AGRICULTURE IN SUB-SAHARAN AFRICA: Pathways for developing innovative programs for youth and the rural poor

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ACRONYMS

GDP: Gross Domestic Product
MDGs: Millennium Development Goals
ICTs: Information and Communications Technologies
SMEs: Small and Medium Enterprises
ISIC: International Standard Industrial Classification
BDS: Business Development Service
MIF: Multilateral Investment Fund of the IDB
UNIDO: United Nations Industrial Development Organization
USAID: U.S. Agency for International Development
IFDC: International Fertilizer Development Center
UNVCD: United Nations Value Chain Development
FAO: Food and Agriculture Organization of the United Nations
IFAD: International Fund for Agricultural Development
ILO: International Labour Organization
ITC: International Trade Centre
UNCDF: United Nations Capital Development Fund
UNCTAD: Conference on Trade and Development
UNDP: United Nations Development Programme
UNIDO: United Nations Industrial Development Organization
WFP: World Food Programme
APF: Agri-ProFocus
YERP: Youth Employment and Social Cohesion
TVET: Technical and Vocational Training
NEPAD: New Partnership for African Development
This paper is intended to provide guidance for those seeking impact in the field of agriculture and youth development in Africa. It defines key terms and concepts, and highlights promising initiatives and projects that develop durable livelihood opportunities for young people working in agriculture.

Africa represents 12 percent of the world’s population, but only accounts for one percent of global gross domestic product (GDP) and 2 percent of world trade. The continent is faced with four key challenges: a global food crisis, profound climate change, soaring energy prices and persistent poverty. High food prices, caused by a high population growth, low agricultural productivity, limited access to technology and high transportation costs all contribute to Africa’s economic picture. In addition, the creation and retention of the capacity for development remains a significant challenge, and technical and vocational training is poorly funded and managed. Consequently, African countries face high youth unemployment, combined with a shortage and a mismatch of skills.

In the coming years however, the transformation of subsistence agriculture in Africa holds tremendous promise for catalyzing economic growth and creating employment opportunities for the world’s large youth population. Furthermore, various African poverty reduction strategy papers stress that growth in the agricultural sector contributes proportionally more to poverty reduction than any other economic sector. In our view, this means focusing businesses that work in agriculture, and ensuring that the systems and human resources are in place.

The need for agribusiness development in Africa is undeniable, especially for its largely young and rural population. Over 63 percent of the total population in Sub-Saharan Africa live in rural areas where agriculture remains the single largest source of employment and income. The transformation of subsistence agriculture and embarking on an agribusiness development path will drive economic growth, while providing increased employment opportunities and enhanced livelihoods for people living in poverty. In addition to stimulating economic growth, an agribusiness development path can contribute substantially to poverty reduction and improved social outcomes, forming part of a socially-inclusive development strategy.

Addressing these challenges requires that agribusiness development needs to be context-specific, by addressing issues of supply and demand. More agribusiness workers need skills and training to increase the value of products, develop businesses and build the capacity to adapt with change. Networks are needed to link farmers to new technical ideas and markets. This can be done by strengthening linkages with industry through agro-processing and value addition to agricultural products, as well as improved post-harvest operations, storage, distribution and logistics. Finally, young people need to be engaged and trained in agribusiness to ensure the sector is successfully developed for the coming bulge of young people in the population.

Some field-based practical experiences and lessons now show promise for improving the employment opportunities of young people through agribusiness. From the point of view of farmers, producers and other actors in the value chain, there are opportunities to build agribusinesses through skills and training, technology and finance in order to improve productivity and add value to products. It is now possible to use evidence-based results to inform future action plans and propose measures to help young people make the transition into the labour market.

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The African Youth Bulge

Africa is a youthful continent with over 920 million people, 60 percent of whom are between the ages of 15 and 24. A large percentage of these young people live on less than USD $2 a day. For example, the prevalence of poverty among young people in Nigeria, Ethiopia, Uganda, Zambia and Burundi is over 80 percent. The highest rates of poverty are found among young people living in rural areas where 70 percent of Africa’s youth live.

The estimated youth unemployment rate in Sub-Saharan Africa is one of the highest in the world at 40 percent. Moreover, by 2040, Africa will be home to one in five of the world’s young, and will have the world’s largest working age population. According to the International Labour Organization (ILO), between 2000 and 2008, Africa created 73 million jobs, but only 16 million were for young people.

Rural youth often migrate to urban areas in search of job opportunities which are usually not readily available. A Food and Agriculture Organization (FAO) report suggests that the average age of the African farmer is about 60 years old, meaning that there are few young people involved or interested in agriculture and agribusiness. A capital intensive agribusiness development path that invests in or targets rural youth can provide them with employment opportunities, investing in both the future of African agribusiness and of the continent at large.

The Importance of the Agricultural Sector

Over the last two decades, Sub-Saharan Africa’s economic growth has not corresponded with employment opportunities. While part of this is due to the rapidly growing labour supply, a large part is also attributed to the inability of Sub-Saharan African economies to generate enough jobs.

The major engine of economic growth in Sub-Saharan Africa is the mining sector, which is capital-intensive and, with a few exceptions, does not create wealth for domestic economies. For example, in the last two decades the mining industry, which employs less than 10 percent of the labour force, grew at over 10 percent per year. In contrast, agriculture, manufacturing and services industries grew less than 2.5 percent annually over the last two decades. The much more rapid growth in mining activity has not translated into commensurate employment opportunities. Agriculture, manufacturing and service industries still employ 80 percent of the labour force.

