

**JOBS  
GUIDE**  
Issue 2

# Jobs in Value Chains Survey Toolkit

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**WORLD BANK GROUP**  
Jobs

# **JOBS IN VALUE CHAINS SURVEY TOOLKIT**

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# TABLE OF TOOLS

Phase	Document Id.	Title	End User
<b>I. INTRODUCTION TO JOBS IN VALUE CHAINS SURVEY ANALYSIS</b>	Toolkit Guide	“Jobs in Value Chains Survey Toolkit: A Guide for How to Assess Value Chains for Development”	Core Task Team, Project Manager
	Toolkit Guidance Slides	<a href="#">“Jobs in Value Chains Survey Analysis—Overview and Methodology Presentation”</a>	Core Task Team, Project Manager
<b>II. BACKGROUND (SECONDARY RESEARCH)</b>	Tool 1	<a href="#">“Tool 1: Value Chains Screening Template”</a>	Core Task Team, Value Chain External Consultant
<b>III. VALUE CHAIN MAPPING</b>	Tool 2	<a href="#">“Tool 2: Value Chains Mapping Guidelines”</a>	Core Task Team, Value Chain External Consultant
<b>IV. STRUCTURED SURVEYS</b>	Tool 3	<a href="#">“Tool 3: Jobs in Value Chains Survey—Expression of Interest (EOI) Sample”</a>	Core Task Team, Value Chain External Consultant
	Tool 4	<a href="#">“Tool 4: Jobs in Value Chains Survey—Terms of Reference (TORs) Sample”</a>	Core Task Team, Project Manager Survey Firm or Consultant
	Tool 5	<a href="#">“Tool 5: Value Chains Survey Sampling Guidelines”</a>	Core Task Team, Survey Firm or Consultant
	Tool 6	<a href="#">“Tool 6: Value Chains Survey Design and Planning Report (VCSDPR) Template”</a>	Core Task Team, Survey Firm or Consultant
	Tool 7	<a href="#">“Tool 7: Jobs in Value Chains Survey—Master Agriculture Survey”</a>	Survey Firm or Consultant
	Tool 8	<a href="#">“Tool 8: Jobs in Value Chains Survey—Master Manufacturing Survey”</a>	Survey Firm/Consultant
	Tool 9	<a href="#">“Tool 9: Jobs in Value Chains Survey—Orientation Training Master Slides”</a>	Core Task Team Survey Firm or Consultant
	Tool 10	<a href="#">“Tool 10: Jobs in Value Chains Survey—Training of Trainers Master Slides”</a>	Survey Firm or Consultant, Interviewers
	Tool 11	<a href="#">“Tool 11: Jobs in Value Chains Survey—Master Interviewer Manual”</a>	Interviewers
<b>V. SEMI-STRUCTURED INTERVIEWS AND FOCUS GROUPS</b>	Tool 12	<a href="#">“Tool 12: Jobs in Value Chains Survey—Semi-structured Interview Guidelines”</a>	Survey Firm or Consultant
<b>VI. ANALYSIS AND REPORT</b>	Tool 13	<a href="#">“Tool 13: Jobs in Value Chains Survey—Master Survey Codebook”</a>	Survey Firm or Consultant
	Tool 14	<a href="#">“Tool 14: Jobs in Value Chains Survey—Core Indicators”</a>	Core Task Team, Project Manager, Value Chain External Consultant

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<sup>1</sup> Formerly the Commonwealth Development Corporation

# ABBREVIATIONS

<b>CAPI</b>	Computer-assisted personal interviewing
<b>CCSA</b>	Cross-Cutting Solutions Area
<b>CRI</b>	Competitiveness Reinforcement Initiative
<b>FDI</b>	Foreign direct investment
<b>EOI</b>	Expression of interest
<b>FTE</b>	Full-time equivalent
<b>GP</b>	Global Practice
<b>GVC</b>	Global value chain
<b>IOT</b>	Input-output table
<b>LQ</b>	Location quotient
<b>MSME</b>	Micro, small, and medium enterprise
<b>NGO</b>	Non-governmental organization
<b>PAR</b>	Participatory action research
<b>PPD</b>	Public-private dialogue
<b>SAM</b>	Social accounting matrix
<b>SME</b>	Small and medium enterprises
<b>T&amp;C</b>	Trade and Competitiveness
<b>TOR</b>	Terms of reference
<b>VC</b>	Value chain
<b>VCSDPR</b>	Value chain survey design and planning report

# ABSTRACT

**Value chain (VC) studies allow us to provide an in-depth understanding of the interrelationships among firms that operate in a supply network and of the factors that determine the structure, dynamism, and competitiveness of these chains.** Although most approaches to value chain analysis provide a limited focus on the nature and structure of jobs in these chains, the Jobs in Value Chains survey toolkit discussed in this guide will help illuminate the number of jobs, where they are located in the VC, and the extent and nature of relationships among actors in a VC. The approach involves value chain mapping and firm-level surveys which quantify employment potential (inclusive of the informal sector), cover the extent and nature of relationships among actors in a VC and identify possible constraints to business operations and growth. Data emerging from these studies can be analyzed to provide solutions to value chain gaps and existing constraints, as well as, to measure the impact of specific job interventions on job creation. The objective of this guide is to provide practitioners with an overview of key items to consider when they design and deliver value chain analysis with the help of the Jobs in Value Chains survey toolkit. The analysis is guided by a strong implementation methodology, which is discussed across the guide. The primary phases involve secondary research for value chain selection, which in turn informs a full mapping of all critical components of the specified value chain. Teams collect jobs data with structured quantitative surveys and semi-structured interviews and focus groups, and they are able to adapt the questionnaires and sampling approach for the selected value chain. The final section includes some recommendations for the structure of the report. The guide has been designed for project team leaders but may also be useful for other donors, development agencies, and government ministries.



# INTRODUCTION TO JOBS IN VALUE CHAINS SURVEY ANALYSIS

Value chains (VC) are an important channel to analyze development challenges and solutions (value chain analysis) and implement them (value chain development initiatives). This is partly due to (a) their specificity and impact, in contrast to economy-wide interventions that often have longer lead times and (b) the relative ease through which key actors can be identified and mobilized. Therefore, as countries seek to develop strategies to deliver more, better, and inclusive jobs, value chains are an ideal focal point to identify opportunities to support greater job creation, productivity, and skills development.

VC studies emphasize job creation across domestic supply chains and skills development to ensure that workers are competitive and able to take advantage of new opportunities. The World Bank has long carried out value chain analyses, particularly in the Trade and Competitiveness (T&C) and Agriculture global practices (GPs). Value chains also have been identified as a focus area in projects implemented through the Jobs and Development Group, most notably in the Let's Work Partnership country engagements.

This guide provides an overview of key considerations for practitioners to design and deliver value chain analysis using the toolkit—with a goal to deliver inclusive jobs and higher earnings for the poor and bottom 40 percent (see box 1). Specifically, the guide is intended to support the preparation of an analysis and report through an action-oriented process that will lead to a program of interventions to support not only job creation, but also skills enhancement and supply chain deepening across targeted subsectors. The guide is designed primarily for project team leaders and team members, but it may also be useful for other donors, development agencies, and government ministries. The Further Reading section at the end of this document identifies other resources that may add insights relevant to embarking on a VC analysis.

## BOX 1: WHAT IS THE JOBS IN VALUE CHAINS SURVEY TOOLKIT?

The Jobs in Value Chains survey toolkit aims to help unlock the potential for value chains to deliver more, better, and inclusive jobs. The effort (a) integrates small and medium enterprises, smallholder farmers, and microenterprises into established sources of demand (inclusive jobs); (b) empowers them to capture more value (better jobs); and (c) identifies sources of large-scale job creation through a process that improves competitiveness and exploits growth potential of the wider value chain and subsector (more jobs).

Although the Jobs in Value Chains survey toolkit focuses on the assessment stage, that stage is just a step within a wider process to energize and develop the value chain. Before field research begins, a process is undertaken to screen and prioritize value chains while a parallel process supports the work through interviews and consultations with key stakeholders. An industry-based public-private dialogue also is part of the process. The approach is designed to produce action plans that will improve the competitive position of local firms and the overall efficiency of the value system. Further, the plans will emphasize implementation that links microenterprises and smallholder farmers into value chains and facilitates greater value capture for these firms. Data emerging from these studies can be analyzed to provide solutions to value chain gaps and existing constraints, as well as, to measure the impact of specific job interventions on job creation. The approach is designed to be:

**Action-oriented:** Designed to lead to identification and implementation of priority actions

**Customizable:** With tools that are flexible and that provide both country- and sector-specific considerations and comparable results

**Flexible:** Applicable to both data-rich and data-poor contexts, as well as to a diverse array of firm typologies that:

- Include primary and secondary sources of information
- Combine qualitative and quantitative methods of information aggregation

**There are five main phases/ activities in the value chains assessment.** These include (a) background (secondary) research (including value chain screening and initial mapping); (b) value chain mapping; (c) structured surveys; (d) semi-structured interviews and focus groups; and (e) the analysis and report (which includes an analysis of the data to identify and prepare interventions to support value chain development and job creation). (See section 3 for a flow chart and more detail about the process.)

**A variety of tools that support the planning and implementation of the Jobs in Value Chains study also are described later in this guide.** The tools include (a) a screening template for VC selection, (b) Expression of Interest (EOI) and Terms of Reference (TOR) templates to use to hire external expertise, (c) a sampling note that suggests approaches and methodologies for sampling, (d) survey instruments and a Value Chain Survey Design and Planning Report (VCS DPR) to monitor implementation standards, (e) an interviewer manual and training slides, (f) a guide to how to conduct semi-structured interviews, and (g) an indicators and scenarios template that outlines the list of indicators derived from the survey and potential jobs growth templates.

**The analysis that results will help teams understand and quantify the opportunities and constraints to job creation and increased earnings within value chains.** This guide is designed to complement the toolkit and support the main stages involved in the collection of robust data on jobs in value chains. In this context, some of the approaches to competitiveness have been adopted from the World Bank's Trade and Competitiveness GP.<sup>2</sup>

**The remaining sections discuss the premise for how to conduct a value chain analysis and provide a suggested framework for project set-up.** The following sections of this guide describe and discuss the various phases of the jobs in value chains approach as described in section 3 (figure 3).

## **RATIONALE FOR A JOBS IN VALUE CHAINS SURVEY**

This section provides some basic information to help motivate teams to focus on jobs and use the value chain approach. It is necessary to build a strong argument to motivate and justify the funding early as a team prepares a work program to identify opportunities for job creation and earnings growth through value chain analysis, or as a team designs a package of technical assistance to deliver support through value chain interventions. This is also particularly important because value chain studies can be relatively costly and require significant on-the-ground commitment.

### **Why focus on jobs?**

**Jobs are a cornerstone for development and a key pathway to meet the World Bank Group goals to eradicate poverty and boost shared prosperity.** Growth alone, without broad-based expansion of employment, has proved to have limited effect on poverty reduction. Robust growth in the presence of limited job creation (as typically happens in resource-rich countries) or where job growth is highly skewed toward high-skilled activities (as increasingly happens in high-income countries) often has little effect on poverty and contributes toward increasing inequality.

**Labor is the most important asset of the poor, and a strategy to leverage this asset to generate a steady earnings stream is the most sustainable pathway out of poverty.** It has been estimated that 600 million jobs are needed over the next decade simply to absorb the growth in the working-age population—75 million youth are currently unemployed worldwide and another 1 billion will enter the labor market between now and 2030. In many of the poorest countries, the number of youth who enter the labor market each year is equivalent to the total number of existing formal wage jobs in the economy. Therefore, while it is critical to increase formal wage employment (more jobs)—especially for women and youth—the solution to the jobs challenge must go beyond this goal and address

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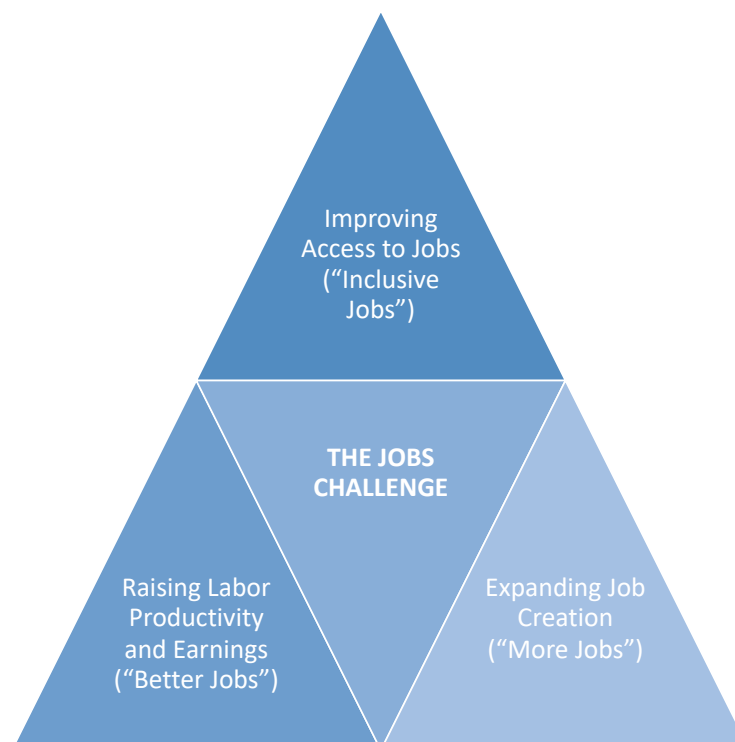
<sup>2</sup> The semi-structured interview guidance presented in this note includes lessons from the approach developed by the World Bank's Trade and Competitiveness GP. Similarly, the public-private dialogue process has been adapted from existing T&C GP methodology.

improvements to returns to the self-employed and informally employed (better jobs). Moreover, the creation of new jobs is not likely to be distributed equally in any country. The winners tend to be those workers most educated and those who live in urban areas (and in many countries, they tend to be men), whereas the less-skilled, those who live in lagging or rural areas, and often women are far less likely to benefit from aggregate job creation. Thus, improved access to jobs and earning opportunities (inclusive jobs) is essential to address the global jobs challenge (see figure 1).

**Figure 1**

The Jobs Challenge

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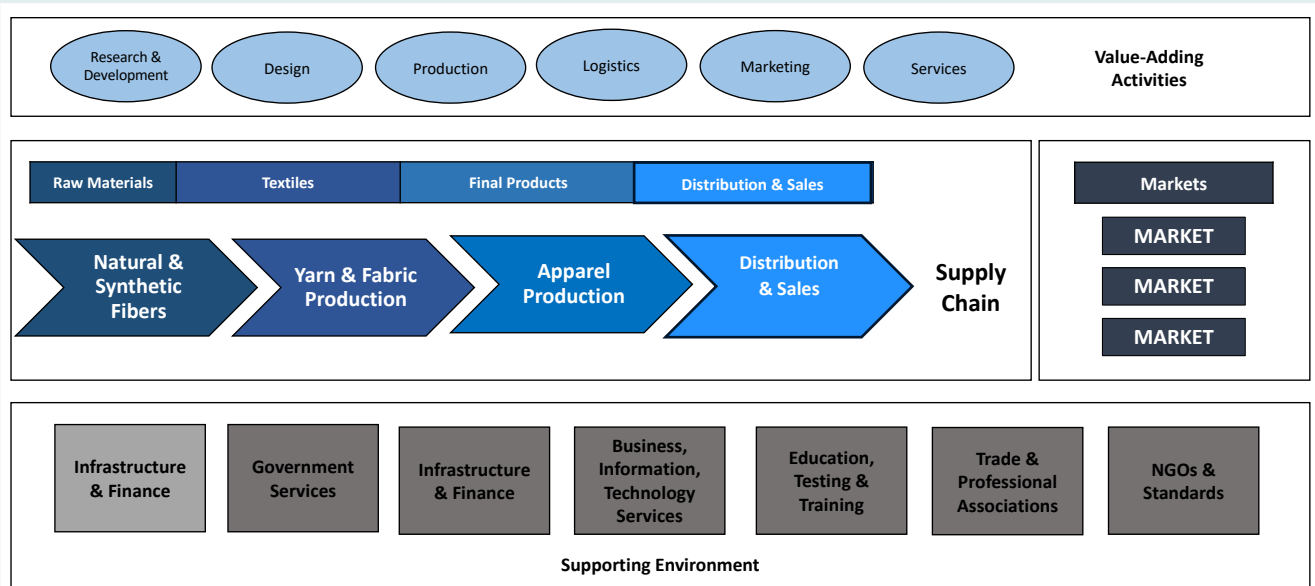
### Why value chains?

