



ERLN Practice Guide 7

Understanding Value Chains

Understanding value chains - an agricultural value chain example

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Introduction

This tool has been produced to support the ERLN work around value chains, particularly agricultural value chains. It seeks to provide policy-makers and stakeholders with a common reference point for discussing value chains in agriculture. It also provides a framework for targeting government support and creating effective value chain development programmes.

Definition

Value chains are a framework for understanding how inputs and services are brought together and then used to grow, transform, or manufacture a product; how the product then moves physically from the producer to the customer; and how value increases along the way (WB, 2010).

The value chain in agriculture describes the full range of activities and set of actors that bring an agricultural product from the field (production) to final consumption, wherein at each stage value is added to the product (Kaplinsky 2011). Value chains include all of the horizontally linked, interdependent processes that generate value for the consumer, as well as vertical linkages to other value chains that provide intermediate goods and services into each phase (WB, 2010).

There are a number of different agricultural value chain models that describe these elements slightly differently. Our approach tries to capture the major elements of these different models. It is structured around four core processes applicable in any agricultural value chain - pre-production, production, processing and marketing.

The pre-production phase focuses on the inputs needed for production and plays a key role in determining the cost structure of the product. The production phase entails a range of inputs and physical transformation and also involves the participation of various services. The processing phase adds value through processing, packaging and sometimes beneficiation. Again this entails a range of inputs and services. The final phase adds value through branding and selling the product.

Where value chains come from?

Interest in value chains is not new. The idea is rooted in Adam Smith's notions of division of labour and later theories around the efficiency of specialization. The value chain concept was first popularized by Michael Porter in 1985 linked to competitive advantage (Kaplinsky, 2011). Value chain thinking also relates to a process view of organisations that sees economic activity as a system, made up of subsystems each with inputs, transformation processes and outputs.



The benefits of value chain analysis

- Value chain analysis breaks the final product down into its constituent parts to better understand the process, stakeholders and relationships, especially business to business relationships.
- It provides a framework for identifying mechanisms for increasing efficiency in production, a necessary condition for successfully penetrating global markets.
- It highlights who is benefiting the most and also possible barriers to entry.
- Entry into global markets which allows for sustained income growth – that is, making the best of globalisation - requires an understanding of dynamic factors within the whole value chain and the growing division of labour and the global dispersion of production of inputs and services. Value chain analysis assists this understanding.
- Value chain analysis enables evaluating each stage of the chain in order to detect problems or identify opportunities to improve the contribution of specific actors and the overall performance of the chain.
- Finally, value chain analysis can provide a policy and restructuring tool to counter both market and state failures and direct any investment and support.