For Africans living in rural areas, agriculture remains the single largest source of employment and income. Agriculture contributes about a quarter of GDP, but employs about half the labour force. Agriculture plays an even more significant role in the lives of the poor, who remain primarily rural and either directly engaged in farming, or depend on farming-related activities. Average yields are low compared with average yields in other regions. Improved knowledge and management practices can significantly increase land and labour productivity, thereby generating economic growth.

Furthermore, agricultural growth, youth employment and food security are complementary and interlinked. If the continent’s growing labour force is to be employed in sustainable opportunities, strategies must holistically address these growth and development needs.
It is traditionally thought that as an economy develops, the role of agriculture in the economy’s GDP and employment rates decreases. This trend has been observed in Sub-Saharan Africa where agriculture’s contribution to GDP has fallen from 43 percent in 1965 to 12 percent in 2008. If agricultural activity continues to be limited to crop and livestock production, it will fail to contribute to output growth and poverty reduction.\(^1\)

However, agriculture’s contribution could be significantly enhanced by strengthening linkages with industry through agro-processing and providing value-addition to agricultural products, as well as improving post-harvest operations, storage, distribution and logistics. Such an agribusiness development path paves the way for economic growth, structural transformation and improved technical skills which in turn can catalyze economic activities and connect major economic sectors on the African continent.

In addition to stimulating economic growth, an agribusiness development path would contribute substantially to poverty reduction and improved social outcomes, forming part of a socially-inclusive development strategy. According to the World Bank, strong synergies exist between agribusiness, agricultural performance and poverty reduction in Sub-Saharan Africa. Efficient agribusinesses may stimulate agricultural growth and strong linkages between agribusinesses and smallholders can reduce rural poverty.\(^1\)

Agro-industrial development has a direct impact on the lives of the poor through increased employment in agro-industrial activities, as well as through increased demand for primary agricultural products. Early stage agro-industry is particularly labour-intensive and provides various opportunities for self and wage employment. Furthermore, young people make up the majority of Sub-Saharan Africa’s rural population and an investment in agribusiness will create employment opportunities for and improve the livelihoods of these youth.\(^3\)

Agro-industrial enterprises also provide “crucial inputs and services to the farm sector for those with no access to such inputs,” inducing productivity and product quality improvements. They also “stimulat[e] market-induced innovation [through chains and networks],” facilitate linkages and allow domestic and export markets to become “more mutually supportive”.\(^4\)

The agro-industry is fairly accessible and can be pursued at small-scale. It also requires low start-up cost and has low technical barriers to entry. Small and medium enterprises (SMEs) remain important actors in the largely informal networks that dominate urban Sub-Saharan Africa and have proved fairly adaptive amidst various challenges.\(^5\)

### Issues

- Declining value-add in terms of GDP and employment.
- Low contribution towards poverty reduction due to little innovation across a dated agricultural sector.
- Little direct impact on rural areas from current macro-level growth.
- Farming inputs inaccessible and costly.

### Opportunities

- Enhance value-add to GDP and rural employment through increased investment.
- Increase production and processing efficiencies through innovation.
- Community-driven development paradigms.
- Low-cost, small-scale agro-industry SMEs.

### Outcomes

- Create jobs for rural poor and young people.
- Increase agriculture’s value-add to GDP and economic growth.
- New technologies catalyze better yields and advanced agribusinesses.
- Localized returns on development investment with macro impacts.
- Accessible, affordable farming inputs and services available.

### Interventions

- Strengthening linkages with industry. Agro-processing initiatives. Value-addition to agricultural outputs. Improved post-harvest operations such as storage, distribution and logistics.

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\(^3\) Ibid.


DEFINING KEY TERMS IN AGRIBUSINESS

Working in agriculture requires a basic, but firm understanding of the key concepts involved. The following section provides some description of these terms.

**Agribusiness**

Agribusiness encompasses a wide range of activities that generate economic value. Agribusiness is comprised of not only farming, but all the other industries and services that connect farmers to consumers. Agribusiness broadly includes inputs suppliers, agro-processors, traders, exporters and retailers. It can be further broken down into four main groups:

1. **Agricultural input industry** for increasing agricultural productivity, such as agricultural machinery, equipment and tools, fertilizers, pesticides and insecticides, and irrigation systems and related equipment;

2. **Agro-industry products** such as food and beverages, tobacco products, leather and leather products, textile, footwear and garment, wood and wood products, rubber products, as well as construction industry products based on agricultural materials;

3. **Equipment for processing** agricultural raw materials, including machinery, tools, storage facilities, cooling technology and spare parts; and

4. **Financing, marketing, distribution and other service firms**, including storage, transport, ICTs, packaging materials and design for better marketing and distribution.

**Agro-processing**

Agro-processing is the “subset of manufacturing that processes raw materials and intermediate products derived from the agricultural sector.” This includes products originating from agriculture, forestry and fisheries.

**Agro-industry**

The agro-industry constitutes all the post-harvest activities involved in the transformation, preservation and preparation of agricultural products for the consumption of food and non-food products. The agro-industry consists of six main groups: food and beverages, tobacco products, paper and wood products, textiles, footwear and apparel, leather products and rubber products. Captured within agro-industry are a diverse range of primary and secondary post-harvest activities, and involves varying levels of scale, complexity, labour, capital and technology intensity.