**Value chains** (see box 2) are attractive entry points because they offer the potential to leverage large-scale job creation that can span from high-skilled, formal employment in globally competitive lead firms to quality, sustainable earning opportunities for low-skilled self-employed workers or smallholders. The ability to link these two worlds—and to link competitiveness and productivity growth to jobs and earnings—makes value chains critical for the policymaker and development practitioner. Thus, the Jobs in Value Chains approach described in this guide aims to identify the opportunities and requirements to link microenterprises and the self-employed into larger markets and high value-added activities. At the same time, these links must occur in value chains that are sustainable—competitive on a national, regional, and in some cases a global basis. This effort requires participants to understand the current challenges and opportunities to strengthen domestic value chains and integrate them into global value chains (GVCs).

## BOX 2: VALUE CHAINS AND GLOBAL VALUE CHAINS

Value chains encompass the full range of activities required to bring a good or service from conception, through the different stages of production (provision of raw materials, input of various components, subassembly, producer services, and assembly of finished goods), to delivery to final consumers, and, finally, to disposal after use.<sup>a</sup> The term “value chain” describes the concept that as the product or service moves through each of these stages of production, value is added along the way. This value may be captured within a single actor (in the case of a vertically integrated chain), or it may involve a number of actors at each stage. The relative value of each stage will not be the same, and therefore one of the key challenges for firms and workers is how to position themselves in the activities that are highest in value added, and how to maximize value captured in the stage(s) in which they participate. Figure B2.1 offers an example of a value chain.

**Figure B2.1: Value Chain Example: Textiles and Apparel**



Source: Stacey E. Frederick, “Development and Application of a Value Chain Research Approach to Understand and Evaluate Internal and External Factors and Relationships Affecting Economic Competitiveness in the Textile Value Chain” (PhD diss., North Carolina State University, Raleigh, NC, 2010).

Note: NGO = nongovernmental organization.

**Global value chains (GVCs) describe the concept that these stages of the production process (often described as “tasks”) increasingly take place across a number of different countries.** Inputs and semi-finished products and services are imported, value is added domestically, and then the product is exported to process further or to consume. This “second unbundling” of global trade was made possible by a combination of improved shipping technology, revolutionary changes in information and communication technology, and global trade liberalization which enabled multinational firms to take advantage of differences in comparative advantage across locations to establish integrated networks of intrafirm and interfirm production and trade.<sup>b</sup> More than half the world’s manufactured imports are now intermediate goods, and more than 70 percent of world services imports are intermediate services.<sup>c</sup>

**GVC-oriented trade offers opportunities for developing countries to benefit from global integration.** In the past, a country that aimed to become an apparel exporter, for example, would need design capabilities and textile mills; to export in the automotive sector, the country would need to produce engines and all subcomponents and would require the scale to carry out assembly. Under the new trade dynamics, a developing country can specialize in certain activities (sewing, specific components, or subassembly) and import the necessary inputs. For microenterprises, links into global value chains not only

offer huge market potential, but also provide an almost unparalleled opportunity to obtain knowledge, technology, and processes at the global frontier, with substantial potential for the support of rapid productivity growth. The nature of such value chains also presents substantial barriers to the majority of microenterprises that lack the technology, skills, assets, and networks to take advantage of these opportunities.

Gary Gereffi, Karina Fernandez-Stark, and Phil Psilos, “Skills for Upgrading: Workforce Development and Global Value Chains in Developing Countries,” Center for Globalization, Governance, and Competitiveness, Duke University, 2011.

Richard Baldwin, “Trade and Industrialisation after Globalisation's 2nd Unbundling: How Building and Joining a Supply Chain Are Different and Why It Matters,” in *Globalization in an Age of Crisis: Multilateral Economic Cooperation in the Twenty-First Century*, ed. Robert C. Feenstra and Alan M. Taylor (Chicago: University of Chicago Press, 2013), 165–212.

OECD (Organisation for Economic Co-operation and Development), “Mapping Global Value Chains,” OECD Conference Centre, Paris, 2012.

**Efforts to develop jobs in value chains complement broader horizontal interventions intended to build skills and develop a competitive supply side, such as schemes to improve infrastructure and institutions as part of the broader investment environment.** Value chain solutions operate at the firm level because they facilitate a virtuous circle between productivity, profits, and investment in jobs and skills (figure 2). Targeted industry-specific or value chain-specific interventions—such as skill development and training, standards, common infrastructure, and market development—tend to have a measureable effect within a more reasonable timeframe than do more generic reform efforts that often take longer and are difficult to evaluate. Additionally, value chain interventions are often more likely to be implemented successfully because the value chain offers a platform to build coalitions of mutual interest.

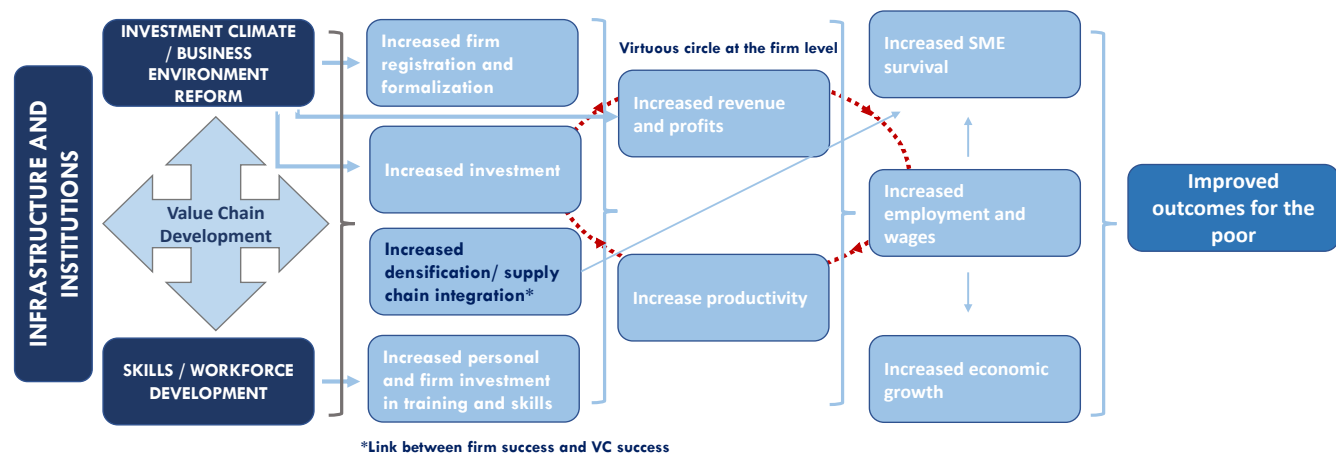
**The main opportunity for large-scale job creation and earnings enhancement in value chains comes through the link between firm success and wider value chain success—as they deepen, or “densify,” the domestic supply chain.** An effort to develop a few competitive lead firms in a value chain is likely to lead to more and better jobs in those specific firms. However, if the firms mainly rely on imported goods and services, the value chain’s job creation potential is stunted. Therefore, the links between these lead firms and domestic suppliers of goods and services need to be strengthened and deepened so that the job creation potential can be unleashed and, in particular, microenterprises can participate.

**A number of barriers, particularly related to the smaller size or informal nature of microenterprises in the supply chain, can limit the realization of these relationships in practice.** Lead firms look for reliable, quality local suppliers and local suppliers look for consistent, sustainable, and profitable market opportunities, but skill and technology gaps, quality control issues, credit constraints, and lack of formal contracts can be obstacles. The value chain development approach, therefore, can be particularly useful to identify common problems and solutions around a framework that is market based.

**The value chain approach helps identify both the skill set that firms require today and the skill sets that will be needed to develop and sustain more competitive business models in the future.** This is particularly critical in value chains that undergo significant transition. For example, European textile value chains had to adopt entirely new business models with the advent of Chinese competition in the mid-2000s. The challenge had significant implications for the skills required, as traditional sewing techniques gave way to more advanced skill requirements in design, as well as in retail and logistics. Value chain and cluster platforms were critical to identify the needs and develop a collective approach to address the market transformation.

**Figure 2**

How Value Chains Link to Jobs, Growth, and Poverty Reduction



Note: SME = small and medium enterprise.

### Who benefits from jobs in value chain initiatives?

Initiatives intended to expand jobs and increase earnings through value chain interventions offer the potential to benefit not only lead firms and microenterprises in the supply chain, but also value chain support institutions (educational, training, and technology institutes and other agencies), workers, and the government. See table 1.

**Table 1**

Beneficiaries and the Potential Gains from Jobs in Value Chains Initiatives

<b>Lead firms</b>	Improved environment for investment and growth, including infrastructure, finance, skills, and legal and regulatory conditions Access to domestic suppliers with higher quality and productivity Improved access to skills
<b>MSMEs</b>	Access to growth opportunities through supply chain links and related environment (infrastructure, finance, skills, regulations, and so on) Potential for increased productivity and environment for expansion
<b>Supporting agents and institutions</b>	Improved understanding of skill needs, enabling technologies, and requirements to upgrade the chain by education and training institutes, technology transfer agencies, and entrepreneurship and incubation centers Potential for increased government and industry investment
<b>Workers</b>	Access to improved training and skill development More employment opportunities and improved matching Potential for wage growth
<b>Government</b>	Infrastructure and industry development and upgrading, export growth Value chain densification Productivity growth More and better jobs

Note: MSME = micro, small, and medium enterprise

## THE PROCESS AND RESOURCE REQUIREMENTS

Value chain studies require a serious investment in time and financial resources. To implement the toolkit described in this guide requires supervision and monitoring by a responsible technical team that will oversee questionnaire adaptations, training, sample selection, fieldwork, and data management. A strong implementation methodology has been developed that uses technical guidelines and quality control. The primary steps involve background research and a full mapping of all critical components of the specified value chain. Data are then collected from structured quantitative surveys and semi-structured interviews and focus groups. The final output of each value chain study includes analysis of the data collected, along with recommendations for the final report.

**Figure 3**  
Broad Overview of the Jobs in Value Chains Analytical Process

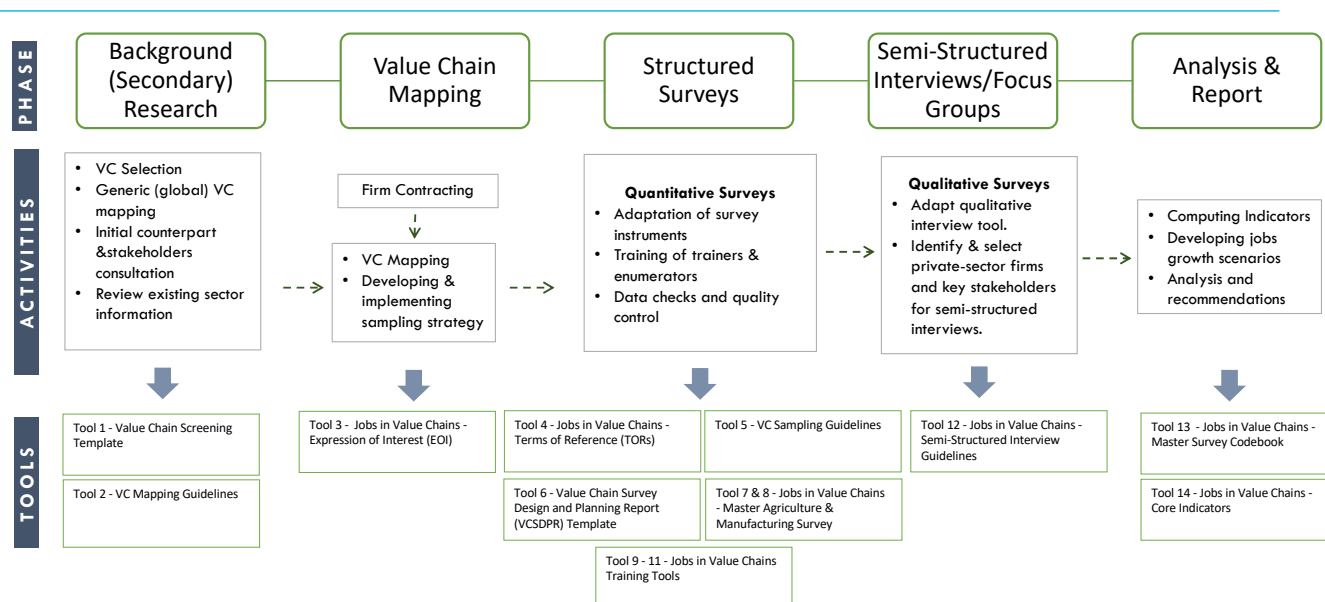


Figure 3 illustrates the five main phases of the project:<sup>3</sup>

1. **Background (secondary) research.** During this stage, teams review potential value chains, put them through a screening process, and select value chains for study. The selection of sectors and specific value chains is an important starting point, especially because in some cases the analysis will be conducted as part of a wider VC development process. Thus, sectors and value chains need to be selected with a strategic perspective. Some important considerations include (a) the availability—or rather, unavailability, of data—to identify value chains; (b) the sector-specific focus, which may arguably concentrate outcomes on a small segment of the economy; and (c) the potential influence of other rationalizations on value chain selection, regardless of the framework used. Much of the work should be manageable through desk research, although some limited fieldwork will often be required. The culmination of this process could involve a team mission to the field to seek agreement on the final value chains for selection and to mobilize key stakeholders.
2. **Value chain mapping.** During this stage, the team undertakes a full mapping of all critical components of the specified value chain through the use of available sample frames, existing research, and other information. Because this step will guide the sample structure of the firms or farms whose staff will be interviewed, the mapping must be as comprehensive, accurate, and up to date as possible. Another important aspect of this stage is to identify the critical

<sup>3</sup> Note that figure 3 describes only the analytical process to reach the point at which potential interventions can be identified to drive competitiveness, job creation, and improved earnings potential. Design and implementation of the interventions are part of the next stage of activities—the value chain development process—which normally requires an ongoing commitment of resources and support (several years). That phase is not covered in this guide.



nodes that will be selected for the quantitative interviews and any additional nodes to be covered by the qualitative approach.

3. **Structured surveys.** Similar to most rigorous quantitative surveys, the value chain tool typically takes seven to eight months to implement from start to finish, from the time that consultant firms are hired until a final weighted data set is available for further analysis. The successful implementation of these surveys is contingent on a strong implementation methodology based on technical guidelines, training, and quality control. The Jobs in Value Chains quantitative surveys have been designed to ensure a structured, rigorous approach to collection of quantitative information. However, each new case study requires investigators to revisit the questions and adapt them to the specific sector for the benefit of the respondents and to gather unique industry insights. The survey instrument will likely need to be tailored further to account for value chain or country-specific needs. Staff may need to add questions on specific issues of interest, reword questions to apply to the regional context, and make other adjustments.
4. **Semi-structured interviews and focus groups.** During this stage, the team uses qualitative methods to capture country or “business-environment” specific factors, records comments from key stakeholders, and notes unique trends within the sector. The interview and focus group sessions not only gather information, they also can help engage key stakeholders in the wider value chain development and dynamization process. Thus, this phase is about action as much as research. Note that although focus group discussions and interviews with key stakeholders may be less structured than formal surveys, the approach to them should be no less rigorous or systematic.
5. **Analysis and report.** In this phase, the investigators analyze the results of the desk and field research and prepare assessment reports on each value chain studied.<sup>4</sup> These reports should detail the structure and dynamics of the value chains, assess job creation opportunities and wider value chain competitiveness, and detail the main obstacles to sustainable jobs and earnings growth, including skills issues but also broader issues of investment climate, infrastructure, and so on. The final analytical reports also outline proposed interventions and a potential program of support to value chain competitiveness and job creation.

