**CREDIT Research Paper**

**No. 02/17**

# Does Social Capital Affect Foreign Aid Allocations?

**by**

**Stephen Knowles**

**Centre for Research in Economic Development and International Trade, University of Nottingham**

The Centre for Research in Economic Development and International Trade is based in the School of Economics at the University of Nottingham. It aims to promote research in all aspects of economic development and international trade on both a long term and a short term basis. To this end, CREDIT organises seminar series on Development Economics, acts as a point for collaborative research with other UK and overseas institutions and publishes research papers on topics central to its interests. A list of CREDIT Research Papers is given on the final page of this publication.

Authors who wish to submit a paper for publication should send their manuscript to the Editor of the CREDIT Research Papers, Professor M F Bleaney, at:

Centre for Research in Economic Development and International Trade,
School of Economics,
University of Nottingham,
University Park,
Nottingham, NG7 2RD,
UNITED KINGDOM

Telephone (0115) 951 5620
Fax: (0115) 951 4159

CREDIT Research Papers are distributed free of charge to members of the Centre. Enquiries concerning copies of individual Research Papers or CREDIT membership should be addressed to the CREDIT Secretary at the above address. Papers may also be downloaded from the School of Economics web site at:
www.nottingham.ac.uk/economics/research/credit

**CREDIT Research Paper**

**No. 02/17**

# Does Social Capital Affect Foreign Aid Allocations?

**by**

**Stephen Knowles**

**Centre for Research in Economic Development and International Trade, University of Nottingham**

**The Author**
Stephen Knowles is Senior Lecturer, University of Otago and CREDIT External Research Fellow.

**Acknowledgements**
I am grateful to Oliver Morrissey and Dorian Owen for helpful comments on this paper. An earlier version of this paper was presented at the Development Economics Study Group (Nottingham, April 2002) and the New Zealand Association of Economists Annual Conference (Wellington, June 2002). I am grateful to participants for the many helpful comments received. Financial support from the Marsden Fund, administered by the Royal Society of New Zealand, is gratefully acknowledged.

---

September 2002

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

by
Stephen Knowles

**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.[1] For this reason, the only control variable considered is income per capita.[2]

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

$$(1)\quad AID_{it} = \alpha + \beta_1 SOC_{it} + \beta_2 YP_{it} + e_{it}$$

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 (Ingelhart et al., 2000). TRUST measures the percentage of individuals in a country who

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 Scandanavian 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.[3]

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-altrusitic 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

3 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.[4]

4 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) Total ODA | Column (ii) Mulilateral | Column (iii) Bilateral | Column (iv) NGOs |
|---|---|---|---|---|
| Constant | 0.105 | 0.097 | -0.181 | -0.014 |
| | (0.32) | (0.99) | (-0.73) | (-0.37) |
| TRUST | 0.011* | 0.004* | 0.010* | 0.001* |
| | (2.02) | (2.19) | (2.26) | (2.24) |
| PPP | -0.4E-5 | -0.5E-05 | 0.3E-05 | -0.8E-07 |
| | (-0.24) | (-0.96) | (0.31) | (-0.04) |
| $R^2$ | 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$^{\dagger}$ | 2.510 | 3.776* | 0.503 |

Asympotic t-statistics based on heteroscedasticity-consistent standard errors are reported in parentheses. **, * and $^{\dagger}$ 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) Total ODA | Column (ii) Mulilateral | Column (iii) Bilateral | Column (vi) NGOs |
|---|---|---|---|---|
| Constant | -0.596 | -0.214 | -0.507 | -0.227† |
| | (-0.51) | (-0.45) | (-0.59) | (-1.88) |
| CIVIC | 0.028 | 0.011 | 0.016 | 0.007* |
| | (0.84) | (0.90) | (0.66) | (2.04) |
| PPP | -0.3E-07 | -0.4E-05 | 0.9E-05 | -0.3E-06 |
| | (-0.002) | (-0.79) | (0.66) | (-0.13) |
| $R^2$ | 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 | 0.178† | 0.069 | 0.024 |
| | (0.16) | (1.92) | (0.29) | (0.454) |
| ASSOC | -0.213 | -0.109 | -0.173 | 0.014 |
| | (0.31) | (-1.52) | (-0.14) | (0.46) |
| PPP | 0.1E-04 | 0.1E-05 | 0.1E-04 | 0.7E-06 |
| | (0.62) | (0.19) | (0.97) | (0.28) |
| $R^2$ | 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.

