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SCALING IMPACT:

IMPROVING SMALLHOLDER FARMERS' BENEFICIAL ACCESS TO OUTPUT MARKETS

LEO

Leveraging Economic
Opportunities

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ACRONYMS

ADVANCE	Agricultural Development and Value Chain Enhancement
ASI	Agribusiness Systems International
BOAM	Business Organizations and their Access to Markets
CRS	Catholic Relief Services
DFID	Department for International Development
EADD	East Africa Dairy Development
EMRIP	Enhancing Milled Rice Production
Ha	Hectare
LEO	Leveraging Economic Opportunities
MEDA	Mennonite Economic Development Associates
MOP	Mango Outgrower Project
MOU	Memorandum of understanding
MSME	Micro, Small and Medium Enterprises
MT	Metric ton
PCE	Projet Croissance Economique
SPS	Sanitary and phytosanitary
SNV	Netherlands Development Organization
TCI	The Coffee Initiative
UHDP	Ukraine Horticulture Development Project
USAID	United States Agency for International Development
WALA	Wellness and Agriculture for Life Advancement
WHI	World Hope International

EXECUTIVE SUMMARY

Smallholder farmers constitute a majority of the working population in much of the developing world, and they tend to be stuck in patterns of semi-subsistence farming, unable to generate sufficient income to access key services to further their pathways out of poverty. Beneficial access to output markets—defined as farmers selling increased volumes of produce at an increased margin per unit with reduced volatility—is inextricably linked to smallholder farmer income.

This report aims to inform the efforts of donors and implementers of market systems development activities to improve smallholder farmers’ access to output markets. It does so by reviewing projects¹ that have improved access, identifying the common barriers in those market systems, and describing the strategic approaches employed to address the barriers.

Significant methodological challenges were faced in gathering neutral and comparable information in a timely manner: the heavy reliance on current and past project staff and project documents increased the influence of bias on the information gathered. In addition, different monitoring systems meant that the information gathered on farmer yields and gross margins was not comparable, and in many cases the lack of a counterfactual prohibited any substantial conclusions around efficacy.

The findings in this report are based on a review of 50 projects and a deeper analysis of 10 cases. The primary selection criteria for deeper analysis was based on four dimensions of scale and performance: (i) outreach—the number of farmers connected to markets; (ii) outcomes—the results achieved by smallholder farmers; (iii) sustainability—the market system’s ongoing orientation to smallholder farmers as a serious market; and (iv) equity—the extent to which disadvantaged or marginalized groups access output markets. The 10 cases that came closest to achieving these aspects of scale were then analyzed to answer the following research questions:

- What **strategies** did these projects deploy to increase smallholder access to output markets?
- What **approaches** were included in these strategies?
- What are the key **lessons learned and guidance** for future implementers interested in implementing similar strategies and approaches?

A. BROAD SET OF STRATEGIES TO IMPROVE ACCESS TO OUTPUT MARKETS

The cases studied revealed five overarching strategies to improving output market access. Starting from the farmer level, the first strategy is to improve production quantity and quality, which requires addressing information flow, knowledge of market requirements and production practices, as well as linkages to inputs and finance. Some direct intervention strategies to implement this include standardized production packages for smallholders to ensure appropriate ratios of inputs and increased access to credit. At a more systemic level, other projects facilitated the development of private-sector grading standards to clarify and communicate end market requirements, or developed contracts or market signals to decrease the perceived risk by both sides.

¹ Throughout this document, “project” is used in the generic sense to refer to donor-funded activities, rather than the USAID-specific definition of this word.

A second common strategy shifts from the direct interface between smallholder farmers and output markets, to reducing transaction costs to attract buyers to procure from smallholder farmers. These cost reductions were achieved through better aggregation, either on the supply side through producer collectives, or on the demand side through buyer coordination mechanisms.

A third, related strategy is to overcome the short-term ‘trading’ mindset among buyers and promote a long-term beneficial commercial engagement by market actors by building trust, better contract compliance, and ultimately investment in smallholders. These approaches focus on shifting the volume of transactions away from spot markets and into stronger collaborations that reduce ‘transactional frictions’ and enable and reward repeat interactions between the same set of farmers and buyers, for example through more service-based business models. In some cases, projects introduced technologies to increase transparency and trust in these commercial transactions.

Zooming out to the wider market system, the fourth strategy finds leverage in institutional structures and formal rules, such as tariffs and import subsidies, to enable the growth of domestic commodity markets in a way that benefits smallholders. One particularly influential set of ‘structures’ are commodity and trade standards, which play a crucial role in developing a culture of trust that underlies the incentives for any market actor to invest in improved production. Common strategies for this type of change include private-public dialogues to create a more effective environment for advocacy, as well as direct influence of trade regulations to support better access to new markets.

Fifth and final of the common strategies cuts across all market actors: encouraging and increasing the tendency to innovate and develop new commercial opportunities, and by extension coordinate behavior change among multiple different market actors in a system. This can involve anything from building farmers’ capacity to find and evaluate profitable opportunities, to upgrading the capacity of buyers and processors to source from smallholders. In some cases it involves supporting movement into higher value niches through certification schemes.

B. LESSONS LEARNED AND IMPLEMENTATION GUIDANCE

Working through the various strategies yielded a number of useful lessons that could be applied to guide future implementation. These are split into two levels of learning: (1) partner² behaviors, which are insights to be incorporated by market actors themselves, with which projects may partner; and (2) project tactics, both in the early project design phase, as well as later in the implementation stage.

Partner Behaviors:

- Quality standards are more likely to be adopted by farmers when associated with price premiums
- Small, incremental shifts in farmer production systems are more likely to be adopted than larger shifts
- The coordinating point that best reduces procurement costs varies and should be evaluated in each context
- To reduce side-selling, forward purchase contracts should allow flexibility for farmers to sell some portion of their produce elsewhere

² “Partner” in this paper refers to any market system actor, including public or private institutions or companies, which projects engage with to implement interventions.

- Trust and communication among buyers and sellers are considerably more important than formal contracts. Contracts or memoranda of understanding (MOUs) are only weak proxies for trust itself
- Improving companies' information flows can support better management and strategic decisions

Project Tactics—Design:

- The coordination mechanism must be viable within the context of the larger market system
- Finance can help or hinder the development of constructive commercial relationships; projects should be wary of introducing credit too early in an intervention
- Projects should resist over-designing solutions, but instead allow partners to adapt models to the context
- Institutional change processes are lengthy
- Export market access is complex and often expensive for producers and suppliers
- Project metrics need to capture systemic changes, not just farmer-level uptake or behavior changes (which may be short-term)

Project Tactics—Implementation:

- Projects should screen potential partners for trustworthiness
- Working directly with smallholders to increase quantity or quality can lead to market distortions
- Pilots should be conservative and ensure that market commitments are in-line with realistic changes in farmer production systems in a single season
- Linking producers with buyers beyond the farm gate spot market can benefit geographically-constrained female producers
- Projects should prioritize farmer collaboration over the development of organizational structures
- If advocacy and institutional reform are important, projects should allocate the time and resources to build relationships and trust with decision makers
- Projects should beware of using non-systemic workarounds when addressing systemic problems
- 'Transferrable skills' in opportunity identification are often key; and projects should avoid viewing market actors solely through the lens of a single crop or commodity
- The complexity of commercial relationships means they must be built gradually, starting with simple business models that both parties understand

C. RESEARCH AGENDA

The findings of this initial review suggest several questions to be investigated further in the second phase of research, which will involve some field-level studies of real project examples after implementation has concluded.

1. How have systemic strategies addressed system governance?
2. How have power relations changed within the sector?
3. Can and how do vulnerable groups benefit?
4. What is the resilience of the models and benefits to the ultimate beneficiaries?
5. How can farmers' capacity be built beyond a single value chain?

I. INTRODUCTION

Farmers owning or renting less than two hectares of land are both the majority of the world's farmers and of the world's poor (Nagayets 2005). These smallholder farmers represent half of the malnourished population globally (Hazell et al. 2007). Bettering the lives of smallholder farmers is therefore crucial to alleviating global poverty.

Although other sources of income (e.g., labor) are critical for smallholder farmers and the poorest (Mueller and Chan 2015), sales of agricultural output remain important. The Leveraging Economic Opportunities (LEO) project (see textbox) is undertaking research to understand whether and how inclusive market systems perspectives can support smallholder farmers to access improved input and output markets. LEO has focused on identifying cases from USAID- and other donor-funded projects that have created beneficial changes for large numbers of smallholder farmers, with a particular focus on cases that have done so through an inclusive, systemic approach.