**The financial resources required to carry out the survey will vary depending on the country context and the size and complexity of the value chain(s).** A budget of US\$200,000 is recommended per value chain in order to carry out an in-depth assessment that includes the survey, complementary primary and secondary research, and the consultation process. While “rapid assessments” of value chains may be possible for \$25,000 or so (two-month, single mission efforts with limited primary research), these will not deliver the depth of understanding and mobilization that are usually required, and therefore they would be unlikely to move directly into a value chain development stage, with clearly defined interventions and programs of support.

## THE TEAM

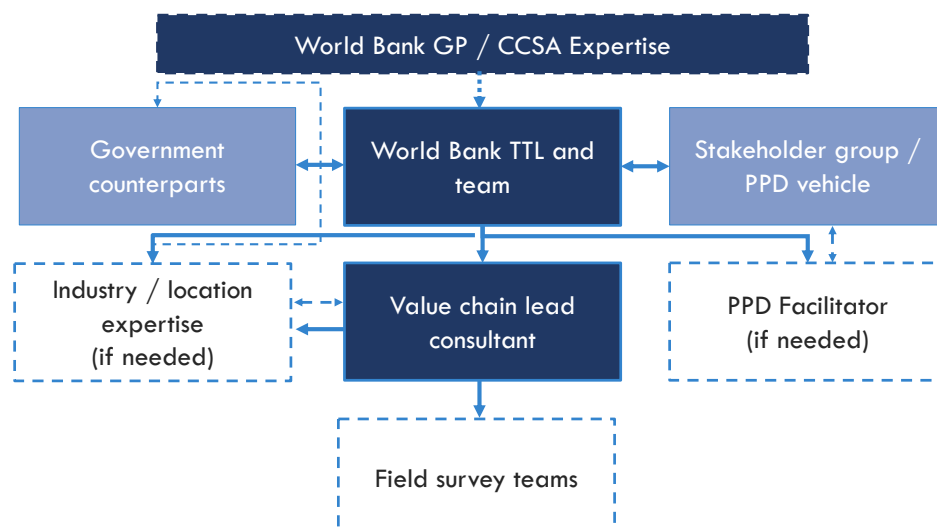
**A strong team that possesses country knowledge and experience in private sector development and job and skills development will be needed to lead the value chains assessment.** The core team will need strong technical expertise and a combined approach, as illustrated in figure 4. The team leader should ideally have experience in value chain analysis and development. In most cases, the team should also include practitioners from a range of other internal practice areas, most notably agriculture, education (to understand skills-related and training-related issues), transport, public-private partnerships, and gender issues.

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<sup>4</sup> Where several value chains are studied within the same country or region, it will often be useful to complement the value chain reports with a summary of findings, lessons, and key recommendations across the value chains.



**Figure 4**  
Generic Organizational Approach to a Jobs in Value Chains Initiative



Note: CCSA = cross-cutting solutions area; PPD = public-private dialogue.

**External expertise will be needed to lead the analytical and survey work on the value chains as well as to facilitate the public-private dialogue (PPD) process locally.** However, a few considerations need to be taken in to account as teams select external expertise for the value chain analysis:

- **Should a single consultant firm be hired to implement the value chain survey or should there be a multiple-contract approach?**

Significant economies of scale can be had if the project is managed as a single contract, both from a financial and practice perspective. (Internal and counterpart communication, on-the-ground interviews, and the PPD process are much less complex with one firm than with a number of different parties that have to be coordinated.) Therefore, a single consultant or firm should be engaged to manage the value chain analysis process, provided the firm demonstrates that it can bring on the necessary technical expertise for each value chain. Any external firm hired to lead the value chain work must demonstrate that it has the capability to design, manage, and deliver a complex survey and that it can provide a team to carry out the surveys on the ground in the local language.

- **Should an international or local consultant be used?**

Although local expertise is critical to ensure context and to facilitate implementation on the ground, international expertise typically brings experience from having conducted similar value chain analyses in other countries. In general, the best approach is a combination where possible. This solution may include a consortium of international and local experts, such as an international firm that brings in local experts on the team, or a local team that brings in international expertise.

**It is recommended to have the surveys conducted by specialist survey firms that employ well-trained enumerators with knowledge of the local context and fluency in the relevant local languages.** While the overall process of the value chain analysis may be led by a firm that is a specialist in value chain studies, such firms may not have specific expertise to carry out rigorous firm surveys (indeed, often they do not). The World Bank/core team that oversees the process could potentially participate in some of the initial survey work to ensure that the approach is appropriate. Additional World Bank and external experts may be contracted to assist in the mapping and sector adaptation components of the project. Clear expectations must be set for fieldwork, supervision, training, reporting, call-backs

and documentation standards and can be achieved through the use of standardized TORs that have been refined during the initial phases of the project.<sup>5</sup>

**Depending on the research approach and the PPD process, the team may also involve active participation by stakeholders early on through a stakeholder working group.** In a participatory action research project, the working group would form the core of the PPD umbrella for the project. This group could include key government counterparts from national and, where relevant, regional government.

**Close collaboration with a local partner organization, such as a chamber of commerce or business development services organization, is also critical to facilitate stakeholder buy-in and to ensure that the process contributes to the development of capacity of key local actors.** The sustainability of the value chain development process relies on the establishment of a public-private collaboration that produces high-impact action plans on an ongoing basis. Thus the counterpart should participate actively from the beginning to take ownership of the analysis and facilitation process. This buy-in is even more important if the PPD is led by external consultants that will not remain in the region once the project is completed. (Box 3 shows one way this can be done.)

### **BOX 3: COMPETITIVENESS REINFORCEMENT INITIATIVES EMBED CAPACITY BUILDING INTO THE ANALYTICAL PROCESS**

**Competitive Reinforcement Initiatives (CRI) embed the analytics of value chain (or cluster) assessment with a program of capacity building for officials (including possibly both public and private sector actors) on how to plan and execute such initiatives and support value chain development programs.** Thus CRI, developed by the World Bank's Trade and Competitiveness global practice, can be a valuable approach for the implementation of value chain programs. The CRI approach is useful for a number of reasons: (a) because value chain initiatives tend to be specific and discrete, capacity building allows for replicability and sustainability of the process; (b) the process opens up dialogue among local stakeholders, in particular between government and the private sector; and (c) the approach ensures the analysis is grounded in an understanding of the local context.

The CRI is a highly structured process that combines training and analytics with an ultimate objective to not only deliver an assessment of value chain opportunities and challenges and action plans for implementation, but also to engage the participants to be agents of change within the value chain.

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<sup>5</sup> Please refer to [Tool 4: Jobs in Value Chains Survey—Terms of Reference \(TORs\) Sample](#).

# PHASE 1: BACKGROUND (SECONDARY RESEARCH)

## SELECTION OF VALUE CHAINS TO ANALYZE

**The selection of sectors and specific value chains is an important starting point.** In some situations, the sectors may be predefined, either as part of a national development strategy or as part of another ongoing program led by government, donors, or other stakeholders. However, when the analysis will be conducted as part of a wider VC development process, value chains should be selected with a strategic perspective. This selection should be based on (a) the scale, sustainability, and competitiveness of the sector in question and specifically the upgrading or downstream value addition potential of the sector; (b) the effect on jobs, especially for target groups such as the poor, rural populations, women, youth, or specific locations within the region; and (c) the readiness of the sector and the likelihood that efforts focused on a particular sector will have the desired effect on the target population because an organized, mobilized, and motivated set of stakeholders is already on the ground.

**A structured approach has been developed to identify priority sectors and then further shortlist subsector(s) that have the highest potential effect on jobs.** The four main steps outlined in this approach are listed here and described in more detail in the remainder of this section:

1. Define objectives and target groups.
2. Identify a list of potential value chains.
3. Carry out a “rapid screening” against established criteria.
4. Engage in stakeholder consultation for final selection.

### Step 1: Define objectives and target groups

**Before potential value chains are selected, step back and recall the overall objectives and identify the target groups that are the focus of the effort.** For most projects that follow this guide, the focus will be on the creation of jobs and on the growth of earnings for the self-employed. The work may also target specific population groups, including specific regions, genders, and possibly specific vulnerable populations such as youth, informal workers, or populations displaced or otherwise affected by conflict or natural disasters. Efforts to explicitly outline these objectives and target groups will have an important effect on the selection of value chains, because some value chains will be more relevant or offer more opportunities to achieve the specific objectives than others.

**The objectives might be defined by the wider government program or by the World Bank (or other donor) strategies and initiatives.** Even where the value chain program is a relatively isolated initiative, the effort should be linked to the broader regional or national strategic frameworks. In the case of the World Bank, the frameworks would be the Country Partnership Framework and the Systematic Country Diagnostic.

### Step 2: Identify a list of potential value chains

**In most cases, the research will start with a long list of potential sectors and value chains, along with some available research on these value chains.** Where no specific initial set of potential activities is defined, it should be relatively simple to develop one through existing research, policy, and data.

**The first step is to review any existing economic strategy documents, policies, or reports to identify relevant key sectors.** Some sources to include are these:

- National or regional and local economic development plans and strategies

- National or regional industrial policies
- Policies, strategies, and reports on employment
- Sector-specific (or cluster) studies and strategies
- Studies in small and medium enterprises (SMEs), small businesses, or other targeted employer groups

**Where data are available, the effort could identify the most important and fastest-growing sectors from a review of relative output and employment data.** If such data are available at a regional or local level, regional specialization can be identified with a calculation of the location quotient (LQ) of employment or output.<sup>6</sup> However, even though it may be possible to identify a region that specializes in agriculture or in a broad area of manufacturing or services, the data available are likely to be highly aggregated. Thus, the data may not be sufficient to use to identify regions at the specific level of the value chain.

### **Step 3: Carry out a “rapid screening” against established selection criteria**

**With a long list established, further assessment can be carried out with some of the same sources noted in the previous step, to assess the relative merits of each value chain opportunity.** The key to this stage is to establish clear selection criteria for the screening process. This guide suggests the following three-pillar selection criteria:

- A. Scale, sustainability, and competitiveness. When the focus is on job creation and links with microenterprises, note that the choice need not be limited to sectors and value chains that have the greatest potential to become globally competitive.** In fact, it may be valuable to focus on a sector that has been a critical employer but that has been in decline because of changes in technology and global market dynamics. On the other hand, to engage in a long-term development strategy for a value chain that has little or no existing presence in the region or that is unsustainable is clearly not a reasonable approach for job creation. Therefore, it is important to assess the relative potential of sectors under consideration for the value chain analysis. Subcomponents of this criterion include
  1. **Existing scale, scope, and intensity:** Is there a critical mass of companies? Do they cover a wide range of activities or stages in the value chain? Is there geographical concentration?
  2. **Competitiveness:** Is the VC present and competitive in domestic, regional, and global markets?
  3. **Upgrading or downstream potential to add value:** What is the potential to sustain earnings given the future evolution of the subsector nationally and globally? Is there potential to improve productivity and move up the value chain or into more attractive segments?
- B. Job effect. This criterion looks at the scale and nature of the effect that an intervention in the sector or value chain would have on jobs for relevant target groups.** It includes the following subcomponents:
  1. **Job scale and intensity:** Does the VC represent a large number and share of jobs, including microenterprises? Are the activities labor intensive?
  2. **Employment multiplier:** How linked is the VC to other parts of the national or local economy, and therefore what potential exists for job creation to amplify throughout the economy?

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<sup>6</sup> Location quotient measures the relative importance of a sector in the regional or local economy compared with the national economy, on the basis of output or employment. For example, if region A had 15 percent of its employment in the agricultural sector and the country as a whole had 10 percent of its employment in agriculture, the region would have an LQ for agriculture of  $15/10 = 1.5$ . An LQ above 1.0 indicates relative specialization, while an LQ between 0.0 and 1.0 indicates lack of specialization.

3. **Suitability for SMEs and smallholders:** To what degree are activities in the value chain accessible for SMEs, microenterprises, and smallholder farmers?
  4. **Short-term versus long-term jobs:** How quickly could activity in the VC scale up to generate more jobs?
  5. **Reach to target groups:** Does the VC involve a large number of the groups that are targeted (the poor, rural populations, women, youth, specific locations, and so on)?
- C. Readiness and additionality.** It is important to consider how likely it is that efforts focused on the sector or value chain will have the desired effect on the target population. Success requires an organized, mobilized, and motivated set of stakeholders; a government with the political will to act; and institutional arrangements that ensure inclusion of all key stakeholders. Finally, in many countries substantial activity will already be underway on value chains, sectors, and clusters by governments, donors, and others. Many value chains may have already been studied extensively and study fatigue could be a concern. Therefore, it is critical to understand what recent and ongoing activities affect these sectors and value chains and the degree to which a further activity would be complementary or would possibly detract from these interventions. The subcomponents for this pillar include
1. **Organization and representation:** Is the VC organized and ready to engage in a change process? Do representative organizations involve all actors? Have specific groups been captured? Are there competing groups?
  2. **Ongoing interventions:** What is already being done by government and donors in this value chain? What is the potential that the VC program would crowd out rather than complement those initiatives?

A detailed template that identifies specific metrics, data sources, and a scoring system for this screening is provided in the form of a VC selection tool.<sup>7</sup> See an example in figure 5.

**Figure 5**

Sample from Horticulture Subsector Screening for Value Chain Selection in Tanzania

	Criteria	Avocado	Green Bean	Onion	Tomato	Potato	Sweet Potato
<b>Scale, Sustainability and Competitiveness</b>	Existing scale and scope Competitiveness Upgrading potential Investment requirements	Low	Low	Medium	High	High	Need more information
<b>Jobs Impact</b>	Jobs scale and intensity Employment multiplier SME suitability Short term jobs potential Reach to target groups	Low	High	Medium	High	Medium	High
<b>Readiness and Additionality</b>	Organization/representation Ongoing interventions	Low	Low	Low	Med-High	Low	Low
<b>Total</b>		Low	Low	Medium	High	Med-High	Medium

Note: *SME = small and medium enterprise.*

In addition to the three-pillar selection criteria, important considerations include the availability—or unavailability—of data for value chains, a sector-specific focus that may concentrate outcomes on a small segment of the economy, and influence by other competing rationalizations. The data available in most countries for most VCs are very poor, and it is often impossible to collect sufficient data to complete all the criteria, particularly to identify

<sup>7</sup> Please refer to [Tool 1: Value Chains Screening Template](#).

the number of jobs and firms that exist in the prospective value chains. Therefore, expectations must be reasonable in terms of the level of detail that will be available at the selection stage. Depending on what data and information are available, the long list opportunities may be screened at an office, but in cases in which little information is available, the screening may have to be handled exclusively in field consultations.

#### **Step 4: Engage in stakeholder consultation for final selection**

**It is good practice to undertake a systematic process to rank and screen the potential sectors, but the final decision is often a political one and may depend on what certain stakeholders consider to be priorities.** Several variables should be considered, including whether short-term or long-term job creation is preferred; whether overall job creation or creation of jobs for certain target groups is a higher priority; and whether jobs in critical sectors or in emerging ones are a higher priority to pursue. As a result, many different value chains may be deemed appropriate. Thus, there is no single correct answer in the selection process.

**Before a final selection is made, the team should carry out a field mission to consult with counterparts and stakeholders.** In the field, the team should (a) review the screening and tentative selection of value chains with counterparts and a group of stakeholders; (b) consider these consultations and make a final selection; and (c) kick off the analytical phase, mobilize stakeholders, and establish the formal PPD process.

**Resulting projects and programs need not be restricted to the specific VCs analyzed.** For example, the final analysis may be on the potato value chain rather than on agriculture in general or even on vegetables—and clients may legitimately worry that any programs and investments that arise from the study will be channeled to these specific value chains. Rather, the VCs are an analytical lens through which issues are assessed and may be generalized. For example, a VC analysis in potatoes is likely to highlight issues of postharvest infrastructure, quality regimes, transport, and market access that would also be constraints for the wider agriculture and processing sector.

