ACRONYMS AND ABBREVIATIONS

AfDB  African Development Bank
CCR  Cast Copper Rod
CSOs  Civil Society Organizations
DFID  United Kingdom Department for International Development
DRC  Democratic Republic of the Congo
EITI  Extractive Industries Transparency Initiative
FMD  Foot and Mouth Disease
GDP  Gross Domestic Product
ICT  Information and Communications Technology
JPC  Jobs & Prosperity: Building Zambia’s Competitiveness Program
kWh  Kilowatt Hour
LAO  Limited Access Order
MICE  Meetings, Incentives, Conferences and Events
MSMEs  Micro, Small and Medium Enterprises
MTENR  Ministry of Tourism, Environment and Natural Resources
NHCC  National Heritage Conservation Commission
OFHC  Oxygen-Free High Conductivity
RETOSA  Regional Tourism Organization of Southern Africa
SADC  Southern African Development Community
SMEs  Small and Medium Enterprises
SMS  Short Message System
SNDP  Sixth National Development Plan
SX/EW  Solvent Extraction/Electrowinning
US$  United States Dollar
WHO  World Health Organization
ZAMEFA  Metal Fabricators of Zambia Plc.
ZAWA  Zambia Wildlife Authority

Regional Vice President: Obiageli Katryn Ezekwesili
Sector Director: Mariolu Jane D. Uy
Sector Manager: Michael J. Fuchs
Task Team Leader: Marie Sheppard
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This report is a window into a larger initiative, the Jobs and Prosperity: Building Zambia’s Competitiveness (JPC) Program. The JPC Program is a “joint venture” between the Government of the Republic of Zambia, the Zambian private sector, the United Kingdom’s Department for International Development (DFID), the African Development Bank Group and the World Bank Group. As such, the report represents the collective efforts of many people who engaged in this work at different stages in the process.

As this report is being published, the Program is being implemented by teams of stakeholders from government, industry and civil society. While these teams are driving the work forward in an effort to achieve results, a smaller group of people has been involved in preparing this report.

The report describes the performance of the Program and synthesizes a series of technical papers that were produced as the program developed (under the World Bank’s Africa Finance and Private Sector Development Unit (AFTFP)). It was prepared by Marie Sheppard (Team Leader and Senior Private Sector Development Specialist), Anna Morris (Private Sector Development Specialist), Michael Engman (Economist), Sipiwe Chihame (Team Assistant), Tim Smythe (GivingWorks, Inc.) and Nazir Ahmad (GivingWorks, Inc.).

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1 For a list of reports in the series, see Annex A.
EXECUTIVE SUMMARY

While Zambia’s economy performs well, in macroeconomic terms, low levels of productivity plague industry, and this constrains growth, diversification and prosperity.

In recent years, economic growth has averaged 5-6% a year, business reforms are being implemented (Zambia was one of the top ten reformers in the Doing Business Index of 2011), and investment levels are at an all time high. However, according to the World Economic Forum’s Global Competitiveness Index 2010-2011, Zambia is not a competitive place in which to do business (ranking 115th out of 139 countries). Not surprisingly, business productivity tends to be low, and few Zambian industries are internationally competitive. Formal employment is shrinking (estimated at 10% of the labor force) and rural poverty is increasing. In summary, there is an urgent need to increase productivity, growth and employment.

In 2008, when discussing Zambia’s progress relative to its Fifth National Development Plan, government and the World Bank agreed to try a different approach to building business productivity and industry competitiveness. Collectively, we wanted to know: is there a better way to design/implement policies and programs so that they are more effective? The World Bank discussed this question with other donors supporting private sector development in Zambia, some of whom then became partners in a new initiative, the Jobs and Prosperity: Building Zambia’s Competitiveness (JPC) Program.

The JPC Program has two phases. Phase I encourages demand for results that, if achieved, could increase the productivity of Zambian businesses. Phase II facilitates the supply of these results.

During Phase I, stakeholders identified beef, dairy, tourism and copper as industries with large but unexploited potential that could benefit from the JPC approach. A collaborative process was used to analyze the competitiveness of these industries and identify opportunities and challenges to realizing them. The analytical work was structured so as to maximize the accuracy and ownership of results. This participatory approach helped to mobilize stakeholders and catalyze demand for achieving the target results. While the industries had been studied before and many of their challenges were known, they remained largely uncompetitive within the region and the world. The JPC Program built on this previous work and adjusted the process of performing analytical work so as to avoid similar pitfalls. Specifically, the JPC sought to generate strong consensus around the analytical findings, which included the explicit consideration of political, social and institutional issues. This approach distinguishes the JPC approach from previous analytical work and is expected to increase the likelihood of tangible results being achieved. Following the analytical work, industry stakeholders used agreed criteria to select three to four priority target results that – if achieved – could assist in unlocking the industries’ potential. These target results became the focus of the Program’s Phase II (implementation).

Phase II has two goals. First, to supply some concrete results by experimenting with a range of tools, including challenge competitions and crowd-sourcing, both of which have been used successfully by the private sector. Tapping into the “wisdom of crowds” (both local and global) can identify cost-effective ways to achieve the target results – which can then be
implemented on a pilot basis. Second, to facilitate advocacy and accountability for achieving the target results. The JPC provides information, analysis and resources to enable advocacy, and, equally important, a means by which stakeholders can hold each other accountable for delivering results.

**What has the JPC achieved?** Several pilots are underway, and some leading indicators suggest that concrete results can be achieved during this pilot. Representatives of the tourism industry identified more-enabling tourism legislation and a better country “brand” as the goals that they sought to achieve. In both instances, Zambian institutions led teams of individuals from the public and private sectors, which, in turn, performed the work and advocated for the outcomes. A legislative team produced a layman’s draft of the Tourism and Hospitality Act, which drew on international best practice, and was submitted to the Ministry of Tourism, Environment and Natural Resources (MTENR). As this report goes to print, government has indicated that this layman’s draft is being used to prepare the final draft, which will be submitted to Parliament in a few months.

**The tourism industry’s second goal was to re-brand Zambia as a tourism destination, as the former brand was thirty years old and market research suggested an urgent need for improvement.** Industry stakeholders decided to “crowd-source” a slogan and logo, as a means of generating a diverse range of suggestions at very low cost (prizes to be provided by the industry). The JPC facilitated a challenge competition, which was completed in April 2011. The result? Almost 5,500 logos and/or slogans from all over the world, and the process itself helped to raise awareness about Zambia as a tourism destination.

**The copper industry identified three goals for the JPC Program: a skills audit, more effective communication about tax revenues from the mining industry, and a better understanding of backward linkages between the industry and local suppliers.** With regard to skills, the Program is assessing mining companies’ demand for skilled workers, as well as the supply of skilled workers being provided by local training institutions. The communication about mining tax revenues is being undertaken in conjunction with the Extractive Industries Transparency Initiative (EITI) and will use channels such as billboards and social media to communicate information about tax revenues recorded as part of the EITI. The copper industry also seeks to understand why backward linkages between the industry and local suppliers are relatively undeveloped. The industry suffers from high costs of (imported) inputs, and the proposed assessment will help determine the constraints to local sourcing, and manufacturing, of supplies.

**Representatives of Zambia’s beef and dairy industries identified three target results: better disease prevention systems, better integration of traditional farmers into the commercial value chain and a better enabling environment.** As part of their ongoing efforts towards achieving the above objectives, government and other industry stakeholders are interested in piloting new/more effective models for:

1) *Livestock Market Centers* – which bring together in a single location a market for cattle, as well as supporting services such as vaccination, veterinary care, certification, information dissemination and training. In this way they have the potential to assist in disease prevention, integration of traditional farmers into the commercial value chain, and improving the wider enabling environment all at the same time; and
2) Animal identification and traceability systems – which could assist in disease prevention.

The industry group asked the JPC Program to hold a worldwide competition to identify new proposals and ideas related to livestock service centers and animal identification and traceability systems. This competition is expected to be launched in mid-2011 with implementation of the winning proposals commencing shortly afterwards (by government, private sector, donors, NGOs or others).

What happens next? The JPC Program is a pilot, operating with limited time and resources, seeking to deliver concrete results within 2-3 years. It is too early to know whether the program is successful – in terms of outcomes. What is clear, however, is that the approach of mobilizing demand and supply for clearly defined results can be an effective way to improve the caliber of analysis and to build consensus around priorities. The ownership generated by this process increases the likelihood of outcomes being achieved, as key stakeholders advocate for outcomes and monitor progress towards attaining them.

If the Program is successful, it could perhaps be scaled up. A decision will be made by May 2011 – based on the outcome of the pilot project – regarding the future of the JPC Program from July 2011 onwards.

The JPC approach is an experiment, and while the risk/return ratio is not yet known, the experience is useful. Whether or not the Program is successful, the experiences gained will be captured for future work in Zambia as well as for other countries with similar challenges. It is hoped that the return on investment will be positive – both for Zambia, which needs more productive industries to drive prosperity, and for the development community, which needs more effective ways of supporting competitiveness and diversification.
1 INTRODUCTION

- Why are industries in which Zambia has an apparent comparative advantage, such as commercial agriculture and tourism, not generating more jobs and income?
- What can be done differently - by government, businesses, civil society and donors - to change this situation and make these industries more productive?
- Can innovative approaches such as crowd sourcing, often adopted by the private sector, be used to generate results and facilitate accountability for achieving them?

These questions continue to preoccupy policy makers, businesses and civil society – especially in light of government’s strategy to embrace private sector-led growth and facilitate competitiveness and diversification.

The Jobs and Prosperity: Building Zambia’s Competitiveness (JPC) Program is an effort to answer these questions and, at the same time, to achieve some concrete results that improve industry productivity and competitiveness.

1.1 Goals of the JPC Program

The Zambian government, with support from donors, has, for a long time, been trying to raise prosperity by encouraging more productive businesses, more competitive and diverse industries, and greater employment. Yet these efforts have not generated the results sought. Despite several years of steady economic growth (averaging 5-6% per year) poverty remains high in rural areas and formal employment is low and shrinking (from 12% in 2005 to 10% in 2009).

In 2008, when discussing Zambia’s progress relative to its Fifth National Development Plan, government and the World Bank agreed to try a different approach to building business productivity and industry competitiveness. Collectively, we wanted to know: is there a better way to design/implement policies and programs so that they are more effective? The World Bank discussed this question with other donors supporting private sector development in Zambia, some of whom then became partners in the JPC Program. The JPC is supported by a coalition of government, business people, civil society and donors and, while the majority of funding has been provided by donors,1 government and industry have contributed substantial amounts of time, effort, information and hospitality.

The goal of the JPC Program is to achieve some meaningful progress towards improving industry productivity and competitiveness. The Program focuses on four industries so as to build traction and keep the scope of work manageable. The industries were selected by a group of Zambian stakeholders (see below). The Program facilitated a process through which Zambian stakeholders identified some narrowly defined target results that, if achieved, could help these industries become more productive and then supports initiatives (policies and programs) to achieve these results.

For donors, there is an additional goal: to pilot a different, potentially more effective, approach to building industry competitiveness.
1.2 The Approach: Encouraging Demand and Supply

To achieve these goals, the JPC Program uses a two-pronged approach: to encourage the demand for and supply of results that – if achieved – could improve the productivity of specific industries within a short time span of 2-3 years. Specifically, the process:

- Encourages the demand for these results so that key stakeholders advocate for and hold each other accountable for delivering them; and
- Facilitates the supply of these results by identifying and implementing policies and programs to achieve them.

The objective of mobilizing both demand and supply in 2-3 years is ambitious, but was deemed necessary in order to build traction and generate meaningful results.

To encourage the demand for results, the Program uses an industry-focused, participatory process that has generated strong buy-in from key stakeholders in government, the business community, the donor community and Civil Society Organizations (CSOs). At the launch of the Program in February 2009, a group of stakeholders used agreed criteria to select four priority industries that (i) had strong potential to create and spread economic benefits and (ii) could benefit from this new approach. The selection process (illustrated in Figure 1) identified the beef, dairy, tourism and copper (mining and fabrication) industries.

![Figure 1: Selection of Priority Industries](image)

Focusing on specific industries, instead of cross-cutting reforms, is a means of building ownership and momentum amongst key stakeholders and – at the same time – of improving the caliber of industry analysis. Most industry stakeholders stand to gain, collectively, from the success of this approach, hence they were more likely to invest in the process and advocate for results. Since stakeholders had operated in these industries and
experienced challenges, first hand, they had a pragmatic perspective that, if harnessed, could help increase the efficacy of the JPC Program.

The JPC Program arms stakeholders with the information and analysis that they need to evaluate and improve industry performance. Sharing information enables advocacy and helps stakeholders to hold each other accountable for delivering results. Therefore, the Program includes a communication campaign that promotes the exchange of information, analysis and performance, relative to the results sought.

The supply of results is being generated by a range of tools; some – such as crowd-sourcing – are borrowed from the private sector. Challenge competitions, a form of crowd-sourcing, will identify solutions that could achieve selected target results in the industries. The most promising submissions will be funded and implemented under the auspices of the JPC Program. It is worth noting that the element of competition can generate more innovative and cost-effective approaches than those used traditionally – and can bring more transparency to every stage of the process.

Many efforts to build competitiveness have encountered obstacles driven by the political economy, and the Program was designed with this in mind. The analytical work explicitly considered the socio-economic and political underpinnings of the country and how they might affect the competitiveness agenda. In addition, there are three attributes that could help to increase the likelihood of success:

- Demand-driven: the selection of industries, target results and solutions to achieve them was done by a group of Zambian stakeholders from government, industry and civil society;

- Open and inclusive: while the process actively involves key stakeholders such as the relevant line ministries, major companies, and business associations; it also seeks to broaden the base of interested parties to include SMEs, traditional farmers, and, to the extent possible, ordinary citizens, in order to bring in a fresh perspective and avoid possible capture by elite groups; and

- Transparent: the selection process was based on criteria that were chosen by key stakeholders, and the monitoring and evaluation of budgets and results will be shared widely to increase accountability for results.

The JPC Program is comprised of two phases: analysis and implementation – as depicted in Figure 2. The purpose of Phase I was to (i) analyze the performance, opportunities for and constraints to building the competitiveness of four industries; (ii) generate consensus around the industry diagnoses; and (iii) determine a set of target results that – if achieved – could improve the productivity of businesses in these industries. Phase I was completed in July 2010.
During Phase I, each industry was analyzed from two perspectives. First, a competitive industry analysis, and second, an analysis of the political/social/economic environment within which the industry operates. The assessment focused on business productivity and examined the issues that most constrain/enhance business performance. Some major cross-cutting issues (e.g. economic underpinnings, political economy and trade and transport) were analyzed, and the findings were factored into the industry analysis as well as the road map for implementation. To be efficient, the work used existing reports and information as much as possible, and supplementary analyses were undertaken to fill in gaps.

Phase II, launched in August 2010, focuses on implementation: achieving the target results in each of the four industries. This phase aims to both encourage advocacy and accountability for the target results identified during Phase I and to facilitate a process whereby “pilot” solutions to achieve those results are identified and implemented.

The JPC Program is a pilot that, if effective, could be scaled up (triggering a possible Phase III) and/or used in other countries. The lessons learned, what works and what does not, will be captured for future work. Since the approach is an experiment, some risks are inherent. Efforts will be made to mitigate them, without compromising the potential returns of the experiment.

This report is structured as follows: Part I summarizes the analytical work on four industries (beef, dairy, tourism and copper) and selected cross-cutting issues that affect these industries’ productivity. This section introduces the target results that, if achieved, could help to increase industry productivity. Part II describes what the JPC Program has accomplished to date and highlights the participatory methods used to identify target results for each industry. Next, it describes the status of “solutions” currently being implemented and sketches ideas for a possible Phase III.
The JPC Program focuses on a small number of industries to keep the scope of work manageable. The industries were selected by a group of Zambian stakeholders in February 2009. An in-depth evaluation of a USAID competitiveness initiative concluded that the donor’s pre-selection of industries in such work, without a previous consultative process with the client government, led to negative implementation results. This is confirmed by the work of Michael Porter (Harvard Business School), on the competitiveness of industries and nations.

Stakeholder support has been a missing ingredient in many cross-cutting reform-based agendas.

The analysis generated is being used by both Government and industry to design strategies and reforms – for example by Government in formulating the Sixth National Development Plan, and by industry to prepare budget submissions and, in the case of tourism, as input for the new Tourism and Hospitality Act (see section 9.2).

For further information on crowd-sourcing see Box 4 in Chapter 8.

One such competition was recently completed to identify a new brand for Zambia as a tourist destination (see Box 6 in Chapter 9).

This approach was used from the beginning, wherein the selection of industries was made by workshop participants voting on the basis of agreed criteria. A similar approach was used in mid-2010, when industry participants selected, for each industry, target results that – if achieved – would improve the productivity of firms in the industry.

The explicit consideration of political and social factors distinguishes the JPC Program from much of the previous analytical work on the same industries.

A list of the technical papers commissioned can be found in Annex A.

For more details on a possible Phase III, see Chapter 10.
PART I: ANALYSIS

What Would it Take for Zambia’s Beef, Dairy, Tourism and Copper Industries to be More Competitive?
2 CONTEXT

In recent years, Zambia has achieved significant progress in terms of macroeconomic growth and investment. Economic growth has been strong, averaging 5-6% per year. FDI flows have increased, as has gross capital formation, which, over the last decade, has risen to over 20% of GDP. Zambia’s performance on the World Bank Group’s Doing Business indicators has also improved, such that Zambia now ranks 76th out of 183 economies and was one of the top ten reformers in Doing Business 2011.1

At the same time, low levels of productivity limit growth, diversification and prosperity. On the World Economic Forum’s 2010-2011 Global Competitiveness Index, Zambia ranked 115th out of 139 countries.2 The poor productivity of Zambian firms and industries undermines their ability to generate income and jobs. The economy is dualistic: only 10% of the labor force is formally employed by private business, with the vast majority working in unproductive, owner-operated, informal “enterprises”. Meanwhile, a small number of large companies capture a disproportionate share of the market, relative to their productivity, and low levels of competition persist in many sectors. Rural poverty is increasing. The growth trajectory, while respectable, is not sufficient to reach the government’s objective of achieving middle-income status by 2030. There is an urgent need to increase the productivity of both the formal and informal sectors.3

Why does this situation persist? Political economists point to many contributing factors: the rent-seeking behavior typical of many land-locked countries rich in natural resources; the legacy of socialism that encouraged over-reliance on the state as the engine of employment and economic growth; the volatility associated with reliance on a single commodity market; high poverty levels; and the lack of a civic voice, especially among the rural poor. Zambia manifests some key features of what has been described as a Limited Access Order (LAO).4 In the LAO, elites trade economic rents for political support; hence they tend to resist reforms that could detract from their financial and political dominance.

