

Research Project

A Cross-Country Enquiry into the Impact of Globalisation on Co-operation

Gianluca Grimalda
CSGR (University of Warwick)

1. General Aims of the Project

Concepts such as social capital, trust, and co-operation are now seen as key resources for a socio-economic system to progress (for a champion of each of the above notions, see Putnam (2000); Fukuyama (1996); Hardin (1982), respectively). The unit of analysis of most of these studies is generally local communities or nation-states. However, the rise of interest in the notion of global public goods (e.g. Kaul *et al.* (2003)), i.e. those public goods that transcend the national borders, such as the environment, international justice, international financial stability, has brought to the centre stage the relevance of trans-national co-operation as means to increase global prosperity. The aim of the present project is to attempt to study the impact of globalisation on both types of co-operation, that is, local and global co-operation, and thus, indirectly, on one of the main causes of socio-economic development for both a single country and the world as a whole.

The approach of the project is empirical, and aims to provide two basic outputs. First, the replication of a same experiment – a Public Good Game (PGG); see section 4 – in different nations is expected to provide evidence on (A) the existence of different patterns of social behaviour and attitudes toward co-operation in communities located in different parts of the world; and (B) whether co-operation rates decrease when interactions take place in an international context rather than in a national one. This is a way to assess whether the national identity of the “players” of the interaction under study has a relevant impact on co-operation. Depending on the results obtained at this stage, different institutional mechanisms may be studied and tested in a further phase of the project as ways to increase the level of international co-operation. In particular, a working hypothesis is that the provision of global public goods is made easier by the “regionalisation” of the provision, which is in turn made possible by breaking down the comprehensive co-operation problem into separate smaller-scale co-operation problems.

The second output of the project is the creation of a data-set measuring the perception of globalisation among people living in different nations. This would be reached through surveys of large samples of people living in different nations. The repetition of the same survey at regular interval of time may give rise to the creation of a “global-barometer”, i.e. an index measuring the evolution over time of individuals’ perception of globalisation.

2. Experiments in the Social Sciences?

Whereas the use of surveys has a long tradition among social sciences, experiments have only recently gained prominence as ways of raising empirical evidence on individual behaviour and the relationship between this and social performance. In this section I shall briefly illustrate the underpinning of the experimental approach, and discuss the extent to which this is suitable for the study of the problem at hand.

Simply stated, the experimental approach consists of the study of a situation of interaction amongst individuals within a ‘controlled’ environment, similar to that of a laboratory for experiments in natural

sciences. The experimental setting, despite its high level of abstraction, is generally constructed in such a way as to be reminiscent of real-life situations, so that the interpretation of the results and their practical implications in terms of policy analysis are often straightforward. Experiments have proved themselves very powerful methods to raise empirical evidence and test theories within sociology, psychology and economics. Well-known is the fact that alternatives to the paradigm of *homo economicus*, i.e. the view of the individual as a rational optimizer only motivated by self-interest, have only started to be constructed after an array of adverse experimental evidence was gathered throughout the years. This ranges from the systematic violations of the axioms of individual rational choice in the presence of uncertainty to the observation of behaviours such as altruism or individually costly revenge – especially when some conception of fairness is seen as being violated – which are clearly irreducible to self-interest. The recognition that individuals seem to take into account a *variety* of motivations when making decisions is also an underlying theoretical hypothesis of this project of research. In particular, community-specific social norms, intended as patterns of behaviour that are widespread within a certain society, and which are relied upon in co-ordinating expectations on each other's behaviour, are assumed to play a relevant role in the determination of individual modes of behaviour (see section 0).

Whereas the experimental approach seems appropriate when applied to interactions among individuals, some concerns arise as to its suitability when applied to the issue of global public goods. In fact, the “agents” in this situation will rarely be “individuals” as such, but rather political bodies, institutions, etc. It is then questionable whether one can draw reliable information on the issue of global public goods from an experimental approach, which typically involves common people rather than policy-makers. I believe this argument can be tackled from two different angles. The first is to say that the policy-maker will most of the time – especially within democracies – be an expression of the values, attitudes and interests of his/her community, thus it would not be surprising that a policy-maker reflected the typical modes of behaviour of the population s/he belongs to. Second, even though the provision of global public goods often goes through a political process that involves interactions among political bodies and the signing of international agreements of co-operation, it is also true that often the subjects that are actually asked to comply with these agreements are in fact common citizens and the civil society. Hence, asking whether global co-operation will be complied with by the citizenship of a nation is a question that seems relevant, and which may be tackled by an experimental approach.

