

Linking Seed Producer Cooperatives with Seed Value Chain Actors: Implications for Enhancing the Autonomy and Entrepreneurship of Seed Producer Cooperatives in Southern Region of Ethiopia

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Local seed business (LSBs) emerged in different parts of Ethiopia with the aim to accelerate the transition from farmers' groups and community-based seed production towards farmers' groups becoming more autonomous, commercial, and entrepreneurial in their approach. Accordingly, seed producer cooperatives have been targeted for this purpose or to provide quality seed for farmers and to undertake seed business at local levels and often beyond. However, the development of the seed producer cooperatives (SPCs) towards local seed business is not adequately assessed. Using a case study methodology, this paper tries to fill the gap and assess the development of seed producer cooperatives towards local seed business by exploring the degree of autonomy and entrepreneurship in four selected seed producer cooperatives found in Southern regions of Ethiopia. The result shows that there exist some similarities and differences among the seed producer cooperatives in their development towards autonomy and entrepreneurship in seed business. The cross cutting issues is that all cooperatives depend on stakeholders for access to basic seed and several services (such as processing, marketing, credit). This negatively affects the autonomy or institutional and economic viability of the seed producer cooperatives. Likewise, the development of all SPCs towards entrepreneurship is at infant stage. Regardless, the presence of a seed sector platform creates a joint vision and regular discussion forum for main operators of the seed value chain. Thus, it might have a strong influence on the development of cooperatives towards local seed business or autonomy and entrepreneurship in the near future.

Keywords: Local seed business, cooperatives, autonomy, entrepreneurship

Introduction

Effective and efficient seed supply systems is very important for food security and economic growth of a nation. Effectiveness and efficiency comes from the extent where seed system actors jointly participate in identifying seed sector problems, execution of collaborative activities, exchange of knowledge and information, adapting the recommendations to local conditions and providing feedback and coordination about the innovations that have been developed. Effective and efficient supply of quality seed requires an integrated effort of seed system actors. However, it is a missing link in the country in general and Southern region in particular. Thus, the linkage between seed value chain actors are extremely important areas, which are currently underemphasized by the seed systems actors of Ethiopia (Alemu, 2010).

The Netherlands government together with Ethiopia partners introduced a local seed business (LSBs) in the Ethiopia seed system with the aim to accelerate the transition from farmers' groups and community-based seed production towards farmers' groups becoming more autonomous, commercial, and entrepreneurial in their approach (LSB Newsletter, 2010). Local seed business constitutes a

seed system in an intermediary position, between formal and informal systems. Since seed in this system (local seed business) may not necessarily certified, varieties being both local and improved, dissemination varies from bartering to commercial sale. Key players in the local seed business (LSB) are seed producer cooperatives (SPCs) that are associated, to varying degrees, with more formal seed systems (ISSD Briefing Report, 2012).

Accordingly, LSBs emerged in different parts of the country to provide quality seed for farmers and to undertake seed business at local levels and often beyond. However, the development of the different seed producer cooperatives towards local seed business is not adequately assessed. This, paper tries to fill the gap and assess the development of seed producer cooperatives towards local seed business by exploring the degree of autonomy and entrepreneurship in four selected seed producer cooperatives (Amard, Kayo, Zerfiyan and Wudegenta gefersa) found in Southern regions of Ethiopia. The study describes the effects of local seed business (LSB) in addressing the topic (autonomy and entrepreneurship of seed producer cooperatives) via linking with other stakeholders, coaching, providing services, and training to the LSBs members and stakeholders.

Background to the Problem

Seed is an important catalyst for the development of agriculture and its foundation, quality production, and marketing are critical for sustained agricultural growth and food security (Atilaw & Korbu, 2011). However, there remains a critical shortage of quality seed in Ethiopia. Supply nowhere matches overall potential demand. For instance, with considerable variability among the different crops, the total supply of improved seed in the country was only 29 percent of the officially estimated demand in 2008 although there were leftover seed in many crops in public seed enterprises and cooperative warehouses (Alemu, 2010). This inevitably constrains agricultural productivity and the opportunities for technology-led intensification which are central to the government's policy thrust. Among others, the supply shortages arise from the limited capacity of both public and private seed producers, the dominance of the public sector in the seed system, lack of baskets of technological options, weak linkages among the actors of the seed system, and above all a lack of a system perspective and agreed-upon vibrant seed system (Dawit et al., 2008; Alemu, 2010; Alemu et al., 2010; Atilaw & Korbu, 2011).

