
Investing at the bottom of the pyramid:
Experimental evidence on business activity and
group cohesion from Tanzania.

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Background and Motivation

- Tanzania's Social Action Fund (TASAF) is a Community-Driven Development program, \$150m disbursed through 3 modalities:
 - Food for work
 - Construction of public infrastructure
 - 'Vulnerable Groups' investments.
- The Vulnerable Groups (VG) is the most novel of these:
 - Groups are newly formed from vulnerable households
 - Vulnerable: widowed, orphaned, disabled, elderly, or HIV-affected.
 - These groups are then asked to put together a business plan
 - Successful applicants are then funded, projects from \$3,500-11,000
 - Typical products are animal husbandry, poultry, milling, tailoring, carpentry, and beekeeping.

This project studies the creation and initial investment of a tranche of Vulnerable groups enterprises.

Background and Motivation

- Why is the Vulnerable Groups program promising?
- Major interventions in development today:
Cash Transfers or Microfinance.
 - Problems with Cash Transfers: require perpetual intervention, may breed a ‘culture of dependency’.
 - Problems with Microfinance: impact may not be very large (Banerjee et. al 2010), difficulty in targeting the ‘bottom of the pyramid’ because the very poor are not entrepreneurs.
- The VG program potentially combines the best of both worlds:
 - A one-time intervention that aims to jump-start entrepreneurial activity, no further financial support is required.
 - Large transfers that can be targeted at the very poor, do not require repayment and hence may have large long-run impacts.

Background and Motivation

- However how low can you go?
- Potential problems with the VG intervention:
 - It is targeted at some of the most marginalized households in poor villages in one of the poorest countries in the world. Can you really create sustainable entrepreneurial ventures in this population? Do the beneficiaries in fact have the business skills to thrive once started?
 - Well-documented ‘elite capture’ in CDD programs (Platteau 2004, Mansuri & Rao 2004). Will elites co-opt these substantial resources? Alternatively, can businesses run by such poor people survive unless they provide elites with sufficient incentives to remain involved?
 - The TASAF groups are synthetically formed for just for the VG program, as opposed to joint-liability driven, social-capital intensive group formation in microfinance (Karlán 2004). Do the VG groups have the requisite social capital to work together effectively?

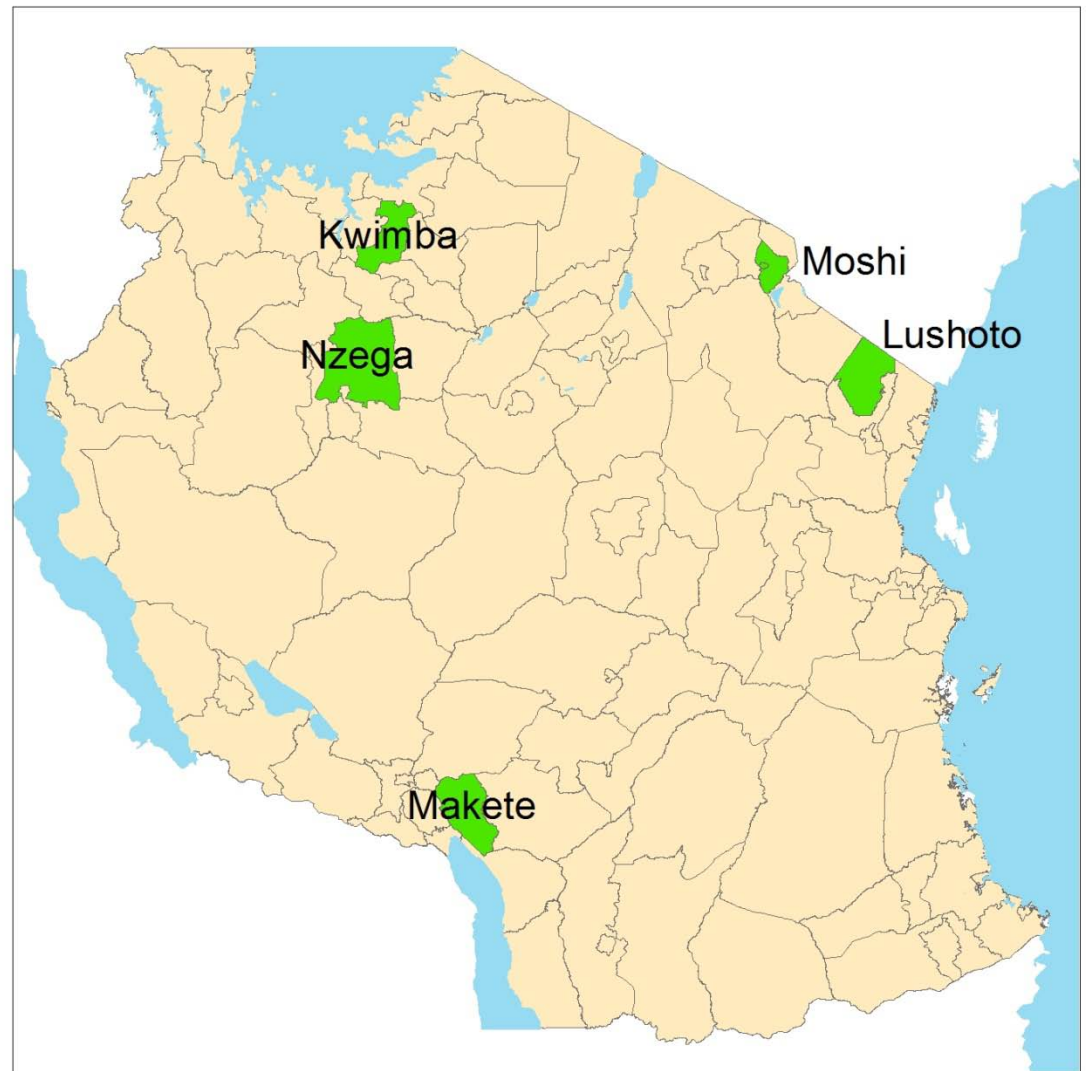
Background and Motivation

Our solutions to understanding these limitations:

- Provide additional inputs to randomized subsets of the groups:
 - Business skills training, focused on bookkeeping, marketing, writing business plans, etc.
 - Group Trust Building exercise.
- Careful identification of blood relationships to elites for every household in study villages at baseline.
- Exhaustive business investment survey, including questions tracking all assets & profits to the individuals who control them.
- Use of experimental games to measure group collective action, cohesion, and reciprocity at the six-month followup.

Sampling Design:

Household-level analysis
is based on 100
villages drawn from
5 districts of
Tanzania:



Sampling Design:

To track issues of elite capture and heterogeneity of benefits:

1. Divide households into five relevant strata:
2. Conduct a listing exercise to establish stratum of every household in our 100 villages.
3. Randomly sample and conduct detailed household surveys:

Eligibility:	Stratum:	Surveys:
Eligible (vulnerable) households	Group Elites (Chair, Secretary, Treasurer)	3/group
	Group Rank and file (remaining beneficiaries)	3/group
	Eligible non-beneficiaries	3/village
Ineligible households	Village Elites (Officer & Chairman)	2/village
	Ineligible Non-Elites.	3/village

This gives us the ability to understand relationships with two kinds of ‘elites’: **group** elites and **village** elites.