In the agro-industry sector in developing countries, including Sub-Saharan Africa, food processing industries tend to be the most prevalent. Food processing industries are largely grouped into three categories:

- **Primary**: Basic processing of natural produce i.e. cleaning, grading and dehusking;
- **Secondary**: Simple modification of natural produce i.e. the hydrogenation of edible oils; and
- **Tertiary**: Advance modification of natural produce i.e. transforming tomatoes into ketchup, dairy products into cheese, etc.

The agri-food system encompasses the value chains for different agricultural products, as well as a set of interlinked activities including agricultural input production and distribution, farm production, raw product assembly and processing and marketing. The system is also used to describe agriculture and related agro-industries and applies to the production of non-food products such as fibers and biofuels.

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20 Ibid.
What are Value Chains?

The value chain in agriculture refers to the addition of value to preliminary agricultural products by combining them with other resources such as tools, manpower, knowledge, skills, other raw materials or other preliminary products. As the product passes through several stages of this chain, the product’s value increases. A key contribution of value chain analysis lies in the notion of upgrading, the acquisition of technological, institutional and market capabilities for greater competitiveness or movement into higher-value activities.

Value chains involve both horizontal and vertical coordination mechanisms. Horizontal coordination implies greater organization, usually in the form of some collective structure (typically a producer group) while vertical coordination involves more long-term relationships, often between producers and processors.

Understanding value chains is about understanding the interaction of many actors. Primary actors undertake input supply, production, processing, storage, wholesale (including export), retail and consumption. Secondary actors perform support service roles for primary functions such as transportation, brokerage and service processing. Those who perform similar functions occupy the same functional “node” [“space”]. These include the input supply node, production node, distribution node and retail node.

Various individuals and organizations play roles in the value chain—government, private sectors, NGO service providers and formal or non-formal networks. The chain is always embedded into a market system consisting of various functions and rules. Within this system, different market players are either directly engaged in business transactions or are part of supporting organizations such as business development service (BDS) providers, government institutions or NGOs.

Two key concepts to increase the value of value chains are through upgrading and deepening activity. Upgrading is the acquisition of technical, institutional and market know-how that enable enterprises or communities to become more competitive and move into higher-value activities.

A working group consisting of the Overseas Development Institute (ODI) and the International Development Research Center (IDRC), among others, recently proposed six different strategies that can be employed in upgrading. These strategies are outlined in Table 1.

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UNDERSTANDING VALUE CHAIN DEVELOPMENT IN AGRICULTURE

### TABLE 1: UPGRADING STRATEGIES

#### HORIZONTAL COORDINATION
- Greater organization within nodes, often in production and processing, and often in a collective structure.
- Significant for poor people in rural areas because coordination with others allows individual producers to achieve economies of scale and to reduce transaction costs.
- Often first step in a series of actions or interventions that result in market access and are required for other forms of upgrading.
- Can be both exclusive and beneficial – groups self-select and in environments where institutional membership is required, the poor are usually among the excluded.

#### FUNCTIONAL UPGRADING
- Changing the combination of functions performed in the value chain (i.e., increasing or reducing the number or type of activities). A producer who begins to process some of their produce performs functional upgrading.
- Other types include adding new functions to HC institutions (i.e., producers’ collectives who package their products to meet buyer requirements).

#### PROCESS UPGRADING
- Improving the efficiency of value chains by increasing the volumes of output or by reducing the unit costs of output.
- Efficiencies can be achieved through improved planting techniques, materials or investments.

#### VERTICAL COORDINATION
- Moves toward longer-term relationships between or among different nodes, often between producers and processors.
- Relationships governed by formal contracts, or outgrowing arrangements and provide the contractor with a stable, assured market and guaranteed prices that are at least at the market rate.
- Often slow and difficult because it involves trust-building between buyers and sellers.

#### PRODUCT UPGRADING
- Increasing the quality standards of the product.
- Related to process upgrading, as quality improvements usually require process enhancements.

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Challenges of Agribusiness for the Rural Poor Along Value Chains

Small-scale farmers face a number of obstacles that inhibit agribusiness development. Key among them include a lack of access to land, skills and knowledge to improve production efficiency, financing for start-up or expansion and new technology. In combination, this limits the capacity for farmers to both diversify into new markets for higher-value products, or add value to existing products through improved quality.

Young women face an additional layer of obstacles to those listed above. Gender-based discrimination through traditional patriarchal customs manifested through social norms and customary rights persists in many communities. Though many countries have ratified international conventions (such as the Convention on the Elimination of Discrimination Against Women) or have introduced statutory laws guaranteeing equal access to opportunities, the enforcement and implementation of such laws remain a challenge. In general, women have lower levels of education, as well as lower levels of knowledge about their land rights. Traditional land inheritance systems that allow women use of land through a male relative leaves women highly vulnerable. In addition, lack of land ownership, a secure asset, further constrains their access to capital and finance.

Building economies of scale is also challenging as small-scale farmers find it difficult to compete with large farms or increase bargaining power with buyers that require certain quantities. Weak institutional environments and support systems, as well as lack of market intelligence and information compound these challenges. Ideally, the selection of a market channel within a value chain should depend on an existing market demand. Often, however, an understanding of demand is not a factor in decisions made. For smallholder farmers, it is especially risky to embark on a project that attempts to create demand for a product where there is not current or potential demand. Focusing on an existing market demand includes meeting a current unmet demand, growing market demand to eventually exceed supply, creating the potential for import substitution and enabling the development of niche markets.