**REFERENCES**

Alesina, A. and D. Dollar (2000) "Who gives foreign aid to whom and why?", *Journal of Economic Growth*, 5, 33-63.

Boone, P. (1996) "Politics and the effectiveness of foreign aid", *European Economic Review*, 40, 289-329.

Burnside, C. and D. Dollar (2000) "Aid, policies and growth", *American Economic Review*, 90, 847-868.

Dalgaard, C.-J., H. Hansen and F. Tarp (2002) "On the empirics of foreign aid and growth", CREDIT Research Paper No.02/08, University of Nottingham.

Glaeser, E. L., D. I. Laibson, J. A. Scheinkman and C. L. Soutter (2000) "Measuring trust," *Quarterly Journal of Economics*, 115, 811-846.

Hansen, H. and F. Tarp (2000) "Aid effectiveness disputed", *Journal of International Development*, 12, 375-398.

Hansen, H. and F. Tarp (2001) "Aid and growth regressions", *Journal of Development Economics*, 64, 547-570.

Ingelhart, R. et al (2000) *World Values Surveys and European Values Surveys, 1981-1984, 1990-1993, and 1995-1997*, Ann Arbor, Michigan: Inter-University Consortium for Political and Social Research.

Knack, S. and P. Keefer (1997) "Does social capital have an economic payoff?", *Quarterly Journal of Economics*, 112, 1251-1288.

McKinley, R.D. and R. Little (1979) "The US aid relationship: a test of the recipient need and the donor interest models", *Political Studies*, 29, 236-250.

Maizels, A. and M.K. Nissanke (1984) "Motivations for aid to developing countries", *World Development*, 12, 879-900.

Morrissey, O. (2001) "Does aid increase growth", *Progress in Development Studies*, 1, 37-50.

Putnam, R. (1993) *Making Democracy Work*, Princeton University Press, Princeton.

Trumbull, W.N. and H.J. Wall (1994) "Estimating aid-allocation criteria with panel data", *Economic Journal*, 104, 876-882.

Whiteley, P.F. (2000) "Economic growth and social capital", *Political Studies*, 48, 443-466.

World Bank (1997) *World Development Indicators*, World Bank, Washington.

Zak, P.J. and S. Knack (2001) "Trust and growth", *Economic Journal* 111, 295-321.

**CREDIT PAPERS**

00/1 **Robert Lensink,** "Does Financial Development Mitigate Negative Effects of Policy Uncertainty on Economic Growth?"

00/2 **Oliver Morrissey,** "Investment and Competition Policy in Developing Countries: Implications of and for the WTO"

00/3 **Jo-Ann Crawford and Sam Laird,** "Regional Trade Agreements and the WTO"

00/4 **Sam Laird,** "Multilateral Market Access Negotiations in Goods and Services"

00/5 **Sam Laird,** "The WTO Agenda and the Developing Countries"

00/6 **Josaphat P. Kweka and Oliver Morrissey,** "Government Spending and Economic Growth in Tanzania, 1965-1996"

00/7 **Henrik Hansen and Fin Tarp,** "Aid and Growth Regressions"

00/8 **Andrew McKay, Chris Milner and Oliver Morrissey,** "The Trade and Welfare Effects of a Regional Economic Partnership Agreement"

00/9 **Mark McGillivray and Oliver Morrissey,** "Aid Illusion and Public Sector Fiscal Behaviour"

00/10 **C.W. Morgan,** "Commodity Futures Markets in LDCs: A Review and Prospects"

00/11 **Michael Bleaney and Akira Nishiyama,** "Explaining Growth: A Contest between Models"

00/12 **Christophe Muller,** "Do Agricultural Outputs of Autarkic Peasants Affect Their Health and Nutrition? Evidence from Rwanda"

00/13 **Paula K. Lorgelly,** "Are There Gender-Separate Human Capital Effects on Growth? A Review of the Recent Empirical Literature"

00/14 **Stephen Knowles and Arlene Garces,** "Measuring Government Intervention and Estimating its Effect on Output: With Reference to the High Performing Asian Economies"

00/15 **I. Dasgupta, R. Palmer-Jones and A. Parikh,** "Between Cultures and Markets: An Eclectic Analysis of Juvenile Gender Ratios in India"

00/16 **Sam Laird,** "Dolphins, Turtles, Mad Cows and Butterflies – A Look at the Multilateral Trading System in the 21st Century"