Research Design:

- Crosscut **social capital**-building exercise and **business skills** trainings to understand the role they play in group success:

Frame of projects in research: 120 groups in 100 villages.

TASAF research design:

(randomization at village level):

		TASAF Treatment (50 villages)	TASAF Control (50 villages)
Training research design: (randomization at group level):	No Training	28 groups	61 groups
	Social Capital training	12 groups	
	Social Capital + Business Skills training	19 groups	
Total Groups:		59 groups	61 groups

Survey Design:

Outcome measurement (1): Surveys.

This study uses the following survey instruments:

- Baseline listing data: gives limited outcomes for every household in the village
- Baseline group survey data: what kinds of activities were the groups conducted before TASAF funding?
 - Typically none.
- ‘Rapid Resurvey’ of groups six months after TASAF disbursement: investments, activities, and allocation of assets, inputs, and profits for individual members.
 - Group-level data on risk, discounting, hyperbolicity.
 - Individual-level data on risk, discounting, hyperbolicity.

Survey Design:

Outcome measurement (2): Experimental Games.

At Rapid Resurvey, we split groups into 2 game groups, one of which contains group elites and the other only R&F members.

- **Public Goods Game:** Each group of 4 plays an iterated PG game with a minimum of 10 rounds and a randomized end round. With this, we can measure:
 - Collective action at the game-group level
 - Slope of strategic response to changes in the contributions of others
 - Tendency for collective action to unravel as you approach the end of the game.
- **Ultimatum Game:** Each group of 4 plays as ‘sender’ and ‘receiver’ to the other group, iterating through members. Players can observe whether it is the ‘sender’ or the ‘receiver’ group that contains the group elites. With this, we can measure:
 - Differences in sharing depending on whether receiving group is elite or R&F.
 - Differences in refusals depending on whether receiving group is elite or R&F.
 - Differences in responsiveness of refusals to sending amount depending on whether sending group is elite.

For both games, we can test whether TASAF treatment or the Social Capital and Business Skills training alter game play or alter the elite/non-elite differential.

Research questions:

- What is an 'elite' in this context? Consider two types:
 - Village elites (Village Executive Officer and Village Chairman, as well as all HHs with blood relations to same).
 - Group elites: Group Chairperson, Secretary, Treasurer
- Do elites appear to be capturing these groups?
- Do the trainings improve the performance of groups?
- Do the trainings change the way that the elites relate to groups?
- Do TASAF or the trainings change game play, by improving collective action or changing reciprocity norms?
- Do the games reveal information about group cohesion, elite/non-elite relationships that is borne out in investment patterns?

The Trust-building exercise:

1-DAY TRAINING PROGRAMME ON TRUST BUILDING AND GROUP COHESION, FOR TASAF II VULNERABLE GROUPS

TRUST BUILDING AND GROUP COHESION				
Timing	Topics	Objectives	Contents	Methodology
9.00 – 9.30	Introduction	Participants: <ul style="list-style-type: none"> • get to know each other • formulate and express their expectations • are aware of the purpose of the training • feel free to contribute and interact • agree on the class rules 	<ul style="list-style-type: none"> • Course program for the 1-day Trust Building module • Class rules 	<ul style="list-style-type: none"> • Ball game
9.30 – 10.30	1. Teamwork and group dynamics	Participants will be able to: <ul style="list-style-type: none"> • reflect about team building and working together • learn how to solve problems as a team • identify individual member potentials that may have a positive impact to the group 	<ul style="list-style-type: none"> • Group dynamics • Characteristics of group members 	<ul style="list-style-type: none"> • Group exercise (toxic lake)
10.30 – 11.00	BREAK			
11.00 – 12.00	2. Group Guidelines and Rules	Participants: <ul style="list-style-type: none"> • are aware of rules governing their common enterprises • understand social aspects which can either foster or hinder the realization of a group enterprise 	<ul style="list-style-type: none"> • Trust building • Identification of personal attributes and motives which may contribute or hinder group trust building 	<ul style="list-style-type: none"> • Small group work • Discussion
12.00 – 13.00	3. Leadership styles and good governance	Participants: <ul style="list-style-type: none"> • experience the influence of different leadership styles on group outcome • practice good governance 	<ul style="list-style-type: none"> • Leadership styles • The need for good governance for a group to have strong cohesion • How to re-enforce good governance and democratic practices in a group 	<ul style="list-style-type: none"> • Role play leadership • Discussion
13.00 – 14.00	BREAK			
14.00 – 15.00	4. An effective group meeting	Participants: <ul style="list-style-type: none"> • understand and practice the art of organizing and conducting effective meetings. 	<ul style="list-style-type: none"> • Preparation and conducting group meeting • Key aspects of conducting effective group meetings • Chairing group meetings • Follow up on resolutions and decisions of meetings 	<ul style="list-style-type: none"> • Case study • Plenary discussion
15.00 – 15.30	5. Conflict resolution	Participants: <ul style="list-style-type: none"> • Increase their awareness on the sources of conflict • Get to know strategies to overcome them. 	<ul style="list-style-type: none"> • Sources of conflicts • Conflict resolution 	<ul style="list-style-type: none"> • Discussion using cartoons
15.30 – 16.00	BREAK			
16.00 -16.25	6. Group Action Plan	To enable participants to: <ul style="list-style-type: none"> • identify learning elements to be practiced in the management of group enterprises • incorporate the lessons they learned in their project 	<ul style="list-style-type: none"> • Group action plan • Project presentations 	<ul style="list-style-type: none"> • Group work • Trainees' presentations • Discussion
16.25 – 16.30	Evaluation	Participants evaluate the course	<ul style="list-style-type: none"> • Course evaluation 	<ul style="list-style-type: none"> • Pictured questionnaire

The Trust-building exercise:

Cartoon C_{2.2}: Importance of Respecting Group Rules







Group Rules are meant for all members, both leaders and ordinary members. They help to ensure transparency and to build an atmosphere of trust amongst group members. Group rules help to understand the rights and responsibilities of leaders and members.

The Business Skills course:

