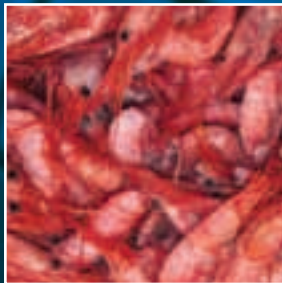


# MOVING TOWARD COMPETITIVENESS

## A VALUE-CHAIN APPROACH



# Moving Toward Competitiveness: A Value Chain Approach

FIAS: The Foreign Investment Advisory Service

A joint facility of the  
International Finance Corporation, the Multilateral  
Investment Guarantee Agency, and the World Bank

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Address comments and questions to the author at [usubramanian@worldbank.org](mailto:usubramanian@worldbank.org).

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# Contents

<b>Acknowledgments</b> .....	<b>iii</b>
<b>Executive Summary</b> .....	<b>ix</b>
<b>Chapter 1: Introduction</b> .....	<b>1</b>
Context .....	1
Purpose and Target Audience .....	3
<b>Chapter 2: Value Chain Analysis—the Key Elements</b> .....	<b>9</b>
Basic Framework .....	9
Source .....	10
Make .....	10
Deliver .....	11
Sector Choice .....	12
Market Analysis .....	13
Value Chain Mapping .....	13
<b>Chapter 3: Measuring Performance and Establishing Benchmarks</b> .....	<b>19</b>
Metrics .....	19
Benchmarking: Uses and Challenges .....	22
Cost, Quality, and Supply of Raw and Intermediate Materials .....	25
Primary Factor Cost Drivers (Labor, Capital, Land) .....	27
Utilities, Administrative Overheads, and Other Costs .....	29
Trade Logistics and Transport .....	32

<b>Chapter 4: Developing Policy Recommendations</b> .....	<b>35</b>
Example: Tourism in Mozambique .....	36
Example: Textiles in Indonesia .....	38

<b>Bibliography</b> .....	<b>41</b>
---------------------------	-----------

<b>Annexes</b> .....	<b>45</b>
1. Acronyms Used in this Report .....	46
2. Value Chain Analysis: Policy Questions .....	47
3. Product Value Chain Analysis: Sample Terms of Reference .....	50
4. Sample Sourcing Business Survey (Peru Textiles) .....	54
5. INCOTERMS .....	60
6. Industry Competitiveness Indicators for Value Chain Analysis .....	62
7. Sample Policy Recommendations & Action Plan Matrix: Mozambique Tourism High Priority Initiatives) .....	63

### List of Figures

Figure 1. Sample Policy Recommendations Framework .....	xii
Figure 2. Example of Potential Implementation Projects Following an Industry VCA .....	5
Figure 3. Key World Farm Shrimp Suppliers .....	6
Figure 4. Shrimp Trawling Value Chain for Nigeria .....	7
Figure 5. Shrimp Value Added and Shipment Value Breakdown .....	7
Figure 6. Extended Value Chain of Cattle Industry .....	10
Figure 7. Key Elements of Value Chain Studies .....	11
Figure 8. Value Chain Mapping Activities: Coffee in Honduras .....	16
Figure 9. Honduran Coffee Value Chain Dynamics: Structure of Industry .....	16
Figure 10. Honduran Coffee Cluster: Interaction of Stakeholders .....	17
Figure 11. Factor Productivity Measures .....	23
Figure 12. Sample Benchmark Indicators for a VCA .....	23
Figure 13. A Comparison of the Kenyan and Honduran T-Shirt Value Chains .....	25
Figure 14. Time to Complete Import Procedures (Honduras, Kenya, and Spain) .....	33
Figure 15. Sample Policy Recommendations Framework .....	36

### List of Tables

Table 1. Unit Labor Cost Comparisons .....	28
Table 2. Shuttles Installed in Selected Countries .....	29
Table 3. Electricity Indicators for Selected Countries .....	30
Table 4. Senior Management Time Dealing with Bureaucracy .....	30
Table 5. Nigeria: Regulatory Procedures (Economy Wide) .....	31
Table 6. Nigeria: Regulatory Procedures (Specific to the Shrimp Sector) .....	32
Table 7. Summary Recommendations for the Tourism Sector in Mozambique .....	37
Table 8. Recommendations for the Indonesian Textile Sector .....	39

**List of Boxes**

Box 1.	Sample Market Analysis Questions . . . . .	14
Box 2.	Sample Questions for Buyers . . . . .	15
Box 3.	Sample Questions for a Mapping Exercise . . . . .	15
Box 4.	Cost and Time Measurements . . . . .	20
Box 5.	Methodology . . . . .	21
Box 6.	Shipment Value Metrics . . . . .	22
Box 7.	Sample Questions for Establishing Benchmarks . . . . .	24
Box 8.	Questions to Consider When Assessing Cost, Quality, and Supply of Materials . . .	26
Box 9.	Questions related to Factors of Production . . . . .	27
Box 10.	Factoring . . . . .	29
Box 11.	Questions to Consider When Assessing Administrative Costs . . . . .	30
Box 12.	Questions to Consider When Assessing Trade Logistics . . . . .	34



# Executive Summary

Developing countries face tremendous opportunities for economic growth given economic liberalization worldwide, and rapid advancement and application of information and communications technologies. However, along with the many opportunities global network trade has to offer, firms in developing countries also face strong competitive pressures for greater efficiency and productivity to maintain market share or even survive. A strong business environment based on sound institutions and policies is a necessary basis for enhanced competitiveness of private firms that produce and deliver goods and services. When business environment constraints—inefficiencies and cost disadvantages—can be identified, policy makers have the opportunity to jumpstart economic reform processes that target priority areas along the product/service life cycle known as the value chain. This technical report outlines a pragmatic approach for analyzing value chain performance as the basis for identifying binding constraints to growth and competitiveness. This approach is intended to facilitate formulating a targeted reform agenda.

The World Bank Group (WBG) uses a myriad of policy tools to support its ongoing private sector development work. There are many established products—including the *Doing Business* reports, *Enter-*

*prise Survey* series, *Investment Climate Assessment* reports (ICAs) and FIAS<sup>1</sup> regulatory reform and investment generation products—all of which address public policy issues that constrain the overall business environment. The industry-specific value chain approach presented in this report complements these products. In addition to the economy-wide business environment issues addressed by many of these products, the value chain approach uncovers sector-specific constraints, offering yet another “lens” through which the underlying public policy issues can be addressed.

## What is value chain analysis?

Value chain analysis (VCA)<sup>2</sup> is a method for accounting and presenting the value that is created in a product or service as it is transformed from raw inputs to a final product consumed by end users. VCA

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1. The Foreign Investment Advisory Service (FIAS) is a multi-donor advisory service of the World Bank Group, jointly supported by the International Finance Corporation (IFC), the World Bank, and the Multilateral Investment Guarantee Agency (MIGA).

2. In this report, VCA is used to mean either “value chain analysis” or “value chain approach.”

typically involves identifying and mapping the relationships of four types of features: (i) the activities performed during each stage of processing; (ii) the value of inputs, processing time, outputs and value-added; (iii) the spatial relationships, such as distance and logistics, of the activities; and, (iv) the structure of economic agents, such as suppliers, the producer, and the wholesaler. Value chains can become complex when they reflect multi-stage production systems with multiple types of firms operating in different locations in one country or multiple countries around the world.

The industry value chain approach introduced in this technical report relies on the traditional market-related context of value chain analysis in identifying failures in sourcing, manufacturing, and delivery.<sup>3</sup> Yet this approach is unique in recognizing the key public policy, institutional and infrastructure factors underlying constraints in the business environment. For instance, regulations related to trade, taxes, licensing and standards often significantly impact firm competitiveness. The emphasis on these types of factors and their impacts on an industry's market-based value chain not only helps in pinpointing priority areas for reform in an industry-specific context, but also in designing policy solutions within the environment in which firms operate.

The policy and reform agenda that typically emerges from the value chain approach presented here relates to three core areas:

- Product market issues (e.g., trade policy, competition policy, price distortions, subsidies, licensing, product standards, customs, logistics, property rights, enforcement of regulations);
- Factor market issues (e.g., wages, capital charges, utility market issues, labor market rigidities, land price, zoning);

3. In addition to WBG units, many other international development agencies such as GTZ, USAID, COMMARK, and ILO, also use value chain approaches. Industry value chain analyses conducted by GTZ, USAID and the World Bank Group's *Value Addition to Firms* business line have primarily focused on "market failures." The main objective of these projects has been to help producers ramp up global value chains, create markets and strengthen backward linkages.

- Market related issues (e.g., market diversification, research and development, product diversification, supplier linkages).

### Purpose and target audience of this publication

This technical report offers a rationale and a practical approach for using VCA as an empirical tool in identifying binding constraints to industry growth and competitiveness. While this publication is not a "how-to" manual per se, it aims to present a sound analytical framework, pointing to useful insights on how to infer business environment-related policy issues. It outlines the key elements of value chain studies and discusses methodological issues in delivering results that can be reliably compared across studies and that can provide a basis for the development of policies and institutions. Thus, the approach and case histories presented here are intended to contribute to ongoing discussions on good practices in VCA within and outside the World Bank Group.

The VCA methodology highlights the linkages between public policies and the performance of industries (or firms), and therefore it is an appropriate tool for a broad audience in both the public and private sectors. It is aimed at practitioners who conduct VCA with a view to getting at policy and institutional issues affecting industries. It may also be useful to private sector groups in WBG client countries as they strive to improve their sectors' competitiveness. The data-based reform agenda enables private sector stakeholders—firms, trade associations, and business advocacy groups—to advocate for reforms that address priority economy-wide and sector-specific issues as identified in the VCA.

### The stages of VCA

The three integral stages of the VCA presented in this report include:

- Process mapping of industry chains in qualitative (graphical) terms and quantitative terms by disag-

gregating metrics such as cost, time, productivity, and value addition along the various segments of each chain. The qualitative mapping presents all activities, actors, relationships among segments of the chain and interaction between the various stakeholders, including producers, intermediaries and buyers.

- Establishing benchmarks for performance indicators against international competition and best practices. The performance measures together with benchmarking against comparators helps in:
  - Assessing the relative importance of the different issues that affect the performance of the value chain, and;
  - Prioritizing the most binding constraints that directly affect the competitiveness of an industry.
- Explicitly understanding the policy and institutional factors underlying these performance measures. This helps in developing a targeted reform agenda that, if addressed, will enhance growth and competitiveness of the subject industries, and will potentially attract private investments, enabling higher value job creation.

An important preparatory step for the VCA includes sector choice which is to determine the actual sector(s) that will be analyzed, and more specifically, the product focus based on criteria such as contribution to the gross domestic product (GDP), export earnings, attractiveness for private investment, policy relevance, job creation, local value added, and so on. Another important element (market analysis) is to provide a solid basis for understanding industry trends and issues both within the country and in the international arena.

## Formulating policy and programs from value chain analysis

The findings of previous value chain studies have provided the strategic underpinnings for growth and competitiveness strategies, small and medium-sized enterprise (SME) projects, and technical assistance projects to help strengthen business environments

and job productivity. As shown in Figure 1 below, the VCA framework identifies a priority set of issues, some of which are sector specific while others apply to the entire economy and affect many sectors and firms in a country. Also, some issues typically need to be addressed primarily by the public sector while others are driven mainly by the private sector.<sup>4</sup>

## Case studies in VCA and related policy recommendations

The case studies of the shrimp industry in Nigeria and tourism in Mozambique help to illustrate the basic concept and application of VCA. The Nigerian shrimp industry was a promising sector in terms of growth potential, job creation and future export earnings,<sup>5</sup> that had displayed a turnaround from a serious decline apparent a decade ago. It was one of four industries in Nigeria chosen for VCA by the WBG project group across a continuum of performance (declining, nascent, recovering, and successful rebirth) designed to bring to light most of the policy issues affecting the country's non-oil sectors.

In Mozambique, the VCA of the tourism industry was part of a larger effort to diversify the economy and help sustain an average 8 percent annual growth rate following the country's dramatic post-conflict recovery. The Mozambique study analyzed both the microeconomic and structural dimensions of the tourism sector to pinpoint the factors constraining product and factor markets, as well as the delivery of services in meeting the changing needs of tourists visiting Mozambique.

**Nigeria's shrimp industry.** Nigerian shrimp suppliers to the European Union (E.U.) market are represented by a trawling industry of about 20 companies which annually export about US\$55 million in frozen shrimp to the E.U. Frozen wild shrimp from

4. Both the public and private sector must work closely together on several of these issues if they are to be addressed effectively. However, to emphasize the primary responsibility, issues are divided between the public and private sector in Figure 1.

5. USAID, Industry Action Plan for Nigerian Shrimp and Prawns, 2002.

**Figure 1 Sample Policy Recommendations Framework**

	Public Sector	Private Sector
Economy Wide	<ul style="list-style-type: none"> <li>• Reduce VAT Redemption delays</li> <li>• Risk-based system for profiling tax payers, backed by an effective post-refund audit system</li> <li>• Review and/or revise Investment Code to ensure level playing field between SME and large firms</li> <li>• Improve land registries; clarify titling/leasing or user rights</li> </ul>	<ul style="list-style-type: none"> <li>• Private power provision to rationalize cost and/or enhance performance</li> <li>• Private water and sanitation</li> <li>• Privatize air/sea ports</li> </ul>
Industry Specific	<ul style="list-style-type: none"> <li>• Remove tariff distortions on main imported inputs for the sector</li> <li>• Reduce barriers to Import Licenses for key actors in the sector</li> <li>• Improve enforcement of product standards</li> <li>• Policy for attracting FDI (e.g., hotels)</li> </ul>	<ul style="list-style-type: none"> <li>• Shop floor management enhancements to increase productivity</li> <li>• Diversification of products and/or markets;</li> <li>• Improve capacity of suppliers, infrastructure for sourcing to improve backward linkages</li> <li>• Promotion for attracting FDI in for e.g. hotels, tourism products</li> </ul>

Source: Uma Subramanian (2007).

A useful framework for developing a targeted reform agenda categorizes sample recommendations derived from the industry VCA into a matrix. Recommendations are grouped along one axis according to whether they apply economy-wide or by industry; along the other axis, solutions that are primarily addressed by public sector agencies are separated from those handled by private firms.

Nigeria are purchased by large European wholesalers on a “free on board” (FOB) basis at the port of Lagos and then enter the E.U. under the preferential quota-free and tariff-free access offered by the Cotonou Agreement. A cold chain keeps the shrimp frozen throughout the supply chain from trawling to final delivery, a procedure that meets critical E.U. Hazard Analysis and Critical Control Points (HACCP) standards for market entry.

The VCA identified four key cost drivers: (i) fuel, used for vessel operation and the critical cooling chain, which accounted for 32 percent of the shipment value; (ii) administrative overhead costs, 12 percent; (iii) capital charge, 10 percent; and (iv) logistics, 5 percent. Despite the high cost elements, the value added component of the shrimp chain generated a profit rate of 18 percent of the value added after covering the costs of both the primary inputs and the

logistics. The major factors that contributed to the “turnaround” of Nigeria’s shrimp sector: the high-value nature of the product; increasing demand in the E.U.; and the quality of the product, which meets international quality standards.

The growth in demand for shrimp and the Nigerian industry’s relatively straightforward value chain allowed for integration of the industry’s production into the global value chain. By incorporating HACCP quality and production standards into their operations, Nigerian shrimp producers effectively accessed high-end European markets willing to pay premium prices for high-quality goods. It is hard to imagine that the industry would have been able to reverse its decline without E.U. market access. In this regard, the Nigerian government was influential in fostering growth in its shrimp industry through effective policy implementation to acquire the HACCP certificate.

***Mozambique's tourism industry.*** Tourism in Mozambique is growing at a 13 percent annual rate as Africa captures an increasing share of the global tourism market. Yet this growth rate is from a very low base level in Mozambique. Mozambique attracts relatively fewer tourists, particularly intercontinental visitors, who spend less than in other destinations in Africa and other world regions.

The tourism value chain in Mozambique required an assessment of each value chain component, such as air carriers, hotels, restaurants and tours, in the overall tourism experience, in addition to the linkages to other agents, and the performance of the service providers, industries and institutions. The study focused on three typical trip itineraries<sup>6</sup> chosen to reflect the heterogeneity of tourism products, destinations and market segments that characterizes Mozambique's tourism offer.

Although the VCA validated Mozambique's valuable intrinsic assets and strong comparative advantage in tourism, it also found the industry is constrained by poor accessibility and positioning in the international marketplace, absence from the interna-

tional distribution networks, and a thin product line dispersed across locations. More generally, a confluence of investment climate issues is preventing dynamic development of the industry; the weak investment climate increases costs for finance and inputs, drains resources from the private sector, and creates an uneven playing field and entry barriers for innovative entrepreneurship.

As a result of the VCA, targeted policy recommendations were developed to address four key areas of industry constraints: (i) the ease and costs of access to destinations in Mozambique, which included visas and frontier issues, airline connections and services in addition to infrastructure, and ground transportation; (ii) regulatory and administrative constraints in the business environment associated with land user rights, licensing, business start ups, investment codes all of which hampered investments in hotels, resorts and alternative tourism accommodations; (iii) tourism institutions and stakeholder cooperation in effectively developing, maintaining and marketing tourism resources; and (iv) linkages, leakages and increasing value added, in order to capitalize on the tourism industry's inherent forward and backward linkages that spill over into other sectors. (See Annex 7: Sample Policy Recommendations & Action Plan Matrix: Mozambique Tourism High Priority Initiatives.)

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6. Lisbon–Maputo–Vilanculos/Bazaruto (Southern Leisure Market); London–Johannesburg–Pemba–Quirimbas (Northern Up-scale Market); and, Europe/USA–Maputo (Business/Conference).



# Introduction

## Context

Developing countries face tremendous opportunities for economic growth given the increasing convergence of economic policies, and advancement and widespread application of information and communications technologies. A growing number of countries are producing and delivering products and services in today's global environment of unprecedented decentralization. However, along with the many opportunities global network trade has to offer, countries and firms also face strong competitive pressures for greater efficiency and productivity to maintain their market share or even to survive. There is a growing consensus in the development community that sound institutions and policies that enhance a country's investment climate are often decisive to the countries and firms that face this global challenge.<sup>1</sup>

The World Bank Group's "private sector development strategy" has underscored several microeconomic issues relating to both product and factor markets as critical elements to the successful development of these public policies and institutions.<sup>2</sup>

The World Bank Group uses a myriad of policy tools and approaches to support its ongoing private sector development work—including the *Doing Business* reports, *Enterprise Survey* series, *Investment Climate Assessment* reports, and FIAS' regulatory reform and investment generation products—all of which address public policy issues that constrain the overall business environment. The industry-specific value chain approach (VCA)<sup>3</sup> presented in this report complements these products. In addition to economy-wide investment climate issues, VCA uncovers sector-specific constraints, thus offering yet another lens through which to identify and understand the underlying public policy issues. These sector-specific issues are often important in jumpstarting more comprehensive economic reform processes in client countries.

By analyzing the costs of doing business through a specific product or industry lens, VCA facilitates the identification of binding constraints to growth

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2. World Bank, *Private Sector Development Strategy: Implementation Progress Report* (June 2003).

3. This report uses VCA to abbreviate "value chain analysis" and "value chain approach."

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1. See, for example, Klein and Hadjimichael (2003).

and competitiveness<sup>4</sup> and the effective targeting of institutional and policy-related issues, at the sector and economy-wide levels alike. The reform agenda that typically emerges from the VCA presented here relates to three core areas:

- *Product market issues* (e.g., trade policy, competition policy, price distortions, subsidies, licensing, product standards, customs, logistics, property rights, enforcement of regulations)
- *Factor market issues* (e.g., wages, capital charges, utility market issues, labor market rigidities, land price, zoning)
- *Market-related issues* (e.g., market diversification, research and development, product diversification, supplier linkages).

VCA plays an increasingly useful role in the World Bank Group's work to improve the investment climate. A number of groups and units within the World Bank Group are already engaged in value chain studies in various countries and regions of the world, including Africa, Latin America, Central Asia, South Asia, East Asia, and the Middle East and North Africa. FIAS itself is directly involved with several value chain studies in a number of countries.<sup>5</sup>

Value chain analyses are sometimes “stand-alone” studies that provide direct inputs to government strategies. In Indonesia, the value chain analyses of selected sectors were key inputs for the government's export competitiveness strategy.<sup>6</sup> Sometimes

4. Value chains are generally used to assess the competitiveness of firms within an industry. The value chain analysis approach presented in this report focuses on industry competitiveness, as evidenced by the aggregate ability of firms within an industry to compete in their markets. Underlying measures of industry competitiveness include productivity, costs, growth in exports, market share, and growth in profits. At the individual firm level, competitiveness is demonstrated in profitability and increased market share. There are other definitions for competitiveness that do not apply in this case. For instance, VCA does not examine how well a country's economy is performing compared to other economies, as embodied in the standard of living and changes in national productivity.

5. FIAS (Foreign Investment Advisory Services) is a joint advisory service of the World Bank and the International Finance Corporation. FIAS has applied the value chain methodology to agribusiness and manufacturing and, more recently, also to the tourism sector.

6. FIAS (2006b).

VCAs are integrated with other analyses as part of larger integrated studies (e.g., sources of growth studies, growth and competitiveness strategies, and ICAs). For example, VCA was integral to the ICA report in Cambodia and provided important inputs to the World Bank's growth and competitiveness strategies in Bangladesh, Kenya, and Pakistan.

Value chain analyses are a good way to understand relationships and linkages among buyers, suppliers, and a range of market actors in between. For example, a coffee value chain links coffee producers to processors and multinational buyers at one end of the chain, and to suppliers of inputs (such as fertilizer producers) at the other end. Many VCAs also incorporate the role of transportation, utility, and financial service providers, among others. However, the focus on inter- and intra-industry and firm relationships—although extremely useful in its own right—captures mainly market-related insights and often misses the policy and regulatory environment (e.g., taxes, licensing, standards, etc.) in which private firms operate. Policies and regulations often have a significant effect on firm-level competitiveness and the performance of the chain. By explicitly synthesizing government policy issues with market relationships, the type of value chain analysis presented in this report helps to clarify which binding constraints to growth and competitiveness are affecting the firms that comprise the industry.

