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# FACILITATING SYSTEMIC CHANGE IN VALUE CHAINS: LESSONS LEARNED FOR STRENGTHENING COUNTRY SYSTEMS

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BACKGROUND PAPER FOR THE USAID EXPERIENCE SUMMIT ON STRENGTHENING  
COUNTRY SYSTEMS

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## ABOUT THE AUTHOR

Dr. Elizabeth Dunn has over 20 years of experience designing evaluations and leading research on low-income households and factors affecting their participation in market systems. She has worked on projects related to micro and small enterprise development, smallholder agriculture, inclusive value chain development and microfinance. As a thought leader in the evaluation of inclusive market systems, Dunn uses concepts from complex adaptive systems (CAS) and social network analysis as an analytical framework for evaluating the evidence from inclusive value chain development projects and improving understanding of the factors affecting smallholder participation, value creation and value capture in regional and global market systems. Dunn was a major contributor to USAID's work on value chain development under the AMAP project. She provided technical leadership for a wide variety of evaluations, including a longitudinal, mixed-method evaluation of the effectiveness of USAID's GMED project in India and served as Technical Director for core impact assessments under USAID's AIMS project.

## EXECUTIVE SUMMARY

This paper reviews USAID experience with inclusive value chain development and discusses lessons learned about facilitating systemic change in markets. Beginning in the mid-1990s, USAID has followed an inclusive value chain approach for strengthening market systems. The dual objectives of the value chain approach are economic growth and poverty reduction.

A value chain brings a product or service from inception to the final consumer. It can be analyzed as a system (or network) with three elements: 1) firms, NGOs, public officials and other decision-making agents, 2) relationships between these agents/decision-makers, and 3) the business enabling environment. The business enabling environment consists of all the formal and informal rules that define the context within which firms and other agents make their decisions. Examples of factors in the business enabling environment that influence behavior in the value chain range from international food safety standards to national labor laws, inflation rates, municipal regulations, and social norms. Business enabling environments can be defined at the local, regional, national, and global levels.

The value chain approach uses systemic thinking at every phase of the project cycle. In project design, a full analysis of the system's structural and dynamic features helps to identify leverage points for catalyzing change. To be sustainable, new behaviors must continue to be promoted by the existing incentives that drive the system. An understanding of the system as a whole is also needed to avoid causing harm to the system (e.g., price subsidies). In project evaluation, the multi-leveled and dynamic nature of value chain interventions has led to the development of degrees of evidence principles for evaluating value chain projects.

The intervention strategy in a value chain project should follow a facilitation approach whenever possible. The role of the facilitator is to identify actors or groups of actors that have self-interest (usually a commercial interest) to champion the changes needed to close competitiveness gaps. The facilitation approach is preferred to direct delivery of program services, because it leads to more sustainable solutions that will continue after the project is over.

The value chain approach emphasizes the role of relationships between firms that are linked or should be linked to improve development outcomes. Project implementers seek to identify opportunities to facilitate win-win relationships that build trust and reward cooperation in vertical and horizontal linkages. The quality of relationships between firms plays an important role in facilitating the flow of information, learning, and incentives for upgrading.

These three programming strategies in the value chain approach—systemic thinking, facilitation approach, and emphasis on relationships—along with lessons learned about the design, implementation, and evaluation of market system strengthening projects have general relevance for projects to strengthen country systems.

## I. INTRODUCTION

In recent years, USAID and other international development organizations have adapted concepts from the global value chain literature (Gereffi and Lee 2012) to create a systemic approach for achieving broad-based economic growth (USAID 2012). Under leadership from USAID’s Microenterprise Development team, the AMAP BDS Project (1994-2012) developed an approach to private sector development, referred to here as the inclusive value chain approach. As a program strategy, the inclusive value chain approach is designed to achieve the dual objectives of economic growth and poverty reduction.<sup>1</sup>

The value chain approach is part of a more general trend within USAID’s economic programming toward facilitating *inclusive market systems*. The purpose of this review is to highlight lessons learned from recent experiences with inclusive value chains, so that these lessons can inform USAID’s approach to strengthening country systems. The discussion in the paper is organized around these topic questions:

- How are inclusive value chains and inclusive market systems defined?
- How is “strengthening of market systems” defined?
- What indicators or other tools are used to measure progress in strengthening market system?
- What are the primary factors that contribute to successfully strengthening market systems?
- What are the main challenges in implementing an effective systems strengthening project?
- What are the key lessons drawn from experience to help shape future market systems strengthening projects?
- What additional areas of study need to be explored for further evidence of effectiveness in market system strengthening projects?