To the extent that this is true, then Zambia would seem to be caught in a vicious circle. Rents are important (due to the importance of the mining industry and aggravated by the fact that the country is landlocked), and the lack of economic/trade diversification allows capture and rent-seeking behavior to prosper. This phenomenon perpetuates the status quo (wherein many sectors seem to be captured by monopolies or cartels), which, in turn, limits productivity, economic diversification, and the formation of new businesses.

Given the apparent prevalence and impact of monopolies, it is worth highlighting the underlying strategies that monopolists often use to retain or increase their market power: (i) limit competition from outside the country; (ii) limit the export of inputs (if produced in Zambia); and (iii) limit internal competition as much as possible. To a large extent, public policies (especially regulatory and taxation) along with dominant business practices perpetuate this uncompetitive environment. As a result, Zambia finds itself caught in a low level equilibrium of below-potential economic performance and unwarranted levels of poverty.5
The above dynamics contribute to a dualistic private sector, consisting of a small number of large enterprises and a dramatically larger MSME sector dominated by informal microenterprises. The large enterprise sector, which generates most of the economic growth, exports and tax revenues, is made up of a few thousand enterprises, each with more than 50 employees. About 200 large enterprises produce the bulk of Zambia’s industrial output.6

While large enterprises drive the economy, they account for only 7 percent of employment. Of a total labor force of almost 5 million people, 16 percent are unemployed. Of the 4.1 million Zambians who are employed, the vast majority (90 percent) work for informal enterprises with less than 5 employees (see Figure 3).7,8 These informal microenterprises are more common in rural areas, where they account for 91 percent of employment. Increasing wealth in rural areas depends on increasing and sustaining the productivity of rural-based businesses (most of which are households) – an undertaking that has proved challenging.9

![Figure 3: Most Zambians work in the Informal Sector](image)

Given the prevalence of the informal sector, it is worth highlighting its predicament. Most of Zambia’s informal businesses are trapped in a web of constraints from which it is difficult to escape. They lack basic infrastructure – both hard (energy, water, transport and ICT) and soft (education, finance and information) – that might otherwise enable increased productivity. Their lack of knowledge, coupled with poor social capital, means that they are unable to improve their products’ quality, finance business expansion or influence regulation and competition in their favor.

Increased productivity is critical for all businesses, and for this reason, the JPC Program is working to achieve results that would benefit both formal and informal firms. If achieved, these results could have a beneficial impact at the individual, industry and national levels.
The following chapters summarize the analysis of the four industries (beef, dairy, tourism and copper) covered by the JPC Program. The text describes the industries’ structure, performance and what it would take for each of them to realize their potential. The text is a summary of the analysis contained in the more detailed technical reports (see list in Annex A).

1 www.doingbusiness.org
2 http://www.weforum.org/issues/global-competitiveness
3 For further elaboration, see JPC Project Concept Note, 26 November 2008.
5 Due to allocative inefficiencies, low productivity firms in Zambia tend to have higher market shares than they would have in middle-income comparator countries (World Bank. December 2009. Zambia Investment Climate Assessment).
6 Clarke et al. June 2010. The Profile and Productivity of Zambian Businesses (based on the Zambia Business Survey 2010, which was a nationally representative survey of MSMEs, including the informal sector/households operating across all sectors, including agriculture).
8 Despite steady economic growth rates, the proportion of the labor force employed in the formal sector is shrinking - from 12 percent in 2005 to 10 percent in 2008 (Ministry of Labour during a presentation of preliminary results of the Labour Force Survey 2010).
9 Sustained productivity depends, in part, on better risk management by smallholders – especially in the agricultural sector.
3 WHAT WOULD IT TAKE FOR ZAMBIA’S BEEF AND DAIRY INDUSTRIES TO ACHIEVE THEIR POTENTIAL?¹

3.1 Introduction

While the beef and dairy industries have significant differences and cannot be considered a single industry, they share a number of characteristics. For simplicity’s sake, this chapter covers both industries together and, where appropriate, highlights the differences.

3.1.1 Background

Relative to its outstanding natural grazing advantages, Zambia has a comparatively small cattle population. The country has approximately 3 million head of cattle with only 0.14 head of cattle per hectare of land suitable for grazing. In comparison, Zimbabwe has three times as many head of cattle per hectare of grazing land and Kenya more than four times as many. ² Most of the national herd is held by traditional farmers and is concentrated in three of Zambia’s nine provinces (which account for over 70 percent of the traditional cattle stock), although other provinces are also well suited to cattle rearing. ³

Zambia’s production and consumption of beef and dairy products is small. Together, the industries contribute approximately 1 percent of Zambia’s gross domestic product. In 2008, Zambia produced 58,400 tonnes of beef at a value of approximately US$194 million and 65,000 tonnes of raw milk at a value of US$39 million. ⁵ Consumption is also relatively low. Beef consumption per capita is lower than elsewhere in sub-Saharan Africa and in the developing world at large, and milk consumption per capita is estimated at two-thirds below the WHO’s recommended guidelines. ⁵

International trade in beef and dairy products is limited, and there are very few exports of beef or dairy products through formal trade channels. Recorded imports of dairy products are five times the value of exports but, overall, trade is not significant in either the beef or dairy industries. ⁶ While informal exports reputedly take place, these flows are limited. Both at home and abroad, retailers and consumers are demanding higher quality and enhanced assurances about product safety, a challenge for Zambia given its disease burden and crude quality standards.

3.1.2 Industry Structure

There are three systems of cattle farming and these differ significantly on measures of productivity (see Table 1):

- **Commercial farmers** (accounting for only 5-6 percent of the cattle population) use advanced cattle husbandry practices and their productivity parallels that of South Africa, the regional leader. Their productivity is, however, somewhat offset by high costs of feed and veterinary services.

- **At the opposite end of the spectrum are traditional farmers** that own 80 percent of the cattle population but are much less productive than commercial farmers.
The behavior and incentives of traditional farmers differ significantly from those of commercial farmers, and are influenced by social and cultural factors (e.g. a tendency to view cattle as a store of wealth, a means of subsistence and of mechanical power rather than a means of generating income), as well as a lack of information and of access to commercial markets (see Box 1). As a result, traditional farmers use fewer and lower quality inputs (e.g. feed, breeding stock and veterinary care) and their cattle have poorer nutrition, lower product yields, and higher rates of disease.

- **In the middle of the spectrum are emergent farmers, who are transitioning to commercial farming and combine aspects of both the traditional and commercial systems.** They view cattle as both a source of income and a social asset, and are prepared to invest limited resources in disease prevention and supplementing natural pasture. Despite lower product yields than commercial farmers, emergent farmers are the most cost-competitive of the three systems, primarily due to their reliance on low-cost grazing and supplemental feeding (as opposed to the costly zero-grazing of commercial farmers).

**Table 1: Traditional Farmers own the Most Cattle, yet they are the Least Productive**

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Traditional</th>
<th>Emergent</th>
<th>Commercial</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattle population (% of total)</td>
<td>80%</td>
<td>14-15%</td>
<td>5-6%</td>
</tr>
<tr>
<td>Calving rate (% per year)</td>
<td>55%</td>
<td>In between traditional and commercial</td>
<td>70-80%</td>
</tr>
<tr>
<td>Calving mortality (% per year)</td>
<td>20%</td>
<td>In between traditional and commercial</td>
<td>1-2%</td>
</tr>
<tr>
<td>Adult deaths (% per year)</td>
<td>5% (adult)-7% (heifer)</td>
<td>Lower than traditional</td>
<td>Lowest</td>
</tr>
<tr>
<td>Off-take rates (% of herd per year)</td>
<td>10%</td>
<td>10-15%</td>
<td>17-18%</td>
</tr>
<tr>
<td>Live weight (kg per cow)</td>
<td>250</td>
<td>250</td>
<td>300</td>
</tr>
<tr>
<td>Milk yield (litres per day)</td>
<td>2</td>
<td>7-10</td>
<td>17-23</td>
</tr>
<tr>
<td>Characteristic</td>
<td>Low growth</td>
<td>Dynamic</td>
<td>Dynamic</td>
</tr>
</tbody>
</table>

Over 310,000 households own cattle, and individual farmers’ herd sizes are fairly small. In the case of small-scale farmers, the mean number of cattle owned is 9. Amongst medium-scale farmers this number is 17, and amongst large scale farmers it is 66.

The processing stage of the beef and dairy value chains is immature and inefficient. For beef, the major processors are vertically integrated from the farm to retailing, and the specialization that produces efficiencies in international industries is yet to take hold. The beef industry used to be dominated by a single, large firm, but new competitors have recently emerged and there are now 10-15 sizeable businesses in this market. That said, the largest player still has a market share of 40-45 percent and still possesses a dominant market position. The beef value chain is buyer-driven, with processors having power over both
farmers and consumers. In the dairy industry, 4-5 processors dominate the market; with the largest of them controlling half of it. Most suffer from low capacity utilization due to oversized plants built prior to privatization.

3.2 Industry Growth Potential and Payoff

Vast grazing lands could support a significantly larger cattle population in Zambia and, therefore, an increased supply of beef and dairy products. The country’s extensive grazing lands (4 times more grazing than arable land) offer a clear comparative advantage over its regional neighbors and provide ample capacity for Zambia to increase its relatively low cattle density. Cattle-farming is concentrated in just three of Zambia’s provinces currently, but all of the country’s agro-ecological zones have rainfall levels that are well suited for raising livestock. Zambia’s carrying capacity suggests that the country could support over 7 million cattle, more than twice its current population of 3 million.

Favorable market prospects, especially within the region, provide the opportunity for a significant increase in demand for Zambia’s beef and dairy products. Rising incomes, urbanization, and changing consumption patterns could drive some growth in Zambia’s domestic market for beef and dairy products, albeit from a small base today. Regional exports provide considerable scope for growth in demand. Zambia can develop a sizable volume of beef exports to the region targeting DRC, Angola, and, if it can meet sanitary standards, South Africa. There may also be scope for increased exports of dairy products to other countries in the region, provided that non-tariff barriers to imports are eliminated or at least reduced. While there is substantial global demand, international markets for beef and dairy products are fiercely competitive and many countries impose strict quality standards. Therefore, it may take Zambia several years to compete successfully.

Potential, both on the demand and supply sides provides an opportunity to expand Zambia’s beef and dairy industries. Assuming other conditions are right (e.g. the grazing lands are used effectively and the beef and dairy products are competitive in price and quality terms), Zambia can take advantage of its abundance of land and the favorable market prospects. In this way, the beef and dairy industries can expand.

Growth in the beef and dairy industries could raise prosperity, especially in rural areas. Larger and more productive beef and dairy industries in Zambia could provide greater and more regular revenue for the country and contribute to exports and economic diversification. In particular, beef and dairy could deliver improved livelihoods and greater prosperity for small, rural farmers and the considerable numbers of people who earn their living from trading in beef and dairy products. These groups are predominantly informal and face considerable challenges to increasing their productivity and incomes. Given that over 310,000 households own cattle, and that these animals represent rural households’ primary store of wealth, growth of these industries could have a substantial impact on wealth creation among the rural poor. While growth in the beef and dairy industries might not create a large number of formal jobs, it could have a major impact on rural livelihoods and provide informal employment (e.g. in farming, processing, trade and transport of products).

The scale and scope of the potential payoff from improved productivity is illustrated in Table 2, which contrasts two scenarios: “business as usual” versus the “potential” for more competitive beef and dairy industries.
Table 2: More Competitive Beef and Dairy Industries offer Substantial Rewards

<table>
<thead>
<tr>
<th></th>
<th>Business as Usual</th>
<th>Zambia’s Potential (over a 10 year period)</th>
</tr>
</thead>
</table>
| Cattle population      | • 2-3% population growth per year; cattle concentrated in 3 provinces  
• Periodic outbreaks of disease and drought check faster growth and risk rapid losses of cattle                                                                                                         | • 5% population growth per year; cattle spread to other provinces  
• Diseases are better managed and do not cause sharp drops in population                                                                                           |
| Productivity           | • Modest productivity and efficiency gains driven by continued growth and investment                                                                                                                               | • Traditional farmers develop into emergent farmers, leading output growth                                                                                          |
| Cost Competitiveness   | • High cost base remains in place and disadvantages commercial farmers                                                                                                                                              | • Larger industry attracts more suppliers, potentially lowering the cost of inputs  
• High cost base remains a concern                                                                                                                                                                                          |
| Market Access          | • Primarily serving domestic market                                                                                                                                                                               | • Zambia increases its presence in regional export markets                                                                                                             |
| Economic Impacts       | • High prices restrict demand growth to no more than 1-2 percentage points above GDP growth  
• Marginal growth in formal jobs and wealth creation                                                                                                                                                                     | • Industry grows at 4-5 percentage points above GDP growth  
• New investment creates jobs  
• Greater prosperity for traditional farmers  
• More forward and backward linkages                                                                                                                               |
| Value of Beef and Dairy Output | • US$232.9 million                                                                                                                                                                                                 | • US$600 million in 10 years, up to US$1.6 billion in the longer term (assuming same output as Kenya)                                                                      |

3.3 Current Performance Gaps

Zambia’s ability to capture the potential economic benefits of expanded beef and dairy industries is constrained by gaps in productivity and price competitiveness. The beef and dairy industries in Zambia are not productive compared to their counterparts in neighboring countries. Slow growth of the cattle population (and thereby low utilization of Zambia’s vast grazing lands) and low product yields result in low output volume. Low productivity, combined with high prices for both beef (dressed weight, i.e. the prices paid by consumers) and dairy (raw milk), makes Zambia uncompetitive relative to other countries in the region (see Figure 4).

Zambia’s main performance gaps are:

- One of the lowest densities of cattle in the region;
- Low off-take rates and live weight of animals for beef - by regional as well as international standards;
• Uncompetitive dressed weight prices (beef prices paid by consumers) which are 20 percent higher than in South Africa, the largest market in the region. This is despite competitive live weight prices (paid to farmers).

• The lowest milk yield in the region (per cow per day); and

• One of the most expensive countries in the region for raw milk (50 percent higher than in South Africa) – with these costs being passed on to processed dairy products.

Figure 4: Zambia’s Beef and Dairy Industries are Not Competitive on Key Indicators

It is important to note that Figure 4 shows overall indicators for each country, and that these figures can vary significantly within each country, depending on the type of farmer. For example, while overall the weight of live animals, off-take rates and milk yields in Zambia are significantly lower than those in South Africa, Zambia’s commercial sector in fact achieves weights, off-take rates and milk yields on a par with South African industry norms.

3.4 Results Needed to Achieve the Industries’ Potential

What would it take for Zambia to sustain a significantly higher cattle population and take advantage of increasing market demand for beef and dairy products? As highlighted in Figure 5, there are several results that, if achieved, could narrow Zambia’s productivity gaps and unleash growth in the beef and dairy industries. A description of each result, ordered by its position in the beef/dairy value chain (rather than its relative priority) is provided underneath the figure.
### 3.4.1 Cattle Farming

Better disease prevention systems and lower cost drugs and veterinary care could improve cattle health and facilitate cattle population growth and exports. Relative to other countries in the SADC region, Zambia suffers from a high incidence of cattle diseases, the main factor behind its low cattle density and inability to sustainably grow its cattle population. In 2008 and 2009, Zambia registered incidents of all economic diseases, especially Foot and Mouth Disease and East Coast Fever. Most of these diseases have been eliminated or brought under effective control in competing neighboring countries such as South Africa, Botswana, Namibia and Zimbabwe. The heavy disease burden has also prevented the beef industry from meeting quality certifications for export markets.

Commercial farmers feel compelled to adopt costly zero-grazing practices to avoid infections. Disease outbreaks also lead to bans on cattle movement that precipitate sharp declines in cattle sales. The high cost, poor quality and limited coverage of animal health services are major underlying causes. Veterinary services are provided by the government and the private sector. Government vets and para-vets can be hired at a very reasonable price, but may not always be available or willing to travel. In the private sector, the number of vets specializing in cattle is low, resulting in call-out rates (cost of veterinarians making a visit to a farm) of US$250 to US$1,000 – a barrier for all but the wealthiest commercial farmers. Drugs, too, are relatively costly. Large international drug producers have not invested in Zambia’s small market, and importing small quantities of drugs from (typically) South Africa is expensive for farmers.
Better availability and affordability of breeding and feeding inputs could reduce production costs and improve calving rates and yields. The limited supply and high costs of breeding stock and commercial feed raise costs of production and – for the many farmers unable to afford and, therefore, use, these inputs – reduces calving rates and yields. Government breeding centers do not supply enough breeding stock, and non-tariff barriers restrict imports. As a result, private breeders take advantage of unfulfilled demand by charging excessively high prices. \(^{14}\) Feed is also comparatively expensive – 15 percent higher than in South Africa. The international feed companies that supply the specialist ingredients for pre-mixes are not present in Zambia because of the small market size, and the need to import ingredients (especially when transportation costs are taken into account) results in relatively high production costs for domestic feed companies. Furthermore, the prices of most feed ingredients produced in Zambia are set at (or, as has tended to be the case for maize, above) international prices. Hence the local livestock industry does not derive much benefit from the domestic production of feed crops. Maize bran, which is used extensively in the feed industry as a low-cost source of roughage, is exported to neighboring countries. Domestic feed companies tend to focus on poultry feeds and, in any case, cannot compete on cost with farm-produced feeds – even though their feeds might ultimately prove more economical due to their superior nutritional value.