Agro-processing is another area facing challenges despite significant donor investments in recent years. Most of the initiatives have failed for the following reasons:

- Activities have been driven by donors, not by demand.
- Initiatives are too large for existing markets to sustain, especially in terms of input supply, which tends to be sporadic for many products.
- The initiatives’ working capital needs are not taken into consideration and donor funding of only start-up costs does not ensure sustainability.
- Programs have limited impact on the households at the grassroots level because most ventures are focused on exports and/or geared to impact macroeconomic earnings of a country rather than the microeconomic earnings of the targeted clients.

26 Import substitution is a trade and economic policy that pushes for the replacement of foreign imports with domestic production.
Factors Contributing to Successful Agribusiness Development

As outlined by Kelly,27 the following are success factors individual actors and institutions should consider when implementing or supporting projects that strengthen smallholder organization models in an effort to fuel agribusiness development.

• **Non-politically aligned organizations**: Political stigma associated with farmer organizations and cooperatives means that such groups must now distance themselves from politics in order to be seen as more practical and market-oriented.

• **High quality service provision**: Farmer organizations must provide high quality service to recruit and retain members. Some of these services may be outsourced, including market identification, product assembly, training, technical assistance and advice.

• **Social and enterprise strategies**: Despite the temptation to provide local social services that address community needs, agribusiness activities should be prioritized as they are linked directly to poverty reduction and the financial sustainability of the organization.

• **Network membership**: Farmer organizations should be part of wider networks that link members to new technical ideas, markets and funding opportunities outside of their community.

• **Focus on core business**: Farmer organizations need to both focus on their core function of supporting members to improve productivity, production planning and marketing and acquire the appropriate marketing and management capacities, before diversifying activities and resources into other activities.

• **Low-cost value addition through innovations**: Farmer organizations can add value to their members’ produce through organizational innovations and support with sorting, grading, production planning, logistics and other such activities which do not require costly capital investments.

• **There is no “one-size-fits-all”**: Farmer organization models vary—the ones most likely to succeed are those that are based on local cultural contexts and members’ marketing needs.

• **Understanding the needs and risks of agribusiness companies**: Agro-enterprises face various risks when buying from smallholders—from inconsistent quality and quantity of supply to side-selling and reputational risk based on public perception of smallholder exploitation. Farmer organizations can help minimize these by being in constant dialogue with buyers and guiding smallholders in responding to market requirements.

Factors Influencing Linkages Between the Farm and Market

The type and strength of linkages formed among different actors depends on a number of factors such as their mutual interest in forming and maintaining agreements, the physical and institutional environment and the types of products or processes involved among others. Good communications and transport infrastructure also promote stronger linkages. Some of the factors that help to link the farm to the market are outlined below:

• **The nature of product** helps to determine the collaboration between producers and processors. Highly perishable, labour intensive crops which have no alternate market result in close collaboration between farmers and agribusiness firms.28

• **Support of farmers’ organizations** helps individual farmers devise strategies that increase their market power.29

• **The role of the initiator of the linkages** between farms and agribusinesses determines the success of such links.30

• **Creation of asset specificity** (creating greater product specialization) reduces uncertainty and raises the exit costs of partners. An example of this is the purchase of specific plant and equipment by the Swaziland sugar farmers’ association.31

• **Facilitation by international NGOs** can help establish and maintain farm agribusiness linkages.

• Ultimately, an enabling environment—policy, legal, institutional and governance—has a significant impact. Examples include the codes of conduct that govern employment or operational standards to the provision of business development, as well as credit and support services. Lobbying for changes in policies and legislation can positively transform the policy environment. The provision of microcredit and improved access to commercial credit on better terms has also effected change—it has stimulated the creation of new enterprises, resulting in livelihood diversification and reduced vulnerability.32

• **Information and communications technology (ICTs)**: Innovations in ICTs has trickled down to the agribusiness sector with ICT firms devising new ways to connect farmers to markets and to each other.

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29-31 Ibid.

Fostering Linkages within Value Chains to the Market

A key constraint to agro-enterprise development is that it is not often linked to the market. Hoxha et al. identified the need to involve actors at all levels of the value chain to ensure that what local producers can contribute is well understood. They observed that market information has a significant impact on production techniques and resulted in farmers diversifying their production to the needs of the market, rather than staying with their traditional crops.

Best et al. highlighted a variety of issues that have strengthened linkages for farmers with markets:

- A clear demand for the product is a precondition for success.
- Facilitators are important in building networks to foster contacts and trust among the actors across the value chain.
- Long-term sustainable relationships can be promoted by a ‘chain champion,’ often someone from the private sector, who is motivated to see the process succeed.
- Traders and processors are vital links in the chain. It is equally important to support them and help them be better organized as it supports farmers.
- Access to both capital and non-financial support is essential for the growth of rural agro-enterprises.
- Innovation is key to ensuring agro-enterprises can adapt to changing market conditions and remain competitive.