The paper begins with a description of the conceptual framework for the value chain approach. Following this, the main section of the paper focuses on lessons learned about working with market systems. The closing section suggests areas for future systems-related research.

## II. VALUE CHAIN APPROACH

### How are inclusive value chains and inclusive market systems defined?

A *value chain* includes the full range of activities and services required to bring a product or service from its conception to sale in its final market. From the beginning, the AMAP BDS approach to value chain development has included an explicit objective of integrating large numbers of microenterprises into competitive markets where they can both contribute and benefit. More recently, the term *inclusive value chain* has been used to highlight this emphasis on including and benefiting smallholders, microenterprises, and the low-income households that operate them.<sup>2</sup> More generally, an *inclusive market system* is one that

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<sup>1</sup> Detailed information about the VCA can be found in the Value Chain Development wiki on KDID’s Microlinks webpage (<http://microlinks.kdid.org/good-practice-center/value-chain-wiki>). The wiki provides an extensive list of key resources developed under AMAP BDS and by other donors, academics and practitioners. Brief descriptions and links to each resource are included (<http://microlinks.kdid.org/good-practice-center/value-chain-wiki/value-chain-resources>).

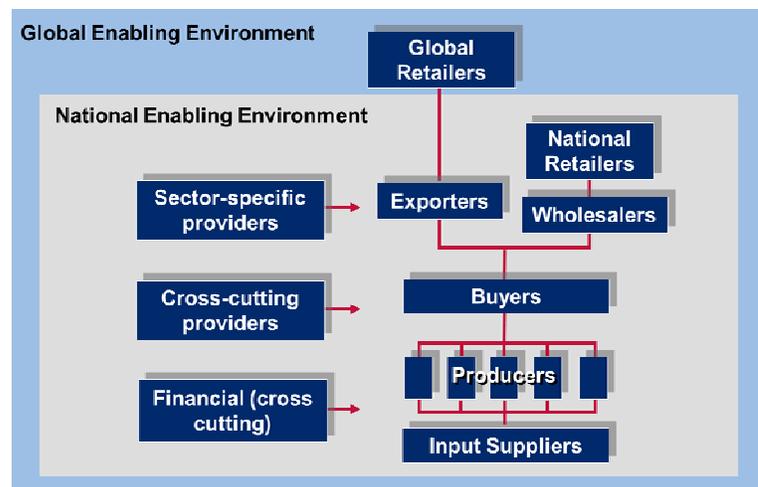
<sup>2</sup> Note, however, that the term “inclusive” is also used in the global value chain literature to describe a value chain that includes a large number of firms of any size from within a specific country.

includes large numbers of low-income households. In addition to value chain networks for bringing products and services to market, another example of an inclusive market system would be a financial market that provides financial services to all types of borrowers, including the smallest firms and low-income households.

The conceptual framework for analyzing value chains refers to both the structural and dynamic features of the system. The structural elements, depicted in the stylized value chain map (Figure 1), include all the firms and other actors involved in the value chain, the linkages between these actors, and the business enabling environments within which they interact and make their decisions. The dynamic elements in the value chain framework include the characteristics of the relationships between firms and the ability of the value chain to remain competitive by upgrading in response to changing end market demands and requirements. This section describes these structural and dynamic elements in more detail.

The structure of a value chain includes all the participating firms and other agents and it can be characterized in terms of the following elements:

Figure 1: Value Chain Map



- **End markets** are always the starting point for value chain analysis because the demand in the end market defines the opportunities that drive the value chain. As can be seen in the value chain map, it is possible for a value chain to have more than one market channel, such as one channel that serves domestic consumers and a second channel that serves consumers in export markets.
- **Vertical linkages** connect firms at different levels of the value chain, from input suppliers to producers, processors, wholesalers and so on, all the way to the retail level. Vertical linkages are the commercial relationships involved in bringing the product up through the value chain.
- **Horizontal linkages** connect firms at the same level of the value chain. Some examples of horizontal linkages are producer cooperatives and exporter associations. Important functions of horizontal linkages at the producer level include product aggregation to reduce transaction costs and the purchase of products or services in bulk to reduce unit price.
- **Supporting markets** include firms and organizations that provide business support services, such as financial, communication, packaging, or transport services.
- The **business enabling environment** consists of all the formal and informal rules that help define the context within which decision makers operate. Examples of significant influences in the enabling environment range from international food safety standards to national trade policy, inflation rates, natural disasters, municipal regulations, and cultural and social norms. Business enabling environments can be defined at a local, regional, national, and/or global level.