Box 1: Traditional Farmers

Traditional farmers in Zambia have few incentives to view cattle as a productive asset from which more income could be generated. Markets are underdeveloped, pricing is opaque, licensing is complex, and the costs of transporting cattle to markets are high. These constraints favor a low-risk, low-investment approach; especially when the high costs and limited availability of key inputs such as breeding, drugs, and veterinary services are also considered.

Information and knowledge gaps further compound the problem. Ineffective extension services mean that traditional farmers are often unaware of low-cost practices and new approaches. Instead, they rely on traditional rather than artificial methods of insemination; poor feed selection and grazing practices; and weak disease-management approaches. These practices translate into poor calving rates, poor animal health, high mortality and low product yields – all of which suppress market returns.

Failures in the banking system also play a role in limiting the market participation of traditional farmers. Faced with high costs of credit and limited access to banking services, traditional farmers instead rely on cattle as what they consider safer, “four-legged banks”. Viewing cattle as stores of wealth rather than commercial assets (a view reinforced by poor market returns), makes traditional farmers reluctant to sell cattle for slaughter. Instead, cattle tend to be liquidated when cash is needed for key life events (e.g. to pay school fees, funeral expenses and bride price). The concurrent timing of these events for a large number of farmers (such as the need to pay school fees in January), means that a large share of traditional farmers (which account for the majority of the country’s cattle stock) sell at the same time, causing a spike in supply that drives down prices. Together, these factors create a vicious circle of low inputs, productivity and returns.
Improved farming practices and business acumen of traditional farmers could translate into greater productivity and returns. Due in part to a lack of know-how and skills (in addition to, as illustrated in Box 1, limited incentives), traditional farmers employ outdated farming practices and lag behind emergent and commercial farmers on growth and productivity measures. This shortage of know-how stems from weak extension services and is exacerbated by poor-quality infrastructure that restricts the flow of information (e.g. the high cost and low coverage of ICT has reduced the flow of information to/from rural areas). In addition to a wider adoption of more advanced and effective animal husbandry practices, traditional farmers would also benefit from skills and incentives to improve market and investment decisions, such as timing sales based on prevailing prices, and weighing the costs/benefits of investing in improved animal health and nutrition.

### 3.4.2 Intermediary Markets

Improved market access could facilitate greater market participation and income generation by traditional farmers. The lack of organized cattle marketing events in rural areas means that traditional farmers lack a sales outlet for their animals that ensures transparent price formation. The combination of license/permit issues and transport availability/cost encourages traditional farmers to sell to informal cattle traders at the “farm gate”, even though they could get higher prices by bringing their cattle directly to feedlots and abattoirs. More developed formal markets such as a wholesale market for beef would allow farmers to better gauge market trends and opportunities, while better transport infrastructure and a more streamlined business/regulatory environment would ease access to such markets (see 3.4.4). Progress is slowly being made as traditional farmers, once primarily oriented towards beef, increasingly recognize the value of the daily cash flows available in the dairy market.

### 3.4.3 Product Processing

While the processing of meat and dairy products suffers from many of the same constraints that affect Zambia’s broader manufacturing sector, there are two main results that – if achieved – could significantly boost the competitiveness of the processing part of the beef and dairy value chains:

**Greater competition and capacity utilization in dairy processing could make Zambia’s dairy products more price competitive in the region.** The Zambian dairy processing industry is not efficient, and this compounds the lack of competitiveness (particularly in price terms) in producing raw milk. The industry is dominated by 4-5 large processors, which together account for over 90 percent of the market. Since many of these processors’ plants were overbuilt during the period of public ownership, they suffer from low capacity utilization, and therefore higher fixed costs than competitors in South Africa. Furthermore, due to a lack of domestic competition, there is little pressure to increase efficiency and to innovate. Larger plants are spread out across the country and do not compete head-to-head. The only competition comes from smaller plants that do not have sufficient share to influence the market.

**Greater specialization along the beef processing chain could help to address Zambia’s uncompetitive dressed weight prices.** In the beef industry, Zambia is competitive in live weight but not when it comes to dressed weight (see Figure 4). This is largely due to cost inefficiencies in the middle section of the value chain. The majority of feedlots, abattoirs and
butcheries are owned by firms that are completely vertically integrated. Several drivers encourage vertical integration, including difficulties with sourcing needed goods and services (including an adequate supply of beef), and challenges with contract enforcement. Those businesses that have successfully vertically integrated tend to be better positioned when it comes to lobbying government, thereby creating barriers to entry that are challenging for new entrants to overcome. More specialization at specific stages of the value chain could drive greater competition, process efficiencies and economies of scale, and lead to the development of wholesale and secondary markets. All of these could bring greater processing cost efficiencies and potentially contribute to a fall in the dressed weight price.

3.4.4 Enabling Environment

Easier access to and a lower cost of finance could facilitate greater investment in and growth of the beef and dairy industries. Finance is a key input, as it enables farmers to increase the size of their herds, invest in fodder crops, and purchase drugs and veterinary care to increase output. Not surprisingly, agricultural firms that have access to banking services are 44 percent more productive than those that do not have such access. Access to affordable finance also facilitates investment in other parts of the supply chain such as processing plant and abattoirs, which require significant capital investment upfront. Yet, despite progress in recent years, financial intermediation remains low in Zambia overall. Access to banking services among smallholders in the livestock sector is also low (17 percent). There are several factors that limit affordable access to finance in Zambia. In particular: (i) interest rates are high (20-30 percent), especially for small borrowers; (ii) banks rely on high collateral requirements (130-150 percent) that cannot be securitized by the asset purchased with the loan; (iii) long-term finance, needed to establish new farms or improve the breeding stock on existing farms, is not available (banks prefer 1-2 year terms, with a maximum of 3 years); and (iv) banks in Zambia have a limited understanding of agricultural markets and agricultural finance.

Better road and electric power infrastructure could lower the costs of doing business. Infrastructure in the rural areas of Zambia is typically poor. Long distances, combined with limited road coverage and poor road conditions, result in long transit times and high transport costs (due to expensive truck maintenance and diesel fuel). Electric power is essential to modern, competitive beef and dairy industries, yet in Zambia, rural access is severely limited. For agricultural firms in Zambia, access to electricity is associated with 52 percent higher productivity; but even in provinces along the line of rail, only about 6 percent of rural MSMEs are connected. Farmers in other provinces have even lower access. Outages are a concern and, in the absence of reliable access to grid electricity, processors and farmers must rely on expensive standby diesel generation.

A better regulatory environment could increase investment in the beef and dairy industries and enhance their performance. While there is a need for some regulation of Zambia’s beef and dairy industries, several elements of the prevailing regulatory environment are having an adverse impact on the industries’ productivity and competitiveness. As mentioned earlier in the context of traditional farmers’ access to markets, complex and cumbersome licensing and permitting requirements contribute to the decision of many farmers to sell at below-market prices at the farm gate. Processors also face a multitude of licenses, permits and certificates, many of which require annual inspections and increase the cost of doing business (without necessarily improving the quality of the product). Local councils charge a levy on all beef and dairy products. Since this is a levy and not a tax, levy
revenues left over after paying for the cost of inspection could be invested in infrastructure for the industries, but, in practice, this does not happen. Quality standards for beef and dairy products are private (developed by the industries themselves) and crude. Enforcement of standards, particularly for informal farmers and processors, is weak.

3.5 Summary

Zambia’s vast grazing lands could support a significantly larger cattle herd and, therefore, an increased supply of beef and dairy products. Given the strong and growing regional market for beef and dairy products, there is a good opportunity to expand Zambia’s beef and dairy industries, which could raise prosperity and provide more jobs (mainly informal) for Zambians, particularly in rural areas.

However, Zambia’s ability to capture the potential economic benefits of expanded beef and dairy industries is constrained by gaps in productivity and price competitiveness. To overcome these gaps, there are a number of results that Zambia should aim to achieve, thereby taking the industries closer to realizing their potential. These include:

- Better disease prevention systems and lower cost drugs and veterinary care;
- Better availability and affordability of breeding and feeding inputs;
- Improved farming practices and business acumen of traditional farmers;
- Improved market access for traditional farmers;
- Greater competition and capacity utilization in dairy processing;
- Greater specialization along the beef processing chain;
- Easier access to and lower cost of finance;
- Better road and electric power infrastructure; and
- A better regulatory environment.

Phase II of the JPC Program is working towards achieving some of the above results. The approach being taken is described in Part II of this document.

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1 Unless otherwise stated, the analysis summarized in this Chapter is taken from the following reports: World Bank. Forthcoming, 2011. What Would it Take for Zambia’s Beef and Dairy Industries to Achieve their Potential? and Engman, Michael. 2010. The Role of Trade and Transport Issues in the Competitiveness of Zambia’s Cattle Industry (draft).

2 Cattle density in Botswana and South Africa is comparable to that in Zambia. In the case of the former, this is partly due to 17 percent of the grazing land being reserved for wildlife. In the case of the latter, much grazing land has been allocated to sheep and goats (South Africa has twice as many sheep/goats as cattle, while Zambia has less than half as many sheep/goats as cattle).

3 For a definition of traditional farmers, see section 3.1.2.

4 Not including milk output from the traditional sector. In comparison, Kenya produced 367,500 tonnes of beef and 3,990,000 tonnes of raw milk, while Zimbabwe produced 103,900 tonnes of beef and 388,600 tonnes of raw milk.
5 Annual per capita beef consumption in Zambia is 2.4-4.0 kg per year compared to 11 kg per year in the developing world at large.
6 In 2007, combined annual per capita imports and exports of beef and bovine animals equaled $0.01. The annual per capita consumption of imported dairy products (Zambia is a net importer) equaled $0.84.
7 Feed accounts for the major proportion of raw milk production costs throughout the world and it is the lower cost of feed that makes the emergent farmer more efficient and competitive in the dairy industry, in particular.
8 Zambia’s grazing area of 20.3 million hectares currently supports just 3 million cattle. In comparison, Zimbabwe’s 12.1 million hectares support 5.4 million, while Kenya, with virtually the same amount of grazing land as Zambia, has a cattle herd of 13.5 million.
9 Zambia’s customary and leasehold tenure systems leave most small-scale farmers with little control over or opportunity to sell land.
10 At present, formal jobs in the industries are probably less than 5,000.
11 In Zambia, livestock (overall, not just beef and dairy) contribute 39.2 percent of rural incomes.
12 There are different views as to what is likely to be the most effective approach to combating disease in Zambia, with proposals ranging from cordoned-off disease free zones (as are used in Botswana, Namibia and several other countries in the region), to alternative approaches that target disease prevention and monitoring along migration routes and where disease prevalence is high, as well as quarantine facilities for animals destined for export.
13 In the 1970s and 1980s, the cattle population increased at a reasonable annual average of 3.3 percent and 2.8 percent, respectively. But as a result of disease outbreaks, the cattle population declined from 2.9 million to 2.6 million during the 1990s. The 2000s have also witnessed periodic, severe outbreaks, and population has increased at a modest average of 1.2 percent per year.
14 An exotic bull for breeding costs around US$1,800, and animals are in short supply.
15 In return for this service they provide to farmers (enabling farmers to avoid some of the difficulties associated with transport and regulations), informal cattle traders take a cut of the revenue ultimately generated by the sale of the cattle.
16 The fact that dairy farmers do not have to liquidate the asset (i.e. slaughter the cow) to capture value is another important incentive.
17 Constraints to manufacturing were profiled in World Bank. 2009. Investment Climate Assessment and in Clarke et al. June 2010. The Profile and Productivity of Zambian Businesses. While a number of cross-cutting constraints impede the productivity of manufacturers, priority issues include the access to/cost of infrastructure and financial services; taxation; education; and crime, theft and corruption.
18 20 percent for Finta and 45 percent for Parmalat.
20 As evidenced by the low share of private credit to GDP (12 percent in 2007). However, while agriculture contributes 14 percent of GDP, it accounts for 20 percent of bank loans (by volume).
21 Bank lending rates at the end of 2009 were 29 percent in Zambia compared to 15 percent in Kenya, 14 percent in Tanzania and 22 percent in Malawi. Borrowing in U.S. dollars is cheaper (around 12 percent) but carries a high exchange rate risk as the cattle industry mainly sells in Kwacha.
22 Among MSMEs, more than half report spending between one hour and one day transporting their products to market (Clarke et al. June 2010. The Profile and Productivity of Zambian Businesses).
23 Long transit times are of even greater importance when products must be kept cool (i.e. refrigerated transport and/or short journey times are necessary).
24 Electricity is needed not only to power equipment in abattoirs but also to operate the cold rooms and refrigeration equipment needed by retailers. In dairying, the chilling of raw milk is required on farm or at collection centers.
4 WHAT WOULD IT TAKE FOR ZAMBIA’S TOURISM INDUSTRY TO ACHIEVE ITS POTENTIAL?1

4.1 Introduction

4.1.1 Background

Tourism makes a significant contribution to Zambia’s economy. In 2005, nature tourism alone (when both direct and indirect effects are included3) contributed nearly 16 percent of Zambian exports, 6.5 percent of GDP, 7 percent of government revenues, 10 percent of formal sector employment and nearly 6 percent of wages.3 Taking into account other types of tourism outside of nature tourism, the economic contribution of the industry is likely to be even greater.4

Zambia accounts for a small share of the regional and global tourism markets.5 Visitation to Zambia increased eightfold between 1995 and 2007, when it reached 897,413 international visitors, although visitor numbers have since declined. In 2009 Zambia received 709,948 international visitors, equivalent to a 12.5 percent decline from 2008. Figure 6 shows the breakdown of 2009 visitors by region of origin and purpose of visit. Two-thirds of the visitors were from Africa, the majority of which were from other countries in southern and eastern Africa. Business/conference visitors accounted for almost half of arrivals, and holiday visitors for one-quarter.

Figure 6: Two-thirds of international visitors to Zambia come from Africa; almost half come for business/conferences (2009)6

![Visitor origin and Purpose of visit diagram]

A large proportion of visitors to Zambia comes from neighboring countries for the purpose of trading goods. On a smaller scale, there are long-haul business visitors related to the copper industry and donor community. Few of these visitors engage in much leisure tourism but do spend money on accommodation and food/beverages.

To the holiday visitor, Zambia is positioned as offering low tourist density and unspoiled destinations. Zambia’s offering to holiday visitors is strongly oriented towards nature tourism, driven by two principal assets: the Victoria Falls and wildlife in the country’s
national parks. Except for a few village visits and traditional ceremonies, Zambia’s cultural, archaeological and historical assets are rarely included in tourist itineraries. Due to the “pull” factor of the Victoria Falls, tourism activities around the nearby town of Livingstone are relatively well-developed compared to those in other regions in Zambia. Victoria Falls itself only requires a short stay and, therefore, can be visited as a weekend getaway or short side trip. As a result, Zambia is often a secondary destination added on to visits to other countries in the region, and, thus, has a shorter length of stay. Zambia’s leisure tourism is highly seasonal, as visits to national parks are mostly limited to the May to October dry season.

Zambia faces increased competition from its regional neighbors – and this is expected to intensify. South Africa is by far the largest market in the SADC region, accounting for 44 percent of visitor arrivals. Botswana, Tanzania and Namibia are the other major competitors in the SADC region, with Kenya an important competitor in the wider region. Recent economic and political difficulties have to some extent suppressed competition from Zimbabwe, the country that shares Victoria Falls with Zambia. However, Zimbabwe could easily revert to being a formidable competitor: Zimbabwe’s tourism products, which are similar in nature but better-developed, are competitively priced. In addition, Zimbabwe benefits from a strong skill base and effective infrastructure.

4.1.2 Industry Structure

The tourism industry is comprised of several types of enterprise, each of which faces different circumstances and cost structures. These include hotels, safari lodges, guesthouses, tour operators, activity providers and transport providers. Several large international chains/franchises are present in Zambia (including Intercontinental, Protea Hotels, Southern Sun, Sun International and Taj Group). In addition, there are a number of small luxury lodges (mostly foreign-owned) and many small, informal enterprises (mostly Zambian-owned). Zambia’s tourism sector, however, is dominated by small and medium operators that are not vertically integrated. Hence, they are largely reliant upon overseas providers for services such as representation, marketing and flights.

4.2 Industry Growth Potential and Payoff

Zambia has the natural resources and other tourism assets needed to attract a significantly larger number of tourists. The country is home to the iconic Victoria Falls and also has some world-class national parks and other wildlife-related attractions, including 19 National Parks and 34 Game Management Areas covering over 22.4 million hectares. These attractions are well received by tourists. Zambia also has numerous natural, cultural and heritage assets away from these core areas (for example: lakes in northern Zambia – for beach and water activities; wetlands in northern Zambia – for birdlife; and various cultural ceremonies across the country). These assets are not yet fully developed or “market ready”, but they are receiving renewed interest, particularly from the government.

The global market offers enormous opportunities for Zambia’s tourism industry. Africa’s tourism industry is expected to continue growing at a rate above the world average. While visitor arrivals in other regions fell following the global financial crisis (e.g. by 4.3 percent in 2009), arrivals to Africa increased (e.g. by 3 percent in 2009). The demand patterns in both African countries and international source markets suggest that demand for the type of tourism products that Zambia has to offer is not a limiting factor in the medium term.
Zambia’s central “crossroads” position offers opportunities for stronger regional linkages and potential for self-drive tours. Bordered by eight other countries, Zambia is positioned at the heart of the region. In particular, the town of Livingstone – which, as well as being located next to the Victoria Falls, is close to the borders of Zimbabwe, Botswana and Namibia – offers significant potential for regional tourism circuits and joint marketing. Significant numbers of self-drive visitors tour Namibia, and could perhaps be encouraged to extend their journeys to Livingstone and other parts of Zambia. The geographical location of the capital city, Lusaka, mid-way between the established airline hubs of Nairobi and Johannesburg, could also help Zambia benefit from established regional tourist circuits.

Given the growing global demand and attractive supply of assets, there is a good opportunity to expand Zambia’s tourism industry. Assuming other conditions are right, Zambia can capitalize on its tourism assets and take advantage of the favorable market prospects. In this way, Zambia’s tourism industry can expand.