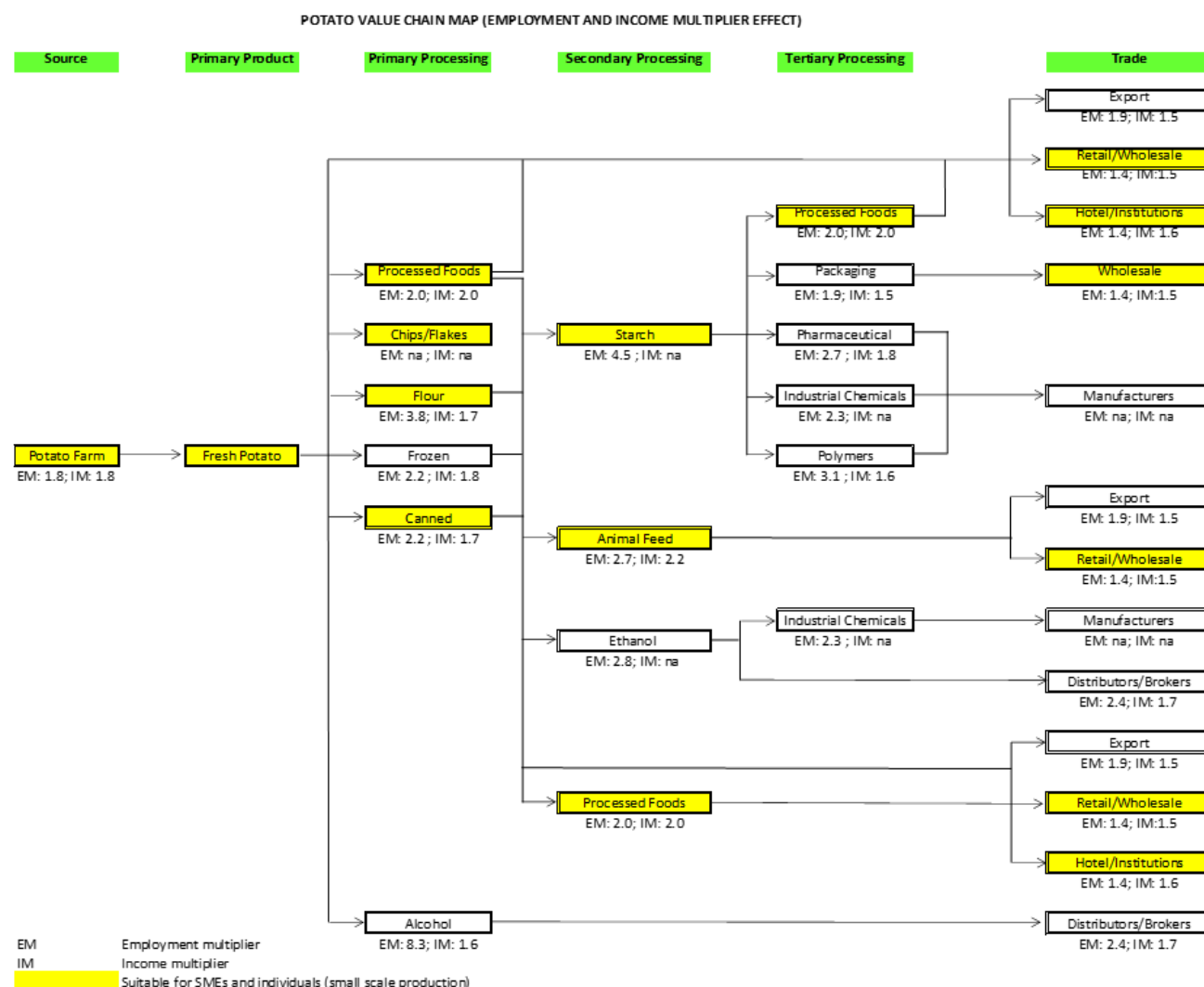
# PHASE 2: VALUE CHAIN MAPPING

## VALUE CHAIN MAPPING

A value chain map illustrates the actors who bring the product from its basic raw materials through to final consumption. The value chain map is a useful tool to guide the research, so an initial mapping must be carried out before the field research begins. This step is essential because it will help determine the approach to the field research—including the sampling strategy for the surveys. Mapping is an iterative process—therefore, the initial map can be expected to be fine-tuned along the way as details about the relationships among value chain actors becomes clearer. Figure 6 shows a sample of a value chain map.<sup>8</sup>

**Figure 6**

Sample Potato Value Chain Flow Map, Employment and Income Multiplier Effect



<sup>8</sup> Please refer to [Tool 2: Value Chains Mapping Guidelines](#)

## Step 1: Map the Basic Functions in the Chain

Unless the local value chain is available, it is often best to start with a typical global map of the value chain in question (a generic value chain map) and then adjust it to reflect the structure of the local chain. Start to map with the end product and step backwards; record all the individual activities in which value is added on the way, back to the point of the basic input suppliers (primary production). However, while the value chain should reach back to input suppliers, it does not need to continue to trace back suppliers ad infinitum.

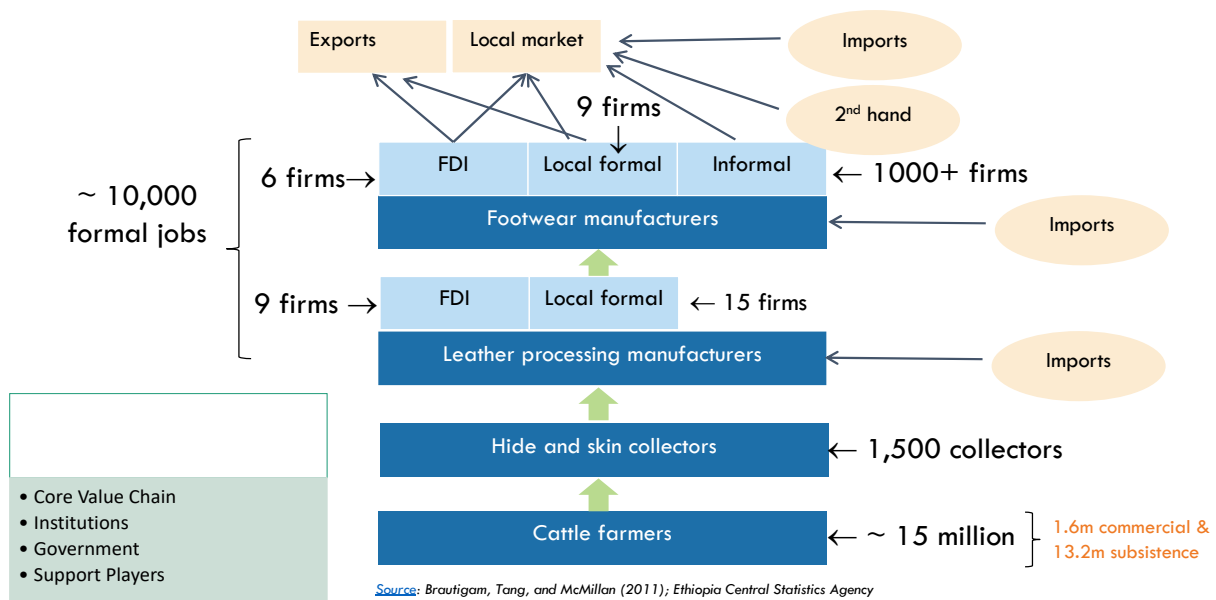
## Step 2: Map the Market Players

Once the core value chain is established, the map moves on to identify specific market players. The focus should be on the core value chain actors—that is, where firms actually take ownership of the product and add value to it before the product is sold onward. Other firms that provide supporting functions (products and services that contribute to the value-adding process) but are not involved in the core market transactions should be considered as part of the “related and supporting” structures (this also includes government institutions and service providers) in the wider value chain/cluster environment. Information on these market participants could be captured but kept separate from the core value chain actors.

The map should identify the specific names of key actors in the chain and should estimate the number of firms at each stage of the chain. Firms must be distinguished by (a) formality (whether the firm is formal or informal); (b) size (SME versus large; small and micro versus medium and large); and, in some cases, (c) domestic or foreign-owned (see figure 7).

**Figure 7**

Sample Value Chain Flow Map with Inventory of Market Players, Leather Footwear Value Chain



Source: Deborah Brautigam, Margaret McMillan, and Xiaoyang Tang, “The Role of Foreign Investment in Ethiopia’s Leather Value Chain,” PEDL Research Note, ERG Project 106, Centre for Economic Policy Research and the U.K. Department for International Development, 2013.

Note: FDI = foreign direct investment.



### Step 3: Map Market Dynamics

**Once the core value chain is established, the map can move to the dynamics of the value chain, including the way that actors interact at different levels in the chain, information on costs and prices, and value-added flows across the chain.** This more detailed development of the value chain map comes later in the process as the information from consultations, surveys, and other research becomes available. At this stage, different types of maps (such as grid maps) may be used to more effectively convey more detailed sets of information such as costs and margins and time flows.

**Potential data sources for the development of value chain maps include the following:**

- Previous value chain and sector studies (global for the generic structure; national for specific)
- National and sectoral statistics
- Industry associations (websites, studies)
- Consultations with stakeholders

**Two potentially valuable sources of data to help design value chain maps are social accounting matrices (SAM) and input-output tables (IOT).** Such country or region-specific datasets provide information on the transaction patterns that define the structure of relationships among firms and detail the sources of inputs into sectors (from all other sectors) and the destinations of outputs from each sector into the others. This can help identify important links among sectors and quantify the extent of these links.

**A second important conceptual tool to complement the value chain mapping is strategic segmentation of the value chain.** Like the value chain map, strategic segmentation should be carried out at the start of the process, particularly because it can help guide the competitive strategy discussion that will be a critical part of the semi-structured interviews (see section 8). For instance, two firms may belong to the same industry (such as tourism) but belong to two very different business segments (such as corporate tourism, medical tourism, or backpacker support). Consequently, the key success factors or competitive pressures for each will differ, as will the nature of jobs in the value chain or the required skill set. Therefore, the strategic segmentation will be fine tuned in an ongoing process similar to the process in which the value chains are mapped.

**The team must perform a preliminary value chain assessment that uses all information available from secondary sources before team members go out into the field for research.** While the surveys and interviews will be the core research tools, secondary research can play an important role to (a) establish hypotheses; (b) inform the interviews; and (c) enable the interviews to focus on key issues (because the research has answered some of the basics). It can also help identify key stakeholders that may participate in the field research.

**Secondary research should aim to gather as much information as possible on all issues and can be structured to mirror the survey and interview topics.** The starting point for the secondary research is the value chain selection criteria discussed earlier. In addition, Table 2 outlines specific issues that may be a good focus for the secondary research.

**Table 2**

Issues and Data Sources for Secondary Research

Areas	Specific issues	Comments and data sources
<b>Organization of value chain</b>	Structure of the value chain; key actors—lead firms and other firm types (quantification of firms by type in each stage); geographical distribution of activities; identification of key individuals	Existing regional and sectoral VC studies; academic papers; industry associations; industry experts
<b>Prices, costs, and productivity</b>	Specific local data or benchmarks (global/national) on costs and prices across the chain as well as output/yield, productivity and margins; firm/farm size and output averages, and so on	As above, plus enterprise surveys—here benchmarks from other countries can also be useful; the idea is to build up an estimate of what the VC costs and margins might be expected to look like
<b>Labor and jobs</b>	Specific local data or benchmarks (global/national) on direct and indirect jobs; labor costs; labor required at each stage/process in VC; productivity	As above; benchmarks may be useful here too
<b>Growth trends and opportunities</b>	Output and export profile over time; recent investments or divestments; initiatives and investment plans; global VC and technology trends	As above. Global studies useful to help understand the direction of the global value chain and technology
<b>Constraints to competitiveness</b>	Main barriers to investment and business operations; specific national and local constraints most critical to the VC	As above and indexes (Doing Business, World Economic Forum Global Competitiveness Index, and so on); enterprise surveys

**Consultations with stakeholders are likely to provide the most detailed information and the perspectives to help the team understand the parameters, key players, and nature of interactions within the value chain.** Thus, it is advisable to reconfirm the initial value chain mapping through preliminary field consultations before the survey phase is launched.

# PHASE 3: STRUCTURED SURVEYS

## SAMPLING

**It is critical to obtain samples in a Jobs in Value Chains analysis because the process ensures that the results of the value chain survey are representative, which is a key requirement.** While value chain research tends to have a strong quantitative emphasis (in particular, as it assesses cost structures and productivity across the chain), this process has often been carried out without a transparent approach to sampling and data collection. As a result, it is often unclear whether the data that come out of the process are representative and to what degree any potential changes in the external environment affect, or even invalidate, the results. Probability sampling ensures that the samples are representative and that a sufficient sample size is used to provide a satisfactory level of precision.

**It is not practical nor cost-effective to collect survey data from every firm and actor in the value chain, as in a census.** For this reason, the standard approach is to draw a sample of firms to survey. Data collection through surveys of sample populations is not only substantially less costly than full enumeration, but it also offers (a) easier control of the sample quality and (b) timelier results due to increased efficiency. The number of surveys required for any one value chain study will depend significantly on the size of the population and the number of stages in the chain. Given the relatively small population sizes that will exist in many value chains in developing countries, the sample size required will often be small and will end up as a relatively large proportion of the population. The sample size will also depend on the cost per unit of the survey exercise. The budget provided in this guide refers to a sample size of 500–700 firms.

**Sampling is also the most challenging part of the process because comprehensive information on the firms present in the market will be unavailable in many countries.** This is particularly true where a significant portion of the value chain may be informal.

### Define the Target Population: Key Considerations

**The first step in sampling is to define the target population in as clear and complete a way as possible.** Care must be taken to make the value chain map accurate and comprehensive.

**In value chain analysis, businesses are the target population.** Their differences lead to distinct challenges in the frame of the sample. Businesses vary greatly in size, are often highly dynamic, and can be identified as legal entity firms or enterprises or physically as establishments on the basis of their location. Especially in developing countries, where many businesses are informal, challenges arise because official records and documentation on informal businesses are usually lacking or incomplete. Consequently, when sampling for value chain analysis, the team must have a precise definition of the unit of analysis and consider that unit's implications on subsequent stages, including the generation of a sampling frame. Specifically, it is important to be clear about the following:

- **The vertical scope of the chain—where does it begin and end?** In most cases, teams will want to survey all stages of value addition in the product or service, from basic inputs through to final sale and disposal or recycling. However, in some cases the focus may be on processing and backward, with less interest in forward distribution stages, especially if those occur in export markets. Similarly, if the main basic inputs in the chain will always be imported, it may be less necessary to survey at that stage. However, it is important to survey wherever there is existing activity or scope for activity in the vertical chain within the country, so that jobs can be estimated.
- **The horizontal scope of the chain.** Although the value chain strictly covers vertical stages of activity, where actors at each stage add value to the product or service, value chains affect a wider set of actors. In particular, related and supporting activities are involved in all value chains, including transport and logistics, financial and business services, research, and training. Employment for all these activities will be affected by dynamics in the core value chain. The team will need to decide where to draw the line that defines the actors to be included in

the survey. In general, we propose to survey only core actors in the vertical chain, although teams will also want to document the core actors' links (and potential links) to a broad set of supply chain actors. A comprehensive approach within the survey would identify supply chain expenditures for products and services that represent the large majority (for example, more than 80 percent) of expenditure by firms at each level of the value chain.<sup>9</sup> A less comprehensive but more practical approach from the standpoint of survey implementation would be to focus on the most important two or three product and service inputs.

- **Definition and stratification of value chain participants.** One of the most critical parts of the sampling process for a comprehensive value chain assessment is to make sure that the surveys are not restricted to firms that currently participate in the value chain. Thus, the team should identify firms and farms, especially small and informal ones, that may not be well documented in the sector. A second issue, which may be important for jobs estimation, is to sample to reflect the fact that different firm characteristics may significantly affect the relative use of labor and capital and the nature of workers required (such as their skill levels). In the case of value chains, the focus will be to stratify for (a) the stage of the value chain and (b) the firm size category (micro and small versus medium and large). In some cases, the team should also stratify the region within the country (particularly in large countries and where there are distinct value chains that operate in different regions).

