Introduction: The Case for Linking Smallholder Farmers to Markets

There are approximately 1.5 billion smallholder farmers in the world, a figure that includes 75% of the world’s poorest people. Recent improvements in global commodity prices and growth in emerging economies are expanding domestic and export markets, creating opportunities for smallholder farmers who can consistently link high production with sales. The expansion of high value horticulture across the developing world is also providing opportunities. Large corporations are starting to see farmers (including smallholder farmers) in Africa, Asia and Latin America as potential new suppliers for international supply chains, as well as growing domestic and regional markets.

Despite the risks associated with emerging markets, these changes may bring improved support services for farmers, such as technology, extension, finance and insurance. Several global agencies have recently renewed their investments in these areas, recognizing that agriculture is the best way for the rural poor to escape poverty: income growth generated by agriculture is up to four times more effective in reducing poverty than growth in other sectors (Growth Commission, 2008).

While these changes are encouraging, smallholder commercial prospects remain weak. Studies from Africa and Asia show that 50–70% of smallholders are not transitioning from subsistence to commercial farming. Few developing economies are creating enough off-farm jobs, which prevents the consolidation and acceleration of agricultural commercialization. Instead, millions of smallholders are locked in poverty with increasingly small parcels of land.

Finding ways to link smallholder farmers to markets is key to reducing rural poverty and hunger. Governments need to invest in local infrastructure, strengthen business services and improve farmers’ skills, while extension systems are needed to upgrade production and market performance. This brief explores the changing role of agricultural extension services and the growing focus on smallholder farmers, outlining how agriculture can, over time, provide a pathway out of poverty. The techniques outlined can empower extension workers to find new ways to assist smallholder farmers, through business-oriented approaches that encourage self-sufficiency.

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1 Farmers with up to 10 hectares of land. 1 hectare = 2.47 acres = 10,000 square meters.
Public and Private Sector Investments
Over the past 30 years, many smallholder farmers have endured a gradual decline in access to public sector extension services. Governments have reduced investment in favor of public–private partnerships, and current trends are towards co-investment schemes and fee-based rather than free services. There are however widening gaps between public and private sector investments for extension services, and resolving these is a challenge.

- **Private sector** investments are often restricted to better endowed smallholder farmers who can supply a better quality product at commercial volumes. They rarely reach the poorest farmers.
- **Public donors** tend to invest foreign aid in farmers with very small landholdings and in highly marginalized communities. Very little funding is used to help farmers produce marketable surpluses and build better market linkages. Therefore, poorer farming communities tend to transition more slowly from a focus on food security to improved market performance and overall economic growth.
- **Government** support to farming communities has dwindled, lacked innovation and is split between key food security crops and export products.

Key Questions for Agriculture and the Changing Role of Extension
Integrating market linkage work with strong farmer organizations, sustainable production methods and access to business services is critical to long term market development. The public and private sector agencies that are interested in upgrading the agricultural system face key challenges that have implications for extension.

For agricultural development:
- How should we define the farming community?
- Are certain types of market support more appropriate for specific farmer segments?

- Which interventions can best improve market conditions for smallholder farmers?
- Does improved market access help poor farmers escape poverty?

For modern extension service providers:
- Do extension services have the staffing and skills to develop market linkages?
- Do extension services have the tools to reach and support the rapidly growing numbers of farmers.
- How can private and public sector actors invest in ways that improve market linkage support?

Types of Markets and Marketing Systems
Efforts to build market linkages must be grounded in an understanding of markets and types of farmers. Farmers should select the right products and markets to meet their needs. There are three basic types.

1. **Informal markets**
In most developing countries, 80–90% of agricultural goods are sold informally, through transactions at the farm gate, roadside sales, village and rural assembly markets, and urban wholesale and retail markets. Prices are typically based on a combination of supply and demand, trader cartels and customer loyalties.