Why value chains are important in the agricultural sector

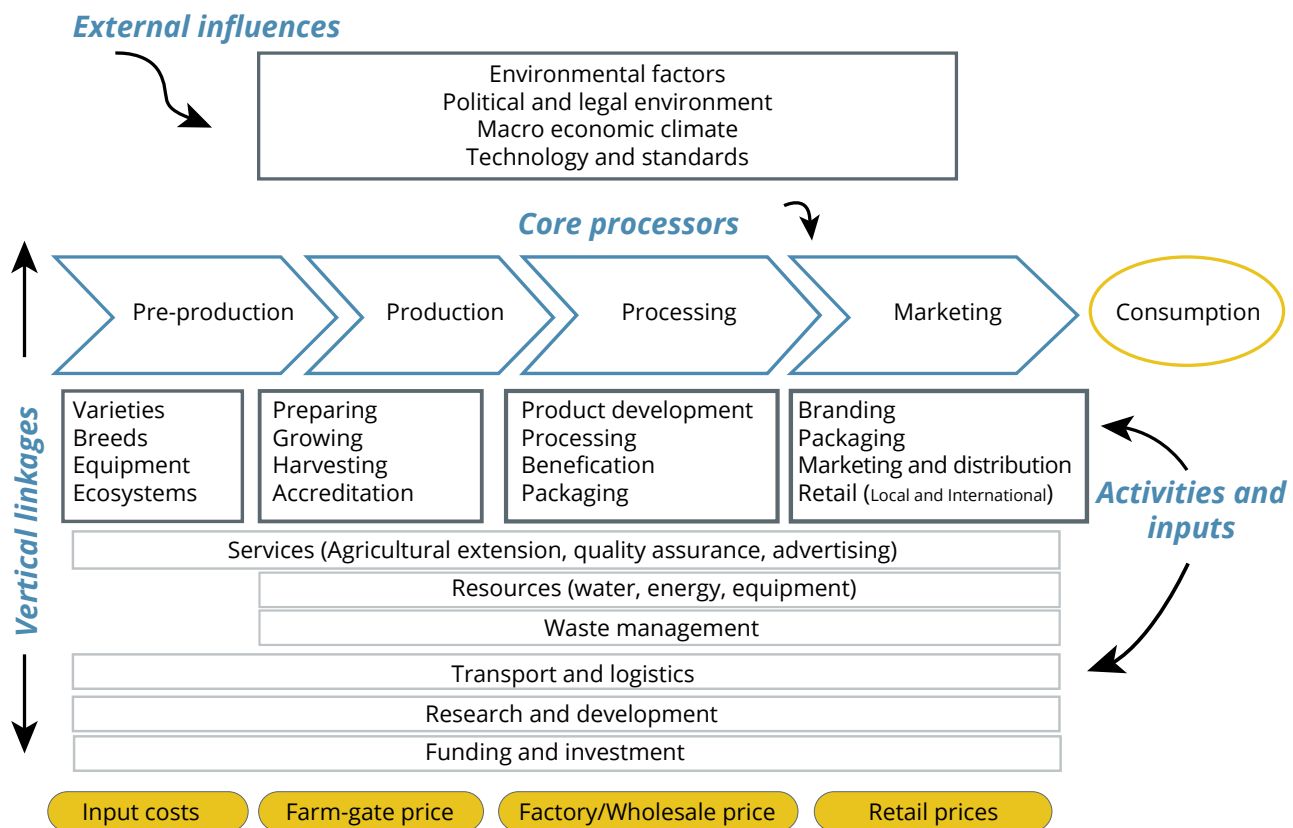
In the National Development Plan, the agricultural sector has been identified as an important engine for economic growth and job creation. South Africa's agricultural sector has found lucrative markets in many parts of the world and the sector contributes about 13% to South Africa's export basket (Daff, 2013).

Given the competitiveness of global agricultural markets, growth in the sector requires a focus on the productivity, efficiency and regional value-add of agricultural products. Value chain analysis is a key tool to assist policy makers to better target interventions in the agricultural sector. Interventions to support producers need to be based on an understanding of the full value chain and where the real value is created. If the full value chain is not understood, farmer support interventions can create poverty traps where the farmer is positioned in a low value part of the chain and the real value creation happens further upstream or downstream of the farming activity (in the pre-production or post-production phases).

Description of the agricultural value chain

There are many different ways to map a value chain – ranging from a simple chain to more complex ones. The model outlined in the graphic has been developed based on three key elements – core processes, key activities and inputs and external influences. It illustrates the way the product flows from conception to end markets and presents a framework for how the industry functions. The process involves four interconnected processes: pre-production, production, processing and marketing each of which involves a range of activities and inputs. These inputs and activities are listed in the boxes. Some are specific to a process and others are cross-cutting. At each point along the chain there is a price.