## IDENTIFY THE TARGET POPULATION: SCENARIOS AND POTENTIAL APPROACHES

**Most value chains (particularly upstream) will include a large representation of informal firms and microenterprises for which little to no data may be available.** However, even for formally registered firms, significant challenges may restrict the ability to take a standard approach to sampling, for example:

- **Clarity on a specific product or service.** Registers of formal firms may not necessarily give sufficient information on a firm's business to allow for a determination of whether the business participates in a specific value chain. For example, a census or register may list a firm's business as "agricultural production" or "horticulture," but it may not provide specific information such as "mango production" or "mango processing."
- **Secondary activities.** A larger firm may be involved in several activities, but the business registry may not indicate secondary or tertiary activities that are part of a value chain being studied.
- **Establishments versus firms.** Business registry lists will often indicate firms and their headquarters but not provide specific information on establishments.
- **Specific contact details.** Firm registries and census data do not always provide the necessary contact information to identify the location or individual to be surveyed.

Thus, even with formal firms, there may well be significant challenges as teams draw the sample frame.

**In extreme cases in which no other frame is available, some informal nonprobability sampling procedures could be considered, especially in the case of rare subpopulations.** The method may include snowball sampling and other types of network sampling in which the responding units help identify other eligible units to be interviewed.

**The three scenarios in table 3 illustrate ways to enumerate the population for value chain analysis.** In practice, the team will likely be confronted with a situation that fits between these extremes and should be able to develop an approach that uses findings from more than case type.<sup>10</sup>

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<sup>9</sup> In most cases, the largest share of input costs will be accounted for by the same product one stage up the chain, in the next stage. However, this is not really a part of the horizontal scope of the chain. The other goods and services inputs are what we would refer to as horizontal.

<sup>10</sup> Please refer to [Tool 5: Value Chains Survey Sampling Guidelines](#) for further details on standard sampling and block enumeration techniques.

**Table 3**

Broad Options for Sampling

Situation	Relevant approach	Description
<b>Scenario 1</b> Full list of firms available along with activities, size, and location	Standard random sampling	<ul style="list-style-type: none"> <li>Firm list = population</li> <li>Sampling: Follow standard approach from Enterprise Surveys <ul style="list-style-type: none"> <li>7.5% precision</li> <li>90% confidence interval</li> <li>50/50 proportion on underlying population</li> </ul> </li> </ul>
<b>Scenario 2</b> Information available on lead firms at the top of the chain, but none on informal firms at the bottom	Snowball + Block enumeration	<ul style="list-style-type: none"> <li>Standard random sampling at each value chain level at which population is known</li> <li>Option 1—Snowball: At last level with population data, randomly sample and then begin to snowball to identify firms' suppliers, competitors, etc. <ul style="list-style-type: none"> <li>Large sample bias risk</li> <li>Ensures clear value chain link</li> </ul> </li> <li>Option 2—Block enumeration: At first level with no population data, carry out mini-census to identify population of firms (may need to do cluster sampling)</li> </ul>
<b>Scenario 3</b> No sufficient information on any firms	Block enumeration	<ul style="list-style-type: none"> <li>Carry out mini-census to identify population of firms</li> <li>Allows collection of population data to be as detailed as possible</li> <li>Can collect stratification information in this first stage</li> <li>Has time implications—can delay implementation</li> <li>In some cases, the team may need to do geographical sampling within this technique (such as sample 5 of 100 neighborhoods)</li> <li>Makes it challenging to set weights</li> </ul>

Because it is impossible to calculate the exact probabilities of a selection, teams may need to use approximate weighting techniques and make various assumptions and a rough estimate of total population, but such estimates are subject to unknown biases. Therefore, the results would have to be presented with a caveat and would not provide the same conclusive power as the results from a probability sample. This shortcoming is similar to the results of a case study, which cannot be used to make inferences to the population. In some situations, it may be best to avoid certain value chains in which the sample frame availability or building (block enumeration) exercise is too costly or time consuming. Typically, the cost and timeline for development of the sample frames or construction of acceptable frames is included in the budget provided earlier in this guide.

## Determine How Many Surveys Will Be Needed

The number of surveys required for any single value chain study will depend significantly on the size of the population and the number of stages in the chain. Table 4 provides a rough estimate based on an example from the Ethiopian leather footwear value chain (mapped in Figure 7). This example represents the maximum number of surveys that would be required in any value chain. Given the relatively small sample sizes that will exist in many value chains in developing countries, the sample size required will often be much smaller and will be a relatively large proportion of the population. In this example, we stratify for formal versus informal firms. In practice, for the purposes of the value chain analysis illustrated under figure 7, it may be possible to under-sample informal (and possibly even formal) cattle farmers as well as hide and skin collectors if there is reason to believe there will be little variation in their responses. Notably, in the example for the Footwear (formal) and Leather Processing (formal) nodes, the estimated population is very small and, therefore, the entire population will be selected to account for variations as well as nonresponses.

**Table 4**

Broad Options for Sampling, Ethiopian Leather Footwear Value Chain

VC Node— Estimated Universe	Formal	Informal	Total
Footwear	15	1,000	1,015
Leather Processing	24	—	24
Hide and Skin	—	1,500	1,500
Cattle Farmers	800,000	3,000,000	3,800,000
Selected Sample	Formal	Informal	Total—Stratified
Footwear	15	107	122
Leather Processing	24	0	24
Hide and Skin	0	111	111
Cattle Farmers	120	120	240
Total	159	338	497

Note: VC = value chain; — = none.

## QUANTITATIVE SURVEYS

The Jobs in Value Chains analysis is structured as an iterative combination of quantitative surveys and semi-structured interviews. As shown in Figure 8, the structured surveys are to be informed by initial research and, subsequently, to inform the more in-depth qualitative analytical techniques.

**Figure 8**

Combination of Structured Surveys and Semi-structured Approaches



## INTRODUCTION TO THE SURVEY CONTENT AND STRUCTURE

The Jobs in Value Chains quantitative surveys have been designed to ensure a more structured and rigorous approach to data collection.<sup>11</sup> Traditionally, the line of enquiry in value chain research has lacked a sufficient focus on labor issues. The survey instrument that has been developed for Jobs in Value Chains analysis aims to address the full set of issues required to understand the structure and competitiveness of value chains (see box 4), but they have a specific emphasis on jobs-related issues:

- **Labor use patterns.** To understand the firm production function and determinants of decisions on use of capital versus labor, labor skill levels, and in-house versus outsourced activity
- **Local supply chain links.** Linked with labor use patterns, to understand barriers to sourcing in the domestic supply to the value chain and implications on employment across the chain
- **Supply and demand of skills.** To systematize and deepen analysis of labor skills versus employer needs and to map current and future capability requirements
- **Environment for skills development and knowledge growth.** To identify the constraints that might limit the amount that firms would invest in skills and training in value chains

The general survey instrument uses those objectives and is structured in five modules as follows:

1. **Screenener.** Gather information on the respondent and identify the node or activity along the value chain the firm is involved in.
2. **Background.** Assemble information on the main sources of revenue, ownership, and legal structure of the firm or farm.
3. **Employment.**
  - a. **Household Roster:** Collect demographic characteristics of family members who work for the firm or farm and information on the duration worked, skills or training, compensation, and any other activities.

<sup>11</sup> Please refer to the generic survey instruments, [Tool 7](#): Jobs in Value Chains Survey—Master Agriculture Survey and [Tool 8](#): Jobs in Value Chains Survey—Master Manufacturing Survey.

- b. **Workforce:** Gather information on nonfamily permanent and seasonal workforce, duration worked, skills and training, compensation, labor and recruiting constraints, and labor to output ratio.
4. **Production.** Compile information on the production structure, costs, capacity utilization, constraints, and prospects for growth.
5. **Marketing and Sales.** Collect data on the revenue, consumers, and nature of the contracts, and on product-specific questions.

#### **BOX 4: SURVEY ADAPTATION BASED ON LESSONS FROM THE PILOT**

**The generic survey instrument has been developed in two versions to separately target Agriculture and Manufacturing/Processing.** The pilot cases revealed the original survey to be very complex: it required over two hours to implement. The team identified important indicators and brainstormed with experts in agricultural surveys and then simplified the questions and reduced the duration to about an hour. Specifically, for agribusiness, there was a need to simplify and structure questions to enable respondents to provide relevant information efficiently and to account for unique issues related to wage, units of labor, and production structure. For example, in the case of the pilot study in Zambia, an analysis of aquaculture VC and poultry VC required certain modifications that allow small farmers to be able to relate to and respond to the questions relatively easily.

**However, with each new case study the team will need to revisit the questions and adapt them to the specific sector for the benefit of the respondents and to gather unique industry insights.** It is expected that the survey instrument will need to be tailored further to account for value chain or country-specific needs. The team may need to add questions on specific issues of interest, reword questions to apply to the regional context, and make other practical considerations. In addition, users may want to tailor the generic instrument for specific sectors beyond those already available. Adapted modules for specific sectors will be developed as part of this tool. To date, tailored survey instruments have been developed for the Tourism (Services) sector and for Distributors (Traders).

**Lessons from the pilot case study in Lebanon (potato VC and recycling VC) indicated that adaptation is also required for the various nodes along the value chain.** For example, respondents involved in distribution and logistics have a widely different set-up than the manufacturing and processing firms. These variances need to be considered and questions reworded accordingly in advance to avoid confusion in the field. The challenge arises as the product of interest transforms along the value chain. In the instance of olive oil, at the initial node the product would be olive plant seedlings, which then transform to olive trees. Then traders transport olives, which are sold to mills where the final product is bottled olive oil. Because this process requires knowledge and expertise in the product, best practice is to make these changes to the surveys in consultation with the firm that implements the survey and with local experts.

**Finally, while the tool is flexible enough to include country and sector-specific considerations, the customization is limited by the need to conform with the existing quality control framework designed with the generic instrument in mind.**



## SURVEY IMPLEMENTATION

The following are some suggestions to keep in mind while the surveys are implemented:

### Who should carry out the surveys?

**It is recommended that surveys be carried out by specialist survey firms, including well-trained enumerators with knowledge of the local context and fluency in the relevant local languages.**<sup>12</sup> Although the overall process of the value chain analysis may be led by a firm that is a specialist in value chain studies, such firms may not have specific expertise in administration of rigorous firm surveys (often they do not). The World Bank team that oversees the process may want to participate in at least some of the initial surveys to ensure that the approach is appropriate and to pilot some aspects of the questionnaire.

### How should the surveys be implemented?<sup>13</sup>

**Given the complexity of the surveys, they should always be carried out face-to-face unless not possible because of significant logistical constraints.** In that case, the alternative should be to complete the surveys by phone. The surveys as they are currently structured are not designed for implementation through the mail, e-mail, or the Internet. Where circumstances dictate, however, it may make sense to send the survey instrument in advance for initial completion followed by discussion in a face-to-face format. Similarly, it may be necessary to leave the survey behind after the initial interview so that some data requests can be met. It has also been determined from the pilot case studies that the survey should use innovative, time-saving technologies for data collection, such as computer-assisted personal interviews (CAPI) that are able to enforce proper use of skip patterns and to verify basic consistency of responses (see Box 5).

**The pilot case studies indicated that it is essential to first test the survey across a representative selection of respondents to ensure applicability and to pilot any adaptations made to the generic instrument.** Typically, this results in minor modifications and has proven to be an effective exercise. The selection should consist of respondents from across each node, with representation across identified strata such as geographic regions or firm size. For a sample size of 500 interviews, 10–15 interviews are the recommended cohort size for the pilot test.

### How should firms be approached?<sup>14</sup>

**It is important to approach firms in a sensitive and inclusive way.** The firms are asked to give a significant amount of time to support the survey, which makes fairly intensive demands for data and information. Firms may, therefore, be reluctant to participate, particularly if there is sense of fatigue with many recent surveys and studies in the country. Some ways to recruit firms include the following:

- **Invitations should be directed through an association or lead firm, if possible.** Firms are much more likely to participate in the survey if they are invited by an industry association or other organization they belong to, particularly if they participate in the PPD process through this organization. Invitations from lead firms through their supplier network can be particularly effective, because the firms may feel a commercial incentive to participate.
- **Enumerators should have a support letter from the government and the World Bank.** Regardless of whether an invitation comes through industry, enumerators should have letters of support from the lead organization (such as the World Bank) and from the government that identifies the team as the survey enumerators and highlights

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<sup>12</sup> Please refer to [Tool 3](#) Jobs in Value Chains - Expression of Interest (EOI) and Tool 4 - Jobs in Value Chains - Terms of Reference (TORs) Sample

<sup>13</sup> Please refer to Tool 9 - 11 - Jobs in Value Chains Training Tools (interviewer manual & training slides) for detailed guidance.

<sup>14</sup> Please refer to [Tool 6](#) - Value Chain Survey Design and Planning Report (VCSDPR) Template for guidance on implementation requirements.

the importance of the research. If possible, government counterparts can issue specific letters that ask firms to participate.

- **Firms should be made comfortable about how data will be used.** Firms should be told clearly and in writing that the data they provide will be kept anonymous and will not be shared in any form.
- **Firms could be promised a summary of results and assurances of action.** Firms often express concern that after they give their input in surveys and interviews they never hear anything more from the research team (or government). It would be useful to promise (and deliver) a summary of survey results to all participants, if possible, and also to give participants some assurance that, where possible, their suggestions will be acted on—or at least given thorough review and discussion in the PPD process.
- **Firms should be given a contact to follow up.** Finally, firms should be given contact information for a person who is not the enumerator but a project leader from the World Bank or other organization or the government counterparts. That person would be available if participants have any questions on the survey or about future activities related to the project.

**A high rate of nonresponse has implications for both the cost and time to carry out the survey and, critically, it may also degrade the results.** A high nonresponse may reduce the number of final surveys completed, which could increase the margin of error of the results. Moreover, if nonresponse is systematic (for example, larger or smaller firms, or informal firms, may be more likely to not respond than other types of firms), then bias may be introduced into the results. Therefore, teams need to approach firms effectively to ensure their participation and avoid a high rate of nonresponse.

### **Who within the firms should respond to the survey?**

**In the case of microenterprises or small firms, the respondent should be the head of the firm.** For larger firms, senior management should be approached for most of the questions, though parts of the survey that require specific functional expertise and information could be completed by the relevant department, be it human resources, sales, or logistics.

### **How should the responses be captured and summarized?<sup>15</sup>**

**Responses should be stored in a database format (in programs such as Microsoft Excel or Stata) in order to maintain security and integrity.** Where resources and technology are available, enumerators should use computer-assisted personal interviewing (CAPI—see Box 5). Variable codes can be used to format the data. All data should be coded in a clean and consistent manner to facilitate data checks and analysis.

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<sup>15</sup> Please refer to [Tool 13](#) - Jobs in Value Chains - Master Survey Codebook

## BOX 5: COMPUTER-ASSISTED PERSONAL INTERVIEWING

**Computer-assisted personal interviewing (CAPI)** is a technique in which a computer is used to input the answers to questions. This can be done either by the enumerator or the respondent.

**Use of CAPI dramatically reduces the time lag between data collection and data analysis.** Because manual coding of the responses recorded with pen and paper is no longer necessary and data validation is done at the time of data collection, the information is ready for statistical analysis as soon as the firms are surveyed.

In addition, the use of tablet devices for interviews yields other benefits:

**CAPI reduces the number of coding errors.** Surveys can contain validation data that make it impossible to enter values outside a given range. Supervisors may also view and check the collected information as soon as the enumerators finish the interviews, together with possible error reports. Automated routing reduces the incidence of missing data. Changes in the structure of the questionnaire can be instantly reflected on the interviewers' devices. This allows for last-minute updates or error corrections.

**CAPI technology simplifies the use of surveys with dynamic structure, in which the questions to be asked will vary depending on the answers given by the respondent.** For instance, if a person who participates in a survey reports that he or she has a job, an additional section that inquiries about the type of job, working hours, or income can be displayed.

**The software's support for the dynamic structure of questionnaires is particularly helpful to teams who conduct studies in an experimental setting.** In such cases, different sets of questions can be randomly assigned to different respondents effectively.

**CAPI is well equipped to deal with personal data, as well.** Respondents might prefer to type their own answers to more sensitive questions on the device screen. Their answers will not be overheard and their handwriting cannot be recognized. The information exchanged between interviewers, supervisors, and the headquarters staff also can be encrypted.

**CAPI also enables supervisors to manage teams of interviewers efficiently.** The sample can be updated and new assignments added over the air, without the requirement that enumerators return to the headquarters. Multiple enumerators can share the same device and use their own usernames and passwords.