An agricultural technology system is a complex set of functions and linkages to increase agricultural productivity and farm household income, by maintaining the resource base and addressing equity concerns, requires an interactive technology system whereby farmers, research, extension, input suppliers, NGOs and other agencies work together in a co-coordinated manner (Merrill-Sands & Kaimowitz, 1990). Altaye (2012) and Tesfaye (2001) indicated the absence of well-formulated, properly defined, and institutionalized research-extension-farmers linkage strategies in Ethiopia. As a result, farmers participation in setting both research and extension agenda has been limited. Proper staffing and provision of budget to institutions involved in ensuring linkage has been inadequate. The involvement of input multiplying and distributing agencies in the linkage forum in general and technology development and transfer activities in particular have not been active and well-coordinated, and lack of conducting proper follow-up, monitoring and evaluation of linkage activities on ad hoc basis.

The creation of a joint vision and regular discussion forum for the seed sector, between research, extension, farmers, NGOs, public and private sector producers is a prerequisite to highlight and mitigate any issues blocking effective operations and clarifying roles and responsibilities among existing actors in the sector. However, it is a weak link in Ethiopia (Alemu, et al., 2010). This problem is not unique to Southern region. In that, the absence of effective linkages in the seed value

chains, including research, extension, farmers, unions, private and public seed producers, and NGOs has been cited repeatedly during regional local seed business and partnership workshops as one of the major problems in the region seed systems (LSB Newsletter, 2010). Because of which it has become a concern among policy makers, researchers, seed producers, development workers, NGOs, and universities.

Above all the weak linkage of seed producers cooperatives with the main operators of the seed value chain is one of the critical factor that hampered the autonomy and entrepreneurship of the seed producer cooperatives (SPCs) (LSB Newsletter, 2010). Their movement towards local seed business development is constrained by the provisions of an expanded, affordable and diversified choice of seeds at the right time, place, price, amount, and the highest economic quality. As a result, the present seed producer cooperatives (SPCs) linkage scenario with the main actors of the seed chains has been inefficient and ineffective in achieving the prescribed goal of enhancing the autonomy and entrepreneurship of the seed producer cooperatives. However, the development of the different seed producer cooperatives towards local seed business and their linkage with seed value chain actors is not adequately assessed. Hence, this paper seeks to fill the gap especially on the linkage of seed producer cooperatives (SPCs) with main operators in seed value chains (research organizations, public and private seed enterprises, extension organizations, NGOs, input suppliers, and farmers' cooperative unions) with the goal of enhancing the autonomy and entrepreneurship of seed producer cooperatives in Southern region of Ethiopia.

Methodology

Using a case study methodology, this paper try to explore the degree of autonomy and entrepreneurship in four selected seed producer cooperatives (*Amard, Kayo, Zerfiyan and Wudegenta gefersa*) found in Southern regions of Ethiopia. The study describes the effects of local seed business in addressing the topic (autonomy and entrepreneurship of seed producer cooperatives) via linking with other stakeholders, coaching, providing services and training to the LSBs members and stakeholders. Accordingly, three principles guiding the assessment of the four seed producer cooperatives were used based on extensive review of literature on the subject matter (LSB Newsletter, 2010). They were:

1. Business boundary: This aims to ensure that seed systems do not depend entirely or are not being made dependent on 'external' developments and technologies. The key issue here is farmers' control over the knowledge, resources, organization, and technologies, but also proximity of markets.

2. **Autonomy:** It entails that farmers or their organizations secure control over and/or access to varieties, keep and share traditional skills and knowledge associated with the seed system, and are able to keep a strategic stock or seed reserve. Groups of farmers engaged in commercial seed production depend on stakeholders for access to basic seed and several services (such as processing, marketing, credit). The principle of autonomy has implications for the design of interventions and structure of such services ensuring institutional and economic viability of the enterprise.

3. **Entrepreneurship:** This is related to sustainability in an economic and institutional context; it embeds market and service orientation with a structure and functioning of the organization. The principle is strongly related to the development of the 'seed chain'. LSBs in their development gradually engage themselves in several seed chain components, including (participatory) variety evaluation, seed production, seed processing, as well as marketing and sales.

Data collection techniques, sampling procedure, and analysis

Initially, case study using interviews and focus group discussions separately with seed producer cooperative management bodies, individual cooperative member farmers, and stakeholders including key experts who have in-depth knowledge and skills on the Ethiopian seed system and local seed business was employed. The assessment was conducted in all four SPCs sites by trained enumerators and experts in the period 2012 till 2013. For each principle (business boundary, autonomy, and entrepreneurship), primary information with farmer groups through focus group discussions and individual household interviews was used. Publications, official reports, and journals constitute secondary data sources.