Having few regulations and often no taxation, these markets are the most accessible to smallholder farmers. No grades and standards, means flexibility in value propositions and often low postharvest losses. These informal markets therefore attract the bulk of smallholder farmers’ produce, from high volume, low value grain and pulse crops to higher value fruits, vegetables and meat products. However, they are often controlled by cartels of traders who limit competition, enforce arbitrary stall fees, and make choices that favor their allies and relatives. A lack of investment and poor transparency often result in crowded, unsanitary market conditions, where food safety issues are often overlooked.
**Key points for policy and extension workers:**

- Local Governments should upgrade market conditions and set regulations to uphold clean storage conditions.
- Work with the private sector managers to support more standardized, hygienic marketing facilities and trading systems.
- Develop and enforcement basic grades and standards, such as weights, measures and moisture contents of goods, and provide market extension agents with equipment to monitor food safety standards.
- Support markets with information and communication technology (ICT) to enable the monitoring and sharing of information on the quality and pricing of produce, and transaction volumes, to promote the trade of competitive, quality produce.

2. Formal markets

Formal markets are, by definition, more regulated and transactions are based on defined legal frameworks. Farmers must meet specific quality standards and apply best practices for the production and handling of goods (and firms may require traceability of lots). Formal buyers require regular, high volumes, so smallholders have to be well organized. They can link farmers to a consistent source of income, but in exchange for longer term buying arrangements and other benefits, prices may be below those in informal markets. **Quasi-formal markets,** such as commodity exchanges and auctions, also offer important opportunities for smallholders.

Many are linked to export crops or traditional cash crops, but highly organized farmers can supply local industries that are seeking to cut costs by sourcing local produce (e.g., feed millers, brewers and food processors, such as supermarkets, fast food chains and hotels. Farmers who link to formal markets can generally access more support services.

There are several challenges, though. Buyers and sellers rarely meet, so trust in transactions is based on written standards and, often, certification. Also, traders extend credit to producers (e.g., a cash prepayment) in almost all market transactions. The size of a deal is thus limited by the traders’ access to and willingness to carry large amounts of cash. Nearly all advanced market systems rely on banks to provide credit, but such systems can only work in countries where banks operate within a legally binding regulatory framework.

Smallholder farmers can become crowded out by middle- to large-scale farmers, who can outcompete them on the basis of their economies of scale (Michelson et al., 2012). Buyer standards can also exclude small-scale producers.

**Key points for extension workers:**

- Know the requirements that smallholders must meet to gain access to formal markets, including conditions where reliable legal services and bank credit are lacking.
- Build the case for the benefits of linking with formal markets, i.e., more support and social services, greater income security.
- Consider the particular requirements for specific products (e.g., coffee farmers can shift from selling average coffee through local traders to selling specialty coffee directly to roasters).

Kenya: Neven et al. (2009) surveyed 115 farmers in Kenya (66 supplying traditional channels and 49 supplying the supermarket channel). Different marketing practices lead to essential differences in profitability between the two farmer types. Whereas traditional channel farmers incur only limited marketing costs, they sell to brokers at a low farm-gate price that allows them to break even at best. Supermarket channel farmers on the other hand incur transportation costs, but receive a price which is more than three times the farm-gate price, resulting in a gross profit of about 40%

3. Formal public markets

These are organized by governments and the food aid sector, who offer standardized contractual buying arrangements for agricultural goods, with specific conditions. For example, the U.S. Government buys surplus stocks from domestic farmers and ships these goods to countries where famine relief is needed. To
complement shipments of food aid, the United Nations World Food Programme (WFP), the U.S. Agency for International Development (USAID) and the U.S. Department of Agriculture (USDA) should invest in local and regional procurement tenders, which enable the purchase of surplus crops from other areas of a country, or neighboring countries, to support food deficit areas, for food aid. The practice is growing in East Africa, the Sahel and parts of Southern Africa. Governments also buy food products for their schools, military, police, prisons and hospitals. There is a growing interest in sourcing some of this food directly from smallholder farmers.