Typical Agricultural Value Chain

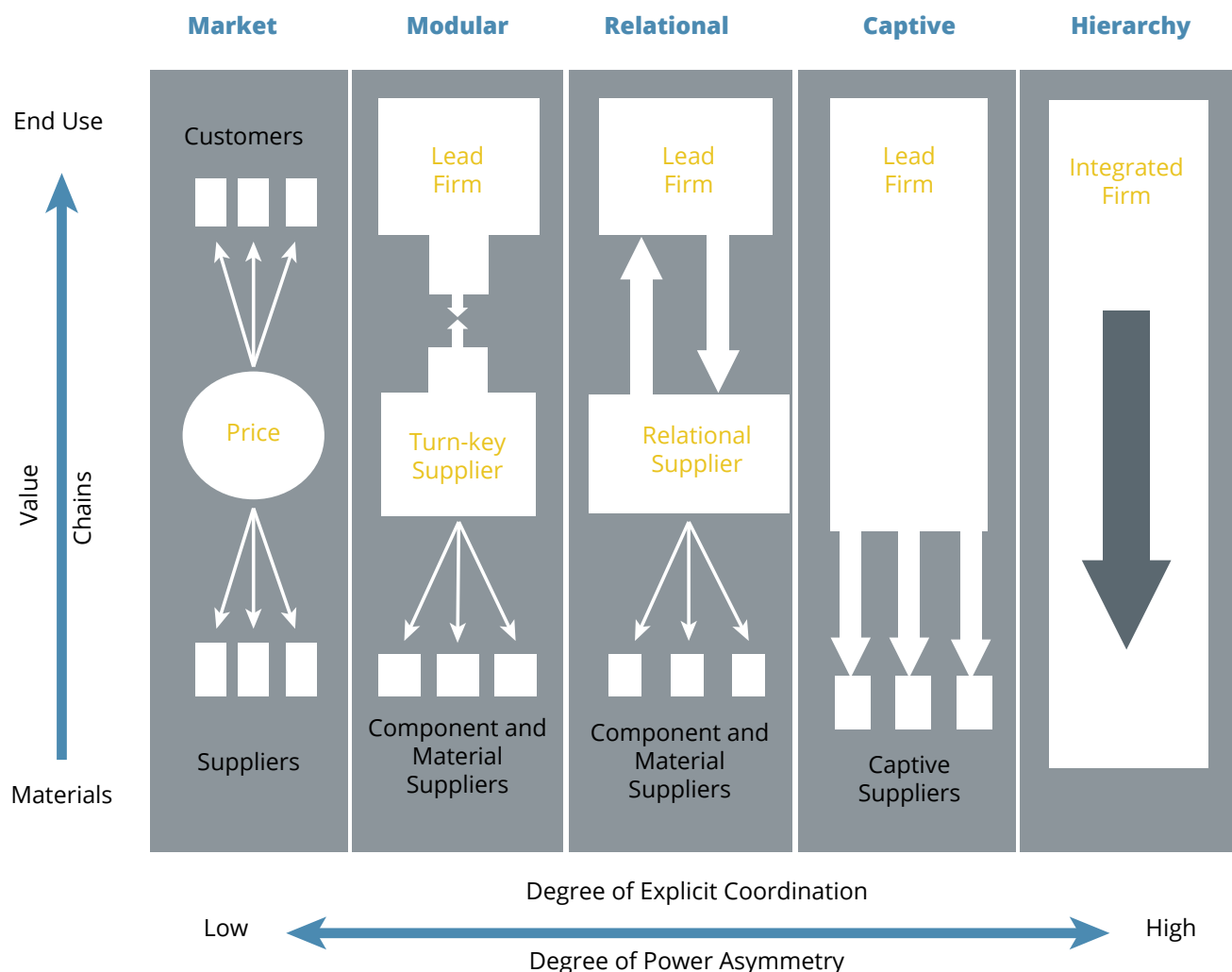


Governance of Value Chains

In each value chain the degree of centralization and/or explicit coordination varies depending on the type of governance of the value chain. Gereffi et al identified five types of relationships namely:

- **Markets:** In this scenario the cost of switching to new partners is low for both parties and price is the most important consideration. Those able to cut price have the most power which is usually large firms.
- **Modular value chains.** Typically, suppliers in modular value chains make products to a customer's specifications, which may be more or less detailed. The supplier often holds the power in this relationship.
- **Relational value chains.** In these networks we see complex interactions between buyers and sellers, which often creates mutual dependence and high levels of asset specificity. This may be managed through reputation, or family and ethnic ties. Here power is usually fairly evenly distributed.
- **Captive value chains.** In these networks, small suppliers are transactionally dependent on much larger buyers. Suppliers face significant switching costs and are, therefore, 'captive'. Here the buyer holds all the power.
- **Hierarchy.** This governance form is characterized by vertical integration. The dominant form of governance is managerial control, flowing from managers to subordinates, or from headquarters to subsidiaries and affiliates. Power is held at the head office.

These are depicted in the graphic below:



Understanding the governance questions helps practitioners and policy makers understand where and how to support value capture for stakeholders.

Key questions to ask when developing a value chain

The generic value chain described above, along with the governance framework provide a framework for questions that need to be answered when mapping a specific value chain. A list of questions to assist practitioners map an actual value chain is outlined below.

General

1. What are the main activities carried out in the value chain to produce the final product (or category of products)? **Note:** These activities will vary depending on the type of chain being analysed (fresh agricultural produce vs agro-processed commodities). However, it is advisable to identify not more than six main activities between the start of the production process and sale to the final customer. In the generic chain we list four, most of which will be found in all agricultural value chains.

