

Identifying Opportunities for Nutrition-Sensitive Value-Chain Interventions

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Although value-chain interventions have historically focused on increasing income for smallholders and other stakeholders along the chain (Hawkes 2013), value chains can also play an important role in determining the availability, affordability, quality, and acceptability of nutritious foods. The nutritional benefits and food-safety risks associated with consuming a particular food can be enhanced or diminished at key points along the value chain.

The literature on value chains identifies several general features that give value chains considerable flexibility in addressing nutrition problems:

- Value chains include all actors and activities from food production to consumption—“from farm to fork”—enabling complex food systems to be molded into a comprehensive, solution-oriented approach to improving nutrition.
- Interventions that tackle market failures can target specific value-chain actors, with a focus on increasing their incentives and capacities for delivering improved nutritional performance.
- Value chains provide a context for examining not only economic value along the chain, but also other kinds of added value, such as nutrition and environmental sustainability.
- Value chains provide a framework where overnutrition, undernutrition, and diets can be considered in an integrated way.

This brief aims to document opportunities to improve the nutritional outcomes of low-income consumers by intervening in food value chains.

UNDERSTANDING CONSTRAINTS IN THE SUPPLY OF AND DEMAND FOR NUTRITIOUS FOODS

The supply of and demand for nutritious foods clearly have important implications for nutrition, and the potential entry points for interventions will depend on the constraints affecting

this supply and demand (including production, prices, incomes, and preferences).

Enhancing the quality of people’s diets is particularly important in low-income settings, where households typically subsist on monotonous staple-based diets. Therefore, characterizing people’s diets in low-income settings is an important starting point to identify market-based interventions involving specific foods. Such foods could include animal-source foods, fruits and vegetables, biofortified crops, and nutritious but neglected and underutilized crop species (including pulses, grains, and other indigenous foods).

In broad terms, however, better nutrition results not just from the nutrient content of an individual food, but also from improvements in people’s overall diet quality. Because value chains traditionally have a commodity-specific focus, a broader framework is required to integrate multiple chains to enhance diet quality. Value-chain interventions to improve nutrition are more likely to be successful if they are designed to fill gaps in the diet rather than striving to improve overall nutritional status. One must be aware that offsetting impacts can occur; if one value chain improves its performance and consumption of the associated food increases, consumption of other foods may decline (Henson 2013). Nonetheless, evidence on the performance of value-chain interventions for improved nutrition is still lacking.

On the demand side, value-chain interventions could work either to stimulate increased consumption of nutritious foods, thereby improving diets, or to increase income, which could increase demand for nutritious foods. On the supply side, interventions could work to either reduce transaction costs or risks along the value chain or to increase food availability and affordability through increased supply of raw materials. In either case, the goal is to increase the consumption of nutritious foods by low-income populations and will likely involve reducing the price of more nutritious foods relative to less nutritious foods.

INTERVENTION PATHWAYS AND RELATED CONSIDERATIONS FOR DEVELOPING VALUE CHAINS FOR NUTRITION

The range of possible interventions is broad, and the type of intervention appropriate for a specific context depends on pre-intervention conditions (see Figure 1). When potential beneficiaries already widely produce and consume certain foods, providing nutritional information may increase demand for those foods. If widely consumed foods are not inherently nutritious, fortification of selected available processed foods can potentially reduce targeted nutritional deficiencies. In other cases, value-chain interventions may be relatively intensive, requiring long-term investments to stimulate changes in production, processing, and marketing. The most intensive interventions are required when major gaps or barriers exist in both the supply and demand of a specific food that has high potential to improve the diet.

Increasing Demand for Nutritious Food

In some local contexts, value chains include nutritious foods that are widely produced but not consumed by target populations because of economic constraints, preferences, or lack of knowledge and information. Interventions to increase demand for these foods can work in one of several ways. They can focus on raising consumption through direct transfers (for example, provision of nutritious food through school meals, food vouchers, or food subsidies). And they can use indirect market channels, such as behavior change campaigns or social marketing, to enhance nutrition knowledge, attitudes, and practices and promote people's consumption of nutritious food or their willingness to pay for it.

Using value chains to improve nutrition has important implications for targeting. For example, the highest-priority groups for nutrition interventions are children under two years of age and pregnant and lactating mothers. Women also play important roles in agricultural production and value addition. While value-chain interventions can potentially empower them to make better food-, health-, and care-related decisions for themselves and their young children, gender discrimination could restrict their access to resources and opportunities (Quisumbing et al. 2014). Understanding these complex processes is not straightforward and deserves careful study.

