

Towards a More Integrated Theoretical Orientation for the Study of Innovation Sustaining Networks in Africa

Robert E. Mazur¹

Sheila Navalia Onzere²

1 Center for Sustainable Rural Livelihoods (CSRL), Iowa State University

2 Department of Sociology, Iowa State University

(presented by Dorothy M. Masinde, CSLR Program Coordinator)

Introduction

- Innovation is key to agricultural development and improvement in the livelihood strategies of small-scale farmers in Africa, as environmental and economic conditions change
 - Roles that farmers and their social networks play in innovation systems significantly shape the nature of 'outcomes' – livelihood success or failure
 - These social networks facilitate and incubate innovations by providing a space where knowledge sharing, experimentation and risk mitigation can be embedded
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Purposes of Study

- ❑ To identify the factors considered by farmers when adopting a set of innovations promoted by an indigenous non-governmental organization
 - ❑ To examine how the process of adopting innovations affected farmers' social networks
 - ❑ Preliminary study to identify areas for further research
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Operationalization of Concepts

- Innovation extends beyond the technological realm, and is dependent on context and differential socialization
 - Innovation - activities and processes associated with the generation, distribution, adoption, adaptation, and widespread use of new technical, institutional and organizational knowledge
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Operationalization of Concepts

- Focused on innovations introduced by Volunteer Efforts for Development Concerns (VEDCO) which disseminates agricultural innovations to small-scale producers to promote food security and sustainable agriculture
 - Enabled the discussion of the innovation concept in concrete terms with farmers by focusing on practices, technologies and knowledge shared by VEDCO
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Operationalization of Concepts

- Social networks, both formal and informal, were conceptualized as the set of relationships on which farmers draw for material and social support
 - Informal networks included relationships with household members, kin and friends
 - Formalized social networks were evident through membership in farmers' groups
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Types of Farmers Interviewed

- ***Food secure / agricultural trade*** - had enough food for their household and enough surpluses to sell on the market regularly.
 - ***Food secure*** - had enough food for their household but did not have regular surpluses to sell to the market; any surpluses were sold on the domestic spot market.
 - ***Moderately food secure*** - currently had enough food in the household, but this situation was precarious; if they experienced a shock to their livelihood, then they would quickly slide back into a status of food insecurity.
 - ***Food insecure*** - did not have enough food to satisfy household needs.
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Farmers Interviewed in 2005

Type of Farmer Interviewed	Luwero District		Kamuli District	
	Women	Men	Women	Men
Food Secure/Agricultural Trade	3	2		1
Food Secure	1	2	2	
Moderately Food Secure	4	3	1	1
Food Insecure	2	2	2	

RESULTS and DISCUSSION

□ *Innovations Adopted from VEDCO:*

- new farming and animal rearing techniques and practices including mulching, confined poultry and piggery projects
 - improved traditional crop varieties such as banana, orange flesh sweet potatoes and rice
 - export crops such as okra sunflower and vanilla
 - market linkages for crops
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Factors Influencing Farmers' Decision to Adopt Innovations

- Farmers analyzed constraints faced before and after adopting innovations, and weighed these against the potential benefits:
 - *Constraints before adopting innovations:*
 - Capital, information, markets, transportation
 - Environmental changes (increased pests and diseases, soil degradation, irregular precipitation patterns)
 - *Constraints after adopting innovations:*
 - Cost of maintaining innovations: labor, time money and time
 - Availability of markets for new crops
 - *Benefits after adopting innovations:*
 - Materials distributed by VEDCO
 - Acquiring new agricultural methods and skills
 - Food security and raised incomes
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Impact of Innovation Adoption on Farmers Social Networks

- Differences in the information paths according to how long VEDCO had been operating in the area
 - While local leaders played an important role in organizing initial meetings for farmers when VEDCO first came into the area, other farmers (RDEs) were responsible for most of the subsequent spread of innovations
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Impact of Innovation Adoption on Farmers Social Networks

- ❑ Maintaining regular contact with other farmers was important in sustaining innovations
 - ❑ Experimentation with new methods required that farmers maintain regular social interactions with other farmers
 - ❑ Farmers who could not draw on the support of family or friends to sustain innovations (e.g., widows, physically handicapped/disabled) have trouble getting help with planting, weeding or harvesting
 - ❑ Many innovative practices introduced by VEDCO required more labor, information and advanced planning
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Impact of Innovation Adoption on Farmers Social Networks

- Positive changes in perceived individual and group status and increased interaction with neighbors were important in helping sustain innovations adopted.
 - Improved household food security, relatively reliable income generating activities, and acquiring more knowledge → feel more respected
 - Especially important for female farmers:
 - Able to earn money
 - Able to speak up and teach other farmers
 - Moved from a position of perceived dependency to capability
 - Group status also changed:
 - Increased interaction
 - Increased scale and diversity of activities
 - Increased negotiating power with traders
 - Material gains enabled farmers to carry themselves with pride
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VEDCO's Role in Farmers' Social Networks

- ❑ Continuous monitoring and evaluation by VEDCO of the crops and methods introduced was crucial for consolidating farmers' benefits.
 - ❑ Regular workshops provided farmers with techniques and knowledge needed to sustain innovations, and formal sanctioned social space to freely interact and share information
 - ❑ Visits by extension workers acquired immense symbolic value, sometimes the 'raison d'être' for deciding to work with VEDCO
 - ❑ Most farmers were not yet able to conceptualize how they would be able to continue the innovation process if VEDCO stopped aiding by supplying materials, initiating market linkages and providing training
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Toward a More Integrated Theoretical Approach

- ❑ In the course of adopting innovations, farmers had started to alter how they viewed themselves and their communities
 - ❑ Transformation of social networks during the adoption of innovations has both positive and negative consequences
 - ❑ Positive changes included increased individual and group status and legitimacy
 - ❑ While there were positive outcomes for some farmers, others within the same group could not benefit from these changes
 - ❑ Innovations in NGOs' approaches may be needed to prevent the latter from being unable to access resources accessed exclusively through social networks because of social closure or through appropriation
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Toward a More Integrated Theoretical Approach

- Understanding the dual dynamic of positive and negative outcomes for farmers in innovation adoption, requires more fluid conceptualizations of social networks.
 - Theories perspectives on innovation-induced changes in social networks may be of value in future studies:
 - Social capital has material and *symbolic* aspects which are interrelated (Bourdieu 1986)
 - Social capital is linked to *power* relationships within social networks. It can be used to maintain inequality or to change the power structure (Bourdieu 1986)
 - How does *generalized trust* develops in situations of continued interaction -farmers' groups (Portes 1998)
 - How can *strategic, structural and behavioral changes* in farmers organizations can be facilitated (organizational innovation theories)
 - How *formal and informal institutions* shape farmers' abilities to maintain social networks (social institutionalist theories)
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