



INTEGRATING FOOD SECURITY AND THE VALUE CHAIN APPROACH

INTRODUCTION

Food security is a persistent issue in many contexts where a value chain approach is applied. This briefing paper identifies challenges, solutions and emerging good practices in using the value chain approach to improve food security. It also highlights synergies where the value chain approach can contribute towards food security objectives and vice versa.

FOOD SECURITY DEFINED

USAID defines food security as “[w]hen all people at all times have both physical and economic access to sufficient food to meet their dietary needs for a productive and healthy life.” The integration of the value chain approach and food security is presented in terms of three recognized dimensions of food security:

- Consistent *availability* of appropriate food, from domestic production, commercial imports or donors;
- Individual *access* to appropriate food from expending income or other resources; and
- Proper *utilization* of food, as determined by proper food processing and storage, adequate knowledge and application of nutrition and child care techniques, and adequate health and sanitation services

Food insecurity shapes the way households behave and respond to incentives. For example, during lean periods to meet food needs, food insecure households often liquidate assets, inhibiting longer-term investments. Malnourishment also reduces cognitive capacity and resistance to illness, with long-term effects on livelihoods. Food insecure households are thus less likely to have the resources and willingness to take the risks required to upgrade. Food insecurity must be addressed before these households can invest in value chain activities.

While value chain programming can have a strong impact on food security by increasing incomes and food availability, it can also have negative impacts. For example, income opportunities that reduce women’s time for child care and food preparation may worsen nutritional out-

comes. Adopting a food security lens can help value chain practitioners identify the potential impact of activities on food security, develop mitigation strategies for possible negative impacts, and seek strategies that create positive outcomes.

Four aspects of the value chain approach make it suited to addressing food security objectives:

- 1) Ensuring that incentives are in place for desired behavior promotes the achievement of results. For example, government-imposed export bans on cereal crops provide disincentives for investment in food production and processing.
- 2) The systems focus helps to effectively identify constraints and target interventions. For example, understanding market structures and transaction costs can help to determine whether improving productivity in areas with high agro-ecological potential will improve availability in food deficit regions.
- 3) The emphasis on market-driven solutions supports sustainability. Food security interventions have often focused more on alleviating short-term needs than on developing systems and relationships to sustainably address underlying constraints.
- 4) The use of leverage in implementation—by facilitating the engagement of market actors rather than providing services directly to beneficiaries—enables initiatives to reach greater scale.

CHALLENGES AND SOLUTIONS

While there is much congruence between the value chain approach and food security objectives, challenges remain in integrating the two. There can be a tension between pursuing economic growth as a poverty reduction tool, on the one hand, and improving the food security of vulnerable populations, on the other. Increasingly, development programs are doing both. Several common challenges and potential solutions are presented below, including geographic targeting, value chain selection, beneficiary targeting, and balancing competitiveness with national food security objectives.

Geographic targeting: Areas with the highest prevalence of food insecurity rarely have the most economic potential. Value chain programs traditionally target high-potential areas to increase incomes, but that may not achieve the desired impact on nutrition and food security. One solution is to target high-potential areas, but work in staple food chains that are consumed by the food insecure. Improving the productivity of these value chains will increase availability and reduce food prices for the overall population if market linkages to food insecure areas exist or are developed. Another solution is to select both food insecure and high-potential areas, working in value chains that are appropriate to each.

Value chain selection: Standard value chain selection criteria that focus on maximizing incomes are often inadequate to achieve food security objectives. Cash crops improve access to food, but many households choose to spend increased earnings on non-food items.¹ Intra-household relationships and gender dynamics also influence how increased income correlates to food security. Conversely, focusing exclusively on food crops for consumption may limit poverty reduction, as food crops tend to be low-margin commodities (although they can also be cash crops when grown primarily for the market). Identifying value chains that can achieve food security objectives requires using selection criteria based on the context-specific underlying causes of food insecurity. When food access is a key constraint, non-agricultural value chains with high potential for increasing incomes may be most appropriate to improve food security.