Growth in tourism could raise prosperity and provide more jobs for Zambians, especially the rural poor. Second only to agriculture in its potential impact on the poor and, due to its labor-intensive nature and potential for backward linkages (local sourcing of inputs), the growth of Zambia’s tourism industry could have a significant impact on formal and informal employment and incomes, particularly in rural areas.

A scenario analysis helps to illustrate the medium-term potential value of boosting the competitiveness of the tourism industry. There are three main ways to increase the revenue from tourists: (1) Increase the number of tourists; (2) Increase the length of time tourists stay in the country; and (3) Increase the amount of money tourists spend during their stay.

Table 3 presents estimates of the revenue that Zambia’s tourism industry could generate in three scenarios: low, medium and high. If Zambia could:

- Attract 1.8 million visitors by 2015 (up from 812,000 in 2008);
- Raise the average length of stay from 6 days in 2008 to 7.5 days in 2015; and
- Raise the average expenditure per tourist per day from US$35.70 in 2008 to US$83.50 in 2015;

then tourism revenues could reach US$1.1 billion and the industry could employ 600,000 people in the formal sector (and even more if the informal sector is included). With the economic multiplier effects estimated at approximately double the direct effects, the overall economic impact would be significant.
Table 3: A More Competitive Tourism Industry offers Substantial Rewards

<table>
<thead>
<tr>
<th></th>
<th>2008 (actual)</th>
<th>2015 (projected)</th>
<th>Source</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Low</td>
<td>Medium</td>
</tr>
<tr>
<td>Visitors (million per year)</td>
<td>A</td>
<td>0.8</td>
<td>1.3</td>
</tr>
<tr>
<td>Average length of stay (days)</td>
<td>B</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Expenditure per day (US$)</td>
<td>C</td>
<td>35.7</td>
<td>35.7</td>
</tr>
<tr>
<td>Revenue (US$ million per year)</td>
<td>D</td>
<td>174</td>
<td>275</td>
</tr>
</tbody>
</table>

Notes: The above numbers relate to visitors overall. It is important to bear in mind that rates of growth in visitor numbers, lengths of stay and expenditure per day can vary significantly between different types of visitor. For example, while for nature-based tourism the average length of stay is around 6.9 days\(^{17}\), business visitors are likely to spend much less time (perhaps an average of 3 days) in Zambia; similarly, those visiting friends and relatives and/or visiting from neighboring countries for the purposes of cross-border trade are likely to spend closer to $50 a day, as against the $1,100 or so daily expenditure of nature tourists.\(^{18}\)

4.3 Current Performance Gaps

Zambian tourism is underperforming, both in relation to other countries in the region and in relation to its own potential. Zambia receives significantly fewer tourists than might be expected, given its fundamental endowments.\(^{19}\) Despite strong nature tourism attractions, Zambia trails many competing nations in the number of visitors, average length of stay and average visitor expenditure. Neighboring Botswana has around three times the number of visitors of Zambia, and Zimbabwe more than twice as many.\(^{20}\) Zambia’s average visitor stay, which is at the low end of the range, is also in decline.\(^{21}\) As shown in Figure 7, Zambia’s shorter length of stay translates into lower gross receipts per tourist trip (excluding airfares) than for regional competitors.\(^{22}\)
4.4 Results Needed to Achieve the Industry’s Potential

By achieving some or all of the following results, Zambia’s tourism industry could come closer to achieving its potential, through increased investment (both domestic and foreign), visitor numbers, length of stay and expenditure. This could provide more jobs and contributed to increased prosperity. These results address (i) the supply-side, by influencing businesses’ decisions on whether/where to invest; (ii) the demand-side, by enhancing Zambia’s appeal to tourists and travel agents; and (iii) the enabling environment, by enhancing the regulatory and authorizing environments within which the industry operates (see Figure 8). A short description of each result, ordered by the supply-side, demand-side and enabling environment groupings (rather than its relative priority) is provided underneath the figure.
Figure 8: Results Required for the Tourism Industry to Achieve its Potential

### 4.4.1 Supply-Side

**Supplies:** A lower cost of supplies could reduce the costs of establishing and operating tourist facilities.

**Labor:** Improved labor productivity could contribute to lower operating costs.

**Finance:** Easier access to and lower cost of finance could facilitate greater investment in and growth of the tourism industry.

### 4.4.2 Demand-Side

**Start Up and Operating Costs**

**Awareness/Familiarity**

**Destination Attractiveness**

**Affordability**

**Convenience**

**Marketing:** More extensive and more effective destination marketing could increase awareness and demand.

**Product:** Upgrading and diversifying Zambia’s attractions and locations could help to attract more tourists and extend their length of stay.

**Travel Options:** Travel to and within Zambia could be made cheaper and more convenient, thereby increasing demand.

### 4.4.3 Enabling Environment (Authorizing and Regulatory Environments for the Industry)

**Regulatory Stability:** A more stable and predictable regulatory environment could reduce risks for investors and operators.

**Competitive Environment:** Greater competition in tourism and related and supporting industries could generate innovation, improve productivity and reduce costs and prices.

**Public Support:** Stronger support from government and the wider population could make it easier to do business in Zambia’s tourism industry.

### 4.4.1 Supply-Side

A lower cost of supplies could reduce the costs of establishing and operating tourist facilities. In Zambia, a large proportion of the tourism industry’s supply requirements are met through imports, mainly from South Africa, with roughly half of purchases being locally produced.\(^{25}\) Zambian operators pay high premiums (largely related to customs and excise duties) for imports over what the goods cost in South Africa.\(^{26,27}\) This puts the operators at a competitive disadvantage, and the situation for small and rural operators, which are faced with additional transportation costs and/or unable to buy in bulk, is even worse. As an example, one of the major cost components for a tourism investor is construction, and the price of cement in Zambia is 80 percent higher than in Kenya, mainly due to a lack of competition.\(^{28}\) Similarly, many luxury items demanded by high-end foreign tourists must be imported and face high excise duties.\(^{29}\) For example, there is a 125 percent duty on wine and spirits imported to Zambia, which is significantly higher than that in other countries in the region.\(^{30}\)

One means of reducing the cost of inputs is through local sourcing of items for which capacity exists (or can be developed) to supply high-quality and reasonably priced goods and services. Developing greater backward linkages in this way could not only reduce costs to operators but also benefit local producers. Lower costs of key inputs such as food and beverages may also translate into lower prices and improved value-for-money for tourists, thereby influencing the demand side of the equation as well.\(^{31,32}\)
Improved labor productivity could contribute to lower operating costs. As a human resource-intensive industry, labor is a major component of the costs of operating tourism enterprises. The ultimate ‘cost’ of labor to the employer can be thought of in terms of the cost per completed task. Cost is thus a function of the financial remuneration paid to an employee in the form of basic wages and additional allowances, as well as an employee’s efficiency/productivity in getting tasks done. On average, basic wages on their own are reasonable compared to those in other countries in the region. However, high allowances/benefits remove the cost advantage that low basic wages might otherwise provide. At 9 percent, non-wage costs in Zambia are among the highest in the region. Only Tanzania has a higher share (16 percent), while it is 4 percent or lower in Kenya, South Africa, Botswana, Namibia, Zimbabwe, and Malawi. Higher remuneration costs are further compounded by low labor productivity, particularly for small operators. Labor productivity in Zambia as a whole lags the best international standards but is reasonable compared to other countries in the region. There is a vast productivity gap between large and small businesses, however, with MSMEs much less productive. A lack of motivation caused by an inadequate link between pay and performance, and weak skills due to a lack of both training and exposure to international service standards, are two key factors underlying poor labor productivity.

Easier access to and lower cost of finance could facilitate greater investment in and growth of the tourism industry. For Zambian non-agricultural firms, including those in the tourism industry, access to banking services is associated with 44 percent higher productivity. Yet, while large businesses have near-universal access to banking services and nearly half use financial credit, MSMEs (particularly those that are locally owned), rarely have such access. Without credit, small enterprises must instead grow at a slower pace supported by cash flow from operations, and this limits the growth of the industry. In relation to finance, the tourism industry faces many of the same problems as the beef and dairy industries (see section 3.4.4): (i) high interest rates; (ii) high collateral requirements; (iii) lack of the long-term finance that would facilitate the large upfront capital investments in facilities that have a long payback period; and (iv) banks’ limited understanding of the industry.

4.4.2 Demand-Side

More extensive and more effective destination marketing could increase awareness and demand. While the opportunity for tourism (especially in Africa) is large, global and regional competition is strong and accelerating. Hence, unless Zambia can create a compelling brand and create a much greater awareness of the country worldwide, it will have difficulty competing with other, better-known destinations in the region. Despite this, the government’s expenditure on tourism marketing has traditionally been low relative to other countries in the region. In 2004, the government was spending US$1.5 million annually on destination marketing, just a quarter of the next lowest regional competitor (Namibia) and one twelfth of Tanzania’s investment. Although the government budget allocation to tourism marketing has recently experienced a tenfold increase, the absolute amount remains low relative to other countries. Hence the private sector undertakes much of the marketing itself. The efficacy of marketing is as important as the level of spending: the quality of marketing materials and campaigns is vital to achieving a return on the marketing investment. Zambia’s existing tourism brand – “Zambia, The Real Africa” is thought to be outdated and detrimental to the country’s image, hence a new brand will shortly be launched. In addition, Zambia does not know enough about its existing and potential tourism source markets to support effective marketing and sector growth, and its products and “unique selling points” are not well-
defined. This suggests a need for more market research on the tourist customer and on tour agent behavior. The latter is particularly important, as accessing international tourist source markets depends heavily on general sales agents and foreign tour operators.

**Upgrading and diversifying Zambia’s attractions and locations could help to attract more tourists and extend their length of stay.** In order to penetrate new markets, attract more returning customers, and increase tourists’ length of stay, Zambia will need a sufficiently diverse and appealing tourism product base. This will mean broadening the range of attractions Zambia offers, with an emphasis on moving beyond nature-based tourism, as well as diversifying the geographic locations within Zambia that tourists can visit. The latter will be particularly important in bringing the economic benefits of tourism to new, rural parts of the country. Although Zambia has high-quality nature offerings and a world-class site in Victoria Falls, several other countries in the region have national parks and safari options of comparable quality to Zambia’s, and Victoria Falls is shared with Zimbabwe. While Zambia has potential tourism assets outside of the well-developed Victoria Falls/Livingstone area, these have not been developed sufficiently. Offerings that build off Zambia’s cultural and other non-wildlife assets in outlying areas can help diversify both the type and the location of tourism, but will require investment in building a critical mass of supply and ensuring the availability of sufficient infrastructure and facilities to meet tourists’ needs.

**Travel to and within Zambia could be made cheaper and more convenient, thereby increasing demand.** Domestic transportation accounts for a substantial share of tourists’ in-country expenditures (18 percent for nature tourists). Inadequate and/or inconvenient travel options constrain tourists’ choices of itineraries and long travel times reduce the time spent seeing sights or participating in activities. Therefore, in order for tourists to be enticed to stay longer and travel to outlying areas of the country, improvements in the affordability and convenience of domestic travel (both air and road) are crucial. Domestic airfares in Zambia are more expensive than in several other countries in the region, estimated at double those in Kenya and Botswana. Zambia has only one domestic airline (and therefore no competitive pressure on price) and a limited number of routes and flights (adversely impacting convenience). High costs of jet fuel, the use of small aircraft and a lack of economies of scale (both due to limited demand) also contribute to higher domestic airfares. However, domestic travel faces a ‘chicken-egg’ problem: with a lack of competition contributing to high airfares, tourists are discouraged. At the same time, the small number of tourists may not, at this point in time, justify a need for an additional domestic airline.

For long-haul tourists, the cost and convenience of international flights to Zambia is also important. A sample of pricing data suggests that international airfares to Zambia are mid-range in the region, but consistently higher than those to Kenya, Tanzania and South Africa (which compete with Zambia as safari destinations). To improve convenience, tourism operators would like to see more direct international flight options from key source markets in the United States and Europe.

The poor quality of domestic roads also constrains both supply and demand, particularly in remote areas. Poor all-weather road infrastructure limits the operating season for lodges and other tourism facilities in many areas. As a result, the period in which operators can earn revenues can be significantly less than twelve months (for some areas, as little as six months). This has a negative impact on profitability and/or may result in prices that are higher than they would otherwise be (to allow operators to cover their fixed costs over a shorter, seasonal, operating period). While neighboring countries such as South Africa and Namibia
enjoy a significant volume of self-drive tourists (both domestic and international), Zambia’s poor road infrastructure severely limits its attraction to self-drive visitors.

4.4.3 Enabling Environment

A more stable and predictable regulatory environment could reduce risks for investors and operators. Given substantial investments in land, equipment and facilities and the time taken to generate demand and revenues, tourism investments tend to have long payback periods. At the same time, prices to international tour operators are set, and reservations made, well in advance of a tourist’s actual arrival. Sudden changes can have a large impact on returns because many tourism businesses cannot easily adjust their prices accordingly. Similarly, changes not anticipated at the time an investment was made, but which occur during the long period before which the operation starts to yield a positive return, can damage profitability. Such changes have been problematic for tourism operators in Zambia in recent years. For example, an announcement made in January 2010, with less than one week’s notice and no public commentary, substantially raised fees for businesses operating around Victoria Falls. Frequent regulatory changes may in part be due to a lack of coordination among the multiple governing agencies whose regulations impact the tourism industry. The government recently introduced the Business Licensing Reform Program, which is designed to reduce compliance costs for licensing businesses and encourage the regulatory – as opposed to the revenue generation – function. The Tourism and Hospitality Act is also being revised as part of this process, thereby creating an opportunity for improvements to the legal and regulatory environment.

Greater competition in tourism and related and supporting industries could generate innovation, improve productivity and reduce costs and prices. Lack of competition contributes significantly to Zambia’s high cost base and, therefore, the prices ultimately paid by tourists. Dominant market positions and/or monopolies exist in key support industries such as domestic air travel and cement manufacture, as well as in certain sub-sectors of the tourism industry itself (e.g. only a few – high-end – lodges operate in Lower Zambezi National Park). As mentioned above, the lack of competition in the domestic airline and cement industries is thought to add a significant premium to prices faced by tourism operators and tourists in Zambia. The political economy factors and rent-seeking described in Chapter 2 suppress the political will and public pressure for increased competition. While competition legislation is in place, it has not achieved the desired outcome of improving the quality, coverage and cost of goods and services. In Zambia, many large companies possess a share of the market larger than their productivity would warrant, and the lack of competition stifles innovation, price reductions and quality improvements that might otherwise enhance Zambia’s tourism product.

Stronger support from government and the wider population could make it easier to do business in Zambia’s tourism industry. While government has identified tourism as one of four industries essential to economic development in Zambia, the level of actual investment (in Kwacha terms) and support (as measured by legislation/actions that would ease the process of starting/growing a tourism business) have been low. Perceived by some as an exploitative industry dominated by white foreigners, tourism has yet to be embraced in a substantive manner. The general population also does not fully appreciate the potential benefits that the industry offers. The perceived economic impact of the industry seems to be significantly less than the actual impact, and the extent of leakages also tends to be overestimated. As a consequence, actions are taken – or not taken – that undermine the
potential of the industry to grow and flourish. An example of such an action is the short-termism associated with the 2008 major increase in visa fees, introduced with very little notice and later reversed. Since, on a regional and global basis, the tourism industry is highly competitive, low levels of support translate into low arrivals and revenues – as is evident from regional comparisons. Once the government and the population recognize that the industry’s potential economic and social contributions far outweigh the perceived costs (as has been proven in Mauritius, Namibia and elsewhere), they will have an incentive to improve the enabling environment.

4.5 Summary

There is large potential to expand Zambia’s tourism industry, and industry growth could provide jobs, greater prosperity and improved livelihoods for many Zambians. Zambia has a good asset base with which to attract significantly more tourists. Taking into account the enormous opportunities offered by the global tourism market and, in particular, the growing demand for nature-based and African tourism products, there is an opportunity to expand Zambia’s tourism industry. Growth of the industry could have a significant pro-poor impact, raising prosperity and providing more jobs and better livelihoods for many Zambians, especially in rural areas.

However, Zambia’s tourism industry is underperforming relative to those of other countries in the region, as well as to its own potential. By achieving a number of results, the industry can come closer to achieving its potential. These results include:

- A lower cost of supplies;
- Improved labor productivity;
- Easier access to and lower cost of finance;
- More extensive and more effective destination marketing;
- Upgrading and diversifying Zambia’s attractions and locations;
- Cheaper and more convenient travel to and within Zambia;
- A more stable and predictable regulatory environment;
- Greater competition in tourism and related/supporting industries; and
- Stronger support for the tourism industry from government and the wider population.

Phase II of the JPC Program is working towards achieving some of the above results. The approach being taken is described in Part II of this document.

1 Unless otherwise stated, the analysis summarized in this Chapter is taken from the following reports: Pope, Adam. November 2009. *Tourism Sector Study* (draft); and Morris, Anna. May 2010. *Benchmarking Prices, Costs & Productivity: How Does Zambia’s Tourism Industry Compare?* (draft).

2 That is, including linkages to the wider economy.
“Nature tourists” are taken to be the subset of visitors to Zambia that visited the country to experience its natural assets such as the Victoria Falls, wildlife and nature-based adventure activities.

Estimates of tourism’s economic contribution vary, but research suggests that Government data may significantly underestimate the contribution (Natural Resources Consultative Forum. 2007. The Real Economic Impact of Nature-Based Tourism in Zambia).

Zambia presently receives less than 1 percent of global visitor arrivals and a smaller proportion of global visitor revenues. In 2008, it received 4.4 percent of all visitors to SADC.

According to the Tourism Council of Zambia, out of an estimated 4,000 guesthouses and lodges in Zambia, only 1,000 are registered with the Hotel & Catering Association of Zambia – this may indicate that the majority of Zambia’s guesthouses/lodges are informal enterprises.

In 2005, 90 percent of surveyed nature-based tourists visiting Zambia were “satisfied” or “very satisfied”, and 84 percent indicated that they would return (Sinyenga G. November 2005. Nature-Based Tourism Demand in Zambia).