Value Chain Development for Poverty Reduction

Many value chain approaches focus solely on improving efficiency and have little or no focus on poverty apart from the assumption that benefits will trickle down to the poor. Other approaches focus more specifically on achieving poverty reduction either by targeting groups of poor people or by analyzing and addressing the constraints preventing them from participating in and benefiting from value chain interventions. An example of the latter approach is the Making Markets Work Better for the Poor (M4P) Program. Humphrey and Navas-Alemán discover that projects target low-income populations by:

1. Targeting areas where the poor live (geographical targeting);
2. Targeting sectors where the poor are more likely to be earning a living (sectoral targeting); and
3. Working with specific groups of poor or vulnerable people (social targeting).

Agricultural projects, by definition, target rural areas, where the poorest live. However, such geographical targeting does not guarantee projects are reaching the poor in these areas. Farmers and cooperatives that participate in these projects may not necessarily meet the criteria of being the most poor or vulnerable in a given rural community. As a result, the explicit linkage of value chain interventions to poverty reduction continues to be weak.
TABLE 2: VALUE CHAIN INTERVENTIONS AIMED AT POVERTY REDUCTION

THE UNITED NATIONS VALUE CHAIN DEVELOPMENT GROUP (UN VCD GROUP)

Pro-poor value chain development activities have become increasingly popular within the donor community since the end of the 1990s. The UN VCD group was formed in July 2010 and consists of 10 UN agencies: FAO, IFAD, ILO, ITC, UNCDF, UNCTAD, UNECE, UNDP, UNIDO and WFP. The group was formed to:

1. Increase the coherence of the UN’s work in value chain development to address various economic, social and environmental development issues; and
2. Enhance learning, coordination and collaboration among UN agencies in the formulation and implementation of value chain development initiatives at country and regional levels.

AGRI-PROFOCUS NETWORK

Founded in 2005, Agri-ProFocus (APF) connects farmers with professionals, expertise and resources to promote farmer entrepreneurship. APF network members gather, train, connect and provide inputs and credit to farmer entrepreneurs and producer organizations. The network is based in the Netherlands and operates an Agri-Hub to support local networks in each partner country. Through entrepreneurship and linkages with national and international markets, APF members aim to open up market potentials for businesses in developing countries and contribute to sustainable food security.

VALUE CHAINS 4 PRO-POOR DEVELOPMENT

The WUR/DGIS Pro-Poor Value Chain Action Research program, Value Chains 4 Pro-poor Development, builds on the premise that pro-poor value chain development needs an integrated approach. It combines competitive business strategies with interventions focused on the governance and institutional arrangements within a value chain, as well as strategies that effectively link value chains with enabling policy and institutional environments.

The project began with pilot studies in Rwanda, Niger, Ethiopia, Kenya, Burkina Faso and Mozambique. An important starting point is that pro-poor development is not an automatic outcome of value chain development or market access. Therefore, to ensure enabling conditions for pro-poor development, the program concentrates on two key aspects:

- Purposeful (re)configuration of the institutional arrangements between horizontal organizations, in particular producer organizations, and the vertical column of (coordinated) commercial transactions that inform institutional crafting of governance and cooperation; and
- Identification of key drivers of pro-poor development and the detection of enabling conditions that connect chain-based interventions with policy and institutional networks.


40 For more information on the Value Chains 4 Pro-poor Development Program, please visit http://www.dgis.wur.nl/UK/V4PD/Projects.
Enterprise Training in Rural Settings for Agribusiness

Studies demonstrate that agricultural and enterprise training can help rural women implement new production strategies and build assets, making them more resilient to climate and market changes. Others show that effective training requires the adaptation of projects to the local needs, circumstances and social contexts, the availability of appropriate technologies and careful risks reduction.

Literature also shows that pairing enterprise training with technical training is an important element in enhancing income levels for the rural poor. The Start Your Own Business Project in Vietnam included modules on appropriate business management that positively affected participants’ daily business management and improved record keeping and financial management. The project also demonstrated that women’s interaction with other women with similar goals can help them develop networks. After the program ended, many participants remained connected and some even started informal clubs or business networks.

In an international review of best practices in entrepreneurship projects, Kantor notes that providing the rural poor with business skills allows them to produce higher quality goods which result in higher market prices, moving them out of the low quality, low price sector.

However, the challenge of ensuring that technical training is both relevant and applicable is true for both enterprise and agricultural training. For example, Marcucci’s evaluation of one particular project noted that enterprise training rarely led to self-employment because i) training was undertaken with little knowledge of economic opportunities within the region; ii) no management training accompanied the skills training; and iii) trainees had no capital with which to start their own businesses. Marcucci also noted that market information is an important element of market expansion. Female entrepreneurs, and especially home-based entrepreneurs, face a particular challenge in accessing information on markets and prices.

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48 Ibid.
The Role of Modern Collectives or Cooperatives

Agricultural cooperatives have been widely promoted in Sub-Saharan Africa. Historically, as part of national socialistic policies, it was believed that collectivity should be encouraged to effectively provide public services and build nations. However, in many situations, cooperatives were poorly run and used by governments to protect state interests, rather than that of its members. Cooperatives were conditioned to function as clients of the state, and subject to centrally imposed price controls, severely limiting their ability to generate adequate returns or profits. By the 1980s, almost all state cooperatives in Sub-Saharan Africa were dismantled, leaving a sense of antipathy towards this organizational model.