LEVERAGING ECONOMIC OPPORTUNITIES

Leveraging Economic Opportunities is a three-year contract to support programming that fosters *inclusive growth* through markets. Building on USAID's value chain approach, LEO focuses on:

- (1) *a systems approach* to markets, acknowledging the complex interrelationships among market actors, market and household systems, climate change, nutrition, the policy environment, and sociocultural factors, including poverty and gender; and
- (2) *inclusion*, recognizing the role that a spectrum of actors—from resource-poor households and small-scale enterprises to larger and more formal firms—play in catalyzing market change and growth that benefits the poor.

Building on a previous paper in this series that examined projects that are improving access to input markets (Fowler and White 2015), this paper strives to inform the efforts of donors and implementers of market systems development activities to improve smallholder farmers' access to output markets. It does so by reviewing projects that have improved access, with a view to answering the following questions:

1. What strategies did these projects deploy to increase smallholder access to output markets?
2. What approaches constituted these strategies?
3. What are the key lessons learned and guidance for future projects interested in implementing similar strategies and approaches?

While building on several previous studies, this report adds to existing knowledge by focusing on: 1) synthesizing available evidence on the results of projects that have taken a market-oriented approach, and 2) identifying and categorizing the strategic approaches that these projects have employed in accordance with the systems in which they were operating and the outcomes they sought to achieve.

This paper is structured as follows: Section II outlines the research methodology used, the projects selected, the research questions and the methodological challenges. Section III defines and reviews the evidence for improving smallholder farmers' beneficial access to output markets. Section IV is structured around five broad strategies that projects pursued to improve beneficial access. For each broad strategy, the report describes the outcome in depth, synthesizes the strategic approaches that were applied by the selected projects to achieve the strategy, and highlights some guidance for implementers in applying those approaches. Section V closes by presenting several questions emerging from the findings that can inform subsequent research.

II. METHODOLOGY

This research drew from a set of 35 cases received from a USAID call for submissions (Annex 1) and an additional 15 recommended by key informants and identified through snowball sampling. From a list of those projects relevant to the research objectives, the LEO team actively engaged with current and former staff of the implementing organizations to obtain project documentation and conduct phone-based interviews. Only a subset of the contacted individuals was able to provide information in a timely manner, resulting in a final set of 10 projects that were examined. Of these projects, three were funded by USAID while the remainder were funded by the Dutch Ministry of Foreign Affairs (2), the Bill and Melinda Gates Foundation (3), the Canadian Department of Foreign Affairs, Trade and Development (1), World Hope International (1) and the private sector (1). All of the focus projects had closed as of April 2015, although three projects have had follow-on phases approved. The selected cases are briefly described below.

Agricultural Development and Value Chain Enhancement (ADVANCE): The ADVANCE project was a USAID/Ghana-funded project implemented by ACDI/VOCA that operated from 2009 to 2014. As part of its suite of activities, the project focused on supporting village-based nucleus farmers to provide inputs, services, and output market linkages to smallholders. ADVANCE had a budget of US\$32 million.

Business Organizations and their Access to Markets (BOAM): The BOAM project was a US\$10.5 million project implemented by SNV, funded by the Kingdom of the Netherlands and the Irish Embassy in Ethiopia, which operated from 2005 to 2011. BOAM focused on five value chains (apples and mangoes, oil seeds and edible oils, milk and dairy products, honey and beeswax, and pineapples). For the honey and beeswax value chain, BOAM worked with large-scale processors to establish several honey outgrower schemes, which were the focus of this case study.

The Coffee Initiative (TCI): TechnoServe's TCI project was implemented from 2008 to 2011 with US\$47 million from the Bill & Melinda Gates Foundation. It focused on the coffee sector in Rwanda, Tanzania, Ethiopia and Kenya. A second phase of TCI was subsequently approved to operate from 2012–2015.

East Africa Dairy Development (EADD): EADD was a project operating in East Africa from 2008 to 2013 that was implemented by TechnoServe with US\$51.3 million in funding from the Bill & Melinda Gates Foundation. It was focused on the dairy sector. A second phase of EADD was approved to operate from 2014–2018.

Enhancing Milled Rice Production (EMRIP): EMRIP was a €2.3 million (approximately US\$3.2 million) project implemented by Helvetas and SNV in Lao PDR over 23 months from 2010 to 2012. Funded by the European Union and the two implementers, the project focused on improving rice mill business functions and organizing the value chain into a coherent body capable of effectively advocating for its interests with the government—two activities which were the focus of this case study.

Mango Outgrower Project (MOP): World Hope International's Mango Outgrower Project operated in Sierra Leone from 2011 to 2013 with an approximate budget of US\$250,000. The MOP linked an outgrower, Africa Felix Juice, to mango-producing smallholder farmers.

Projet Croissance Economique (PCE): In operation in Senegal from 2009–2015, funded by USAID and implemented by Engility Corporation, the US\$61.8 million PCE focused on the rice, maize and millet value chains with the dual objective of increasing farmer incomes and improving their food security by connecting

them to credit, commercial supply chains, and emerging market opportunities. A second phase of PCE has been funded by USAID, beginning in 2015.

Sunhara: The Sunhara project was funded by the Bill & Melinda Gates Foundation from 2009 to 2014. With a budget of US\$4.1 million, it focused on improving horticultural (especially potato) production and marketing in Uttar Pradesh, India's largest and most populated state. As part of the project, Sunhara worked with a private-sector wholesale input supplier to develop an agrodealer franchise program. Sunhara was implemented by Agribusiness Systems International (ASI).

Ukraine Horticulture Development Project (UHDP): The Mennonite Economic Development Associates (MEDA) implemented UHDP from 2009 to 2013, with C\$12 million (approximately US\$11,160,000) from Canada's Department of Foreign Affairs, Trade and Development. UHDP was focused on assisting 5,000 smallholder farmers (farming less than five hectares of land) in developing their agricultural businesses and participating profitably in higher value horticulture markets. It did so by providing participants with technological and informational support for horticulture business, and consulting on post-harvest practices, storing and selling.

Wellness and Agriculture for Life Advancement (WALA): WALA was an US\$80 million USAID-funded project in Malawi which ran from 2009 to 2014. It was implemented by a consortium led by Catholic Relief Services (CRS). Among other activities, the project facilitated a large-scale birds-eye chili outgrower scheme, which is the focus of this case study.

A. RESEARCH QUESTIONS

Two sets of research questions were used in the development of this paper: first, the four aspects of scale outlined in Dunn (2014) were applied as an outcome-based lens to narrow the initial long-list of 50 projects to a shorter list for deeper study. While no project studied met all four aspects, the projects listed above showed significant results in at least one aspect of scale, and showed promise to achieve further aspects in other implementation contexts.³

Although every project reviewed for this paper reported the number of smallholder farmers it had reached, there was little consistency in what was counted. A standard way to assess the level of scale reached was thus required that could be applied across the cases. The selected measure was **outreach**, defined as the total number of farmers who accessed improved output markets through a commercial transaction facilitated by the project. This measure informs our understanding of the extent to which the selected projects increased access by smallholder farmers to output markets.

Yet while outreach provides an understanding of farmer output market linkages, it does not inform an understanding of a project's effectiveness. Changing output market linkages may do little to create the ultimate results (e.g., better earnings) that a project is seeking, or may only benefit better-off groups. Improved access to output markets may be short-lived if structural aspects of the market system have not evolved. Consequently, the research also examined three other aspects of scale for each case:

- **Outcomes**—the results (i.e., increased income) achieved by smallholder farmers due to improved output market linkages;

³ For a case-by-case summary of each aspect of scale, see Annex 2.

- **Sustainability**—the market system’s continued capacity to provide access to improved output markets on a commercial basis to smallholder farmers; and
- **Equity**—the extent to which disadvantaged or excluded groups (e.g., smallholder farmers, women, low-income households) are accessing improved output markets.⁴

The second set of research questions focused issues most relevant to future implementers with similar objectives in similar contexts:

- What **strategies** did these projects deploy to increase smallholder access to output markets?
- What **approaches** were included in these strategies?
- What are the key **lessons learned and guidance** for future implementers interested in implementing similar strategies and approaches?

B. METHODOLOGICAL CHALLENGES

Several limitations were encountered in the course of the research. First, it proved extremely time-intensive to obtain from the selected projects information that was relevant to the research questions. In all cases, the process of organizing interviews and receiving documentation took months. Second, the reliance on conducting interviews with current or former project staff created some risk of bias in responses. The secondary materials that were reviewed had also been produced by the projects themselves, creating a similar risk of bias.

Third, the monitoring systems used by the projects did not collect a standard set of information. Thus it was not possible to capture information for every project in each of the research questions. This was particularly the case for smallholder changes in gross margin and the characteristics of those benefiting from the projects (i.e., equity). Fourth, most of the projects measured overall changes for smallholder farmers without seeking to isolate the contribution of specific strategies or interventions. This absence of an estimated counterfactual frustrated the effort to understand the efficacy of specific strategies. Finally, the fact that several of the selected projects were continuing to operate through a second phase and that no ex-post impact assessments existed for the other initiatives meant that speculating on the durability and resilience of the changes to business models and market systems was difficult.