The volumes involved are large. For example, the WFP’s Purchase for Progress (P4P) program purchased 270,000 metric tons of food from smallholders between 2008 and 2013, worth over US $100 million. P4P buys staple food crops in 21 countries for food aid, with up to 10% of its grain coming from smallholder farmers who have a surplus of staple foods. However, to meet the high standards for grain quality, farmers must be organized and prepared to invest in the necessary technology. The market for high-quality grain is small in most countries where the WFP operates, so it can be difficult for farmers to find alternative markets beyond food aid sales. The procurement process is also lengthy compared with selling to traders for cash down payments.

**Key point for extension workers:**
- Work with local farmers to use procurement modalities such as forward contracting, offered by P4P, as a means of accessing credit to buy inputs, as warranty to access partial payments at harvest, or as insurance to reduce the inherent risks of rain-fed production.

**Matching Farmers and Markets**
Farmers vary widely in their assets, natural resource base, farm size, expertise, technology use, access to markets and agricultural services, level of organization and their products. Linking to formal markets should not be the goal for all smallholder farmers – trying to link the most vulnerable farmers to the highest value or most dynamic markets would be a mistake. Most smallholders, especially those living in remote rural areas, are unlikely to be able to link to formal markets, and many struggle to link consistently to local informal markets.

Extension and advisory providers designing and investing in market linkage projects must determine the best entry points for different types of farmers and communities of farmers, corresponding to their interests and circumstances. Projects should focus on linkages that improve food and nutrition security and livelihoods. To develop intervention packages to help link smallholder farmers to markets, they must:
- understand and recognize the various types of markets and farmer segments within the target area;
- understand the factors that affect market access and farmers’ prospects, such as location, farm size, water resources, and access to roads and transport;
- determine whether to use an approach that targets farmer groups or individual farmers;
- consider farmers’ goals and aspirations, as well as characteristics such as age, gender and skills;
- consider local political stability, food security, wealth, and environmental status;
- assess market demand, local production conditions, the business environment (maturity of the local private sector), interests of traders to work with organized smallholders;
- help smallholders to decide which products to invest in and which markets to target;
- find effective approach for each farmer or group of farmers.

**Differentiated marketing prospects and strategies based on land holding size**
There is a clear division in the potential for commercialization based on land size. As such, segmented intervention programs should be designed for farmers with larger and smaller land holdings.
Land-constrained farmers
These farmers rarely have enough surplus produce to sell in the marketplace – often having to buy staple crops – and tend to be less organized and less educated than farmers with larger holdings. The commercial prospects for these farmers are limited. They require diversified business plans (including non-farm options), which may involve linking to combinations of formal and informal markets. Investments should aim to support, basic organization, basic education and income smoothing, which lead to livelihood stabilization, which is a first step towards resilience and capacities that support improved generational transitions. These include creating farmer groups to learn new skills and gain from collective marketing for bulk sales, or providing basic literacy and financial education to improve money management. If income stability and consistency can be improved, this will enable more of these farmers to educate their children, giving them better prospects for off-farm employment in the future. Progress will be slow: it might take up to 10 years to finish an effective process of community organization, market identification, production increases and improved market linkage, but this general livelihood approach that creates self-reliance safety nets is far more cost effective than relying on emergency food assistance.

Farmers with more land and labor assets
Formal markets offer the best returns for smallholders with somewhat larger landholdings (more than 3 or 4 hectares of land). Their prospects can improve quickly when they have access to more stable markets and improved technologies, which allow them to expand production and productivity. With the right support, they can go beyond reducing hunger to achieve stable income gains and increase surpluses and bulk sales of key staple and cash crops.

These farmers require an aggressive approach to technology adoption to link them to higher volume and higher return market opportunities. They also need support to improve their area of production and raise productivity and quality. When these farmers are able to benefit from economies of scale, they can focus on more extensive crops, allowing them to raise their incomes through greater specialization in value chains, with the support of programs aimed at improving their business capacity.

Groups of farmers can be also be helped to manage their assets and business more effectively, and linked to business services, to become consistent net sellers. Key interventions include providing support for financial and business planning and reinvestment in farm enterprises, and using new technologies to raise on-farm productivity. It may take three to five years to progress to stable market linkages, when these farmers are linked to growth markets.