Household targeting: There is a tradeoff between increasing incomes of productive populations and focusing interventions on the most food insecure. Value chain activities typically encourage self-selection of participants and those that self-select are generally less vulnerable and are able to assume risk and undertake upgrading. In contrast, food security activities directly target interventions to the most food insecure individuals or households that often lack the resources or are too risk averse to participate in value chain programming. One solution is to understand the constraints of food insecure populations and determine what resources they require to engage in upgrading. Activities can then be designed to facilitate access to those resources, either implemented directly or

by linking households to other initiatives that meet households' immediate needs to position them to take on the risks of upgrading. Another solution is to target the *impact* of the program to the food insecure. Value chain programs can have a positive impact on food security by increasing the availability and reducing the price of food consumed by vulnerable groups, so long as market linkages are in place between surplus and deficit areas. These indirect results of value chain programming on food security can actually be greater than the direct impacts.²

Competitiveness versus national food security policies: There is often a contradiction between the competitiveness potential of particular staple crop commodities and national food security objectives that promote domestic food production to improve stability and reduce the risk of supply disruptions. In some cases it may be more cost-effective to purchase food from other countries than to produce it domestically, but this will conflict with national food policy. At the same time, while farmers may be better off growing higher-value cash crops and purchasing food, they will choose to grow their own food until they have confidence that food will be available in local markets during the lean season. In some cases, this can be resolved by improving the competitiveness of staple crop production to compete with imports. Another solution is to work with a portfolio of crops—to address national food security objectives with some crops and increase competitiveness with others. Ultimately, competitiveness is important to take into account in value chain selection, but it is not the only criterion.

APPLYING THE VALUE CHAIN APPROACH

In spite of these challenges, there are many ways in which the value chain approach can address food security. Where availability is a primary constraint, potential strategies include increasing production of staple foods that are consumed by the food insecure; reducing post-harvest losses, which account for 15 to 50 percent of the harvest in many developing countries;³ improving market efficiency to link surplus production with food deficit areas; and introducing more effective and sustainable strategies for food aid. For example, in Malawi, the Market Linkages Initiative promotes a cellphone-based mar-

¹ Jaleta et al, *Smallholder Commercialization: Processes, Determinants and Impact*, ILRI, 2009.

² See <http://microlinks.kdid.org/library/integrating-food-security-and-nutrition>.

³ <http://www.fao.org/news/story/en/item/36844/icode/>

ket information system developed by ESOKO that provides traders and farmers with food commodity prices and enables them to post bids and offers. The system allows traders to respond to market signals to buy in areas of surplus, where the price is low, and resell in areas of deficit where the price is high.

Improved **access** can be achieved by increasing and smoothing household income and consumption and by reducing the cost of food. Diversifying income sources from agricultural and non-agricultural activities will spread risk and increase the regularity and distribution of cash inflows into the household. Improved access to storage will enable households to better time sales and purchases. Value chain programs that focus on staple crops generally focus on increasing volumes and market efficiency, which results in decreased food prices, greatly improving access. The WALA project, for example, is supporting 30,000 farmers in southern Malawi to produce pigeon peas. In addition to their very positive nutritional benefits, pigeon peas are harvested in the season following the maize crop and therefore extend farming households' earning period substantially.

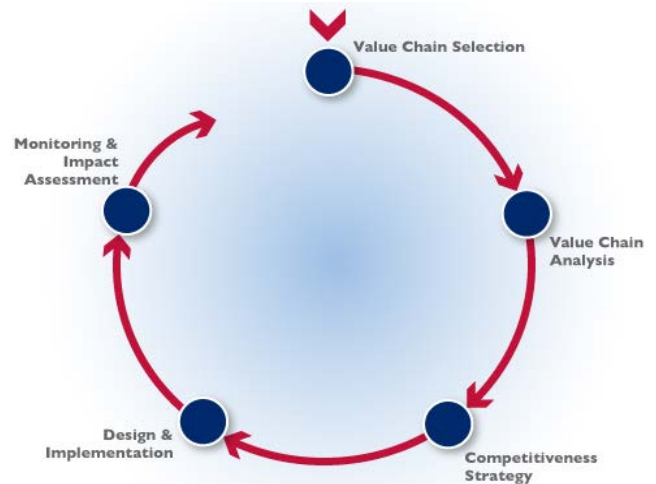
Effective **utilization** requires adequate knowledge and application of positive nutritional practices. Key value chain strategies to improve food utilization include integrating nutrition into value chain selection and analysis, promoting diet diversification, and supporting nutrition-sensitive processing upgrading. For example, Partners in Food Solutions, created by General Mills and subsequently joined by DSM and Cargill, is improving the technical capacity and commercial viability of small and medium-scale food processors in Africa to fortify selected basic grains and produce food products targeted at commercial markets—and specifically, to vulnerable populations. By mid-2012, Partners in Food Solutions estimates that they will have impacted 90,000 smallholder farmers through their work with 35 processing firms.

EMERGING GOOD PRACTICES

There is increased interest in integrating food security and the value chain approach, and good practices are emerging from the experience of implementing agencies, donors and other development partners that are relevant at various stages of the value chain project cycle.