⁴ According to a review of empirical literature conducted by Peterman, Behrman, and Quisumbing (2010), women are less likely to have access to agricultural inputs than men, despite a similar propensity for adopting new technologies such as fertilizer and improved seed varieties.

III. DEFINING AND REVIEWING THE EVIDENCE

For the purposes of this paper, “beneficially accessing output markets” is defined as farmers gaining one or more of the following for their agricultural production:

- the ability to sell increased volumes
- earning an increased margin per unit sold
- reduced volatility in volumes demanded and prices offered

While the accrual of benefits to farming families cannot automatically be assumed from increased sales volumes and margins, with attention to crop profitability (including opportunity costs), such increases have the potential to improve their welfare, as supported in the literature. The role of lessened volatility is also well supported. Barrett et al. (2008)’s review of the relationship between price volatility and smallholder welfare found that greater price risk (as well as low prices for outputs) has negative impacts on smallholder farmers, discouraging their participation in markets altogether. Fafchamps (1992) finds that lower variance in food prices removes a key disincentive for farmers to engage with output markets.

In their choice of partners, the selected projects took relatively similar approaches in working with one or a few large buyers and supporting the coordination of farmer sales through farmer collectives or village-level agents. The strategies used to improve beneficial access to output markets generally fell into one of five types:

- Increase productive quantity and quality
- Reduce procurement costs
- Shift market actors’ perspectives towards beneficial, longer-term engagement
- Address institutional structures and rules to facilitate increased transparency and predictability in output markets
- Facilitate new commercial opportunities

These five strategies address constraints (e.g., poor quality product, low yields, high costs of procurement, restrictive government policies) that are symptoms of deeper issues affecting the performance of the market systems in which the output transactions take place. These may include culturally-driven gender norms around marketing behaviors, low government investment in dilapidated rural road networks that makes aggregation time-consuming, or limited farmer literacy and numeracy that make it difficult for traders to communicate the high standards of some export markets. Almost always, poorly performing markets are inhibited in their development by inadequate or lopsided governance regimes that favor the extractive behaviors of an elite over the low-cost market access of the larger population. In turn, each of these systemic features is related to other conditions and agent characteristics in the mind-bogglingly complex, dynamic market systems that surround the relatively simple act of a farmer selling her crop.

However, it is difficult to determine whether the projects examined for this research analyzed the challenges they were addressing from a systemic perspective (focused on root causes of symptomatic underperformance). Such an orientation was not explicitly outlined in the project literature examined. Moreover, it is also difficult in some cases to pick apart the tactics of the projects versus the tactics of project partners. For example, the Sunhara project worked closely with SAPPL, a private company, to achieve what looks to be sustainable impact, but from the available information it is difficult to immediately understand what the project did

and what SAPPL did (and how the project convinced SAPPL to engage with the target population). This distinction—program tactics versus the behaviors of key partners—has profound implications for the sustainability of changes to market systems and is a key priority for future research. Consequently in the discussion below implementer guidance is differentiated between partner behaviors and project tactics.

IV. STRATEGIES & APPROACHES

Recognizing the limitations on information available for this research, and acknowledging that most of the cases used a mixture of facilitation and more direct implementation approaches, this section examines how projects using a market-oriented approach have sought to address the key barriers to improved access to output markets by smallholder farmers. For each of the five broad strategies outlined above, the section briefly describes its relevance to accessing output markets, the range of approaches projects used to achieve the strategy (including evidence of the results of the strategy, where available), and recommendations for practitioners looking to deploy similar approaches in the future. For a summary of each project's evidence relating to outreach, outcomes, sustainability, and equity, please see Annex 1.

A. INCREASE PRODUCTION QUANTITY AND QUALITY

In many markets, demand for sufficient quantity or specific quality characteristics (in a given timeframe) exceeds available supply. This supply deficit is caused by many factors, among them a) limited information about end market requirements moving between actors across the market system, b) limited smallholder knowledge of or interest in market requirements, c) limited availability of required inputs or post-harvest equipment, d) lack of knowledge of appropriate production practices to satisfy market quality or quantity requirements, or e) lack of availability of credit for financing production.

For smallholder farmers to beneficially access output markets, they need to consistently meet markets' volume and quality requirements. Doing so, in response to clear market demand signals, supports increased incomes.

IMPLEMENTATION APPROACHES

1. Facilitate private sector grading standards

In contexts where a driving constraint of the value chain is a lack of a minimum commodity quality, cases studied worked with end-buyers to establish clear grades where they were absent, or worked with producers and processors to upgrade production and post-harvest systems to align with already-established grades.

In Senegal, PCE developed grades and a standardized approach to testing quality, including sampling techniques, moisture content measurement, traceability documentation, and descriptive statistical analysis. The project held workshops with buyers and farmers to train them in the full methodology and approach, and to ensure that both producer unions and buyers were fully capable of replicating each other's findings using the same methodology in case of dispute. As of August 2013, the PCE project had facilitated the grading of more than 10,000 MT of paddy rice.

If projects are dealing with commodities that already have established international grades, the strategic focus is on adjusting production and post-harvest systems to align with the minimum requirements for higher-end grades. The TCI project in Tanzania, Kenya, and Rwanda helped farmer cooperatives establish wet mill processing capacity in-house with processing protocols that ensured that end-product green coffee would meet premium quality requirements. As a result of this work, cooperatives that received training from TCI in the improved production protocols received an average export price increase of US\$0.96 per kilogram over the benchmark export commodity price.

2. Facilitate standardized production packages for smallholders

In contexts where the driving constraint is farmer awareness of or capacity to successfully utilize new production practices and technologies, projects studied successfully overcame this constraint through developing turnkey input packages to reduce the number of production variables farmers had to manage directly.

The Sunhara project in India worked with a partner company, SAPPL, which had identified a significant market opportunity in supplying high-quality potatoes for processing. Prior to the model, the vast majority of smallholders in the region used degraded potato seed and minimal inputs, resulting in low and poor-quality yields. SAPPL worked through a growing network of franchise input supply/buyer operations to provide high-quality potato seed, planters, fertilizer, and crop protection products, scaled to the farmers' plot size, with a forward purchase contract⁵ arrangement at a price floor determined at the beginning of the season (Fowler and White 2015). Additionally, staff from the franchise shops provided consistent extension service to farmers throughout the season, and this service was included in the input package price. The input-package included a loan option offered through a partner bank on the strength of the contract, with SAPPL guaranteeing 10-25% of the value of the loan at a 7% interest rate. One element of the strategy which franchise owners argued was key to the success in terms of smallholder adoption was offering a discounted 'trial' pack, meant for only a small land area to allow farmers to test the new variety and technologies. This significantly bought down farmer risk and seemed to dramatically increase the rate of smallholder adoption.

A 2014 Bain and Company report evaluating the SAPPL franchise model noted that banks had a 99% loan recovery rate, and that “[p]roductivity [for smallholder outgrower scheme participants] has increased by 30-40%, while costs have declined by 20-30%, resulting in average income increases of 40%” (Bain & Co., 2015). As of fall 2014, SAPPL was buying back potatoes from over 5,000 smallholder farmers in the scheme annually.

3. Support formal and informal contracts or market signals to decrease perceived risk

One of the most consistent barriers to smallholder increases in product quantity and quality is perceived risk stemming from end-market price or volume volatility. Building in market signals earlier in the season to increase farmer awareness of a guaranteed buyer, either through formal outgrower schemes or informal commitments to buy specific grades, can significantly increase farmer tolerance for experimenting with intensified production and post-harvest technologies.

The EMRIP project in Laos focused on improving miller/paddy farmer linkages. Millers offered contracts to farmers, coordinated input provision through third-party suppliers and provided extension support through their own team. These efforts drove significant increases in farmer adoption of improved seed and fertilizer. During its 23-month duration, the project linked 21,361 smallholder rice producers across 340 villages with 21 rice mills. The mill producer networks typically comprised 10-15 villages, and 1,000 individual members. The improved grain quality resulted in mills obtaining 9% to 14% gains in prices for quality-milled rice and farmers receiving a 10% gain in terms of premium prices from those mills accessing higher quality markets. Participating mill throughput increased from 12,400 MT of paddy in 2009 to a projected 36,523 MT of paddy in 2011.

⁵ A forward purchase contract is an agreement to purchase a commodity upon delivery at a specified time in the future.

In addition, the Ghana ADVANCE, Sierra Leone WHI MOP, India Sunhara, Malawi WALA, and Ethiopia BOAM projects all worked through some form of outgrower scheme. While the approaches varied depending on the commodity and context, all projects saw farmers increase investment in production practices, increasing yields and/or improving quality, based on the guaranteed market at the end of the season.