This integration of the public policy environment with market relationships makes this approach different from VCA undertaken by other agencies, such as Germany's Gesellschaft für Technische Zusammenarbeit (GTZ) and the U.S. Agency for International Development (USAID). Their primary focus is on addressing market failures, often with the objective of helping small and medium-sized producers create markets, strengthen links with global buyers, and better integrate with global value chains.<sup>7</sup>

7. In addition to World Bank Group units, many other international development agencies such as GTZ, USAID, the ComMark Trust, International Labour Organization, and others also use value chain approaches. Among academics, Michael Porter (1985) and Gary Gereffi (1994) in particular have pioneered approaches to VCA. Porter focused on how individual firms can create value and build up their competitive advantage; Gereffi focused primarily on the economic governance patterns in “global” value chains.

The three integral stages of the VCA presented in this report include:

- Process mapping of industry chains in both qualitative (graphically) and quantitative terms by disaggregating metrics such as cost, time, productivity, and value addition along the various segments of each chain.
- Establishing benchmarks for performance indicators against international competition and best practices. This process helps in:
  - Assessing the relative importance of the different issues that affect the performance of the value chain, and;
  - Prioritizing the most binding constraints that directly affect the competitiveness of an industry.
- Explicitly understanding the policy and institutional factors underlying these performance measures; this facilitates the development of a targeted reform agenda for the public and private sectors to address the binding constraints.

## Purpose and Target Audience

*Moving Toward Competitiveness: A Value Chain Approach* offers a rationale and a practical approach for using VCA as an empirical tool in identifying binding constraints to industry growth and competitiveness. While this publication is not a “how-to” manual per se, it aims to present a sound analytical framework by pointing to useful insights on how to infer business environment-related policy issues. It outlines the key elements of value chain studies and discusses methodological issues in delivering results that can be reliably compared across studies and that can provide a basis for the development of a reform agenda.<sup>8</sup> Thus, the approach and case histories presented here are intended to contribute to ongoing discussions on good practices in VCA within and outside the World Bank Group. Although the approach presented here does not entail a standardized set of survey questions, it identifies a minimal set of

8. The report is not designed to guide task managers in elaborate detail on how to conduct a value chain project, nor to advise policy makers on “which sectors to choose.”

quantitative indicators for typical value chain studies, thus allowing for cross-country comparisons. Despite differences in the types of sectors and products analyzed, relevant indicators (such as input prices, factor costs, logistics time and costs among others) can be computed and compared.

By linking public policies and the performance of industries (or firms), the value chain approach is relevant for a broad audience in the public sector, private sector, and international development agencies.

## The Public Sector

Because the primary clients for the WBG’s business-enabling environment work are governments of developing countries, the regulatory and public policy focus of this value chain approach is relevant in providing a specific policy reform agenda in addition to the more traditional market-related agenda of most other industry value chain studies. This approach shows public sector agencies the effects of certain policies that directly and indirectly affect private sector competitiveness and growth.

For example, a few years ago, the Nigerian government introduced an export subsidy to promote non-oil exports. A VCA of the cotton textile industry showed the unintended effect of the export subsidy on other parts of the value chain. Because cotton growers were exporting cotton on an accelerated basis to take advantage of the export incentive, the Nigerian textile industry experienced a significant shortage of raw material which forced them to import higher-priced cotton, thereby significantly increasing their production costs.<sup>9</sup> The distortionary effect of the export subsidy on different segments of the textile chain was among the key issues that affected the sector’s survival.

The Kenyan cut flower industry offers another interesting example. Even though nearly all cut flowers in Kenya were produced for export purposes, farmers were still required to pay a value-added tax (VAT) up front for imported inputs, and to claim reimbursement afterward. In practice, many small and medium-sized flower producers (often facing a

9. Yee and Paludetto (2005).

chronic lack of working capital), had to wait up to 12 months to receive their refunds. This impeded their ability to invest in expanding capacity and staying current with new technology.<sup>10</sup>

In Indonesia, one of the major findings of the shrimp value chain study was that the lack of effective enforcement of standards by government agencies hurt the industry's growth potential and credibility in key international markets.<sup>11</sup>

### **The Private Sector**

The data-based reform agenda enables private sector stakeholders—firms, trade associations, and business advocacy groups—to advocate for reforms to address priority economy-wide and sector-specific issues as identified in the VCA.

For example, a value chain study on textiles in Indonesia<sup>12</sup> showed the negative effect that a 10 percent VAT had on the competitiveness of the entire textile industry. The delays alone in VAT restitution for imported cotton implied an extra cost equivalent of 9–14 percent of the total profit of an average textile firm. This information gave the textile industry further support that helped them make the case for a complete elimination of VAT on cotton imports, a reform which was subsequently passed. It is important to note that the VAT issue in the textile industry also underlines the cost of doing business for other private industries in Indonesia.

As a tool used in business operations, the value chain mapping exercise helps a firm to determine which stakeholders are involved in the chain, and how and where they affect the production and distribution, revealing opportunities to forge new or better relationships that can influence the firm's level of success in the chain. For firms trying to access international markets, when each firm is only a small part of the total value chain, a VCA provides information on the overall chain structure and the relationship between the firms in the chain, including end-

market structures and reward mechanisms.<sup>13</sup> Armed with this knowledge, an individual firm can determine how well it is meeting end-market requirements, what improvements may be needed, and how it can maximize its returns within the chain structure.

### **International Development Agencies**

Applying a VCA—a commonly used tool in private business—to public policy objectives enables development agencies to:

- Catalyze the momentum for policy and institutional reform by creating a “bottom-up” policy agenda that incorporates a sector perspective;
- Provide an effective platform for data-based public-private dialogue and partnership;
- Enable the spread of technological know-how through stronger linkages among private firms with regional and global supply chains;
- Examine the allocation of value added across the chain, which has implications for job creation and higher wage employment, and ultimately for poverty reduction.

One of the most significant outcomes of previous VCA projects was that they brought together producers, intermediaries, government agencies, and other relevant stakeholders in different segments of a value chain. The findings of the VCA enabled these players to jointly seek solutions to overcome key impediments that affected the performance of the chain. For example, high import tariffs on fertilizers increase the production costs of cotton growers. A VCA can help assess these tariffs on the production costs of cotton growers and trace their effect on the competitiveness of a downstream, higher-value industry such as yarn spinning or cotton shirt production. This kind of understanding is enhanced by both the quantitative and qualitative data generated by a VCA and will considerably strengthen reform advocacy efforts.

The findings of previous VCAs have provided the strategic underpinnings for growth and competitive-

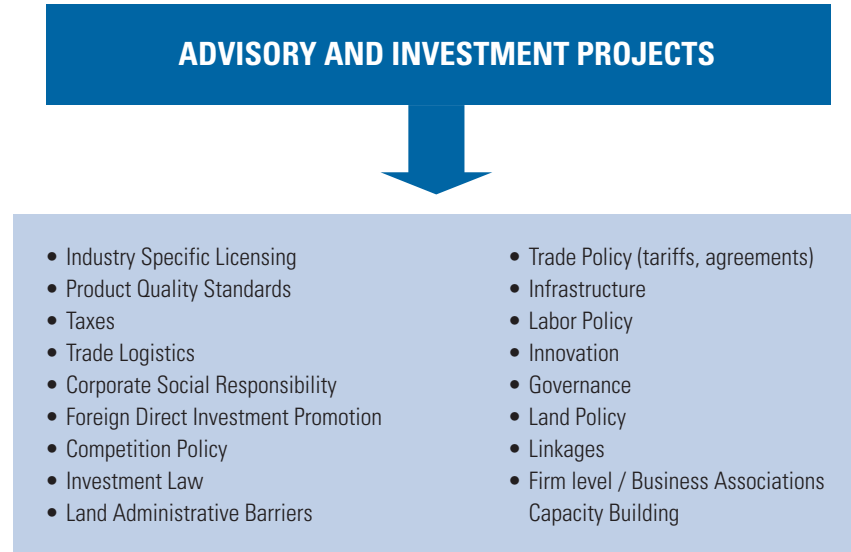
10. World Bank Group (2005c), *Kenya: Growth and Competitiveness*.

11. FIAS (2006b).

12. FIAS (2006b).

13. Gereffi (1994).

**Figure 2 Example of Potential Implementation Projects following an Industry VCA**



ness strategies, and for projects designed to improve the business environment for small and medium-sized enterprises.<sup>14</sup> In Kenya,<sup>15</sup> for example, the findings of a value chain study provided the basis for a project that was designed to increase productivity and employment in small and medium-sized enterprises by strengthening financial and non-financial markets. The set of activities implemented to support enterprise needs included a value chain-based, subsector-matching grant fund, tools for business schools to improve management training, a business plan competition to promote innovation and entrepreneurship, and a restructuring of the national levy scheme to ensure sustainability of firm-level training. The project was also designed to reduce compliance costs in business regulations, and to create incentives for informal firms to graduate to higher levels of formality. The project assisted in implementing a simplified taxation regime and in reducing the cost of starting up businesses through the adoption of a “one-stop shop.”<sup>16</sup>

14. In Honduras, Mozambique, Nicaragua, and Nigeria, key findings have been integrated with World Bank Group projects.

15. World Bank Group (2005c), “Kenya: Growth and Competitiveness.”

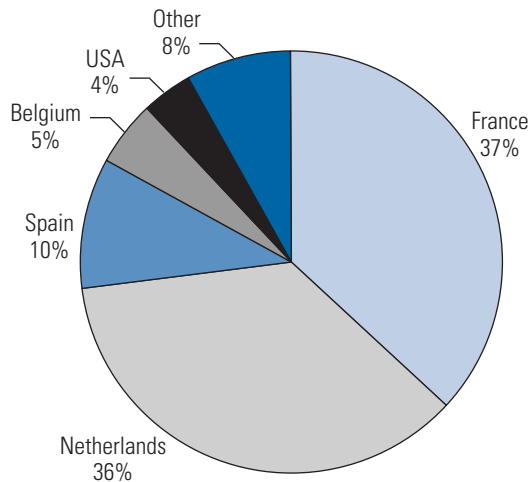
16. World Bank Group (2004b), “Kenya: Micro, Small and Medium Enterprise Competitiveness Project.”

Figure 2 depicts the range of potential downstream implementation projects enabled by the results of a VCA; some are of a technical advisory nature, while others may be direct investment projects.

### Example: The Shrimp Value Chain in Nigeria

The basic concept of value chain analysis is illustrated by examining the shrimp value chain in Nigeria. In order to uncover priority policy issues affecting the non-oil sectors in Nigeria, the WBG project team, in close consultation with the government, decided to apply VCA to a combination of booming as well as declining industries. The industries selected were: textiles (declining), cassava (nascent), leather (recovering) and shrimp (successful rebirth).

Nigeria’s shrimp exports enter the European Union under the Cotonou Agreement (successor to the Lomé Agreement), which offers preferential quota-free and tariff-free access to the EU to various countries in Africa, the Caribbean, and the Pacific. Nigeria’s shrimp are purchased by large wholesalers in the EU in a market dominated by seafood companies from the Netherlands (Figure 3). These wholesalers purchase frozen wild shrimp from Nigerian

**Figure 3 Key World Farm Shrimp Suppliers**

Source: Yee and Paludetto (2005).

suppliers on a free on board (FOB) basis at the port of Lagos, where the product is transferred to container ships bound for Europe. A cold chain keeps the product frozen throughout the supply chain from trawling to final delivery, a procedure that meets the Hazard Analysis and Critical Control Point (HACCP) standards required by EU authorities, and which is critical for market entry in Europe.

Nigerian suppliers of shrimp to the EU market are represented by a trawling industry of about 20 companies. The largest companies are Atlantic Shrimpers (70 trawlers) and Ocean Fisheries (21 trawlers). Medium-sized companies, such as Banarly Group (14 trawlers), also are very active. Other companies in the industry are mainly small, owning a handful of trawlers each. The shrimp value chain in Nigeria has a relatively short chain, unlike the textile or leather sectors, although it is fully integrated in an international supply chain.

The primary activity in the value chain is the catching and processing of wild (white, tiger, and brown) shrimp along the Nigerian coast, preferably during the rainy season from June to November. Each trawler is stocked with fuel, stores, and supplies to last for about 50 days. The stores and supplies consist of consumables used during the voyage, primarily sodium metabisulfite, a chemical treatment applied

to the catch as a preservative; and nets, winches, and wires that are needed to support maintenance. The materials are purchased abroad and brought in by containers that have to pass through cross-border formalities in Lagos Port (Figure 4).

Trawlers have a freezer and a cold store that maintains the temperature around  $-20^{\circ}\text{C}$ , which is the start of the cooling chain as the catch is processed and frozen at sea. The typical trawler is built abroad and is about 25 meters long with a capacity of 40 tons. With a crew of about 15 people, each trawler is able to make about five to six trips during the rainy season.

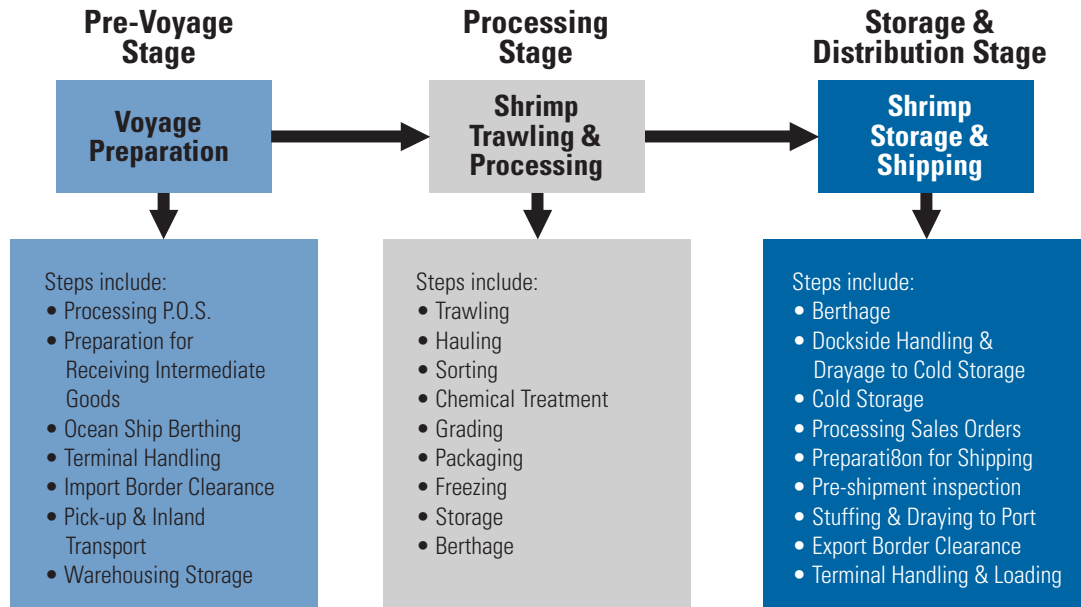
At sea, the trawler continuously trolls, hauls, sorts (i.e., separates fish and other seafood from shrimp), chemically treats, grades (by type and size), packages, and freezes the catch. In this method, not much processing in terms of shelling or de-veining is involved compared with some international chains that entail more processing (and value-adding) activities. As each catch is hauled aboard the boat, the crew operates according to the HACCP program that complies with health safety standards as accepted by the European Commission.<sup>17</sup> The successful adoption by the Nigerian shrimp industry and approval by the EU countries of the HACCP plan is one of the key reasons for market acceptance in Europe.

By the end of the voyage, the average catch is about 8 tons of shrimp and 12 to 15 tons of fish.<sup>18</sup> The trawler docks at privately operated jetties where much of the landside facilities were renovated or built by the shrimp fishing industry. The extension of the cooling chain from sea to land is facilitated by cold storage facilities built by the industry adjacent to the landing docks. The shipment of frozen shrimp is quickly transferred by truck to the cold storage facility where it is kept until the consignment is ready to be exported. Prior to exportation, the Federal Department of Fisheries samples and analyzes the consignment to ensure that it conforms to international health standards. Upon successful pre-shipment

17. Nigeria was included in the EU "Decision 2001/635/EC-Part 1" list of countries in 2001. Under this arrangement, the Federal Department of Fisheries was designated the Competent Authority or central point of responsibility.

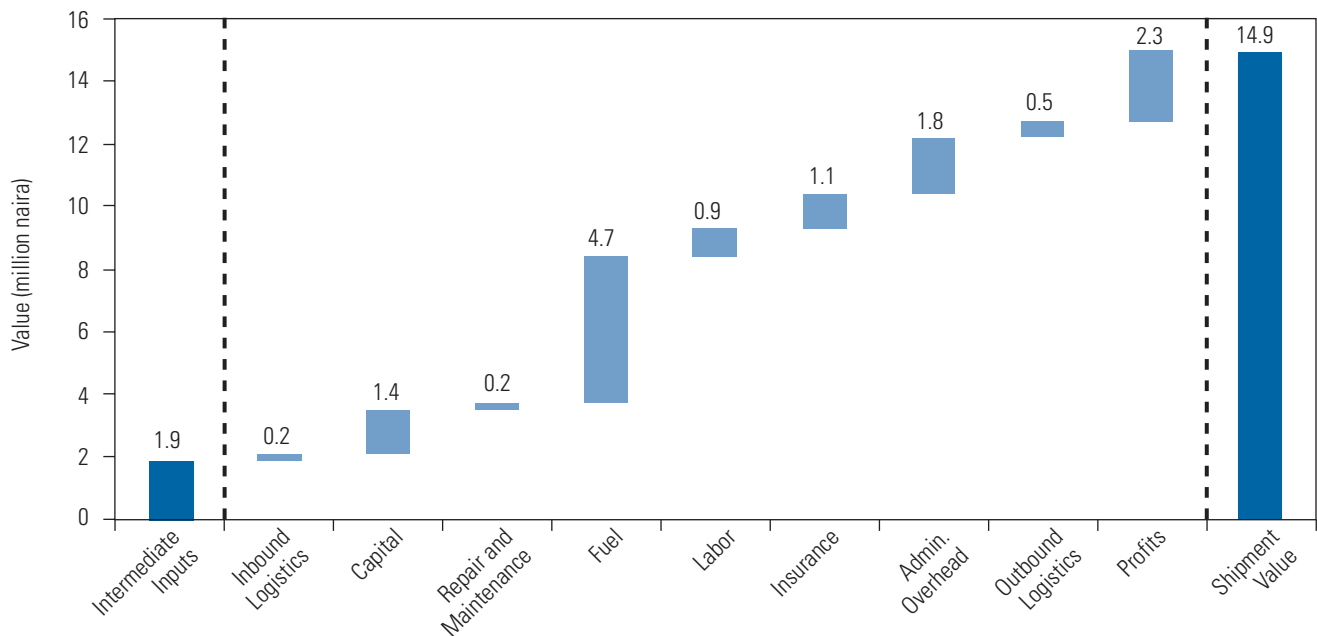
18. The frozen fish, known as the by-catch, commands a low value and is sold in the local market.

**Figure 4 Shrimp Trawling Value Chain for Nigeria**



Source: FIAS. "Nigeria: Value and Supply Chain Study." March 2005.

**Figure 5 Shrimp Value Added and Shipment Value Breakdown**



Source: Yee and Paludetto (2005).

Figure 5 illustrates the value chain shipment value breakdown. For this VCA, a medium-sized company was used as a case study to represent the value chain for the entire industry. The case study was based on an order from a customer in France for 15 tons of shrimp to be delivered FOB at Port Lagos at a value of about 15 million naira. The ordered shipment is equivalent to the catch of two trawlers out at sea on a voyage for 50 days.

inspection, the consignment is then stuffed into an empty reefer (refrigerated) container and drayed to the Apapa container terminal in Lagos for customs clearance and transfer to a container ship.

Fuel, used for vessel operation and for the cooling chain (a critical necessity for a perishable product adhering to international standards or HACCP), is a key cost driver at 32 percent of the shipment value. If the shrimp do not remain frozen, the product will not be exportable. As a member of the Organization of Petroleum Exporting Countries, Nigeria suffers from not only high fuel costs but also sabotage of pipelines that cause enormous uncertainty in supplies.

Administrative overhead costs at 12 percent of shipment value are high, but consistent with the rest of the economy. The study revealed that a typical shrimp firm must adhere to 46 regulatory compliance procedures. Of these, 29 procedures apply to all firms and 17 are specific to the shrimp sector.<sup>19</sup> Cap-

ital charges, which account for almost 10 percent of the shipment value, are the third largest cost driver in Nigerian shrimp operations. Annual nominal interest rates at the time of the study were 19 percent compared with 13 percent in India, 5 percent in China, and 12 percent in Bangladesh.

Despite the high cost elements, the value added by the shrimp chain covers both the primary input costs as well as the logistics costs and generates profits. The profit rate is 18 percent of the value added. This “success” is a turnaround for a previously declining industry.

Two major factors have contributed to the sector’s positive results. First, the nature of shrimp as a product is inherently high value. Second, the quality of the product meets international quality standards as determined by HACCP. Incorporating HACCP quality and production standards has given the Nigerian shrimp fishing industry access to EU markets, which are willing to pay premium prices for high-quality goods.

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19. Please see Chapter 3, Tables 5 and 6 for a detailed list of the regulatory compliance procedures.

# 2

## Value Chain Analysis— the Key Elements

### Basic Framework

The VCA framework centers around three major segments that describe each production link in the value chain: **source, make, and deliver**.<sup>1</sup> Figure 6 shows the framework for an extended cattle industry value chain. Each activity mapped on the value chain diagram can be represented by a cost breakdown.