*Source:* World Bank, "Tools: CAPI," Living Standards Measurement Study website, <http://go.worldbank.org/60ERBS5XA0>.

# PHASE 4: SEMI-STRUCTURED INTERVIEWS AND FOCUS GROUPS

## SEMI-STRUCTURED INTERVIEWS AND FOCUS GROUPS

The collection of data and information through semi-structured surveys required in the Jobs in Value Chains approach must be planned and implemented through close coordination with the structured survey activity. See section 4 and figure 8 for more information about the process.

**Although the structured surveys are critical to capture key data in the value chain, the methodology has limitations.** Most important, surveys seldom enable an in-depth and nuanced understanding of the dynamics of the value chain, the opportunities and challenges that firms face, and the steps required to improve competitiveness, upgrade positioning, and create quality jobs. Therefore, a more semi-structured process of interviews and consultations is absolutely essential to any job-focused value chains assessment. Open conversations with business owners constitute perhaps the most important instrument to gather key information and insights on the value chain dynamics and the challenges within a given business segment.

**Beyond the collection of information, interview and focus group sessions can be essential to engage key stakeholders in the wider value chain development and dynamization process—thus, it is about action as much as research.** Although interviews and focus groups may be less structured than formal surveys, the process must be just as rigorous and systematic in its approach. This section and the accompanying tool provide brief guidance on how to conduct the interviews.<sup>16</sup>

The issues to be covered are discussed in detail in the semi-structured guidance tool and include the following broad categories:

- Background on the firm
- Global and local value chain dynamics
- Firm’s products and markets
- Firm segmentation (positioning) and strategy
- Production and cost structure
- Operations and productivity dynamics
- Supply chain and sourcing strategies
- Challenges in the integration of local supply chains
- Skills and training
- Business environment
- Industry collaboration

**Although the firm is the focus of the interviews, important targets for semi-structured interviews also include government agencies and other institutions that may affect the value chain in areas such as education and training and technology and research.** In fact, these stakeholders must be interviewed because they may not typically be studied under the structured survey process.

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<sup>16</sup> Please refer to [Tool 12: Jobs in Value Chains Survey—Semi-structured Interview Guidelines](#)

**Two broad types of semi-structured approaches most commonly used in the value chains analysis are:**

- **Key informant or expert interviews.** These interviews are generally meetings with individuals from a specific firm or institution with expertise on the value chain or specific issues within it.
- **Focus group discussions.** These interviews and discussions take place with a larger number of participants related to the value chain. Focus groups bring together value chain actors with a common background—by firm type (a group of key suppliers to lead firms, a group of farmers, microenterprises), by a specific topic (institutions and other actors involved in training and skills development, standards setting, or logistics), or by identity group (women or youth).

**The two techniques differ in their approach and the potential benefits that can be gained from them** (Table 5). It is recommended that both methods be employed as part of a Jobs in Value Chains analysis.

**Table 5**

Comparison of Key Informant Interviews and Focus Groups

	<b>Key Informant Interviews</b>	<b>Focus Groups</b>
<b>Number of participants</b>	<ul style="list-style-type: none"> <li>• Normally 1; may be a small group (up to 3)</li> </ul>	<ul style="list-style-type: none"> <li>• Ideally 5–12</li> </ul>
<b>Advantages</b>	<ul style="list-style-type: none"> <li>• Provides very specific knowledge and expertise</li> <li>• Relatively easy to target and control outcomes</li> <li>• Can address sensitive issues not appropriate for group discussion</li> </ul>	<ul style="list-style-type: none"> <li>• Stimulates broad discussion</li> <li>• Provides opportunity to understand different perspectives on the same issue</li> <li>• Potential to generate new ideas</li> <li>• Potential to test reactions to ideas</li> <li>• Potential to mobilize actors</li> </ul>
<b>Disadvantages and challenges</b>	<ul style="list-style-type: none"> <li>• Issues may be very specific to the firm or individual</li> <li>• Difficult to test veracity and assess whether opinion is broadly held</li> <li>• Less likely to generate new ideas</li> </ul>	<ul style="list-style-type: none"> <li>• Requires significant preparation and potential cost</li> <li>• Requires skilled facilitator</li> <li>• Risk that discussion will veer off course or be hijacked by specific issues or individuals</li> <li>• Risk of “groupthink”</li> </ul>
<b>Important considerations</b>	<ul style="list-style-type: none"> <li>• Identify the most relevant key informants.</li> <li>• Use a senior-level interviewer for high-level informants.</li> <li>• Build trust with the interviewee.</li> <li>• Ensure an open and transparent conversation, but control the flow.</li> </ul>	<ul style="list-style-type: none"> <li>• Manage the demographics of the participants to ensure the most effective mix.</li> <li>• Ensure that all participants are involved and feel they have a voice.</li> <li>• Manage (loosely) the conversation.</li> <li>• Manage the expectations of participants.</li> </ul>

An additional method, called life-story interviews, is discussed within the semi-structured guidance tool.

## PUBLIC-PRIVATE DIALOGUE AS PART OF THE VALUE CHAIN PROCESS

**Consultation and more structured public-private dialogue (PPD) should form an integral part of the process of value chain analysis and development.** This section provides a brief introduction to PPD, its relevance for the jobs in value chains analysis, and some recommendations for how to implement it.

### What is Public-Private Dialogue?

**PPD is a structured engagement between stakeholders that seeks to identify, prioritize, and recommend consensus as well as fact-based solutions to a specific need, challenge, or problem.**<sup>17</sup> PPDs go well beyond standard consultation because of the following attributes:

- They are established as an **ongoing dialogue** rather than a single conversation.
- They are designed to be as **inclusive** as possible and to include all voices.
- They go beyond information collection to seek agreement on a set of challenges, through fact-based discussion, and to consider **solutions** to those challenges.

**PPDs enable diversity of opinion and empower people who may often be marginalized to contribute to decisions.** The process often results in increased local ownership and more sustainable policy and action. PPDs can be instrumental when there is

- Lack of trust between key stakeholders
- Asymmetrical information, which may limit knowledge flow across stakeholders
- Lack of coordination
- Need for joint action, to build peace, mitigate against uncertainty, or rebuild after a disaster or terrorist act

### Why should value chain analysis include dialogues?

**Structured dialogues enhance the quality of a value chain study because they can engage horizontal and vertical groups of stakeholders across the value chain.** Although the value chain lens can offer a common interest around which stakeholders may coalesce, challenges of conflicting agendas, perceptions, limited capacity, and lack of information or knowledge often create barriers for the stakeholders to take collective action. PPD can be a valuable tool to bring the stakeholders together to discuss, identify, and prioritize the challenges that limit the potential of the value chain. Once these challenges have been identified and prioritized, stakeholders can work together to propose solutions. Structured dialogue injects discipline to facilitate the discussions and build capacity that would otherwise be lacking. More specifically, dialogue can improve the quality of the value chain analysis through

- Validation of data and analysis
- Insights into the data and into issues not reflected in the data
- Improved ability to understand stakeholders and political economy
- Creation of a common understanding among stakeholders of the challenges and opportunities that face them
- Greater ownership of the agenda by the stakeholder community
- Sensitization of stakeholders
- Strengthened knowledge and capacity of the counterparts

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<sup>17</sup> Public-private dialogue has historically been used at the World Bank as a mechanism to develop consensus around and catalyze reforms of the investment climate related to private sector development. In recent years, with a growing portfolio of sectoral interventions, smaller budgets, and higher awareness of the need to engage citizens, improve transparency, provide inclusion, and improve governance, project teams have used dialogues creatively by taking the complexity out of them. In particular, projects do not focus on PPD secretariats and on large or complex national reforms that can be expensive and difficult to administer.

- Improved chances that a lending or advisory project will move forward because the stage will be set for value chain program development and implementation

#### **Who should be included in the PPD process?**

**PPDs should engage primary stakeholders as well as a wide range of participants and institutions from across the value chain.** This group includes firms and farms from the formal and informal sectors, large and small companies, industry bodies, the government, and public-private agencies that play important roles in the value chain such as incubators, agricultural extension agencies, training centers, and trade facilitation agencies. Support industries, such as transport, information and communication technology, and other professional services also should be represented. Through their participation in the analysis, strategy discussion, and PPD process, training and educational institutions, for example, will be able to identify the skills that local firms need and, more important, they will be able to anticipate the skill set that will be needed in the future. Finally, the dialogue should include representatives from the demand side—for example, a major retail chain that distributes a given agricultural product—because they understand the needs of the end consumer.

**Take care to consider secondary stakeholders who are affected by the outcomes of the value chain analysis and give those stakeholders an opportunity to influence those outcomes.** Secondary stakeholders can be integrated into the dialogue through feedback mechanisms such as surveys, focus groups, social media, a website, and e-governance tools. (See box 6 for one option.)

**The PPD process will likely be most effective if it is managed at the level of the individual value chain, so that focused discussions move toward targeted solutions.** Therefore, in most cases there will need to be several parallel PPD processes, perhaps with individual value-chain-level PPDs nested under a regional or national umbrella process that oversees the overall value chain program.

### **BOX 6: PARTICIPATORY ACTION RESEARCH**

**Participatory action research (PAR) is a research approach in which the stakeholders or beneficiaries participate in the design and execution of the research and actively implement the recommendations produced by the research.** PAR is distinctive as a research approach in that it combines a participatory approach with proper scientific data collection and analysis and concrete action on the ground—the work is not done as an experiment. PAR can be particularly useful for analysis of jobs in value chains because it

Offers a way to involve in the process not just firms but also workers and others, including those currently outside the process such as the unemployed and students.

Creates an approach that facilitates not only improved communication and understanding across stakeholders but also joint identification of problems and of innovative solutions.

**PAR is not an alternative but rather a complement to the PPD process.** It is also a complement to rather than a substitute for rigorous economic analysis.

**The typical approach to PAR is to establish research groups to address specific questions or challenges.** These research groups comprise representatives from multiple stakeholder groups, with a focus on those who would benefit the research process most. The research groups help define and refine the parameters of the research, the diagnostic approach, and the formulation of the strategic response.

## How to fund and run the PPD process

**Whether set up as a highly structured dialogue platform or a loosely structured group, a PPD for a value chain study should be designed to become a sustainable process that will support the ongoing development of the value chain.** The structure will depend on the objectives, complexity of the problem, stakeholders involved, the political economy, and funding. Although PPDs can be large or small and formal or informal, in most cases value-chain-related PPD processes will be relatively small and informal.

**Whereas large and complex PPDs can be expensive, the PPD process for a value chain study is not expected to cost more than US\$20,000–\$40,000 per year, because of its relatively short time window (usually not more than six months).** The costs would include one or two missions for a PPD expert, as needed; the cost of a local facilitator; venue, event, and logistics costs; and potential survey or other feedback mechanisms. From a financial perspective, the ideal scenario is for PPDs to become self-sustained through membership over time, with some support from public sector and development partners as needed. In practice, however, this goal is ambitious in most countries long term; in any case, during the value chain analytical stage, the process will almost never be supported through membership fees.

**Although the World Bank or another development partner or government that funds the PPD will play the role of convener, the process should be owned by the participants.** It should not be perceived as a World Bank effort to influence and guide decisions. Success depends on participants in the dialogue who feel comfortable in the environment.

**It is advisable to use external, local facilitators.** The facilitator should be perceived as a neutral and well-respected individual who is ideally a subject-matter expert or is knowledgeable in the sector or the region. The facilitators should have strong listening skills, have no personal bias, have the ability to bring all participants and voices into the discussion, be able to gain the trust and confidence of participants, and be able to set the ground rules for discussion. The facilitators will be expected to (a) make sure the discussions move forward; (b) maintain the discussion thread between different meetings; (c) ensure all voices have the opportunity to be heard; and (d) articulate and summarize the discussions and bring up key relevant points already addressed in various meetings.

**Facilitators also have a responsibility to act as “guardians” of the strategy-based debate.** The value chain process will feed critical facts and analysis from the analytical process into an open and inclusive PPD process. The facilitator must ask the right questions and apply an analytical lens at all times to upgrade the content of the discussion.

## How to start with PPD—when and how?

Where possible, it is best to embed dialogue into the process of the value chain study and not wait until after the analysis and recommendations are complete, which is done more often. Which of two alternative entry points should be used for a dialogue depends on the context (figure 9):

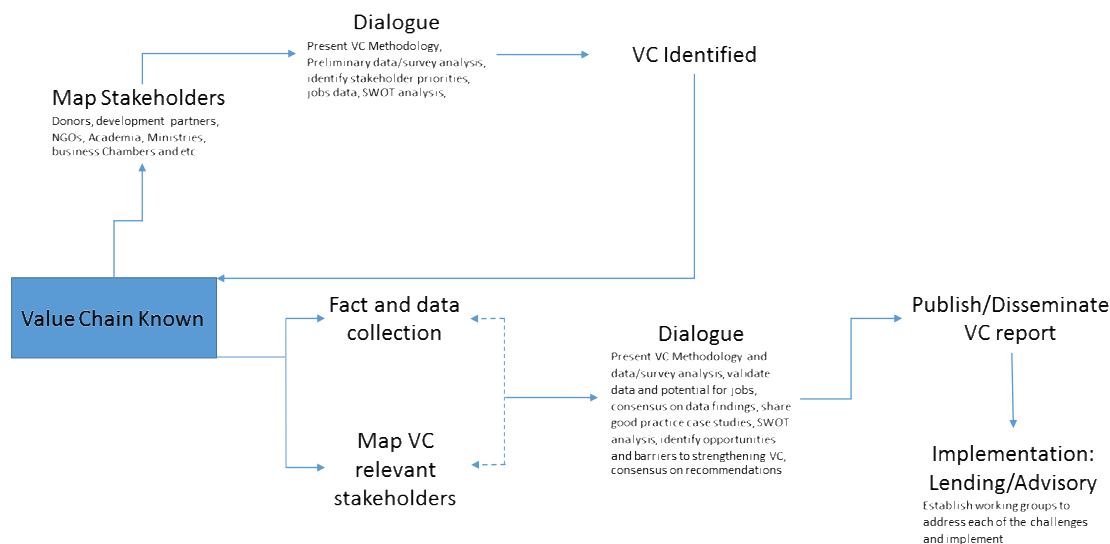
When the specific value chains are unknown. In circumstances in which the study first needs to identify the value chains that promise the most opportunity and potential for jobs and growth, a smaller and contained dialogue can help identify and construct a common agreement around the selected value chain(s). Such dialogues will target a smaller group of stakeholders during last two or three weeks of value chain identification. However, as the study progresses and initial data are collected, a more robust dialogue will be around the data and preliminary analysis to jointly identify solutions.

When the value chain(s) are known. Where the focus has been clearly identified, the entry point for the dialogue should be soon after the data are gathered and some preliminary analysis has been completed. The process of sensitization and stakeholder mapping should start at the beginning of the study so that once the dialogue platform is established, the participants have already bought into the process and they are ready to start the dialogue.



**Figure 9**

Overview of Entry Points and PPD Process in Value Chain Studies



**Key activities to get the PPD process started include the following:**

- **Gather facts.** As a first step, the team should do online research to take stock of existing studies, players, and potential partners. A similar assessment can also be taken at the field level to understand the current political situation, existing dialogues, and drivers for change or growth.
- **Collect data and do analysis.** While facts are gathered, additional data collection and analysis should be done to fill in the gaps and capture a more holistic picture of challenges and opportunities.
- **Understand the political economy and history of decision making.** Within the scope of the value chain, it is critical to understand the role of political economy between actors.
- **Map the stakeholders and influencers.** Work to map the stakeholders goes hand in hand with the political economy analysis. The team needs to identify and engage with stakeholders who can be key influencers—both those who oppose the agenda and those who are likely to support the agenda.
- **Map potential links or synergies with existing dialogues and initiatives.** The team must understand what overlapping or relevant initiatives exist. To the extent possible, synergies should be identified and communication issued that can explain how the initiatives are different and what value the current exercise would add.
- **Sensitize the stakeholders about the value and benefits of a dialogue.** Before dialogues can be undertaken, a majority of stakeholders will likely need to be sensitized to the purpose and objectives and their role in the effort. Members of the team will need to meet stakeholders individually for this purpose and invite them to help build on the drivers that motivate them.
- **Design and develop the dialogue with working groups to ensure the right and inclusive participation of varied stakeholders.** Dialogues should be designed to suit the context within which the study is carried out and the political economy that surrounds it. For example, the effort may be a series of informal meetings or it may start off low key before it gains some traction and visibility. The PPD could also be a big formal dialogue with high visibility and media engagement. The key is to respond to the local context.