4. Support increased access to credit

Farmers commonly use credit to finance their operations. Financial systems that do not enable farmers to access credit for agriculture limit opportunities for intensifying or expanding production. In Ukraine at the beginning of UHDP, a breakdown in the international financial system created significant challenges for the national banking system. As a result, financial institutions were unable to lend and consequently smallholders were not able to make profitable investments. As a partial solution, MEDA facilitated an investment fund to set up a new financing institution, Agro Capital Management LLC. Since its creation, Agro Capital Management has lent over US\$5 million to farmers (including 36% women), resulting in 126 hectares being planted with table grapes, 50,000 square meters of greenhouses installed, and 5,700 MT of cold storage capacity brought into operation.

IMPLEMENTER GUIDANCE

- **Quality standards are more likely to be adopted by farmers when associated with price premiums (partner behavior):** Particularly where quality segmentation is driven largely by intensifying production through higher cost inputs or practices, a premium price channel is typically needed to incentivize adherence by farmers to new grade requirements. Nevertheless, most projects found strong resistance by buyers to the idea of price premiums. EADD, for example, found they were unable to encourage a shift to price premiums over their first phase of implementation. From a systemic perspective, understanding and addressing the reasons that the system does not reward higher quality are important to unlocking this behavioral shift.
- **Small, incremental shifts in farmer production systems are more likely to be adopted than larger shifts (partner behavior):** To the extent possible, changes being promoted within production systems should align with existing farmer practices. Projects can work with buyers to identify the minimum-required adjustments to farmer production systems to achieve yield quantity and quality increases. Projects that promoted many changes in production practices or tried to encourage production of a new crop saw far slower adoption rates. Investments in agronomic and financial analyses to identify the minimum number of shifts to production practice can hasten adoption and reach scale more rapidly.
- **Working directly with smallholders to increase quantity or quality can lead to market distortions (project tactic):** Many market systems-oriented projects avoid working directly with smallholders due to concerns around distorting market relationships, encouraging smallholder (or other value chain actor) dependency on donor-driven projects, or encouraging increases in supply that ‘overshoot’ demand, thereby distorting prices downward and adversely affecting smallholders. Incentives to increase the quality and quantity of supply should reflect real market signals, and be driven by relationships with permanent market actors.
- **Pilots should be conservative and ensure that market commitments are aligned with realistic changes in farmer production systems in a single season (project tactic):** Projects must have a thorough understanding of the key drivers of low yields and quality, and work with buyers to phase in

quality and tonnage requirements over time. Failure to deliver in one season can make buyers reluctant to try again the following season.

- **Project metrics need to capture systemic changes, not just farmer-level uptake or behavior changes (which may be short-term) (project tactic):** Projects that take systemic approaches to changing market systems need to track whether those changes occur. While farmers' adoption of new inputs and quality practices is important, these metrics are not always sustained following the withdrawal of the facilitator or in the face of negative market shocks.

B. REDUCE PROCUREMENT COSTS

High costs of procuring product from smallholder farmers inhibit the effective functioning of output markets. Specifically, high fixed transaction costs associated with distributing inputs, extension service, credit, and coordinating commodity aggregation often inhibit buyers from engaging smallholder farmers. As Key and Runsten (1999) explain, these transaction costs are often fixed, meaning that they do not depend on the size of the supplier. As a result, "the presence of fixed contract-related transaction costs is a principal motive for firms to deal with larger growers". Sartorius et al. (2007) support this analysis, finding that "it is often problematic for agribusiness to ignore larger suppliers and include small-scale farmers in high risk supply chains because of the incremental transaction cost". Strategies that lower those costs, such as improving communication mechanisms and coordination between buyers and sellers, bulking greater quantities of product at a single location, and reducing the risks of pick-up and payment all can improve smallholders' ability to beneficially access output markets.

IMPLEMENTATION APPROACHES

All case studies tended to rely on a single entity to align farmer supply with buyer demand, which was a risk to the sustainability of their impact. Monopsonistic (one buyer, many sellers) trading relationships are nonetheless a good starting point when the alternative is the status quo of spot transactions with low capacity local traders, themselves with poor market access and little understanding of paths to upgrading. From a systemic perspective, however, the ideal situation is a vibrant market where farmers can choose from a number of high capacity buyers that compete horizontally for supply, rather than competing vertically with farmers in a contest for the most gain from one-off transactions.

Buyer/supplier coordination involves four things: facilitating, from pre-season through post-harvest, the communication of quality requirements from the buyer to growers; communicating rolling tonnage estimates from producer collectives to buyers, particularly monitoring and relaying to buyers disease and weather-related shocks; coordinating packaging and transportation logistics; and facilitating payment. This coordination role was either embedded with producer collectives, or with buyer agents.

1. Encourage supply aggregation through producer collectives

All selected projects worked with producer collectives as a mechanism to aggregate production. Several of these designated a marketing agent or group of agents from the participating producer collectives as dedicated marketing staff. The WALA project in Malawi, for example, established marketing clubs of 15-25 members, based on geographic proximity. All of the clubs in an area were then aggregated into marketing clusters, which elected leadership and marketing committees. Each marketing cluster identified an Agribusiness Community Agent. These became the representative agents for the marketing clubs in coordinating with the end-

buyer, and tracking other marketing opportunities as they emerged, including participation in project-sponsored marketing fairs. Given the size of the chili outgrower scheme (25,000+ farmers), these agents were critical to facilitating coordination with the buyer for pick-up. This greatly reduced the cost for the buyers of accessing this supply. In project interviews with participating farmers in the outgrower scheme, they stated that it was only through group coordination that they were able to participate in the scheme, and could not have accessed the buyer on their own.

2. Facilitate aggregation through buyers

Several cases focused on establishing demand coordination through the buyer. The Sunhara project utilized the geographically dispersed franchise shops, which coordinate input sales and commodity buy-back from their farmer customer base, serving the same function as producer collectives or marketing agents under other models. The BOAM project facilitated the development of outgrower schemes between eight processors and approximately 8,000 beekeepers in Ethiopia, instilling systems that coordinated mass bulking of honey in a cost-effective manner. Buyer-driven systems can effectively transmit the quality requirements necessary for continued procurement; the outgrower model provided embedded services and equipment, and instituted a quality-based pricing system.

IMPLEMENTER GUIDANCE

- **The coordinating point that best reduces procurement costs varies and should be evaluated in each context (partner behavior):** Choosing between suppliers or buyers as the coordinating point should be determined based on logistical capacity, geographic dispersion, and the economics of the commodity. For horticultural crops, a relatively smaller number of producers will be required to satisfy buyer demand at scale, but they may require more intensive one-on-one production assistance. In this context the coordination mechanism may make more sense to be vertically embedded in the buyer firm, as in the Sunhara case. Alternatively, for staples crops, it could be necessary to add a coordination point at the supplier level, given the much higher numbers of farmers required to meet buyers' volume requirements. In the end, the choice of coordination point should be made by project partners (both buyers and suppliers), not by project staff, and should be the result of a process of trial and error where multiple arrangements are tested to find the best fit for the context.
- **To reduce side-selling, forward contracts should allow flexibility for farmers to sell some portion of their produce elsewhere (partner behavior):** Contracts that require farmers to sell all of their production to a buyer may create malcontent farmers by preventing the maintenance of existing commercial relationships and preventing them from benefiting if crop prices rise. The Ghana ADVANCE project's experience with nucleus farmers found that side selling was significantly reduced if farmers retained the autonomy to sell a portion of their crop through alternative marketing channels.
- **The coordination mechanism must be viable within the context of the larger market system (project tactic):** Sourcing from smallholder farmers adds costs through requiring additional labor, and sometimes infrastructure. For these additional costs to be justified, the broader market has to be able to grow. Under the Ghana ADVANCE model, for example, underlying economic drivers created an enabling context for nucleus farmers to grow their outgrower schemes. These drivers include a shifting end-market demand for processed commodities requiring primary agricultural commodities as inputs (i.e., soy cake for poultry feed), an emergent agribusiness small and medium enterprise segment with an incentive to

stabilize trade, and sufficient margins for upgrading along the chain. These forces have provided motivation for buyers and suppliers to cooperate, and have propelled strategically positioned intermediaries to step into the new functions and roles of outgrower business management. As another example, in Ukraine, UHDP learned that traders who served formal markets only purchased from registered business entities that could conduct wire transfers through a bank account, provide certificate of origin documentation, and facilitate large volume sales. In order to overcome these barriers, a legal review was carried out to identify the business registration models best suited to allow small-scale farmers to work with registered business entities, thereby gaining access to additional high-value markets which demanded larger volumes. Based on the findings, UHDP formed agriculture service cooperatives that provided the flexibility to allow multiple people to enter into a business partnership without requiring equal asset or equity allocation. This cooperative arrangement provided a legal business entity that united registered and non-registered farmers and other legal entities under one enterprise to collectively engage in market transactions with traders in the high-value markets. This reduced the costs and risks for buyers, thus increasing the attractiveness of the suppliers.

