net of subsidies from the official sector.<sup>3</sup>

It is possible that some of these aid disbursements are more likely to be influenced by the prevailing level of social capital than others. Government aid allocations are funded out of general taxation, whereas NGOs rely on donations from private individuals. Whereas aid given by governments is likely to include both an altruistic and a non-altruistic component, aid disbursed via NGOs is likely to be purely altruistic in nature. It is the altruistic component of aid that is likely to be determined by the prevailing level of social capital, meaning we would expect aid given by NGOs to be more highly correlated with social capital than aid disbursed by governments. In order to test whether

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<sup>3</sup> Data are for all Overseas Development Assistance (ODA) flows to both part I and part II countries. Part II countries are transitional economies, who traditionally were not eligible for ODA assistance. Part I countries are those who traditionally have qualified for ODA.

the effects are the same for different types of aid, the empirical work will use four measures of aid as dependent variables: net contributions by NGOs, contributions to multilateral institutions, bilateral grants and total ODA (the sum of contributions to multilateral institutions, bilateral grants and bilateral loans).

There are 21 members of the OECD Development Action Committee (DAC). Two of these countries, New Zealand and Luxembourg, do not have data for the social capital variables. This limits our effective sample size to 19 countries. Data for the foreign aid variables, along with summary statistics are reported in Table One. Note that the data are presented for all member countries of the DAC. However, the summary statistics are only for the 19 countries included in the empirical work.

The only countries for which total ODA exceeds the United Nations' target of 0.7 percent of GNP are Denmark, the Netherlands, Norway and Sweden. There is a reasonable amount of variation in all of the aid variables across countries. It is also worth noting that the vast majority of aid is disbursed by governments, rather than by voluntary donations to NGOs. On average, net contributions to NGOs are only equal to 8.5 percent of total ODA.

Turning to the social capital variables, TRUST varies from a high of 66.1 in Sweden to a low of 21.7 Portugal. There is far less variation across countries in CIVIC: the maximum score of 41.8 is recorded by Denmark, with the low of 36.5 recorded by Finland. Australia enjoys the highest level of ASSOC of 1.01, with Spain recording the low of 0.06. There is a limited amount of variation in YP for this sample of countries.<sup>4</sup>

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<sup>4</sup> Although the figure for the United States is almost twice as high as that for Portugal, the coefficient of variation for this variable is not high.

**Table One: Aid Allocation Data for 1994**

Country	Total ODA (% GNP)	Bilateral Grants (% GNP)	Multilateral (% GNP)	NGOs (% GNP)
Australia	0.341	0.257	0.084	0.023
Austria	0.461	0.295	0.076	0.021
Belgium	0.358	0.190	0.162	0.023
Canada	0.444	0.282	0.163	0.052
Denmark	1.056	0.628	0.484	0.028
Finland	0.365	0.262	0.103	0.003
France	0.689	0.478	0.163	0.021
Germany	0.466	0.278	0.160	0.053
Ireland	0.287	0.128	0.156	0.119
Italy	0.290	0.068	0.105	0.006
Japan	0.295	0.119	0.083	0.005
Luxembourg	0.447	0.28	0.16	0.033
Netherlands	0.796	0.583	0.282	0.080
New Zealand	0.242	0.185	0.057	0.035
Norway	1.230	0.817	0.300	0.117
Portugal	0.383	0.167	0.139	0
Spain	0.314	0.055	0.130	0.027
Sweden	1.008	0.762	0.242	0.069
Switzerland	0.405	0.303	0.104	0.065
UK	0.338	0.185	0.158	0.055
USA	0.174	0.148	0.038	0.041
Max	1.230	0.817	0.484	0.119
Min	0.174	0.055	0.038	0
Mean	0.505	0.316	0.165	0.043
Std Dev	0.286	0.229	0.103	0.036
Coeff Var	0.566	0.725	0.624	0.837

Total ODA is Total Overseas Development Assistance (the sum of bilateral grants, bilateral loans and contributions to multilateral institutions) as a percentage of GNP. Bilateral Grants is bilateral grants as a percentage of GNP, Multilateral is contributions to multilateral institutions as a percentage of GNP and NGOs is net grants by NGOs as a percentage of GNP.