The dynamic features in the value chain framework correspond to “emergent” properties in systems theory. Some of the dynamic features with important implications for project implementation include value chain governance, relationships between firms, and the pace of innovation:

- **Value chain governance** refers to power and the ability to exert control over the behavior of other agents in the system. Typically, a “lead firm” might set, monitor, and enforce the parameters under which other firms operate. Awareness of the governance structure in the system can be useful in identifying possible interventions and opening pathways for the generation, transfer, and spread of knowledge leading to innovation.
- **Inter-firm relationships** that are more supportive of value chain competitiveness are mutually beneficial, collaborative, and allow for the free transmission of information and incentives for upgrading. An important function of inter-firm relationships is to transmit information and incentives, thus improving the responsiveness of firms to changes in end market requirements.
- **Upgrading** at the firm level is defined in terms of investments that increase value added. For example, a produce wholesaler might invest in cooling equipment that improves the shelf life of the product. A farmer might invest in new inputs, training, or irrigation in order to cultivate a new variety that earns a higher price in the market.

In summary, a value chain approach takes a market system perspective with a focus on the pivotal role of demand in end markets and identifying leverage points where interventions can catalyze improved value chain competitiveness. Interventions seek to improve the business enabling environment and transform relationships between firms—whether vertical linkages between firms at different levels of the chain or horizontal linkages between firms at the same level—in order to encourage upgrading and broader distribution of benefits.

### **Example: Value Chain from Guatemalan Horticulture**

As an example to illustrate the structural and dynamic features of a value chain, take the case of the value chain for Guatemalan high-value horticultural products (i.e., broccoli, snow peas, and baby vegetables). The value chain map in the Appendix (Figure 2) highlights some of the structural features of the system. The map indicates that end markets reach consumers inside and outside of Guatemala. It also shows which types of firms are vertically linked, such as the link between distributors and supermarkets or the link between farmers and exporters. In this case supporting markets are represented across the bottom of the map, at the same level as input suppliers. Upgrading in the case of Guatemalan horticulture is focused on the adoption of sanitary and phytosanitary standards that are required for products that are exported to the U.S. and E.U. These food safety standards and the production schedules of the packing plants play a role in value chain governance.

A value chain development project for the horticulture value chain would begin with a detailed assessment of opportunities in end markets and identify key systemic constraints to exploiting these opportunities. This would feed into a competitiveness strategy for stimulating sustained growth based on competitive advantage and upgrading. A typical value chain project would then attempt to address constraints at multiple levels, such as through policy reforms, improvements in infrastructure (e.g., cold chain storage), farmer training in

improved production techniques, and new business models allowing input suppliers to serve small producers at a lower cost and build new commercial linkages. All of these interventions would feed into the competitiveness strategy and would be based, to the extent possible, on a facilitation approach, which is explained in more detail below.

### III. LESSONS LEARNED

This review draws on the seven cases listed in the Appendix (Table 1), along with other experiences accumulated over eight years of the AMAP BDS project. Lessons related to the evaluation of value chain projects were developed under the Private Sector Development Impact Assessment Initiative (PSD IAI), a component of AMAP BDS focused specifically on understanding and addressing critical evaluation challenges that are inherent to the new generation of programs facilitating systemic market change.

#### **How is “strengthening of market systems” defined?**

**System strengthening is defined in terms of the development objectives and sustainability.** In the case of value chain programming, the development objectives are economic growth, which is linked to value chain competitiveness, and poverty reduction, which requires both value creation and value capture by low-income households.

The question of sustainability refers to whether beneficial outcomes will be perpetuated beyond the life of the project. In private sector development, the concept of sustainability is complicated by the fact that markets are constantly evolving and business opportunities tend to change over time. Moreover, it is beneficial for a firm to be able to adapt to changing conditions. The concept of resilience, or the ability of a system to respond to change, may be a better indicator for positive adaptation to change and the ability of the system to endure over time.

#### **What indicators or other tools are used to measure progress in strengthening a market system?**

**Indicators related to participation, value creation, and value capture can be used to measure progress in value chain strengthening.** Participation is a measure of the inclusiveness of the value chain. It provides information on the potential scale of benefits to be gained. Value creation is related to upgrading and the capacity to innovate and respond to market signals. One of the assumptions behind the inclusive value chain approach is that microenterprises and smallholders will have opportunities to upgrade in order to increase their value creation, thus becoming more attractive commercial partners and creating more opportunities to capture additional value in the form of higher net revenue.