This framework is flexible and can be applied to value chains irrespective of their length. For example, the cattle industry represents a multistage production system and, as shown in Figure 6, the source-make-deliver framework can be applied to categorize the various products emanating from it. From a supply chain perspective, the cattle industry is linked to downstream industries in meat, leather, and dairy, for instance. The leather chain could be extended to the higher value-added leather shoe industry (or leather bags). In practice, the length of the chain being analyzed depends on the objective and scope of the project in dialogue with the client.

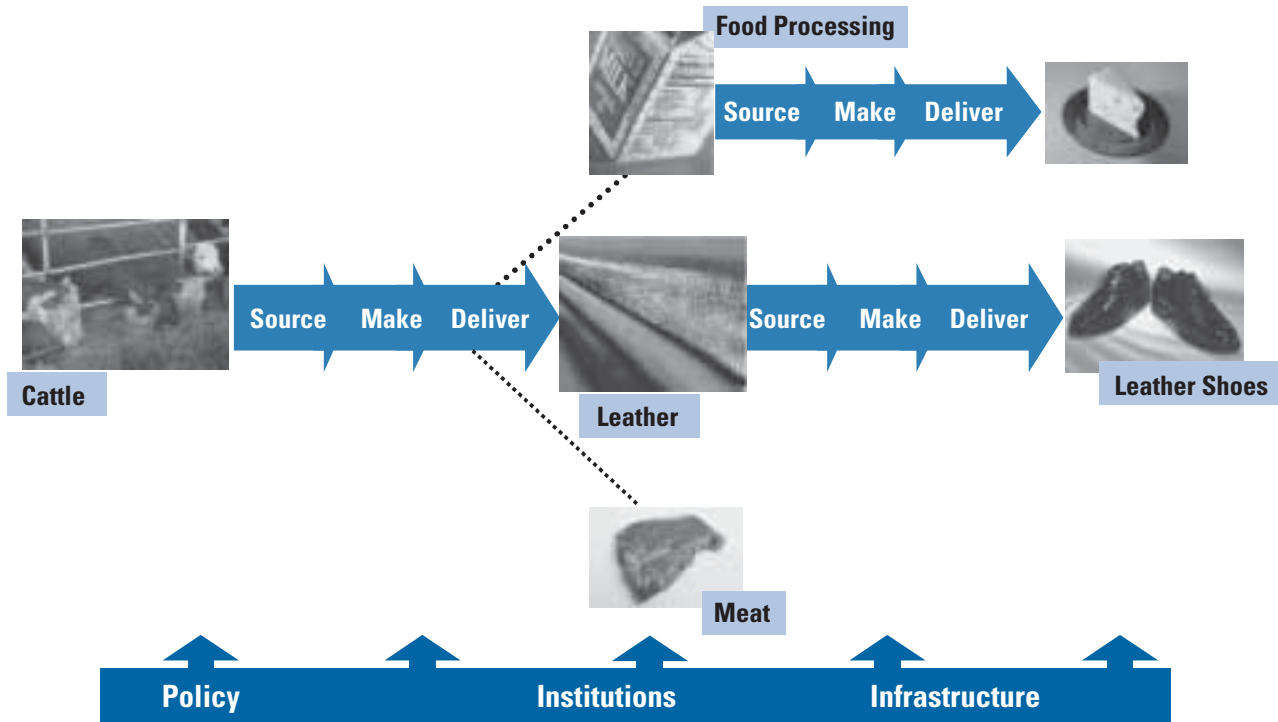
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1. The source-make-deliver construct is an adaptation of the Supply-Chain Operations Reference (SCOR) model that was developed by the Supply Chain Council and integrates business process reengineering, benchmarking, and process measurement into a cross-functional framework for use as a management tool.

Quantification of the value chain by measuring monetary value and time is undertaken along the source-make-deliver construct for each production activity. This measurement framework provides a consistent way to organize and classify cost and time figures for comparison across diverse production activities. The resulting monetary value and time measurements are then further analyzed and transformed to derive metrics such as value added and productivity to identify performance gaps. Firm-level performance is measured and inferred for the sector as a whole. Establishing benchmarks for selected indicators against competitor countries, good practice cases, and international standards can help in assessing the relative competitiveness of the sector.

As shown in Figure 7, the value chain analysis typically includes the following key elements or steps:

- Choose the sector(s) to assess;
- Analyze the market;
- Map the value chain;
- Measure the performance of the chain and establish benchmarks;
- Analyze performance gaps (focusing on government and market failures);

**Figure 6 Extended Value Chain of Cattle Industry**

Source: Subramanian (2007).

- Establish recommendations for policy changes with potential downstream implementation.

Each element is discussed in more detail in the sections that follow. Several of these elements—choosing the sector, analyzing the market, measuring the performance of the value chain performance and establishing benchmarks—require data collection. Some data is available within the public domain and from existing sources, whereas other data require targeted field interviews. Also, while the steps shown in Figure 7 are laid out in a discrete fashion, a fair level of interaction occurs between the various elements.

### Source

To source refers to the process of procuring goods and services required as inputs in the main production process for a product. This product will either become an intermediate input in the next stage of production or will be sold to the consumer as a final good.

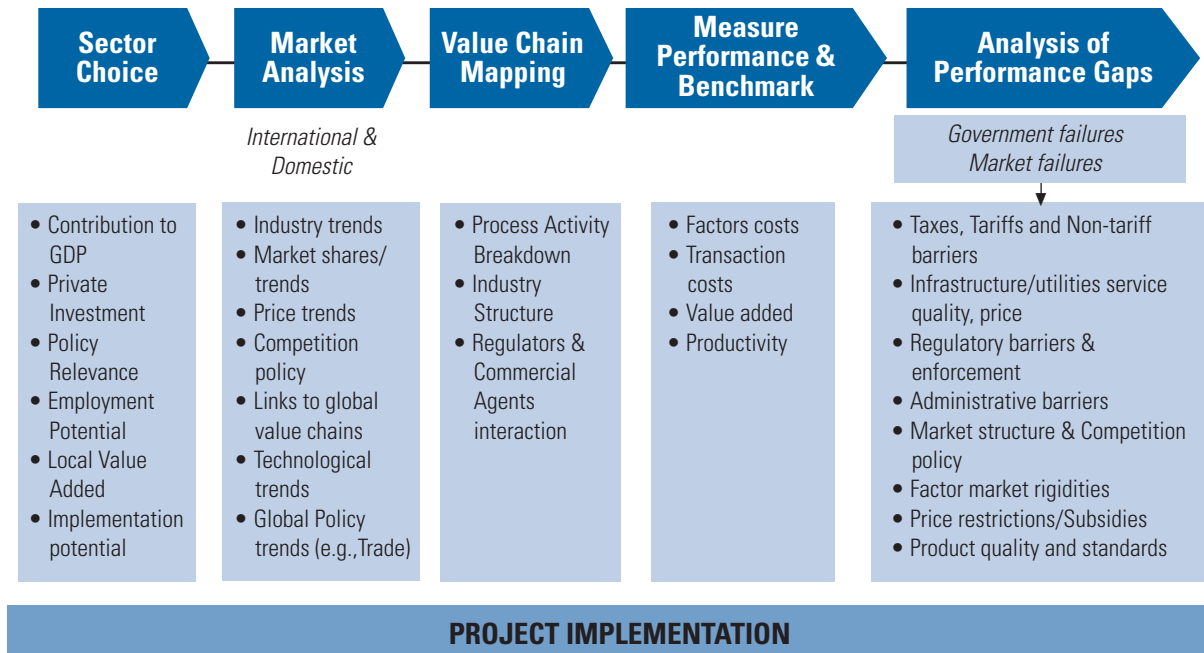
The relevant issues to examine at this stage include: import tariffs, import restrictions, delays in obtaining raw or intermediate materials, the share of imported versus domestic sources for materials, subsidies, applicable taxes (including value-added taxes), competition policy, transport and trade logistics. Costs and the time to source materials should be measured where applicable.

### Make

To make, as the word implies, refers to the processes necessary to transform raw or intermediate inputs into a finished product. This finished product either becomes an intermediate product that is further transformed (e.g., yarn, which may be used to make fabric), or the final product a consumer purchases (e.g., leather footwear).<sup>2</sup>

2. It is also important to account for any by-products that result from production that can be sold or disposed.

**Figure 7 Key Elements of Value Chain Studies**



Source: Subramanian (2007).

Accounting for the monetary value and time for activities in the make phase of VCA should include the primary factors listed below (note that cost and time associated with raw and intermediate inputs are taken into account as part of the source process):

- Land
- Labor (not including administrative overhead costs)
- Capital charges (interest charges, depreciation, and returns to capital)

Data on the following secondary items should also be included in accounting for the make segment of a VCA:

- Cost and quality of utilities (power, fuel, water, telecommunications, etc.)
- Administrative overhead (time to address and manage red tape/bureaucracy, management time for administrative matters, unofficial charges, other overhead charges)
- Equipment (including repair and maintenance)

It is also important to obtain information about key policy issues affecting availability and productivity of the factors of production. For example, labor costs need to be supplemented by information about labor mobility, hiring/firing practices, labor laws and regulations, union activity, and labor productivity measures.

### Deliver

The deliver phase of VCA examines the moving of finished products or services to either the next production activity (e.g., printed fabric for apparel) or to the final consumer (e.g., shirts). This segment includes the following activities:

- Preparation for outbound shipping (clearing agents, clearance documents, etc.)
- Pre-shipment inspection
- Export border clearance (customs, other government clearance)
- Port and terminal handling
- Outbound line-haul transport

- Capital carrying charges in transit
- Shelf loss in transit/storage
- Wastage, returns, price markdowns
- Emergency shipment

## Sector Choice

Determining the sector or sectors (or subsectors) on which to perform a value chain analysis is a complex decision that requires balancing multiple interests and objectives. In practice, a request for a VCA from a client country or from another WBG unit is accompanied by suggestions for sectors to assess. The ultimate sector or subsector choice is usually an iterative process that occurs through discussions with the client government, private sector stakeholders, and donor agencies including the WBG and the task team (including other actors where appropriate).

Although the questions listed below are not exhaustive, they could provide a useful basis for choosing which sector(s) to assess.<sup>3</sup> The weight assigned to any of the questions will depend upon the specific country context and the objective and scope of the project.

1. What is the underlying objective of the proposed project? How does it relate to other relevant projects in the country?
2. How does the sector choice fit with the overall country strategy?
3. What is the sector's contribution to the country's GDP? What is the growth potential of the sectors (globally and nationally)?
4. What is the sector's contribution to the country's exports?
5. Does the sector have the potential to attract (further) private investments?
6. What is the potential within the sector to reduce poverty?
  - a. Does this sector offer significant current or potential employment generation?

<sup>3</sup>. Desk research using various data sources may answer many of these questions.

- b. Does the product value chain involve less-developed regions in the country?
7. Does the sector offer the potential to establish or change policy with broad impact? Would these changes in policy improve the overall business environment for private sector development in the country?
  8. Are there any indications about the sector's readiness for reform and change?
  9. Is there enough demonstrated support for policy reform?
  10. Are international benchmarks available?

The criteria for choosing a subsector or product for which to perform a VCA directly follow from the parameters that determined the initial sector choice. If the focus is on the agribusiness sector, for instance, it will be necessary to know which agro-based products are most important to the country. As a case in point, in Indonesia the government identified a number of agribusiness product lines as vital to the country's export growth strategy. The answers to several of the questions listed above indicated that farmed shrimp would be a useful subsector on which to focus because it would offer significant policy insights for the government's agricultural export strategy.

Although a detailed, quantitative VCA focuses on a subsector or product, the analysis must be placed within the context of the entire sector. For instance, if one chooses to perform a VCA of horticulture, and pineapple is the product for the detailed analysis, it is important for the task team to present the pineapple value chain in the context of the entire horticulture industry in that country (and external markets where appropriate). The broader sector issues must be covered in the market analysis stage.

**Tip:** Economic data facilitates sector choice; it also provides pertinent background information relating to the business environment, which is useful in interpreting the VCA results where firm performance is linked to value-adding activities and public sector policies and responsibilities.

## Market Analysis

A value chain analysis requires a solid understanding of the subject country's standing in the world economy using trends in production, consumption, exports, imports, prices, macroeconomic performance, monetary indicators, sectoral contributions to GDP, general policy and trade policy regime, and so on. After the sector or subsector has been determined, the next step in a VCA is to conduct a market analysis to obtain a strong basis for understanding industry trends and issues both in that country and in the international market (See Box 1 for relevant questions). Some of the factors that might be examined in this phase include the following:

1. Market trends (global and national): values, volumes, market growth, and share
2. Price trends of the final product, and the main raw or intermediate inputs
3. Current structure of the industry and market: competition levels and entry-exit barriers
4. Key suppliers and key markets: linkages with global value chains, which might include a quick assessment of the following:
  - i. What is the competitive advantage of each major producing country?
  - ii. What is the share and potential of the domestic/regional market?
5. End markets: composition, structure, ease of entry, and reward structure
6. Market channels: the most effective and efficient channels, and the types and efficiency of communication linkages
7. Market niche possibilities: growth potential, export potential, or both
8. International benchmarks used by the industry
9. Required quality and technical standards for achieving domestic and international competitiveness
10. Key technological trends
11. International or regional policy: whether the product or service is covered by preferential trade agreements between certain countries or different trading blocs
12. Enforcement of property rights and regulations and the need for informal payments, which might include an assessment of the following:
  - i. Level of foreign direct investment in the industry and its trend
  - ii. Sector's share in gross domestic product
  - iii. Sector's share in exports
  - iv. Percentage of employment accounted for by the sector
  - v. Level of vertical integration of the industry
  - vi. Assessment of informal activity in the industry/sector

Most market analysis data can be obtained from secondary sources such as published statistical databases, country or commodity reports, and through direct interviews with domestic industry and trade associations and relevant government agencies.

**Tip:** Use domestic and international industry associations and industry specialty publications such as those published by the United Nations Industrial Development Organization (UNIDO) and the International Trade Center. Conduct interviews with importers, retailers, and branders.

In addition to understanding market trends in the sector, it may also be useful to ask selected questions to obtain an understanding of the demand side of the issues through a buyer's survey (Box 2). A buyer's survey is particularly important for value chains that are buyer-driven, such as apparel (buyers such as Wal-Mart, Target, The Gap, and JC Penney) or furniture (a buyer such as Ikea).

## Value Chain Mapping

A value chain map allows one to depict all activities, actors, and relationships among segments of the chain, and the interactions between producers and intermediaries.

Information from a market analysis is used in conjunction with detailed firm data to understand the

### Box 1: Sample Market Analysis Questions

1. What are the global market trends over time (in terms of value, volume)?
2. Who are the key global producers and suppliers? Which are the major importing countries?
3. How has the world price of the product changed over time?
4. How has the world price of (raw and intermediate) inputs to this product changed over time?
5. What is the level of foreign direct investment in this industry? What are the trends?
6. At the country level:
  - What percentage of GDP does this sector constitute? What is the sector's share of exports? What is its share of foreign direct investment?
  - What percentage of employment is accounted for by the sector?
  - What is the country's position in the global market?
  - How has the country market share changed over time?
  - What is the sector's potential for growth and exports?
7. In what trade policies does the country participate? Do any regional partners share special trading rights?
8. Are there applicable specific product quality standards or required processing standards?
9. What competitive advantages do major producing nations have? What competitive advantage does this country have?
10. Does the sector serve a niche market?
11. Does the country have preferred access to key global markets?
12. Does the sector have a large domestic/regional market?
13. Does the state of physical infrastructure/utilities impede the productivity of the sector?
14. What is the market structure of the industry (i.e., monopoly, oligopoly, perfect competition, monopolistic competition)?
15. Is there a dominant firm in the industry or are there several?
16. Are there entry barriers to new firms?
17. What is the level of vertical integration of the industry?
18. What is the market share of the following along the value chain: (i) multinationals; (ii) domestic firms in the formal sector; (iii) informal producers?
19. Is there a level playing field among producers and firms (e.g., small vs. large, foreign vs. domestic, formal vs. informal) on issues such as:
  - Enforcement of taxes, import tariffs, product standards, etc.
  - Access to formal sources of financing (banks)
  - Access to key public utilities (e.g. energy)?
20. Who are the new entrants in the sector? Who has left the market? Why? Are there licensing restrictions for new entrants? Do transparent criteria exist for allocating licenses and permits?
21. How disaggregated is the global value chain (e.g., trade to global sales ratio; outsourcing trends)?

sourcing, production, and delivery segments of an industry at micro levels. (See also Box 3). This process of obtaining disaggregated information about a firm (or a farm) or about a number of firms (or farms) and subsequent extrapolation to an industry or sector allows one to better understand:

- How a firm (or a farm) is linked to its industry, region, country, and global chain, thus facilitating an analysis of the opportunities that the firm (or farm) faces in upgrading its processes and strategically positioning itself in the value chain
- The relative strength of the segment in the chain (e.g., yarn spinning in a textile-apparel chain)
- Key institutions, intermediaries, service providers, and their interaction
- The framework for allocating costs, rewards, rents, and value added to the appropriate chain participants.

**Tip:** Firm-level business process reengineering studies and industry association benchmarking studies can be used to develop a value chain map.

The figures that follow illustrate a value chain map for coffee production in Honduras. Figure 8 shows the physical production process; Figure 9 shows the structure of the coffee industry; Figure 10 illustrates the key regulatory and commercial agents in the coffee industry and how they interact.

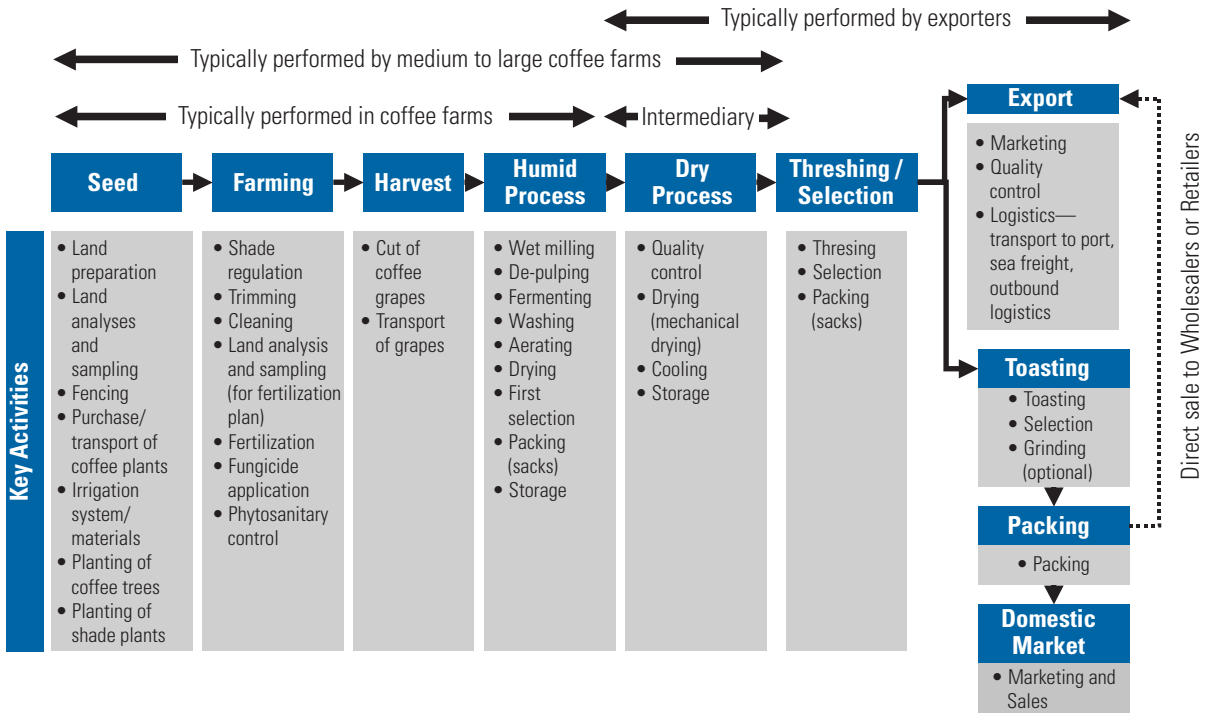
**Box 2: Sample Questions for Buyers**

1. What are the criteria that drive your decisions to obtain products from new markets/countries? How important is each of the following?
  - Political and economic stability
  - Labor costs
  - Workforce skills
  - Labor productivity
  - Geographic proximity to markets
  - Trade agreements
  - Corruption
  - Social and environmental standards and practices
  - Government regulations and administration (bureaucracy)
2. What criteria do you consider in deciding from which company or country to obtain products?
  - Previous established buyer-supplier relationship
  - High workforce skills
  - Low cost of production other than labor
  - High workforce productivity
  - Low labor costs
  - High product quality
- Fast speed to market
- Sophisticated level of services (i.e., full package for apparel)
- High labor standards
- Good product mix
- Low average defect rate
- Short order to delivery cycle time
- High flexibility in size and scale
3. What is the contract length you usually set with your suppliers?
4. Who are Country X's main competitors in Sector A? How does Country X rate against other competitors or key international exporters?
5. How do you assess quality?
  - Standards set by your company
  - International standards
  - Other metrics (specify)
6. What is your policy on defective or low-quality products?
7. What is your policy on delayed delivery?
8. What type of financing terms do you demand from suppliers?