For every nature tourist, 0.307 full-time equivalent jobs are created in the formal sector. Compared to other economic sectors in Zambia, the hotel/restaurant sector has one of the highest levels of direct and indirect employment generation per unit of final expenditure (Natural Resources Consultative Forum. 2007. The Real Economic Impact of Nature-Based Tourism in Zambia).

Data for the year 2008 are used since at the time of writing this report full data for 2009 were not available.

Average length of stay was 9 days in 1997 and 8 days in 1998, hence 7.5 days seems to be a feasible target.

The separation into these categories has been used for illustrative purposes, and there may be some overlap and/or mutual reinforcement. Factors on the supply side will also have an impact on the demand side (e.g. the establishment of new facilities may itself enhance destination attractiveness).

The separation into these categories has been used for illustrative purposes, and there may be some overlap and/or mutual reinforcement. Factors on the supply side will also have an impact on the demand side (e.g. the establishment of new facilities may itself enhance destination attractiveness).

Although many large hotels now receive duty exemptions for certain direct imports; both small and large operators purchase many imported products locally. These products incur duties which are likely to be reflected in the prices paid by operators.

The Zambia price premium is difficult to estimate precisely and varies significantly depending on the type of good involved and exchange rates used. Estimates range from 30-100 percent above prices in Johannesburg or Kenya. Nevertheless, based on a number of separate pieces of analytical work there seems to exist a general consensus that Zambian operators face a significant cost disadvantage.
A recent report (Overseas Development Institute. May 2010. **Assessing the Economic Impact of Competition**), found that Zambia, in which one company has a near monopoly in the cement industry, had cement prices 1.8 to 5 times higher than the other countries covered in the study (Bangladesh, Vietnam, Ghana and Kenya).

At the time of research, the excise duty on wine was 8.3 percent in Swaziland; 15 percent in Zimbabwe; 23 percent in South Africa; 35 percent in Kenya; and 70 percent in Uganda (Morris, Anna. May 2010. **Benchmarking Prices, Costs & Productivity: How Does Zambia’s Tourism Industry Compare?** (draft)).

Other cost components such as labor and overhead also play a role in prices. While Zambia has aimed primarily at a high-end market which is relatively unresponsive to prices, high prices may discourage other types of tourists. Based on a small sample of hotels and safari lodges in Zambia, labor costs account for as much as one-third of operating costs.

For example funeral, transport and lunch allowances as well as Christmas bonuses. A mandatory 10 percent service charge in the tourism and hospitality industry which, by law, must be passed on to employees, regardless of performance, may reduce workers’ motivation (and also raises the prices paid by tourists).

Only 11 percent of MSMEs use banks for transactions; less than 1 percent have insurance services; fewer than 8 percent use savings instruments; and only 2.3 percent receive financial credits (Clarke et al. June 2010. **The Profile and Productivity of Zambian Businesses**).

Diversity of offerings will become increasingly important with the predicted resurgence of tourism in Zimbabwe, which could otherwise adversely impact Zambia’s market share in the region. Historically, the development of peripheral clusters has had limited success due to insufficient demand; large travel distances; deteriorating infrastructure; lack of all-weather roads; high cost of air travel; and difficult access to goods and services.

Zambia could also diversify within existing clusters by investing in facilities that appeal to the MICE segment, or by expanding budget accommodations to target the backpacker segment. Innovative packaging of tours with neighboring countries may also offer an opportunity to diversify the attractions without necessitating significant upfront investment in new locations or attractions.

This includes parts of Kafue National Park, Lower Zambezi National Park, portions of Western and Eastern Provinces, and much of Northern Province, whose “Northern Corridor” is often discussed as the next great destination in Zambia.

Safety and security are other key aspects of the enabling environment that both tourists and investors take into account. They – as well as some other aspects of the enabling environment – are not covered here since the analytical work did not identify these as being binding constraints on Zambia’s tourism industry.

The new fees under Statutory Instrument No. 6 (2010) were enacted by the NHCC with three days’ notice to stakeholders. The Victoria Falls entry fees increased from US$10 to US$20 per person; boat cruise fees to US$20 per person; and helicopter license fees from US$0 to US$15,000 per year, plus a per passenger charge. The new charges and fees are in addition to those already imposed by ZAWA.

The Zambia Competition Commission, the body empowered to prevent anti-competitive and restrictive business practices, has handled 252 merger, acquisition and takeover cases since 2000, but has ruled against only 1.


Natural Resources Consultative Forum. 2007. **The Real Impact of Nature-Based Tourism**.

While, compared to the cost of a luxury safari package, the amount may be considered small, consultations suggest that it is the uncertainty and the feeling of “yet another add on” that upsets tourists and tour operators.
5 WHAT WOULD IT TAKE FOR ZAMBA’S COPPER MINING INDUSTRY TO ACHIEVE ITS POTENTIAL?1

The JPC Program’s analytical work covered two dimensions of Zambia’s copper industry: mining and fabrication. Although both sectors rely on the same natural resource, the drivers of and constraints to competitiveness differ between them, and they have different prospects for growth in Zambia. Therefore, copper mining and copper fabrication are dealt with in separate chapters (5 and 6, respectively).2

5.1 Introduction

5.1.1 Background

Zambia plays an important role in the global copper mining industry. The country contains the largest known reserves of copper in Africa, holding 6 percent of known copper reserves in the world.3 The history of Zambia’s copper mining industry is one of decline followed by revival. From around 700,000 tonnes in the 1970s, copper production fell to just 255,000 tonnes in 1998 as nationalization of the mines proved counter-productive. However, since the mines were privatized in the 2000s, investment and output have revived, and Zambia is regaining its world market share.4 In addition, the industry is expanding geographically from its traditional base in the Copperbelt to other parts of the country, where geological surveys suggest significant deposits of copper. With existing and expected investment commitments, Zambia is on course to achieve government’s target of 1 million tonnes of copper output per year (from 820,000 tonnes in 2010), though it is unlikely to be attained by 2011 as targeted. If Zambia could reach this target, however, it could become the 3rd largest copper producer in the world.5

Copper plays a critical role in Zambia’s economy. Historically, the performance of the Zambian economy has followed the fortunes of copper mining closely. Although the economy is diversifying, copper mining/refining continues to account for a sizeable part of GDP (see below) and is one of the lead industries for economic growth.6

However, Zambia – as a country – could benefit more from the mining industry. All countries that depend on natural resources face the shared challenge of taxation: determining tax levels and administering them in an effective manner that balances the needs of Government and investors. Mining depletes a valuable natural asset and taxing the mining companies is a way of generating savings that can be redeployed to increase the productive capacity of the rest of the economy, and thereby help sustain the country over the long-term. Despite the revival of the industry post-privatization, the mining industry’s contribution to government revenues in Zambia has remained low. The industry accounts for 15-18 percent of GDP and exports over US$3 billion worth of copper per year, but contributes just 8 percent of total tax revenue.7

The reason for the low tax-take lies in the Development Agreements that were signed by the government and the mines at the time of privatization and that gave away generous tax concessions. By early 2007, concerns about ‘resource robbery’ caused by the low tax-take were creating a public outcry, which led the government to impose, in 2008, a new tax regime consisting of higher royalties and taxes, including a windfall tax. Many aspects of the new regime, including the windfall tax, were ultimately reversed in response to the fall in
copper prices during the global financial crisis. In 2009, the government instituted another new tax regime with an effective tax rate (47 percent) within the international range (40-50 percent). This regime was designed to increase the level of government revenues, as mines that were rehabilitated after privatization began to generate strong, positive cash flows. The new tax regime, however, was challenged by the mining industry, which argued that the invariability clauses in the original Development Agreements precluded such changes and that mining companies should be compensated, in the form of lower taxes, for the government’s failure to provide adequate infrastructure and social services (the absence of which undermines the mines’ cost competitiveness).

It is worth noting that a country’s legal/regulatory environment is a key determinant for investors, when they compare the attributes of different destination countries. Exploration and mining companies seek a stable, predictable and transparent regulatory environment in which the rules of the game are clearly set out and administered on an equitable basis. These characteristics are particularly important in the case of the mining industry, given the high upfront capital investment and long payback periods involved (see below).

In late-2010 the government reached an agreement with a number of mines, and these mines have already started paying in accordance with the new regime. Negotiations continue with a few remaining mines in order to bring them into the fold of the new regime. Due to its significant footprint and the debate over its tax contributions to the country, the mining industry has remained the focus of economic and political attention in Zambia.

5.1.2 Industry Structure

Many of the firms involved in Zambia’s copper mining/refining industry are the subsidiaries of small- to medium-sized firms (by international standards of mining companies). However, there are notable exceptions (such as Vedanta, Glencore, and the China Non-Ferrous Metal Mining Group) that are major global players. Reports suggest that these are also likely to be joined by BHP Billiton, the world’s largest mining house. Though Zambian copper mining essentially is a private industry, the government has retained a sizeable holding of the shares of the privatized mines.

The global copper mining industry operates with a long-term perspective, and production costs and risk are critical issues. The nature of the industry requires high upfront investment, high risk and long payback periods, and this has a number of implications (see later). Production costs can differ significantly between mines, depending on the type of mine and nature of the deposit. In the mining and refining industries, with prices determined by international markets, the key determinants of competitiveness are the costs of production and transporting product to market. A mine’s cost of production is a function of the nature of the resource (the quality of the ore, its depth, etc.) and the extent to which the most accessible resources have been exploited. The depletion of resources at the older mines means that they now need to mine at considerable depth and distance from the mine head, leading to high costs. Younger mines can save on operating costs, but they have to bear the upfront investment in capital and equipment, which can be significant. In addition, the cost and productivity of inputs influence the cost of production at all mines, irrespective of the nature of the resource. If prices are reasonably attractive, the cost of inputs low and the productivity of inputs high, even older mines can earn profits. For transport costs, location relative to processing and refining facilities is the key driver of costs. The overall business environment in which the mine operates also affects costs.
5.2 Industry Growth Potential and Payoff

Zambia is recognized internationally as having good mineral potential. The Fraser Institute’s highly respected survey of mining and exploration companies ranks Zambia 26th out of 79 jurisdictions worldwide for mineral potential. In Africa, only DRC and Burkina Faso have an appreciably higher score for mineral potential. The resources available to existing mines in Zambia are estimated at 2.8 billion tonnes of ore ranging between 0.6 percent and 4 percent copper. This, together with recent successful exploration, should be sufficient to sustain even an expanded industry well into the middle of the 21st Century.

Global demand for copper is expected to remain strong. Long-term forecasts are by nature uncertain, but global demand for copper is expected to grow at around 3 percent annually, reaching 25 million tonnes by 2020. Much of the increase in demand will be driven by economic growth and urbanization in emerging economies, especially China and India.

Limited global supply should support high (but volatile) prices and continued investment. Global supply of copper from known sources is expected to peak at 20 million tonnes by 2013/14 and decline thereafter, resulting in a shortfall in supply. As a result, copper prices are expected to remain high in real terms, though they will be subject to cyclical fluctuations and periodic, short-term volatility. To meet the shortfall in supply and to take advantage of high prices, the global mining industry is looking to increase investment in copper mining and refining.

Good mineral potential, combined with strong demand in the global market, provide an excellent opportunity for growth in Zambia’s copper mining industry. Assuming other conditions are right (e.g. Zambia’s mines are competitive in terms of costs and productivity levels), Zambia can capitalize on its mineral potential as well as the strong demand for copper in the global market.

A larger, more competitive copper mining industry could increase employment and prosperity. Zambia’s sizable deposits could, if managed well, drive increased production, exports and government revenue, with the benefits spreading more widely. In addition, while formal employment in the mines is likely to remain quite small, there is potential for improved linkages between the mines and local companies. The two scenarios in Table 4 (“business as usual” versus “Zambia’s potential”) illustrate the scale of the opportunity.

<table>
<thead>
<tr>
<th>Table 4: A More Competitive Copper Industry Offers Substantial Rewards</th>
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<tbody>
<tr>
<td><strong>Output</strong></td>
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<tr>
<td><strong>Export earnings</strong></td>
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<td><strong>Government revenue</strong></td>
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<tr>
<td><strong>Employment</strong></td>
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<tr>
<td><strong>Linkages</strong></td>
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</table>
5.3 Current Performance Gaps

Progress on achieving the industry’s potential is constrained by the following:

**Production costs are high, driven by high (and rising) input costs and low productivity.** The Zambian mining industry has a high cost base. Nearly all operations in Zambia are in the top half of the international cost curve (see Figure 9). Many of the older mines, which account for the majority of output, are in the upper quartile of the cost curve. The newer mines have lower costs but are still in the middle of the curve. The major input cost of concern is labor, which has risen dramatically in recent years and the productivity of which is well below international standards. The cost of other inputs, such as equipment, spares, fuel and other consumables is also high.

![Figure 9: Mines in Zambia have High Costs of Production](copper cash operating costs in 2009, US$ cents per pound of copper sold)

**Poor infrastructure is a major constraint on competitiveness.** Electric power shortages limit output and existing generating capacity is insufficient to keep pace with any significant expansion in the mining industry. The rail system is costly and unreliable. Clearing borders is slow and costly, and this compounds unnecessarily high transport costs.

**Zambia’s policy environment is not considered favorable.** The Fraser Institute’s 2010/11 survey ranked Zambia 57th out of 79 jurisdictions in terms of policy environment. This is confirmed by the influential mining consultant Behre Dolbear which, in its 2011 report, ranked Zambia 19th out of 25 countries in terms of attractiveness to mining investment. Given the significant upfront capital investments and the long payback period inherent in the industry, the stability of the regulatory environment - in relation to taxation in particular - is crucial, and Zambia scored only 3 out of 10 on the tax regime component of the Behre Dolbear Index.
### 5.4 Results Needed to Achieve the Industry’s Potential

Progress towards a few key results could help the copper mining industry accelerate growth and achieve its potential. As Figure 10 highlights, a number of results—if achieved—could help address performance gaps and enhance the economic benefits for the copper mining industry and the country. These results address three phases of the mining cycle: (i) exploration, where prospective investors assess new deposits; (ii) mining operation, where three key inputs—electric power, labor, and manufactured goods—are employed in the extraction of ore; and (iii) product transport, where extracted ore is moved from the mine to the processor and, subsequently, cathode and blister copper transported to the customer. A few additional results focus on the regulatory environment, which has broader, cross-cutting implications for the industry. A short description of each result, organized according to these categories (rather than its relative priority) is provided underneath the figure.

**Figure 10: Results Required for the Copper Mining Industry to Achieve its Potential**

<table>
<thead>
<tr>
<th>Exploration 5.4.1</th>
<th>Mine Operation 5.4.2</th>
<th>Product Transport 5.4.3</th>
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</thead>
<tbody>
<tr>
<td>Better availability and quality of geological survey information could facilitate new mining investment.</td>
<td>Reliable electric power supply with sufficient generating capacity could support faster industry growth.</td>
<td>More efficient rail and road transport could reduce the cost of moving copper to the customer.</td>
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<tr>
<td>Greater labor productivity could improve cost competitiveness.</td>
<td></td>
<td>Streamlined border crossings could reduce delays and improve the reliability of supply for customers.</td>
</tr>
<tr>
<td>More competitive, locally produced goods and services could reduce mines’ supply costs.</td>
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</table>

A new regulatory and tax regime that balanced the interests of the industry and the country, could create a “win-win” situation.

A more predictable regulatory environment could increase stability and reduce risks for investors.

Responsibility for the delivery of social services could be transferred to the Government and supported by appropriate tax contributions from mines.
5.4.1 Exploration

Better availability and quality of geological survey information could facilitate new mining investment. With as much as 40 percent of the country remaining to be surveyed, it is impossible to state with precision the size and economic potential of additional copper reserves in Zambia. Without high-quality and detailed survey data upon which to base exploration decisions, potential investors face greater uncertainty and must proceed on a speculative basis. Investor uncertainty is ultimately reflected in the price they are willing to pay for a license, compromising Zambia’s ability to get appropriate value for money from exploration licenses. While some data are available, the quality and level of specificity is often not sufficient to support exploration. In addition, information is often not easy to access from abroad. Higher quality and more easily available survey data are likely to attract more investment and lead to development agreements that deliver better outcomes for the government, the mines, and the Zambian people.

5.4.2 Mine Operation

Reliable electric power supply with sufficient generating capacity could support faster industry growth. The cost of electric power from the public grid in Zambia (US$0.04-0.06 per kWh) is among the lowest in the world. Periodic outages, however, are a concern for power-intensive industries like mining and refining due to the sometimes lengthy disruptions to production. Should the country again suffer frequent electric power outages as it did in 2008, mines would have to rely on a combination of grid power and costly standby diesel generation (US$0.32-0.40 per kWh), making the cost of electric power uncompetitive compared to countries with reliable supply from the grid. Even more important is the capacity of the grid to accommodate planned growth in production. Without a 40 percent or more increase in supply, availability of electricity may be the binding constraint on whether and when the industry reaches the 1 million tonne target. Assuming a constant intensity of electric power demand, the target of 1 million tonnes is likely to be achievable only when the Kafue Gorge Lower project comes on-stream in 2016. In addition, as the industry expands to new parts of the country, there is a need to extend the grid.