In line with the spirit of liberalization that followed in the 1990s, a spirit of change in cooperative development emerged, emphasizing the need to be independent of the state, operate in alignment with market principles and respond to the demands of the economy. A movement to support commercially autonomous, self-reliant, professionally managed, member-based producer cooperatives as key pillars to rural development emerged.49 The climate that cooperatives faced included new market players, sellers and buyers in a market that sought efficiency, competitive pricing and transparency and precipitated the overhaul and structural reorganization of cooperatives overall.

Currently, cooperatives have a role to play in facilitating vertical and horizontal linkages along value chains, structures that thrive off market incentives.

The Indian Dairy Cooperatives Network50

In 2005, the Indian Dairy Cooperatives Network, with 12.3 million members, accounted for 22 percent of the milk produced.

Sixty percent of the cooperative members are landless, smallholders or women (women make up 25 percent of the network).

The National Federation of Coffee Growers of Colombia

Created in 1927, the National Federation of Coffee Growers of Colombia has 310,000 members, most of which are smallholders (less than two hectares). It provides production and marketing services to some 500,000 coffee growers and uses its revenues to contribute to the National Coffee Fund, which finances research and extension and invests in services (education and health) and basic infrastructure (rural roads, electrification) for coffee-growing communities.

FOSTERING SUCCESSFUL AGribusiness DEVELOPMENT

Lead Firm and Chain Linkage Interventions

In a review of 30 value chain projects, Humphrey and Navas-Alemán (2010) identified two main modes of value chain intervention: i) lead firm interventions, which intervenes around strong actors and uses those as a leverage point for promoting upgrading; and ii) chain linkage interventions which focuses intervention around weaker actors in order to improve their participation in the chain. The two modes are not always mutually exclusive. The first tends to work through partnerships with lead firms and through these influence weaker actors, whereas the other works more directly with weak actors—creating new links or changing existing ones.

In lead firm projects, donors partner up with large (often multinational) firms as actors who can—due to their strategically important position in the chain’s governance structure—have a large-scale impact on smallholders in terms of stable demand and price premiums, as long as suppliers manage to deliver what lead firms demand. Intervening in and through lead firms, however, does not always mean simply working with one or a few large firms, but sometimes involves a broader set of actors.

A number of agencies have experience working with large companies in agricultural development. USAID is especially known for its long-standing track-record in this field. It has developed its own approach to value chain interventions in the field of agriculture where lead firms play a particularly important strategic role as points of linkage. In the past decade, it has run several programs in Asia, where linking with lead firms, if not making up the sole purpose of the intervention, has been the key instrument through which the intervention worked. USAID’s first enterprise development program in India, the Growth-Oriented Microenterprise Development Program (GMED) held two chief objectives that were deeply inter-dependent: creating vertical linkages and upgrading. The limited success of the program was significantly impacted by exogenous factors. The global economic recession of 2008/2009 prompted contractions to the Indian supermarket industry and a subsequent breakdown of contract negotiations. Other flaws however, also became apparent.

While there were successes in the program’s ability to spread information about innovative production technologies and upgrading practices, the incentives for farmers to adopt these upgrades were largely reliant on the ability to develop sustained vertical linkages with corporate buyers. When one objective was not delivered, the second would follow suit. Furthermore, while lead firms can serve as catalysts to transform value chain systems, its model also bears weakness with the inherent risk of placing farmers in a position of dependence on a small number of lead firms to make decisions in their favour.

Chain linkage interventions operate by addressing inefficient or missing linkages between producers and markets, raising the productivity of the entire chain. These interventions may address poor information about the market, raise producer capacity and quality, address a lack of technical ability to engage with market opportunities, ameliorate market access and inequalities or promote cooperation among value chain actors. Such chain linkage interventions may have a broader range of beneficiaries and are often better able to identify and target the poor, especially in geographically or socially marginalised groups, at particular points of disadvantage in value chains.

SNV

SNV has extensive history in value chain development and its methods have shaped the approaches of many other donors. SNV’s project in Vietnam to improve the quality and production of sedge emphasized its focus on women as primary beneficiaries from additional incomes from producing sedge handicraft. SNV combined value chain and business service market development approaches to focus on critical constraints and opportunities that limited growth, benefitted all value chains actors and had potential to be viable solutions offered by local service providers.

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Defining “Innovation Systems”

In recent years, innovations have been used to improve the efficiency of the agri-food system. Agriculture Innovation Systems are being endorsed to formulate and analyze rural and agricultural development policies, programs and projects. Agribusiness incubators have become an important aspect of this innovation system and have proven critical to the survival of early-stage enterprises.

The World Bank\textsuperscript{55} defines a national Agricultural Innovation System as “a network of organizations, enterprises and individuals focused on bringing new products, new processes and new forms of organization into economic use, together with the institutions and policies that affect their behaviour and performance. The innovation systems concept embraces not only the science suppliers but the totality and interaction of actors involved in innovation. It extends beyond the creation of knowledge to encompass the factors affecting demand for and use of knowledge in novel and useful ways.”

The Agricultural Innovation Systems’ concept has been endorsed and used by the Organization for Economic Co-Operation and Development (OECD), the Inter-American Development Bank (IDB), the World Bank, United Nations agencies, non-governmental organizations, national governments and the New Partnership for African Development (NEPAD).

Agriculture innovation is made up of three main domains:

- Knowledge and education.
- Business and enterprise.
- Bridging institutions that facilitate knowledge transfer between the two other domains.\textsuperscript{56}


Agribusiness Incubators

The World Bank’s infoDev\(^57\) defines business incubation as a process which nurtures innovative, early-stage enterprises that have high growth potential to become competitive businesses. The process provides, for a fee, a combination of shared facilities and equipment, business development, market access and technology transfer services, financial services, mentoring and networking.

