GlobalFood

How does social capital influence the success of development projects? Insights from a randomized controlled trial in Kenya

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Introduction

Agriculture & Nutrition

- Linking agriculture and nutrition: recent topic[a]
- How can agriculture be made more nutrition sensitive?
  - → Deliver nutrition information to farmers[b]
  - → Offer technologies to farmers

Social capital and networks

- Crucial role in inducing behavioural changes
  - → technology adoption
- Little known about how farmers communicate

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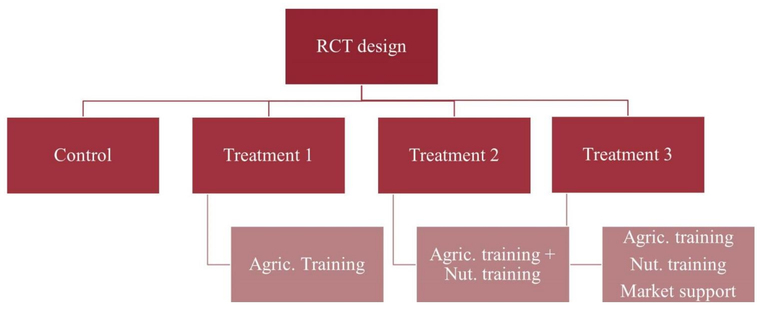
1. How does the structure of agricultural and nutrition information networks look like within community-based organizations (CBOs)?
2. Who shares information with whom?
3. How does the flow of information influence the adoption of technologies?

Data & Analysis

Randomized controlled trial (RCT)

- Research area: Kisii and Nyamira County, Kenya
- Baseline survey: Oct. – Dec. 2015
- Follow-up survey: Oct. – Dec. 2016
  - Randomly sampled 48 CBOs
  - 824 members in total
- Intervention: March – September 2016
- Technology offered: KK15 (black) beans



Network Data

- Interviewees indicated for each member of their CBO whether they talked about agriculture and nutrition (N=13318).

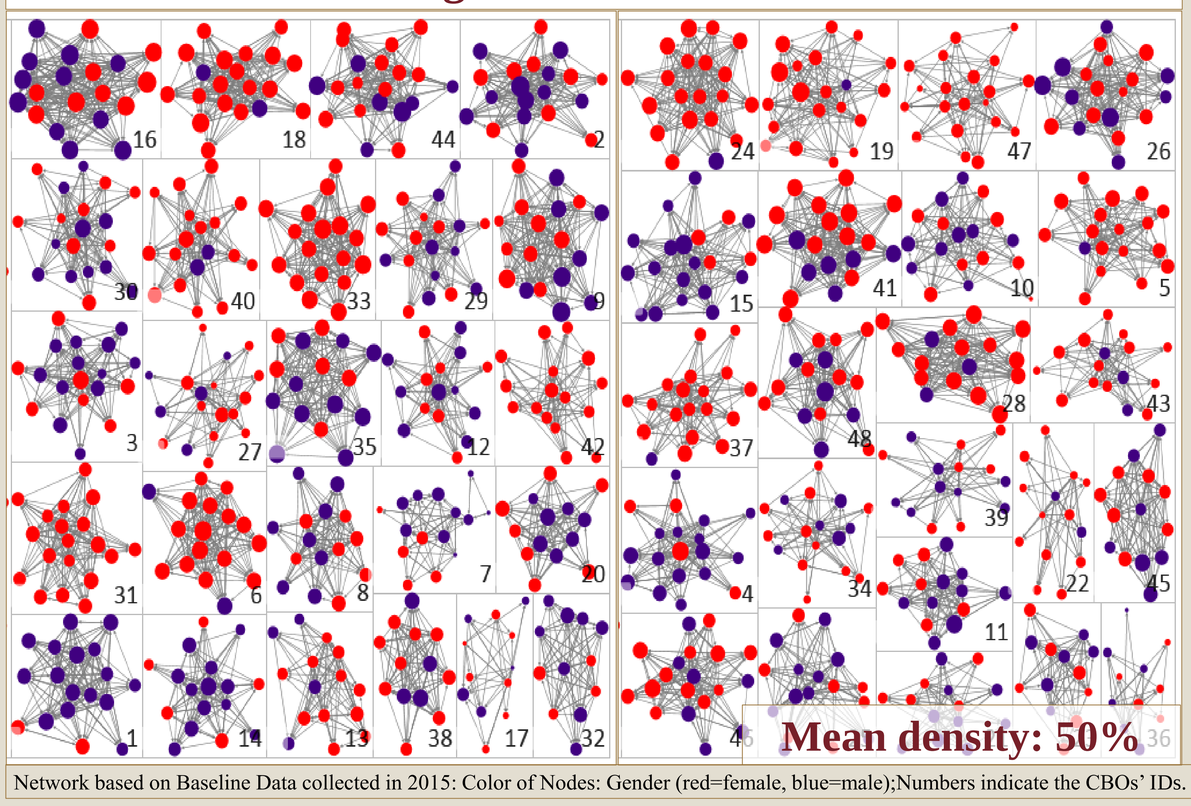
Name of group member	Do you know NAME?	Do you talk about agriculture?	Do you talk about nutrition?
Joyce			
Betty			
Moraa			
Evans			