2. How many steps and how many players are involved long from pre-production to the end market? How does this compare with competing value chains?
3. What are the flows of products, information and knowledge in the value chain? These flows can be both tangible and intangible, for instance, products, money, information and services.
4. Which product segments are currently being offered by the companies in the chain? Do they represent the full range of segments that could be offered? Do they represent the highest value segments in the industry?
5. Who are the operators involved in the activities and what are their roles?
6. What types of relationships and linkages exist among the various chain actors? These may include a market relationship, a persistent network relationship between independent firms, a vertical integration.
7. Who holds power or influence and how is the value chain governed – see five categories above?
8. In what ways is the value chain regulated from outside, or self-regulated?
9. Where is the most value added to the value chain?
10. Where are the bottlenecks in the value chain?

Once the general questions have been asked then a series of specific questions are needed for each process step. The table below provides a tool for asking these questions.

<i>Question</i>	<i>Pre-Production</i>	<i>Production</i>	<i>Process</i>	<i>Market</i>
• What is the output?				
• Are there any accreditation requirements in the market?				
• What are the key activities needed to achieve this output?				
• What inputs are needed?				
• What is the largest cost item?				
• What are the resource demands?				
• Who are the actors? And how do they relate to each other?				
• Who holds the power? And is there any opportunity to shift this?				
• What R&D is happening?				
• What logistical and transport needs exist?				
• What are the investment or funding needs?				
• What is the market/s? Are there local or international components and how do these differ?				
• Who are the competitors?				
• What are the opportunities?				

Question	Pre-Production	Production	Process	Market
• Are there opportunities for backward or forward linkages along the horizontal cluster of activities?				
• Are there opportunities for vertical linkages and/or beneficiation				
• How is waste managed?				
• What is the value add?				
• What is the final price/s?				
• What are the challenges?				
• What are the solutions to these challenges?				

Once the existing chain is mapped a series of strategic questions need to be asked and answered namely:

- Is the product a low value or high value product? Is this the correct positioning?
- Is the product low cost or high cost in the market? Is this the correct positioning?
- What is the % differentiation? Is this the correct positioning?

Weaknesses of value chains

While value chains are a valuable tool for analysing processes they also have weaknesses. Some of these are listed below: *(This list has been adapted from World Bank, 2010)*