2-DAYS TRAINING ON BUSINESS SKILLS/ENTREPRENEURSHIP, FOR TASAF II VULNERABLE GROUPS

BUSINESS SKILLS & ENTREPRENEURSHIP - DAY 1				
Timing	Topics	Objectives	Contents	Methodology
9.00 - 9.30	Introduction to Business Skills Module	Participants: <ul style="list-style-type: none"> • formulate and express their expectations re. Business Skills Module • are aware of the purpose of BS Module 	<ul style="list-style-type: none"> • Recap of Trust Building training • Course program 2-day Business Skills Module 	<ul style="list-style-type: none"> • Pairs/Group discussion
9.30 - 10.30	1. Personal Entrepreneurial Competencies (PECs)	To enable trainees to: <ul style="list-style-type: none"> • assess their own risk taking behaviour • identify important personal entrepreneurial competencies 	<ul style="list-style-type: none"> • Risk-taking • Other PECs 	<ul style="list-style-type: none"> • Ball-toss game • Brainstorm • Discussion
10.30 - 11.00	BREAK			
11.00 - 11.30	PECs	Continued	Continued	
11.30 - 13.00	2. Introduction to Marketing	Participants get aware of: <ul style="list-style-type: none"> • the importance of meeting clients' demands • their own selling and negotiation skills • the basic elements of marketing 	<ul style="list-style-type: none"> • Customer needs • The marketing mix (4 Ps) 	<ul style="list-style-type: none"> • Ilimi Market exercise • Discussion using cartoons
13.00 - 14.00	BREAK			
14.00 - 15.30	3. Basic Business Management (Part I)	Participants get aware of the importance of: <ul style="list-style-type: none"> • business planning • separating business from the family • delivering quality • cash management • recordkeeping • making profit calculations 	<ul style="list-style-type: none"> • Business game 	<ul style="list-style-type: none"> • ILO SIYB Business game (role-play)
15.30 - 16.00	BREAK			
16.00 - 16.30	Basic Business Management	Continued	Continued	<ul style="list-style-type: none"> • ILO SIYB Business game (role-play) • Discussion
BUSINESS SKILLS & ENTREPRENEURSHIP - DAY 2				
Timing	Topics	Objectives	Contents	Methodology
8.30 - 9.30	4. Creativity & Innovation	To enable participants to: <ul style="list-style-type: none"> • Get aware of the importance of creativity in business. • Become creative and develop new business ideas. 	<ul style="list-style-type: none"> • Recap of first day training • Creativity • Idea generation 	<ul style="list-style-type: none"> • Innovation exercise (group work)
9.30 - 10.30	5. Business Opportunity Seeking	To enable participants to: <ul style="list-style-type: none"> • Be aware of the need to look out for opportunities on a continuous basis. • Identify and evaluate appropriate business opportunities 	<ul style="list-style-type: none"> • Opportunity seeking • Business environment scanning 	<ul style="list-style-type: none"> • Business Opportunity exercise (group work)
10.30 - 11.00	BREAK			
11.00 - 13.00	6. Basic Business Management (Part II)	To enable participants to: <ul style="list-style-type: none"> • Get familiar with important roles and functions of an entrepreneur on running a small business. 	<ul style="list-style-type: none"> • Key competencies of an entrepreneur to successfully run a small business. • Functions and roles of an entrepreneur in a small business. 	<ul style="list-style-type: none"> • Brainstorming • Group work
13.00 - 14.00	BREAK			
14.00 - 15.00	Basic Business Management (Part II)	Continued	Continued	<ul style="list-style-type: none"> • Trainees' presentations • Discussion using cartoons • (The trainer uses trainees' inputs to explain difficult topics: i.e. pricing and costing).
15.00 - 15.30	BREAK			
15.30 - 16.00	7. Group Action plan	To enable participants to: <ul style="list-style-type: none"> • Identify learning elements to be practiced in the management of group enterprises. • Incorporate the lessons they learned in their TASAF subproject 	<ul style="list-style-type: none"> • Group action plan • Project presentations 	<ul style="list-style-type: none"> • Group work • Trainees' presentations • Discussion
16.00 - 16.30	Evaluation	Participants evaluate the course	<ul style="list-style-type: none"> • Course evaluation 	<ul style="list-style-type: none"> • Pictured questionnaire

The Business Skills Course.

<p>PRODUCT</p> 	<p>A good product satisfies your customer's needs, keeping in mind:</p> <ul style="list-style-type: none">• Quantity• Quality• Attractiveness• Design• Distinguish from competition• Combination of goods• Assortment
<p>PRICE</p> 	<p>Setting your price to make a profit, keeping in mind:</p> <ul style="list-style-type: none">• Cost of producing the product• What are customers prepared to pay?• What are your competitors' prices?
<p>PLACE</p> 	<ul style="list-style-type: none">• A good business location is easily accessible for customers, clean, safe, attractive, with opening on regular and convenient hours• A good presentation of goods (display)• Finding the best way to distribute your product
<p>PROMOTION</p> 	<p>Promotion is all activities to attract customers to buy your product, for example:</p> <ul style="list-style-type: none">• Visit potential clients• Sign post• Sales promotion• Advertising• Selling techniques• Word of mouth

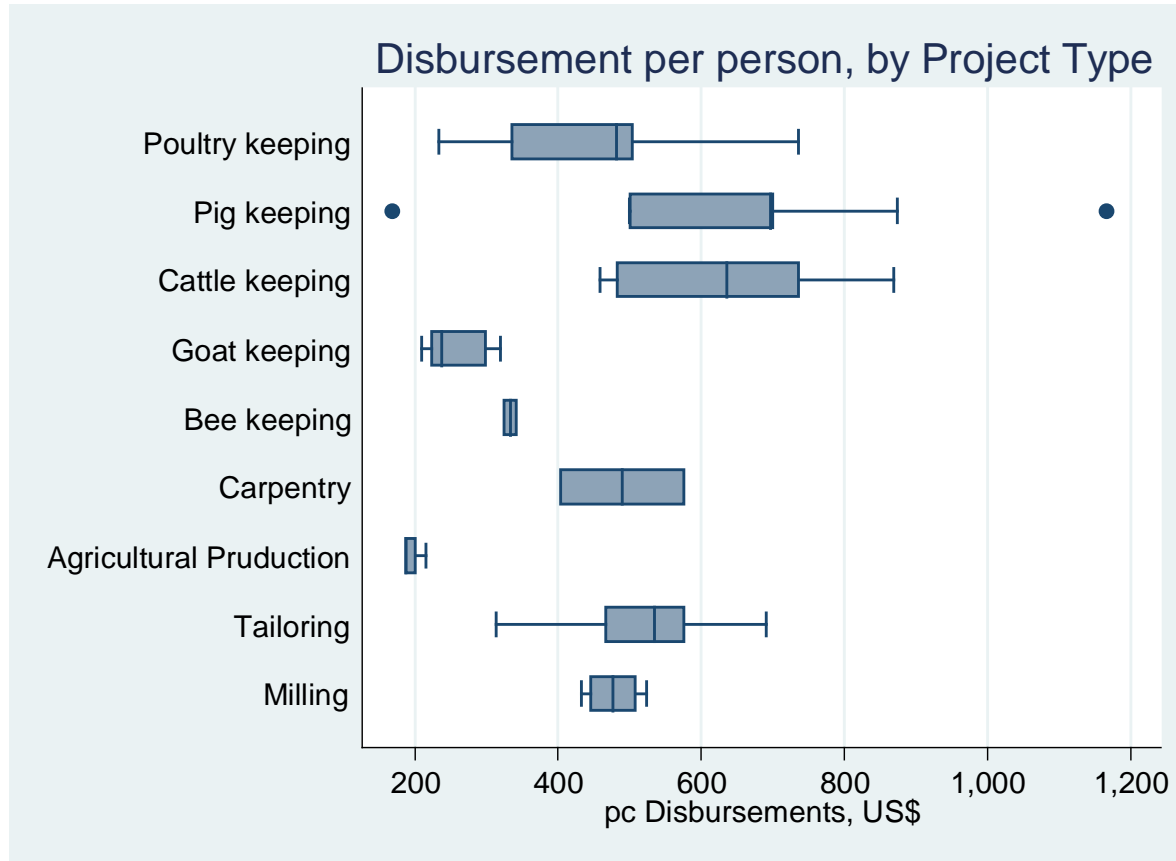
Group Disbursement.