3. The Theoretical Background

3.1 The Impact of Globalisation on Co-operation

Although the differences between co-operating in a local context and co-operating in a global setting are clear-cut, there exist strong theoretical arguments that globalisation will have non-neutral effects on levels of co-operation in both cases. The overall effect may nevertheless be ambiguous. If one takes as the reference point the rational choice approach and the idea that co-operation is based on a tit-for-tat equilibrium in a repeated N-player Prisoner's Dilemma, then it is clear that globalisation, by reducing the frequency of interactions between people living in the same community, and by making interactions impersonal, should lead to a decrease of co-operation within local communities (see e.g. North (1990)). In other words, globalisation may have the effect of lowering the level of trust present in previously close-knit communities, and may also progressively lead to comparable levels of co-operation among individuals living in different societies. However, this argument may partially be countered by the consideration that an even more radical entrenchment to ‘local’ concepts of identity may be triggered as a direct reaction to the process of homologation brought about by globalisation.

The impact of globalisation in the international context is instead more ambiguous. In fact, on the one hand, globalisation widens the number of agents involved in the interaction, and this should generally act as a disincentive for co-operation, because the incentive to free ride on others' contribution is – at least for the most common settings – positively related with the number of players involved. On the other hand, globalisation makes interactions more frequent, and this should have a positive effect on co-operation, as the incentive to build a reputation as a “co-operator”. In other

words, the discount factor of future utility increases as an effect of the acceleration of the rate of encounters.

3.2 Can Community-Based Values be Part of Rational Choice Theory

The model of behaviour lying behind the account offered above is that of a self-interested agent who maximizes his/her expected utility over an infinitely long horizon. Tit-for-tat emerges as an equilibrium strategy in this context, when the discount rate of future utility is below a certain threshold, which in turn depends on the frequency of the interaction and on the relative incentives of co-operation vis-à-vis defection. However, there are several reasons to believe that this type of account does not suffice to account for the vast range of unselfish behaviour that we observe in our societies. First, people are often observed to co-operate even in situations where the probability of encountering the current party in the future is close to zero. According to the standard theory, such a behaviour is irrational as the strategy of defecting would instead be optimal. More generally, such forms of behaviour as the active participation of individuals in organised groups, voting in political elections, giving to charities, *etc* are all instances of behaviour that are not directly explainable in terms of *self-interested* rationality. Second, both in situations of rare and frequent interactions people often seem to act more in accordance with moral values inherited through family education or society-codes of behaviour rather than on the basis of a self-interested analysis of the costs and benefit involved. Even though it is possible that tit-for-tat and behaviour prompted by internalised moral values are observationally equivalent in repeated interactions, different implications of the two accounts clearly emerge in single or rare interactions, and in this case evidence seems to support the view that the latter type of behaviour is widespread in societies. Experimental evidence confirms this view, as co-operation is relatively high in one-shot PGG, and is non-negligible even in the last round of repeated PGG (see section 4).

Hence, a different account of individual behaviour has recently gained consensus among scholars. The underlying idea is that the sphere of individual motivations extends well beyond self-interest and covers areas that are generally referred to as 'other-regarding' (Ben Nér and Putternam (1998)). Once the set of ends that the individual is willing to pursue is clear-cut, which is obviously a matter of empirical investigation, then the standard analytical approach of rational choice theory can be applied, though the consideration of other-regarding motivations – and also expectations – poses relevant problem at the formal level¹. A 'rational' choice can here be intended as one that maximises a comprehensive objective function that includes all the different motivations that an individual holds as relevant.

Various models of other-regarding motivations have thus far been put forward in the context of 'multiple motivations' models². Abstracting away from their specific contents, what is worth noticing is that this framework makes it possible to account for a basic aspect of the present project, namely that non-self-based values and group-based codes of behaviour may play a relevant role in shaping other-regarding motivations³. However, the key unanswered question of this approach is obviously who the relevant 'others' are for an individual and thus the extension of the "group" which the individual identifies with. One can contrast two extreme hypotheses in this respect: The first is that the group of

¹ See e.g. the analytical construction that is needed in the theory of Psychological Games (Geanakoplos *et al.* (1988)).