In-depth key informant interviews (KIIs) were conducted with around 40 key stakeholders of the seed value chain (often managers and key experts) found in the four LSB sites of the region. Similarly, an in-depth key informant interview was conducted with 40 farmers or members of the seed producer cooperative (management bodies, progressive farmers, and leaders) found in the four sites (10 farmers per one cooperative). In addition to these, four focus group discussions (FGDs) with seed producer cooperative members using check-lists were conducted separately in the four LSB or SPCs sites (one per each site). One FGDs consists of 10-15 groups with different characteristics – age, farming experiences, their prior position and membership in farmers' development groups, cooperatives, and women headed households. Similarly, four focus group discussions (FGDs) with main stakeholders (operators) in seed value chain

using check-lists was conducted separately in the four LSB or SPCs sites (one per each site). One FGD consists of 10-15 groups with different characteristics – age, professional experiences, and familiarity in the seed system of Ethiopia. The sample comprises research organizations, public and private seed enterprises, extension organizations, NGOs, input suppliers, and farmers' cooperative unions.

Generally, the study employs descriptive statistics to explain the linkage of seed producer cooperatives with operators in seed value chains for the aim of enhancing the autonomy and entrepreneurship of the cooperatives. The qualitative data generated using FGDs, and KIIs are analysed thematically. The secondary information was complemented with information collected through focus group discussions with key stakeholders and farmers. Triangulation was used to enhance the trustworthiness of information gathered for each indicator.

Result and Discussion

The linkage of the four SPCs with main operators in the seed value chains (research organizations, public and private seed enterprises, extension organizations, NGOs, input suppliers, and farmers' cooperative unions) were assessed with the goal of enhancing the autonomy and entrepreneurship of seed producer cooperatives in the Southern region. Accordingly, there exist some similarities and differences among the seed producer cooperatives in their development towards autonomy and entrepreneurship in seed business.

The situation in the local seed business (LSB) sites

The linkage of SPCs with main operators in seed value chains (research organizations, public and private seed enterprises, extension organizations, NGOs, input suppliers, and farmers' cooperative unions) was strengthened through the creation of a transparent and agreed-upon multi-stakeholder seed forum and platforms that drive toward a mutual understanding, common vision and code of conduct across SPCs and seed value chain actors.

Generally the linkage of seed producer cooperatives (SPCs) with the main operators of the seed chains seems similar. The cross cutting issues in all of the cooperatives is that all depend on stakeholders for access to basic seed and several services (such as processing, marketing, credit). Thus, the principle of autonomy might have implications for the design of interventions and ensuring institutional and economic viability of the seed producer cooperatives or SPCs.

All seed producer cooperatives (SPCs) have weak linkages with the research organizations in aspects of basic seed supply, baskets of

technological options, joint planning and review, executions of collaborative activities such as joint adaptation and demonstration trials, exchange of knowledge and information via trainings, publications of written production manuals. Moreover, their linkages with both public and private seed producers were found to be weak. Similarly, their business boundary illustrates the common premature stage and dependency on external stakeholders in seed marketing. Notably, the lion share of their seeds is sold to the union that is responsible for further marketing within or beyond the locality. To make the matter worse, Self Help Africa has been a key partner and a single NGO for all seed producer cooperatives (SPCs). In spite of these facts, the cooperatives have strong linkages with *wereda* (district) extension offices on aspects of cooperative governance and management, training on improved production techniques, and facilitation of credit sources.

Thus, the development of all SPCs towards entrepreneurship is at infant stage due to the fact that entrepreneurship is strongly related to the development of the 'seed chain'. LSBs in their development gradually engage themselves in several seed chain components, including variety evaluation, seed production, and seed processing, as well as marketing and sales unlike the present scenario of dependence of SPCs in external stakeholders. This might affect the sustainability of SPCs in an economic and institutional context.

Variations exist among local seed business (LSB) sites

The typical variations that worsen *Amard* seed producers cooperative unlike the others is that, their dependency on a single seed of wheat variety. Thus they lack differentiated superior product, specifically access to new wheat varieties. In the past, basic wheat seed supply has been a bottleneck and was sometimes insufficient for the producers to multiply enough seed to meet the demands for commercial seeds. Thus, the producers lack a continual stream of new wheat varieties to keep pace with the current evolving pests and diseases but the public system lacks the capacities to respond to demand and develop and disseminate new or existing varieties with sufficient speed.

Conclusion

The result shows that there exist some similarities and differences among the seed producer cooperatives in their development towards autonomy and entrepreneurship in seed business. The cross cutting issues in all of the cooperatives is that all depend on stakeholders for access to basic seed and several services (such as processing, marketing, credit). This might negatively affect the

autonomy or institutional and economic viability of the seed producer cooperatives. Likewise, the development of all SPCs towards entrepreneurship is at infant stage. Regardless, the presence of a seed sector platform creates a joint vision and regular discussion forum for main operators of the seed value chain. Thus, it might have a strong influence on the development of cooperatives towards local seed business or autonomy and entrepreneurship in seed business in the near future.