Within Six months of the baseline survey, the groups receive their funds.

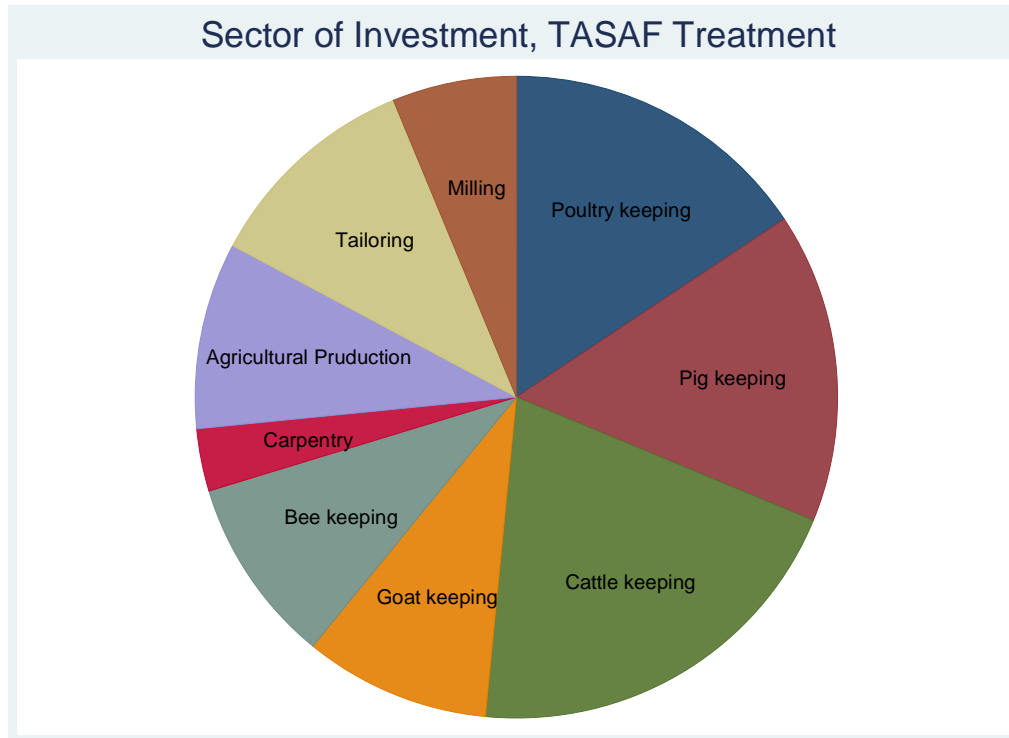
Six months after disbursement, we conduct the ‘Rapid Resurvey’ exercise that allows us to observe:

- Group composition 1 year after baseline.
- Entrepreneurial activity being conducted by the group.
- Assets purchased, total values.
- Distribution of assets: who is considered to own them, where are they kept.
- Group- and Individual-level discounting, risk aversion.
- Play the Public Goods game and the Ultimatum game.

Per-capita disbursement, by project type:.



What are the VG groups investing in?



Who are elites? Evidence from Baseline.

The Group Elites are more male and substantially better-educated than the average rank-and-file member, but no richer.

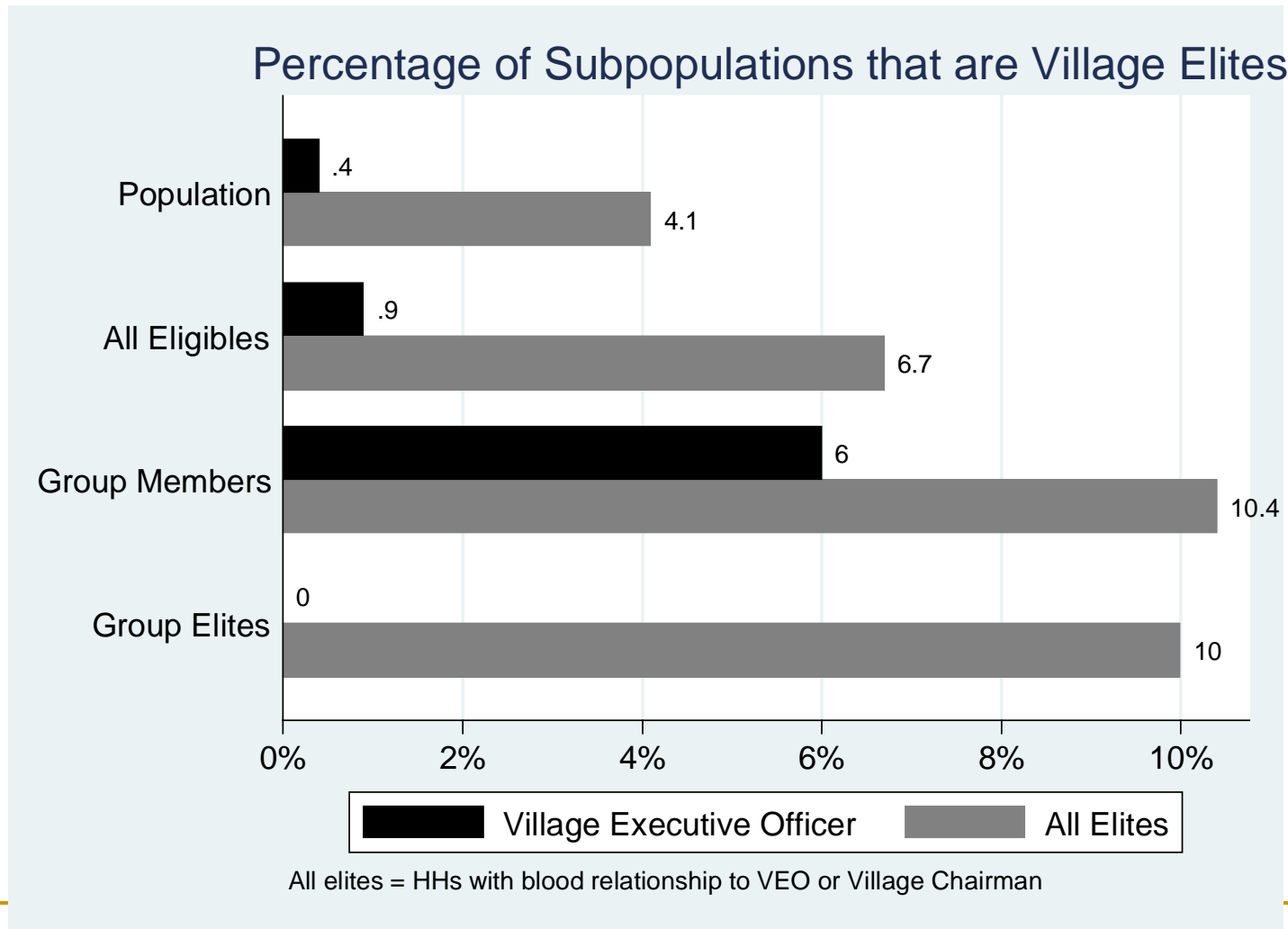
Village elites are almost all male and better-off in every respect.