Methods

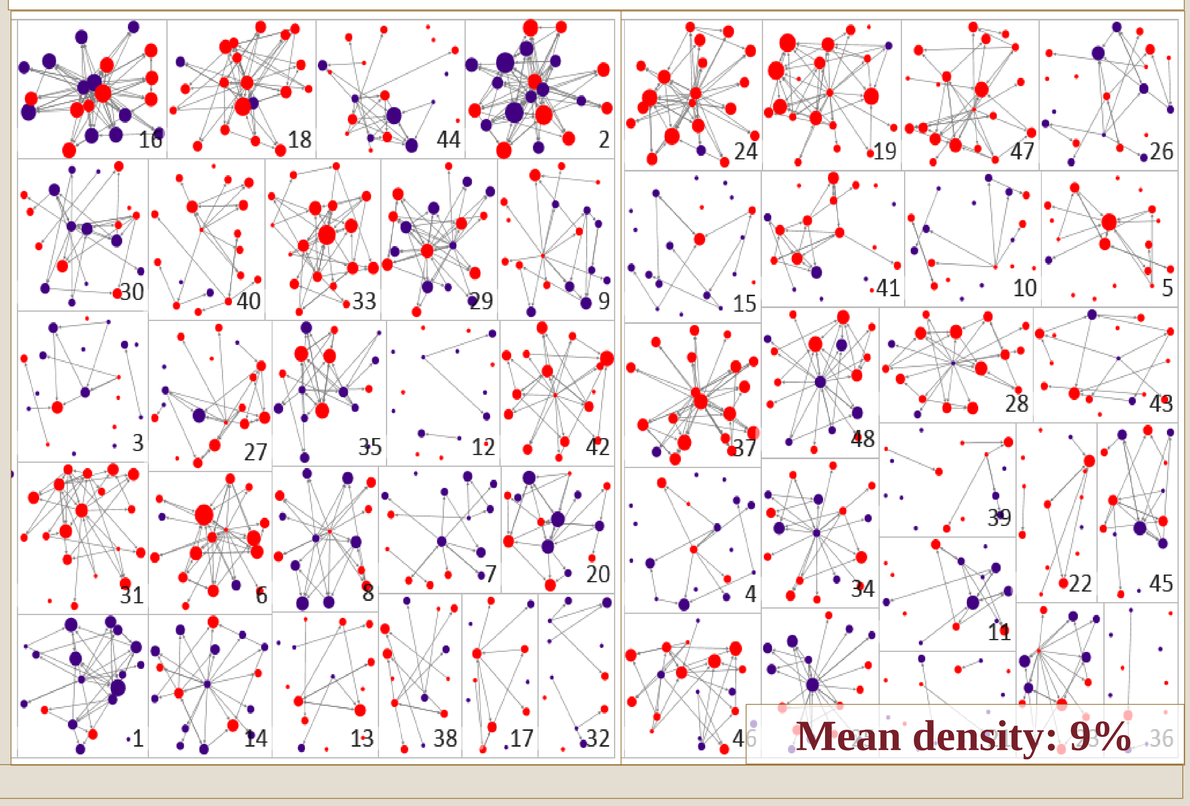
1. Structure of networks
   - Graphical solutions
2. Who shares info with whom?
   - Dyadic logit regressions
3. Change in flows of information
   - Descriptive statistics (so far)

Results

1a Agricultural Network



1b Nutrition Network



Network based on Baseline Data collected in 2015: Color of Nodes: Gender (red=female, blue=male);Numbers indicate the CBOs' IDs.

2. Who shares info with whom?

Explanatory variables (N_D = 13318)	Agriculture	Nutrition
Both female (1=yes)	0.08	0.57***
Both male (1=yes)	0.17*	0.28**
Plots sharing same border (1=yes)	0.55***	0.99***
Difference in trust towards others	0.17***	0.13
Difference in years of education	0.01	0.04**
Difference in external links	0.054***	0.06***

Notes: Coefficients and standard errors from grouped dyadic logit regression; data grouped on CBO level; standard errors (in brackets) clustered by dyads. * sig. at 10%, ** sig. at 5%,, *** sig. at 1%. Other controls: leadership position of J, Diff. years of age, diff. land size, kinship, as well as the sums of trust, years of educ., external links, land size.

What's next?

How does the flow of information influence the adoption of technologies?

- Spatial and network regressions

3. RCT impact: change in information flows (preliminary)

	Received nutrition training-Control	Received agricultural training-Control
Agr. Info exchange 2016	0.91	1.08
Nut. Info exchange 2016	0.51*	0.47**
N_{Group}	24	24

Notes: Mean differences given. Information exchanged measured as mean degree. Degree is a common social network measure for centrality. Equivalent to the frequency of being named (or naming someone) as informant.

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1. Nutrition information is shared within CBOs, to a moderate extent
2. Gender dimension: Men stick to men, women to women when sharing nutrition information
   - Target mixed-gender CBOs to nudge communication
2. Teaching effect within CBOs: more-educated and well-connected tend to share with less-educated and less-connected
3. RCT: Exchange on nutrition information increased

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Contribution

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References

a IFPRI (2016) Global Nutrition Report (2016): From Promise to Impact: Ending Malnutrition by 2030. Washington, DC.
b Ruel, M. T., Alderman, H., & Maternal and Child Nutrition Study Group. (2013). Nutrition-sensitive interventions and programmes: how can they help to accelerate progress in improving maternal and child nutrition?. The Lancet, 382(9891), 536-551.

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