C. SHIFT MARKET ACTORS' PERSPECTIVES TOWARDS BENEFICIAL, LONGER-TERM COMMERCIAL ENGAGEMENT

The unwillingness and/or inability of buyers and sellers to collaborate in mutually-beneficial patterns is a common impediment to the functionality of output markets. Mutual distrust, inadequate compliance with contract terms, and the reluctance of buyers to invest in smallholder-oriented business models all commonly lead to spot market transactions. Sartorius et al. (2007) highlight the finding that “farmer distrust, combined with a perceived loss of autonomy and feelings of exploitation (unequal power), has been widely cited as a major cause of contracting failures in developing countries.” The lack of trust increases the need for monitoring and control of the other party, thus increasing contract costs and discouraging partnerships between buyers and smallholder farmers (Sartorius 2007).

In situations lacking this element of trust, collaboration between farmers and buyers often fails, either during or following the end of project-funded linkage efforts. By addressing these often attitudinal factors, relationships between buyers and sellers can strengthen to the point that new and more durable forms of collaboration are possible, encouraging investment in production and post-farm technologies. With a short-term, transaction-focused mindset, buyers and sellers tend to compete with each other to gain as much as possible from a single exchange. That vertical competition contrasts with horizontal competition, in which buyers compete with each other for the loyalty (and output) of sellers. With stronger horizontal competition, longer-term commercial relationships between buyers and sellers are more likely to develop and be sustained, enabling projects to influence the embedding of information exchange and other services in commercial relationships.

IMPLEMENTATION APPROACHES

1. Introduce technologies to increase transparency and trust in commercial transactions

Technology can play a role in bolstering trust and transparency among market actors that supports commercial engagement. For example, many commodities are sold by weight, often using scales that are not regulated for accuracy. This frequently creates mistrust between farmers and buyers and can encourage deceitful behavior. To overcome this, the EMRIP project worked with millers to purchase communal weighing scales and facilitated their certification by government authorities. Technologies that facilitate improved information

flows between buyers and sellers can be particularly effective. In Rwanda, TCI introduced SMS bookkeeping as an efficient technology for coffee collectives to provide daily financial information to the exporters that finance them. This builds the confidence of the exporters, who can regularly observe changes in key indicators (e.g., cash position, physical coffee stocks). It consequently reduces the frequency and cost of physical monitoring, while enabling exporters to more quickly provide additional working capital when this drops. Similarly, in Senegal, the use of information management systems by farmer collectives has enabled them to provide relatively precise estimates to input suppliers and buyers of their input needs and harvest volumes. Such estimates can create trust among buyers.

2. Identify and build on the incentives that matter most for commercial relationships

The market structure and dynamics within a given subsector will influence which forms of commercial engagement are most important to smallholders. In the Senegalese context, PCE has found that smallholder rice farmers have relatively little interest in entering into sales contracts with buyers prior to harvest, given that there are multiple market outlets, and so there is less pressure to comply with the terms of those agreements. In contrast, rice farmers greatly value their relationship with the lenders who provide input credit. Without access to input loans, they are unable to produce their desired crop volumes. They will therefore go to great lengths to comply with the terms of their input loans and repay promptly. PCE recognized this and thus put its emphasis on supporting contractual relationships with input suppliers rather than output buyers.

3. Encourage models that enable repeat interactions

When smallholder farmers interact with input suppliers and/or buyers on a regular and ongoing basis, stronger commercial relationships are likelier to develop, facilitating greater collaboration and investment. This can be particularly true when relationships serve a variety of purposes. In India, for example, the relationships between the franchisees supported by the Sunhara project and the farmers they supplied was multifaceted. Franchisees engaged with potato seed producers to provide foundation seeds, provide extension support, and purchase the seed following harvest. These repeat interactions strengthened their relationships and built trust.

4. Introduce models that reduce “transactional frictions”

Frustrations and miscommunications can cause commercial relationships to deteriorate. Working with firms to reduce or eliminate such challenges can facilitate business and promote longer-term engagement. One commonly-arising issue is the delay of payment to farmers following their delivery of crops to a buyer. Delays can create mistrust and resentment, particularly when prevailing crop prices increase in the intervening period. One means of addressing this is to support a system for collateralizing buyers’ crop inventory, as was initiated by PCE. This enabled buyers to immediately pay farmers upon delivery by accessing credit from financial institutions.

5. Introduce more collaborative, service-based business models

Buyers’ existing business models may not effectively facilitate the development of long-term relationships or efficient market transactions. Promoting more collaborative business models can lead to forms of commercial engagement that are more beneficial for buyers and producers. For example, in Rwanda, the prevailing nature of coffee sales prior to the start of TCI was for exporters to buy from farmers without yet knowing where they would sell the crop. This created significant risk for the exporters, who consequently sought to pay as little as possible for coffee, without regard for quality. TCI introduced a new model for market access called

Coffee Service Provider in which a firm offers a range of services to wet mills (e.g., access to working capital, export logistics, market linkages) in exchange for a percentage of their revenues. This model shifted the incentives of the farmers and service providers towards maximizing the coffee's quality and thus the ultimate sales price, from which both would benefit.

IMPLEMENTER GUIDANCE

- **Trust and communication among buyers and sellers are considerably more important than formal contracts. Contracts or MOUs are only weak proxies for trust itself (partner behavior):** Having a written contract can be useful, but is not necessary where buyers and sellers have an established relationship of trust. In fact, Schipmann and Qaim (2011) find that a general preference among farmers is to use marketing options that do not involve a contract, preferring instead to retain increased flexibility. For example, there were many potential customers for sticky rice paddy and side-selling rice was a concern for the EMRIP project. Participating millers were able to limit this by building relationships through repeated interactions. Implementers should recognize that there are no shortcuts to building strong relationships. Projects may consider putting less emphasis on formal contracts, charters and systems, and rather focus on how they can successfully support coordinated action in learning, production, and marketing.
- **Finance can help or hinder the development of constructive commercial relationships; projects should be wary of introducing credit too early in an intervention (project tactic):** Several of the projects initially examined under this research were unsuccessful in their commercial innovations because they introduced credit before producer groups had the capacity to manage credit. As a result, those groups were left with a soured relationship with a buyer and finance provider. Ensuring the capacity and incentives are in place prior to encouraging financing is essential to avoid this unintended negative consequence.
- **Projects should screen potential partners for trustworthiness (project tactic):** Market actors' history of interactions has a powerful influence on their willingness to collaborate. Where actors have a reputation for disreputable behavior, effective relationships are less likely. To foster sustainable relationships, project-driven screening processes should encourage any interested market actors to self-select into the project, but screen out those actors with a reputation for being untrustworthy. In Laos, EMRIP recognized that building trust depended foremost on collaborating with trustworthy rice millers. Project staff therefore began by identifying socially committed and capable millers as engines of the project through a rigorous screening process. Criteria used to aid the selection of millers were, among others, a substantial capacity to support smallholder farmers, and a reputation among farmers as trustworthy and honest. Inclusiveness and diversity were also considered when selecting millers, and priority was given to female- and minority-run mills or mills that work extensively with ethnic minority farmers.
- **Projects should resist over-designing solutions, but instead allow partners to adapt models to the context (project tactic):** The types of commercial relationships that will be most appealing and beneficial to smallholders, input suppliers and buyers are likely to depend on multiple factors, including market structure, power relationships between market actors, and crop type. In PCE's experience, encouraging farmers growing staple crops to enter into binding sales contracts was unsuccessful given the ease with which buyers can be found at harvest time. The less exacting quality and delivery

requirements for staples relative to horticultural products made buyers less willing to invest in their suppliers to secure supply.

- **The complexity of commercial relationships means they must be built gradually, starting with simple business models that both parties understand (partner behavior):** Implementers often overlook that informal relationships can already be quite complex. In seeking to strengthen formalized commercial links, it is important to start simple and slowly layer in services. Over the implementation of UHDP, MEDA in Ukraine applied a graduated approach in which the formality of relationships grew over time as capabilities and assets were developed. This process likely allowed suppliers and buyers to experiment with new commercial relationships over time, enabling the best-fit solution to emerge in accordance with agent preferences and other features of the market system. This started by brokering informal alliances between farmers and lead farmers but evolved for some farmers into the creation of farmer-owned commercial entities that managed formal relationships with buyers.
- **Improving companies' information flows can support better management and strategic decisions (partner behavior):** Supporting buyers to gather and analyze information about the performance of their supplier network can improve the sustainability of project-fostered commercial relationships. For example, there may be donor pressure to encourage buyers to increase the numbers of farmers they source from, which may lead to a reduced focus on sourcing from only high-performing farmers. However, a basic supply chain tenant is that a “good” supplier is more cost effective to invest in than a “bad” supplier. Information systems that identify farmer performance can make investing in the expansion of a dedicated supplier base more appealing.