**Table Two: Social Capital and Income Variables**

Country	TRUST 1991-2	CIVIC 1991-2	ASSOC 1991-2	GNP 1995
Australia	40	41.2	1.01	18940
Austria	31.8	41.6	0.2	21250
Belgium	33.5	36.5	0.26	21660
Canada	53.1	40.2	0.43	21130
Denmark	57.7	41.8	0.2	21230
Finland	62.7	36.5	0.38	17760
France	22.8	36.5	0.21	21030
Germany	32.9	39.9	0.26	20070
Ireland	47.4	40.3	0.25	15680
Italy	35.3	39.9	0.19	19870
Japan	41.7	41.8	0.1	22110
Netherlands	53.5	39.7	0.37	19950
Norway	65.1	40.9	0.3	21940
Portugal	21.7	37.1	0.18	12670
Spain	34.2	39.2	0.06	14520
Sweden	66.1	40.9	0.27	18540
Switzerland	42.6	41	0.76	25860
United Kingdom	43.7	40.5	0.15	19260
USA	51.1	40.8	0.53	26980
Max	66.1	41.8	1.01	26980
Min	21.7	36.5	0.06	12670
Mean	44.047	39.805	0.322	20024
Std Dev	13.396	1.815	0.232	3421.3
Coeff Var	0.304	0.046	0.720	0.171

TRUST, CIVIC and ASSOC are defined in the text. GNP is income per capita, measured in international dollars.

### III. EMPIRICAL RESULTS

Four different measures of foreign aid were used as the dependent variable in the empirical work: total ODA, bilateral grants, contributions to multilateral organisations and net grants by NGOs. The empirical results obtained, when TRUST was used as the proxy for social capital, are reported in Table Three. Initial testing suggested some potential problems with heteroscedasticity. Therefore, all t-statistics reported are based on White's correction for an unknown form of heteroscedasticity.

**Table Three: TRUST and Foreign Aid Allocations**

	Column (i)	Column (ii)	Column (iii)	Column (iv)
	Total ODA	Mulilateral	Bilateral	NGOs
Constant	0.105 (0.32)	0.097 (0.99)	-0.181 (-0.73)	-0.014 (-0.37)
TRUST	0.011* (2.02)	0.004* (2.19)	0.010* (2.26)	0.001* (2.24)
PPP	-0.4E-5 (-0.24)	-0.5E-05 (-0.96)	0.3E-05 (0.31)	-0.8E-07 (-0.04)
R <sup>2</sup>	0.255	0.229	0.328	0.249
N	19	19	19	19
Diagnostics:				
LM	0.997	10.963**	1.304	0.482
RESET (2)	9.880**	0.239	11.285**	0.231
RESET (3)	4.804*	2.096	6.043*	0.111
RESET (4)	3.357 <sup>†</sup>	2.510	3.776*	0.503

Asymptotic t-statistics based on heteroscedasticity-consistent standard errors are reported in parentheses. \*\*, \* and <sup>†</sup> indicate significance at the 1%, 5% and 10% level respectively, on the basis of two tailed tests. LM is the Lagrange multiplier test for normality of the residuals and is chi-squared distributed, with the null hypothesis of normally distributed residuals. The RESET tests for mis-specification are F-distributed, with the null hypothesis of correct specification.

TRUST is significant at the five percent level in all of the equations, with the point estimate being the highest for total ODA. In terms of economic significance, a one percentage point increase in TRUST will result in an extra 0.011 percentage points of foreign aid as a proportion of GNP. Alternatively, a one standard deviation increase in TRUST would increase foreign aid by 0.15 percent of GNP. YP is insignificant in all

regressions, suggesting that income per capita has no effect on foreign aid allocations across countries. This may be due to the fact that there is minimal variation in the data for PPP across countries. When interpreting the results it should be kept in mind that non-normality of the residuals may be a problem with the results for multilateral aid, and that misspecification may be a problem for the results for total ODA and bilateral grants. However, there are no problems with the diagnostics for the NGOs regression.

