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Linking smallholder vegetable producers to markets - A comparison of a vegetable producer group and a contract-farming arrangement in the Lushoto District of Tanzania

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ABSTRACT

For several decades there has been a growing interest in institutional arrangements to link smallholder farmers to markets. In particular, registered farmer organizations and contract farming arrangements have been very common approaches that have been used to integrate smallholder farmers into agricultural value chains. This study compares a farmer-based organization and a contract farming approach, both of which are active in the same geographic location and operate under the same economic and social constraints. While concentrating our analysis on four critical factors (group homogeneity, size and ability to cope with "free-riding" behavior; supplier-buyer contract enforcement; access to external services; and the supportive role of the government and NGOs), we investigate: (a) how both approaches tackle the same problems, constraints and shortcomings; (b) which structural weaknesses limit their performance in linking smallholder farmers to formal markets; (c) what support measures may facilitate the sustainability of those approaches; and (d) which approach is more suitable to respond quickly to changing market conditions? The registered tight farmer-based organization benefits from a high degree of trust among members enabling them to purchase joint assets, remain independent from single buyers, and maintain an informal quality control system. The advantage of the contract farming approach lies in the formal quality control mechanisms, which reduce the necessity for high group cohesion and allows them to include resource-poor farmers as members. Conversely, formal quality control requires high start-up funding that cannot, in most cases, be borne by the group members and thus requires investment from single buyers, governments or donors, which can create dependencies. Government interventions in terms of capacity building programs for second-tier organizations could allow farmer groups to share the costs associated with input provision, capacity building and extension services. Public-private partnerships providing certification at lower costs may allow farmer groups to reduce dependencies on single buyers.

1. Introduction

For several decades there has been an increasing interest in farmer organizations (FOs) as a mechanism to support agricultural development (Lele, 1981; Chirwa et al., 2005; Shiferaw et al., 2011; Batt, 2016). In the literature, FOs are widely perceived as important mechanisms to improve farmers' income by reducing transaction and negotiation costs while linking them to rural markets for both inputs and outputs (Chirwa et al., 2005; Bernard and Spielman, 2009; Markelova et al., 2009; Bachke, 2009). Donors and national governments expect FOs to become market-based organizations that replace the need for government initiatives in the provision of basic agricultural services. Other international and national development organizations also acknowledge FOs as important instruments to promote equitable growth and poverty reduction (Bernard and Spielman, 2009).

Despite the confidence in FOs, there is growing evidence to show that government and non-government support for FOs has not always led to viable farmer groups (Shepherd, 2007; Murray-Prior, 2007; Lele, 1981; Stringfellow et al., 1997; Shiferaw et al., 2011). Stringfellow et al. (1997) notes that FOs that have been formed hastily and with

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little reference to underlying patterns of social and economic organization, often fail to survive. However, Shepherd (2007) and Batt (2016) suggest that one rarely finds successful cases of farmer groups that are sustainable without government or donor support. For Shiferaw et al. (2011), heavy political interference, poor internal leadership and managerial problems often contribute to their demise.

Another problem faced by FOs in recent decades are changes in the global agricultural economy that provide smallholder farmers with new challenges resulting from increasingly complex and more sophisticated value chains with consumer demands for higher food safety standards (Batt, 2015; Gehlhar and Regmi, 2005; Kaganzi et al., 2009; Narrod et al., 2009). Accessing new global markets or domestic supermarket chains requires advanced quality monitoring systems, well-coordinated production and delivery systems, and the need to supply on time even in the case of droughts, floods, social obligations and other external influences. Furthermore, there is always a danger that smallholder farmers will be ‘squeezed out’ in the market transaction process (Markelova et al., 2009), particularly when they have a poor bargaining position, such as in Tanzania (Bloom et al., 2008).

An alternative to direct market access through FOs are contract farming arrangements (Shepherd, 2007). Vorley, et al. (2009) emphasize that contract farming arrangements have been successful in improving the coordination between smallholder farmers and buyers, as well as easing the process of quality standard implementation and monitoring. Eaton and Shepherd (2001) see contract farming arrangements as particularly successful in cases where access to capital, technologies or markets constitute key limiting factors.