D. ADDRESS INSTITUTIONAL STRUCTURES AND RULES TO FACILITATE INCREASED TRANSPARENCY AND PREDICTABILITY IN OUTPUT MARKETS

In several of the selected cases, institutional structures and formal rules that serve the interests of rent-seeking elites inhibit smallholder farmers' ability to reach output markets. Sudden export tariffs/bans, subsidized commodity imports, and input tariffs distort demand quantities and prices, inhibiting the growth of domestic food and other agricultural commodity systems. Empirically, the risk and overall price and quantity suppressions that result are disproportionately born by smallholder producers. Simultaneously, when government or trade institutions do not enforce clear and transparent commodity and trade standards (e.g., market weights and measures certifications), producers and buyers have no external guarantee that terms of transactions are fair and honest. This leads to high levels of distrust between producers and traders, reducing overall trade volumes, and discouraging them from experimenting with more sophisticated transaction mechanisms such as growing under contract. Predictability and transparency, in other words, are essential features of regulatory regimes, regardless of their content and intention.

IMPLEMENTATION APPROACHES

1. Create a supportive environment for advocacy through private-public dialogues

In some market systems, there is little focused pressure within the system to reform policies and regulations that harm the interests of smallholder farmers. Some of the projects studied sought to reform policies by enabling market actors to lobby for their interests. The EMRIP project, for example, worked closely with provincial agriculture and forestry offices, the departments of industry and commerce, and the private sector to improve policy and regulatory conditions in the rice sector. One of their main tools was multi-stakeholder meetings in the target provinces followed by national-level meetings in which priorities were advanced. Through this collaboration, government agencies increasingly realized the value of alignment with the private sector during policy consultation. Several significant policy changes were passed as a result, including the opening of rice exports to neighboring countries, streamlining trade procedures, reducing import taxes on agricultural inputs, and the formation of a team at the Department of Agriculture to work on drafting a national rice strategy for the country.

2. Support better access to new markets through influencing trade regulations

For many crops, smallholder farmers' access to markets is greatly influenced by trade regulations. Better access can greatly increase smallholder farmers' commercial opportunities. The BOAM project worked with Ethiopia's Ministry of Agriculture and Ministry of Trade and Industry to achieve third-country listing for export to the EU in 2007. This allowed Ethiopian honey to be sold in Europe for the first time. Largely as a result, seven business organizations invested in processing and exporting Ethiopian honey. By 2011, the six largest exporting companies shipped over 153 MT of honey into the world market compared to just 33 MT in 2008 (SNV 2012).

IMPLEMENTER GUIDANCE

- **Institutional change processes are lengthy (project tactic).** Projects that involve advocating for changes within institutional structures are unlikely to show results within short time frames and should set realistic targets. For example, EMRIP found that it takes a minimum of three to four years to ensure that advocacy efforts are structurally embedded in policies, organizational structures and appropriate practices to the extent that production quality matches supply expectations.
- **Projects should prioritize farmer collaboration over the development of organizational structures (project tactic).** While organizational structure and formalization can be useful, this is ultimately less important than facilitating a climate of trust and collaboration among members and with other market actors. EMRIP found that producer collective structure is relatively unimportant in determining a collective's functioning as long as all members work collaboratively and treat each other fairly. This suggests that implementers should put less emphasis on the structure and registration of producer collectives and instead encourage farmer collective action in learning, production and marketing, and consultation with local government.
- **If advocacy and institutional reform are important, projects should allocate the time and resources to build relationships and trust with decision makers (project tactic).** Projects aimed at reforming institutional structures and policies are inherently political. This should be accounted for when designing strategies for reform, with time and resources dedicated to developing relationships

and trust with local decision makers. TCI found that where they lacked engagement with local decision makers, the project had difficulty reaching its objectives. Conversely, where they focused their efforts on connecting with local decision makers, the project benefited from stronger support.

- **Projects should beware of using non-systemic workarounds when addressing systemic problems (project tactic):** Institutional constraints typically require a long-term effort to resolve. When they constrain project activities, implementers may be tempted to pursue less systemic solutions. While doing so can create short-term results, it may not resolve the underlying issues. For example, projects operating in Ethiopia often experience challenges in facilitating access to finance for their members and thus provide financial institutions with partial or full loan guarantees as a work-around mechanism. This improves short-term access, but rarely supports systemic changes in financial access.

E. FACILITATE NEW COMMERCIAL OPPORTUNITIES

In some contexts, farmers' beneficial access to output markets is limited by the capacity of the system and its actors to find and exploit new commercial opportunities. Market actors may not be accustomed to investigating market alternatives, and consequently lack the knowledge of alternate opportunities and the requirements to access them (e.g., finance, sanitary and phytosanitary (SPS) technologies, certification, connections). They may feel limited by the challenges of coordinating behavior changes among various actors in the system.

IMPLEMENTATION APPROACHES

1. Build farmers' capacity to find and evaluate profitable market opportunities

In the case of WALA in Malawi, the most important project impacts came from helping farmers to organize into marketing clubs (as opposed to supporting them to produce within outgrower schemes) so as to strategically discuss and choose what crop to grow based on their previous experiences. This facilitated an attitudinal shift among farmers to collaboratively evaluate and strategize around existing and emergent market opportunities. Ultimately, several farmer groups elected to transition away from the chili value chain in which WALA had been working when prices dipped unfavorably, to pursue other opportunities they deemed more potentially profitable. The key success was the development of this capacity to assess risk and evaluate various production and marketing strategies against one another.

2. Support movements into higher value market niches (e.g., certification schemes)

One strategy for promoting access to more beneficial commercial opportunities is to support a transition to producing for higher-value market niches. In Ethiopia, SNV supported three exporters, Dimma, Comel and Alem Honey, which were pursuing certification by the International Organization for Standardization. The support included strengthening exporter capacities to train staff, incorporate quality management systems, and pay the fees for certification. These inputs were intended to improve their chances of penetrating export markets. The intensive level of support provided to the selected exporters makes replication by other exporters unclear, and may have limited the systemic impacts, but demonstrates how targeted support enabled the firms to upgrade their target market niche.

3. Upgrade the capacity of buyers and processors

Farmers' access to output markets is typically influenced by the capacity of larger firms in the value chain, such as traders, processors and exporters. When these firms face capacity challenges, particularly in contexts with few commercial actors or limited competition, farmers can suffer. The support offered by facilitators to build the capacity of buyers and processors can vary substantially, addressing problems with accessing financing, conducting market research, and building connections with export markets. In Sierra Leone, World Hope International (WHI)'s project partner, Africa Felix Juice, experienced financial difficulties. WHI decided to facilitate an investment by its subsidiary, First Step Inc., in the juice company to stabilize the business so it could continue its mango procurement from smallholder farmers. Unfortunately, commercial operations were suspended due to the Ebola outbreak in 2014. Encouraging direct investments into key players in the market system presents risks but can have a transformative impact.

IMPLEMENTER GUIDANCE

- **Export market access is complex and often expensive for producers and suppliers (project tactics):** While export market windows can seem highly profitable on paper, projects often do not engage in sufficient due diligence in evaluating their profitability for smallholder farmers. The following elements should be carefully considered:
 - What are the market entry requirements? SPS compliance for high-value export markets is increasingly expensive, and often requires internationally certified support and testing facilities in the country of origin. Projects need to confirm availability and accuracy of these services, and their costs.
 - What is the total transportation timeframe from field to buyer? Particularly for perishable crops, projects need to accurately estimate shipping and customs timelines in order to determine post-harvest loss, and the costs necessary to mitigate loss through proper post-harvest handling on- and off-farm.
 - What are all the intermediary costs? In practice, additional costs tend to be transferred to the primary producer through purchase price suppression. Projects need to ensure they are discounting the export market demand price accurately in initial feasibility studies.
 - What logistical and managerial capacity and sophistication are required to meet necessary SPS, traceability, or other requirements for market entry or certification? Who in the market system will carry out these tasks? Importantly, projects should work with suppliers and buyers to negotiate transparently who will pay for certification compliance, and who will hold the certification. If producers do not hold the certification, it can be used as a monopsonistic tool by the buyer. Moreover, expensive certification requirements can easily exclude poorer farmers from accessing lucrative markets, making guaranteed price premiums important to protect smallholder investments (Abdulsamad et al 2015).
- **'Transferrable skills' in opportunity identification are often key; and projects should avoid viewing market actors solely through the lens of a single crop or commodity (project tactics):** Efforts to support access to new commercial opportunities should consider the implications beyond the specific value chain of focus. Critically evaluating the marginal returns of current marketing strategies is applicable across all crops, and can be applied as new opportunities arise. In the case of the WALA project, several farmer clubs actually moved away from the chili outgrower scheme piloted by the project in the first

three seasons because they found a crop and market channel that would be more profitable for their group. The marketing club scheme, however, was a critical step on their path towards developing this key capacity. The same principle should be applied to support for traders working in a given value chain, and in fact many traders work across several chains, dealing in a variety of commodities either simultaneously or sequentially throughout the agricultural season.

