

**"SOCIAL COHESION IN RWANDA:
RESULTS FROM A PUBLIC GOOD
EXPERIMENT"**

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OVERVIEW

- Literature attribute high levels of ethnic diversity to low levels of public goods provision (**Easterly ,2001**)
 - Different languages and cultures that ethnic groups possess may also provide a source of divergent preferences.(Habyarimana J,2007)
 - Ethnic groups differ in their preferences because the utility they derive from a given public good is reduced when other groups also use it.(Alesina. et al., 2009)
 - Communities showing average levels of ethnic diversity provide 20 percent lower contributions than homogenous communities. (Miguel .et ,2005)
 - Ethnic diversity has a negative and significant effect on contributions (Okten.et al, 2004)
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INTRODUCTION

- ❑ Rwanda is currently carrying out a series of devolution policies, where the responsibility for provision of local public amenities such as water will be decentralized to local communities.
- ❑ However, given Rwanda's turbulent history, culminating in the 1994 genocide, how well people in local communities can cooperate in practice may be an important constraint on devolution. In this paper we report on a public good experiment carried out in twenty different rural districts in Rwanda.

Interesting point: participants' historic background in order to assess whether these matter for the willingness to contribute to the public good.”



BACKGROUND

- In Rwanda, decentralization and participation have been promoted along with initiatives to improve social cohesion between ethnic groups.
- Decentralization through devolution implemented at the level of districts.
- However, complex situation in the country;
- ✓ Impact of genocide on the social structure: Trauma, orphans, widows.....
- ✓ Majority of rural population still very poor.....



PUBLIC GOOD EXPERIMENT

- ❑ Public good :good that everyone(contributors and non-contributors alike) can enjoy once provided;
- ❑ Public goods are provided;but, are they provided in efficient quantities?
- ❑ What determines who contributes and who free rides?
- ❑ Experiments aim at explaining why people contribute as much or as little as they do.
- ❑ Experiments also aim at designing mechanisms so that public goods will be provided at efficient levels.

❖ The game.

- ❑ Subjects are allocated to groups, get an endowment of a fixed amount and have to decide how much to allocate to the private account and how much for the group account.
- ❑ The money in the public account is multiplied by some factor and divided between all group members, irrespective of their contribution

A group of n members decide simultaneously how much to invest in the public good, where the payoff for the i th person is given as:

$$P_i = e - g_i + \beta \sum_n g_j$$

where e = initial endowment in “tokens,” not varying across subjects,

g_i = tokens subject i contributes to the group public good account,

β = marginal payoff to each individual from the public good,

And $\sum_n g_j$ = the sum of the n individual contributions to the public good.

EXPERIMENT DESIGN

- ❑ Experiment carried out in 20 different locations, i.e. districts;
- ❑ Sample: 300 participants and 15 per each location selected randomly ;
- ❑ Six sessions (rounds) per location;
- ❑ Three groups selected randomly for each session.
- ❑ Allocation of 3 different exchange rates: 2, 3, and 4 at random.
- ❑ 3 new groups drawn in the next session and allocation of same 3 different rates.
- ❑ Endowment: 1000 RwF payment for showing up and 250 RwF handed out at the beginning of each session;
- ❑ 1\$ = 500 Rwf;
- ❑ Individual payoff in case each participant allocates his total endowment to the public good = 4500 Rwf..... equivalent to 9\$ > participant daily income: 4.5\$

Table 1. Descriptive statistics (N=300)

Variables	Definition	Mean	Std. Dev.
age	Age in year of the respondent	36.25	11.96
gender	= 1 if male respondent	0.52	0.50
married	1 = single (29%); 2 = married (58%), 3 = divorced (3%), 4 = widow (10%)	1.95	0.86
education	=1 if the respondent has been to school	0.98	0.14
yearschool	Years of schooling	7.83	13.05
Monthly income	Household monthly income in Rwandan francs	68801.16	98500.7
Former refugees	If the respondent is the former international refugees	0.11	0.31
In-country migrants	If the respondent is moved to the place from elsewhere	0.26	0.44
Permanent resident	=1 if the respondent is native	0.64	0.48

Source: Experiment in 20 districts of Rwanda

ECONOMETRIC SPECIFICATION

- ❑ Level of contribution as the dependent variable.
- ❑ Set of explanatory variables
- ❑ We first assume a model that includes :
 - ❖ an intercept, participant's return from the previous round
 - ❖ some individual-level characteristics sometimes studied in these experiments, such as in income level of the participants.
 - ❖ participants' historic background in order to assess whether these matter for the willingness to contribute to the public good.”

Table 2: Percentage of endowment contributed to the public good per round and historic background

	Rd.1	Rd.2	Rd.3	Rd.4	Rd.5	Rd.6	Overall
Permanent residents (N=191)	0.52	0.51	0.51	0.49	0.49	0.49	0.50
Former international refugees (N=33)	0.54	0.57	0.58	0.65	0.55	0.59	0.58
In-country migrants(N=76)	0.53	0.55	0.55	0.55	0.55	0.54	0.55

- ❑ Contributions level of all the participants in subsequent rounds and broken down by permanent residents, former international refugees and in-country migrants.
- ❑ Former refugees make highest contributions than both permanent residents and in-country migrants.

Table 4. OLS regressions

dependent variable: contribution	Coefficient	Robust Standard error
Return t-1	0.10***	0.02
Exchange rate	5.15**	1.91
Permanent resident	-35.06**	6.77
Former international refugees	28.85**	6.33
Income level	0.00**	0.00
_cons	89.03***	8.75
	1799	
No. of obs.	0.1821	
R-squared	(F(6, 1799)	
	= 16.45	

*Significant at 10% level, ** Significant at 5% level, *** Significant at 0.1% level

- Baseline group: In-country migrants
- significant difference between the in-country migrants and both former international refugees and local residents.
- Contribution increases with previous return: people take into account other group participants' behavior.
- Contribution increases with former international refugees as group members,

Table 5. OLS regressions

dependent variable: contribution	Coefficient	Robust Standard error
Return t-1	0.08***	0.02
Exchange rate	5.05*	1.89
Permanent resident	-15.16**	4.01
In-country migrants	-9.06*	4.52
Income level	0.00**	0.00
_cons	94.47**	9.47
No. of obs.	1799	
R-squared	0.1632	
	(F(5, 1793)	
	= 12.60	

*Significant at 10% level, ** Significant at 5% level, *** Significant at 0.1% level

- Baseline group: Former international refugees
- Significant difference between former refugees and both permanents residents and In-country migrants.
- Permanents residents contribute less than their counterparts.
- Contributions increase with high level of income
- Contributions increase with the exchange rate

Is the participants' historic background really matter for the willingness to contribute to the public good.”

❑ Ethnic diversity :Former international refugees as one group and permanent resident as another group

“Historic background ► ethnics groups ► cultures ► divergence in preferences”.

❑ Highest contribution for former refugees versus lowest contribution for permanent residents.

“Trust vs. mistrust in current Government(institutions) may affect the willingness to contribute

❑ Low contribution for In-country migrants(genocide survivors)

“Impact of genocide: poverty, trauma.....”

Thank you!