	Non-vulnerable			Vulnerable					
	Village Elites		Non-Vulnerable	Eligible Non-Beneficiaries		TASAF group elites		Rank & File group members	
Age	48.58	***	50.15	60.30	***	54.03	***	58.01	***
Percent Male	95.06	***	79.17	49.71	***	60.28	***	47.39	***
Secondary or post-secondary edu	86.42	***	54.30	29.68	***	62.78	***	31.22	***
Unimproved latrine	23.05	***	38.89	41.09	***	33.61	**	39.63	
Own Mobile Phone	76.13	***	31.21	20.62	***	28.06		14.83	***
# days eaten meat in past week	1.43	***	0.87	0.67	***	0.50	***	0.46	***
Total HH Consumption	45005.03	***	32021.49	27593.25		28424.87		22399.68	***

*** p<0.01, ** p<0.05, * p<0.1. Tests are t-tests of differences in means from the Non-Vulnerable group.

Because village elites in groups are rare, we track all households with blood relations to village elites.

What fraction of HHs are village elites under this definition?



Empirical analysis:

1. Establish the balance of the TASAF & training experiments.
2. Group-Member level analysis:
 1. Are elites benefiting disproportionately in group investments?
 2. Do the trainings alter how individuals benefit from group investments?
 3. Do the training alter the degree to which elites benefit?
 4. Does treatment & training alter behavioral responses re RA, impatience?
3. Group-level analysis:
 1. Investments & profits.
 2. Membership changes between baseline & RR.
4. Lab experiment game play analysis:
 1. Do TASAF treatment and trainings alter game play outcomes?
 2. Do TASAF treatment & the trainings differentially effect the game play of elites?

Balance of the Experiment:

Balance tests:

Analysis at the TASAF group level

	Faith-based group at baseline	Income-generating activity at baseline	ROSCA at baseline	Self-help group at baseline	Social group at baseline	Income-generating project at baseline	Group Size at baseline	Any group conflict over choice of project	# of individuals who had left group at baseline	Year in which group formed	Was this group specifically formed for TASAF?	Was an elite prime mover of this group?	# of different project ideas at time of formation
TASAF treatment	0.00853 (0.040)	0.032 (0.054)	-0.0183 (0.061)	-0.0382 (0.065)	0.0068 (0.042)	0.032 (0.054)	0.501 (0.616)	-0.0808** (0.036)	-0.202 (1.865)	0.174 (0.193)	-0.043 (0.081)	0.113 (0.100)	-0.0465 (0.178)
Social Capital training	-0.0525 (0.043)	-0.114* (0.063)	-0.125* (0.067)	-0.101 (0.062)	-0.0467 (0.042)	-0.114* (0.063)	-1.800** (0.877)	0.180* (0.104)	8.855 (5.359)	-0.156 (0.351)	0.00611 (0.170)	0.12 (0.145)	-0.277 (0.190)
Business Skills training	0.0145 (0.024)	0.0904 (0.067)	0.101 (0.064)	0.0277 (0.025)	0.0104 (0.017)	0.0904 (0.067)	3.255** (1.590)	-0.0218 (0.131)	-10.21* (5.294)	0.198 (0.366)	0.0185 (0.176)	-0.123 (0.153)	0.155 (0.190)
Kwimba District	0.011 (0.014)	0.103* (0.061)	0.275*** (0.103)	0.192** (0.087)	0.0105 (0.014)	0.103* (0.061)	14.59*** (0.885)	-0.0146 (0.032)	1.517 (1.560)	2006*** (0.246)	0.589*** (0.120)	0.585*** (0.117)	1.333*** (0.132)
Lushoto District	0.152* (0.083)	0.195** (0.095)	0.125* (0.070)	0.138* (0.071)	0.104 (0.068)	0.195** (0.095)	14.95*** (0.621)	0.133* (0.073)	13.21*** (4.075)	2007*** (0.221)	0.873*** (0.083)	0.453*** (0.120)	1.412*** (0.167)
Makete District	0.00556 (0.014)	-0.00456 (0.020)	0.0214 (0.025)	0.0713 (0.048)	0.00575 (0.015)	-0.00456 (0.020)	17.39*** (1.145)	0.0353 (0.034)	0.836 (1.256)	2007*** (0.192)	0.984*** (0.042)	0.836*** (0.078)	1.429*** (0.160)
Moshi District	0.00487 (0.014)	-0.0069 (0.020)	0.0548 (0.050)	0.0727 (0.051)	0.00517 (0.014)	-0.0069 (0.020)	9.815*** (0.622)	0.114* (0.060)	1.131 (0.954)	2006*** (0.172)	0.942*** (0.053)	0.534*** (0.105)	1.611*** (0.154)
Nzega District	0.00636 (0.014)	-0.0011 (0.019)	0.0716 (0.059)	0.133* (0.077)	0.054 (0.056)	-0.0011 (0.019)	14.39*** (0.444)	0.142 (0.093)	-0.173 (0.966)	2007*** (0.223)	0.778*** (0.103)	0.649*** (0.112)	1.923*** (0.209)
Observations	120	120	120	120	120	120	120	120	120	120	120	120	120
R-squared	0.155	0.176	0.186	0.132	0.089	0.176	0.941	0.163	0.365	1	0.857	0.726	0.817

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Summary statistics on inputs to and benefits from the group, by elite status:

Elite Status:	Value of Assets Owned & kept on own land	Value of Assets Not Owned but kept on own land	Cash value of inputs provided to group project	Number of hours provided to group project	Profits taken from group project	# Obs
Group Rank & File	14.67	119.39	15.84	11.22	4.62	756
Group Elites	27.57	226.64	17.14	12.41	4.82	102
Village Elites	74.48	206.12	15.66	7.83	5.37	61
All	20.07	137.05	15.97	11.12	4.69	919

Tasaf treatment groups only. Village Elites are HHs with blood relationships to Village Executive Officer or Village Chairman.

All monetary amounts are in US \$.

Group elites give more, care for more, don't get higher profits.

Village elites get more private assets, put in less time, and get more profit.

Effects of training on allocation of assets to members:

Analysis at the TASAF member level.

	Value of Assets Owned & kept on own land	Value of Assets Not Owned but kept on own land	Cash value of inputs provided to group project	Number of hours provided to group project	Profits taken from group project
Social Capital training	(6.35) (32.46)	8.13 (53.24)	(6.96) (7.53)	(4.64) (3.37)	0.26 (2.39)
Business Skills training	(31.06) (23.49)	(9.45) (55.34)	6.67 (11.23)	0.47 (3.54)	-3.871* (2.20)
Group Elites	7.13 (8.43)	191.8*** (68.32)	9.376*** (2.96)	5.873*** (1.83)	2.438** (0.97)
Village Elites	53.62 (43.03)	114.00 (81.41)	6.942** (3.26)	0.64 (1.93)	2.03 (1.45)
Observations	908	908	908	908	908
R-squared	0.044	0.072	0.112	0.241	0.089

Robust standard errors in parentheses, clustered at village level

*** p<0.01, ** p<0.05, * p<0.1

Business skills training decreases profit-taking.

Differential effects of trainings on elites:

(Showing interaction coefficients only):

Analysis at the TASAF member level.

