

Understanding the role of value chains in enhancing diets in low-income settings

Diagnostics to Support the Identification, Design and Evaluation of Interventions



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Value chains and nutrition

- How to leverage market-based interventions to improve diets of low-income populations?
- Value chain (VC) framework can provide a lens to examine role of markets in food systems and potential to improve diets
- Recognizes need to examine all stages of food chain from production to consumption
- However...
 - A VC is commodity specific
 - Focus in VCs to date has been on efficiency and economic returns - little explicit focus on consumers and “nutrition”







VCN Framework supports the **identification and design of interventions**: supporting supply and demand of nutritious foods, and enhancing value chain performance with a nutrition lens

*Diagnostics involving 5 key steps**:

1. Understanding the nutrition problem
2. Examining the macro-level food systems context (the enabling environment)
- 3. Characterizing diet patterns and relative contribution of different crops/missing foods, contaminated foods, etc.;**
- 4. Identify value chain constraints and opportunities related to nutrition and food security.**
- 5. Prioritizing intervention options**

* For more details see Gelli, A, Hawkes C and Donovan J. Food value chains and nutrition: Exploring opportunities for improving nutrition. In Pritchard et al. (ed), Routledge Handbook of Food and Nutrition Security. Routledge, 2016.

Supply and Demand Typology

Demand (Consumption levels in target population)		<u>Quadrant B</u> High demand & inadequate supply	<u>Quadrant A</u> High demand & adequate supply
		<u>Quadrant D</u> Low demand & inadequate supply	<u>Quadrant C</u> Low demand & adequate supply
			
		Supply (Year-round availability in markets)	

Case Study in Southern Malawi, Zomba District

- Mixed-methods descriptive study based on two rounds of data collection
 - Quantitative: panel of 1200 households, including 7-day recall food consumption module
 - Qualitative: 56 In-depth individual interviews
- In-depth Market study:
 - Structured interviews with 47 traders located in the 5 main markets, semi-structured interviews with government agencies, businesses and traders

Demand (Consumption levels by target Population)	B) High demand and inadequate supply	A) High demand and adequate supply
	<p>Bean and legumes: Consumed in low volumes, increased consumption will improve diet quality.</p> <p>Intervention options:</p> <ul style="list-style-type: none"> • Innovation in production technologies to expand availability • Improved coordination and other measures (e.g. storage) with traders to reduce costs <p>Constraints: Production bottlenecks limit availability during periods of the year; limited incentives for traders to engage in supplying local markets</p>	<p>Groundnuts: Consumed throughout the year but high levels of aflatoxin contamination is a major health risk.</p> <p>Intervention options:</p> <ul style="list-style-type: none"> • Developing & testing third-party quality assurance • Strengthening capacity of processors to minimize food safety concerns <p>Constraints: Gaps in regulatory environment and quality assurance; limited capacity & weak incentives for smallholder to invest in improved production</p>
-	D) Low demand and inadequate supply	C) Low demand and adequate supply
+	<p>Nutritious tree fruits: not consumed in significant amounts due to limitations on supply and demand; increased consumption will improve diet quality.</p> <p>Intervention options:</p> <ul style="list-style-type: none"> • Information campaigns to increase acceptability; • Support to chain actors to process/store to extend shelf life • Investments in marketing infrastructure • Subsidies/social transfers to facilitate consumption when in season (school meals) <p>Constraints: Lack of storage and transport for perishable products, limited demand increases risk for production developments and other investments; few processors and distributors engaged in sector</p>	<p>Animal source foods (esp. dried fish) & leafy green vegetables : Available but consumption is low; increased consumption will improve diet quality.</p> <p>Interventions options:</p> <ul style="list-style-type: none"> • Subsidies/transfers for consumption (lean season) • Support to chain actors to reduce costs to production and trading • Information campaigns to stimulate demand <p>Constraints: Producers and sellers with limited opportunities to expand or add value to production due to limited effective demand</p>
	-	+
	Supply (Year-round availability in markets)	