Enhancing the Supply of Nutritious Foods

On the supply side, the main pathway to nutrition is through improved economic returns for producing nutritious foods, which can work in one of several ways. Simply expanding production of a relatively nutritious crop can lead to improved availability of nutritious foods, but smallholder farmers may not grow optimal amounts of nutritious foods because they lack access to inputs or output markets. Interventions to reduce costs at specific points

in the chain can target producers as well as small- and medium-scale enterprises involved in the supply of nutritious foods. Such interventions can increase production and sales by improving agricultural practices and market opportunities and reducing market risks such as price volatility.

There are, however, several challenges. Perhaps most important, the gender of the producer may contribute to constraints to producing additional nutritious foods. For example, women producers may not be inclined to supply the market if they are not able to control the income from crop sales. Alternatively, if an intervention leads to women's profitable production of a new crop, men may also begin to grow that crop, marginalizing gains to female producers. Moreover, in areas where many farmers are women, the introduction of new agricultural practices can affect time allocation and labor in ways that negatively affect child care.

Several potential price effects deserve additional consideration. Seasonality of certain products can play an important role in how specific value chains work. Many smallholders are net buyers during parts of the year, and the cyclicity of prices can affect either demand or supply from these producers. In addition, if markets are not integrated for targeted products, increased supply could cause local prices to decline for those products, dampening any impact from interventions.

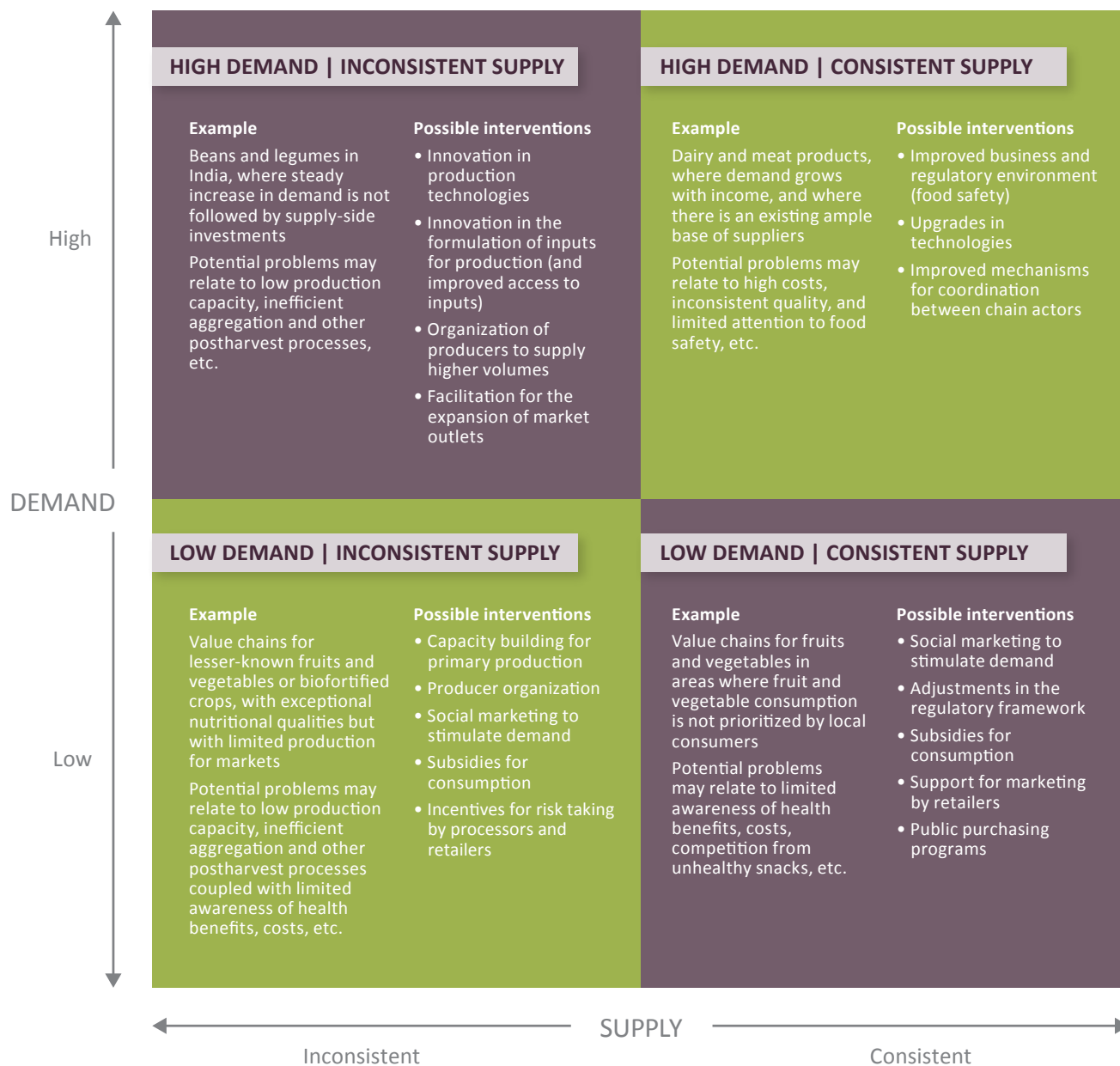
Increasing Nutrition Added-Value along the Value Chain