	Value of Assets Owned & kept on own land	Value of Assets Not Owned but kept on own land	Cash value of inputs provided to group project	Number of hours provided to group project	Profits taken from group project
Group Elites * SC Training	(45.60) (31.94)	91.80 (184.20)	2.68 (11.77)	-9.154* (5.35)	3.89 (4.21)
Group Elites * BS Training	28.62 (22.56)	(175.30) (201.50)	(17.38) (13.72)	1.70 (4.38)	(2.68) (3.75)
Village Elites * SC Training	-146.1* (84.84)	(172.60) (181.60)	10.60 (11.23)	0.36 (5.03)	3.66 (3.86)
Village Elites * BS Training	36.22 (25.72)	(130.60) (116.80)	(16.16) (12.99)	(2.83) (4.06)	(1.77) (2.96)

Observations	908	908	908	908	908
R-squared	0.057	0.084	0.12	0.251	0.091

Robust standard errors in parentheses, clustered at village level

*** p<0.01, ** p<0.05, * p<0.1

Impacts on Behavioral Outcomes:

Analysis at the group member level.

Dep var is a dummy variable indicating that individual is:

	Impatient	Hyperbolic	Risk-loving
TASAF treatment	0.02 (0.03)	0.00 (0.01)	-0.05 (0.04)
Social Capital training	0.110** (0.05)	0.00 (0.01)	-0.157*** (0.06)
Business Skills training	-0.107** (0.05)	-0.01 (0.01)	0.149*** (0.05)
Group Elites	0.0791** (0.04)	-0.00585* (0.00)	-0.05 (0.04)
Village Elites	-0.05 (0.06)	0.00 (0.00)	0.07 (0.06)
Observations	1283	1284	1284
R-squared	0.03	0.014	0.057

Robust standard errors in parentheses, clustered at village level

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

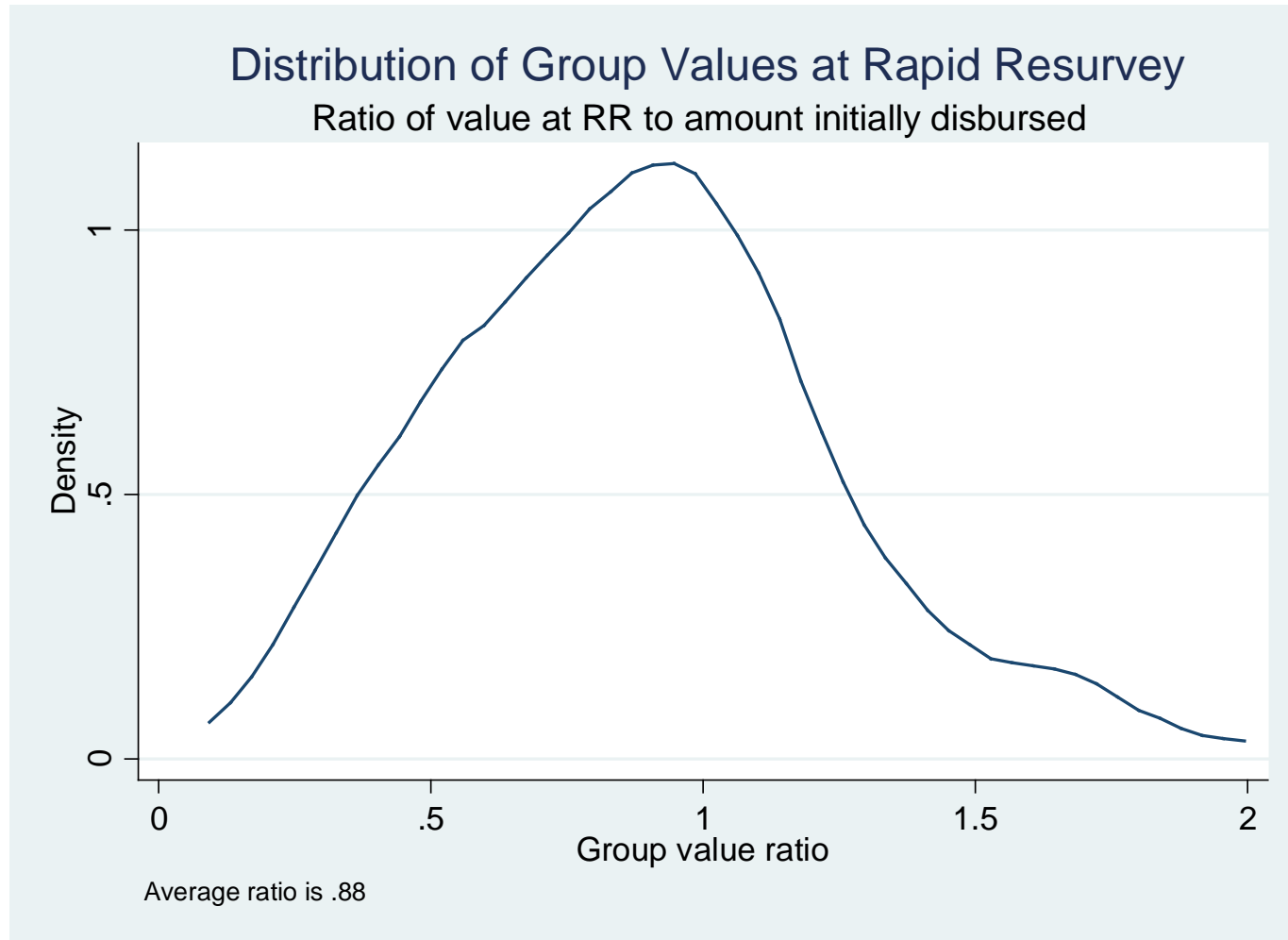
BS training is making group members more patient and risk tolerant,
SC training is making them less patient and less risk tolerant.

Moving to Group-level analysis: Summary Stats.

Outcome:	TASAF Treatment Villages	TASAF Control Villages
Number of groups	59	61
Groups with any business activity at baseline	3	3
Groups with any TASAF disbursement	57	0
Groups with any business activity at Rapid Resurvey	57	7
Average value of TASAF disbursement	\$6,730.11	\$0.00
Average total value of operating groups at Rapid Resurvey	\$5,934.90	\$166.92
Average sales over previous month among operating groups	\$32.02	\$1.32
Average monthly profit among operating groups	-\$106.02	\$5.49

Experiment is clean, most entrepreneurial activity is created by TASAF, TASAF groups are 1.5 orders of magnitude bigger than non-TASAF groups, and are dissaving at a pace that would exhaust assets in about five years.

Group level: what is happening to TASAF money?



Effects of the training on group outcomes.

Estimated among TASAF Treatments:

	Disbursement per member at Baseline	Value Added per member at Rapid Resurvey	Value of Monthly Sales per member	Monthly Profits per member	Funds Remaining in TASAF Account
Social Capital training	54.33 (64.05)	-108.5*** (34.51)	-1.955 (2.31)	-25.27* (14.59)	1.567 (240.60)
Business Skills training	16.32 (73.57)	114.2*** (42.28)	1.433 (2.28)	22.78 (15.03)	429.7 (340.80)
Group contains a VEO	16.75 (83.66)	133.2*** (41.72)	0.47 (2.61)	29.36 (20.05)	-156.4 (276.30)
# of blood relatives of elites	7.529 (14.43)	4.726 (6.04)	0.495 (0.66)	0.406 (2.36)	44.51 (32.21)
Observations	57	57	57	57	57
R-squared	0.923	0.563	0.408	0.395	0.446

Robust standard errors in parentheses. All monetary amounts in US \$.