V. INFORMING A RESEARCH AGENDA

This paper summarizes the findings from an in-depth review of 10 projects using a market systems facilitation approach to impact farmers' beneficial access to output markets. Yet from a systemic perspective, several issues were not clearly addressed by the selected cases. Consequently, this review suggests some areas for further investigation as part of the second phase of research.

1. How have systemic approaches addressed system governance?

In reviewing some of the approaches taken by these projects, a priority for further research is the degree to which the projects managed to embed changes in the broader governance environment that influenced trading behaviors. Without changing these underlying mechanisms, many strategic approaches will be ineffective. Few projects sought to specifically understand and alter the system governance in ways that push firms to meet specific end-market demands in inclusive ways. A common example is instituting and enforcing grades and standards, which can be a critical pathway to supporting change in a system. In crops where there is a strong governance system, grades and standards are more easily adopted and enforced. Where governance systems are weak, enforcement within domestic markets is erratic and often used to extract rents. Many of the strategic approaches used by the selected cases (e.g., supporting outgrower models) have been quite commonly applied by projects for many years without having an impact on the deeper structural drivers of system performance (e.g., trusting relationships, learning mechanisms, localized innovation). Thus explicitly looking for these impacts is an important area for learning about the long-term effectiveness of systems-oriented projects.

2. How have power relations changed within the sector?

This was not explicitly addressed in many of the selected cases, yet is critical to the sustained benefit of smallholder farmers. In a review of several market oriented projects, Abdulsamad et al. (2015) found important factors influencing smallholder gains included existing power asymmetries and governance structure in the system, and where in the system power and leverage is concentrated. Though support for producer collectives of varying formality was a common strategy among the cases, the materials reviewed largely did not analyze the market systems in terms of power relations or their impact on the returns to smallholders and on the ability of smallholders to improve or maintain their position in the system.

3. Whether and how vulnerable groups can benefit

There was relatively little focus by the selected projects on whether and how their interventions benefited vulnerable populations. The WALA project in Malawi did find that linking producers with buyers beyond the farm-gate spot market can benefit geographically constrained female producers. Unlike in the past, when chilies used to be considered a men's crop due to the travel required to find buyers, WALA's chili program brought buyers closer to farmers' homes where women could be more involved (Arlotti-Parish, 2014). This finding was an exception though to this lack of focus, and this remains a clear research gap.

4. What is the resilience of the models and benefits to the ultimate beneficiaries?

The reviewed projects frequently linked smallholder farmers to buyers. Yet the lack of availability of evaluations conducted after the end of the project limit the ability to assess the durability and resilience of the project-supported models and the relationships created. The frequent use of producer collectives raises questions around their institutional capacity once donor support ends. Several of the projects found that at least several years of additional capacity building would be required for the collectives to function independently. Research in this area also requires unpacking how farmers can most effectively manage price volatility. In several cases, dramatic price shifts proved a key challenge for farmers and buyers to maintain their commercial relationships. Many models requiring intensive coordination between farmers and buyers struggle to continue when confronting significant price downturns. The resilience of these models to withstanding shocks has not yet been adequately examined. The ability of farmers to continue accessing output markets post-project is a related learning priority. Even if the project-promoted models no longer function, there is the potential that farmers have gained skills and connections that have allowed them to maintain their access via other mechanisms.

5. In what contexts are each of these five strategies appropriate or inappropriate?

This review has identified five strategies for scaling smallholder technology adoption through strengthened output market linkages. As further research identifies more cases implementing one or more of these strategies, broader conclusions can be drawn about what contexts would make each strategy more or less appropriate, including the broader enabling environment, market system actor capacity, and social and economic trends.

6. How can farmers' capacity be built beyond a single value chain?

Several of the selected projects focused on supporting smallholder farmers' access to output markets in a single value chain. While this specialization undoubtedly aided the ability of the projects to understand those market systems and target their interventions, it raises the challenge of how projects should respond if those value chains are no longer attractive to farmers. As the WALA project found, farmers will abandon value chains that are no longer profitable. Thus understanding what 'transferable skills' have been created for farmers and how certain features of a market system can enable low-cost switching by both producers and buyers is critical for evaluating project impact.

ANNEX I: CALL FOR SUBMISSIONS

Call for Projects: Scaling Up

Leveraging Economic Opportunities (LEO)⁶ is a three-year contract to support USAID programming that fosters inclusive growth through markets. LEO is contributing to learning in a number of interrelated technical areas (see text box), including scaling up technology adoption and beneficiary outreach.

LEO is seeking to identify and document successful strategies and models for **increasing smallholder returns through strengthening their linkages to input markets and end markets.**

Many business/market system models developed and implemented through USAID and other donor projects, as well as private sector initiatives, have successfully strengthened smallholder technology adoption and incomes at scale. Access to output markets has expanded new technology platforms, improved post-harvest handling technologies, variations on lead-firm or contract farming schemes, certification schemes, and other approaches. Access to inputs has been improved through supporting innovative business models with input suppliers, lenders, farmer collectives, buyer and microentrepreneurs. LEO is seeking examples of these approaches that have generated benefits for smallholder farmers at scale. It strives to understand both the operating principles, and factors in the market system and socio-political environment that enabled them to succeed. These examples, complete with qualitative and quantitative measures of scale of impact, will be widely disseminated to USAID missions and operating bureaus, as well as to project implementers, to strengthen learning in this area.

Value chain and market systems development practitioners are warmly invited to submit successful examples of these kinds of market-led models that fit within the description above. These examples must have collected evidence of reaching scale, from either project monitoring or independent evaluation.

Submissions need to include the name of the project or model, implementing organization, and a point of contact for LEO follow-up. Submissions may be featured in an upcoming report to USAID missions and operating units on lessons learned in scaling up; and may also be featured in future presentations to USAID and its implementing partners. Submissions should be sent to dwhite@activoca.org by October 31, 2014.

The LEO team looks forward to learning with you in this important area.

The LEO Learning Agenda

The learning agenda includes:

- documenting models that allow the poor to participate in growth opportunities
- tailoring facilitation approaches to meet the needs of the extreme poor
- identifying project modifications to promote economic multiplier effects
- categorizing strategies to empower women
- applying a systems approach to policy reform to ensure sustainability
- discovering ways in which market forces effectively drive technology adoption

⁶ <https://www.microlinks.org/activities/leveraging-economic-opportunities-leo>

ANNEX 2: PROJECT RESULTS

Name of case, (value chain), country, proponent, donor, budget, dates and type of model	Outreach	Outcomes	Sustainability	Equity	Evidence
<p>ADVANCE Ghana ACDI/VOCA USAID/Ghana US\$32 million 2009-2014 Microentrepreneur</p>	<p>34,121 smallholders through 125 Nucleus Farmers</p>	<p>84% of smallholders adopted new technologies. Crop yields increased from 50—300% between 2011 and 2013 depending on the crop.*</p>	<p>All of the project’s nucleus farmers are still operating and providing expanded services. There is anecdotal evidence of crowding in by other actors.</p>	<p>Producers selling to nucleus farmers are all smallscale farmers—no evidence currently on differential gender impacts.</p>	<p>In-depth interviews Project Monitoring Data and Reports</p>
<p>BOAM Ethiopia SNV Netherlands Development Organization Embassy of the Kingdom of the Netherlands / Irish Embassy US\$10.5 million 2005-2011</p>	<p>More than 8,000 beekeepers trained and thousands more indirectly impacted.</p>	<p>2-year average production increase of about 23% (from 104 kg per household per year) and revenue increase in Ethiopian Birr (ETB) of 83% (from 1,999 ETB or approximately US\$99 per household per year).</p>	<p>The strong institutions created by SNV’s use of MSPs in the form of Coordination Groups continue to broaden the effects of the program. A new 5-year (2012-2017) scaling up program called Apiculture Scaling-up Program for Income and Rural Employment (ASPIRE) was launched to further develop the value chain and expand outreach.</p>	<p>The introduction of new types of beehives increased productivity and production, while bringing the honey business closer to the homestead. The result was many more women becoming engaged and involved in the value chain.</p>	<p>In-depth interviews with two project staff members. Project Monitoring Data and Reports</p>

