Tropentag, September 19-21, 2012, Göttingen - Kassel/Witzenhausen

"Resilience of agricultural systems against crises"

The Impact of Social Networks on Dairy Technology Adoption in North-West Ethiopia

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Abstract

Social structure, especially in the form of social networks, affects the adoption of agricultural technologies. In light of an increasing focus on new demand-driven agricultural extension approaches that leverage social networks as an opportunity, too little is known about (a) which network characteristics matter? and (b) how do specific network characteristics matter? This paper investigates the impact of social networks in relation to smallholder dairy production technology adoption in Ethiopia. Structured household interviews were conducted on randomly selected 304 smallholder dairy farmers. Combined social network analysis and economic approaches is used to analyse dairy production adoption that incorporates social learning. Results reveal that smallholders acquire knowledge about improved dairy practices mainly from the public extension system (extension network), and to a lesser extent through their close associates (peer networks). The market networks are not a significant predictor of dairy adoption; supporting the finding that innovation is supply-driven by extension rather than market-driven by product demand articulated by traders. Likewise, community networks have no direct effects, suggesting that community-based associations (for example, cooperatives, self-help groups, etc.) are less likely to technology adoption decisions in this particular case. These findings suggest that the potential contributions of other social networks, particularly communication networks and market networks that can significantly affect adoption, often remain untapped. Given the adoption of agricultural production technologies as an essential means of boosting productivity, increase production and improving incomes of smallholder households, these results indicate that technology-promoters may have to change their approach and focus on the innovative use of all kinds of social networks as an important determinant. In addition, this finding shades light to design suitable strategies that leverage social networks to promote more rapid adoption of agricultural technologies by smallholders.

Keywords: Adoption, dairy, Ethiopia, innovation, social networks

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