**Box 3: Sample Questions for a Mapping Exercise**

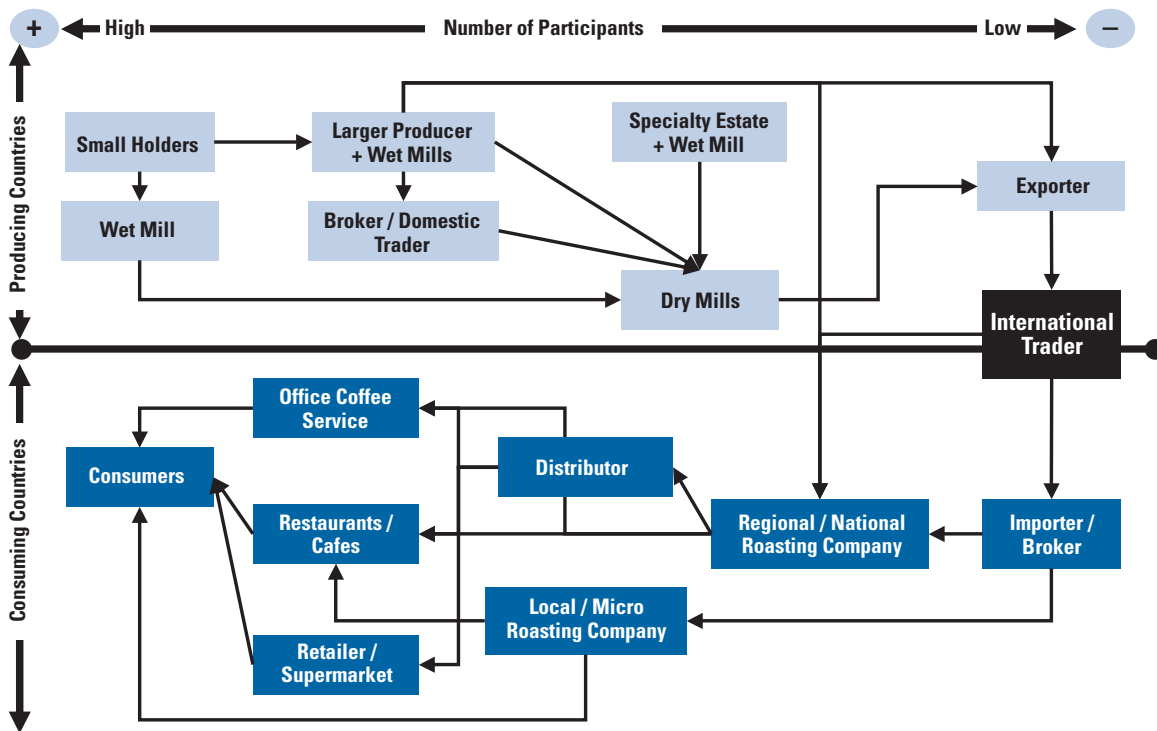
1. What is the "cradle to grave" process map of the industry?
2. What are the by-products created in the industry? What is the value of these by-products?
3. Differentiate between production oriented for export and that for domestic markets.
4. Differentiate between small-scale vs. large-scale enterprises.
5. What are the key subsectors that drive value in the industry?
6. Who are the key intermediaries? How many of these are formally registered enterprises?
7. What are the contractual norms in the firm/sector at the buying and selling ends?
  - Ordering procedures
  - Payment terms
  - Inspection requirements

**Figure 8 Value Chain Mapping of Activities: Coffee in Honduras**



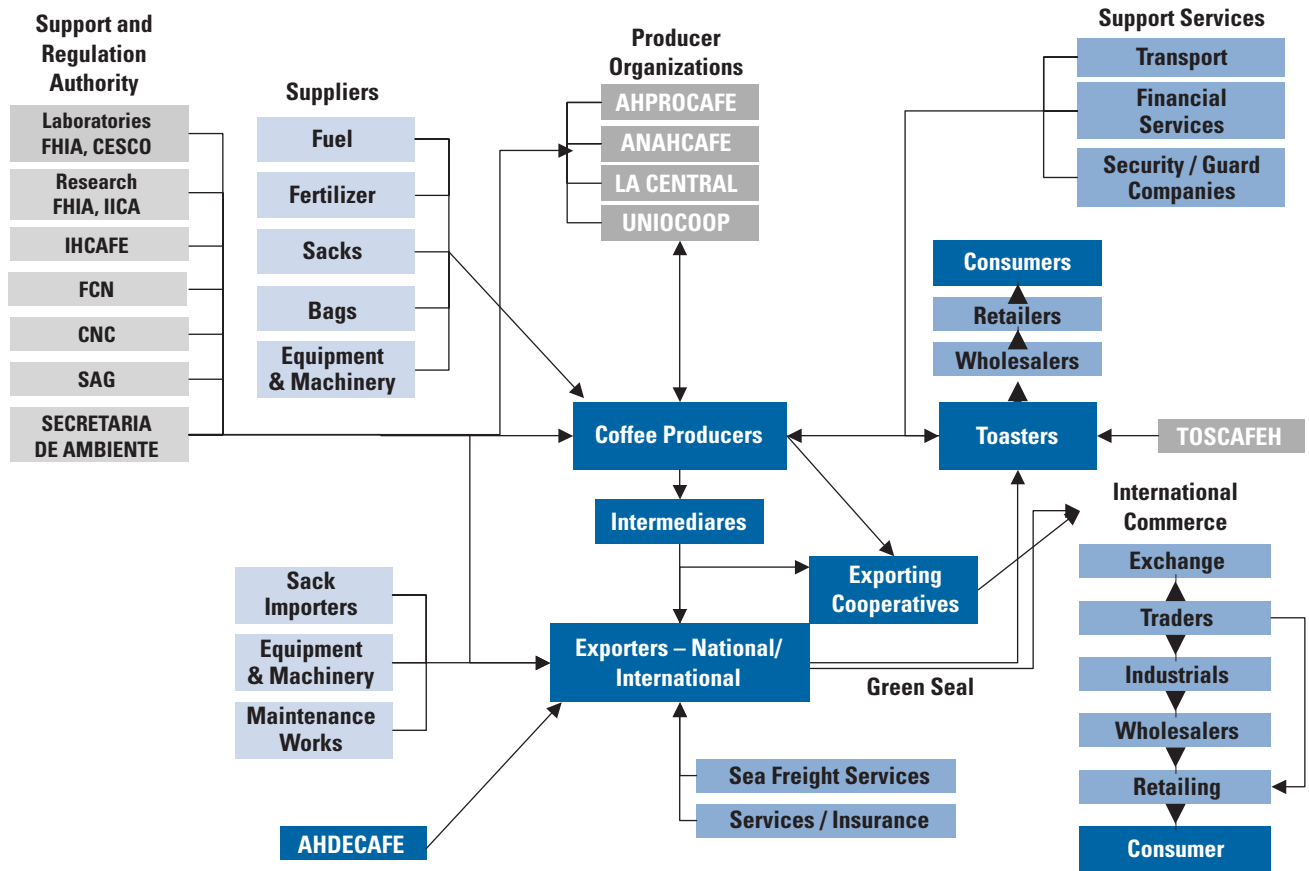
Source: World Bank Group (2005d), Honduras Coffee Value Chain.

**Figure 9 Honduran Coffee Value Chain Dynamics: Structure of Industry**



Source: World Bank Group (2005d), Honduras Coffee Value Chain.

**Figure 10 Honduran Coffee Cluster: Interaction of Stakeholders**



Source: World Bank Group (2005d), *Honduras Coffee Value Chain*.



# 3

## Measuring Performance and Establishing Benchmarks

### Metrics

A qualitative mapping process of an industry or sector is followed by cost and time measurements of the disaggregated segments of the value chain (Box 4). The performance of an industry or sector may be explained by: examining various activities in the production chain and comparing these with national or international benchmarks; identifying gaps in performance; and probing into the underlying policies, institutions, and infrastructure-related inefficiencies that directly affect productivity and competitiveness.

The metrics used to measure the performance of a value chain include:

1. Cost
2. Time
3. Value added
4. Productivity

Cost and productivity are the underlying factors in determining the competitiveness of an industry. Costs encompass both monetary costs (such as raw material costs, input costs, and utility costs) as well as transactions costs (such as time delays, red tape, and regulatory barriers).

Interpreting cost and time in a meaningful way and then relating it to policy and institutional factors requires establishing benchmarks and conducting a performance gap analysis. It entails tracing the overall performance of the supply chain and sifting through the layers of qualitative and quantitative information (obtained from mapping the value chain; computing time, cost, added value and productivity; benchmarking; and drawing out policy insights) to reveal the underlying reasons for the gaps, which often point to priorities for action. These reasons could include policy distortions, institutional inefficiencies, infrastructural gaps, factor market rigidities, and market failures. This stage of analysis essentially involves compiling and evaluating information and data from multiple sources to determine cause-and-effect relationships.

The tracing process needs a systematic approach with a starting point that will then be linked to critical areas that underlie specific causes linked to policy distortions, institutional inefficiencies, infrastructural gaps, factor market rigidities, and market failures. It is critical to choose the right starting point—and therefore the appropriate metric, which should help

#### Box 4: Cost and Time Measurements

Disaggregating costs along the value chain in transforming raw and intermediate inputs into a final product helps to identify key cost drivers that influence the final landed price of the product. The cost drivers can be examined and linked to macroeconomic factors (e.g., interest rates, foreign exchange rates), microeconomic factors (leasing costs, wage rates, import bans, export subsidies, border controls), and social factors (labor disruption) as well as physical infrastructure and utilities (roads, transport ser-

vices, communications, energy) to identify the causes of changing cost pressures.

Similarly, time measurement of disaggregated activities along the chain provides significant insights on performance, and facilitates in identifying problem areas. Time measurements can also be monetized through measures such as carrying charges, storage and warehousing costs, and inventory costs.

in evaluating the overall competitiveness of the chain. A useful metric in this context that yields a tractable measure is the shipment value or, more specifically, the FOB price of a consignment at the point of transfer to the buyer. (See also Box 5.)

The cost and time measurements for the chain of activities usually follows the source-make-deliver construct. Although some of this data may be obtained through prior sector studies, the detailed steps that occur in the production and logistical process are typically best obtained through direct interviews. Any relevant secondary data (e.g., prior studies) can be used to validate and compare the current study information. Within a firm or business, the following individuals are potential candidates for the interviews:

- Business owners/proprietors
- Operational managers/production supervisors
- Material procurement managers/supervisors
- Product delivery managers/supervisors
- Marketing managers/supervisors
- Financial managers

Other sources for obtaining information about industry policies, regulations, institutional agencies, and technical standards include the following:

- Suppliers
- Industry associations
- Ministry of trade or commerce
- Ministry of industry

- Ministry of agriculture
- Licensing boards
- Quality assurance agents

Sources for obtaining information on supply chains, logistics, and trade transactions include the following:

- Freight forwarders/multimodal transport operators
- Shipping line and shipping agents
- Transport carriers (truck, rail, air)
- Port authority (sea/air)
- Customs services
- Commercial banks, exchange control agencies, the central bank
- Pre-shipment inspection agencies
- Chambers of Commerce
- Departments of trade/external trade

*Value added* and *productivity* are useful measures to show whether a firm is competitive in its current operating and regulatory environment. Value added is defined as the value of output at market price (factory gate price, or more often, the FOB price) minus the value of all intermediate inputs purchased from other firms. Value added thus represents the contribution of, and payments to, the primary factors of production and can be defined as below:

$$\text{Value Added} = \text{FOB Price of Shipment} - \text{Value of Intermediate Inputs (ex-works)}$$

### Box 5: Methodology

Because value chain data is computed on the basis of a shipment or consignment value, the methodology for assessing cost and time essentially requires a case study approach. However, because the objective of the study is not to advise a single company but to understand competitiveness from the perspective of a subsector or an entire sector, one must check the consistency of the data from the firm that is the object of the case study by conducting interviews with other firms, industry associations, service providers, and government agencies. The methodology involves comparing the data from the case study with infor-

mation from several sources to come up with a representative value chain.

Depending on the structure of a subsector or an industry, more than one value chain map and quantitative disaggregation may be required. For instance, Kenyan coffee is produced by both small producers and large commercial plantations. The cost structure and the market and business environment that small producers face are very different from those that plantations face. Thus, to understand the coffee sector it is important to differentiate the analysis for the two types of production models.

The more value a firm can add to a product for a given primary and intermediate cost configuration, the greater its profitability. The potential to add value to a product lies in a firm's ability to keep raw and intermediate input costs as low as possible and to increase the price of its finished product in the market. Given that most firms in developing countries are price takers, value added therefore is dependent on the following two factors:

- 1) **Productivity:** Greater productivity enables higher levels of final output given a particular configuration of inputs. Productivity is one of the critical factors in determining competitiveness.
- 2) **Costs of production:** Costs of production are affected by policies, institutions, and the industry structure that governs the supply of primary and intermediate inputs. These could include tariffs on imported inputs, poor logistics that cause delays in import procurement, licensing restrictions that impede lower-cost domestic supplies or the poor enforcement of standards that affect the cost and quality of inputs; labor costs; poor utility services; and so on.

The basic measurement units that should be computed as part of a value chain analysis include those listed in Box 6. (See also Figure 11.)

Productivity measures the efficiency with which primary and intermediate inputs and factors of pro-

**Tip:** Should transport and logistics costs be included in value added computation? The contract of sale will specify the point of ownership transfer through the specified INCOTERMS and this will in turn define who bears the costs of transport and logistics. The terms of trade used for analysis should be those that have been determined to be most prevalent or typical in the sector and country.

duction are transformed into output. Traditionally, productivity measures have focused on labor and capital. More specifically, examples of labor productivity include output per labor hour worked or value added per labor hour. Examples of capital productivity include return on assets (ROA) or return on equity (ROE).<sup>1</sup> Other productivity measures can be derived for factor inputs. For example, in an agricultural industry, yield per hectare (for fruit and vegetable crops, for example) and feed-conversion ratios (for shrimp and livestock, for example) are computed as standard productivity measures.

1. Productivity metrics are analyzed at the firm level. These measures also apply to macroeconomic analyses such as those for an entire industry or a nation. For a discussion on sectoral productivity measures see Palmade (2005). For national productivity measures, see OECD (2001), Pilat and Schreyer (2004), and Schreyer (2001).

**Box 6: Shipment Value Metrics**

- Intermediate inputs as a percentage of shipment value (or FOB price)
- Value added as a percentage of shipment value
- Value added as a percentage of the total wage costs
- Logistics costs as a percentage of shipment value
- Inventory cost as a percentage of shipment value
- Cost of factor inputs:
  - Land as a percentage of shipment value
  - Capital as a percentage of shipment value
  - Labor as a percentage of shipment value
- Administrative overhead as a percentage of shipment value
- Cost of utilities as a percentage of shipment value
- Repairs and maintenance as a percentage of shipment value
- Profit as a percentage of shipment value

**Tip:** Physical measures of productivity such as spinning output per worker hour or packing rates per worker day in the textile industry do not directly come out of cost and time measurements, but they should be collected through the interview process.

Whereas labor productivity can be computed with data collected for the activity analysis, capital and equity efficiency analyses require data on average asset values and average equity values, which likely will be contained in financial statements if they are available. The ability to compute inventory turnover and inventory age for a consignment depends on being able to obtain data to compute average inventory for the period in question.

Value Adding Efficiency is a percentage measurement that combines two input factors: labor costs and equipment costs (as measured through depreciation). It is calculated using the following formula:<sup>2</sup>

2. DTI, “2005 Value Added Scoreboard.”

$$\text{Value Adding Efficiency} = \frac{\text{Total Value Added}}{(\text{Labor Costs} + \text{Depreciation})}$$

The value added of an industry or sector is a useful measure for understanding the sector’s potential as a source of growth for the overall economy. “Value added as a percentage of GDP” and “value added as a percentage of exports” are proxies for the growth of an economy and could be considered key private sector development indicators. These also facilitate the measurement of productivity. Examples include “value added per labor hour” and “value added per unit of capital invested.”

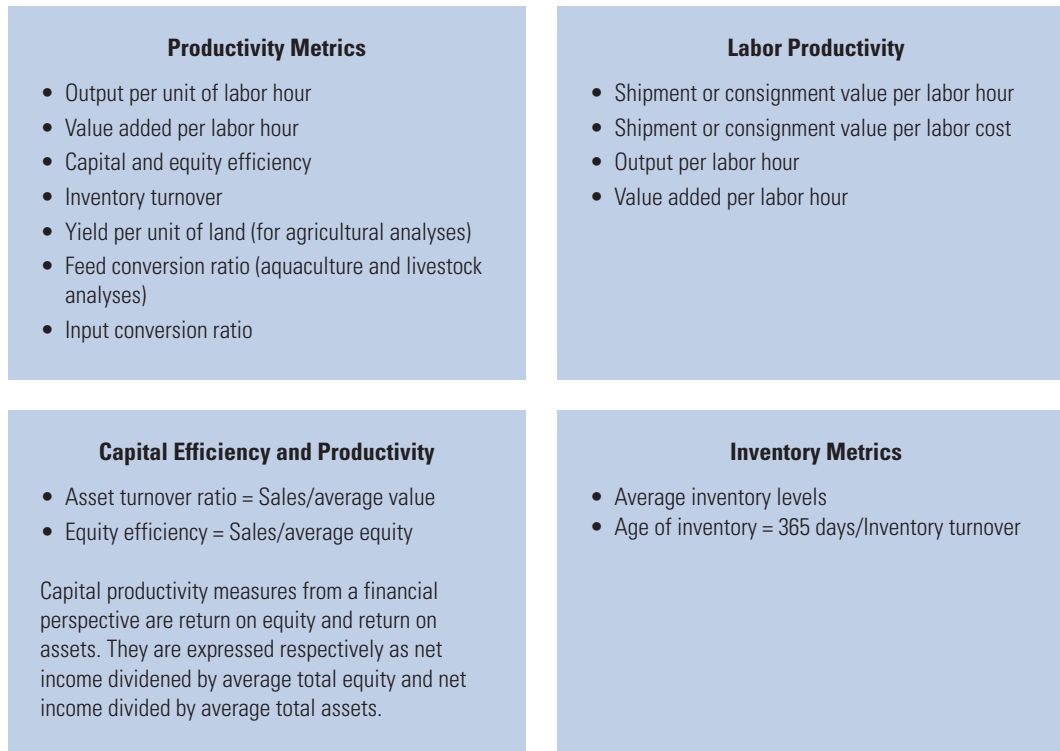
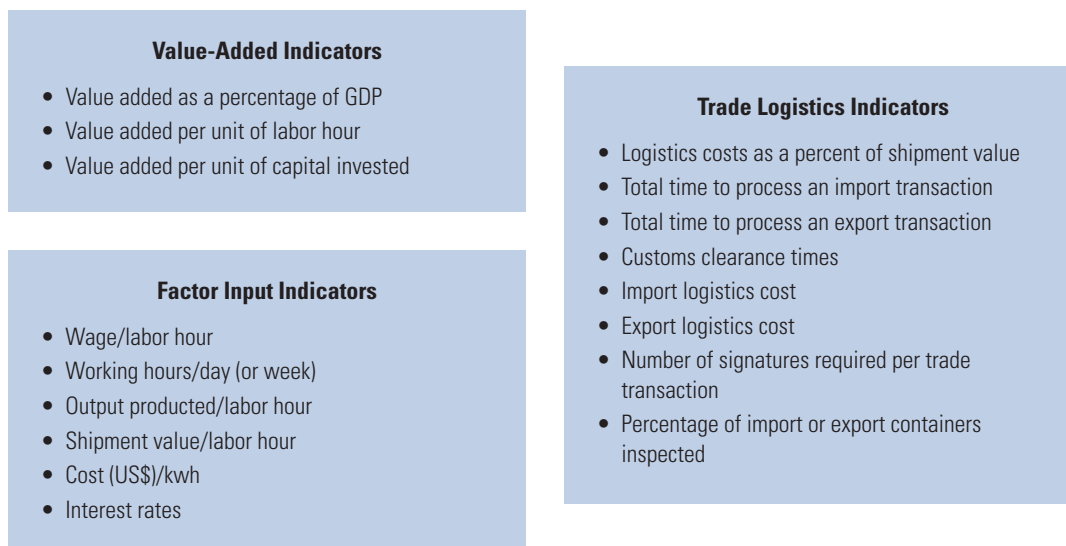
Profit margin is another useful indicator of a sector’s performance and can be represented by the formulae below:

$$\begin{aligned} & \text{(FOB price of shipment) minus} \\ & \text{(the costs of raw and intermediate inputs)} \\ & \text{minus (costs of primary inputs) minus (costs} \\ & \text{of transport/logistics services)}^3 \\ & \text{or} \\ & \text{(FOB price of shipment) minus (total cost of} \\ & \text{production) minus (cost of delivery)} \end{aligned}$$

**Benchmarking: Uses and Challenges**

Benchmarking of key indicators along the value chain helps to detect performance gaps and identify the main constraints to a firm’s competitiveness. More importantly, it helps to prioritize constraints that directly affect the overall competitiveness of the value chain. Benchmarking is often complicated because reliable comparable data is often not readily available for all sectors and products. In practice, it is possible to identify key data points on which benchmarks can be obtained through industry experts and secondary sources including research papers; think-tanks; and agencies such as the World Trade Organization (WTO), the Food and Agriculture Organization

3. Primary inputs include utilities, equipment maintenance, and administrative overhead costs (in addition to labor, capital, and land).

**Figure 11 Factor Productivity Measures****Figure 12 Sample Benchmark Indicators for a VCA**

### Box 7: Sample Questions for Establishing Benchmarks

- What international benchmarks are used in the industry?
- How do the factor costs (for labor, capital, and key inputs) compare with best practice case firm in the country, the region or the world?
- How does the productivity (of labor, capital, and key inputs) of national firms in the sector compare with best practice case firm in the country, the region or the world?
- How does the capacity utilization of domestic firms in the industry compare with best practice case firm in the country, the region or the world?
- How does the technology in the sector compare with best practice case firm in the country, the region or the world?

(FAO), United Nations Industrial Development Organization, International Trade Centre, and the World Bank Group. (See also Box 7.) In this regard, this report contributes to the benchmarking process by providing a consistent approach for the analytical framework and use of appropriate metrics, and in identifying a set of indicators that might be useful to plan for early in the project cycle (Figure 12).