Where supply and demand for nutritious products already exist, interventions can focus on enhancing the nutrition added-value along the chain. They can target specific points in the value chain—during processing, for example—where efficiencies can be introduced or where nutritional or food safety leakages exist. Interventions can also provide information at key points in the chain, enhance overall information flows along the chain, or provide quality assurance and improved regulatory frameworks. Such interventions could improve efficiency (by enhancing nutrient content or reducing contamination per unit price of food) and increase people's knowledge of and willingness to pay for nutritious and safe food.

Signaling and Potential Regulatory Issues

Relatively nutritious foods are similar to credence goods—that is, the positive attributes of nutritious foods may not be immediately observable to either producers or consumers. Consequently, consumers have no incentive to pay for such attributes without some form of visible differentiation or third-party oversight (such as public information campaigns or private consumer reporting; Minot 2014). If the nutritious attributes of foods are not economically valued, then value-chain actors may not be inclined to supply more nutritious foods because they will not receive a premium for those products. Similarly, if consumers do not place a premium on safer foods relative to unsafe or risky foods,

FIGURE 1 Characterizing interventions through changes in the supply of and demand for nutritious foods



Source: Gelli et al. (2015).

producers may not pay attention to the safety attributes of foods. In practice, a premium for nutrition content and food safety often does not materialize, particularly in low-income settings.

To solve this problem, consumers must not only understand the additional value of these foods, but also be assured that foods labeled as nutritious or safe actually are nutritious or safe. The relationship between the regulatory environment and the nutritional value of food as it moves along the chain is complex. Standards and common metrics, like those involved in nutrient profiling of foods, can provide some relevant information for stakeholders at key points in the value chain, but traders

and processors in the informal sector may not have access to information and technology to maintain the quality and safety of perishable foods. One goal of interventions could be to test cost-effective ways of providing such information or technology.

CONCLUSION

Though there has been considerable interest in linking value chains to nutrition, there is little documented experience in the literature, and important evidence gaps limit our understanding of the feasibility of the value-chain-for-nutrition approach. To

understand how best to develop value chains for nutrition, more research is needed on

- pathways linking value-chain activities to nutrition,
- conditions required for value chains to bring about increased consumption of nutritious foods,
- constraints preventing consumption requirements from being met, and
- intervention designs most likely to be effective at alleviating constraints.

Not surprisingly, these issues are all highly context specific. The impact of interventions on the nutrition and health status of target populations depends on the nature of both their present diet and potential dietary changes. The intake of additional nutritious foods will serve as a complement or substitute for the consumption of other foods in the diet. Consequently, it is important to examine changes in overall diets, not just the consumption of one food.

Addressing micronutrient deficiencies can improve a range of health, nutrition, and developmental outcomes in infants and young children, particularly if implemented alongside other demand-side value-chain interventions like behavior change in health and nutrition practices (Bhutta et al. 2013). However, as with other demand and supply intervention pathways, successful value-chain-for-nutrition interventions must consider the range of nondietary factors that can influence nutrition outcomes. Many factors will be outside the control of the intervention and will require assessment, monitoring, and ongoing adaptation to ensure project outcomes can be achieved. Finally, as the food production environment is constantly changing owing to pressures from climate change, population growth, and social and economic trends, sustainability and resilience dimensions should also be considered when planning value-chain-for-nutrition interventions.

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