² One of the approaches stresses the intrinsic attitude of individuals to conform with others' expectations, where this can come from a concern for one's own social status (Bernheim (1994)) or because expectations acquire a *normative* force because of the moral reproach associated with their infringement – e.g. Pettit (1990). Other accounts point at reciprocity as the main other-regarding factor (Rabin (1993)), or at the existence of individual preferences defined over the overall payoffs distribution within the relevant group of agents. Such motives as inequity aversion, concern for one's position in the ranking, envy and even altruism can all be accommodated as different forms of 'social preferences' – for a review, Fehr and Schmidt (2001).

³ To be sure, there exist many possible ways in which community-based values enter an individual's system of motivation and combine with self-based motivations. In particular, it is arguable that individuals have a *conditional* disposition to reciprocate community-based values. A discussion of these points and the development of a model can be found in Grimalda and Sacconi (2002).

agents on which the subject bases her judgments is relatively 'local', i.e. it takes as the main reference the views, interests, and modes of assessment of the community to which the individual is *physically* close. The alternative hypothesis is instead that the 'others' to which a subject refers to is, in some sense, 'global', i.e. it is not constrained by geographical, or even cultural and socio-economic barriers. This latter hypothesis then leads to a model of individual where s/he possesses *multiple* identities, and these are created taking a global perspective (see Sen (1999)).

4. The Public Good Setting

The basic experimental setting that will be used in order to investigate the issues outlined above is that of so-called Public Good Games⁴. In its more general version, subjects are called to contribute to the provision of a public good, whose amount depends on the number of agents who renounce to part of their own private good and contribute to the public cause. The payoffs are calibrated so that *not* giving to the public good and then *free ride* on others' contribution is the payoff-maximizing strategy for each agent. In contrast, contribution by all agents is the socially efficient strategy. The general finding in this context is that a positive degree of contribution is observed in the first trial of the game, and this diminishes over time if the experiment is repeated (Kagel and Roth (1995)). Several modifications of the game have been put forward in order to account for this evidence, and the explanation that seems more likely is that individuals are conditionally disposed to 'co-operate', but progressively defect as they realize that the overall degree of co-operation is not as high as required by the individual to elicit co-operation (Croson (1998)). The effect of the game being repeated a finite number of times undoubtedly also plays a part.

What is most notable is that the amount of co-operation is considerably high in the first trial of the game, in a percentage that likens that of single-trial PGG. In terms of the hypothesis that such individuals are conditional co-operators, this fact implies that their initial beliefs on one another's behaviour is that co-operation will be carried out with relatively high probability. This is a very important fact, because it is likely that initial expectations on one another's behaviour derive, at least to some extent, on the expectations that people hold in real life situations, as interactions within an experimental setting are normally anonymous. In fact, face to face interactions, let alone getting acquainted to each other through talking to each other or discussing, are normally avoided in experiments, unless one wants to test the impact of these aspects explicitly. Consequently, the initial level of co-operation observed in a game can be relied upon to reveal – or at least be a 'proxy' for - the different attitudes towards co-operation of members of a certain society.

The method by which the research aims to investigate these issues is by replicating the same experiment in different countries. This should make it possible to appreciate country-specific differences in existing social norms, and the impact that the introduction of the 'global' perspective has on them. In particular, the type of interaction that would be replicated is a Public Good Game (PGG), which would enable us to test the relevance of 'norms of co-operation' in local contexts, and how these interact with the introduction of a different dimensions specifically designed to 'translate' the change from a local context of action to a global one. This type of cross-country approach has already been developed in some studies, in particular with respect to Ultimatum Games (UG) (see e.g. Okuno-Fujiwara *et al.* (1991)), Trust Games (Buchan *et al.* (2003); Bouckaert and Dhaene (2002)) and also PGG and Prisoner's Dilemmas (Henrich *et al.* (2001); Blackwell and McKee (2000)). However, in any of these studies, the approach has been merely comparative, that is, the existence of significant behavioural differences in different countries was investigated. The innovation of this research would lie in that people coming from different nationalities would directly interact with each other.

⁴ An alternative setting that may be used is that of the so-called Trust Game (TG). Given its dynamical structure, it could also solve the problem of having people interacting with each other in different part of the world, which is of course a not secondary problem in the international version of the PGG. However, its main shortcoming is that it only allows two-by-two interactions.