A comparison of the Kenyan and Honduran apparel industry value chains illustrates how benchmarking helps to prioritize critical constraints in the value chain (Figure 13). It also reveals interesting insights into how policies and institutions play a central role in affecting the overall competitiveness of the industry in the two countries.<sup>4</sup>

At US\$3.60, the FOB price of a plain cotton t-shirt from Kenya is more than 2.5 times the FOB price of a similar t-shirt from Honduras. What explains the difference in FOB price of a similar product? Benchmarking of the individual cost elements in the value chain of the two production processes reveals that Kenya has higher costs of raw and intermediate materials, labor costs per unit of apparel, overhead costs, and logistical costs. Raw material costs (mostly imported

fabric) in Kenya are almost three times those in Honduras. Both Kenya and Honduras are subject to trade agreements with the United States, through the African Growth and Opportunity Act (AGOA) and the Central America Free Trade Agreement (CAFTA), respectively.

In addition to Kenya's location, which increases ocean freight costs, two main underlying factors help to explain the cost differences: (i) trade logistics costs for imports at US\$2,325 per twenty-foot equivalent unit (TEU) in Kenya are 3.5 times that of Honduras<sup>5</sup>; and (ii) the average tariff on imported fabric is 17.5 percent in Kenya compared with 9.5 percent in Honduras.

It might be expected that for a labor-intensive sector such as apparel, Kenya would have some comparative advantage given that Kenyan wages (at US\$9.40/labor day) are on average much lower than in Honduras (US\$12/labor day). However, in monetary terms the labor cost for a t-shirt in Kenya is still higher than in Honduras. This is driven by lower labor productivity. On average, Honduran firms produce twice as many shirts as Kenyan firms assuming all other factors constant, a key factor in Honduras' greater competitiveness.

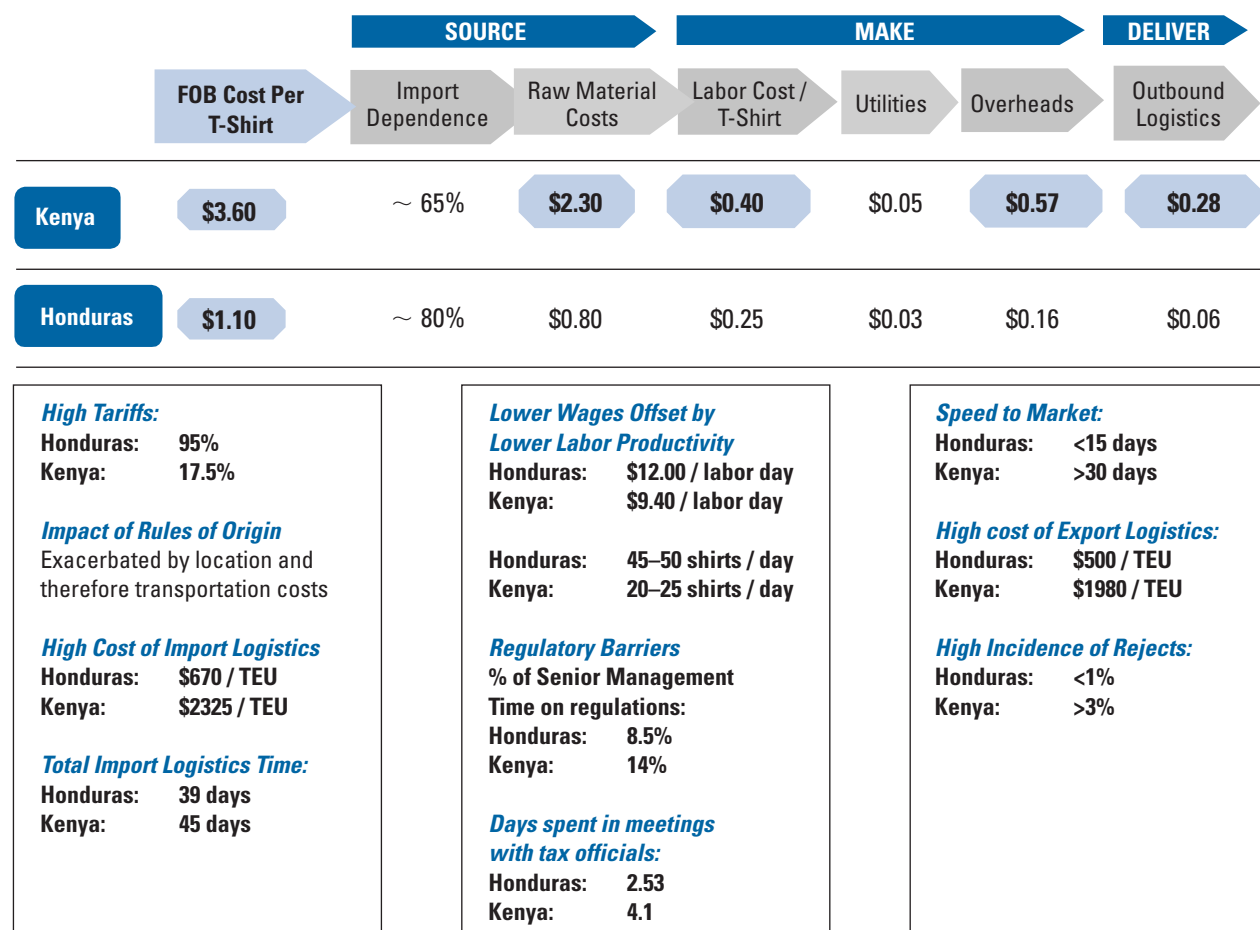
Overhead costs in Kenya (at US\$0.57 per t-shirt) are more than three times higher than in Honduras (at US\$0.16 per t-shirt). This cost disparity is partly reflected in the time senior management in companies spends addressing government regulations (8 percent of their time in Honduras compared with 14 percent in Kenya). Also, the average time a senior manager in Kenya spends in meetings with tax officials is almost double that in Honduras.

Finally, outbound logistics costs (excluding ocean transportation costs) in Kenya are almost four times those in Honduras. The cost difference is further exacerbated by the quality of product as reflected in reject rates of more than 3 percent in Kenya. The example discussed here clearly illustrates that geography alone is not driving the somewhat lower competitiveness of the Kenyan apparel industry in U.S. markets, nor are lower average labor costs compensating for other overriding constraints.

4. Subramanian and Matthijs (2007).

5. World Bank Group (2006), *Doing Business 2007: How to Reform*.

**Figure 13 A Comparison of the Kenyan and Honduras T-Shirt Value Chains**



Source: Subramanian and Matthijs (2007).

### Cost, Quality, and Supply of Raw and Intermediate Materials

Policy and market failures often lead to high costs, poor quality, and difficulties in obtaining raw and intermediate materials. Raw and intermediate material costs are often driven by:

- Trade policy distortions such as import bans or tariffs
- Regional trade agreements that have rule-of-origin requirements
- Anomalies in product standards that may provide disincentives for using domestic sources.

For instance, in Kenya’s apparel industry, high import tariffs and poor logistics drive up the cost of imported fabric. This increases the costs of apparel production. In Indonesia, the imposition of a 12 percent VAT on all imported material that takes an average of 1.5 to 2 years to reclaim seriously constrains a firm’s working capital. This long turnaround time for seeking VAT reimbursement comes with significant bureaucratic hassles and implies a cost equivalent of 9 to 14 percent of total profit for a typical medium-sized textile export firm.<sup>6</sup>

6. FIAS (2006b).

**Box 8: Questions to Consider when Assessing Cost, Quality, and Supply of Materials**

1. What percentage of industry inputs (i.e., raw materials) is imported? How do the price and quality of imports compare with domestic raw or intermediate materials?
2. What kinds of protective measures such as tariffs, duties, or bans exist on imports?
3. What is the quality of the sourced inputs? What are wastage and defect rates?
4. What kinds of certification do suppliers of inputs require?
5. Are standards on quality of imported inputs enforced? Are standards of domestic production of inputs enforced? Are national product quality standards aligned with international standards?
6. What kinds of policy restrictions (bans, licensing restrictions) affect the domestic production of this material?
7. Are the criteria for allocation of licenses and permits transparent? How long does it typically take to obtain an import or operational license?
8. What are the contract terms between the buyer and seller of intermediate inputs? What is the structure of the prevalent buying relationships in the industry?
9. What is the average lead time for sourcing raw or intermediate material? Is there variability in lead time?
10. What are the inventory holding costs? What part of the inventory holding costs are due to firm inefficiency versus policy and market factors outside a firm's control?
11. How much time does management spend on locating and obtaining supplies?
12. How often do disruptions occur in supply and why do they occur? What alternate methods for acquiring inputs are in place? What is the associated cost?

Poor logistics may result in a firm not being able to obtain the raw and intermediate materials it needs in production in a timely manner, which means that the firm must hold large inventories, which in turn ties up its working capital. Some materials may be of poor quality due to low standards or poor enforcement of standards that are then carried through to the finished product, affecting the producer's ability to command a premium price in the market. For instance, poor husbandry practices and inadequate abattoir regulations and enforcement mechanisms made it difficult for the leather processing industry in Nigeria to obtain high-quality skins, which limited the growth of high-quality leather production.<sup>7</sup>

In another example, the main issues affecting the cut flower industry in Kenya are associated with the high cost of agricultural inputs—specifically, sprays and fertilizers. These are usually imported and not sourced from domestic firms due to poor enforcement of quality standards in Kenya. Small and medium-sized enterprises (SMEs) in the cut flower industry faced a range of problems in using agrochemicals, including a lack of information on approved or

banned chemicals, poor equipment and application techniques, poor disposal practices, uneven quality of agrochemicals, absence of mixing guidelines, and the lack of surveillance and monitoring of quality standards.<sup>8</sup>

Monopolistic or oligopolistic suppliers supported by protectionist policies can impose entry barriers to newer and more efficient firms, and these policies may drive up the price of raw and intermediate materials. Restrictions on licenses for domestic producers may play a big role in creating price distortions in the input market, which can lead to high administrative costs. For example, shrimp producers in Indonesia are required to renew their import permits every six months.<sup>9</sup>

Relevant questions to pose at this stage of the VCA would assess non-tariff barriers, import tariffs, quotas, delays in obtaining raw or intermediate materials, the share of imports versus domestic sources, subsidies, applicable taxes including VAT, and competition policy issues. These questions should attempt to measure the cost and time of these items where applicable (Box 8).

7. Yee and Paludetto (2005).

8. World Bank Group (2005c).

9. FIAS (2006b).

### Box 9: Questions related to Factors of Production

1. What labor market regulations affect sector productivity?
2. How do the personnel training programs of the average firm compare with best practices in the sector?
3. How do issues related to corporate social responsibility (e.g., environmental standards, child labor laws) affect the sector?
4. How do labor and capital productivity of the average firm compare with best practice cases in the country, in the region, in the world?
5. How do the costs of labor, capital, and other key inputs of the average firm compare with best practice cases in the country, in the region, in the world?
6. Do restrictions on FDI affect the sector? Are there government incentives such as tax breaks and concessional land for promoting FDI?
7. What are the key finance issues for the value chain? Differentiate between long-term vs. working capital:
  - Capital market regulation/access to finance issues
  - Within the banking system
  - With collateral
  - With creditors' rights
8. Is trade financing available from foreign sources? What is the interest rate?
9. What percentage of working capital finance is obtained through formal financial institutions? From retained earnings? From personal/family sources? From informal lenders?
10. What percentage of investment capital is obtained through formal financial institutions? From retained earnings? From personal/family sources? From informal lenders?
11. Do input suppliers provide the inputs for cash or on credit?
12. What are informal sources of financing? What are the terms and conditions if funds are obtained from an informal source? Do they charge any interest, and if so, how much?
13. Are other financial services required, such as insurance? Are such service providers available?
14. How do land market issues such as restrictive zoning laws, administrative barriers to land registration, lack of clarity in titling, and unclear leasing laws affect a firm or an industry? How would these affect investors?
14. Is the industry largely based in an export processing zone? What level of integration do these zones have with the rest of the economy?
15. What product quality standards apply?
16. What kind of in-house quality control takes place, if any? What is the cost?
17. Are there instances of down times in the production cycle? How often? Why? At what cost?
18. How does the capacity utilization of domestic firms in the industry compare with global practice?
19. How does the technology on average in the sector compare with global and regional best practice?
20. What percent of net revenue is allocated toward investment in technology?

### Primary Factor Cost Drivers (Labor, Capital, Land)

Primary inputs usually constitute a major cost in the product transformation process. These inputs include labor costs, capital charges, and land costs (leasing or acquisition costs).

It is also helpful to examine key policy issues that affect the cost, quality, and productivity of these three main factors of production. (See also Box 9.) For example, labor costs need to be supplemented with information about labor mobility, hiring/firing practices, labor laws, regulations and standards, union activity, and labor productivity measures.

Ranking the cost drivers as a percentage of FOB price provides a quick snapshot of which cost elements really matter. However, only when these indi-

vidual costs are benchmarked against those of competitor countries or good practice cases is it possible to understand the priority of the particular cost elements in improving the competitiveness of a sector.

Previous value chain studies have shown that even for a labor-intensive sector such as apparel, labor cost is not always the driving factor that affects the sector's competitiveness. For instance, even if wages in the Kenyan apparel industry were reduced to zero, this would have little effect on the industry's competitiveness due to other overriding factors such as low labor productivity, import tariffs, and very high logistics costs.<sup>10</sup> Similarly, in the Indonesian textile industry it is not just the actual wage rate that matters.

10. Subramanian and Matthijs (2007).

**Table 1: Unit Labor Cost Comparisons**

Country	US\$/hour	Normal Hours/Week
China (Coastal)	0.76	44
China (Inland)	0.48	48
India	0.67	48
Indonesia	0.55	40
Pakistan	0.37	48
Thailand	1.29	48
Vietnam	0.28	48
Bangladesh	0.30	48
Sri Lanka	0.48	48
Hong-Kong	6.20	48

*Source: Werner International 2004/5.*

Labor productivity in Indonesia's apparel industry is less than that in coastal China by 30–50 percent. Poor labor productivity is exacerbated by overly rigid labor market policies, strong labor unions, large severance payments, and comparatively short working hours (Table 1).

A common problem identified in value chains is difficulty in accessing financing for both working capital and investments. This problem is especially acute among SMEs and in the agricultural sector. Without access to finance, many producers get stuck in a low investment–low return production cycle. Lack of finance may prevent a producer from planting a crop, from investing in measures to increase productivity, or from exploiting potential markets. Likewise, financial constraints may prevent processors from expanding, which caps the amount of produce they buy from local producers.

In general, the majority of agricultural finance in developing countries comes directly from within the value chain; namely, from buyers, sellers, or other business associates, without the involvement of financial institutions.<sup>11</sup> (See also Box 10). These efforts to access finance have been met with varying degrees of success in matching demand with supply. By identifying relationships along the value chain, mitigating constraints, and exploring how formal financial insti-

tutions can enter into the equation, most business sectors can improve the overall effectiveness and efficiency of the value chain.

In Nigeria, the high cost of debt financing—with nominal interest rates of 20 percent and greater per annum for short-term borrowing and about 16 percent for long-term (4 years) borrowing—was a strong disincentive to invest in new equipment. In another example, machinery upgrades in the Indonesian textile industry are markedly behind those in China, India, and Pakistan, which severely affects productivity (Table 2). The high cost of repairs and maintenance often is the result of an obsolete plant and machinery, which significantly increases operating costs. In Indonesia, high repair and maintenance costs are primarily due to constraints in obtaining credit from commercial sources for upgrading textile technology. Additionally, high financing costs often lead to delays in obtaining intermediate materials.

Land-related issues in developing countries include ambiguous property rights, a lack of clear titling, uncertainties about user rights of leased land, uneven treatment of foreign versus domestic firms, and zoning restrictions. In Mozambique, for instance, a value chain analysis of the tourism sector revealed that the government owns most of the land, which it leases on a long-term basis for development. However, firms were reluctant to invest in production ventures because of uncertainties and lack of clarity about user rights and the labyrinth of administrative procedures associated with obtaining leasing rights.<sup>12</sup> In addition, increasing competition for land-use rights for expansion of tourism to attractive coastal areas (e.g., for snorkeling and scuba diving) was fueling conflict between investors and rural communities (who use the land for farming, fishing, and other uses).

The value chain analysis recommended that the government provide investors in hotels and other establishments with a one-stop source of accurate information and processing of user rights for land, with a clear delineation of the roles and responsibilities between the local and central levels of government. Additionally, the analysis recommended that the

11. USAID, *RAFI Notes: Value Chain Finance* (Issue 2), June 2005.

12. FIAS (2006a), "The Tourism Sector in Mozambique: A Value Chain Analysis."

**Table 2: Shuttles Installed in Selected Countries**

Country	2004 Installed		Total Shipments 1995–2004	
	Shuttleless Looms	Shuttle Looms	Shuttleless Looms	Shuttle Looms
World	860	1450	513	120
Indonesia	29	197	11	5
China	260	686	258	98
India	11	105	9	5
Pakistan	25	10	6	—
Turkey	21	30	21	—

*Source:* International Textile Manufacturer Association.

**Box 10: Factoring**

A major challenge for many small firms is accessing finance for working capital. In particular, many exporters find it difficult to finance their production cycles, because after their goods are delivered, most buyers demand 30 to 90 days to pay. Sellers issue an invoice—recorded for the buyer as an account payable and for the seller as an account receivable—which is an illiquid asset for the seller until payment is received.

“Factoring” is a type of supplier financing in which firms sell their creditworthy accounts receivable at a discount (generally equal to interest plus service fees) and receive immediate cash. The advantage of factoring is that it is not a loan and there are no additional liabilities on the firm’s balance sheet, but it does provide immediate working capital financing. In addition, factoring is often

done “without recourse” in that the factor that purchases the receivables assumes the credit risk for the buyer’s ability to pay.

Factoring can be a powerful tool in providing financing to high-risk suppliers with a lack of market information. Factoring’s key virtue is that underwriting is based on the risk of the receivables (i.e., the buyer) rather than the risk of the supplier. Therefore, factoring is particularly well suited for financing receivables from large foreign firms whose receivables are the obligations of buyers who are more creditworthy than the sellers themselves.

*Source:* Leora Klapper. “Export Financing for SMEs: The Role of Factoring.” World Bank Group, Trade Note 29.

government take a proactive, community-driven approach to preparing land for tourism activities. In that way, all land related issues could be addressed beforehand with individual communities prior to the investors’ bids for developing such tourism assets.

**Utilities, Administrative Overheads, and Other Costs**

Expensive and poor quality utilities, transaction costs due to bureaucracy and red tape, administrative and

regulatory barriers, and charges for frequent repair and maintenance can add significant costs to production. (See also Box 11.) For example, producers in Honduras and Nicaragua face frequent electrical power brownouts or blackouts, which seriously affect their production efficiency and costs due to frequent interruptions in production cycles (Table 3).

Administrative overheads often constitute a significant proportion of production costs for firms in emerging economies. To calculate administrative overheads, it is useful to know, for example, what percentage of time senior management engages in ad-

### Box 11: Questions to Consider When Assessing Administrative Costs

- What typical regulatory compliance procedures are required for an order-to-delivery cycle for a typical trade transaction? Which agencies are involved? What are the formal and informal charges/ fees?
- Are there industry specific regulatory compliance procedures required? What are these?

**Table 3: Electricity Indicators for Selected Countries**

Country	Cost of power US\$/kwh	Days of Power Outage	% of Sales lost due to power outages
Chile	0.057	3.73	1.56
Cambodia	0.2	4.88	2.24
Guatemala	0.116	9.45	2.52
Honduras	0.035	22.5	3.62
Nicaragua	0.128	23.01	5.15

*Source:* World Bank Group, Enterprise Surveys, database.

addressing bureaucracy. The Nigeria value chain study indicated that for every dollar spent on labor, two dollars were spent on senior managers' time to address bureaucratic hurdles, a multiplicity of government regulations, and administrative procedures. Regulatory compliance is especially burdensome when excessive red tape exists in registering a business, paying taxes (corporate, property, and others), obtaining import and export licenses, registering land, obtaining utility services, obtaining plant safety certification, and adhering to environmental protection and cross-border inspection processes. Table 4 shows that senior managers in Nigerian firms spend almost half their time on administrative barriers.