## MANAGE RISKS IN THE PROCESS

Table 6 summarizes some of the main risks the PPD process may face, along with potential mitigation measures to consider.

**Table 6**

Risks and Potential Mitigation in the PPD Process

Risks	Mitigation
<b>Lack of inclusion: Influential or crucial stakeholders may not be included in the consultation process, on purpose or by accident. Fair representation of all actors can be a challenge.</b>	Include a meaningful stakeholder mapping or identification exercise before the project launch, ideally led by a neutral coordinator who is not directly involved with the project and who speaks the local language. Consider separate consultations with traditionally excluded stakeholders at the start. Address inclusion through other options, such as feedback mechanisms, focus groups, road shows, and town hall discussions, as relevant. The survey could be a tool to inform the parties, but an official letter from the counterpart sent out to all firms and institutions around the value chain may be the best option to make sure everyone is included. This is especially important if the value chain initiative is meant to develop and implement an action plan.
<b>Lack of capacity of stakeholders: No culture exists of dialogue or acceptance by stakeholders of such a process.</b>	Design a clear and customized structure and process, plan to share knowledge as part of the design, include efforts to build networks, and establish informal mechanisms of collaboration, perhaps within existing institutions. Build the capacity of private sector associations.
<b>Insufficient partner collaboration: Process to build consensus takes longer than anticipated and delays results.</b>	Manage expectations from the start and use an incremental approach. Break results into manageable pieces to maintain momentum and show achievement early on. Set realistic objectives. Invest in efforts to build stakeholder capacity and awareness. If necessary, put the process on hold and reassess whether the risks are too high (the process is hijacked by influential businesspeople, a mandate and client agreement are not in place, significant political or reputational risks hinder progress). While full consensus among stakeholders is ideal, often the implementation of initial actions (low-hanging fruits or early wins) will convince the skeptics of the virtues of strategic collaboration. This is often the case among companies as some managers adopt a wait-and-see approach before they commit to a sector-based initiative.
<b>Higher-than-anticipated cost: Efforts may be needed to do additional analysis or gather more facts.</b>	Be realistic up front and scope carefully to identify available information or potential gaps, and then plan accordingly.
<b>Lack of implementation of suggested actions: Recommendations may not be accepted by agencies needed for implementation.</b>	Build awareness before project launch to ensure actors tasked with implementation fully grasp the benefits of recommended actions for themselves and for others. Publish decisions about reforms and implementation to create transparency and help build trust. Maintain a matrix of issues, identify individuals responsible for specific action items, and track progress for accountability. Use media (newspapers, television, and radio) to showcase results and motivate high-level engagement and buy-in.
<b>Vested interests are re-enforced.</b>	Be open and transparent, make the process as broad-based as possible, and maintain quality control.
<b>Process is taken over by one-person shows.</b>	Again, be as inclusive as possible, foster bottom-up support of the process, and secure commitments from participants.

# PHASE 5: ANALYSIS AND CONCLUSIONS

## MEASUREMENT OF JOBS THROUGH THE VALUE CHAINS SURVEY DATA

Value chain surveys are intended to provide key data to enable measurement of the potential jobs effect of a value chain intervention or investment.<sup>18</sup> This measurement requires a relationship between an investment (in a firm or more broadly in the value chain) and jobs—in other words, the jobs multiplier or coefficient. This, in turn, requires a relationship between (a) investment and output growth, and then (b) between output growth and jobs. Note that the survey instrument has been designed to focus on the latter. The relationship between investment and output growth is treated as exogenous.

To explain the output and jobs relationship, the analysis proceeds in the following steps:

1. **Calculate employment reported in the sample population.** Data on permanent and seasonal labor, split by skill level, age, and gender, are collected in the survey, as is information on wages paid for different types of workers. These data can be tabulated for each node in the value chain as well as between large and small firms or farms. Note that employment is calculated on the basis of full-time equivalents (FTEs), as explained in box 7.

### BOX 7: HOW TO DEFINE “JOBS”

To measure direct employment, investigators use definitions based on those agreed by the international finance institutions in the recent indicator harmonization effort. Specifically:

- **Direct Employment—Operations and Maintenance:** the number of full-time equivalent employees, defined locally, who work for the company or project at the end of the reporting period. This number includes directly hired individuals and individuals hired through third-party agencies as long as those individuals provide on-site services related to the operations of the client company. Also, this number includes full-time equivalent time worked by seasonal, contractual, and part-time employees. Part-time jobs are converted to full-time equivalent jobs on a pro rata basis, according to the local definition (for example, if the work week is 40 hours, a 24-hours-per-week job would equal a 0.6 FTE job). Seasonal or short-term jobs are prorated on the basis of the portion of the reporting period that was worked (for example, a full-time position for three months would be equal to a 0.25 FTE job if the reporting period is one year). If the information is not available, the rule of thumb is that two part-time jobs equal a full-time job.
- **Direct Employment—Construction:** the number of full-time equivalent construction workers employed for the construction of the company’s or project’s hard assets during the reporting period. Part-time jobs for construction are converted to full-time equivalent jobs on a pro rata basis, using the local definition (for example, if the work week equals 40 hours, a 24-hour-a-week job would be equal to a 0.6 FTE job; a full-time position for three months would be equal to a 0.25 FTE job if the reporting period is one year). If the information is not available, the rule-of-thumb is that two part-time jobs equal a full-time job.

2. **Adjust reported employment data from the sample population. The survey captures employment data on the basis of total activities of the firms or farms.** Therefore, they may need to be adjusted to reflect non-marketed output (share of output that is not sold but used in the household, given as in-kind payment, and so on) as well as

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<sup>18</sup> Please refer to [Tool 14](#) - Jobs in Value Chains - Core Indicators

output related to products that are not part of the selected value chain (for example, a farmer that produces a secondary crop during the off-season or an input supplier or distributor that serves products beyond the focus value chain). This step would also involve quality control checks on the data, against other variables and known ratios in the sector, including a calculation of the firm wage bill as a share of reported revenue and employment per hectare (for farms).

3. **Scale-up to the overall population.** The final estimate for the sample population could then be scaled up to the general population on the basis of weightings developed from the initial sample frame.
4. **(Derives from #2) Establish the output-employment relationship (multiplier) at each node.** With the employment data in the sample established, the relationship between employment and output could be determined. This may be taken as the average within strata, or a nonlinear relationship may be established (for example, where there are scale effects that mean marginal labor use declines with increasing output). In practice, however, the output-employment relationship in a dynamic scenario may be somewhat different from what we observe in the static environment. For example, the number and nature of jobs created in a growth scenario will depend to a large degree on the type of investment that drives growth (expansion versus greenfield investment) and the decision taken by firms on the mix of capital and labor they deploy (see box 8). This may establish ranges for the employment multiplier.

#### **BOX 8: EMPLOYMENT ELASTICITY TO GROWTH**

**An important issue to consider in assessments of the potential job creation from expansion in a value chain is how existing firms and farms would respond to growth.** Would they hire? Or would they use the opportunity to invest in labor-saving technologies?

**One way to look at this is to use the data from the Jobs in Value Chains quantitative survey to assess the relationship between output and employment, as well as between output and capital investment, which gives a static view of the relationship under the current structure of the value chain.** The survey also asks respondents to anticipate their marginal investments in capital and labor in a hypothetical situation in which they receive a long-term (three-year) contract that would double their output. This may give much more conservative results for the relationship between output and employment at the margin.

5. **Quantify input-output and supply chain links.** To estimate a multiplier at the level of the value chain, quantify the input-output relationships both within a firm and across nodes of the chain. To do this, the survey provides information on the relationship of firm output and the main supply inputs they purchase. It also provides information on the share of a firm's inputs that it purchases from local suppliers. This allows for a simple calculation between an output increase in each node and the output increase that would result from that in other nodes of the chain. For example, let's assume an orange juice processing firm with \$100 million in revenues spends 50 percent of its revenues on oranges and this did not change with output, and that it purchases 50 percent of its oranges locally (and imports the rest). Then if output in processing is doubled, that should result in a \$25 million increase in output (assuming the firm can meet demand) for local orange producers. That scenario assumes a fixed relationship structure in the local supply chain. But the investments may have a qualitative impact on the structure of the supply chain—for example, lead firms may use the investment to upgrade in global supply chains that require them to source inputs from international rather than local markets. Conversely, the firm may use the investments specifically to invest in building local supply chains or it may have established specific targets to increase local supply chain development. Questions in the survey about constraints to attempts to increase local supply provide inputs that allow for an estimation of how the depth of the local supply chain may change. This method has been illustrated using the results from the Jobs in Value Chain Survey implemented in Lebanon in box 9.

## BOX 9: PILOT CASE STUDY—LEBANON POTATO VALUE CHAIN: JOBS MEASUREMENT

The value chain analysis was carried out in the regions of Akkar (farms); Miniyeh, Zgharta, Tripoli–Bekaa and Mount Lebanon in North Lebanon through a combination of 109 structured surveys, 6 semi-structured interviews, and additional secondary research.

Structured interviews: 109 structured interviews were carried out with firms in peripheral nodes of the value chain, particularly to test the implications of specific growth opportunities assessed in the value chain (table B9.1).

**Table B9.1: Overview of Sample Frame**

Value chain node	Est. population	Surveyed	Comments
<b>Input suppliers</b>	10	5	Included suppliers of potato seeds, fertilizers and equipment
<b>Farmers (small)</b>	600–700	68	Sample biased toward larger farms within this strata
<b>Farmers (large)</b>	30	23	4–5 percent of farms, more than 30 percent of output
<b>Traders</b>	25	10	Included mix of traders who sell in local markets and those who export; most traders were not exclusive to potatoes
<b>Processors</b>	2	3	Additional survey of processors in Bekaa included to provide comparison with main producer in North Lebanon

Semi-structured interviews: 6 semi-structured interviews were carried out with key informants in value chains both at the initial stage of the research and after completion of the structured surveys. These nodes included retailers (3) and commercial bakeries (3).

Focus groups: Focus group discussions were held with stakeholders across both value chains on two occasions: in January 2016 as part of the value chain selection assessment and in May 2016 to present and discuss results from the survey.

The main findings revealed the location, scale, and quality of jobs within the VC, and the potential for job growth over the next few years based on alternative strategic and investment scenarios. The data were also used to create a job profile for workers involved in production, distribution, and processing, including the gender, age, and skill profile of labor. Specific results indicated that the vast majority of demand across all parts of the current value chain is for low-skilled labor. Within the input supplier and processing nodes, there is a significant employment of Lebanese females in permanent low-skill positions (more than 40 percent). Also, most of the jobs in the distribution or trading node are held by youth in permanent low-skill positions (more than 80 percent).

Table B9.2 summarizes some of the key findings from the Value Chain Jobs Estimation analysis of the potato value chain in North Lebanon. It indicates that while on-farm activities represent the largest source of jobs in the value chain, most of this comes in low-skilled, seasonal labor with limited opportunities, in both scale and scope, for younger Lebanese workers. Instead, on-farm jobs are largely occupied by migrant (and recently, refugee) labor. However, the quality of jobs is much higher in other parts of the value chain.

**Table B9.2: Findings of the Value Chain Jobs Estimation Analysis**

	Jobs in current VC		Share of total jobs (%)		Share of FTEs (%)		Value chain job creation: permanent (+ seasonal) jobs	
	Total	FTE	Permanent	Seasonal	High skill	Low skill	Export scenario	Processing scenario
<b>Input suppliers</b>	250	126	41	59	28	72	71 (+104)	71 (+104)
<b>Farmers</b>	7,284	2,137	16	84	19	81	254 (+1,367)	206 (+1,051)
<b>Traders</b>	1,247	510	31	69	16	84	30 (+75)	46 (+115)
<b>Processors</b>	215	132	53	47	20	80	0	800 (+696)
<b>TOTAL</b>	<b>8,996</b>	<b>2,905</b>					<b>355 (+1,546)</b>	<b>1,123 (+1,966)</b>

*Note:* Export scenario is based on expansion of fresh exports by 25,000 tons by the capture of half of the European Union export quota. Processing scenario is based on the attraction of investment to a processing facility with equivalent (25,000 ton) capacity.

VC = value chain.

An examination of the potential jobs effect of investments reveals that the greatest jobs effect comes through downstream investment in processing, where even a relatively small-scale plant would generate substantial employment. Including seasonal jobs, each processing job created would deliver a jobs multiplier of 2.06, in particular through its effect on on-farm jobs. By contrast, investment at the farm level to expand fresh product exports would generate off-farm jobs with a multiplier of 1.39 for permanent jobs and just 1.17 including seasonal jobs.

*Source:* Thomas Farole and Yasuo Konishi, "Jobs in North Lebanon: Assessment of the Potato Value Chain." Jobs Working Paper 9, World Bank, Washington, DC, 2017.

**Estimates from the survey results should enable the team to establish a reasonable range for the jobs multiplier.** This multiplier can be broken down to further levels of detail, including jobs by skills mix and gender.

## BOX 10: PILOT CASE STUDY – ZAMBIA POULTRY VALUE CHAIN: JOBS MEASUREMENT

The poultry value chain (VC) in Zambia was identified on the basis of the growth potential and strong backward links via domestic inputs. Additional selection criteria included the following factors:

Largest livestock subsector in Zambia: 48 percent of livestock value addition

65 percent of national demand met through small-scale farms

Favors women: 60 percent of producers, 50 percent of retailers

From a jobs perspective, there is a need to examine how small-scale farmers can benefit as the sector modernizes. This analysis focuses on the broiler subsector because of its labor intensity. It is estimated that the broiler VC currently provides approximately 32,000 jobs, of which roughly 26,000 are in the traditional model and almost 6,000 in the modern model.

Along with details on the profile of the workforce, the study of the poultry VCs revealed the potential for job growth over the next few years if the main identified constraints to job creation are mitigated. Table B10.1 summarizes some of the key findings from the Value Chain Jobs Estimation analysis of the poultry VC in Zambia. It indicates that the traditional production model offers more jobs, but it can be assumed that jobs in the modern production sector are better jobs (with higher incomes) because of higher labor productivity. The total number of jobs in the broiler VC amounts to over 31,000.

The table further shows two job scenarios that assume continuous population growth at 3.1 percent and a 25 percent increase in per capita broiler consumption. In scenario 1, market shares remain constant between the traditional and the modern production model, whereas in scenario 2, all additional demand is captured by the modern production model. In scenario 1, the broiler VC has the potential to create an additional 17,000 jobs by 2022 (amounting to a total of over 48,000 jobs). In scenario 2, almost 9,000 additional jobs are created in the modern production sector—fewer jobs than in scenario 1, but arguably better quality jobs.

**Table B10.1: Value Chain Jobs Estimation for the Poultry Value Chain in Zambia**

<u>Total Jobs in Current VC</u>			<u>Value Chain Job Creation Scenarios</u>			
	Traditional Production Sector	Modern Production Sector	<u>Scenario 1:</u> Constant Market Shares		<u>Scenario 2:</u> Shift to Modern Production Model	
			Traditional Production Sector	Modern Production Sector	Traditional Production Sector	Modern Production Sector
DOC	325	175	503	271	325	449
Feed	8,520	3,496	13,188	5,411	8,520	8,967
Rearing	15,061	1,689	23,304	2,614	15,016	4,333
Processing	-	210	-	326	-	540
Distribution	1,750	48	2,716	74	1,750	123
TOTAL	25,611	5,618	39,711	8,696	25,611	14,412

*Note:* DOC = Day-old chicks; – = none.

## STRUCTURE OF THE RESULTS AND PRIORITY OF THE INTERVENTIONS

**A fundamental output from the research will be to identify the opportunities and challenges for increased growth, competitiveness, and job creation in the value chain, and the policy and program interventions required to deliver improvements.** This section briefly provides some detail on how the outputs of the research and analysis may be structured to deliver a clear output and to pave the way for implementation of the findings. The guidance on a potential report structure is complemented by a checklist that summarizes the key facts and knowledge (at a topical level) that are essential to the completion of a Jobs in Value Chains assessment—this is provided in the appendix.