Greater labor productivity could improve cost competitiveness. Low labor productivity is driven, on the one hand, by increasing labor costs and, on the other, by low output per worker. For example, at Mopani, labor costs increased almost fourfold between 2003 and 2008, and now comprise just over 40 percent of costs, compared with 22 percent at Indonesia’s Grasberg mine. This is despite the fact that mining is not a labor-intensive industry. Adversarial wage bargaining and government and social pressure has encouraged large wage increases for “insiders” (trade union members) at the expense of restricting employment opportunities for the large number of unemployed Zambians (“outsiders”). Labor productivity is a larger concern, and in this regard Zambia lags well behind international standards. In Chile, annual production of copper per worker is almost seven times greater than in Zambia, and a difference of this magnitude cannot be explained solely by variables like scale, nature of resources and better equipment. Low productivity is in large part driven by gaps in workers’ skills that are rooted in weak technical and vocational training from industry and training institutions. Productivity is also undermined by a work ethic that favors entitlement over efficiency, which itself is derived from historical legacy, labor regulations (e.g. high allowances) and a lack of accountability (including pay having a limited relationship to productivity).
More competitive, locally-produced goods and services could reduce mines’ supply costs. Manufactured goods, equipment and consumables are expensive and/or difficult to obtain in Zambia; hence mines rely heavily on imports from South Africa and elsewhere. Due to the logistics costs, trade facilitation fees and markups associated with imports, equipment and spare parts in Zambia can cost more than twice what they would in other countries. Motivated by profit, mines are keen to source from the least-cost providers that can meet their standards of quality, quantity and reliability. The greater use of local manufacturers could theoretically reduce the import and logistics-related costs that mines currently incur. Local manufacturers, however, lack the capacity to deliver the more complex, high-value-added products that account for the majority of mines’ spending at a sufficient quality to meet the needs of the mines. International mine suppliers, who can produce the required quality, have thus far not located in Zambia due to its lack of attractiveness for manufacturing and, until recently, insufficient demand from mines. As a result, the industry buys only low-value items (such as food, clothing, and non-critical services) locally, often from traders rather than local manufacturers. Developing a high-quality, high-value-added manufacturing base in Zambia that is capable of supplying reliably a number of key products to the mines, will take time and will likely not be feasible for all types of mine supplies. Nevertheless, a more efficient local manufacturing industry could ultimately reduce input costs for the mines; improve industry competitiveness over the longer term; raise the incomes of local producers; and, potentially, help create markets for the copper fabrication industry (see Chapter 6).

5.4.3 Product Transport

More efficient rail and road transport could reduce the cost of moving copper to the customer. Almost all of Zambia’s copper is ultimately exported, exiting Zambia along the routes of the North-South Corridor which connects the Copperbelt province with the major ports of Durban in South Africa (2,600 km) and Dar es Salaam in Tanzania (1,800 km). Due to the weight and volume of copper and, in many cases, long transport distances to port, rail—which tends to be lower cost than road transport—is the preferred mode of transport in the copper industry worldwide. In Zambia, however, the railway that links the Copperbelt to Dar es Salaam and Durban commands a very limited market share. Privatization has not brought the investment and skills needed to revive a rail system that fell into disrepair under public ownership, and the system has not been extended to new mining areas. In contrast, the trucking companies that, in the absence of an effective rail system, carry the vast majority of Zambian copper to market, are relatively price competitive despite significant inefficiencies along the corridor. Trucking companies interviewed during the course of this study charge around 4.2 cents/tkm for southbound traffic from the Copperbelt to Durban and 6.7 cents/tkm for northbound traffic. The southbound price compares favorably with many other African transport corridors and countries such as China and France (5.0 cents/tkm). However, the trucking of copper does face a number of challenges that unnecessarily increase costs and transit times. Aside from inefficiencies related to border crossings (described below) the main inefficiencies in the logistics environment are related to high fuel prices, poor conditions on some road stretches, and the risk of theft of cargo.

Streamlined border crossings could reduce delays and costs and improve the reliability of supply for customers. The opportunity cost of border crossing delays, both outbound (affecting exports of products to customers) and inbound (affecting imports of supplies) is a pressing concern for the copper mining industry. It is estimated that the standing cost for copper transporters at the Chirundu and Beitbridge border crossings is equivalent to a 25 percent surcharge on transport prices—or some 0.8-0.9 cents/tkm. In addition, there is
potential to significantly reduce trade transaction costs associated with trade procedures (currently 0.7-1.1 cents/tkm from the Copperbelt to Durban and 1.0-1.6 cents/tkm from the Copperbelt to Dar es Salaam) by streamlining administrative requirements and procedures.

5.4.4 Regulatory Environment

A new regulatory and tax regime that balanced the interests of the industry and the country could create a ‘win-win’ situation. At the root of the disagreements over the tax regime (discussed in section 5.1.1) is the inability of the government and industry to find an equitable balance between, on the one hand, the commercial interests of the industry and, on the other, the industry’s contribution to national prosperity. Such a regime needs to cover, in a clear and transparent fashion, taxation, as well as the government’s obligations to provide the macro stability, governance, infrastructure and social services that the industry needs to prosper. In exchange, the government and public at large need assurances that the mines are in fact contributing sufficient tax revenues to support the communities within which they operate and at levels consistent with profits they receive from extracting Zambia’s natural resources. Unless such a regime is agreed upon, the industry will continue to dispute at least some aspects of the new tax regime and the growth of government revenues will be constrained. Moreover, the regime will remain unstable, thereby undermining investor confidence.

A more predictable regulatory environment could increase stability and reduce risks for investors. Given the large upfront investments, long-term commitments and long investment payback horizons inherent in the mining industry, stable and predictable policies are essential in evaluating a mining project’s perceived risks and economic viability. Frequent legal and regulatory changes create an air of uncertainty for investors. Zambia’s recent history of regulatory changes (such as has been seen in relation to taxation, as discussed earlier) is a severe constraint on both new investment as well as the continued operation of established mines.

Responsibility for the delivery of social services could be transferred to the government and supported by appropriate tax contributions from mines. In Zambia, expectations for the social contribution of mines extend well beyond those typically borne by private industry. Zambian mining companies incur costs and responsibilities associated with operating schools, hospitals and clinics, and maintaining local road infrastructure. Mines serve these roles partly due to gaps in government provision but in large part due to legacy expectations of mines that developed prior to privatization. While in financial terms these costs are relatively minor, uncertainty and lack of clarity under the current arrangement is cited as a key deterrent to greater investment in the sector. Hence, there may be a need for a more explicit agreement with the government and the public at large on an appropriate allocation of social provision responsibilities, with the government taking greater responsibility for supplying the services and a shared understanding that the industry contributes its part through the tax revenues it provides to the government. Such an understanding would have to be supported by mechanisms to ensure appropriate tax compliance and payment by industry.

5.5 Summary

Zambia is recognized internationally as having strong mineral potential, and limited global supply should support high (but volatile) prices and continued investment in the future. This provides an excellent opportunity for growth in Zambia’s copper mining
industry. A more productive mining industry could contribute income to the government, as well as improve livelihoods and increase employment and backward linkages.

However, **high production costs and relatively frequent changes in the legal and regulatory environment may deter investors, causing Zambia to lose out to other copper-producing countries.** To overcome these competitiveness gaps and take the copper mining industry closer to achieving its potential, there are a number of results that Zambia should aim to achieve. These include:

- Better availability and quality of geological survey information;
- Reliable electric power supply with sufficient generating capacity to keep up with industry growth, including in new areas;
- Greater labor productivity;
- More competitive, locally-produced goods and services;
- More efficient rail and road transport;
- Streamlined border crossings;
- A new regulatory and tax regime that balances the interests of industry and the country;
- A more predictable regulatory environment; and
- Responsibility for the delivery of social services transferred to the government and supported by appropriate tax contributions from mines.

Phase II of the JPC Program is working towards achieving some of the above target results. The approach being taken is described further in Part II of this document.

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2 Many of the issues covered in this – copper mining – chapter are also relevant to refining activities.

3 40 percent of the country has not been geologically surveyed, so actual reserves may exceed current known reserves.

4 Zambia was once the 4th largest producer of copper worldwide, before dropping to 11th, as output declined, but today it has recovered to 8th position.

5 It may even be possible to overtake Peru to become the 2nd biggest producer after Chile (which accounts for 34 percent of world output).

6 The mining industry’s rate of growth of almost 8 percent per year during the 2001-2008 period (before a temporary setback in early 2009) was second only to that of the transport, storage and communications sector.

7 Taxes represent 3-5 percent of export revenues in Zambia compared to 25-40 percent in the rest of the world.

8 Note that the actual tax rate paid by many of the companies may be lower, due to the existence of tax concessions that are set out in companies’ individual agreements with Government.

9 Mines typically start to generate strong cash flows and start to pay significant levels of taxes 7-9 years after major investment.

10 The figures provided in this table represent World Bank estimates based on desk research and discussions with stakeholders. Even under the “business as usual” scenario, tax revenues are expected to increase significantly due to several factors, including: (i) the price of copper is likely to remain high; (ii) the expectation that the new tax regime introduced by the Government will raise the tax take; (iii) the expiration of some of the tax concessions in the Development Agreements, as many of the mines enter a post-investment stage when they are expected to generate large operating profits; and (iv) most of the mines are reconciled to paying the 3 percent royalty. There is considerable uncertainty as to the extent of the increase in tax revenues under the “business as usual” scenario, however, as a result of: (i) the possibility that, because of high capital investment...
and the carry forward of losses, the tax paid in cash to the Government will not increase even under the new regime; (ii) the refusal of some mines to adhere to the new regime, believing that it does not supersede their Development Agreements; and (iii) the possibility that new mines may obtain similar tax concessions as were incorporated in the Development Agreements of the past. However, even with these objections, the tax-take should increase.

11 Labor costs at Mopani increased by 396 percent between 2003 and 2008.

12 World Mine Cost Data Exchange, www.minecost.com

13 See 5.4.2 and 5.4.3.

14 McMahon, F. and Cervantes, M. for The Fraser Institute. April 2010. Survey of Mining Companies 2009/10. The Policy Potential Index developed by the Fraser Institute is a composite index that measures the effects, on exploration, of government policies. The Index covers a number of issues including uncertainty concerning the administration, interpretation, and enforcement of existing regulations; environmental regulations; taxation; infrastructure; socioeconomic agreements; political stability; labor issues; geological database; and security, among others.

15 The overall Behre Dolbear Index rates countries on economic system, political system, social issues, permitting delays, corruption, currency stability and tax regime.

16 During electric power outages, priority is given to ensuring the supply to mines is disrupted as little as possible.

17 In fact, the assumption of constant intensity may prove unrealistic as the older – and deeper – mines such as Konkola Copper Mines will need more electricity to pump away water.

18 A number of other electric power generation investments are planned and, if implemented on schedule, could help facilitate mining industry growth.

19 Labor costs are higher at Mopani partly because it is an older mine. Labor costs for mines in less-developed countries can be as low as 20 percent, compared to 40 percent for North American mines.

20 According to consultations with trucking companies in the Copperbelt, approximately one-sixth of Zambia’s copper exports travel by rail (almost all to Dar es Salaam), with the rest by truck.

21 In 2009, a transport price of $110/tonne on a southbound journey of copper ores/concentrates represented 5.6 percent of the total value of the cargo. For copper cathode, the transport price represented 1.6 percent of the total value of the cargo (Engman, Michael. May 2010. The Role of Trade and Transport Issues in the Competitiveness of Zambia’s Copper Industry (draft)).

22 The quality of the major arterial roads has improved significantly in recent years and they are now largely in good condition. However, some roads have degenerated due to heavy truck traffic in the Copperbelt, and there are some challenging stretches on the 600-kilometer route between Serenje and Nakonde on the Tanzanian border. In addition, insufficient road capacity often results in heavy truck traffic and congestion delays, and poor road conditions on some stretches substantially increase truck maintenance costs (by 10-20 percent, according to one large Zambian trucking company consulted during the course of this study).

23 The transport companies consulted during the course of this study argued that the cost of diesel is 30-40 percent of their total cost, and that fuel in Zambia is more expensive than in other countries in the region. The trucking sector may save around $18 million ($0.005 cents/km), or 12 percent of the overall income of the trucking business associated with copper transportation and return hauls, as truckers fill up large tanks in Botswana and Zimbabwe. The additional fuel storage containers translate into foregone income of $230 for each return trip between Durban and the Copperbelt, or more than $5 million in total annually.

24 Customers are impacted by border delays as it is difficult to forecast when shipments will arrive, and this can disrupt their own production.

25 According to trucking companies in Zambia, it takes around 4-6 days to truck copper from the Copperbelt to Johannesburg if the cargo is pre-cleared, all documents are in order, and there are no incidents along the way. Additional time is needed for the cargo to reach the port of Durban and if there are any delays during the journey. It takes an average of 7 days to reach Dar es Salaam – but it can vary from 5 days without delays at the border to 10-12 days.


27 Between 2002 and 2008, Mopani reportedly spent almost US$80 million on social costs, with US$21.5 million spent in 2008 (equivalent to 2.7 percent of revenue), up from US$6 million in 2002.
6 WHAT IS THE POTENTIAL FOR MORE COPPER FABRICATION IN ZAMBIA?¹

6.1 Introduction

6.1.1 Background

The copper fabrication industry lies between (i) the industry that produces copper (as a commodity metal from mined ores as well as from recycling), and (ii) the users of copper in finished products. It involves the fabrication of products such as wire rod, wire, low-voltage cable, and other copper-based semi-manufactures that are used in the production of electronic goods and in construction, for example.

The copper mining and copper fabrication industries are largely separate. Copper is clearly a major input into the copper fabrication industry. However, aside from this supply relationship, the copper mining & refining and copper fabrication industries are almost completely separate, with different drivers, competitive forces, structures, and economics.² The former produces a fungible commodity which can be sold anywhere and (in most cases) has a market of last resort in the metal exchanges, while the latter is highly dependent on customer demands and needs, stockholding patterns, and technical requirements. As a result of this difference in business models, few copper mining companies are involved in any process further downstream than the refining of copper to cathodes. In addition, copper mining is tied to where the natural resource is available; copper fabrication to where products that use copper are made. Whereas the main copper producing countries are Chile and Peru, the main copper fabricators are the major industrial countries such as China.

The government and population of Zambia have, for many years, viewed copper fabrication as a potential opportunity for adding more value to the country’s copper. Many Zambians believe that copper mining can evolve into copper fabrication, thereby adding more value to the country’s copper and encouraging a broader manufacturing industry. They also believe that this development, if achieved, could become an important source of economic growth, jobs and diversification.

At present, Zambia is not a major player in the global copper fabrication industry. Zambia’s copper-related exports are mainly cathode/blister copper, the standard forms of the internationally traded commodity. Zambia uses less than 5 percent of its copper output to produce fabricated products, and finished goods containing copper are mainly imported into Zambia.

6.1.2 Industry Structure

Zambia has a small copper fabrication industry that produces a narrow range of products for domestic use and for export to regional markets where it benefits from market proximity. However, these markets are small, and Zambia competes with the larger, more developed South African copper fabrication industry. Zambia’s fabrication industry is growing rapidly, but from a small base, led by ZAMEFA, a subsidiary of the US-based General Cable Corporation.
There are a limited number of companies engaged in copper processing in Zambia. At the first stage of copper processing, ZAMEFA (which produces wire rod, wire, cable, and a few other products) has a domestic, regional and international orientation; and the cast product foundry Non Ferrous Metals has a domestic orientation. At the next stage, the wire and cable manufacturer Kavino is largely domestically oriented. In the scrap metal business, Central African Recycling appears to be well organized to take advantage of opportunities as they arise. ZAMEFA has an evolving product portfolio mainly targeted to the needs of neighboring countries. However, by its reputation for quality and reliability, it has also been able to penetrate some more distant international markets such as India. The company benefits from its position in a large specialist multinational cable-making group with global sales outlets.

6.2 Current Performance Gaps

Although there is a longstanding desire to capture additional economic returns through the fabrication of copper products, the prospects – at least in the short- and medium-term – are not favorable. The viability of producing and selling copper and copper alloy semi-manufactures on a significant scale is constrained by a number of factors, both on the supply-side and the demand-side.

6.2.1 Supply-side

While copper is a major input into the copper fabrication industry, there is little competitive advantage from sourcing copper inputs locally. The price of copper is set by international commodity exchanges and varies little throughout the world. Hence, even though Zambia is an important copper producer, a fabricator based in Zambia is unlikely to have much cost advantage in buying copper over, say, one based in China. The maximum cost advantage a local fabricator could gain is the cost of shipping the cathode copper to the fabricator in China. However, that saving is likely to be offset entirely by the Zambian fabricator having to ship the same weight of (fabricated) copper to China, where it will be used to manufacture the final product.

Copper fabrication requires other raw materials, many of which are not available in Zambia. As a general rule, the industry prefers to use scrap, provided that there is a supply of acceptable quality, and 37 percent of copper used is derived from scrap metal. However, Zambia lacks sufficient quantities of scrap to sustain a major copper fabrication industry. In addition, many copper products are copper alloys and Zambia produces only a few of the other metals required (e.g. nickel). The need to import other metals (particularly zinc to make brass) to a land-locked country such as Zambia is a source of comparative disadvantage.

6.2.2 Demand-side

Local and regional demand will not support a substantial copper fabrication industry in Zambia in the short- or medium-term. The major source of demand for copper products is the manufacturing industry (e.g. the manufacture of electronic goods uses copper products as an input). However, sub-Saharan Africa’s manufacturing base is small, resulting in a limited regional demand for copper semi-manufactures. Sub-Saharan Africa accounts for less than 1 percent of global consumption of the principal semi-manufactures. The majority of this demand comes from South Africa, which is largely self-sufficient. Regional demand is expected to remain limited until significant growth occurs in the region’s broader
manufacturing industry. In Zambia itself, the market is even smaller: Zambia’s usage of refined copper is less than 0.2 percent of the global total.

**Zambia cannot access long-distance markets for fabricated products competitively.** Zambian competitiveness in copper semi-manufactures or copper products (e.g. low-voltage cables) on the international market outside Africa (such as India and East Asia, where there is strong local production capacity) is likely to be hampered by logistical difficulties (particularly border delays and long lead times) in servicing these markets reliably.

### 6.3 Industry Growth Potential and Payoff

Given the above constraints, the potential for copper fabrication in Zambia is, in the short- to medium-term, modest. In addition, copper fabrication may not be able to provide the benefits of jobs and prosperity that the country is looking for.

**It is unlikely that significant new demand for fabricated copper products will emerge domestically or regionally in the near term.** Domestic demand will remain limited because of Zambia’s lack of competitiveness in manufacturing generally. Regional markets are growing, but from a small base, and South Africa is a formidable competitor. Hence, current market prospects do not justify a significant expansion of Zambia’s copper fabrication capacity (an industry in which proximity to market is key).

**There may be scope for marginal expansions to existing capacity.** The limited number of users of copper semi-manufactures in Zambia may wish to source products locally in order to reduce their dependence on imports (which are subject to slow border clearance). Local entrepreneurs might also cater to small, local needs on an artisanal scale. Greater use of copper products in the construction industry (i.e. copper pipes for plumbing) in Zambia and the region could also help build domestic demand for copper products. But together these will not amount to a substantial market. Even these opportunities could be limited if the need is for products which require input of scrap and other metals rather than pure copper.