Market Linkage Approaches
There are many approaches and interventions to select from, depending on the needs of individual farmers or farmer groups. This section briefly describes specific approaches and interventions.

1. Investment in value chains
A systematic process is applied to improve market linkage for farmers, including building relationships between groups of organized farmers selling to known trading partners and establishing consistent sales. The structure and level of investments may vary, but the process generally follows these basic steps (for more details, see the full discussion paper of the same title):2

1. Organize support staff and meet the community.
2. Identify products that are in demand and farmers interested in supplying those goods.
3. Build relationships with buyers in formal markets to keep up to date with pertinent information on market requirements, current demand, available services, options for trading mechanisms.

2 Available at: www.meas-extension.org/meas-offers/best-practice
4. Collect production, marketing and finance information for a business plan.
5. Write a group business plan and prepare farmer implementation schedules.
6. Market the produce as a group.
7. Review the agro-enterprise performance of the group.
8. Review, improve and scale up the process.

2. Contract farming
Contract farming provides smallholders with a direct sales agreement for a specific product and a target market. The agreement is usually based on specifications such as price, quality standards and sales volumes. Contracting is generally supported by an intermediary firm that secures the market and then sources smallholder produce to aggregate supply volumes, as well as controlling quality. These firms often support financing and technology and help to reduce risks for smallholders. Contracting allows farmers to access a more consistent market, though they often receive prices slightly below prevailing market prices. The disadvantage of contract farming is that smallholder inclusion may be limited to the start-up phase, after which larger, more competitive farmers fill the market.

**INDIA:** There have been cases where farmers have had to take on relatively large loans due to contractual agreements, but were later unable to repay them when poor rains led to crop failure or when market prices collapsed. This was highlighted widely in the media in the mid-2000s when crop failures and a fall in the cotton market led to a series of suicides after farmers had to hand over their farms to debt collectors. Crop insurance schemes associated with sales agreements are rare.

3. Certification schemes
Certification schemes that support smallholder production and marketing have been growing for more than 20 years. Leading certification agencies include Fair Trade, Organic, Utz, and RainForest Alliance. Major food processing and retail companies looking for more sustainable supply chains and ways to attract ethically-minded consumers have recently bolstered the certified market segment. Under these schemes, farmers must comply with product and trading specifications to sell to a specific market with a minimum floor price. Fair trade schemes usually also provide farmers with a range of social benefits, and studies show that many farmers place substantial value on this form of cooperation and social support (Setboonsarng, 2008). But recent changes in market prices have led many farmers to return to conventional markets.

4. Public–private approaches to value chain investment
As formal markets expand through globalization and market consolidation, major food companies are actively seeking new sources of supply. Companies and development agencies are converging on the idea of inclusive business models to help informal smallholders access the complex world of formal corporate business (Fig. 1a).

**Figure 1a. Business model based on single firm activities. Source:** Vorley et al., 2008.

**Figure 1b. Business model based on integration of value chain partners. Source:** Authors.
The concept of an extended new business model that goes well beyond the firm to a higher level of integration involving many unassociated actors in a specific value chain is shown in Fig. 1b.

Changing the Role of Modern Extension Services
Current inefficiencies in agricultural extension services are caused by many challenges, especially the lack of investment in government services, and uncoordinated and inconsistent (in terms of quality and availability) support from a broad range of development contractors and non-governmental organizations (NGOs). The provision of private sector extension services is mainly limited to export, or higher value products, targeting the more commercial smallholder farmers. For smallholders to benefit from emerging market opportunities, extension services need to find new operational business models that provide financially viable service delivery. Services also must be more consistent, better coordinated services and provide greater “added value” to different types of farmers, if they are to have a more meaningful impact.