It is useful to record the typical regulatory compliance procedures required for an order-to-delivery cycle or a typical trade transaction. As a case in point, the Nigeria value chain study revealed that a typical shrimp firm faced 46 regulatory compliance procedures. All Nigerian firms must comply with a minimum of 29 regulatory compliance procedures rang-

**Table 4: Senior Management Time Dealing with Bureaucracy**

Country	% of Senior Management Time on Administrative Barriers
Nigeria	45%
India	14%
China	25%
Brazil	8%
Kenya	13%
Bangladesh	4%

*Source:* World Bank Group, Enterprise Surveys, database.

ing from land registration to corporate taxes, vehicle permits, utility charges, plant health and safety certification, and environmental protection. In addition to the 29 regulations, shrimp industries must comply with an additional 17 regulations for the shrimp sector (see Tables 5 and 6).<sup>13</sup>

13. Yee and Paludetto (2005).

**Table 5: Nigeria: Regulatory Procedures (Economy Wide)**

Description	Government Agency	Frequency	Official Fees (Naira)	Unofficial Payoffs (Naira)
1 Land Rent	State Government	annual	6.5 million	
2 Value Added Tax	Ministry of Finance	annual	5% of purchase value	
3 Corporate Tax	Ministry of Finance	annual	30% of net profit	
4 Education Tax	Ministry of Finance	annual	2% of profit	
5 Capital Gains Tax	Ministry of Finance	annual	10%	
6 Nigerian Social Insurance Trust Fund	Federal Government	monthly	6.5% of basic salary	
7 Nigerian Housing Fund	Federal Government	monthly	2.5% of basic salary	
8 Vehicle Registration	Ministry of Transport	annual	10,000	
9 License for Logo Advertisement on Vehicle	Local Government	annual	2,500/vehicle	
10 Vehicle Pollution Inspection	Ministry of Transport	annual	1,500/vehicle	
11 Hackney Permit for Private Business Vehicle	Ministry of Transport	annual	5,000	2,000
12 Canteen License	Local Government	annual	10,000	10,000
13 Property Tax	State Government	annual		
14 Electricity Charges	NEPA	monthly	8.5 / unit plus demand charges	
15 Water Charges	Water Corporation	monthly	25,000	
16 Factory/Plant Health Certificate	Local Government	annual	70,000	
17 Factory/Plant Environmental Fee	Lagos State Environmental Agency	monthly	50,000	
18 Land Rent	Local Government	annual		
19 Combined Expatriate Resident Permit and Alien Certificate (CERPAC)—Entry into Nigeria	Federal Government	annual	47,600	15,000
20 CERPAC—Re-entry permit into Nigeria	Federal Government	annual	5,000	1,500
21 Expatriate Quota Fee	Federal Government	annual	50,000	10,000
22 Property Tax	Federal Government	annual		
23 NEPZA Registration/Licence	Nigerian Export Processing Zone Authority	annual	25,000/export	
24 Capital Allowance	Ministry of Finance	annual		
25 Surcharge on Import Duty	Ministry of Finance	every import	7% of basic duty	
26 Corporate Tax Returns	Ministry of Finance	annual		
27 Fire and Safety License	Federal Government	annual	10,000	10,000
28 Paye (employee deductions for tax at source, etc.)	Federal Government	annual	based on individual salary	
29 Corporate With-Holding Tax (WHT)	Federal/State Government	every contract	5% of service/contract	

**Table 6: Nigeria: Regulatory Procedures (Specific to the Shrimp Sector)**

Description	Government Agency	Frequency	Official Fees (Naira)	Unofficial Payoffs (Naira)
1 Factory/Plant Health Certificate	Nigerian Port Authority	annual	3,500	
2 Jetty License	Nigerian Port Authority	annual	0.35 million	
3 Wharfage Levy	Nigerian Port Authority	every trip	5,000	
4 Pilotage Levy	Nigerian Port Authority	annual	20,590/license	4,500/license
5 Lighter Terminal Levy	Nigerian Port Authority	annual		
6 Documentation Fee	Nigerian Port Authority	every voyage	500	
7 Vessel Survey Certificate	Ministry of Transport	annual	50,000/certificate	5,000/certificate
8 Berthing Permit	Department of Navy	ever sailing	4,000	
9 Vessel Sailing Permit	Department of Navy	every sailing	2,000	
10 Vessel Departure Permit	Nigerian Drug Law Enforcement Agency	every sailing		200/vessel
11 Vessel Arrival Permit	Nigerian Drug Law Enforcement Agency	every sailing		200/vessel
12 Pilotage Fee	Nigerian Port Authority	annual	20,590 /license	4,500/license
13 Cabotage License	Nigerian Maritime Authority	annual	2% of turnover	
14 Bunkering Approval Fee	Department of Navy	every fueling	0.35 per liter	
15 Radio License	Ministry of Transport	annual	4,800	2,500
16 Petroleum Licence	Federal Government	annual (barge)	10,000	2,500
17 Vehicle Entry License Fee (Levied by Port)	Nigerian Port Authority	annual	5,000	

### Trade Logistics and Transport

The cost and quality of trade logistics and transport services is a key determinant in a firm's ability to bring its products and services to the market in time. Important indicators to assess the performance of the trade logistics and transport services include: transaction times and costs to clear imports and exports, the number of documents that must be completed and approved, the number of signatures needed in a typical trade transaction, waiting times at ports and terminals, customs clearance time, the cost of moving containers, and inland transport costs<sup>14</sup> (Box 12).

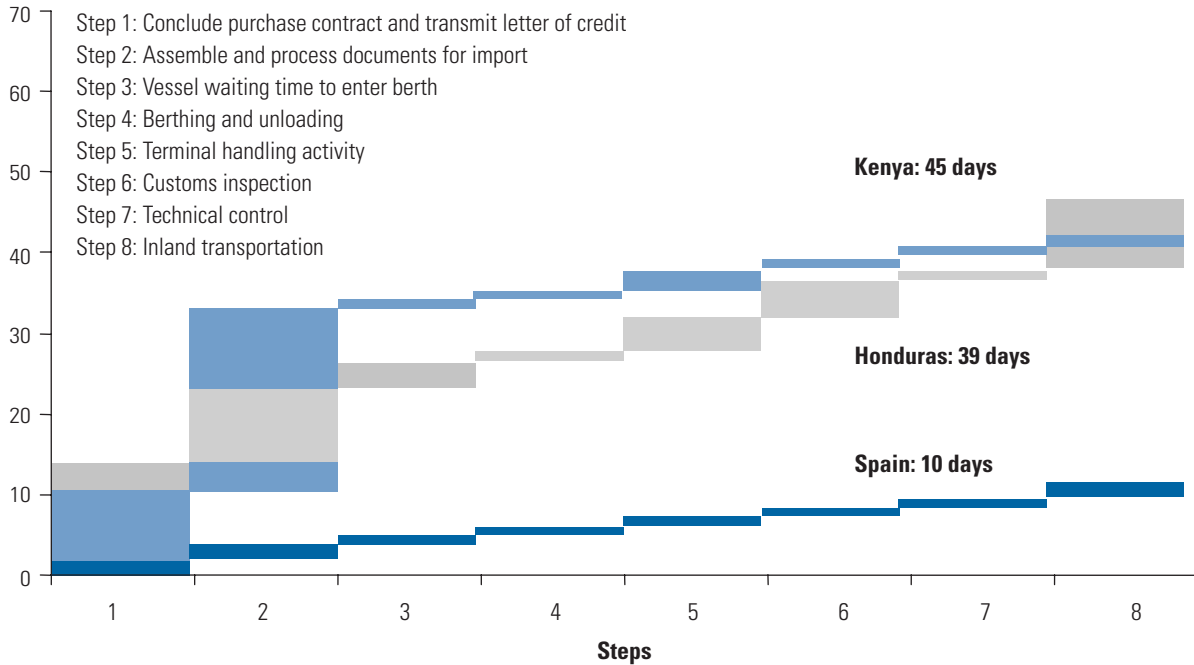
In the Bangladesh ceramics industry, a heavy reliance on imported inputs was exacerbated not only by the poor state of the Bangladeshi road network but also delays at ports, which increased the delivery times by several days; rent-seeking by customs and port officials aggravating the problem exporters and

importers experienced at the ports. According to the Doing Business data, the cost for average export documentation in Bangladesh was US\$158, compared with US\$30 in Indonesia and US\$13 in Malaysia; whereas trucking costs for an average 20-foot container amounted to US\$245 in Bangladesh, compared with US\$180 in Indonesia and US\$130 in Malaysia.

The time it takes to complete various import procedures are compared for three countries in Figure 14. Kenya and Honduras are plainly at a disadvantage compared to Spain, where it takes only 10 days to complete an import transaction. Despite some significant reforms that were recently undertaken in Kenya,<sup>15</sup> several segments of the supply chain there have barriers. The key bottlenecks in Kenya are in the

14. Hausman, Lee, and Subramanian (2005).

15. Kenya allowed traders to submit customs declarations before the goods arrive at the border, which reduced the amount of time needed for goods to clear customs by three days. Kenya also introduced new cranes at the port that would enable more efficient terminal handling activities (*Doing Business*, 2007).

**Figure 14 Time to Complete Import Procedures (Honduras, Kenya, and Spain)**

Source: *Doing Business* (2007).

time it takes to conclude a purchase and transmit letters of credit, assemble and process documents, and transport goods inland. By sharing inspections, Honduras was able to cut the waiting time at its border with Nicaragua in half. Despite this measure, the time required to complete an import transaction in Honduras is still very high.

In many countries, poor infrastructure and trucking services imply significant costs and delays. The logistics cost for handling a 20-foot export container in Kenya is almost US\$2,000. The carrier industry in many countries is fragmented, operators are not oriented to offer customer service, equipment is old, and there is no protection through carrier liability insurance if cargo is lost or damaged.

The time for goods to clear a terminal is also high in many countries. In a congested port, a vessel may have to anchor offshore awaiting a berth, or ineffi-

cient terminal handling may keep ships in a berth longer than is necessary for loading or unloading. Border clearance procedures in many countries are notoriously slow. Inspections by customs and control agencies (e.g., ministries of agriculture and health) are often sequential rather than simultaneous, which further adds to delays. These delays can be exacerbated by inspections of a high percentage of containers that pose little risk. A biased interpretation of duties could lead to disputes and delays, which are sometimes resolved only through bribes.

Poor logistics services force firms to carry a larger administrative staff, hold more inventory for longer periods, and incur high cargo insurance costs. Firms are also exposed to risks of missing delivery dates with consequential fines, shipment value discounts, or rejection of the shipment by the customer. These inefficiencies drive up the costs of doing business.

**Box 12: Questions to Consider When Assessing Trade Logistics**

1. What trade policy issues affect sourcing of raw or intermediate material (e.g., preferential trade agreements, rules of origin requirements, import tariffs or import bans)? What is the level of import tariffs for key inputs and final products?
2. How do trade logistics affect the sector? (Considering that just-in-time delivery is critical for competing in world markets, this category includes administrative procedures, customs and technical control processes and other non-tariff barriers to trade, such as standards for product quality and testing, certification processes, etc.)
3. What is the extent of the informal market for logistical services?
4. Which non-tariff barriers affect the industry?
  - How long does it take to clear exports?
  - What are the procedures for clearing shipment?
  - How much paperwork is needed?
  - How many agencies are involved?
5. Who is responsible for pre-shipment inspection of the outbound product? What is the cost?
6. What is the prevalence of illegal/corrupt practices? What are the impacts on the sector?
7. Does the state of physical infrastructure impede the productivity of the sector? How does this affect competitiveness? What are the trucking charges (\$/km ton)?
8. How often in the last year were shipments delayed? What is the value of loss as a percent of shipment value?
9. How integrated is the order-warehouse-transportation dock system in terms of lead time, costs, and number of process activities? How close is lead time to process time?
10. What is the percentage of defects? How are causes for defects analyzed and traced back through the chain?
11. Who bears the cost of defects and the costs of disposing them? How much are these costs?
12. What is the average percentage of returned consignments? What is the value of returned goods?

# 4

## Developing Policy Recommendations

Policies, institutional efficiencies, infrastructure services, factor costs and quality all affect the total cost structure. These sometimes drive costs up and sometimes they drive costs down through subsidies and concessions. For example, two government policies affected the performance of Nigerian wax print textiles. First, an export expansionary grant (EEG), which the government initiated for a limited period of time for promoting non-oil exports, resulted in rapid growth in cotton exports. This in turn led to a scarcity of domestic cotton and increases in raw material costs for the textile industry because the industry had to import cotton. Abuse of the subsidy eventually forced the government to withdraw the EEG. This resulted in tremendous uncertainty and costs for many firms that had invested in expanding their operations to take advantage of the EEG. Second, the government imposed an import ban on foreign textiles, which did nothing to stop illegal imports of Chinese wax print textiles into the region and into Nigeria on a large scale. These illegal imports forced domestic producer prices down, resulting in the closure of several Nigerian factories.

Assuming that a producer in a developing economy is a “price taker,” the value added and profit mar-

gin will depend on all the costs—raw and intermediate goods as well as the costs of the primary inputs and transport/logistics services. A quick snapshot of the industry’s cost competitiveness is the relative size of the wedge between the FOB price and all other costs. A highly competitive industry would show a relatively large wedge.

In addition to costs, a VCA must consider productivity and the input-conversion ratio, which plays a critical role in determining whether a firm (or industry) is profitable. Because final prices are determined by the market, a firm needs to focus on increasing its productivity. The higher the productivity of a sector, the lower the costs of production as a proportion of the FOB price, the greater the value added, and potential profits. The latter may lead to reinvestments in the sector, which could have spillover effects to the rest of the economy.

Value chain analysis helps to effectively isolate the binding constraints that affect the sector in a systematic manner. Establishing benchmarks helps to prioritize the constraints so that targeted solutions can be formulated. The set of issues that emerge from such a detailed analysis at a sector level has implications for both the public and private sectors alike.

**Figure 15 Sample Policy Recommendations Framework**

	Public Sector	Private Sector
Economy Wide	<ul style="list-style-type: none"> <li>• Reduce VAT Redemption delays</li> <li>• Risk-based system for profiling tax payers, backed by an effective post-refund audit system</li> <li>• Review and/or revise Investment Code to ensure level playing field between SME and large firms</li> <li>• Improve land registries; clarify titling/leasing or user rights</li> </ul>	<ul style="list-style-type: none"> <li>• Private power provision to rationalize cost and/or enhance performance</li> <li>• Private water and sanitation</li> <li>• Privatize air/sea ports</li> </ul>
Industry Specific	<ul style="list-style-type: none"> <li>• Remove tariff distortions on main imported inputs for the sector</li> <li>• Reduce barriers to Import Licenses for key actors in the sector</li> <li>• Improve enforcement of product standards</li> <li>• Policy for attracting FDI (e.g., hotels)</li> </ul>	<ul style="list-style-type: none"> <li>• Shop floor management enhancements to increase productivity</li> <li>• Diversification of products and/or markets;</li> <li>• Improve capacity of suppliers, infrastructure for sourcing to improve backward linkages</li> <li>• Promotion for attracting FDI in for e.g. hotels, tourism products</li> </ul>

Source: Uma Subramanian (2007).

Some of the issues are sector-specific, and others are relevant across an economy and apply to many sectors and firms in a country. Both the public and private sectors must work closely together on some issues if they are to be addressed effectively. A useful framework for developing targeted solutions is presented in Figure 15. Along the vertical axis, recommendations are divided by whether they address economy-wide or sector-specific constraints. Along the horizontal axis, solutions that are primarily addressed by public sector agencies are separated from those that are in the realm of private firms, even though many solutions require joint public-private efforts to jumpstart reforms.

The World Bank Group has conducted a number of value chain studies, and in one way or another, they have led to substantial policy changes. The following examples illustrate how the diagnostics of a VCA can lead to tangible recommendations for policy changes. These include the tourism sector in Mozambique and the textile sector in Indonesia.

### Example: Tourism in Mozambique

Mozambique has a strong comparative advantage in tourism but has so far not been able to exploit its potential. In 2000, the Government of Mozambique adopted the “Action Plan for Reduction of Absolute Poverty” (PARPA) as a medium-term rolling instrument incorporated into the public planning process. Tourism was seen as a priority area in which additional investment could create the jobs necessary to meet the PARPA objectives. Most developing countries have increased their market shares in international tourism; Sub-Saharan Africa in particular has experienced strong growth in tourism within the last two decades, increasing its market share of global arrivals from 1.5 percent in 1970 to 4.5 percent by 2003.<sup>1</sup> Despite its strong tourism asset base and geographic proximity to South Africa—one of the world’s

1. FIAS and OECD. “The Tourism Sector in Mozambique: A Value Chain Analysis.” World Bank Group, March 2006.

**Table 7: Summary Recommendations for the Tourism Sector in Mozambique**

	<b>Public Policy</b>	<b>Private Sector</b>
<b>Economy-Wide</b>	<p><b>1. Land issues</b></p> <ul style="list-style-type: none"> <li>• Clarify land user rights</li> <li>• Establish a “one-stop” source of accurate information and processing of land user rights;</li> <li>• Clearly delineate the roles of local and central governments.</li> </ul>	<p><b>2. Airport infrastructure</b></p> <ul style="list-style-type: none"> <li>• Improve infrastructure at airports and on key links to regional destinations</li> </ul>
<b>Industry-Specific</b>	<p><b>3. Ease and cost of access</b></p> <ul style="list-style-type: none"> <li>• Remove visa requirements for key source markets; streamline frontier formalities o reduce waiting times</li> <li>• Revise bilateral air service agreements with EU countries and key African hubs.</li> <li>• Accelerate implementation of UNIVISA</li> <li>• Revise policy on charter flights to improve frequency and flexibility</li> </ul>	<p><b>4. Marketing of Mozambique as prime tourism destination</b></p> <ul style="list-style-type: none"> <li>• Develop strategy for effective, coordinated promotion of the country’s image by domestic tour operators, hotels and airline representatives</li> </ul>

top tourist destinations—Mozambique trails behind all its neighbors except for Malawi.

Although the country’s tourism sector has grown from a very low baseline, at an impressive annual growth rate of 13 percent (1999–2003), the average number of tourists per 100 inhabitants, at 2 for Mozambique, is half of Africa’s average, and well below the world average of 11 per 100 inhabitants. Mozambique’s poor performance reflects problems with its overall image, product variety, and the quality of tourism experiences. Realizing this potential depends substantially on the ability of all players in the Mozambique tourism value chain—from hotel operators, tour operators, hospitality service providers, relevant government agencies—to create and deliver high-quality tourism experiences that can transform the country into a “must see” destination in Africa. FIAS conducted a tourism VCA in Mozambique in 2006 and formulated targeted policy recommendation based on its findings.

The VCA found that the requirements for turning Mozambique into a regional tourism destination were extremely high. For the purposes of illustrating how policy recommendations are formulated from VCA results, four of the major findings of the Mozam-

bique study have been selected (see Table 7). By no means do these four include all the sector’s shortcomings, but they illustrate how public and private sectors can address economy-wide and industry-specific issues. It should be noted that prioritization of the issues went hand in hand with an assessment of the feasibility and potential impact of the proposed solutions. The first two examples apply economy-wide, while examples three and four are tourism sector specific.

The first finding, which affects the economy as a whole and needs to be addressed by the government, relates to the numerous difficulties with land-related issues. Because of the lack of clarity and uncertainty with land use rights, the sector cannot expand fast enough and the risks associated with user rights turn off private investors. The recommendations emphasized the need for the government to establish clarity in land user rights; establish a one-stop source for land registration and leases; more clearly delineate the roles between local and central governments; and establish early consultative mechanisms with the community.

The second major finding identified the difficulty and high costs of accessing the country from abroad.

There were very limited intercontinental flights from Europe to Maputo; most countries had flights to Johannesburg, where connecting flights had to be taken to Mozambique. While this issue has implications for the economy as a whole, the tourism sector in particular was significantly affected. The recommendations called for a review of existing bilateral air service agreements with EU countries by the government in coordination with the World Bank's Communications project.<sup>2</sup> In addition, a review of the policy on charters was recommended to enable more frequent and flexible charter operations. Visa requirements for tourists from most major source countries (excluding South Africa) acted as a deterrent. A key recommendation was to lower these restrictions, making the country a more attractive destination for tourists.

For a reform agenda that had to be driven mainly by the private sector, in partnership with the public sector, the VCA pointed to two areas: (i) improvements in infrastructure at airports other than Maputo; and on key links to destinations in the northern part of the country, and (ii) more effective representation of Mozambique as a prime tourist destination in regional and global tourism markets. There was clear need for better collaboration between foreign and domestic tour operators; and effective coordination among the industry's stakeholders. Airlines, hotels, tour operators, retailers, restaurants and a whole range of public sector agencies needed to effectively work inter-sectorally to develop, promote, and manage tourism destinations and, more broadly, Mozambique's image and positioning in world markets.

<sup>2</sup> World Bank (2001), Mozambique Communication Sector Reform Project.

(See Annex 7: Sample Policy Recommendations & Action Plan Matrix: Mozambique Tourism High Priority Initiatives.)

### Example: Textiles in Indonesia

The textile VCA showed that although Indonesia had gained a renewed strength in the U.S. market, its competitive position was under threat, particularly as a result of cut-throat competition from China and India. The project pointed to five key constraints that needed urgent attention if the sector wanted to maintain its global market position:

- Low levels of investment in the sector during recent years resulted in a declining technological profile and lower productivity.
- Weaknesses in trade facilitation measures exposed the industry to rent-seeking activities that could significantly undermine future growth prospects.
- Rising energy costs were expected to raise overall production costs by 5–6 percent. A serious concern was the uncertainty associated with the increases in energy costs.
- Domestic tariffs and taxes had a negative effect on operational costs (e.g., VAT and duties on imported raw materials). There was a high risk of export losses from trade diversion due to higher average tariffs on textile and apparel products relative to key competitors in the U.S. and other markets.
- Low labor productivity and rigid labor market policies were undermining Indonesia's relative labor cost advantage in the long run.

The following recommendations were derived from the VCA: (Table 8).