00/17 **Carl-Johan Dalgaard and Henrik Hansen,** "On Aid, Growth, and Good Policies"

01/01 **Tim Lloyd, Oliver Morrissey and Robert Osei,** "Aid, Exports and Growth in Ghana"

01/02 **Christophe Muller,** "Relative Poverty from the Perspective of Social Class: Evidence from The Netherlands"

01/03 **Stephen Knowles,** "Inequality and Economic Growth: The Empirical Relationship Reconsidered in the Light of Comparable Data"

01/04 **A. Cuadros, V. Orts and M.T. Alguacil,** "Openness and Growth: Re-Examining Foreign Direct Investment and Output Linkages in Latin America"

01/05 **Harold Alderman, Simon Appleton, Lawrence Haddad, Lina Song and Yisehac Yohannes, "**Reducing Child Malnutrition: How Far Does Income Growth Take Us?"

01/06 **Robert Lensink and Oliver Morrissey,** "Foreign Direct Investment: Flows, Volatility and Growth"

01/07 **Adam Blake, Andrew McKay and Oliver Morrissey,** "The Impact on Uganda of Agricultural Trade Liberalisation"

01/08 **R. Quentin Grafton, Stephen Knowles and P. Dorian Owen,** "Social Divergence and Economic Performance"

01/09 **David Byrne and Eric Strobl,** "Defining Unemployment in Developing Countries: The Case of Trinidad and Tobago"

01/10 **Holger Görg and Eric Strobl,** "The Incidence of Visible Underemployment: Evidence for Trinidad and Tobago"

01/11 **Abbi Mamo Kedir,** "Some Issues in Using Unit Values as Prices in the Estimation of Own-Price Elasticities: Evidence from Urban Ethiopia"

01/12 **Eric Strobl and Frank Walsh,** "Minimum Wages and Compliance: The Case of Trinidad and Tobago"

01/13 **Mark McGillivray and Oliver Morrissey,** "A Review of Evidence on the Fiscal Effects of Aid"

01/14 **Tim Lloyd, Oliver Morrissey and Robert Osei,** "Problems with Pooling in Panel Data Analysis for Developing Countries: The Case of Aid and Trade Relationships"

01/15 **Oliver Morrissey,** "Pro-Poor Conditionality for Aid and Debt Relief in East Africa"

01/16 **Zdenek Drabek and Sam Laird,** "Can Trade Policy help Mobilize Financial Resources for Economic Development?"

01/17 **Michael Bleaney and Lisenda Lisenda,** "Monetary Policy After Financial Liberalisation: A Central Bank Reaction Function for Botswana"

01/18 **Holger Görg and Eric Strobl,** "Relative Wages, Openness and Skill-Biased Technological Change in Ghana"

01/19 **Dirk Willem te Velde and Oliver Morrissey,** "Foreign Ownership and Wages: Evidence from Five African Countries"

01/20 **Suleiman Abrar,** "Duality, Choice of Functional Form and Peasant Supply Response in Ethiopia"

01/21 **John Rand and Finn Tarp,** "Business Cycles in Developing Countries: Are They Different?"

01/22 **Simon Appleton,** "Education, Incomes and Poverty in Uganda in the 1990s"

02/01 **Eric Strobl and Robert Thornton,** "Do Large Employers Pay More in Developing Countries? The Case of Five African Countries"

02/02 **Mark McGillivray and J. Ram Pillarisetti,** "International Inequality in Human Development, Real Income and Gender-related Development"

02/03 **Sourafel Girma and Abbi M. Kedir, "**When Does Food Stop Being a Luxury? Evidence from Quadratic Engel Curves with Measurement Error"

02/04 **Indraneel Dasgupta and Ravi Kanbur,** "Class, Community, Inequality"

02/05 **Karuna Gomanee, Sourafel Girma and Oliver Morrissey,** "Aid and Growth in Sub-Saharan Africa: Accounting for Transmission Mechanisms"

02/06 **Michael Bleaney and Marco Gunderman, "**Stabilisations, Crises and the "Exit" Problem – A Theoretical Model"

02/07 **Eric Strobl and Frank Walsh,** "Getting It Right: Employment Subsidy or Minimum Wage? Evidence from Trinidad and Tobago"

02/08 **Carl-Johan Dalgaard, Henrik Hansen and Finn Tarp,** "On the Empirics of Foreign Aid and Growth"

02/09 **Teresa Alguacil, Ana Cuadros and Vincente Orts,** "Does Saving Really Matter for Growth? Mexico (1970-2000)"

