

## ECONOMIC AND SOCIAL RESEARCH COUNCIL END OF AWARD REPORT



### For awards ending on or after 1 November 2009

This End of Award Report should be completed and submitted using the **grant reference** as the email subject, to [reportsofficer@esrc.ac.uk](mailto:reportsofficer@esrc.ac.uk) on or before the due date.

The final instalment of the grant will not be paid until an End of Award Report is completed in full and accepted by ESRC.

Grant holders whose End of Award Report is overdue or incomplete will not be eligible for further ESRC funding until the Report is accepted. ESRC reserves the right to recover a sum of the expenditure incurred on the grant if the End of Award Report is overdue. (Please see Section 5 of the ESRC Research Funding Guide for details.)

Please refer to the Guidance notes when completing this End of Award Report.

<b>Grant Reference</b>	RES-167-25-0372		
<b>Grant Title</b>	<b>An experimental analysis of network and group formation for collective action</b>		
<b>Grant Start Date</b>	1 February, 2008	<b>Total Amount Expended:</b>	£ 113,611.61
<b>Grant End Date</b>	Initially: 31 January, 2010 Extended to end May 2010		
<b>Grant holding Institution</b>	<b>University of Oxford</b>		
<b>Grant Holder</b>	<b>Professor Marcel Fafchamps</b>		
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<b>Co-Investigators (as per project application):</b>		<b>Institution</b>	
<b>Dr. Abigail Barr</b>		<b>University of Oxford</b>	

## 1. NON-TECHNICAL SUMMARY

Please provide below a project summary written in non-technical language. The summary may be used by ESRC to publicise your work and should explain the aims and findings of the project.  
*[Max: 250 words]*

Recent years have witnessed renewed policy interest in community-based development. This interest is predicated on the idea that community involvement leads to more effective and equitable development. However, because communities often lack the power to collect taxes, contributions to local public goods are voluntary and there is a potential for free riding. For informal arrangements to be sustainable, participants must trust one another and be able to hold each other to account. This, in turn, places limits on the extent to which communities mobilize to address collective problems and can lead to divisions and exclusions within communities.

This study used data from a lab-type field experiment and a quasi- or natural experiment to investigate group formation for collective action in nineteen African villages. The lab-type field experiment involved a game that mimicked situations in which development agencies, non-governmental organizations, or government bodies invite villagers to form groups rapidly in order to address a shared problem. The quasi- or natural experiment occurred as a result of actions taken by the Zimbabwean government. In the early 1980s, displaced people were resettled in new villages made up of unrelated and often unacquainted households. In order to survive and prosper, the inhabitants of these villages had to solve various problems of collective action. To varying degrees, they addressed these problems by setting up Community Based Organizations (CBOs).

Combining data on experimental group and CBO formation with data on village geographies, kinship networks and household characteristics we investigated who groups and who groups with whom.

## 2. PROJECT OVERVIEW

### a) Objectives

Please state the aims and objectives of your project as outlined in your proposal to the ESRC.  
*[Max: 200 words]*

The aim of this project was to shed light on whether and how the need to rely on trust and informal mechanisms of enforcement when addressing problems of collective action leads to divisions and exclusions within communities. This is important as divisions and exclusions have implications for the equitability and sustainability of community-based development initiatives.

A literature on this topic already existed. However, owing to the types of data used, previous analyses could not distinguish between the effects of individual and community characteristics on the formation of groups and group composition and the effects of group formation and composition on individual and community characteristics.

Our principle objective was to use the experimental nature of our data to isolate the effects of individual and community characteristics on the formation of groups and

group composition.

In particular, we sought to establish whether the need for trust and inter-personal accountability

- restricted group formation for collective action to within kin groups only
- led to the exclusion of the poor
- caused men and women to segregate; and
- implied a role for religion in village economies.