New institutional arrangements for extension services
New institutional arrangements are needed so that different service providers can meet the needs of different farming sectors. Diversifying service delivery will require representation from government field agents; field agents from international and local NGOs; private sector field agents; community volunteers; private sector ICT-based service providers; and business-focused farmer organizations. These players must find more effective ways of working together within a business framework. Service providers will have to place greater emphasis on the business process if they are to create competitive options for farmers.

There are two major challenges that need to be met to make these new arrangements work.

1. The efforts and investments of government ministries must be harmonized and coordinated with those of larger external agencies, both public and private. Improved planning and investment processes will help focus resources more effectively while helping to remove inefficiencies in the agricultural system.

2. Extension services would benefit from being better informed about the needs of farmers within specific value chains, but they are limited by the use of antiquated systems for gathering, analyzing and communicating information. Many governments remain reluctant to share certain data, with agriculture and food security sensitive areas, while donors might be more interested in investing in extension services if they had better information on the targeting of resources and the impact of the services. The use of ICT is a critical building block in the upgrading of national extension services.

Reform in skill sets for extension providers and farmers
Extension services managers and field agents must shift from a focus on production to a broader set of skills, with a greater focus on marketing, business and financial services. While the larger NGO agricultural projects have adopted a more business-oriented approach, most government research and extension agencies have been slower to reform. Extension services must hire and retain staff with expertise in community-based, participatory learning methods. Extension agents will have to unlearn “one size fits all” methods and learn to work with the differing needs of farmers and their organizations, to help them invest in appropriate business opportunities. The challenge is to introduce a business culture to the other extension systems and to accelerate the use of business-oriented training for the range of farmers.

At the same time, smallholder farmers must become adept in basic business methods such as assessing market opportunities, developing business plans, and negotiating with value chain
partners. Farmer groups also need support to develop group management, financial (starting with internal savings and lending) and marketing skills, as well as innovation skills for accessing new technology and sustainable production and natural resource management skills (Ashby et al., 2011).

Supporting farmer organizations for collective marketing
As well as improving their management skills, extension services must help smallholder farmers become organized, upgrade their financial and business skills so that they can gain from economies of scale through demand driven collective marketing. The goal is to create farmer organizations that support durable trading relationships. Different types of farmer organizations have been tested and implemented by various extension services.

1. Savings and Loans groups
For the most vulnerable farmers, NGO methods typically begin to organize farmers into savings groups first, so that they can learn basic financial literacy before they progress into production and marketing groups.

2. Producer groups
The most traditional level of farmer organization for all extension efforts has been to bring farmers together to test new production systems. This is effective if markets are not a challenge, but in most cases, farmers face major business constraints in addition to production challenges.

3. Collective marketing groups
At the most basic level, extension workers can help organize farmers into groups where they can learn new technologies and produce a specific level of surplus for sale. Organized groups have more negotiating power at the time of sale through collective marketing. When farmers start to associate beyond the primary group, it is important to have a transparent system for group representation and timely feedback to members. As the number of associated groups grows, effective and transparent management becomes more challenging.

4. Cooperatives
Cooperatives are typically formed from associating producer groups. Ideally these second tier organizations can aggregate more produce, can provide farmers with more services, and through these efforts, build their ability to develop long-term trading relations in specific value chains. These relationships can be further strengthened through market linkage mechanisms such as certification schemes. Despite the many benefits of association, past efforts to support cooperatives have suffered major problems with issues, such as: corruption, extortion, inept management and political manipulation, leading many farmers to abandon them. When the role of governments declined, or where its role has been reformulated, to favor farmer ownership, more farmers have begun returning to these modern cooperative farmer led organizations, to support their marketing opportunities.

5. Value chain support within the chain
If farmers are reluctant to work in cooperatives or cooperatives are missing in key value chains, extension services need a system of organization to support collective action. NGOs have piloted a number of interim structures that support improved market coordination among farmers. The level of maturity or formality within the chain, and the degree of emphasis on developing durable trading relationships, are important considerations.