**Copper fabrication may not be an ideal source of economic diversification as it cannot shield Zambia’s economy from copper price fluctuations.** The fabrication of copper is subject to the same market cycle that determines the demand for, and price of, refined copper. Hence, increased fabrication of copper would not help to shield the Zambian economy from its vulnerability to cyclical fluctuations in the price of copper.

**Expansion in copper fabrication would generate a small number of jobs.** Copper fabrication is a capital-intensive industry and even with the modest industry growth mentioned above, the impact on local employment would be limited. At present, total employment in copper fabrication in Zambia is estimated at less than 1,000. A continuous-cast wire rod mill with a throughput of 100-300 thousand tonnes per annum, operating around the clock, may require a team of less than 100 to undertake operations, maintenance, sales and administration.

**Margins in copper fabrication are lower than in copper mining/refining, and even world-leading fabricators do not earn high margins.** The scale of profit margins in copper fabrication is altogether different from mining, as are the risks. Compared with mining, copper fabrication requires modest capital investment (though not compared with other manufacturing industries). But the margins are slim, compared not only with the total value
of the metal throughput (requiring significant working capital), but also as a proportion of production cost. Even world-leading companies do not earn high margins. The slim margins on offer can be illustrated by looking at the profitability of the world-leading cable company, Nexans, in 2008 (a relatively good year for the company). In that year, the gross profit margin was 14 percent and the operating margin 6 percent. Such modest margins show that even manufacturers of copper products with strong reputations, able to produce a range of specialist products, do not earn high margins.

**Zambia is not alone in lacking a major copper fabrication industry despite the local availability of copper.** The world’s largest copper producer, Chile, has also not developed into a major fabricator on a global scale (see Box 2).

**Box 2: The Case of Chile**

Chile produces 34 percent of the world’s copper and 17 percent of the world’s refined copper, but only 1 percent of the world’s fabricated copper products. Yet, rather than investing heavily in fabrication, Chile has capitalized on its resource base by establishing a competitive mining industry, ensuring the benefits of copper are channeled to the population, and encouraging diversification in industries with growth potential (e.g. horticulture, fisheries and tourism). Chile’s fabrication meets the needs of local industry and infrastructure, and little more.

Zambia and Chile have some important similarities, including:

- Small populations, hence limited local demand (16m in Chile and 12m in Zambia);
- Lack of a large manufacturing sector; and
- Economies centered on natural resources (but more non-mineral diversification in Chile).

Chile’s experience suggests that pinning hope for economic diversification on the copper fabrication industry, or even manufacturing as whole, is not necessarily the most appropriate course of action for a major copper producer.

### 6.4 Results Required to Develop a Fabrication Industry over the Longer-Term

**The most effective way to encourage Zambia’s copper fabrication industry is to have a more competitive domestic manufacturing industry.** While not a short-term solution, encouraging a competitive manufacturing industry in Zambia (and thereby building local demand for fabricated products) could be the most effective way of developing a larger copper fabrication industry. This requires improving the competitiveness of manufacturing in Zambia that, like copper fabrication itself, is disadvantaged by constraints such as unreliable access to electric power; uncertain international logistics for sourcing inputs and reaching customers; low access to and high cost of long-term finance; and low labor productivity and skills levels. Greater use of copper products in the construction industry (i.e. copper pipes for plumbing) in Zambia and the region would also help to create demand. Of course, highly competitive industries in South Africa in particular, and perhaps in India, China and elsewhere, will be prepared to seize any market opportunities that arise.
6.5 Summary

The local availability of copper does not provide Zambia with much of a comparative advantage in copper fabrication. In an industry in which proximity to consumer markets is the key driver, domestic and regional demand for copper products would need to grow significantly before anything beyond a marginal expansion in Zambia’s copper fabrication industry would make sense, and such market growth will take time. Promoting a competitive domestic manufacturing industry is the most effective way to encourage copper fabrication in Zambia.

1 Unless otherwise stated, the analysis summarized in this Chapter is taken from the following report: World Bank. Forthcoming, 2011. What is the Potential for More Copper Fabrication in Zambia?
2 While many copper mining companies are involved in the refining of copper to cathode stage, few are involved in any process further downstream. Wire rod is an exception, being made by some copper refiners in industrialized countries, and by wire and cable manufactures - primarily for their own internal use. For refiners in industrialized countries, it is relatively easy to add a wire rod mill adjacent to the refinery in order to capture more value-added to the cathode and to benefit from economies of scale.
3 The production of semi-manufactures.
4 Scrap is preferable to cathode for two reasons: (i) it is cheaper than refined metal, hence increasing the fabrication margin and profit; and (ii) in making copper alloy products, using alloy scrap provides a ready mix of the alloying metals.
5 Excluding the South Africa market, the total open market for all copper and copper alloy semi-manufactures in sub-Saharan Africa can be estimated at about 10 kilo-tonnes per year.
6 South Africa-based fabricators are clearly in a better position to service customers within their own country, as well as in export markets outside Africa. To overcome the transport disadvantage in terms of time and cost, Zambian firms have to offer a clear product advantage to potential export customers.
7 Examples of potential users of copper products in Zambia include the growing construction industry and El Sewedy, which manufactures electrical transformers.
8 For example, in 2008, a leading European rod producer indicated a profit of 12.2 percent of costs for a large cap CCR rod mill and 49.6 percent for an OFHC rod mill. This compared to a margin of 84.5 percent for cathode production from copper ore (SX/EW, First Quantum).
PART II: TURNING ANALYSIS INTO RESULTS

Realizing the Potential of the Beef, Dairy, Tourism and Copper Industries
7 ACCOMPLISHMENTS OF JPC PHASE I

While the first part of this report analyzed four industries, the second part describes how this analysis is being used to improve industry productivity. It summarizes the approach used to identify and achieve target results and reports on the progress achieved to date. Specifically, Chapter 7 discusses the accomplishments of Phase I, including the process used to select target results that became the focus of Phase II; Chapter 8 describes the approach used to achieve those target results; Chapter 9 provides a summary of the activities underway, and Chapter 10 outlines options for a possible Phase III of the Program.

7.1 Cultivating Demand for Results

During Phase I, four industries were selected and analyzed, and a number of target results were identified that – if achieved – could improve these industries’ productivity. The focus on industries – as opposed to cross-cutting constraints or reforms – was a deliberate effort to build demand for results in order to increase the probability of success. The political economy analysis, performed in conjunction with the industry studies, stressed the importance of “home-grown demand” for meaningful results, and the approach was designed accordingly.

Demand for results was cultivated at several junctures throughout the analytical phase. Prior to commencing the analysis, industry representatives were asked for reports and data, and as the analysis progressed, many provided interviews and supplementary information. Once completed, the analysis was presented at a series of workshops (two locations for each industry to reach “beyond Lusaka”). These consultations improved the quality of the analysis and built consensus for the findings, both of which helped to accomplish some interim progress (see Box 3) and to generate demand for some target results that are the focus of the JPC Program’s Phase II: Implementation.

<table>
<thead>
<tr>
<th>Box 3: Accomplishments of JPC Phase I</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Government has used the analysis to develop the Sixth National Development Plan and asked team members to consult/advice in this process on an ongoing basis; industry has requested analysis/meetings to discuss key findings; and CSOs have been using JPC material in workshops and in the media;</td>
</tr>
<tr>
<td>• High-level Government engagement in the JPC Program, with the Ministers of Finance, Commerce and Livestock participating in key events, proposing follow-up work and pursuing specific issues (e.g. labor, mines and minerals legislation, and tourism legislation);</td>
</tr>
<tr>
<td>• Consensus achieved amongst Government, private sector and donor community on the opportunities for and current performance of the chosen industries and on the priorities for improving their competitiveness; and</td>
</tr>
<tr>
<td>• Government’s 2011 Budget involved a tenfold increase in allocation for tourism marketing. The JPC Program’s industry analysis had highlighted that Zambia had one of the lowest levels of investment in tourism marketing in the region. Industry took up a clarion call that was recognized and supported by Government.</td>
</tr>
</tbody>
</table>
7.2 Selecting Target Results for Phase II

While the industry analysis identified many opportunities to improve industry competitiveness, in order to deliver fast results, the JPC Program had to narrow its focus. Instead of a “laundry list”, the Program sought to focus on a few “target results” during the implementation phase. By demonstrating progress in a few areas, it could build traction with stakeholders and generate momentum for more progress. Given limited capacity and resources, the Program engages selectively, focusing where it expects to deliver the greatest impact.

Starting in August 2010, representatives of each industry selected three or four target results that, if achieved, would make an important contribution to improving their respective industries’ productivity.

7.2.1 Process Used to Select Target Results

A workshop was held for each industry, and participants used three criteria to identify a subset of high-priority results that were “ripe for the picking” (see Figure 11):

- **The economic impact for Zambia (if the result were to be realized):** the expected magnitude of impact on the industry; the spread of impact - including on poverty; and potential spillover effects on other industries in Zambia;

- **The feasibility of realizing this economic impact:** the level of political will and public support for the result; social and cultural prospects for change; and the institutional capacity for implementation; and

- **The fit with the JPC approach:** the fit of the desired result with either of the Program’s two implementation methods: (i) a competition to seek innovative, private-sector driven proposals that could be implemented relatively quickly and on a small scale, as part of a pilot program; and (ii) a campaign to build advocacy for needed actions and to encourage accountability (particularly of policy-makers) for delivering the associated results; and with the Program’s budget.
7.2.2 Target Results Selected

Based upon the above criteria, each workshop participant voted for his/her top three priority results (four in the case of tourism). Those results with the most votes became the “target results” - the focus of Phase II. Table 5 gives the list of Target Results.¹
Table 5: Target Results

| Beef and Dairy | 1) **More effective disease prevention** - better prevention systems and lower cost drugs and veterinary care;  
2) **Integrating traditional farmers into commercial value chains** - improved market awareness and access as well as more regular/better-timed cattle sales for traditional farmers; and  
3) **A ‘more-enabling’ environment** - in particular: better enforcement of laws, better rural infrastructure and measures to curtail illegal cattle trading. |
|----------------|--------------------------------------------------------------------------------------------------|
|                | 1) **A more stable and predictable regulatory environment**;  
2) **Better destination marketing** in key source markets;  
3) **Lower input costs**; and  
4) **Improved access to/within Zambia**, including both air and road transport. |
| Copper²        | 1) **Greater consensus and clarity on the roles of mines and government, provision of social services and contribution of industry**;  
2) **Lower input costs** - higher labor productivity, lower labor costs and improved linkages between mines and local producers; and  
3) **Better regulatory environment** - a more transparent, stable and equitable tax regime and legal/regulatory environment. |

Once the target results were identified, the focus shifted to how to achieve these results. The approach taken was designed to achieve results in two ways: (i) directly (by sourcing and implementing actions); and (ii) indirectly (by encouraging advocacy and accountability for the target results). The implementation phase and the way forward are described in Chapters 8 and 9.

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1 The wording in the table summarizes the target results as the workshop participants saw them; hence some of the results listed in the table may not exactly match those discussed in Part I.
2 Initially, participants selected energy and transport as their two target results. However, when it was clarified that these results could not be achieved through the JPC Program due to its limited funds/time, participants chose the three targets in Table 5 as the priorities of Phase II of the JPC Program. Note also that, based on the results of the analysis outlined in Chapter 6, copper fabrication was not seen as a priority area for JPC intervention during Phase II. Hence, participants’ discussion of target results for the copper industry focused on copper mining.
8 IMPLEMENTATION: HOW TO ACHIEVE TARGET RESULTS?

During Phase II, the approach shifted from analysis to implementation, with three objectives:

- **Build demand for achieving the target results**: facilitate the awareness of, and advocacy and accountability for implementing, these results;

- **Facilitate supply of target results**: implement a pilot program, including challenge competitions and crowd-sourcing, to identify high-potential solutions and transparently implement the solutions to achieve the agreed results; and

- **Capture lessons learned**: monitor and evaluate the process and the results, thereby capturing lessons to be used in a potential scaling-up in Zambia and/or in other countries with similar challenges in the political economy domain.

The components of the implementation phase are described below.

8.1 Building Demand for Target Results: Awareness, Advocacy & Accountability

This component aims to help Zambians (i) advocate for the target results; (ii) hold policy-makers, donors and others accountable for achieving the target results; and (iii) support the implementation of activities that may contribute to achieving the target results.

Building off the platform generated during Phase I, the objective is to widen and deepen the “market” (population of stakeholders) that will demand results. This includes (i) sharing information with a broader group of stakeholders; and (ii) cultivating more sophisticated and more effective demand.

The approach to this involves communication and advocacy campaigns that will engage with two markets:

- The Zambian market (e.g. business, academia, parliamentarians, media, wider civil society, donors, and the general population);¹ and

- The international market, including the Diaspora (e.g. potential contributors of ideas for actions to achieve the targeted results, as well as potential financiers of the program).

The type of communication channel will vary depending on the target result and the market. Channels could include glossy brochures, radio programs and/or social networking. The communication program is designed to engage and motivate stakeholders to take action – and to advocate for policy-makers and others to take action – to achieve the desired results for the chosen industries. Building the information base of policy-makers, and encouraging advocacy among the wider population, can help to increase the capacity and

¹ The number indicated here is not clear. It might be 1 or 1. **(Note: Double check this number in the original source.)**
incentives of policy-makers to take action. The communications campaign will also encourage Zambians to hold those responsible for implementing the solutions accountable for achieving the target results.

A major element of the communications campaign is to share the analytical findings from Phase I with key constituencies in the public and private sectors in ways that are engaging and meaningful. The purpose of this exercise is to increase awareness of the opportunities for each industry and the constraints that impede them. This document, along with the supplementary technical papers and summary notes, is being published with this objective in mind. Likewise, the main messages from this work have been shared at a series of workshops and discussions in 2010.

The advocacy campaign will target particular issues identified during the analytical phase. This campaign allows the JPC Program to target results that may be less suitable for the challenge competitions and/or may be beyond the scope of the Program’s resources (e.g. large infrastructure investments). The Program’s support to the revision of the Tourism and Hospitality Act (see section 9.2) is an example of the kind of issues the advocacy campaign will target (Chapter 9 also provides some other additional examples).

8.2 Facilitating Supply of Target Results: Pilot Solutions

This component seeks to identify proposals for actions that can help achieve the target results in each industry and then implement a small number of them on a pilot basis. The search for solutions will endeavor to engage a diverse set of participants in Zambia and abroad.

8.2.1 Use of Challenge Competitions to Identify Proposals

The JPC Program is using crowd-sourcing (Box 4) in the form of transparent challenge competitions (Box 5) to identify proposals. This involves publicizing a ‘call for proposals’ to a wide audience, both within Zambia (to tap into local knowledge) and to specific international groups (to tap into international experience). The aim of these competitions is to identify proposals that could help to achieve the targeted results for each industry.

Challenge competitions have been used before – in other countries – to identify solutions to problems in the industries covered by the JPC Program (see Annex C). In Zambia, the first challenge competition supported by the JPC has already taken place: a competition to generate suggestions for a new brand for Zambia’s tourism industry (see section 9.2).
Box 4: The Role of Crowd-Sourcing in the JPC Program

Crowd-sourcing offers a new approach to solving problems, and companies as diverse as Proctor & Gamble, Netflix and Goldcorp are harnessing the knowledge of crowds to solve complex problems. By using the web and other communication tools, they tap into the ideas and creativity of many more people than was previously possible. In addition, crowd-sourcing can be a cost-effective way of solving problems.3

The JPC Program is employing these new tools in an effort to generate ideas and propose actions to solve problems that have until now seemed intractable. It aims to arrive at innovative and effective solutions that have been developed in an open, transparent and competitive process, adding weight to their likelihood of success.

DFID, which is funding the implementation of the JPC Program, is a pioneer in the use of crowd-sourcing in the donor community. The tool has been used in DFID Challenge Funds (a competitive grant program for businesses) and the World Bank’s Development Marketplace (another competitive grant program for innovative social enterprises with a high potential for development impact) to identify ‘out-of-the-box’ solutions to difficult problems. The results have been promising, with the most successful example in the international development arena being M-PESA, a mobile phone-based banking service led by Vodafone in Kenya and Tanzania.

Box 5: Challenge Competitions

The JPC Program’s challenge competitions have five main steps:

1. **Define Challenge Questions**
2. **Launch Competitions**
3. **Collect & Review Proposals**
4. **Select Winners & Award Prizes**
5. **Implement Solutions**

First, industry stakeholders (government, business and civil society) define one or more specific “challenge questions” (i.e. statements of problems for which the competition is seeking solutions) per industry based on the target results identified during JPC Phase I. As with other selection processes in the JPC Program, agreed criteria are being used to identify the challenge questions.4 The challenge questions will be tested in focus groups prior to being launched.

Next, the selected challenges will be advertised within Zambia as well as internationally, with a request for proposals that could resolve the challenges. The submitted proposals will be short-listed by representatives from business, government, civil society and the JPC Secretariat, and an independent jury will select the winning proposal(s). The winners will receive recognition, a prize and/or financial support to implement their proposals.
To improve the likelihood of effective implementation, the evaluation of proposals will explicitly consider issues of political and social feasibility. Simply transplanting solutions from outside, without due regard for Zambia’s specific socio-political context, is likely to be less successful than tailoring solutions to the constraints and incentive structures in Zambia. Therefore, proposals will, among other criteria, be assessed on the basis of their implementation feasibility within the Zambian environment. A preliminary list of possible evaluation criteria is provided in Annex B.

The implementing agent will vary across industries and will be determined on a case-by-case basis to allow flexibility and the most effective method to be used. Winning proposals could be implemented by government, industry associations, businesses and/or donors in a variety of ways. Implementation methods are still being explored, but the method selected for each proposal will in large part depend on the nature of the proposal and will take into account who is interested in implementing the various proposals and who has the capacity to implement most effectively. Some proposals will be piloted under the JPC Program; others that may not fit within the JPC Program’s scope could be implemented by other organizations.