## **b) Project Changes**

Please describe any changes made to the original aims and objectives, and confirm that these were agreed with the ESRC. Please also detail any changes to the grant holder's institutional affiliation, project staffing or funding. *[Max 200 words]*

The original aims and objectives of the project remained in place throughout. However, because we could find no evidence that the poor were being excluded from collective action, we expanded our objectives to include a search for positive evidence of the existence of egalitarian values in the villages. To this end, Abigail Barr and Mattea Stein conducted an analysis of the relationship between household income and status, the latter measured by funeral attendance.

In addition, we asked for and were granted a three month, no cost extension to the project. This extension was necessary as the setting up of the data relating to the quasi- or natural experiment was far more onerous than we anticipated. In order to address a number of gaps and inconsistencies in the data, we had to send field researchers back out to the villages with specially designed questionnaires and other data gathering instruments.

The extension has allowed us to meet our original aims and objectives and to generate a dataset that is worthy of further analysis.

## **c) Methodology**

Please describe the methodology that you employed in the project. Please also note any ethical issues that arose during the course of the work, the effects of this and any action taken. *[Max. 500 words]*

Our hypotheses about who groups with whom were drawn from existing literatures in biology and the social sciences. They focused on the roles of kinship, shared futures, inequalities, social norms, and religions.

In the lab-type experiment, individuals played a game involving financial payoffs and within which they could form groups in order to share risk and secure higher expected payoffs. The data analysed came from 14 experimental sessions each conducted in a different village. In some villages, the experimenter enforced the grouping-to-share-risk agreements, in some the agreements were held together by trust alone, and in some they were held together by trust and by the groupers being able to hold each other to account. We combined the data from the experiment with data on the participants, their memberships in CBOs and religions, and their family networks. Then, using dyadic regression analysis, we compared who grouped and who grouped with whom under the different treatments and, thereby, identified which types of social tie and social proximity were associated with trust and an ability to hold each other to account.

In the quasi- or natural experiment, families started arriving in their new villages in 1980. By 1984 the resettlement was essentially complete. Focusing on 15 such villages and drawing data from a panel survey (1983-2000), a genealogical mapping exercise conducted by one of us in 1999 and 2001, a retrospective data generating exercise focused on memberships in CBOs and religious congregations conducted by one of us in 2000, a retrospective data generating exercise focused on deaths and land right transfers and village mapping exercises completed by our field researchers in 2009, we constructed a quantitative snapshot of the villages and their inhabitants in 1980-84. From this we constructed a baseline, i.e., a set of variables summarizing the situation of each household in each village *before* they started to engage in CBO activity. Then, using dyadic regression analysis we investigate whether and how well elements in this baseline predict who forms and joins CBOs, who joins CBOs with whom and the density of the network of CBO co-memberships in each village in each year from 1982 to 2000.

In both dyadic analyses, we adjusted the standard errors on all the estimated coefficients to account for non-independence across dyads sharing a common element.

**Things we did not do:** We said that we would do a cross-section comparison of the resettled and non-resettled villages. However, early analyses of the CBO data indicated that we would not be able to add to the insights of Barr (2004). So, we focused on the analysis of the resettled villages over time. In the analysis of the lab-type experiment, we found that the propensity to form groups varied markedly across villages, but not specifically between resettled and non-resettled villages. So, in our papers, we focus on the tests of the hypotheses alluded to above, while controlling for village-level differences.

#### d) Project Findings

Please summarise the findings of the project, referring where appropriate to outputs recorded on *ESRC Society Today*. Any future research plans should also be identified. [Max 500 words]

**The poor are not excluded:** The analyses revealed no evidence of the poor being excluded or choosing to exclude themselves from group formation and no evidence of the rich grouping with the rich and the poor with the poor. Indeed, the villages in which average wealth was lowest at the time of resettlement had the densest networks of CBO co-membership throughout the subsequent two decades. In these villages, it was the wealthier households who were instrumental in setting up the CBOs, possibly because, for them, land clearance and homestead-building was easier and faster. Initially, the poorer households would have had little time for anything but land clearance and building. However, by 1985 they were just as engaged as the wealthier households.