*** p<0.01, ** p<0.05, * p<0.1

BS training increases group value, SC training decreases it.

Impacts on Group Membership:

Fraction of the group at RR that is:

	New	Ejected	Quit	Aggregate growth
TASAF Control	1.94%	0.96%	3.93%	-5.12%
TASAF Treatment	3.19%	3.88%	16.54%	-16.20%
Total	2.55%	2.39%	10.13%	-10.56%

Very few of the unfunded groups are doing anything between baseline and Rapid Resurvey, meaning that their group membership displays little turnover.

TASAF-funded groups, on the other hand, have very high aggregate turnover and shrink by an average of 16% in terms of membership.

Impacts on Group Membership:

Analysis at the TASAF group level.

	# of New Members	# of Original Members who Quit	# of Original Members Ejected	Overall Group Size Growth since Baseline	# of New members that are Village Elites	# of Quit members that are Village Elites	# of Ejected members that are Village Elites	# of Quit members that were Group Elites	# of Ejected members that were Group Elites
TASAF treatment	0.254* (0.144)	2.349*** (0.520)	0.652 (0.426)	-2.059*** (0.515)	0.0341 (0.035)	0.140** (0.063)	0.0197 (0.038)	0.0495 (0.052)	0.0178 (0.039)
Social Capital training	-0.18 (0.219)	-0.362 (0.927)	-0.169 (0.520)	0.303 (0.893)	0.0547 (0.089)	0.0375 (0.108)	0.0352 (0.081)	0.104 (0.116)	0.219 (0.177)
Business Skills training	0.041 (0.230)	0.579 (1.412)	0.268 (0.679)	-0.841 (1.430)	-0.0885 (0.082)	-0.121 (0.100)	-0.0715 (0.075)	0.254 (0.206)	-0.252 (0.173)
Observations	120	120	120	120	120	120	120	120	120
R-squared	0.366	0.463	0.19	0.464	0.086	0.27	0.09	0.242	0.157

Robust standard errors in parentheses

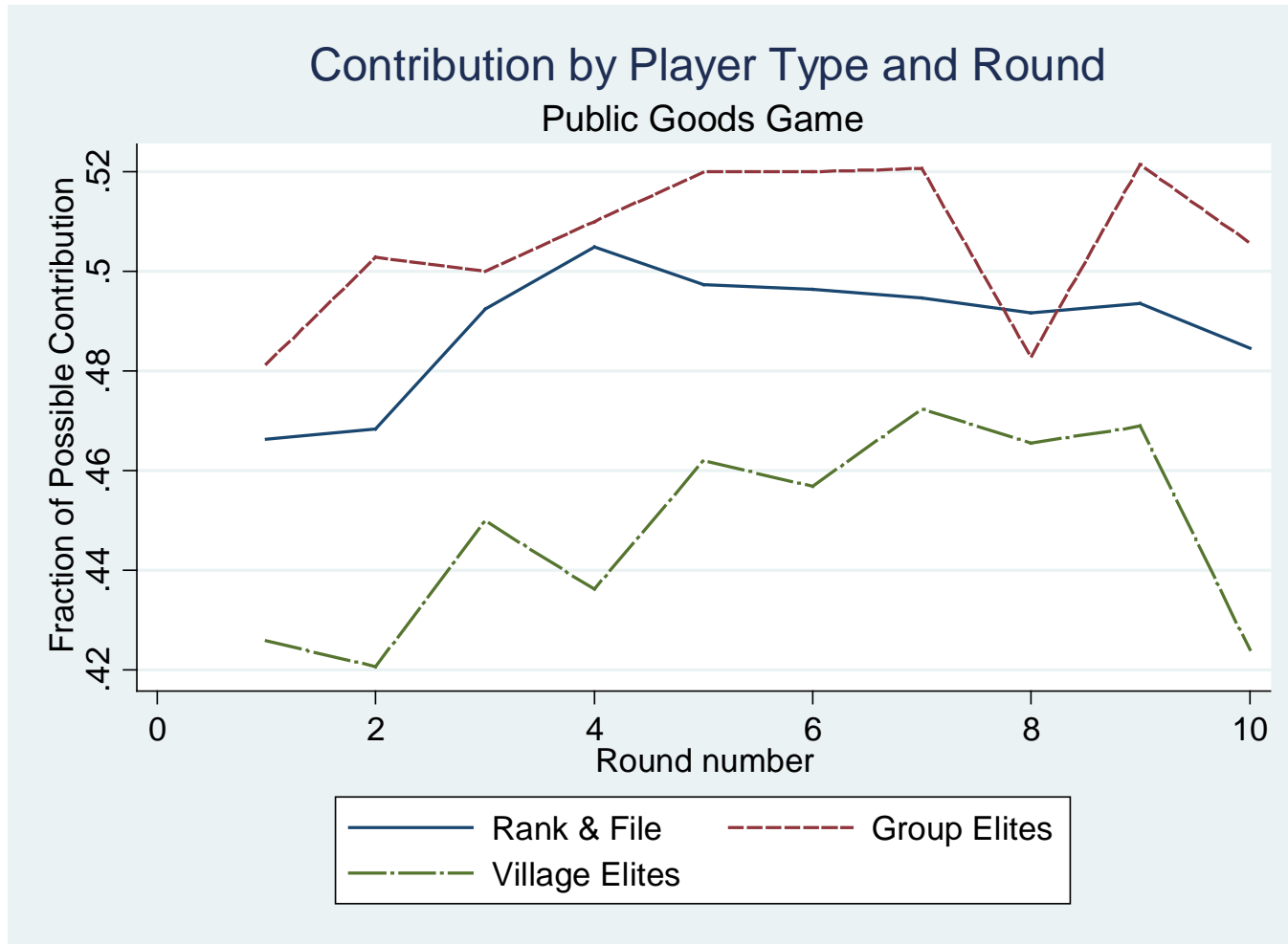
*** p<0.01, ** p<0.05, * p<0.1

TASAF treatment causes much higher turnover in membership.