02/10 **Simon Feeny and Mark McGillivray,** "Modelling Inter-temporal Aid Allocation"

02/11 **Mark McGillivray,** "Aid, Economic Reform and Public Sector Fiscal Behaviour in Developing Countries"

02/12 **Indraneel Dasgupta and Ravi Kanbur,** "How Workers Get Poor *Because* Capitalists Get Rich: A General Equilibrium Model of Labor Supply, Community, and the Class Distribution of Income"

02/13 **Lucian Cernat, Sam Laird and Alessandro Turrini,** "How Important are Market Access Issues for Developing Countries in the Doha Agenda?"

02/14 **Ravi Kanbur,** "Education, Empowerment and Gender Inequalities"

02/15 **Eric Strobl,** "Is Education Used as a Signaling Device for Productivity in Developing Countries?"

02/16 **Suleiman Abrar, Oliver Morrissey and Tony Rayner,** "Supply Response of Peasant Farmers in Ethiopia"

02/17 **Stephen Knowles,** "Does Social Capital Affect Foreign Aid Allocations?"

**SCHOOL OF ECONOMICS DISCUSSION PAPERS**

In addition to the CREDIT series of research papers the School of Economics produces a discussion paper series dealing with more general aspects of economics. Below is a list of recent titles published in this series.

00/1 **Tae-Hwan Kim and Christophe Muller,** "Two-Stage Quantile Regression"

00/2 **Spiros Bougheas, Panicos O. Demetrides and Edgar L.W. Morgenroth,** "International Aspects of Public Infrastructure Investment"

00/3 **Michael Bleaney,** "Inflation as Taxation: Theory and Evidence"

00/4 **Michael Bleaney,** "Financial Fragility and Currency Crises"

00/5 **Sourafel Girma,** "A Quasi-Differencing Approach to Dynamic Modelling from a Time Series of Independent Cross Sections"

00/6 **Spiros Bougheas and Paul Downward,** "The Economics of Professional Sports Leagues: A Bargaining Approach"

00/7 **Marta Aloi, Hans Jørgen Jacobsen and Teresa Lloyd-Braga,** "Endogenous Business Cycles and Stabilization Policies"

00/8 **A. Ghoshray, T.A. Lloyd and A.J. Rayner,** "EU Wheat Prices and its Relation with Other Major Wheat Export Prices"

00/9 **Christophe Muller,** "Transient-Seasonal and Chronic Poverty of Peasants: Evidence from Rwanda"

00/10 **Gwendolyn C. Morrison,** "Embedding and Substitution in Willingness to Pay"

00/11 **Claudio Zoli,** "Inverse Sequential Stochastic Dominance: Rank-Dependent Welfare, Deprivation and Poverty Measurement"

00/12 **Tae-Hwan Kim, Stephen Leybourne and Paul Newbold,** "Unit Root Tests With a Break in Variance"

00/13 **Tae-Hwan Kim, Stephen Leybourne and Paul Newbold,** "Asymptotic Mean Squared Forecast Error When an Autoregression With Linear Trend is Fitted to Data Generated by an I(0) or I(1) Process"

00/14 **Michelle Haynes and Steve Thompson,** "The Productivity Impact of IT Deployment: An Empirical Evaluation of ATM Introduction"

00/15 **Michelle Haynes, Steve Thompson and Mike Wright,** "The Determinants of Corporate Divestment in the UK"

00/16 **John Beath, Robert Owen, Joanna Poyago-Theotoky and David Ulph, "**Optimal Incentives for Incoming Generations within Universities"

00/17 **S. McCorriston, C. W. Morgan and A. J. Rayner,** "Price Transmission: The Interaction Between Firm Behaviour and Returns to Scale"

00/18 **Tae-Hwan Kim, Douglas Stone and Halbert White,** "Asymptotic and Bayesian Confidence Intervals for Sharpe Style Weights"

00/19 **Tae-Hwan Kim and Halbert White,** "James-Stein Type Estimators in Large Samples with Application to the Least Absolute Deviation Estimator"

00/20 **Gwendolyn C. Morrison,** "Expected Utility and the Endowment Effect: Some Experimental Results"

00/21 **Christophe Muller,** "Price Index Distribution and Utilitarian Social Evaluation Functions"

00/22 **Michael Bleaney,** "Investor Sentiment, Discounts and Returns on Closed-End Funds"