**More recently, there has been a shift toward identifying measures of systemic change.** While efforts to create indicators of systemic change have relied on conflicting definitions, the concept of systemic change refers to a permanent (sustained) change in the structural and/or dynamic elements of the system. When a change is built into the system in this way, it is expected to be more sustainable.

**Evaluations of value chain projects face special challenges that can be at least partially addressed using degrees of evidence principles.** The degrees of evidence approach was developed under the Impact

Assessment Initiative of AMAP BDS.<sup>3</sup> The degrees of evidence framework promotes the selection of a portfolio of evaluation methods, including established impact evaluation methods providing a strong case for attribution as well as complementary evaluation methods that assess impacts at different levels of analysis and create a preponderance of evidence about overall project effectiveness.

### **What are the primary factors that contribute to successfully strengthening market systems?**

**Project design should be based on a detailed analysis of the structural and dynamic elements in the system.** Depending on the type of system, this would include mapping the decision-makers, the linkages between them, incentives that drive behavior in the system, the enabling environment, and emergent properties associated with system dynamics. Effective project implementation requires frequent (even continuous) monitoring of the current status of the system and frequent adjustments based on feedback loops. For this reason, the most successful implementers are those who remain engaged in constant dialogue with commercial and stakeholder groups throughout the life of the project. A visual representation of the system (e.g., a value chain map) can be very useful as a communication tool for raising actors' awareness of their roles, their relationships, and their opportunities for improving the competitiveness of the system.

**Project implementation should rely on a facilitation approach rather than on direct delivery of program services.** The intervention strategy in a value chain project should be to follow a facilitation approach whenever possible. The role of the facilitator is to identify actors or groups of actors that have self-interest (usually a commercial interest) in catalyzing the changes needed to close competitiveness gaps. A facilitation approach is preferred to direct delivery of program services, because it leads to more sustainable solutions that will continue after the project is over. A facilitation approach catalyzes behavior change among value chain actors.

**Project implementers should remain flexible and opportunistic in response to changes in the system.** Because conditions in markets can change very rapidly, the implementation team must be adaptable to sudden changes that might open new opportunities while abruptly closing others. In order to remain consistent with the original project intent, it is important for members of the team to be aware of the project's developmental objectives and to understand the causal model connecting their interventions to the achievement of these objectives.

### **What are the main challenges in implementing an effective systems strengthening project?**

**While it leads to more sustainable outcomes, the facilitation approach can create several challenges for project implementation.** One problem stems from the fact that project implementers lack direct control over decision-makers in the system. When the competitiveness strategy calls for identifying and preparing a lead firm to launch new relationships with suppliers, implementers might spend a great deal of time helping the lead firm prepare the new business model, only to have the firm decide that the change is no longer a good fit

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<sup>3</sup> The special problems inherent in evaluating value chain projects, and the degrees of evidence principles for addressing these challenges, can be found in the PSD IAI report [linked here](#).

within its overall business strategy. Another challenge with the facilitation approach is that it expends funds and accumulates measurable outcomes at a much slower pace than direct delivery of services.

**Project accountability based on static performance targets may reduce project effectiveness.** Static targets are derived from linear, deterministic causal models. While it is reasonable for implementers to be accountable for project results, the common practice of setting performance targets during the project design phase is based on the inaccurate assumption that the features of the market system will remain unchanged over the multi-year life of the project.

### **What are the key lessons drawn from experience to help shape future market systems strengthening projects?**

1. **Facilitation.** Implementation should follow a facilitation approach instead of a direct delivery approach. The facilitator identifies actors within the chain who are willing and able to drive needed changes.
2. **Systemic Thinking.** Implementation should be based on a careful analysis of the system and a commitment to “do no harm.” Systemic thinking is needed at every stage of the project cycle.
3. **Relationships.** Most value chain projects include interventions to improve relationships between actors. This is done by facilitating mutually beneficial relationships that build trust and reward cooperation.
4. **Information.** The flow of information and learning through the system has an important influence on firm-level upgrading and system-level competitiveness.
5. **Flexibility.** Project implementers should be ready to adapt their interventions in order to keep pace with changes in the overall system.
6. **Evaluation.** Because value chain projects intervene at multiple levels of the system, multiple evaluation methods should be combined to assess the overall effectiveness of a project.