5. Planning of the Experiments and Surveys

The aspects that we want to investigate, as outlined in the foregoing sections, can be divided in the following three topics:

- A) The impact of globalisation on individual identity and local Co-operation;
- B) The existence of different attitudes towards co-operation in different nations and/or different social settings;
- C) The impact of globalisation on international Co-operation.

The theoretical arguments underlying areas (A) and (C) have already been illustrated in section 3.1. Area (B) asks whether there exist significant differences in propensities to co-operate among individuals living in different countries in the world. In particular, it is interesting to test whether countries that have gone through processes of social and political change, often connected with a globalisation process – e.g. Argentina, China and Eastern Europe– are faced with a significantly different change in the attitude to co-operate of their citizens with respect to countries whose social and political environment as been substantially ‘stable’ in recent years. Moreover, the hypothesis that the loosening of social bonds affects negatively interpersonal trust and co-operation may be tested.

At an operative level, the way to test the hypotheses is by introducing suitable treatments of the experiment - or in the questions asked in the survey – which lead from a relatively ‘local’ to a ‘global’ setting for the interaction. This would enable us to check whether such change engenders significant alterations in individual behaviour. According to the above analysis, should significant differences be observed between the two settings, these will be interpreted as evidence that the ‘local’ dimension is a relevant force in individual motivations; conversely, if no significant difference seems to emerge, then one could conclude that such a local dimension is not so relevant and people do in reality ‘think globally’ when acting in this situation.

In what follows different procedures to examine these aspects are suggested:

A1) The questionnaires surveys could directly address this issue, by asking questions aimed at testing the individual perception of being part of a globalised world. In addition to this, this issue may also be addressed indirectly, for instance by asking the individual the proportion of local tax that s/he would like to devote to the provision of local public good – say, a programme to reduce level of pollution in the local area – as opposed to a global public good – say, a programme to reduce the greenhouse effect throughout the world.

A2) The same issue could be analysed in an experiment in which different individuals belonging to the same community are endowed with a certain sum of money, which they can either take for themselves or give to a public good. Such a public good may be either local or global in different treatments of the experiment. The evaluation of the differences in the provision of the public good in the two cases would bring evidence to the point.

B1) Evidence on this point may be reached by observing whether there exist different degrees of co-operation in a PGG or in a TG conducted in different countries;

B2) It may also be of interest to analyse whether different degrees of co-operation exist between different social groups, as identified by the level of income or by some other parameter, within a population.

C) This point could be better understood by comparing the results, in terms of degree of co-operation, when a PGG or a TG is played among people belonging to the same nationality and when it is played by people belonging to different nationalities. More precisely, in a first treatment of the PGG subjects are asked to interact with compatriots, whereas in a successive treatment the interaction takes place among people of different nationalities.

6. Phases of the research project

First Phase: November 2003 – June 2004:

- Identification of the pool of countries in which experiments are to be executed, and identification of researchers responsible for the experiment in each of them. It is hoped to include countries at different stages of development and representative of recognisably different cultures or political systems. Attention will be also paid to include countries that are going through or have just come out of situations of crisis and social turmoil. Typically, this type of international experiments have been conducted over a relatively small sample of countries, rarely bigger than four units. It is hoped to increase the size of the sample to about 8-10 units, including two European countries having rather different systems of welfare (the UK and Italy?); a State formerly belonging to the Soviet union and/or an East European country; the US; one or two Latin American countries (Argentina? Mexico?); one or two African countries (Uganda as a rapidly growing economy in recent years? Another stagnating economy?); a developing middle income Asian country (China or India); a developed high-income Asian country (South Korea or Japan).
- Organisation of the workshop of the following stage; launch of a call for papers on the issue. On the assessment of the quality of the contributions received, some researchers will be asked to take active part in the project.

Second Phase:

Workshop to be held on 1-3 July on the theme “The Impact of Globalisation on Local and International Co-operation: An Empirical Experimental View”. Three main sessions:

- The Impact of Globalisation on Local Co-operation (Thu afternoon);
- The Impact of of Globalisation on International Co-operation (Fri morning);
- The Individual Perception of the Global Dimension (Fri Afternoon).

On Saturday morning the scientific committee for the execution of the project will meet. This is formed by an advisory board and the responsables for the execution of the survey and experiment in each country. The organisational details and the exact specification of the experiment will be decided.