Pre-Value Chain Selection: Before selecting value chains, it is important to identify the predominant food

Figure 1: Value Chain Project Cycle



security challenges and their underlying causes. Issues of availability, access or utilization require different strategies based on the population that is affected, over what period of the year, and the food they consume and/or produce. Further, it is important to assess vulnerability. Households that are food insecure (particularly those that are chronically food insecure) tend to be more vulnerable to shocks. Such vulnerability has a strong influence on the capacity of households to engage in value chain programming. Food security objectives should then be set based on the findings. Understanding the impact of gender on food security in a particular context is critical. For example, if food security is partially being driven by intra-household food allocation, this will need to be addressed by the project or by linking with other programs working in the area.

Value Chain Selection: Tailoring value chain selection to addressing food security objectives is critical to effectiveness. Focusing on agricultural value chains will create a greater food security impact in areas where nutritional outcomes are worse, agriculture is responsible for a greater portion of the economy and many of the food insecure are farmers. In other contexts, non-agricultural value chains may be more appropriate.⁴ Be cautious in promoting new crops in areas where there is no surplus land or labor, the new crop would be grown at the same time as traditional food crops, or where there is pronounced variation in the supply or price of staple foods.⁵

⁴ Ecker et al, Growth is good, but not enough to improve nutrition, 2.

⁵ Patricia Bonnard, Improving the Nutrition Impacts of Agriculture Interventions: Strategy and Policy Brief, March 2001, 5.

In such cases, the new crop is more likely to reduce staple food production and increase the risk of food insecurity. Look also to support diversity of household income and food sources. Selecting a portfolio of food and income value chains will often be optimal. Programming may have a negative impact on diet diversity if promoting a single food value chain. Practitioners should consider selecting value chains that will lower costs for food insecure households as this can be more important than increased income if its benefits are derived during the lean period of the year and it has the potential to have impact on a broader population. Finally, if considering staple food value chains, consider including the enabling environment as a selection criterion, given that many food staples are characterized by strong government control and inconsistent policies.

Value Chain Analysis: Food security is shaped by regional and global forces, so it is important to select an appropriately broad geographic scope for a value chain analysis. Food flows shape availability and access, and thus need to be properly understood. A value chain analysis should also consider the variable impacts of changes in food prices, as higher output prices for staple foods will tend to hurt net purchasers of food (including most smallholder farmers). Analysts should also map nutritional changes of food products along the value chain, as post-harvest handling and processing often significantly impact the nutritional quality of food. This will identify points of nutritional loss or food safety concerns that could be resolved through new technologies or practices.

Competitiveness Strategy: Value chain programming targeting staple foods should work to reduce per unit costs to reduce food prices for consumers. However, improving the competitiveness of food value chains reduces the financial viability of cultivation for some farmers, particularly for those with small land sizes in marginal areas. In these cases, implementers should recognize and support transition, potentially by simultaneously supporting other economic opportunities that affected farmers are better suited to engage in. In considering competitiveness strategies, practitioners should look for ways nutrition can provide a competitive advantage. Par-

ticularly when targeted at informed consumers or institutional purchasers, more nutritious food can garner higher prices and profits.

Design and Implementation: An important consideration during intervention design is how to create indirect impacts on food security, such as lowering the prices of staple foods. These opportunities can create even larger food security benefits than directly intervening with the food insecure. Effective design and implementation requires investing in new skill sets that are not traditionally included in value chain projects, including nutrition and food security monitoring expertise. Value chain programs also need to maintain ongoing sensitivity to potential risks created by their interventions. For example, higher food safety standards may push out smallholders and raise costs for consumers. When food utilization is a challenge, implementers will need to determine how to deliver nutritional messaging directly to households—which is critical to bringing about behavior change. During intervention design, it is critical that all upgrading strategies are assessed on their business viability, regardless of their food security benefits. Some assets that improve household nutrition will be liquidated if they are not economically viable. For example, dairy cows may be sold if milk sales are not adequate to cover the total cost of ownership. Building linkages to other programming will be necessary when food insecure populations face constraints that cannot be resolved through value chain interventions alone such as poor health and sanitation, lack of safety nets, access to financial services, etc.

Monitoring and Evaluation: Incorporating explicit food security indicators into results measurement is critical to determining the effectiveness of value chain projects in supporting food security and building an evidence base for effective programming. Consumption-related indicators should complement income indicators, recognizing that food insecure households will often choose to consume additional production. Further, projects should identify and seek to measure the indirect benefits they create—such as through reduced food prices—as well as the direct impacts.

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