<p>Coffee Service Provider (CSP)</p> <p>East Africa</p> <p>TechnoServe</p> <p>Bill & Melinda Gates Foundation</p> <p>US\$47 million</p> <p>2008-2011</p>	<p>195,408 farmers sold to new or improved wet mills</p>	<p>42% increase in yields (apparently in comparison to control groups)</p>	<p>2 of 3 Coffee Service Providers have continued to provide services to smallholder farmers in Rwanda following the essential close-out of activities over Phase 2.</p>	<p>33% of the farmers trained were women and over one third of the farmer trainers were women.</p>	<p>In-depth interviews.</p> <p>Project Monitoring Data and Reports</p>
<p>East Africa Dairy Development (EADD)</p> <p>East Africa</p> <p>TechnoServe</p> <p>Bill & Melinda Gates Foundation</p> <p>US\$51.3 million</p> <p>2008-2013</p>	<p>190,000 farmers have been reached, with 30% actively supplying</p>	<p>Average gross marginal increase in revenue of US\$80 per year for EADD farmers over those in a control group.</p>	<p>Evidence of factors that encourage loyalty to EADD-supported hubs, including a reliable market for raw milk, the availability of products and services on credit (through check-off), and access to financial services.</p> <p>Positive trends for both productivity and business viability. Several of the hubs visited have assumed greater responsibility for covering their own administrative and operational costs.</p> <p>In Rwanda EADD hub model was adopted by the government to guide development of the dairy sector and featured</p>	<p>EADD made headway in increasing women's registration at DFBA (31.5%, up from 14% at baseline), as well as representation on DFBA boards, but active and equitable participation was still often non-existent.</p> <p>Qualitative evidence shows that women, having traditionally been excluded from institutional leadership positions, are unaccustomed to voicing their opinion and asserting their right to make decisions. They also continue to face key constraints around accessing extension and training, and lack</p>	<p>In-depth interviews.</p> <p>Project Monitoring Data and Reports</p>

			within 2013 National Dairy Strategy.	control over income and assets.	
<p>EMRIP</p> <p>Lao PDR</p> <p>Helvetas / SNV Netherlands Development Organization / Lao PDR's Department of Agriculture of the Ministry of Agriculture and Forestry</p> <p>EU (90%) / Helvetas and SNV (10%)</p> <p>€2,3 million (approx. US\$2.9 million)</p> <p>2010-2012</p>	<p>21,361 small-holder rice producers across 340 villages were connected with the 21 rice mills.</p>	<p>Farmers achieved increases in income (>60%) due to the increased crop yields (+30-50%) and higher prices (+10%) for improved quality of paddy.</p>	<p>The linkages created between the different rice chain actors continue to enhance the efficiency in trading processes and transactions all along the chain.</p> <p>Key systematic changes resulting from public-private policy dialogues at a provincial and national levels have led to the opening of rice exports to neighboring countries, streamlining trade procedures, reductions import taxes on agricultural inputs and the drafting of a national rice strategy for the country.</p> <p>Over the next two years (2013-2015) the enhancing milled rice production project (EMRIP-V) will build on the original EMRIP by improving the income of farmers and increasing</p>	<p>Priority was given to female and minority run mills or mills that work extensively with ethnic minority farmers during the selection process.</p>	<p>In-depth interviews with two project staff members.</p> <p>Project Monitoring Data and Reports</p>

			productivity and sustainability of rice production.		
<p>Mango Out-grower Project (MOP)</p> <p>Sierra Leone</p> <p>World Hope International (WHI)</p> <p>WHI donors</p> <p>\$250,000</p> <p>2011-2013</p>	<p>2,670 farmers participated in 157 cooperatives from 120 different villages and towns. Of those, 51%, or 1,349 farmers, sold mangoes to Africa Felix Juice Company (AFJ).</p>	<p>Sales of mangoes to AFJ in 2012 produced a total gross income of US\$41,890 and a net income of US\$19,528.</p> <p>Seasonal jobs paid an estimated total of US\$3,900.</p> <p>Total monetary benefit to participating communities was US\$23,428.</p>	<p>While difficulties arose from issues at the AFJ plant as well as inadequate and undependable trucking, farmers have been eager to continue their participation in the project each subsequent year. This is credited to a mango supply chain that works with institutional structures already in place and by relying on the pre-existing technical capacity of farmers.</p> <p>It should be noted that due to the devastating effects of the Ebola outbreak in Sierra Leone, all activity within the value chain has been ceased.</p>	<p>In the Village Cooperative's that had sales in 2012, two-thirds of the registered members were women.</p> <p>76% of seasonal community workers participating in Village Cooperatives were youth, defined as men age 18 to 40.</p>	<p>In-depth interviews with four project staff members.</p> <p>Project Monitoring Data and Reports</p>
<p>Projet Croissance Economique (PCE)</p> <p>Senegal</p> <p>Engility Corporation</p> <p>USAID/Senegal</p> <p>\$61.8 million</p>	<p>44,755 farmers benefitting from all PCE project activities, linked to 50 producer networks</p>	<p>Farm gate sales through PCE supported networks reached US\$21 million in FY2013, from baseline in FY2010 gains through price premiums and yield increases</p>	<p>Newly introduced rice varieties constituted more than 30% of the foundation seed order by the seed producer association UNIS-Nord.</p> <p>New financing services have been mainstreamed,</p>	<p>More than 95% of the farmers reached have land holdings of less than 2 square hectares.</p> <p>Households with very low land availability (of under one hectare) have tripled the</p>	<p>In-depth interviews.</p> <p>Project Monitoring Data and Reports.</p>

<p>2009-2015</p> <p>Producer collective-driven</p>		<p>Gross margins from the irrigated rice increased from US\$469/ha to US\$732/ha.</p>	<p>with contract and warehouse collateral now accepted as the basis for \$18 million in short term loans that benefit small holder farmers.</p>	<p>average amount of credit between 2009 and 2012, likely due to PCE support.</p> <p>Efforts have been made to ensure that women are participants in the structured farmer networks.</p>	
<p>Sunhara</p> <p>India</p> <p>Agribusiness Systems International</p> <p>Bill and Melinda Gates Foundation</p> <p>2009-2014</p> <p>\$4.1 million</p> <p>Input-supplier (Agrodealers)</p>	<p>10,000 farmers reached through current buy-back arrangements</p>	<p>18% decrease in cost of production;</p> <p>80% increase in potato yields, with sales prices either constraint or at a premium versus wet market.</p> <p>40% decrease in post-harvest losses;</p> <p>70% of farmers adopted new tech.</p>	<p>Wholesaler/buyer continues to expand franchises (37 as of end of project, with additional 21 planned for following year).</p>	<p>Information on farmers not available. All franchise owners were male.</p>	<p>In-depth interviews</p> <p>Project evaluation documentation</p> <p>SAPPL self-reported finances</p>
<p>Ukraine Horticulture Development Project (UHDP)</p> <p>Ukraine</p> <p>Menonite Economic Development Associates (MEDA)</p> <p>Canada's Department of</p>	<p>Included between 200-300 Agro Business Representatives (lead farmers) and 6,800 smallholder farmers</p>	<p>Average farm income increased by 75% annually.</p> <p>Consolidated sales went from 0 tons in year one to 10,321,000 tons in year 4 at a value of US\$7.9 million.</p>	<p>In year 4 of the project, UHDP clients were already in direct contact with traders through their Agro Business Representatives and were negotiating sales without the support of UHDP or its local partners.</p>	<p>6,800 smallholder farmers were assisted, approximately 40% of which were women. The ethnic tartar population, particularly in Crimea, also benefited directly from UHDP support in areas where ethnic bias previously made it difficult to start innovative enterprises.</p>	<p>In-depth interviews with one project staff members.</p> <p>Project Monitoring Data and Reports</p>

<p>Foreign Affairs, Trade and Development</p> <p>\$12 million</p> <p>2009-2013</p>		<p>UHDP farmers generated 11 MT of greenhouse and horticulture crops worth US\$10.5 million.</p> <p>Agro Capital Management conducted new farm equipment sales valued at US\$5 million sold to 737 small farmers, 36% of which are women.</p>	<p>Over the next seven years (2014-2021), the Ukraine Horticulture Business Development Project (UHBDP) will expand and extend the achievements of UHDP.</p>		
<p>WALA</p> <p>Malawi</p> <p>Catholic Relief Services / ACDI/VOCA</p> <p>USAID</p> <p>\$80 million</p> <p>2009-2014</p>	<p>Approximately 11,000 chilli farmers were active in the out-grower scheme.</p>	<p>The 5,315 enrolled chilli farmers in 2011 sold over 132 MT of chilies valued at over US\$292,000 dollars to Exagris.</p>	<p>WALA's real agribusiness objective was for farmers to combine knowledge of their costs with an understanding of market opportunities to be able to make their own decisions successfully in the future, regardless of the commodity. Meanwhile, institutional innovations like the clubs and clusters that organized farmers continue to play an important role in agribusiness activities.</p>	<p>Sixty-eight percent of WALA's participating agribusiness farmers were women. This was also true for the chilli program, which saw more women join the marketing clubs as early adopters.</p>	<p>In-depth interviews with three project staff members.</p> <p>Project Monitoring Data and Reports</p>

ANNEX 3: BIBLIOGRAPHY

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U.S. Agency for International Development

1300 Pennsylvania Avenue, NW

Washington, DC 20523

Tel: (202) 712-0000

Fax: (202) 216-3524

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