Third Phase: July 2004 – December 2004:

- Preparation of the experiment and the survey in each country.
- Convening of researchers to a host research centre within the group of research centres participating in the project, and conduction of the experiment by each researcher (this is done to check for the existence of biases on results induced by researchers running the experiment).

Fourth Phase: January 2005:

Running of the experiment

Fifth Phase: February 2005:

- Evaluation and presentation of the results in a workshop.
- Preparation of a second round of experiments attempting to test whether a different design can increase the degree of co-operation in the international version of the experiment.

Sixth Phase: April 2005:

Execution of the second round of experiments.

Seventh Phase:

Evaluation and presentation of the results in a workshop.

7. Funding

- Once a sufficiently sizable research group, including researchers based in different countries, has been formed, a bid for a research grant will be submitted to the ESRC. It is hoped that most of the researchers will be able to autonomously find funds to finance the activity they are responsible of.
- Funding from a private sponsor may also be applied for, especially in relation with the creation of the “Global-barometer”, which is likely to be the more expensive part of the research, and possibly the more “significant” aspect of the research in the eye of a private donor.

References

- Ben Nér, A. and L. Putternam (eds.) (1998), *Economics, Values, and Organization*, Cambridge: Cambridge University Press, pp. 3-69.
- Bernheim, B. (1994): “A Theory of Conformity”, *Journal of Political Economy* Vol. 102, N. 5, pp.841-877.
- Blackwell, C., McKee, M. (2000). “We’re all capitalists now”, *mimeo*
- Bouckaert, J, Dhaene, G. (2002). “Inter-Ethnic Trust and Reciprocity: Results of an Experiment with Small Business Entrepreneurs”, Gent Universiteit: *Working Paper 2002/150*
- Buchan, N., Croson, R., Johnson, E. (2003). “Trust and Reciprocity: An International Experiment”, *mimeo*
- Croson, R. (1998). “Theories of Commitment, Altruism and Reciprocity: Evidence from Linear Public Goods Games”, *mimeo*
- Fehr, E. and Schmidt, K. (2001): “*Theories of Fairness and Reciprocity – Evidence and Economic Applications*”, Institute for Empirical Research in Economics, University of Zurich, WP N. 75
- Fukuyama, F. (1996). *Trust: the social virtues and the creation of prosperity* London: Penguin
- Geanakoplos, John, Pearce David, and Stacchetti Ennio: *Psychological Games and Sequential Rationality*, in: *Games and Economic Behavior* 1, 60-79 (1989)
- Grimalda, G. and Sacconi, L. (2002), *The Constitution of the Non-profit Enterprise: Ideals, Conformism and Reciprocity*, *LIUC Papers, N. 115*, Series in Ethics, Law and Economics
- Hardin, R. (1982). *Collective Action*, Baltimore: Johns Hopkins University
- Henrich, J., Boyd, R., Bowles, S., Camerer, C., Fehr, E., Gintis, H. and McElreath, R. (2001). “In Search of Homo Economicus: Behavioral Experiments in 15 Small-Scale Societies”, *American Economic Review (AEA Papers and Proceedings)*, V. 91, 73-78
- Kagel, J.H. and Roth, A.E. (eds.) (1995). *The Handbook of Experimental Economics*, Princeton: Princeton University Press
- Kaul, I., Conceicao, P., Le Goulven, K. and Mendoza, R. (2003). *Providing Global Public Goods*, Oxford University Press
- North, D.C. (1990): *Institutions, Institutional Change and Economic Performance*, Cambridge MA: Cambridge University Press
- Okuno-Fujiwara, M., Prasnikar, V., Roth, A. E. and Zamir, S. (1991). “Bargaining and Market Behavior in Jerusalem, Ljubljana, Pittsburgh, and Tokyo: An Experimental Study”, *American Economic Review*, Vol. 81, pp. 1068-95
- Pettit, P. (1990). “Virtus Normativa”, *Ethics* Vol. 100, pp. 725-755
- Putnam, R. (2000). *Bowling alone: the collapse and revival of American community*, New York: Simon and Schuster
- Rabin, M. (1993): “Incorporating Fairness into Game Theory”, *American Economic Review*, Vol. 83, N. 5, pp. 1281-1302.
- Sen, A. K. (1999). *Development as Freedom*, New York: Knopf