A question often discussed in literature concerns the ability of FOs and contract farming arrangements to involve the poorest of the poor to increase their incomes and enable them to benefit from market integration (Devaux et al., 2009; Shiferaw et al., 2008; Kruijssen et al., 2009). With regard to FOs, Stockbridge et al. (2003) emphasize that the service costs associated with supporting poor members are often higher than for other group members that are better resource endowed, since the production volume from poor farmers is smaller and they are less reliable in the repayment of credit or the provision of produce due to their smaller production capacity. Singh and Prowse (2013) point out that buyers operating under contract farming schemes prefer to contract larger farmers rather than smallholders, since the latter often have insufficient land, and lack access to irrigation and financial resources. Smallholders may also avoid entering contract farming arrangements as they fear the higher upfront investments and the specialization on only a few crops compared with production for the mainstream market (Singh and Prowse, 2013; Barrett et al., 2012; Bellemare, 2012).

In this study, we compare two approaches, both focusing on integrating smallholder farmers into formal vegetable markets, both of which are active in the same geographical location and operate under the same economic and social constraints. One of the study organizations is a tight farmer-based organization, which delivers products to domestic high-value markets. The second study organization depicted is a contract farming arrangement between smallholder farmers and an export company for fresh vegetables. With this qualitative case study, we aim to contribute to the existing body of literature by analyzing:

(a) How producer-based organizations and contract farming, as two different approaches to link smallholder farmers to markets, tackle the same problems, constraints and shortcomings faced by smallholder farmers in the same geographic location?
(b) What are the weaknesses of each approach considering specific critical factors that are important to link smallholder farmers to formal markets?
(c) What support measures can be provided by governments, NGOs, or the donor community to contribute to the sustainable development of vegetable marketing groups in a rural development context?
(d) Which approach is more suitable to respond quickly to changing market conditions?

In our comparison we focus on four critical factors that are found in the literature to be conducive in linking smallholder farmers to markets. Those factors are: (1) group homogeneity, size and ability to cope with “free-riding” behavior; (2) supplier-buyer contract enforcement; (3) access to external services such as input supply, finance and extension; and (4) the supportive role of the government and NGOs.

The remainder of the paper is organized as follows: the next section compares basic characteristics of FOs and contract farming arrangements that can be found in the literature. Section 3 provides insights of the literature into the four critical factors mentioned above. The fourth section describes the case study region, the two marketing organizations and how both organizations incorporate the four critical factors in their organizational arrangements. In section 5 we compare the advantages and disadvantages of both approaches considering the four critical factors and develop recommendations for potential policy or donor interventions. Section 6 draws some conclusions.

2. Farmer organizations VS. Contract farming

In their comparison of both FOs and contract farming arrangements, Vorley et al. (2009) differentiate between producer-driven organizations, where the drivers are smallholder farmers, and buyer-driven models, which are mainly driven by processors, exporters, retailers or larger farms. Table 1 gives an overview of the two types of organizations. Producer-driven organizations such as producer groups and cooperatives are mainly established by farmers to improve their access to markets, finance, inputs and other services, as well as to undertake joint investments in storage or other facilities. In many cases they receive

Table 1
Comparison of basic characteristics of producer-driven and buyer-driven organizations.
Source: Summary of findings from Vorley et al. (2009); Eaton and Shepherd (2001); Key and Runsten (1999); and Shepherd (2007).

Producer-driven organizations	Buyer-driven organizations
• Aims at increasing access to markets, conduct joint investments to acquire storage and processing technology; ease and improve access to services • Usually built on informal networks • Often strongly supported with high co-funding from development organizations or donors and rarely sustainable without donor funding • Majority of the information is informal and an important building block for the success of such organizations (e.g. information on informal networks with traders, reliability of members, local financial sources such as money lenders) • Slow decision making • Strong focus on traditional commodities with lacking access to external markets • Potential contradiction between general openness for new members and group competitiveness • Lack of professional management team	• Aims at improving the information flow among supply chain segments to reduce marketing risks faced by the company (and farmers) • Improve coordination with smallholder farmers to introduce quality standards, calculate with fixed prices, secure quantities of raw products • Formal coordination with limited access to specific local information • In particular successful in areas, where access to capital, technology or markets constitute key limiting factors (Eaton and Shepherd, 2001) • Often application of external quality control and traceability systems • Buyers often prefer to work with larger producers since costs of administering the contracts increase with smallholders (Key and Runsten, 1999) • Vulnerable to the problems of unequal power-relations • Focus often on international markets