The results obtained when CIVIC is used as a proxy for social capital are presented in Table Four. CIVIC is only significant in the NGOs regression. This suggests that civic norms are not as important as trust in determining how much foreign aid countries chose to allocate.

**Table Four: CIVIC and Foreign Aid Allocations**

	Column (i)	Column (ii)	Column (iii)	Column (vi)
	Total ODA	Multilateral	Bilateral	NGOs
Constant	-0.596 (-0.51)	-0.214 (-0.45)	-0.507 (-0.59)	-0.227 <sup>†</sup> (-1.88)
CIVIC	0.028 (0.84)	0.011 (0.90)	0.016 (0.66)	0.007* (2.04)
PPP	-0.3E-07 (-0.002)	-0.4E-05 (-0.79)	0.9E-05 (0.66)	-0.3E-06 (-0.13)
R <sup>2</sup>	0.031	0.038	0.047	0.118
N	19	19	19	19
Diagnostics:				
LM	2.940	10.803**	2.596	1.575
RESET (2)	0.538	0.305	0.832	2.902
RESET (3)	0.320	0.544	1.512	5.839*
RESET (4)	0.203	0.337	1.099	3.882*

See notes to Table Three.

The results obtained when ASSOC is used to proxy for social capital are reported in Table Five. ASSOC is insignificant in all the regressions.



**Table Five: ASSOC and Foreign Aid Allocations**

	Column (i) Total ODA	Column (i) Mulilateral	Column (ii) Bilateral	Column (iii) NGOs
Constant	0.359 (0.16)	0.178 <sup>†</sup> (1.92)	0.069 (0.29)	0.024 (0.454)
ASSOC	-0.213 (0.31)	-0.109 (-1.52)	-0.173 (-0.14)	0.014 (0.46)
PPP	0.1E-04 (0.62)	0.1E-05 (0.19)	0.1E-04 (0.97)	0.7E-06 (0.28)
R <sup>2</sup>	0.03	0.056	0.033	0.017
N	19	19	19	19
Diagnostics:				
LM	3.249	13.837**	3.112	3.211
RESET (2)	0.115	0.230	2.298	0.297
RESET (3)	0.616	0.884	1.396	0.243
RESET (4)	0.397	0.821	0.940	0.155

See notes to Table Three.

#### IV. DISCUSSION OF RESULTS

When TRUST is used to proxy for social capital, there is evidence that high social capital countries allocate more aid as a proportion of GNP, than do countries with lower levels of social capital. However, when CIVIC is used to proxy for social capital, this is only true for net grants by NGOs. There is no evidence of a correlation between ASSOC and foreign aid allocations. This result may well be driven by the fact that TRUST is a more accurate measure of social capital, than is either CIVIC or ASSOC. Other studies, such as Knack and Keefer (1997) have found TRUST to be a superior proxy of social capital compared to either CIVIC or ASSOC. Knack and Keefer (p.1258) choose to focus on TRUST as their primary social capital indicator “because it is more directly relevant to economic activity – as indicated by the greater attention the concept has received in the literature – and because CIVIC exhibits so little variation across

countries.” Whiteley (2000) also relies on TRUST, rather than other potential variables from the World Values Survey, as his proxy for social capital.

## **V. CONCLUSION AND SUGGESTIONS FOR FURTHER RESEARCH**

The title of this paper asks whether social capital affects foreign aid allocations. The empirical results obtained in this paper suggest that the answer is yes, but only when TRUST is used as a proxy for social capital. No evidence is found of a significant correlation between income per capita and foreign aid allocations. It would be interesting to examine whether a reduction in social capital accounts for the reduction in foreign aid allocations made by many countries over time. However, sufficient time-series data do not yet exist for the social capital variables to examine this issue.

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