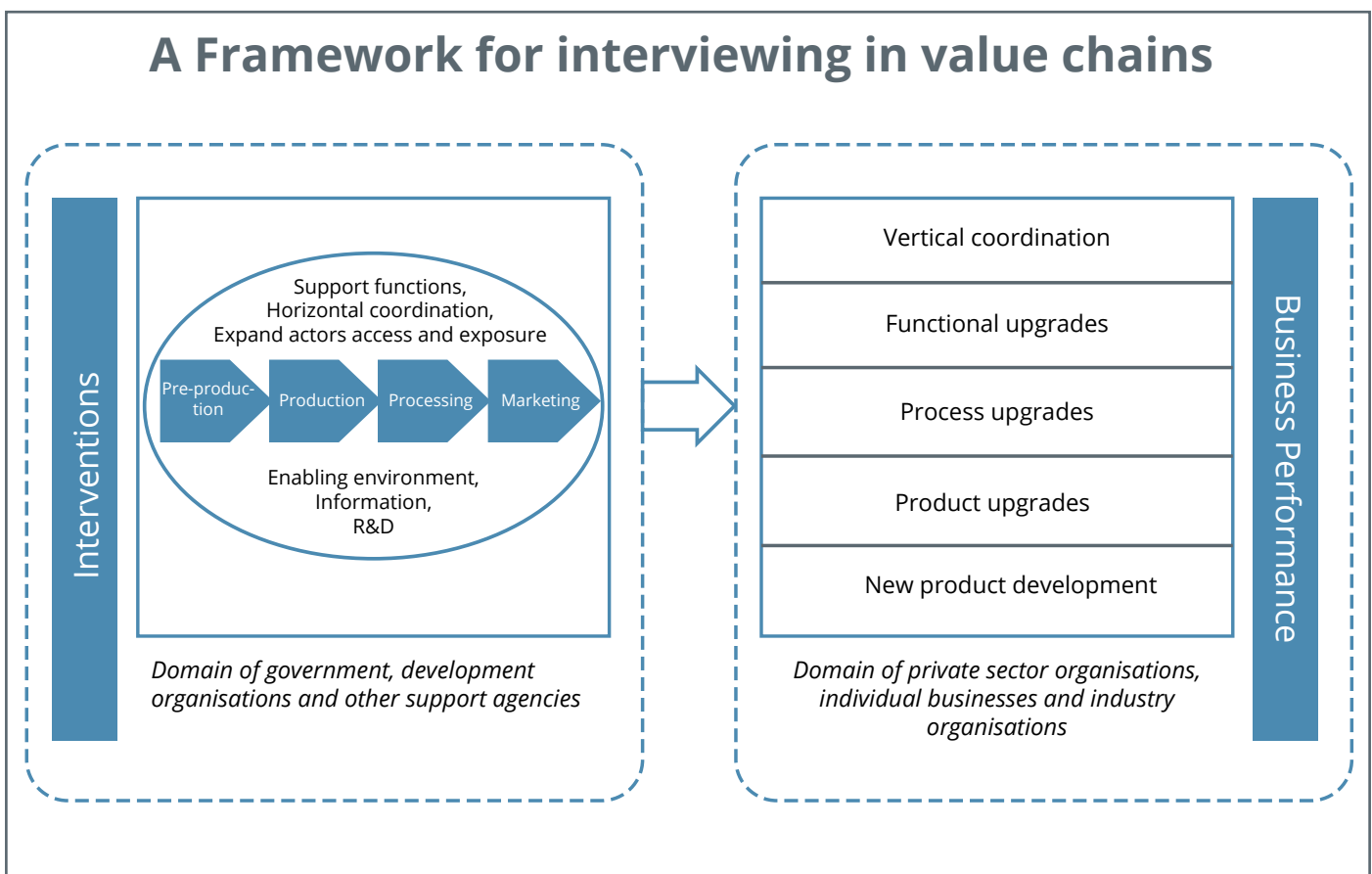
- Limited expertise: Many people are familiar with value chains but few are experts and therefore the exercise is not always as robust as needed.
- Value chains are not fixed or static: It is important to recognize that value chains are not fixed in terms of composition, relationships, or market positioning. For key actors there is a competitive need to alter and improve their performance in the market and this impacts on the value chain. Further, value chain analysis too often focuses simply on improvements within the given value chain, rather than on how value chains can be shifted to target different, more attractive markets and business strategies.
- Market dynamics matter: Value chains can be helpful instruments for serving the needs of a particular market sector, but focusing on a static value can mask the need to segment and customise products for different markets.
- Quality and service are also important: Similarly, excessive focus on delivering a product (especially a commodity) may hide opportunities to deliver a package of products and services (across value chains) that the market or customer will find desirable.
- Shifting value within a value chain, rather than creating more value: Some stakeholders continue to look at value chain analysis as a zero-sum game focused on shifting value from one link of the chain to another. This cutthroat perspective obscures opportunities to upgrade the whole system to the benefit of all value chain participants.
- External environment: Often value chain analysis fails to properly consider the environment in which the value chain operates and in so doing fails to identify key interventions needed to unlock value.

How can value chains be strengthened?

Because value chains do not exist in the sense of having a tangible reality, they are simply a framework for trying to understand how the world works, (Copla, 2009), they do not always function optimally. Government and development practitioners have therefore used value chain analysis to inform sector strategies and programmes to increase competitiveness and access to markets.

Often the first intervention in a series of interventions that are needed to improve value added and also the share of the value chain activities is horizontal coordination. Once this is functioning then the focus often turns to vertical linkages with the activities, products and services which cut across the value chain and are captured in the boxes in the generic diagram. Other areas for intervention include functional upgrading, product development and upgrading. Finally improvement might be needed in the enabling environment to shift the external factors that impact on the chain.

The public sector is better placed to make some of these interventions while others are better suited to industry interventions. The systematic below provides a framework for thinking about who should be making what interventions.



Concluding thoughts

Research points to several key lessons for policy makers and practitioners including:

- The choice of value chain is important. The selected chain must be rooted in real market activity where some competitive advantages exist.
- Good value chain analysis requires robust research and a good evidence base to understand the current market and the opportunities.
- Clarity on the rationale for the intervention. It is important to distinguish whether the primary aim of an intervention is to reduce poverty or stimulate growth. This does not preclude both the poor and non-poor from benefiting but it helps to focus the investment.
- Identifying appropriate interventions. It is important that the interventions proposed are rooted in the VC analysis and congruent with the logic of the value chain.
- Focusing on gaining access to the segments of the chain where value is held. Participation alone is not a measure of success and does not necessarily offer opportunities for growth. The key goal should be to capture those segments with significant value.
- Avoid obsessing about the production node. Most public sector interventions focus on ensuring the poor capture some production. Often this is the least valuable segment and can be a poverty trap.
- Analyse the enabling environment and identify the state failures as well as market failures as these are often good points for public sector intervention.

(Adapted from COPLA, 2009)

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