**Table 8: Recommendations for the Indonesian Textile Sector**

Recommendation	Public	Private
<b>Improve technology and productivity</b>	Establish guidelines for accelerated depreciation for tax purposes.	Explore options for “supplier credits” from Japanese and European equipment makers in discussion with MIGA.
<b>Reduce the impact of energy costs</b>	Improve the transparency of energy pricing policy; publish standardized rates.	Ease access to equipment and technology for alternative energy. Establish a National Textile Energy Efficiency Scheme (TEES).
<b>Improve labor productivity</b>	Principles guiding severance pay system aligned with: <ul style="list-style-type: none"> <li>• Good practices</li> <li>• Sustainable deferred compensation schemes (e.g., joint savings scheme between employer and employee; reduce the frequency of changes to the minimum wage and limit government involvement in overtime rates).</li> </ul> Reform the social security scheme.	Establish a Productivity Improvement Centre possibly associated with textile training center in Bandung, Indonesia.
<b>Reduce the impact of tariff and non-tariff barriers and domestic taxes</b>	<ul style="list-style-type: none"> <li>• Eliminate advance income taxes on imported processed materials.</li> <li>• Establish a better risk-based taxpayer profiling system and cost-effective post-refund audit system.</li> <li>• Implement IMF recommendations for VAT simplification.</li> <li>• Reduce VAT refund processing to 10 days (IMF 2006).</li> <li>• Pay interest on delayed refunds after 30 days of claim.</li> <li>• Reduce administrative procedures for VAT refund claims.</li> <li>• Eliminate the requirement to submit original copies of invoices.</li> <li>• Streamline methods for auditing refund claims.</li> <li>• Reduce information required in VAT return from 175 fields to 17 fields.</li> <li>• Strengthen the capacity of the tax office, including the use of third parties.</li> <li>• Strengthen the central government review team to improve the scrutiny of nuisance tax, regulations, and levies imposed by local governments.</li> <li>• Benchmark administrative barriers and cost of compliance to regulations at the provincial or local government level.</li> </ul> Address negative impact of preferential trade agreements (CAFTA-DR)	Coherent marketing strategy: <ul style="list-style-type: none"> <li>• Public–private program</li> <li>• Target selected markets/buyers</li> <li>• Funding mechanisms of joint marketing campaigns</li> <li>• National branding and image</li> </ul>



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# Annexes

- 1. Acronyms Used in this Report**
- 2. Value Chain Analysis: Policy Questions**
- 3. Value Chain Analysis: Sample Terms of Reference**
- 4. Sample Sourcing Business Survey (Peru Textiles)**
- 5. INCOTERMS**
- 6. Industry Competitiveness Indicators for Value Chain Analysis**
- 7. Sample Policy Recommendations & Action Plan Matrix: Mozambique Tourism High Priority Initiatives)**

## Annex 1

### Acronyms Used in this Report

AGOA	African Growth and Opportunity Act
BEE	business-enabling environment
CAFTA	Central America Free Trade Agreement
CAFTA-DR	Central America Free Trade Agreement – including Dominican Republic
EEG	export expansionary grant
EU	European Union
FAO	Food and Agriculture Organization
FIAS	Foreign Investment Advisory Service (World Bank Group)
FOB	free on board
GDP	gross domestic product
GTZ	Gesellschaft für Technische Zusammenarbeit
HACCP	Hazard Analysis and Critical Control Points
ICA	Investment Climate Assessment
IFC	International Finance Corporation (World Bank Group)
MIGA	Multilateral Investment Guarantee Agency (World Bank Group)
PARPA	Government of Mozambique Action Plan for Reduction of Absolute Poverty
ROA	return on assets
ROE	return on equity
SCOR	Supply-Chain Operations Reference
SME	small- or medium-sized enterprise
TEU	20-foot equivalent unit
UNIDO	United Nations Industrial Development Organization
USAID	U.S. Agency for International Development
VAT	value-added tax
WBG	World Bank Group
WTO	World Trade Organization

## Annex 2

### Value Chain Analysis: Policy Questions

The questions listed below aim to provide practical policy guidance for practitioners who conduct value chain studies. The questions are applicable to most manufacturing sectors. Additional questions specific to an agricultural processing sector appear after the general policy questions.

#### I. Trade Policy

1. What are the global/regional trends regarding tariff and non-tariff trade barriers? What is the general level of protection in the industry?
2. What types of regional and international trade policies or agreements (e.g., CAFTA, WTO) affect trade in the sector and in the country? Differentiate between regional and international agreements.
3. What kinds of duties or import tariffs exist for key inputs such as machinery and equipment?
4. Does a VAT exist on imported material? What is the average duration for reinstatement of the VAT?
5. Is the industry largely based in export processing zones (or special/privileged industrial zones)?
6. Describe the degree to which these zones are integrated with the rest of the economy.
7. Which types of non-tariff barriers affect the industry?
  - a. Customs and technical clearance: How long does it take to clear imports and exports?
  - b. What are the procedures for clearing shipments?
  - c. What amount of paperwork is needed to clear shipments?
  - d. How many agencies are involved in clearing shipments?
8. What product quality standards apply?
9. What types of Corporate Social Responsibility-related issues (e.g., environmental standards; child labor laws) affect the sector?
10. What is the market share trend in key markets?

#### II. Competition Policy

11. Does a level playing field exist among producers and firms (e.g., small vs. large; foreign vs. domestic; formal vs. informal) on issues such as:
  - a. Enforcement of taxes, import tariffs, product standards, etc.
  - b. Access to formal sources of financing (banks)
  - c. Access to key public utilities (e.g., energy)
12. Why kinds of licensing restrictions exist to limit the number of firms that produce or distribute raw, intermediate, and final products?
13. What kinds of incentives or restrictions exist for production units by size (e.g., do small and medium-sized enterprises receive subsidies)?
14. Who are the new entrants? Who has left the market? Why?
15. What types of licensing restrictions exist for new entrants?
16. What types of criteria exist to allocate transparent licenses and permits?

#### III. Other Policy and Regulatory Issues

17. Are there any critical land market issues such as restrictive zoning laws, administrative barriers, or a lack of clarity in titling that must be considered? How do they affect the industry?
18. What is the prevalence of illegal/corrupt practices and what are their effects on the performance of the sector?

19. What kind of anticorruption laws exist, and how effective have they been?
20. What is the rate of growth of FDI in the sector? Do restrictions on FDI affect the sector? What is their basis? Are there government incentives for promoting FDI such as tax breaks and inexpensive land?
21. What is the share of informal firms in this sector in the market?
22. Are intellectual property rights adequately established and enforced for the industry?
23. Does the government extend any incentives for technological upgrading?

#### IV. Competitive Advantages

24. What competitive advantages do major producing nations have? How critical are the following factors to the industry and the country?
  - a. Location/geography
  - b. Infrastructure (roads, ports, airports, telecommunications, power, water)
  - c. Labor skills
  - d. Low factor costs
  - e. Technology
25. What is the structure of the market?
26. Does the sector serve a niche market?
27. Does the state of physical infrastructure and utilities impede the productivity of the sector? How does this affect competitiveness?

#### V. Performance Measures

28. What international benchmarks does the industry use?
29. How does the productivity of labor, capital, and key inputs of national firms in the sector compare with global and regional best practice?
30. How does the productivity of labor, capital, and key inputs of the average firm differ from the firms considered to have the best practices in the sec-

- tor in the country? How does this productivity compare with the average firm in the country?
31. How does the capacity utilization of domestic firms in the industry compare with global and regional best practice?
32. How does the technology in the sector compare with global and regional best practice?
33. How do the factor costs of labor, capital, and key inputs compare with global and regional best practice?
34. With just-in-time delivery being a critical component for competing in world markets, how well do logistics services (i.e., customs procedures and facilities; technical barriers to trade such as standards for product quality and testing, certification processes, etc.) perform?
35. What is the typical order-to-delivery cycle time of the industry? How does it differ from that of competitors?
36. What are the key finance issues for the value chain (such as the following)?
  - a. Capital market regulation/access to finance issues
  - b. The banking system
  - c. Collaterals
  - d. Creditors' rights
  - e. Informal sources of financing
  - f. Trade financing available from foreign sources
  - g. Interest rate
37. What are the inventory holding costs? What part of the inventory holding costs are due to firm inefficiency versus policy and market factors outside a firm's control?
38. What percent of inputs (i.e., raw materials) to the industry is imported? How do the price and quality of imports compare with domestic raw or intermediate material?
  - a. What kinds of protective measures exist on imports such as tariffs/duties/bans?
  - b. What kinds of enforcement of product quality standards exist in the country?
  - c. What kinds of policy restrictions exist on domestic production of this material?

39. What kinds of unique labor market regulation affect sector productivity?

## VI. Additional Questions for an Agricultural Processing Sector

1. Are the food quality standards on par with international standards? Is there a problem with enforcement of standards?
2. Is there a difference or difficulty in enforcing standards on small producers?
3. How qualified and capable are quality certification laboratories and processes?
4. How many exporting firms in the sector are certified exporting firms (e.g., HACCP, EureGAP, etc.)?
5. What is the frequency with which the sector products fail inspection tests in importing countries? What is the frequency of rejections?
6. What types of inspections do agricultural products undergo in key import countries?
7. Were any alerts released in the last quarter or year by the regulatory authorities of importing countries?
8. What types of subsector policy issues (e.g., high prices for fertilizers or pesticides) exist in the agricultural sector? Why do they exist?
  - a. What types of tariffs exist on imported inputs?
  - b. Do transport logistics costs add to import costs?
  - c. Is there a lack of competition among quality producers in the domestic market? Why?
9. Would producers in Country X be able to sell processed products with a higher added value in key external markets (e.g., breaded shrimp instead of frozen; roasted coffee instead of green)? If not, why not?
  - a. What types of tariffs are imposed by the United States, European Union, or other trade partners on higher value products?
  - b. Are higher standards required?
  - c. Is it difficult to establish market credibility for the higher value products?
  - d. Is there an absence of adequate processing facilities for higher value-added processing?
10. What issues, such as those below, are associated with sourcing raw or semiprocessed agricultural products?
  - a. Poor road links
  - b. Inadequate or unreliable transport services
  - c. Inadequate or absent cooling chains, warehouses, etc.
  - d. Poor-quality supplies
  - e. Reliability of supplies
  - f. Inadequate supplies
11. What is the marketing channel for the agriculturally processed product?
  - a. Sell to government board/body
  - b. Auction
  - c. Private brokers
  - d. Retail chains
  - e. Other
12. Is this sector part of the government's export development strategy? What is the strategy?
13. How effective are the agricultural industry associations in lobbying for change in the sector?
14. What is the structure of intermediaries between local small agricultural producers and processors (e.g., cooperatives, traders, brokers, consolidators, etc.)?

## Annex 3

### Product Value Chain Analysis: *Sample Terms of Reference*<sup>1</sup>

This is a generic terms of reference, designed as a guide for outlining the basic scope of work and research activities necessary for a team of consultants to assess the performance of firms or farmers involved in the production and export of tradable agricultural products (e.g., coffee, cotton, apparel, shrimp) using a value chain analytical framework. Consultants would be expected to apply this framework as a means for identifying, assessing, and prioritizing constraints; as well as remedial measures and cross-cutting policy reforms that would most likely enhance the growth and competitiveness of an economy.

The terms of reference are designed for a single consultant or a team of consultants with expertise and knowledge of the following:

- Value chain analytical and benchmarking techniques relevant to the industry
- Trade, economic, and industrial policies relevant to both product and service sectors in the country under review
- Global industry trends, practices, and business management strategies relevant in various segments of the tradable product(s) in the country

Ideally, consultants should have expertise in value chain analysis, the sector to be assessed, and have the ability to gather data, perform surveys, and other research.

#### Objectives of the Study

The purpose of the study is to elicit recommendations to improve the business environment in Country X in a manner that enhances competitiveness, growth, employment, and business opportunities. The study should provide input that will serve as the basis for

1. The estimated average costs for one industry value chain is roughly US\$50,000 including consultants' costs.

developing a coherent economic growth development strategy. To this end, the study's objectives are as follows:

- Develop public and private awareness and consensus on the range, importance, and impact of market and policy constraints that limit the growth of businesses in the country.
- Assess and document the performance of local industries involved in the value chain of the product (e.g., farmers and producers of final and intermediate goods, such as processors, input suppliers, freight forwarders, transporters, and so on) relative to global competitors.
- Identify the underlying policy, institutional, and infrastructural issues that affect the competitiveness of private sector activity in the country, and establish priorities for which public sector interventions might have the greatest positive impact.
- Identify actions the private sector can take to improve domestic productivity, expand its market share, reduce costs, increase competitiveness, and add local value along the supply chain for the product.
- Examine the challenges and opportunities for increasing access to and shares of global and regional import and export markets for the product and associated inputs.

#### Scope of Work

The consulting team should provide adequate answers to broad questions such as the following:

- Which segments of the product value chain are competitive, and which ones are not?
- Which externalities, disconnections, and efficiencies in one segment of the product value chain have significantly affected performance in other

segments of the chain, thereby undermining the growth of the entire industry?

- Which institutional and policy interventions have strengthened the competitiveness of various segments of the chain, and which ones have undermined it? Which policy and infrastructure inadequacies currently impede efficient and effective input sourcing, production, and transformation of value and delivery of the products that can be traded to domestic or foreign consumers?
- What other types of underlying factors limit the ability of local firms to directly contribute to the product chain? Are there specific factors that limit the benefits (or rents) within the value chain, and to the local community?
- What public-private remedial measures should be taken to improve domestic productivity, reduce costs, and strengthen the ability to add local value throughout the chain? What remedial measures need to be implemented to strengthen the integration of the domestic private sector with the regional and global supply chains where applicable?

As part of this analysis, the consultant (or team) should complete the following tasks:

***Task 1: Analyze the market by compiling a comprehensive profile of the products, associated industries, and markets***

1. Present a brief product and industry profile that should include (but not be limited to) the following items:
  - Global, regional, and national market, production, and trade data to assess the structure of global, regional, and local demand, production, output, trade volume and values, consumption patterns, input and output prices, and so on.
  - A discussion of the global external shocks that are likely to influence the export performance of the products or sector (e.g., changing global policies such as phasing out the Multifiber Agreement (MFA), rising fuel and energy prices, the prevalence of global terrorism and security

concerns, changing consumption patterns, changing climatic conditions, and so on). Benchmark these data points with competing countries, and regional and global averages.

- An analysis of global, regional, and national product and industry trends, including key export and import markets, market shares; changes in sourcing, production, and supply chain management practices; standards and technological practices; and so on. Identify key drivers of the demand for the product, and specific factors required for local producers to compete in each of these markets, including, product quality or required processing standards.
  - An assessment of the relationship between product sector contributions and broader macroeconomic indicators (e.g., national and provincial GDP, inflation, employment, foreign exchange, tax revenues, and so on). This should include a review and synthesis of the policy and administrative framework governing each product. Completing this task will require a review of other analytical and policy studies covering investment climate, trade and transport, and so on (e.g., investment climate assessment, *Doing Business* indicators, FIAS administrative barriers studies, and so on).
  - A brief discussion of the existing market structure (competition policy) and entry barriers, if any. It should also include competitive dynamics of core service providers linked to the product value chain including profiles of economic agents (e.g., input suppliers or producers, core producers and intermediaries, transporters and freight forwarders, and so on).
2. This phase should also include a good stock-taking of all previous relevant studies or projects (both completed and ongoing) and a gap analysis to clearly identify the added value of the current project in specific terms. By the end of this phase, the team should already have identified broad key issues that affect the sector. The task team leader and team must work closely together at this phase before the first mission trip is launched.

### ***Task 2: Value Chain Analysis***

The value chain analysis will include:

- Value chain mapping (i.e., separating the product value/supply chain into its major value-added activities or segments). For each identified product or sector the consultant should *characterize the product market* to include sources of raw materials, buyers, mechanisms for information flow within the value chain, and key supporting services (energy, transportation, etc.).
- A measurement of the product value chain performance, which includes the following steps:
  - Provide estimates of cost, time, and added value of sourcing, transforming, and delivering raw materials within one segment (or process) of the chain to another.
  - Benchmark the indicators in the point against those of competing countries involved in the production and delivery of similar products.
  - Identify key segments and activities within the chain where performance lags behind those of competing countries/industries.
  - Prioritize segments and activities in the chain where poor performance or inefficiencies severely undermine the competitiveness of the entire value chain.

### ***Task 3: Identify key policies, regulatory, and institutional constraints to the performance of the value chain and identify appropriate solutions***

Drawing on the value chain and benchmarking analysis in Task 2, the consultant team should identify key policy and market factors that will improve the competitiveness of a specific industry, as well as those that undermine it. These tasks might include the following:

- Identifying cross-cutting/economy-wide bottlenecks that affect the capacity of the private sector to compete (e.g., a lack of infrastructure, cumber-

some customs procedures and facilities, technical barriers to trade, etc.).

- Identifying underlying sector-specific factors that are causing poor performance along the value chain (e.g., standards for product quality and testing, certification processes, sector policy distortions, administrative procedures, skills, access to capital equipment, access to capital, tax structure, and licensing).
- Establishing monetary costs of policy interventions/regulations (i.e., the costs of compliance and hidden/informal costs of compliance such as the cost of internal resources used by each company to comply).
- Identifying good practice cases to support the recommendations to address the issues.
- Analyzing the institutional and policy linkages between the performance of the value chain and specific policies, regulations, and institutions originating from either the public or private sectors. Consultants may identify which specific institutional and policy measures would help to enhance the private sector's ability to improve the performance of the value chain. Implications of these policy measures should be discussed and supported by evidence drawn from the value chain analysis and from international good practices. A summary of these issues and their implications could be presented in a matrix that highlights their effects on supply-chain competitiveness.

To the extent possible, the consultant (or team) should also provide some sensitivity analysis of the effect these constraints have on key economic development objectives (e.g., how can the amount of local added value and income generation be increased; what are the prevailing attitudes toward investment and risk-taking, safety and security, and working conditions?).

Finally, based on the findings of the study, the consultant should offer *recommendations for World Bank Group support* for policy and institutional measures that would improve productivity and performance along the value chain.

## Key Milestones, Deliverables, and a Time Frame

- Desk research might include (i) taking stock of studies or projects and identifying a scope of work and (ii) market analysis. This should be completed before the first mission trip occurs. Consultant should submit an inception report containing a research on points (i) and (ii).
  - The first mission trip should include field work to collect data for the value chain analysis and a preliminary analysis of issues.
  - First draft to be submitted by XX.
  - The second mission trip will involve completing field work and filling data gaps. It should focus on analyzing the underlying policy, institutional, and other constraints affecting the competitiveness of the product value chain.
  - Second draft report to be submitted by XX.
  - Following review and feedback by the task team and the peer review committee, a draft of the final report should be delivered by XX.
- A workshop will be held in the country to discuss the findings and fine-tune the recommendations.
  - The consultant team should finish its report by XX. This should be in the form of a manuscript that can be published with a length of approximately X pages, not including annexes, and statistical and other tables. The report should draw conclusions about the current status of laws, regulations, capacities, and programs designed for developing the sector in the country; it should identify areas that need priority attention; and it should recommend key steps the government, private organizations, and international development agencies should take. Reference should be made to the appropriate contexts for such efforts—whether at the national level, at the regional level, or in relation to international organizations and forums.

The consultant team will report on this study to XX managers.

## Annex 4

### Sample Sourcing Business Survey (Peru Textiles)<sup>1</sup>

**Objective:** To gauge the importance of different factors in investment and sourcing decisions of textile and apparel companies

**Interview target:** Sourcing managers from large international textile and apparel buyers

#### A. INTERVIEWEE PROFILE

Company name:	
Company type (retailer, licensee, distributor, other [please describe]):	
Contact name:	
Contact e-mail address:	
Contact phone number:	
Home country of company:	
Private or publicly owned company:	
Annual revenue:	

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1. Used in the Peru Textile Value Chain Study, FIAS, 2007.

1. For each of the following countries, please answer the questions on the left.

	China	Mexico	India	Pakis- tan	Bangla- desh	Other SE Asia	CBI (Caribbean Basin)	Peru	Other
Do you currently source from this country? Yes/No									
What percent of total global purchasing does this country represent?									
Has this changed in the last 3 years? By what percent has it increased or decreased?									
Do you plan to expand operations in this country in the near future (Yes, No, Year)?									
Do you source a major product (> 15% of sourcing) from this country? (Yes, No, please name product.)									

## B. INVESTMENT AND SOURCING DECISIONS

2. If your decision to contract a new supplier is based on country of origin, please mark with an X how important the following criteria are for your sourcing decisions.

CRITERIA	IMPORTANCE				
	1 Not Important	2 Slightly Important	3 Important	4 Fairly Important	5 Very Important
Political and economic stability					
Labor cost					
Workforce skill					
Workforce productivity					
Geographic proximity to markets					
Trade agreements					
Corruption					
Social and environmental standards and practices					
Government regulation and administration (bureaucracy)					

3. Rate the performance of the *average factory* in each country for the factors below on a scale of 1 (“very poor”) to 5 (“excellent”). If you are unfamiliar with the performance of any of these countries, write NF (not familiar).

Factor	China	Mexico	India	Pakis- tan	Bangla- desh	Other SE Asia	CBI (Caribbean Basin)	Peru	Other
High workforce skills									
Low cost of production other than labor									
High workforce productivity									
Low labor cost									
High product quality									
Fast speed-to-market									
Sophisticated level of services (i.e., full package)									
High social and environmental compliance									
Product mix									
Low average defect rate									
Short order-to-delivery cycle time									
High flexibility in size and scale									

4. Mark with an X which of the following issues (if any) have caused your company to take any of the described actions:

Issue of Concern	Action			
	Choose one supplier/ business partner over another	Withdraw from a supplier/ business partner over another	Choose one country over another	Withdraw from a country (specify if it was a Latin American country)
High workforce skills				
Low cost of production other than labor				
High workforce productivity				
Low labor cost				
High product quality				
Fast speed-to-market				
Sophisticated level of services (i.e., full package)				
High social and environmental compliance				
Product mix				
Low average defect rate				
Short order-to-delivery cycle time				
High flexibility in size and scale				

5. What are the mechanisms to contract a new supplier? How long does it take?
6. What type of contracts do you usually have with your suppliers? How long do these take to implement?
7. Which countries are Peru's main competitors? How does Peru rate against competitors or key international exporters such as China, Mexico, India, Pakistan, Bangladesh, other Southeast Asian countries, Caribbean basin countries, and other countries?
8. How do you assess quality and outside standards?
  - a. International standards, ISO 14000
  - b. Other metrics (please specify).
9. What is your policy on defective products/low-quality products?
  - a. Return entire order
  - b. Return partial order
  - c. Discount price
  - d. Other
10. What is your policy on delayed delivery?
  - a. Return entire order
  - b. Return partial order
  - c. Discount price
  - d. Other

### C. PERUVIAN INDUSTRY QUESTIONS

11. How many factories do you work with in Peru?

	<b>Large (&gt;500 workers)</b>	<b>Medium (100–500 workers)</b>	<b>SMEs (&lt;100 workers)</b>
Number of factories			
Increased/decreased/stayed the same during the last 5 years?			