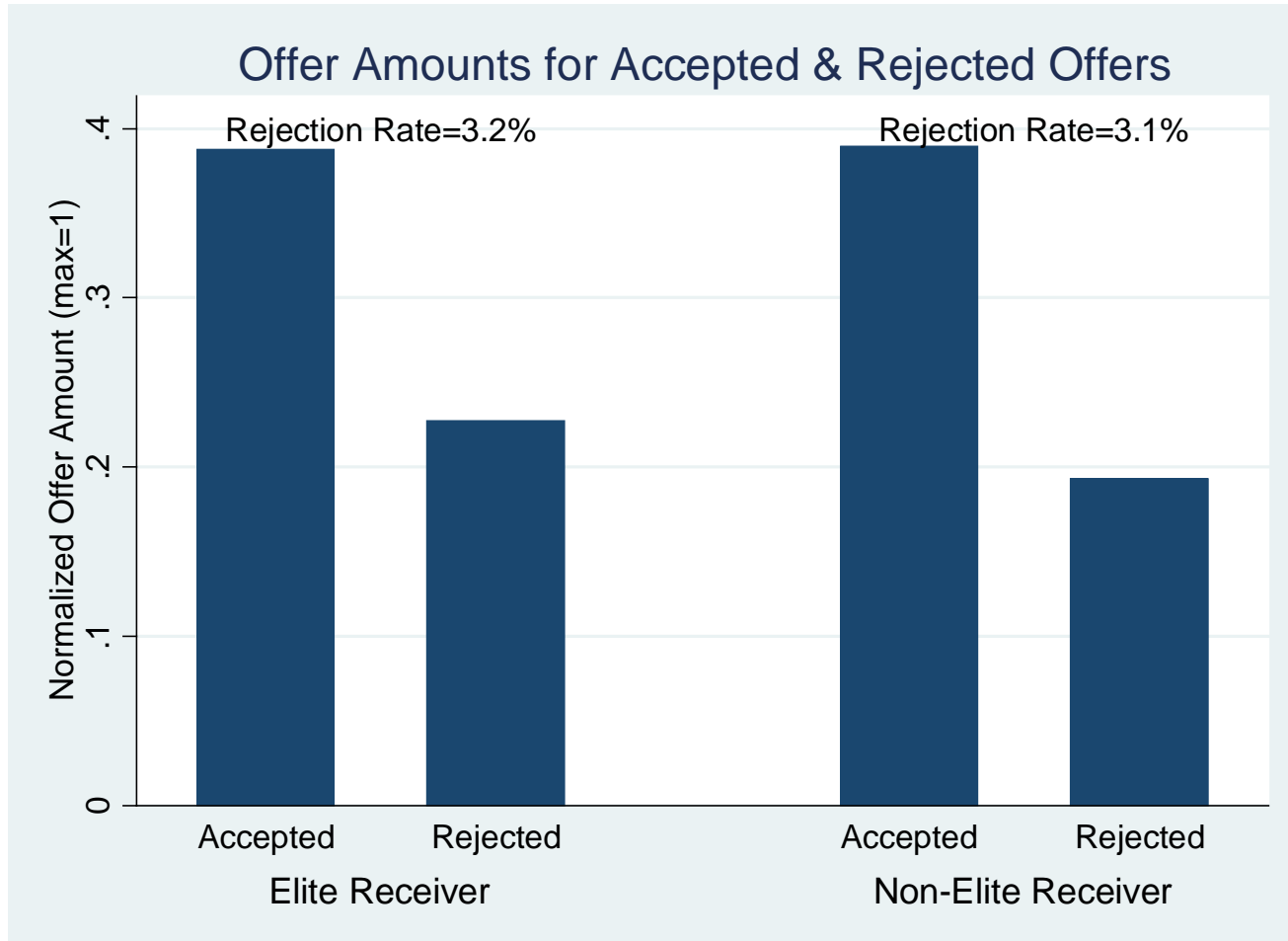
Net result is group shrinkage, village elites *quit* treated groups (!?).

Trainings have no effect on membership.

The Public Goods Game:



The Ultimatum Game:



Game Play, by Treatment:

Analysis at the game player level.

	Public Goods		Ultimatum	
	Collective Action: Amount contributed to pot	Unravelling: Decrease in contribution at end of game	Trust: Amount Sent	Reciprocity: Rejection, conditional on amount sent
TASAF treatment	0.01 (0.10)	0.00 (0.01)	-0.05 (0.09)	0.00 (0.01)
Social Capital training	0.25 (0.18)	-0.02 (0.02)	-0.15 (0.14)	-0.02 (0.01)
Business Skills training	-0.22 (0.19)	0.01 (0.02)	-0.18 (0.16)	0.00 (0.01)
Group Elites	0.198** (0.08)	0.00 (0.01)	0.03 (0.09)	-0.01 (0.01)
Village Elites	-0.05 (0.09)	-0.0233* (0.01)	-0.03 (0.13)	-0.01 (0.01)
Amount sent (UG only)				-0.0259*** (0.01)
Observations	939	939	938	938
R-squared	0.102	0.008	0.086	0.048

Robust standard errors in parentheses, clustered at village level
 *** p<0.01, ** p<0.05, * p<0.1

Elite/Treatment interactions on game play:

Analysis at the game player level.

	Public Goods		Ultimatum	
	Collective Action: Amount contributed to pot	Unravelling: Decrease in contribution at end of game	Trust: Amount Sent	Reciprocity: Rejection, conditional on amount sent
Group Elites * TASAF	0.315* (0.18)	-0.02 (0.03)	-0.02 (0.17)	0.00 (0.02)
Group Elites * SC Training	0.660** (0.30)	0.02 (0.03)	-0.11 (0.23)	-0.0397* (0.02)
Group Elites * BS Training	-1.160*** (0.30)	0.00 (0.03)	-0.19 (0.39)	0.01 (0.02)
Village Elites * TASAF	-0.22 (0.20)	-0.03 (0.03)	0.32 (0.30)	0.01 (0.02)
Village Elites * SC Training	0.39 (0.38)	0.02 (0.03)	-0.656** (0.32)	0.02 (0.03)
Village Elites * BS Training	0.07 (0.39)	0.01 (0.03)	0.40 (0.34)	0.00 (0.05)
Observations	939	939	938	938
R-squared	0.124	0.009	0.091	0.051

Robust standard errors in parentheses, clustered at village level
 *** p<0.01, ** p<0.05, * p<0.1

Conclusions:

- TASAf creates groups from nothing; only 4 control groups have any activity and group composition is essentially fixed in the absence of treatment.
- Group elites are the ‘heavy lifters’, both give and get more. Village elites appear to get disproportionate benefits.
- Treatment causes much more group turnover, with village elites *exiting* treated groups.
- The business skills training appears a modest success; changes in behavioral measures, a decrease in profit-taking and an increase in group value. No differential effects from elites despite fact that BS elites contribute less in the PG game.
- The social capital training appears a failure; lower profits, lower group value, more impatient and risk-averse group membership. Tanzania suffering from an excess of collectivism in the first place?

Next steps:

- Analysis of data from 18-month and 30-month followup surveys:
 - What is the tradeoff between consumption increases in the short term and durability of business investments in the longer term?
 - How do the strong behavioral impacts of the training play out over time?
- ‘Poverty traps’ study:
 - Additional cross-cutting randomization that gave one-time cash infusions to individuals within the group membership and eligible non-beneficiary strata.
 - Transfer amounts randomized between \$50 and \$350.
 - Allows us to look for a ‘threshold’ wealth level above which individuals have sufficient asset wealth to be able to re-invest and escape from poverty dynamically.
- The big picture:
 - This project features an overlapping and very intensive set of investments in a very poor population.
 - Human capital, social capital, group investment capital, individual assets.
 - If none of this combination of inputs allows for an investment-driven escape from poverty, there is likely no feasible intervention that can achieve this.
 - In this case, look to social protection programs such as Cash Transfers instead?