Business incubation differs from business development services because of its holistic and pro-active approach and its focus on high-growth potential enterprises. It also differs from technology parks due to its focus on early-stage enterprise development. The success of business incubation can be measured in terms of enterprise creation, market innovations, enterprise survival rate, profitability, revenue growth and job creation.

Agribusiness incubators do not focus on just one component in a value chain. Instead, they focus on nurturing and promoting the growth of sustainable and innovative start-up enterprises. infoDev’s experience indicates that incubated agribusiness enterprises have a much higher survival rate than what is typically found. Over 75 percent of the graduated enterprises are still in business three years after graduation. Types of incubators include:\(^58\)

- **“One Stop” Agribusiness Sector Developer** (e.g., Fundacion Chile)
- **University and Research-based Agribusiness Incubators** (e.g., Incubator for Agribusiness and Agroindustry- Bogor Agriculture University (IAA-IPB))
- **Agribusiness Value Chain Integrators** (e.g., Villgro)
  - Timbali in South Africa has worked with female farmers since 2004. Its graduates have created 140 small farm enterprises which has allowed poor women to become more assertive and economically independent.
  - Villgro incubates social enterprises with innovations in agriculture, dairy, water and energy. It is a mentoring program that provides services such as seed funding, networks, capacity building, marketing, talent recognition and Villgro stores. Villgro’s work has impacted 360,000 rural users, identified over 2,000 innovators, generated sales of $1.6 million USD and has created social returns/consumer surplus worth $5 million USD.
- **Grassroots Agribusiness Innovation Incubators** (e.g., Villgro)
  - Villgro incubates social enterprises with innovations in agriculture, dairy, water and energy. It is a mentoring program that provides services such as seed funding, networks, capacity building, marketing, talent recognition and Villgro stores. Villgro’s work has impacted 360,000 rural users, identified over 2,000 innovators, generated sales of $1.6 million USD and has created social returns/consumer surplus worth $5 million USD.
- **Trans-national Strategic Alliance Incubators** (e.g., Malaysian Life Sciences Capital Fund (MLSCF)).

Developing Agro-Dealer Networks Along the Rural Input Supply Systems

In Kenya, Malawi and Uganda, the Rockefeller Foundation partnered with local NGOs to build networks of rural agro-dealers and develop agricultural input in supply pipelines. Working with global partners such as the International Fertilizer Development Center (IFDC) and local organizations,\(^59\) the pilot has:

- Trained rural retailers in technical, product and business management skills. These retailers then become certified agro-dealers.
- Linked certified agro-dealers to major agricultural input supply firms, using partial credit guarantees that cover 50 percent of the default risk.
- Repackaged seed and fertilizer into smaller packages for increased affordability.
- Organized agro-dealers into purchasing groups to facilitate bulk purchasing from suppliers. Group members provide joint collateral to guarantee repayment.

These efforts are beginning to see results.\(^60\) In Malawi, a recent survey of rural markets showed that the majority of farmers are now buying their inputs from local agro-dealers. With the increased numbers of agro-dealers, the distances travelled by smallholder farmers have been drastically reduced. The range, volume, quality and price of agricultural inputs have also improved significantly. Furthermore, the default rate on the credit guarantees was less than one percent in the first three years of the program, which is attributed to the high quality of the training provided for the participants and their ability to work together to ensure repayment. As a result of greater involvement in seed and fertilizer sales, agro-dealers have become important extension nodes. Several seed, fertilizer and agro-chemical companies now use them to demonstrate new technologies.

Strengthening the capacity of producer organizations would also assist in improving the input supply systems. For smallholder farmers, purchasing inputs in bulk and organizing distribution through their own organizations compensates for inadequate private sector delivery. For input suppliers, dealing with producer organizations presents considerable advantages over dealing with geographically dispersed farmers who individually purchase only very small quantities of inputs.

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\(^57\) infoDev is a global partnership program at the WBG which works at the intersection of innovation, technology, and entrepreneurship to create opportunities for inclusive growth, job creation and poverty reduction.


\(^60\) Ibid.
MODELS AND OPPORTUNITIES

ICTs for Agricultural Development

Information and communication technology (ICT) is well placed and increasingly available to build the capacity of young farmers to develop their farming enterprise. ICT devices are constantly evolving in their functionality, availability and affordability, requiring a flexible definition. Any easily portable digital device that can provide access to content through a mobile connection can potentially be a tool for young farmers to increase their capacity. These devices are usually owned by individuals rather than institutions and enable users to overcome constraints to knowledge and information through access across spatial, temporal and contextual limitations.

Devices that are driving the environment are growing in their ubiquity across rural regions and often build on the existing network of television and radio extension services: basic mobile phones and feature phones. Farmers increasingly have choice in the mode they use to access and utilize information to develop their farming business. As network services increase in availability and quality, and the cost of new technology decreases, smartphones and tablets among other devices will allow farmers access to more sophisticated tools to develop their agribusiness and increase their access to markets. A multitude of services exist on mobile platforms to provide relevant information to enhance agricultural productivity, decrease information asymmetry, maintain records, use financial services and tighten market linkages, while mobile money enables instant and secure payments.