**Women and men do tend to segregate but this is not owing to a lack of trust between the sexes:** It will come as no surprise to anyone who has convened meetings in sub-Saharan Africa, that when women and men were invited to form groups quickly during the field experiment they tended to separate into male and female groups. However, this tendency was not owing to women finding it easier to trust other women and men other men. In fact, when trust was important there was less sex separation. Further analysis indicates that this is because trust is stronger within families and among people who belong to the same religious congregation and neither families nor religions are sex segregated.

**Religions and kinship support the informal enforcement of collective agreements** As well as supporting the formation of mixed sex groups when mutual trust is important, kinship and religions provide a context within which people can hold each other to account.

**The relationships formed by belonging to the same CBO are valued** Co-members of CBOs were more likely to group together when invited to do so during the field experiment *except* when the agreements holding those groups together could be socially enforced. At first glance, this finding appears odd. However, it is consistent with community based organization co-members wishing to protect their on-going valuable relationships from the potential harm that could be done to them if one or other party was tempted to renege on an agreement within the experiment. When the grouping agreements were enforced by us there was no such risk. When they were supported by trust alone, they could be broken but no one would ever know. So on-going relations would be unharmed. To make informal social enforcement possible, we set the game up so that people who wished to renege on their grouping agreements had to tell everyone that that was what they were doing. So, a renegade could have upset on-going relationships and this represented a risk. Not grouping was the easiest way to avoid that risk. That CBO co-members did not group together under this last treatment is an indication that they value those co-memberships.

**Clans may be a substitute for CBOs, i.e., an alternative support for collective action.**

#### **e) Contributions to wider ESRC initiatives (eg Research Programmes or Networks)**

If your project was part of a wider ESRC initiative, please describe your contributions to the initiative's objectives and activities and note any effect on your project resulting from participation. *[Max. 200 words]*

Our project was funded under the "ESRC-DFID Joint Scheme for Research on International Development" The focus of this scheme is poverty alleviation. In the latest call "inequality and development" has been listed as one of three areas of particular interest. Our work falls into this area.

Had we found that the poor tend to be excluded when groups are formed to address shared problems or that poor villages tend not to form groups and may therefore be less effective at addressing problems of collective action this would have had important implications for poverty alleviation via community-based development initiatives.

In fact, we found the opposite: poorer villages engage in more group formation and relatively poor households are not excluded from either CBOs or groups formed within a game designed to mimic a situation in which a funding agency invites villagers to form groups rapidly in order to address a shared problem.

This is good news. However, we need bear in mind that, in order to identify the causal relationships of interest, we had to focus on a specific type of village. The implications of this are discussed in our latest paper which can be found at <http://www.csae.ox.ac.uk/workingpapers/pdfs/2010-21text.pdf>

### 3. EARLY AND ANTICIPATED IMPACTS

#### a) Summary of Impacts to date

Please summarise any impacts of the project to date, referring where appropriate to associated outputs recorded on *ESRC Society Today*. This should include both scientific impacts (relevant to the academic community) and economic and societal impacts (relevant to broader society). The impact can be relevant to any organisation, community or individual. *[Max. 400 words]*

#### **Outreach activities**

Four working papers have been released. Three are under review at top field journals. The fourth will be presented twice more before being revised for submission to a journal.

Presentations: Nottingham University (2008), African Studies Centre in Leiden (2008), The Free University, Netherlands (2008), The Hague, Netherlands (2009), Boston University, US (2009), University of California, Berkley (2009), Groningen University (2009), Wageningen University (2010), to evaluators of the CPWF (2009).

Conference appearances: CEPR conference, LSE (2008), CSAE annual conference (2 in 2009), European Association for Evolutionary Political Economy annual conference (2009), CSAE annual conference (2010), International Network for Social Network Analysis annual conference (2 in 2010).

Our seminars and conference appearances have generated a great deal of interest and we have found that being able to direct people to the project web site on the CSAE web page has been the most effective way to provide interested parties with further information and to keep them updated. We have updated our web site to reflect our latest findings.