Implications from Malawi Case Study

- Results indicate a need for a layered approach to improving diets
 - *Lean season*: Food stores and spending power are highly limited, so improving diets should focus on subsidies and social transfers (large, immediate short-term improvements)
 - *Harvest season*: emphasis on nutrition education while in planting season, production support
 - *Information to optimize decision-making* related to food and nutrition (short- and medium-term improvements in diets)
- Longer term interventions like improving capacity for product differentiation, processing and storage, and market infrastructure can simultaneously be addressed.

Key Take-Aways

- This diagnostic tool supports a strategic view
 - Find interventions that can simultaneously address various challenges, and complementary interventions that can address different challenges depending on season, target group, etc.
- Multi-faceted descriptive work is key for determining synergies and trade-offs
- However, food systems and preferences may be highly localized, may need to repeat descriptive work in multiple areas of a particular country

Thank you!



Dietary Change	Demand & Supply Characteristics	Consumer-related Issues	Main Constraints	Implications for Intervention Design
Groundnuts consumed throughout the year but high levels of aflatoxin contamination	(Quadrant A) Consumers willing and able to purchase, & high availability in markets during all or part of the year	Sorting and grading likely to result in low-income consumers exposed to foods w/ higher levels of aflatoxin	Gaps in regulatory environment and quality assurance; limited capacity & weak incentives for improved production	Developing & testing third-party quality assurance; strengthening capacity of processors to minimize food safety concerns
Beans & legumes are consumed in low volumes	(Quadrant B) Consumers willing to prioritize the purchase of food when funds are available, but limited availability some parts of the year	Willingness to purchase and prioritize over other food (except maize), consumers have limited purchasing capacity during peak demand periods	Production bottlenecks limit availability during periods of the year; limited incentives for traders to engage in supplying local markets	Innovation in production technologies to expand availability; improved coordination and other measures (e.g. storage) with traders to reduce costs
Animal source foods (esp. dried fish) / Leafy greens: Available but consumption is low.	(Quadrant C) Low consumption, despite generally high degree of availability in local markets	Preferred foods but low willingness to pay due to insufficient budget	Producers and sellers with limited opportunities to expand or add value to production due to limited effective demand	Subsidies/social transfers to facilitate consumption in critical periods (e.g. lean season); support to chain actors to reduce costs to production and trading
Nutritious fruits (e.g. mangoes and avocados) not consumed in significant amounts throughout the year	(Quadrant D) Low consumption; not typically purchased due to budget constraints and not preferred; highly seasonal availability	Low willingness to pay for fruits (coping foods), with preferences towards consumption of staples, fruits relatively expensive during off-peak seasons, adding further deterrence to year round consumption	Lack of storage and transport facilities for highly perishable products, limited demand increases risk for production developments; few processors and distributors engaged in sector	Subsidies/social transfers to facilitate consumption when in season (school meals); Information campaigns to increase acceptability; support to chain actors to process or store to extend shelf life;

Implications from Malawi Analysis

- Results point to the need for a layered approach to interventions
 - For low income, rural households, complementary role of:
 - 1) lean season food transfers to smoothen consumption and protect vulnerable households from seasonal price spikes (quadrant C)
 - 2) ag-nutrition inputs and training to promote medium term investment shaping supply of (and demand for) nutritious foods (quadrant B)
 - 3) Information on how to “optimize” decision-making related to food and nutrition (all quadrants)
 - Longer term interventions like improving capacity for product differentiation, processing and storage, and market infrastructure could simultaneously be addressed (quadrants D and A)

Developing a strategic approach

- A strategy for interventions framed around enhancing consumption in low-income households of basket of nutritious foods
 - Coherent, short-, medium- and long-term objectives could be framed around interventions/constraint in specific food chains
 - Factor in seasonality components explicitly
 - Includes roles for public and private sectors