Friedland expands on the potential of ICT use and transaction data to establish the credit-worthiness of farmers, easing access to finance by demonstrating proof of economic activity, as has been in the case of Safaricom’s mShwari. The use of transaction data helps producers, processors and buyers alike to plan and forecast activity, strengthening market structures. Furthermore, the increasing use and embedding of new technology to share knowledge and techniques is transforming and modernising agriculture into an attractive option for young people.

Agricultural extension services play an important role in supporting rural smallholder farmers to increase their productivity and better their livelihoods. Through mobile, radio, television, eKiosks and other ICT platforms, advisory services that transfer new skills and production techniques, improve marketing knowledge and practice, enable farmers to manage their farms as businesses and facilitate P2P learning through a host of applications. While many applications are available on basic phones using USSD and IVR services, increasingly sophisticated applications are use data services.

<table>
<thead>
<tr>
<th>TABLE 3: EXAMPLES OF ICT4AG APPLICATIONS</th>
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<td><strong>LIFELINES AGRICULTURE</strong></td>
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<td>Extension, financial service, agent network support and marketing information service; IVR platform; India</td>
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<tr>
<td><strong>FARMBOOK</strong></td>
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<tr>
<td>Business management, planning, mapping and learning application for field agents; Southern Africa (in development)</td>
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<tr>
<td><strong>COCOALINK</strong></td>
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<td>Extension, social and marketing information services for cocoa; SMS &amp; IVR platform; western Ghana</td>
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<td><strong>iCOW</strong></td>
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<td>Extension and P2P learning service for dairy cattle; SMS &amp; IVR; Kenya</td>
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<td><strong>MKULIMA YOUNG</strong></td>
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<tr>
<td>Social marketing, extension and P2P learning service platform; social media, website, mobile; Kenya</td>
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<td><strong>MFARM</strong></td>
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<td>Market information service; mobile platform; Kenya (Price information, collective crop selling and collective input buying services)</td>
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<td>Microinsurance product; SMS/ USSD platform; Kenya</td>
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MODELS AND OPPORTUNITIES

The Songhai Model

Founded in Benin by Father Godfrey Nzamujo in 1985, Songhai (named after the extensive 15th century Malian Empire) is a sustainable agriculture institution that has trained thousands of young people in a wide range of sustainable agriculture techniques. Its alumni have gone on to establish more than 500 farms in Benin and other West African countries.

The Songhai model adopts a holistic approach to agribusiness and entrepreneurship development, which involves training, provision of support services, linkages to credit and market through a network of graduates. The methodology trains youth over an 18-month period and equips them with the skills to manage small- and medium-scale, commercially-viable and environmentally sustainable agricultural productions and agro-based enterprises. The curriculum includes:

1. Practical technical training that views agriculture and agriculture-related activities as business opportunities;
2. Training in technology and research; and
3. A support network that helps young entrepreneurs connect with economic opportunities outside their home regions.

Songhai knows it must transform current agricultural production dynamics into a holistic and sustainable development process. Agriculture is a cluster industry that involves industry, production and services, which create a balance of forward and backward linkages among one another.

The Songhai Integrated System of Production: A Cluster Industry Concept

As a result of the success of the Songhai model, a regional initiative among FAO, IFAD, ILO, UNDP and UNIDO, in partnership with Songhai Centre, was initiated in 2008 to build on the model and respond to a request from several Sub-Saharan African countries for the implementation of similar programs. The selected countries include Benin, Burkina Faso, Côte d’Ivoire, Gabon, Ghana, Guinea, Kenya, Liberia, Sierra Leone, Malawi and Togo. The initiative will:

• Facilitate and support the establishment of a Regional Centre of Excellence for Agribusiness and Entrepreneurship Development in Sub-Saharan Africa.
• Reinforce the capacity of relevant national institutions to establish National Centres for Agri-Enterprise Development NCAED.
• Develop agri-entrepreneurial skills and capabilities of young people, women and men, particularly those from rural areas.
• Create platforms to facilitate effective linkages between agribusinesses to credit, market and business support service providers.
• Improve the institutional and business environment for small- and medium-scale agribusiness development.

63 For more information on the Songhai Model, please visit www.songhai.org.
CONCLUSION

Agribusiness presents tremendous opportunities for economic growth and youth employment in Sub-Saharan Africa. Given that the majority of Africans work in agriculture, an increase in farm productivity directly increases rural incomes and livelihoods. A burgeoning agribusiness sector also provides powerful growth linkages to the rest of the economy by providing affordable food, raw materials and a greater demand for processing and service industries.

Increasing agricultural productivity tackles poverty by:

- Increasing productivity and the incomes of the rural poor;
- Reducing food prices, which in turn increases real income for the urban poor; and
- Creating spill-over effects for the rest of the economy.

Strengthening the agribusiness sector will amplify these effects by creating employment and entrepreneurial opportunities in rural and urban areas and by contributing to the growth of micro- and small enterprises through the establishment of market linkages. These employment and entrepreneurship opportunities can help absorb the surplus youth labour force in rural Sub-Saharan Africa where 70 percent of the continent’s youth live.

Targeted, localized agribusiness development will also benefit smallholder farmers and their organizations through greater access to and knowledge of markets.

Growth-oriented agribusiness development offers a pathway out of poverty for rural Sub-Saharan Africa. A shift towards this direction is both critical and necessary.

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