**The results from the surveys and interviews should be put through a rigorous assessment, both quantitative and qualitative in nature.** There exist a large number of frameworks through which results can be assessed to get at value chain competitiveness, upgrading potential, and the degree to which microenterprises are linked in the chain. Among the most commonly used frameworks are:

- **Strategic segmentation.** As discussed in section 6, strategic segmentation is critical for understand the nature of the segments present in the local value chain. The results from the surveys and interviews should reinforce the nature and strength of different segments in the local chain and their implications for jobs and skills.
- **Porter's 5 forces:** This classic strategic tool uses the data from primary and secondary sources to illustrate the attractiveness of the different strategic segments in a given industry; it analyzes whether profit can be made and who would capture most of it. It is a dynamic tool for analysis because it can be used for current and past scenarios but it also can help firms understand future trends in a given industry.
- **SWOT analysis.** This standard strategic planning tool can help summarize the ways in which regional capabilities (strengths and weaknesses) match with the global competitive environment (opportunities and threats).
- **Gap analysis.** With benchmarking as its analytical tool, gap analysis assesses the difference between the current and “ideal” value chain to support a given vision for the future of the value chain. In an increasingly globalized environment, it has become less and less common to keep all stages of the value chains local. Thus the focus is of the effort is to link local value chains to global value chains. It can be an inspirational exercise to set as a benchmark what others with similar capabilities have done and what stages would be best to manage locally in the long run.

**Once the general analysis has been completed, the assessment should be structured to deliver a clear story and linked interventions, as illustrated in box 11.** The proposal can be based on the following recommended key questions:

### **Strategic options for firms and the value chain: Market opportunities and the path to an upgraded value chain**

- Where are the main market opportunities for development of the value chain?
- What are the options to upgrade the value chain and what is the most appropriate path for the chain? What are the risks of different paths?
- What firms are likely to lead the drive to increased competitiveness, and how are they linked to other firms in the chain?
- How can producers implement new strategies to increase their margins with no risk of retaliation from their current clients (such as through exports)?
- Where are the risks and threats for the value chain now and in the future? Is the competitive position of the value chain solid in general?

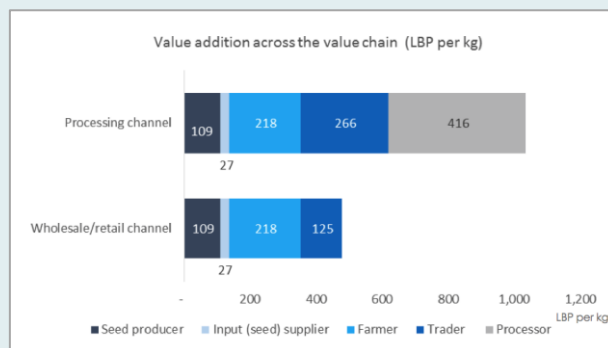


## BOX 11: PILOT CASE STUDY—HOW THE LEBANON POTATO VALUE CHAIN’S MAIN FINDINGS LINKED TO RELEVANT POTENTIAL INTERVENTIONS

### Market Opportunities and Competitiveness

Background research and trends in the regional market (slightly higher prices and strong growth in demand) have indicated that there is an opportunity to grow the potato sector through regional exports. In the short term, however, transport barriers and an overall difficult external environment have made it even more important to develop the processing end of the value chain, where risks that stem from timing in the market might be managed better and where higher value-added potential might soften the impact of some of those extraordinary costs (figure B11.1)

Figure B11.1: Value Addition across the Value Chain of the Lebanese Potato Sector



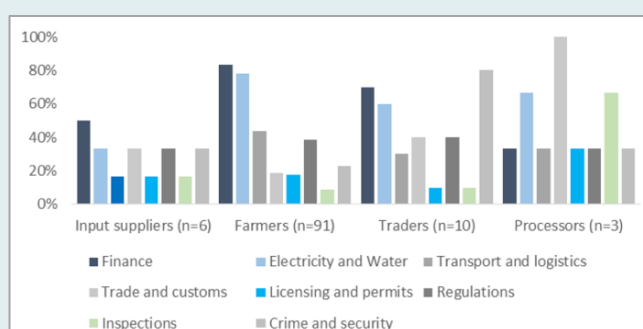
Note: LBP = Lebanese pound

The investment patterns of the largest global potato processors suggest that competitiveness has been driven primarily by production scale and efficiency. It also has tended to be driven more by access to inputs than to markets. This is because the perishability and weight (low value to weight ratio) of potatoes makes processed potatoes more economically efficient to ship than raw potatoes for most processed products. (One exception to that rule is potato chips, which, because of fragility and high volume-to-weight ratio, are more typically produced closer to end markets.)

### Constraints to Competitiveness

A comparison of the structures of production costs along the value chain revealed that 50 percent of the production cost of processors comes from electricity and fuel costs. This observation immediately raises concerns in the Lebanese environment, where electricity reliability is so poor. Furthermore, postproduction costs, including storage, marketing, and transport, are relatively higher in the processing end of the potato value chain (figure B11.2). The main processors in the North also identified volume requirements (to serve new, large customers) as a moderate constraint, because efforts to meet volume requirements would typically require substantial capital investment.

Figure B11.2: Percentage of Firms That Identified Factors as Major or Moderate Obstacles to Operations



One of the primary factors that has held back growth for potato farmers is the existing market system, whereby farmers have operated without any control over the market and therefore have been subject to fluctuations in prices on both the input and output side. At the time of the analysis, no integration existed in the supply chain, and virtually all sales came through ad hoc trading arrangements. Just 5 percent of farmers surveyed had a formal contract, and just one of three processors sold with a formal contract. When formal contracts existed, they typically did not guarantee price but specified volume commitments (from both sides, subject to quality) at prevailing (daily) market prices (figure B11.3).

**Figure B11.3: Percentage of Firms That Identified Factors as Major or Moderate Obstacles to Growth**



Evidence from the surveys suggests that labor shortages, skills gaps, or both exist in the value chain. For example, when asked why firms made extensive use of seasonal labor, in addition to the seasonality of the potato crop (the main reason), 60 percent of farmers and traders and all three processors indicated a lack of skills or labor shortages. For high-skilled workers, in addition to job-specific technical skills (for input suppliers and farmers), problem-solving skills were highlighted as most critical and difficult to find for both processors and traders. Other key skills gaps were indicated in both cognitive (ability with calculations and numbers) and non-cognitive (leadership, time management) skills. For low-skilled workers, the emphasis was almost exclusively on physical strength and dexterity, although some gaps were identified in time management skills and teamwork.

## Policy Recommendations

**Address electricity and other infrastructure constraints to attract large-scale processing activity.** The lack of reliable electricity infrastructure and the high cost of land are among the main factors that make processing less competitive in Lebanon. An effort to address these, for example through industrial parks and special economic zones, or direct interventions to improve electricity costs and quality, would be necessary to support a processing-driven value chain development strategy.

**Improve supply chain coordination and integration.** Among the least costly but most critical interventions required are efforts to improve coordination and move toward deeper integration across the existing supply chain. A key step would be to implement successful models of contract farming between processors (as well as traders) and farmers, to integrate inputs, provide technical services to improve farming practices, and increase marketing. Robust contracting arrangements to reduce the risk to farmers of investing in new varieties and techniques would kick-start a process to upgrade the value chain and build trust within the value chain.

**Build skills for the future of the value chain.** The potato value chain in North Lebanon has become used to operations with low-skill demands and relatively poor working conditions. To put the potato value chain on a path to higher growth and better quality jobs, the sector will need to upgrade the quality of the jobs available and invest in training to support the development of skills required to exploit growth opportunities in the sector. For example, development is needed in the skills used in quality control, packaging, and logistics and in other skills required for a more sophisticated production and processing industry.

Source: Thomas Farole and Yasuo Konishi, "Jobs in North Lebanon: Assessment of the Potato Value Chain," Jobs Working Paper 9, World Bank, Washington, DC, 2017.

### Opportunities for jobs, earnings, and inclusion

- How well does the current value chain deliver inclusive jobs and earnings, particularly to target groups?
- What implications do the different development and upgrading paths have on the degree and nature of links across the value chain, in particular for microenterprises? What would be the likely net outcome in terms of jobs and earnings of different paths?
- What is the optimum development path to deliver sustainable, quality jobs and income growth for microenterprises and the self-employed?
- Do local training providers meet the demand for professional skills? Does the institutional and educational ecosystem have the capacity to provide what is needed? If not, what kind of changes are necessary?

### Priority constraints

- Given the recommended development and upgrading path(s), what constraints would prevent growth?
- What are the main constraints that prevent further value chain integration (especially for microenterprises) and better quality employment opportunities?

### Identification of key interventions

- What do the identified opportunities and constraints indicate should be the high priority interventions that need to be made?
- What low-hanging fruit and opportunities for quick wins exist?
- How should interventions be packaged, and who are the key actors to lead and contribute to their implementation?
- What scheme would best fund implementation in each case? Some of the initiatives would have an effect on the whole value and some others would only apply to groups of companies that share a strategic challenge, so a scheme to fund and monitor the efforts should be tailored accordingly. For instance, initiatives that target a limited number of companies should consider co-financing models in which the private sector gradually takes on an increasing share of the cost as soon as the initiative proves to benefit their balance sheets and thereby justify the firms' financial commitment to sustainability over time. Failure to build in mechanisms within interventions to encourage partial funding from the private sector could foster an overdependence on continued subsidized public support and prove to be counterproductive.

### When priorities for interventions are set, it may be helpful to assess each intervention in the context of

1. **The likely effect the intervention would have to support the competitiveness and sustainability** of the value chain
2. **The likely effect the intervention would have on target populations**—in other words, the scale of job and earnings growth it delivers to target populations
3. **How likely the intervention would be implemented**, indicated by whether the key stakeholders are mobilized and motivated to make it happen, whether the costs and time to implement are available, and whether there is political will of government, donors, and other actors
4. **Redundancy**—the degree to which it addresses untouched issues or complements other interventions.

**To facilitate the discussions and build consensus around the prioritization, it would be helpful to apply a set of variables, like those noted in the list, to each potential intervention and use a visual aid to map them accordingly.** The participants could assign a grade (between 1 and 5), translate the choice into a spider web tool per intervention, and transfer the result to a 2 x 2 matrix as they play with different variables. The tools eventually used will depend on the preferences and style of the value chain expert, but the prioritization of interventions itself is extremely important. Often an action plan lists every potential action initiative but fails to differentiate those that are strategically more important. That oversight hampers the degree of implementation.

**Any final selection of priorities and development of an implementation plan should be done in close consultation with stakeholders through the ongoing PPD.** In fact, some of the analysis and decision making could ideally be carried out through the PPD process.

# CONCLUSION

**This guide provides an overview of the main phases and activities involved in a ‘jobs in value chains’ assessment, and it identifies the range of tools available to help plan and implement the survey.** Value chain studies help us understand the number of jobs, where they are located in the VC, and the extent and nature of relationships among actors in a VC. However, the successful collection of robust data is contingent on a strong implementation methodology that follows technical guidelines, training, and quality control. The guidelines provided in this guide can be used to help prospective project team leads oversee questionnaire adaptations, sample selection, fieldwork, and data management.

**Some important considerations outlined in this guide include the need to undertake an effective selection and mapping of value chains, to take a practical approach to sampling, and to contract consultants or experts to implement the quantitative tool, initiate public-private dialogue, and provide expertise in the VC product or sector of interest.** The final sections provide a brief outline of the work to estimate and structure results through the use of the reports that have been prepared with data collected under these surveys. Some additional resources have been made available in the Further Reading section.

# ANNEX

## VALUE CHAIN SURVEY ANALYSIS COMPLETION CHECKLIST

This guide aims to provide project team leads with a basic set of tools to understand the structure and composition of a value chain; the main strategic challenges and the competitive pressures shared by local value chain firms; and the location, nature, and structural relationships that shape employment dynamics (jobs and earnings) within the chain. The conclusions drawn from the value assessment will equip practitioners to better inform the subsequent action-oriented interventions to tackle opportunities for shared growth and job creation.

The following questions, and the extent to which those responsible for the assessment can answer them, may serve as a self-applied checklist to test this knowledge. The first set of fundamental questions covers those issues that, ideally, should be fully understood for the analysis to be considered complete. Analysts should also be proficient in information on (a) the current industry structure, (b) the major challenges that value chain members face, and (c) the implications for value chain upgrades and job creation.

### FUNDAMENTAL QUESTIONS

By the end of the analytical process, team members should be able to create a snapshot or synthesis of the major issues that govern the current dynamics and competitive position of the value chain:

- What are the facts of the VC/cluster (major size magnitudes)?
- How has the VC/cluster evolved over time? Is there a history of successes and failures in regard to public-private collaboration?
- What strategic segments do local VC firms compete in? What factors can define the existing strategic segments in this industry?
- What companies have grown the most? Why? What business models are more likely to sustain or improve the competitive position of firms?
- Which are the main players in the value system?
- Where are jobs concentrated in the value chain (what stages, types of firms)? What are the opportunities to expand job creation and improve incomes, and what are the main risks to existing jobs?
- How well are microenterprises connected in the value chain? What are the opportunities and constraints to efforts to deepen this connection?
- What training and education institutions in the region can VC companies interact with?
- What are the major skill gaps between current capabilities of the workforce and the skill set needed to pursue winning strategies?
- What are the major trends (global, regional, or national) that affect the local VC?
- What business and institutional leaders seem to be more willing to lead or collaborate in future sector-based actions?

If the team is unable to answer each of those questions with some level of certainty and detail, the analysis should be considered incomplete and might require further interviews or research.

Other important questions that should be answered as part of the analytical process:

**What are the structure, size, and sources of growth and job creation in the VC today?**

- Estimate industry turnover, number of firms (per typology), and employment. How have these figures evolved recently?
- Can we break down these magnitudes per strategic segment? Can we compare margins and trends in each segment?
- What products does the VC produce? How complex are they (commodity compared with value added, what differentiation)? What is the industry concentration (in value and production)?
- Who's who in this value chain?

The team may confront two important hurdles here:

1. **Strategic segmentation has important implications for both the rest of the analysis and the success of future PPD stages, because it sets the working perimeter in which companies that share similar key success factors compete.** Segmentation options in an industry are not always obvious and may be subject to constant debate. However, it is a big mistake to not take this methodological step into consideration. Failure to identify the different business segments in an economic sector can perpetuate a tendency to rely solely on sectorwide policies, which are unlikely to be sufficient, and can result in action plans that sit on the surface of the real and transformational issues.
2. **Information on distribution channels and retail may not be available.** To create a comprehensive mapping of all stages and actors in the VC may require teams to develop their own estimates and review multiple data sources. Statistical information on economic sectors tends to be defined from a supply perspective, but the demand side is important to account for because actors in those VC stages are better equipped to anticipate changes in demand and thus to amplify business trends that may affect the VC.

#### **What are the top three challenges the VC faces today? In the future?**

- What is attractive about the different strategic segments at play? Where can local firms build competitive advantage and increase their profitability?
- What are the VC/cluster's main competitors globally and nationally?
- In a nutshell, what business models are **not** likely to sustain the competitiveness of the VC/cluster and what others are more likely to drive growth?
- Benchmark: How does this VC compare with others?

**A sense of urgency is needed in industry to get it to engage in future PPD and process facilitation phases.** The reason is simple. Strategic change requires that participants leave their comfort zone, and too often leaders in an industry fail to anticipate and adapt to business trends that could transform the whole industry. For instance, the European textile sector had to reshape its business models to adapt rapidly to competition from low-income countries. Once a disruptive force is identified, it is easier to convene the business community to discuss and implement other growth strategies.

#### **Implications for action-oriented PPD**

- What specific firms can best drive growth and job creation in the industry? Which firms have the potential to drive integration in the value chain (those with the most solid business model and strategy)?
- Who is particularly willing to participate in future PPD and action processes?
- What is the perception of the public sector among local firms?
- What exactly do the competitiveness support agents in the value system do? What influence and resources (financial, human, other) do they contribute?

# FURTHER READING

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