

**Authors**

Lori Beaman  
Northwestern University

Andrew Dillon  
Northwestern University

**Diffusion of Agricultural Information within Social Networks:  
Evidence on Gender Inequalities from Mali**

Lori Beaman  
Northwestern University

Andrew Dillon  
Michigan State University

December 2017

**Abstract:**

Social networks are an important mechanism for diffusing information when institutions are missing, but there may be distributional consequences from targeting only central nodes in a network. After implementing a social network census, one of three village-level treatments determined which treated nodes in the village received information about composting: random assignment, nodes with the highest degree, or nodes with high betweenness. We then look at how information diffuses through the network. We find information diffusion declines with social distance, suggesting frictions in the diffusion of information. Aggregate knowledge about the technology did not differ across targeting strategies, but targeting nodes using betweenness measures in village-level networks excludes less-connected nodes from new information. Women farmers are less likely to receive information when betweenness centrality is used in targeting, suggesting there are important gender differences, not only in the relationship between social distance and diffusion, but also in the social learning process.

**Acknowledgements:** The authors acknowledge financial support for fieldwork from the German Development Ministry (BMZ), International Food Policy Research Institute, Millennium Challenge Corporation, Millennium Challenge Account-Mali, and Northwestern University's Institute for Policy Research. We thank Sam Armberg, Gabriel Lawin, Aissatou Ouedraogo, and Loïc Watine for superb research assistance. Seminar participants at the University of Illinois-Champaign and Ohio State University, two anonymous reviewers, Agnes Quisumbing, and Maria Porter are acknowledged without implication for their helpful comments. The authors can be contacted at [l.beaman@northwestern.edu](mailto:l.beaman@northwestern.edu) and [dillonaf@msu.edu](mailto:dillonaf@msu.edu).

# Diffusion of Agricultural Information within Social Networks: Evidence on Gender Inequalities from Mali

Social networks are an important mechanism for diffusing information when institutions are missing, but there may be distributional consequences from targeting only central nodes in a network. After implementing a social network census, one of three village-level treatments determined which treated nodes in the village received information about composting: random assignment, nodes with the highest degree, or nodes with high betweenness. We then look at how information diffuses through the network. We find information diffusion declines with social distance, suggesting frictions in the diffusion of information. Aggregate

knowledge about the technology did not differ across targeting strategies, but targeting nodes using betweenness measures in village-level networks excludes less-connected nodes from new information. Women farmers are less likely to receive information when betweenness centrality is used in targeting, suggesting there are important gender differences, not only in the relationship between social distance and diffusion, but also in the social learning process.

January 31, 2018