6. Facilitated value chain support
To avoid problems associated with being too heavily involved in the chain, many external agencies now facilitate the roles of chain actors rather than work directly within the chain. Chain actors are given technical advice and training to help them implement an upgrading process. Facilitation reduces dependency, and this approach may support greater sustainability of the value chain when the facilitation process ends.
7. Agri-dealer networks
As proposed by the P4P strategy, donors are trying to foster projects that support rather than manage market linkage methods. In Zambia, CARE, an international NGO, has been working to strengthen the capability of input suppliers to provide technology to target farming communities rather than simply giving them inputs. The project worked with the farmers and input suppliers to demonstrate the value of new technologies and build relationships, to give farmers continued access to improved technologies when the project support ended.

8. Agent networks
Another USAID-funded project in Zambia, managed by the Cooperative League of the United States of America (CLUSA), developed an agent model to support improved market linkage in extension work. In this model, an extension worker facilitates linkages between farmers and input suppliers and supports linkages between farmers and buyers. As a project expands, the agent supports a growing portfolio of farmers, and this approach has longer term prospects as both the input suppliers and buyers pay a fee to the agent.

9. Community fee-based service providers
Because of the scarcity of development resources to support extension, several agencies are establishing fee-based service delivery systems. This approach is being led by NGO’s such as CRS, to develop a cadre of market supported service providers. These service providers work in specific marketing zones and are linked through a local support network. For this service to succeed, farmers must value the service and be prepared to pay regular fees to support clearly developed learning programs. These types of services generally focus on business components of the extension service. Whilst, this fee based approach is being adopted by the private sector and is gaining favor with NGO’s, fee based services have not yet been adopted by the more traditional Government extension services.

Measuring success in value chains and realistic targeting
Few standard metrics are used regularly across projects and by agencies to measure the production and market performance of smallholder farmers. Where such methods are used, the main measures include production per area, sales prices multiplied by units of produce sold, cost of production and gross margin. At the project level, it has been difficult to maintain consistent use of these indicators to reliably capture market performance. Working with the private sector, the Committee on Sustainability Assessment (COSA) has made progress in developing a set of indicators. Accurately measuring the market performance is essential if extension teams are to provide support and advice on-farm enterprises.

Expectations for performance should be based on the ability of a target farming community to respond to value chain support, which depends on its starting point profile – assets, skills and existing market access. Targets set for building market options for poor women are different from targets for mature farmer groups who have access to irrigated plots year round. Not only will some groups take longer to acquire durable market linkages, but the level of market performance (in terms of production, market supply and income gains) will also be considerably higher for farmers with more land, skills or those who use knowledge intensive systems.

Scaling up business-oriented extension services
Traditionally, field agents visit farmers to diagnose and solve problems and are assigned specific areas to manage and report on by their managers. But how can modern extension services manage to support the hundreds of field agents that are now needed to support millions of farmers? The answer to this includes a combination of actions, including new institutional arrangements discussed earlier and the use of modern communications and decision support tools. Getting to the numbers
of farmers within existing levels of investments require ICT solutions to reduce costs and scale up solutions (George et al., 2011).

Now that mobile phones and mobile connectivity services are used throughout the developing world, there are many ICT-based service providers offering a range of services to governments, NGOs, the private sector and farmers. Currently, ICT-based services usually complement face-to-face extension, but these services are a growing business opportunity.

**Conclusions**

Millions of smallholder farmers are seeking ways to improve the productivity of their farms and to improve their market performance. Modernizing extension and improving market linkages can play a vital role in improving their prospects. Helping farmers improve their market access and performance will require building business relationships in all types of markets. Though formal markets offer the best returns, they are best suited to smallholders with at least 2 hectares of land and good proximity to the markets. To help farmers with less land and poor proximity to urban markets, it may be best to focus on strengthening their links to informal markets.

It is also important that extension service providers consider the well-being of the whole farming family, by providing advice on nutrition and health, and encouraging education and the development of farming skills. As competition grows and land tenure systems change, it is likely that millions of children from today’s farming families will choose to opt out of farming. This process of transition will require new ways of doing business and, to remain relevant, extension services will have to find new ways of working with farming communities.

**References**