00/23 **Richard Cornes and Roger Hartley,** "Joint Production Games and Share Functions"

00/24 **Joanna Poyago-Theotoky,** "Voluntary Approaches, Emission Taxation and the Organization of Environmental R&D"

00/25 **Michael Bleaney, Norman Gemmell and Richard Kneller,** "Testing the Endogenous Growth Model: Public Expenditure, Taxation and Growth Over the Long-Run"

00/26 **Michael Bleaney and Marco Gundermann,** "Credibility Gains and Output Losses: A Model of Exchange Rate Anchors"

00/27 **Indraneel Dasgupta,** "Gender Biased Redistribution and Intra-Household Distribution"

00/28 **Richard Cornes and Roger Hartley,** "Rentseeking by Players with Constant Absolute Risk Aversion"

00/29 **S.J. Leybourne, P. Newbold, D. Vougas and T. Kim,** "A Direct Test for Cointegration Between a Pair of Time Series"

00/30 **Claudio Zoli,** "Inverse Stochastic Dominance, Inequality Measurement and Gini Indices"

01/01 **Spiros Bougheas,** "Optimism, Education, and Industrial Development"

01/02 **Tae-Hwan Kim and Paul Newbold,** "Unit Root Tests Based on Inequality-Restricted Estimators"

01/03 **Christophe Muller,** "Defining Poverty Lines as a Fraction of Central Tendency"

01/04 **Claudio Piga and Joanna Poyago-Theotoky,** "Shall We Meet Halfway? Endogenous Spillovers and Locational Choice"

01/05 **Ilias Skamnelos, "**Sunspot Panics, Information-Based Bank Runs and Suspension of Deposit Convertibility"

01/06 **Spiros Bougheas and Yannis Georgellis,** "Apprenticeship Training, Earnings Profiles and Labour Turnover: Theory and German Evidence"

01/07 **M.J. Andrews, S. Bradley and R. Upward,** "Employer Search, Vacancy Duration and Skill Shortages"

01/08 **Marta Aloi and Laurence Lasselle,** "Growing Through Subsidies"

01/09 **Marta Aloi and Huw D. Dixon,** "Entry Dynamics, Capacity Utilisation, and Productivity in a Dynamic Open Economy"

01/10 **Richard Cornes and Roger Hartley,** "Asymmetric Contests with General Technologies"

01/11 **Richard Cornes and Roger Hartley,** "Disguised Aggregative Games"

01/12 **Spiros Bougheas and Tim Worrall,** "Cost Padding in Regulated Monopolies"

10/13 **Alan Duncan, Gillian Paull and Jayne Taylor,** "Price and Quality in the UK Childcare Market"

01/14 **John Creedy and Alan Duncan,** "Aggregating Labour Supply and Feedback Effects in Microsimulation"

# Members of the Centre

## Director

**Oliver Morrissey** - aid policy, trade and agriculture

## Research Fellows (Internal)

**Simon Appleton** – poverty, education, household economics
**Adam Blake** – CGE models of low-income countries
**Mike Bleaney** - growth, international macroeconomics
**Indraneel Dasgupta** – development theory, household bargaining
**Norman Gemmell** – growth and public sector issues
**Ken Ingersent** - agricultural trade
**Tim Lloyd** – agricultural commodity markets
**Andrew McKay** - poverty, peasant households, agriculture
**Chris Milner** - trade and development
**Wyn Morgan** - futures markets, commodity markets
**Christophe Muller** – poverty, household panel econometrics
**Tony Rayner** - agricultural policy and trade

## Research Fellows (External)

**David Fielding** *(University of Leicester)* – investment, monetary and fiscal policy
**Ravi Kanbur** (*Cornell*) – inequality, public goods – Visiting Research Fellow
**HenrikHansen** *(University of Copenhagen)* – aid and growth
**Stephen Knowles** *(University of Otago)* – inequality and growth
**Sam Laird** (*UNCTAD*) – trade policy, WTO
**Robert Lensink** *(University of Groningen)* – aid, investment, macroeconomics
**Scott McDonald** *(University of Sheffield)* – CGE modelling, agriculture
**Mark McGillivray** *(WIDER, Helsinki)* – aid allocation, aid policy
**Doug Nelson** *(Tulane University)* - political economy of trade
**Shelton Nicholls** *(University of West Indies)* – trade, integration
**Eric Strobl** *(University College Dublin)* – labour markets
**Finn Tarp** *(University of Copenhagen)* – aid, CGE modelling