## **IV. FUTURE AREAS OF STUDY**

### **What additional areas of study need to be explored for further evidence of effectiveness in market system strengthening projects?**

Two areas that warrant further study are the development of techniques for analyzing systems and for assessing sustainability and resilience. In order to advance our understanding of market systems, we need appropriate analytical tools. While we are beginning to apply concepts from complex adaptive systems and social network analysis, there is a great deal more that can be done in terms of adapting and using analytical methods from systems theory. Similarly, we need better concepts for understanding the sustainability of project outcomes and factors that contribute to the resilience of the market system.

## APPENDIX

Figure 2: Value Chain Map for Guatemalan High-Value Horticulture

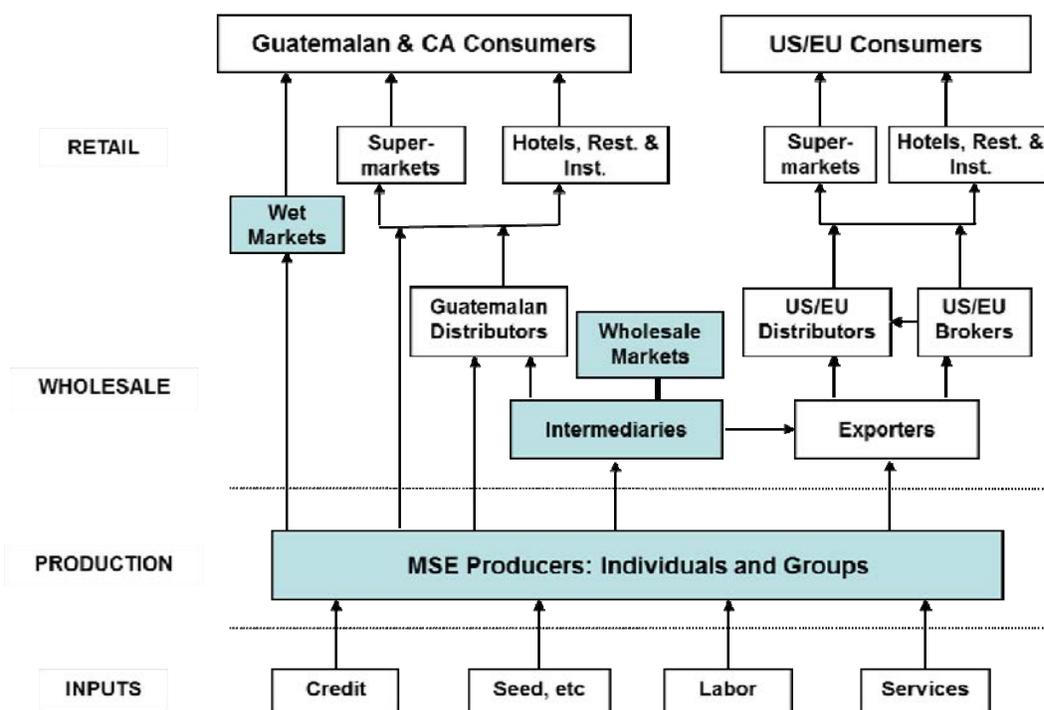


Table 1: Cases Reviewed for this Study

Country	Value Chain	Project Name	Project Information
Bangladesh	Dairy	<b>SDVC:</b> Strengthening the Dairy Value Chain	\$4.8 million over 5 years (2007-2012) Gates-funded
Guatemala	Horticultural Vegetables	<b>AIMVC:</b> Analyzing the Integration of Micro and Small Enterprises into Value Chains	Research component of USAID AMAP BDS Project (2004-2008)
India	Fresh Vegetables for Supermarkets	<b>GMED:</b> Growth-Oriented Microenterprise Development	\$6 million* over 4 years (2004-2008) USAID-funded
Kenya	Maize	<b>KMDP:</b> Kenya Maize Development Program	\$11.2 million over 8 years (2002-2010) USAID-funded
Nigeria	Farm Machinery and Fertilizer	<b>ProOpCom:</b> Promoting Pro-Poor Opportunities in Commodity and Service Markets	£16.5 million* over 9 years (2002-2011) DFID-funded
Tanzania	Horticultural Vegetables	<b>AIMVC:</b> Analyzing the Integration of Micro and Small Enterprises into Value Chains	Research component of USAID AMAP BDS Project (2004-2008)
Zambia	Agricultural Inputs	<b>PROFIT:</b> Production, Finance and Improved Technologies	\$17 million* over 6 years (2005-2011) USAID-funded

\*These project budgets include additional value chain interventions not listed here.

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