The linkage of SPCs with main operators in seed value chains (research organizations, public and private seed enterprises, extension organizations, NGOs, input suppliers, and farmers' cooperative unions) was strengthened through the creation of a transparent and agreed-upon multi-stakeholder seed forum and platforms that drive toward a mutual understanding, common vision and code of conduct across SPCs and seed value chain actors. Thus, the creation of a joint vision and regular discussion forum for research, extension, SPCs, NGOs, and public seed producers that highlight and mitigate any issues blocking effective operations and clarifying roles and responsibilities among existing actors in the sector was made and handled by a platform committee that comprised of key representatives from each actors.

Participation of the actors in linkage mechanisms of joint planning and review; execution of collaborative activities; exchange of resources and feedback; dissemination of knowledge and information; and joint governance and coordination was witnessed among the seed value chains. For instance, in order to enhance the business and/or marketing boundary of all the cooperatives, efforts was made through platform negotiations with the union, public seed enterprise, and extension organizations to support the SPCs towards LSB development in such a way to diversify some portions of their market(s) or customers beyond the union level. Moreover, mobilizing relevant NGOs and other partners towards the self-reliance of the producers in all post-harvest seed production techniques was made. Specifically, ensuring facilitating mechanisms where by each actors contribute own share for the provision of seed processing and cleaning machines for the cooperatives is being made.

The producers also lack differentiated superior product, namely access to new technologies. All lack a continual stream of new varieties to keep pace with the evolving pests and diseases. Thus direct linkages was created between the SPCs with research and extension via joint planning and review, executions of joint activities such as joint adaptive and demonstration trials; exchange of knowledge and information for sustained participatory variety selection and dissemination. Similarly, in order to enhance their self-reliance in all production techniques and some areas of

expertise direct linkage with researchers and extension staffs was created for the provisions of training on improved pre and post-harvest production techniques, preparations of written materials or manuals.

The level of development of the cooperatives was also enhanced through increasing their scope of linkages with other key NGOs who has a stake on the problems.

Implications for Future Actions

The active involvement of a broad range of different stakeholders in collective innovation systems: joint planning and review, executions of collaborative activities, exchange of knowledge and information; evaluation and feedback of innovation, and coordinating the overall system performance is needed and should be a pre-requisite for effective linkages among the seed chains and for promoting local seed business development. Such an involvement requires the establishment of functional and agreed-upon local and regional partnerships.

Complex problems in the real world are rarely solved by a simple technological “fix”, or by the efforts of one discipline or institution alone. Partnerships and joint vision of stakeholders therefore need to include the disciplines necessary to analyze the situation, and the institutions with the power to change it for further scale-out of LSB and its activities. It highlights, the integration of different disciplinary perspectives and analysis/action at different organizational levels (seed enterprises, seed producers cooperatives, research, extension, union, NGOs, etc). Such integration commonly involves using systems concepts to explore interrelationships between different components of the seed systems, between the different levels, between these systems and their changing environments (as influenced by policy and markets).

Learning about such a system can only take place in a real world environment. Even a local seed business (LSB) development cannot replicate the complexities encountered or offer opportunities for improving autonomy and entrepreneurship of seed producers. Therefore learning about LSB is best organised around a shared “challenge” or agreed “entry point”, which serves as a “platform” where stakeholders can come together on the basis of mutual trust and clearly defined institutional roles and commitments towards replication of local seed business development. This means locating learning within ongoing local seed business– with all their organisational and operational constraints.

A favorable policy environment needs to be established to encourage and enable innovations by seed value chain actors. Thus, system perspectives with a transparent and agreed-upon linkage policies based on the consent of the seed chains actors should be a prerequisite for vibrant and integrated seed sector development.

Given the weak linkage trends of the value chains, is increasingly seen as a poor picture of innovation in the seed sector of the region. Rather, an “innovation systems” model, in which a variety of individuals and organizations interact in a complex relationship and according to their interests and opportunities, is seen as a better representation of reality to tackle seed sector challenges. Thus, a joint visions and regular multi-stakeholders discussions are needed between the range of actors and interest groups that results in joint analysis, planning, and hence collective action. The stimulus for change can result from any part of the seed chains. Improving the performance of seed producers alone does not automatically lead to improved innovation. It is the processes of interaction between seed sector actors, and the factors that regulate or affect these processes, that are usually more important than the individual performance of the different actors themselves.

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