#### **Feeding into policy research in Zimbabwe**

Our work on CBOs is now being used as a baseline in an analysis of the effects of the on-going socio-economic and political crisis in Zimbabwe. Marleen Dekker and collaborators in Zimbabwe (funded by the Netherlands Embassy in Harare and the African Studies Centre in Leiden) have been using adjusted versions of our CBO survey instruments when resurveying some of the villages in our study. Thus, we know that many valued CBOs have ceased to exist owing to the crisis.

#### **Feeding into CPWF evaluation work**

As mentioned in our interim reports, our methods are now being applied by evaluators of the CIGAR's Challenge Program on Water and Food. This impact started when Abigail Barr met with the team in Colombia in October 2007, prior to us knowing whether we had the funding for this project. The CPWF team found the discussions about dyadic approaches to network analysis tremendously useful as, while they had beautiful data, they had yet to identify a method of analysis. CPWF team members made two visits to Oxford to explore the possibility of applying our methods to their data. They became increasingly aware that they would not be able to develop, in a timely manner, the expertise required to conduct such an analysis. Abigail Barr is now directly involved in their evaluation analysis.

## **b) Anticipated/Potential Future Impacts**

Please outline any anticipated or potential impacts (scientific or economic and societal) that you believe your project might have in future. *[Max. 200 words]*

### **Seminars**

We plan to present our final paper on CBO formation twice over the next few months.

### **Feeding into policy research in Zimbabwe**

The findings of our research will be used as inputs into research papers and policy briefs to be produced under a new project on Land Tenure in Zimbabwe. This new project is a collaboration of the African Studies Centre in Leiden and Ruzivo Trust in Harare, Zimbabwe. It is funded by the LandAC of the Ministry of Foreign Affairs in The Netherlands. The focus of this new project is the development of communities in the resettlement schemes undertaken in Zimbabwe since 1999. Our analyses will provide a basis for comparison between the old and new schemes.

The findings of the Land Tenure project and the comparisons will be disseminated at two events planned for November 2010:

1. Researchers' workshop on Land Tenure in Zimbabwe for academics and policy makers in Zimbabwe.
2. Stakeholders Conference on Agrarian and Rural Development in Africa entitled: "Rethinking and Reconnecting Academia in Africa's Agrarian and Rural Development" with academics and policy makers from Africa and Europe.

You will be asked to complete an ESRC Impact Report 12 months after the end date of your award. The Impact Report will ask for details of any impacts that have arisen since the completion of the End of Award Report.

## 4. DECLARATIONS

Please ensure that sections A, B and C below are completed and signed by the appropriate individuals. The End of Award Report will not be accepted unless all sections are signed.

Please note hard copies are NOT required; electronic signatures are accepted and should be used.

### A: To be completed by Grant Holder

Please read the following statements. Tick ONE statement under ii) and iii), then sign with an electronic signature at the end of the section.

#### i) The Project

This Report is an accurate overview of the project, its findings and impacts. All co-investigators named in the proposal to ESRC or appointed subsequently have seen and approved the Report.	<input checked="" type="checkbox"/>
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#### ii) Submissions to *ESRC Society Today*

Output and impact information has been submitted to <i>ESRC Society Today</i> . Details of any future outputs and impacts will be submitted as soon as they become available.	<input checked="" type="checkbox"/>
<b>OR</b>	
This grant has not yet produced any outputs or impacts. Details of any future outputs and impacts will be submitted to <i>ESRC Society Today</i> as soon as they become available.	<input type="checkbox"/>
<b>OR</b>	
This grant is not listed on <i>ESRC Society Today</i> .	<input type="checkbox"/>

#### iii) Submission of Datasets

Datasets arising from this grant have been offered for deposit with the Economic and Social Data Service.	<input type="checkbox"/>
<b>OR</b>	
Datasets that were anticipated in the grant proposal have not been produced and the Economic and Social Data Service has been notified.	<input type="checkbox"/>
<b>OR</b>	
No datasets were proposed or produced from this grant.	<input type="checkbox"/>
<b>None of the above:</b>	
Two datasets arising from this grant will be offered for deposit with the Economic and Social Data Service once the papers generated using the datasets are in print	<input checked="" type="checkbox"/>