12. What type of products are you currently buying from Peru? Please state SITC codes.

	<b>Currently buying from Peru (Yes/No)</b>	<b>SITC codes</b>
Raw cotton		
Yarn		
Woven fabric		
Knotted fabric		
Apparel:		
—Women's		
—Men's		
—Children's		
—Other		

13. Which countries do you consider to be Peru's biggest competitors for the following products?

	Competitor country (countries)	Overall satisfaction (scale 1–10) as a supplier with:		Peru vs. Competitor(s)	
		Peru	Competitor(s)	Positives	Negatives
Cotton					
Yarn					
Fabric—woven					
Fabric—knitted					
Apparel—T-shirt					
Apparel—Men's shirt					
Apparel—Women's blouse					

14. What is the average defect rate from the average factory in Peru?

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In your sourcing experience, what is the average defect rate from all your source countries?

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15. Describe the level of integration with your suppliers, and Peruvian suppliers in particular. Do you provide any of the following?

	Overall	Peru
Technical support		
Credit		
Training		
Fabric, inputs, accessories		
R&D support		
Design		
Other		

16. What are other weaknesses in the Peruvian industry?

17. Do you have any suggestions for how Peru can improve its performance?

18. What have been your experiences in sourcing from SMEs in Peru (key challenges might include labor issues, quality, timeliness, informality, other)?

a. Are these issues specific to Peruvian SMEs or similar to other countries (Yes/No)?

b. What specific steps could be taken in Peru to make it easier/more efficient for you to source from SMEs in the country?

19. How would you describe Peru's textile/apparel industry in one sentence?

**B. INTERNATIONAL TEXTILE AND APPAREL CONTEXT**

20. Do you think the international market for textile and apparel is changing? How?
  - What are the key changes in supply, demand, and prices?
  - Do you think the expiration of the safeguards against China in 2008 will change this picture? If so, how?
21. How are these trends affecting your purchasing decisions? Do you look for new markets you did not consider before? How is the growing presence of China in the market affecting your buying conduct?
22. Specify how trade agreements are affecting your sourcing patterns.
23. Do you think countries are specializing in different segments of the industry (i.e., profiling themselves as a specific kind of supplier)? Specify which countries and their specialty.

## Annex 5 INCOTERMS

### Origin Terms

**EXW:** Ex-Works, named place where shipment is available to the buyer, not loaded. The seller will not contract for any transportation.

#### *International Carriage NOT Paid by Seller*

**FCA:** Free Carrier, unloaded at the seller's dock OR a named place where shipment is available to the international carrier or agent, not loaded. This term can be used for any mode of transport.

**FAS:** Free Alongside Ship, named ocean port of shipment. (Ocean shipments that are NOT containerized.)

**FOB:** Free On Board vessel, named ocean port of shipment. This term is used for ocean shipments only where it is important that the goods pass the ship's rail.

#### *International Carriage Paid by the Seller*

**CFR:** Cost and Freight, named ocean port of destination.

This term is used for ocean shipments that are not containerized.

**CIF:** Cost, Insurance and Freight, named ocean port of destination.

This term is used for ocean shipments that are not containerized.

**CPT:** Carriage Paid To, named place or port of destination.

This term is used for air or ocean containerized and roll-on roll-off shipments.

**CIP:** Carriage and Insurance Paid To, named place or port of destination.

This term is used for air or ocean containerized and roll-on roll-off shipments.

#### *Arrival at Stated Destination*

**DAF:** Delivered At Frontier, named place of destination, by land, not unloaded.

This term is used for any mode of transportation but must be delivered by land.

**DES:** Delivered Ex-Ship, named port of destination, not unloaded. This term is used for ocean shipments only.

**DEQ:** Delivered Ex-Quay, named port of destination, unloaded, not cleared.

This term is used for ocean shipments only.

**DDU:** Delivered Duty Unpaid, named place of destination, not unloaded, not cleared.

This term is used for any mode of transportation.

**DDP:** Delivered Duty Paid, named place of destination, not unloaded, cleared.

This term is used for any mode of transportation.

### Incoterms 2000

The following chart summarizes the responsibilities of both the buyer and seller for each of the current 13 INCOTERMS.

SERVICES	EXW	FCA	FAS	FOB	CFR	CIF	CPT	CIP	DAF	DES	Delivered		DDU	DDP
											Delivered Ex Quay	Delivered Ex Ship		
	Ex Works	Free Carrier	Free Alongside Ship	Free Onboard Vessel	Cost & Freight	Cost Insurance & Freight	Carriage Paid To	Carriage Insurance Paid To	Delivered At Frontier	Delivered Ex Ship	Delivered Ex Quay Unpaid	Delivered Duty Unpaid	Delivered Duty Paid	
<b>Warehouse Storage</b>	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller	
<b>Warehouse Labor</b>	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller	
<b>Export Packing</b>	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller	
<b>Loading Charges</b>	Buyer	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller	
<b>Inland Freight</b>	Buyer	Buyer/ Seller*	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller	
<b>Terminal Charges</b>	Buyer	Buyer	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller	
<b>Forwarder's Fees</b>	Buyer	Buyer	Buyer	Buyer	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller	
<b>Loading On Vessel</b>	Buyer	Buyer	Buyer	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller	
<b>Ocean/Air Freight</b>	Buyer	Buyer	Buyer	Buyer	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller	
<b>Charges On Arrival At Destination</b>	Buyer	Buyer	Buyer	Buyer	Buyer	Buyer	Seller	Seller	Buyer	Buyer	Seller	Seller	Seller	
<b>Duty, Taxes &amp; Customs Clearance</b>	Buyer	Buyer	Buyer	Buyer	Buyer	Buyer	Buyer	Buyer	Buyer	Buyer	Buyer	Buyer	Seller	
<b>Delivery To Destination</b>	Buyer	Buyer	Buyer	Buyer	Buyer	Buyer	Buyer	Buyer	Buyer	Buyer	Buyer	Buyer	Seller	

\* There are actually two FCA terms: FCA Seller's Premises where the seller is responsible only for loading the goods and not responsible for inland freight; and FCA Named Place (International Carrier) where the seller is responsible for inland freight.

## Annex 6

# Industry Competitiveness Indicators for Value Chain Analysis

### 1. Inputs

- a. Cost of key inputs (raw and intermediate)
- b. Tariff on main imported inputs
- c. Input conversion ratio
- d. Import dependency ratio
- e. Time to import (Doing Business Indicators)
- f. Cost to Import (Doing Business Indicators)

### 2. Factor of Prouction

- a. Wage/labor hour
- b. Hiring/firing rigidities (Doing Business Indicators)
- c. Interest rate (long-term and working capital)
- d. Getting credit (Doing Business Indicators)
- e. Rate of return on capital
- f. Cost and time to lease industrial land
- g. Cost and time to purchase industrial land

### 3. Utilities

- a. Electricity cost (US\$/kwh)
- b. Water cost (US\$/cubic meter)
- c. Telecommunication cost (3-minute local call) and % of firms using the Internet to interact with clients
- d. Power outage (days) and % of sales lost (Enterprise Survey)
- e. Number of days to get telephone connection

### 4. Productivity

- a. Value added per worker
- b. Output produced per labor hour
- c. Yield per hectare
- d. Value added per unit of investment
- e. FDI per value added
- f. Average production cost per unit

### 5. Product Quality

- a. Number of rapid alerts
- b. Defect rate
- c. Percentage share of exports
- d. Number of certified exporting firms/total exporting firms (or total producing firms)

### 6. Market Access

- a. Order to delivery time (days/weeks)
- b. Tariff in key export markets
- c. Time and cost to export (Doing Business Indicators)
- d. Trade openness index

### 7. Business Environment

- a. Enforcing contracts (Doing Business Indicators)
- b. Entry barriers (Doing Business Indicators)
- c. Registering property (Doing Business-Indicators)
- d. Protecting investors (Doing Business Indicators)
- e. Licenses
- f. Senior management time spent on red tape (Enterprise Survey)
- g. Paying taxes (Doing Business Indicators)

## Annex 7

### Sample Policy Recommendations & Action Plan Matrix: Mozambique Tourism High Priority Initiatives

Action	Responsibility/ Coordination	Time Frame	Monitoring Indicators
<p><b>1. Ease and Costs of Access into Mozambique</b></p> <ul style="list-style-type: none"> <li>• Provide and publicize clear information for visitors of entry/exit requirements and train immigration and airport staff to understand how to handle tourist expectations at entry/exit points.</li> <li>• Remove visa requirement for major source markets, and streamline frontier formalities (entry/exit) to reduce waiting times at borders. Also strengthen border processing capacity and intensify negotiations on one-stop border posts with South Africa and other selected transport corridors around the country.</li> <li>• Accelerate implementation of UNIVISA</li> <li>• Also mechanisms to enable tour operators to pre-arrange visa and entry permits should be established.</li> </ul>	MITUR; Customs; Ministry of Foreign Affairs	Short- Medium Term	<p>No. of nationalities of key source markets with visa exemptions</p> <p>Publications produced, printed and readily available at entry points</p> <p>No. of hours it takes to pass through border posts</p> <p>No. of days/hours it takes for nationals of key source markets to obtain visas</p>
<ul style="list-style-type: none"> <li>• Establish payment system and modalities to allow foreign travel agents and operators to issue air tickets, and access airline seat inventories</li> <li>• Revisit bilateral air service agreements with the EU countries and key hubs in Africa (particularly South Africa) to facilitate higher capacity and flexibility for direct flights to Maputo, Vilanculos, and Pemba. Also revise policy on charters to allow for more frequent/flexible back-to-back operations</li> <li>• Review airport policies and establish monitoring systems at airports to measure performance and progress in service quality improvements e.g. customs, immigration, delays, baggage-related complaints. Carry out detailed audit and assessment of airport infrastructure improvement needs, starting with extension of runway and night flying equipment in Vilanculos</li> <li>• Examine and resolve issues that originate from key regional connection points to Mozambique—particularly Johannesburg airport which is the source of many lost/stolen baggage, slow processing of insurance claims, and so on.</li> </ul>	<p>Airport Authority, Civil Aviation Authority, Ministry of Transport, Airlines</p> <p>Coordinate with World Bank Communications Project air transport component</p>	Short- Medium term	<p>No. of domestic airline tickets sold by tour operators</p> <p>No. of back-to-back charter operations conducted by charter airlines</p> <p>No. hours taken to clear customs in airport</p> <p>No. of baggage lost complaints filed</p> <p>Airport capacity to handle larger aircraft</p>
<p><b>2. Improve Availability &amp; Quality of Hotels, Tour Operators and Other Hospitality Services</b></p>			
<ul style="list-style-type: none"> <li>• Provide investors in hotels and other establishments with a one-stop source of accurate information and processing of user rights on land, with clear delineation of roles and responsibilities between the different levels of government. Also promote a pro-active system of community-driven preparation of land for tourism based investment and activities. Here, all land issues are dealt with, before hand, by the community itself, prior to the investor's bid for such tourism assets</li> </ul>	<p>MITUR, with Inter-ministerial Committee, Provincial governments (relevant departments). Ministry of Planning.</p> <p>PEP Africa's Tourism Anchor project (guidelines for procedures to secure land use rights) technical assistance to streamline administrative procedures)</p>	Medium Term	<p>Guidelines issued and regulations in effect.</p> <p>No. of days taken to secure a Duat</p> <p>No. of disputes resolved between investors and communities</p> <p>No. of days taken to resolve disputes on user rights on land</p>

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**Sample Policy Recommendations & Action Plan Matrix: Mozambique Tourism High Priority Initiatives—continued**

Action	Responsibility/ Coordination	Time Frame	Monitoring Indicators
<ul style="list-style-type: none"> <li>• Develop industry codes of practice and a functioning accreditation system for tour operators and related hospitality businesses (tour guides, divers, translators, airport taxis). Establish a system to benchmark firm performance, and reward high performing firms within each industry.</li> <li>• Establish a systematic skills development program for tourism industry:               <ul style="list-style-type: none"> <li>○ Augment curriculum and improve training in the Hotel Andalusia and Technical and Vocational Education and Training programs under the TVET project</li> <li>○ Training programs including staff exchange, between emerging Mozambique hospitality service providers (e.g. divers, tour operators, travel agents, hotel staff and middle management, handicraft etc) and their counterparts in key source/competing markets</li> <li>○ Increase level of private sector input and involvement in strategic decision making (e.g. at Board level) in these institutions.</li> </ul> </li> </ul>	MITUR with INNOQ, PoDE, Hotels association, Tour Operator association and, other relevant Industry Associations; Hotel Andalusia  Coordinate with the USAID ARC project in Cabo Delgado	Short-Medium Term	No. of accredited tour operators and hospitality service providers  No. of beneficiaries of international exchange programs  Increased tourist satisfaction
<ul style="list-style-type: none"> <li>• Streamline administrative procedures—particularly licensing requirements and business start-up procedures for hospitality firms including: tour operators, taxi companies, and other ancillary service providers (restaurants and entertainment facilities) servicing the tourism industry. Also implement clear penalties to discourage license hoarding</li> </ul>	MITUR PoDE with Ministry of Commerce  Upcoming FIAS-PEP Africa project  Coordinate with USAID and World Bank TFCA project	Medium Term	No. of days it takes to secure business licenses  No. and magnitude of penalties against non-performing license owners
<b>3. Marketing, Product Development and Maintenance of Tourism Assets</b>			
<ul style="list-style-type: none"> <li>• Establish responsibility for restoring, maintaining and marketing key existing tourism assets (e.g. the coastal resources, Elephant Reserve, Ilha da Moçambique, Ethnology Museum, etc.). Develop a sustainable financing plan for restoration and maintenance activities. Start with the Elephant Park and Ponto d'Oro.</li> </ul>	MITUR with Ministry of Education and Culture	Medium Term	Terms of Reference. Action plan with clear responsibilities
<ul style="list-style-type: none"> <li>• Privatize the management of the Maputo Convention Center to improve visibility, revenue and capacity utilization. Set up a destination marketing organization that will promote tourism (including MICE tourism) in Maputo</li> </ul>	Ministry of Foreign Affairs, Maputo Convention Center; Min. of Tourism,	Short-Medium Term	Percentage monthly capacity utilization of conference facilities  No. of events (domestic versus international)  No. of total guests per month (domestic versus international)  Revenues per month

**Sample Policy Recommendations & Action Plan Matrix: Mozambique Tourism High Priority Initiatives—continued**

Action	Responsibility/ Coordination	Time Frame	Monitoring Indicators
<ul style="list-style-type: none"> <li>• Develop a coherent short-medium term strategy for tourism marketing               <ul style="list-style-type: none"> <li>○ Pursue more aggressive joint marketing and collaboration between Mozambique and South Africa in order to leverage expected increases in tourists' visits due to the upcoming 2010 World Cup Championship</li> <li>○ Involve private sector actors along the value chain e.g. hotel and tour operators; tour guides, airlines in marketing Mozambique as destination</li> <li>○ Define tourism image, and key source markets other than current sources</li> <li>○ Update and manage distribution of promotional material on the country, including maps, schedules of events and country data, post cards, and so on,</li> <li>○ Effective participation in world travel market events promote e-tourism and on-line destination marketing techniques such as World Hotel link.com.</li> <li>○ Develop joint public-private funding mechanisms for marketing</li> </ul> </li> </ul>	CPI Hotel Association CTA MITUR or FUTUR, Tour Operators  Coordinate with KfW funded marketing plans for Inhambane	Short- Medium Term	Adoption of an interim strategy with a one-year action program  Percentage of increased government expenditure on marketing  Percentage of increased private expenditure in marketing (by typology of tourism business/firm) No. of tourists No. of tour packages sold
<b>Improving Institutional Focus and Co-ordination</b>			
<ul style="list-style-type: none"> <li>• Intensify use of inter-ministerial committee to address key tourism industry issues such as:               <ul style="list-style-type: none"> <li>○ air transport issues with Civil Aviation Authority,</li> <li>○ visa issues with Foreign Affairs Ministry,</li> <li>○ managing tourism assets (e.g. infrastructure, public works, urban and city transport development)</li> <li>○ review responsibilities for tourism development and marketing between MITUR, DINATUR, CPI and FUTUR to eliminate overlapping roles and activities.</li> </ul> </li> </ul>	MITUR, Inter- ministerial Committee	Short- Medium Term	No. of tourism-related issues addressed and resolved by the committee  Clear cut difference in performance measures for FUTUR, DINATUR, and MITUR
<b>ACTION PLAN MATRIX—Other Areas Needing Attention</b>			
<b>Reduce Difficulty and Cost of Access</b> <ul style="list-style-type: none"> <li>• Complete implementation of 5th freedom rights for neighboring African countries in line Yamoussoukro Declaration and SADC Protocol agreements</li> </ul>	Ministry of Foreign Affairs; MITUR and Department of Civil Aviation  Coordinate with World Bank Communications Project air transport component	Medium- Long Term	No. of airlines taking advantage of 5th freedom rights within the region  No. of route points served by different airlines Regional air fares

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**Sample Policy Recommendations & Action Plan Matrix: Mozambique Tourism High Priority Initiatives—continued**

Action	Responsibility/ Coordination	Time Frame	Monitoring Indicators
<ul style="list-style-type: none"> <li>Prioritize road investment program to consider need for improved road networks in the North, through strategic selection of O/ D points. Also improve road maintenance, signage and accessibility to key tourism assets (e.g. in Maputo Elephant Reserve)</li> </ul>	Public Works/ Highway Department, Ministry of Transport. MITUR	Short-Medium Term	Percentage increase in expenditure for road maintenance activities Percentage increase in kilometer roads networks effectively maintained. No. of tourism assets per Km <sup>2</sup> with easy and adequate road access
<b>Strengthen Destination Management and Product Development in Provinces</b>			
<ul style="list-style-type: none"> <li>Explore integrated tourism development zones as pilots that can be replicated. This should begin with the preparation of integrated provincial tourism development plans starting with Maputo and the Pemba- Quirimbas region to address physical infrastructure development issues including zoning; land use standards, ceilings for carrying capacity. The plans should also include contingency arrangements to mitigate the damaging impact of natural occurrences (e.g. cyclones, mobile sand dunes, hurricanes) on key tourism assets. Integrated Development Plans are already underway for Vilanculos.</li> <li>Develop clear national guidelines, modalities and standards for cleaning up waste associated with natural occurrences (e.g. floods, hurricanes) that damage the aesthetic/physical value of tourism assets (e.g. beaches).</li> <li>Create appropriate institutional and legal framework for resolving disputes between community and investors, with respect to land use rights, compensation, and other agreements. Develop guidelines for investor interaction with community in Priority Areas for Tourism Development (PATIs) and Trans-frontier Conservation Areas (TFCAs).</li> </ul>	Local municipalities in consultation with private sector, MITUR, Ministry of Environmental Coordination (MICOA), Ministry of Land and Urban Development.  Coordinate with the World Bank TFCA projects tourism component; and with the DANIDA funded coastal zone management project with MICOA in Vilankulos.	Medium term  Short-Medium Term	Integrated plan  Natural disaster management plan Guidelines for negotiations with community and legal codes governing contractual relations.
<b>Improve Tourism Revenue Management and Data Gathering</b>			
<ul style="list-style-type: none"> <li>Establish a monitoring framework geared towards tourism satellite accounting that would make tracking and disbursement of tourism taxes and revenue transfers to be more transparent and effective. Particular attention should be paid to strengthening the collection of tourism statistics from peripheral provinces to facilitate more effective policy making.</li> </ul>	Ministry of Finance; MITUR, Hotel Association, Provincial Heads and Local Chiefs, MOF	Medium Term	Published data. Total tax revenues and disbursement of revenues. Action plan to redress any inefficiencies and inadequacies in data collection.

**Sample Policy Recommendations & Action Plan Matrix: Mozambique Tourism High Priority Initiatives—continued**

Action	Responsibility/Coordination	Time Frame	Monitoring Indicators
<b>Strengthen Overall Safety and Environmental Standards in the Industry</b>			
<ul style="list-style-type: none"> <li>Promote the adoption of appropriate international standards (e.g. ISO 7000 for management, ISO 14000 for management environmental compliance, and others such as food safety and security. Develop food safety and quality standards and training compliance program for local food producers to meet standards and quality requirement of supermarkets, and hotel chains. Review and monitor compliance with international aviation safety standards</li> <li>Establish industry benchmarking system to monitor operational and competitive performance of the hotel industry relative to competing countries.</li> </ul>	INNOQ with PODE, MITUR, Department of Civil Aviation, Airlines (LAM), Airport Operators	Medium Term	No. of certified tourism-related businesses for each respective standards (e.g. ISO14000)
<b>Increase Investment and Local Value Added</b>			
<ul style="list-style-type: none"> <li>Review the Investment Code to ensure a level playing field between large and small hospitality establishments. Extend the benefits of the investment code to other stakeholders in the tourism value chain (e.g. tour operators and ancillary service providers—restaurants)</li> <li>More effective use of PoDE's investment outreach program</li> <li>Revise taxes, tariffs and duties on imported equipment, machinery, food and drinks and refurbished vehicles that are important to quality of service in the tourism industry</li> </ul>	<p>CPI and Min of Finance</p> <p>Min of Finance, Ministry of Industry and Trade</p>	<p>Short Term</p> <p>Medium term</p>	<p>No. of tourism businesses taking advantage of investment code benefits</p> <p>No. increased level of domestic investments flows due to investment code incentives</p> <p>Percentage of taxes and duties reduced by product group</p> <p>Percentage change in import prices of key tourism related input products</p> <p>Percentage change in quantity of imported tourism inputs due to revised taxes, duties and tariffs</p>
<ul style="list-style-type: none"> <li>Develop small scale financing and technical support for SMEs in handicrafts and other ancillary services</li> </ul>	PODE; PEP Africa	Short term	Revenues from handicrafts and ancillary services (from tourist expenditure surveys)



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