8.2.2 Types of Solutions that Could be Generated/Implemented by the JPC Program

While the challenge competitions are not yet completed, industry representatives have already identified some potential solutions. Examples include:

- **Beef and Dairy:**
  - **Increase revenue for traditional farmers from the sale of cattle.** Peer pressure and collective responsibility would be used to encourage adherence to contracts between farmers and processors to discourage side-selling and to increase yields (e.g. through the use of collective feed lots). By improving the value generated from commercial relationships between poor farmers and processors, this approach could generate more revenue for both parties and, as a by-product, improve the flow of information/knowledge to traditional farmers about animal husbandry/disease prevention;
  - **Reduce the incidence of disease** through collective, multi-year purchase agreements with cattle vaccine manufacturers that could drive down unit costs of vaccines and thereby increase coverage of herds.

- **Tourism:**
  - **Increase brand recognition for Zambia as a tourist destination** as a means of encouraging demand. Low-cost social media could be used to market Zambia’s new brand to tourists and to tour operators (since the latter group packages tours). By sharing information about Zambia’s tourism assets (baiting the hook with innovative “windows” into the lives of game scouts or lodge operators), social media could build brand-awareness and encourage tourism circuits for high demand locations;
- Improve tourists’ experience of Zambia’s border crossings through independent monitoring of delays at border crossings. This could be done by using a SMS-based system whereby tourists provide feedback on their experiences of crossing Zambia’s borders, and then the information is collated and published. This could eventually lead to a competition to determine which border crossing is the quickest and easiest for tourists.

- **Copper:**

  - Develop a database of specialized mining skills to help companies source their requirements. Most foreign investors do not know the level or quality of skills available in Zambia, and at the same time, Zambian training institutes do not have a forecast of the demand for different types of skills. Preparing a database that has the buy-in of industry and government could generate useful information for industry and for training institutions. The preparation of this database is already underway (see section 9.3);

  - Increase local sourcing of mining companies’ inputs by (i) aggregating demand for specific products/services to illustrate to local suppliers the volume of demand; (ii) linking mining companies to local suppliers; and (iii) providing a transparent system to allow customers to rate suppliers’ quality and reliability;

  - Improve transparency around the amount and use of revenues generated by the mining industry. Billboards, newspaper articles and web-based systems could be used to (i) disclose information on tax payments made by mining companies to local and national government; and (ii) share information on government’s use of these funds.

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1 The JPC team will engage with existing industry stakeholder groups (e.g. industry-specific bodies such as the Chamber of Mines, Zambia National Farmers’ Union and the Tourism Council of Zambia, as well as broader bodies such as Zambia Business Forum and the Economics Association of Zambia).

2 Crowd-sourcing enables people across the globe to propose solutions to clearly defined problems. The internet is a useful, cost effective means of reaching this population; however it is of limited use in some markets – such as Zambia – where the majority of the population does not have internet access. Crowd-sourcing can be adapted so as to ensure that “unconnected” markets are able to provide input, thereby tapping into valuable local knowledge. For example, in the case of the tourism branding competition which took place under the JPC Program, this was done through targeted advertisements in the local Zambian press, facilitating mail and hand delivery of entries for local people that may not have access to e-mail, and structuring the judging panel to include high-profile individuals from both Zambia and abroad. Ultimately, Zambia was one of the top three countries of origin of the entrants, and both of the competition winners were residents of Zambia.

3 Since there are a number of different types of crowd-sourcing, it is difficult to generalize in terms of the ratio of benefits to costs. Costs, as well as benefits, can vary significantly depending on the type of competition, the type of solution being sought and the target market, among others. Nevertheless, it is worth noting that, in the case of the one pilot competition (tourism branding), preliminary evidence suggests that the benefits have outweighed the costs. The Zambia Tourism Board is of the view that the competition generated a new brand for Zambia’s tourism industry at a lower cost than alternative methods.

4 The criteria used to select challenge questions include (i) impact (e.g. the effect on business productivity, the range of businesses affected); and (ii) implementation (e.g. the cost, the time span, the viability from a political economy perspective).
It is worth noting that some organizations have already asked whether they could have access to the results generated by the competition. It seems that the challenge could provide a “triage” function wherein viable proposals are directed to a range of agencies which would then support/undertake implementation.
9 ACCOMPLISHMENTS OF JPC PHASE II TO DATE

The implementation phase (Phase II) of the JPC Program is one means through which the target results listed in Chapter 7 could be achieved, with other means being external to the JPC (e.g. the Sixth National Development Plan and 2011 Budget Speech drew from the analysis). In order to define the precise activities for Phase II, follow-up meetings with industry representatives from government and private sector were held in October 2010. At these meetings, industry groups used transparent criteria to narrow down the broad target results and determine how the JPC Program could best contribute towards achieving them.

The decisions made by each industry, the progress achieved to date, and the proposed activities for the remainder of JPC Phase II, are described below.1

9.1 The Beef and Dairy Industries

Industry representatives requested that the JPC Program support two challenge competitions, which would:

- **Identify proposals for the establishment and management of “livestock market centers”**. The idea is to bring together in one place a market for cattle as well as supporting services such as vaccination, veterinary care, certification, information dissemination and training. Establishing such centers is a priority of the Ministry of Livestock, several donors and other stakeholders. The centers are expected to be able to contribute to achieving all three target results selected for the beef and dairy industries – disease prevention, integration of traditional farmers into the commercial value chain, and wider enabling environment – simultaneously.

- **Identify designs for a viable and sustainable identification and traceability system for cattle**. This challenge competition targets the issue of disease control and could generate a range of possible solutions that might otherwise be difficult to identify. Government, donors and others could then experiment with a few different models arising from the competition.

The competitions are expected to be launched in mid-2011, and will be publicized in Zambia and internationally. Implementation of the winning proposals is expected to commence shortly afterwards.

In addition, communications activities will be used to promote advocacy and accountability, and help traditional farmers be more productive and better integrated into the commercial value chain. Industry representatives suggested that a series of television/radio programs and other communications activities be used to share specific messages with farmers and consumers. Messages could include:

- the respective roles of different parties (e.g. Veterinary Department, local councils, police) in regulation and the prevention of disease - to encourage accountability of all parties involved;

- what the livestock industry is – and could be – worth to the country; and
what livestock levies are supposed to be for – and what they are actually being used for.

9.2 The Tourism Industry

The representatives of the tourism industry selected two immediate priorities: (i) making substantial improvements to the legal/regulatory environment – specifically the Tourism and Hospitality Act; and (ii) identifying a more effective brand for Zambia as a tourism destination.

The JPC Program has supported a partnership between government and private sector representatives to develop a layman’s draft of the revised Tourism and Hospitality Act. The analysis and consultations completed under Phase I of the JPC Program identified the current tourism legislation as major impediment to the competitiveness of Zambia’s tourism industry. Recognizing an opportunity to improve the Tourism and Hospitality Act, the Zambian government requested the private sector’s assistance in developing a new Act that would provide a more enabling framework for the industry. At the August 2010 JPC Tourism Workshop, the Chairman of the Zambia Tourism Board suggested that a public-private committee be established, with the goal of preparing a layman’s draft Act based, on the one hand, on international best practice and, on the other, Zambian experience. Under the guidance of an international lawyer (funded by the JPC Program), the committee submitted a layman’s draft to the Ministry of Tourism in October 2010. After holding a consultative conference to gather feedback on the existing legislation as well as the new layman’s draft, the Ministry of Tourism submitted a final draft to the Ministry of Justice in February 2011, with the goal being to submit it to Parliament in May 2011.

The JPC Program has supported a challenge competition to identify a new brand for Zambia’s tourism industry. At a meeting in October 2010, a core group of tourism industry representatives identified marketing as the highest-priority target result and agreed that, before marketing activities can begin in earnest, it is crucial to identify a more effective brand to market Zambia as a tourism destination. It was agreed that a worldwide competition would be launched to open up the field of suggestions for a new brand for Zambia’s tourism industry (see Box 6).
Box 6: The Use of Crowd-Sourcing to Identify a New Brand for Zambia’s Tourism Industry

A competition to identify ideas for new slogans and logos for Zambia’s tourism industry was launched in January 2011 – and yielded almost 5,500 proposals from all over the world. The entries were shortlisted by a Zambia-based committee; voted for by the public via internet and social media; and the winners selected by a high-profile Zambian and international jury. The new brand for Zambia’s tourism industry will be launched in May at the 2011 Tourism Indaba in South Africa.

The process of launching and managing the competition was an excellent example of public/private/donor partnership. It was led by the government – launched by the Minister of Tourism and the Zambia Tourism Board – in collaboration with the private sector and the JPC Program. The prizes for the winning slogan and logo were generously contributed by the private sector (a 15-day luxury safari for two, including international flights).

The branding competition demonstrated that crowd-sourcing can be a cost-effective, transparent and relatively quick approach. By taking advantage of the internet and social media, Zambia can tap into the ideas of a larger number of people than would otherwise have been possible. The competition also generated publicity for Zambia and its tourism industry.

9.3 The Copper Industry

The representatives of the copper industry identified two immediate priorities: (i) assess the demand for and supply of technical skills; and (ii) improve supply linkages between mining companies and local producers and service providers.

- **Assess the demand for and supply of skilled labor.** Mining industry representatives expressed concern that the training provided by Zambian institutions often fails to match the needs of the mines. At the same time, both industry and the government are concerned about the number of expatriates employed by the mines. If the availability of skilled labor was greater in Zambia, more staff could be sourced domestically and the mines could improve their productivity. While it is unclear as to the reasons for this skills gap, one key driver seems to be a lack of information. Specifically, more information is required regarding (i) what skills the mining companies need; and (ii) what skills the training institutions provide (in terms of the numbers, types and levels of competence of their graduates); as well as a mechanism through which the mining companies can provide feedback on the “product” provided by the training institutions. Therefore, the JPC Program is assessing the demand for and supply of workers of different types and levels of skills. The intention is to provide useful planning input for both industry and training institutions. This assessment is underway and the findings will be communicated to interested parties, including mining companies already operating in Zambia, potential investors, the government, training institutions, labor unions and others. Ultimately, a challenge competition could be used to identify more effective ways to fill any skills gaps identified by the assessment.

- **Improve supply linkages between mining companies and local producers and service providers.** Mining industry representatives believe that there is scope for
improving linkages and thereby reduce mines’ operating costs and increase the number of jobs and revenue for the country. An assessment of successful linkages (cases in which local companies are supplying the mines) as well as the scope for greater/stronger linkages (i.e. what the mining companies’ needs are and what local producers are capable of supplying) will take place in mid-2011. Depending on the outcome of the assessment, a challenge competition could be launched to identify ways of improving supply linkages between mines and local producers/service providers.

The mining industry has also expressed concern about the efficacy of the regulatory environment and the transparency of tax payments. Given this, the JPC Program is supporting (i) the development and enactment of a revised Mines & Minerals Act intended to facilitate private investment and effective regulation of the industry; and (ii) efforts to ensure more transparent communication of tax revenues generated by the mines at national and local level (in conjunction with the Extractive Industries Transparency Initiative).

1 Additional activities (e.g. competitions, advocacy campaigns, experimenting with low-cost actions on a small scale) may be undertaken as they are identified.
10 LOOKING FORWARD: A POSSIBLE PHASE III

10.1 The Future of the JPC Program

The future of the JPC Program depends largely on the outcome of the current pilot phase. Three main possibilities exist: (i) the Program is wound down; (ii) the current Program is sustained; and (iii) the Program is scaled-up (see Table 6).

Table 6: Options for the JPC Program after June 2011

<table>
<thead>
<tr>
<th>Wind down the Program</th>
<th>No new activities to commence after May 2011 and all existing activities to be completed by end-June 2011.¹ The outcomes of and lessons learned from the pilot phase are communicated to interested parties to facilitate future efforts.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sustain the current Program</td>
<td>Complete existing activities and launch some new activities after June 2011, focusing on the existing priority industries and their target results. The work could be managed in different ways:</td>
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<tr>
<td></td>
<td>• Continue in a similar form: i.e. a partnership between the government, private sector and donors, with the World Bank as the Secretariat and financial backing from existing/new funding agencies;</td>
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<tr>
<td></td>
<td>• Continue in a different form, which could involve: (i) government absorbing activities into its own work program (e.g. through the Private Sector Development Reform Program at the Ministry of Commerce, Trade &amp; Industry or the relevant line ministries); or (ii) other organizations (e.g. Zambia National Farmers’ Union, Chamber of Mines, Tourism Council of Zambia, International Growth Centre or other donor agencies) absorbing activities into their work programs.</td>
</tr>
<tr>
<td>Scale up the Program</td>
<td>Existing activities are completed, and the Program continues beyond June 2011 with a larger size/budget and/or scope. It is extended to cover additional target results and/or, additional industries in Zambia and/or to another country. The work could be managed in different ways:</td>
</tr>
<tr>
<td></td>
<td>• Scale-up the Program in a similar form: i.e. a partnership between the government, private sector and other donors, with the World Bank as the Secretariat and additional financial backing from existing/new funding agencies;</td>
</tr>
<tr>
<td></td>
<td>• Scale-up the Program in a different form, which could involve: (i) the government, private sector, other donors and/or other organizations using the JPC approach to design and implement new activities related to additional target results for the beef, dairy, tourism and copper industries and/or new...</td>
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<tr>
<td>industries in Zambia; (ii) the government launching a new donor-funded operation (which could potentially include challenge fund, infrastructure, business enabling environment and/or growth poles components); or (iii) the World Bank and/or other organizations piloting the JPC approach in other countries.</td>
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A decision will be made by May 2011 – based on the outcome of the pilot phase – regarding the future of the JPC Program beyond June 2011.

### 10.2 Capturing Lessons Learned

The JPC Program is an experiment, hence some risk is inevitable – and the Program is constantly evolving based on lessons learned. The demand-driven nature of the Program requires a level of flexibility, in both design and implementation, to provide for continuous improvements and changes. This adaptable approach can help to identify and reduce risks as the Program proceeds, and the overall risk of failure is being mitigated by starting small (hence the “pilot” concept), regular monitoring and evaluation of progress, and adapting the Program along the way.

The Program will be monitored along two dimensions: the overall approach and the specific solutions being implemented, and the results will be shared within Zambia and the international development community. Progress will be measured against an agreed results framework, and the Program will be evaluated formally in mid-2011. The solutions identified and implemented under the Program will be monitored at key junctures in their life-spans, with the baseline analysis and ongoing monitoring conducted by a third-party to ensure independence. The broader lessons learned from the approach will also be communicated within Zambia and the international development community.

It is expected that the Program will identify some key ingredients for effective approaches to seemingly intractable development challenges. These might include (i) attributes of the approach (a transparent, demand-driven approach); and (ii) key dimensions, such as encouraging advocacy for results, the use of crowd-sourcing and/or experiences with using specific solutions to achieve particular target results.

The lessons from this work, in terms of what fails as well as what works, can inform and guide future initiatives in Zambia as well as in other countries. Irrespective of whether the JPC Program ultimately produces promising and scalable solutions, the process itself is likely to shed light on the dynamics of stimulating change in Zambia. While these lessons will be used in determining the future of the Program itself, some of them are also expected to be of interest to those designing and implementing other competitiveness-related initiatives in Zambia and beyond.

In conclusion, Zambia urgently needs more productive industries to drive prosperity. At the same time, the development community seeks more effective ways to support competitiveness and diversification. A range of tools are being tested - from catalyzing demand for results through to sponsoring competitions for solutions that can achieve them. Preliminary results suggest that the JPC approach is generating a positive return on
investment, including constructive ripple effects. As the final stage of the JPC unfolds, there will be more opportunities to glean lessons of what worked, what failed, and why.

1 Zambian organizations currently involved in the program may continue with some follow-up activities related to the activities undertaken under the JPC Program (e.g. Zambia Tourism Board will use the new brand in its marketing efforts; Government, the Zambia National Farmers’ Union and others may pilot some of the models arising from the beef & dairy challenge competitions; Government, the Chamber of Mines and others may implement activities to help improve the availability of skilled workers, based on the JPC Program’s mining skills assessment).

2 A risk assessment has been completed (using the World Bank’s Overall Risk Assessment Framework), and is available upon request.

3 The results framework is available separately.

4 The scope of the monitoring and evaluation (M&E) activities will be determined by the length of the program. If the program is wound down by July 2011, then the M&E activities will also be completed by this time.
ANNEXES
ANNEX A: TECHNICAL PAPERS PREPARED UNDER THE JPC PROGRAM

Final Reports


Draft Reports & Working Papers


ANNEX B: POSSIBLE CRITERIA FOR EVALUATING PROPOSALS SUBMITTED IN JPC CHALLENGE COMPETITIONS

- How well does the applicant understand and appreciate the technical, financial and socio-cultural aspects of the challenge?

- Are the nature and method of the proposed solution clearly explained and does it address one or more of the critical opportunities or constraints posed in the challenge?

- The cost effectiveness of the proposed solution.

- What is the expected impact, who could benefit and how?

- How long will it take to demonstrate the concept behind the proposed solution (ideally three to six months)? Are the aims and objectives of the proposal realistic given this timeframe?

- Technical viability: How does the solution work? What skills and resources would be required to implement it? Has a “host community” for the demonstration been identified?

- Social, cultural and political feasibility: Is this kind of solution likely to be politically, socially and culturally acceptable to the community? Does the proposal lay out ways to make it more culturally acceptable? Do the means of delivering the proposed solution appear viable?

- Market/financial viability: Is there a likely source of ongoing revenue (e.g. user fees, sales revenues, community sponsorship, government subsidy) to sustain this solution beyond the demonstration phase?

- What resources/capabilities are missing? What kind of financial and/or technical assistance will the project require? Is it possible for the JPC Program to provide/broker this assistance?
ANNEX C: CROWD-SOURCING AND CHALLENGE COMPETITIONS USED IN THE BEEF, DAIRY, TOURISM AND MINING INDUSTRIES IN OTHER COUNTRIES

Crowd-sourcing and challenge competitions have been used effectively outside Zambia, including in the industries targeted under the JPC Program. Examples include:

**Beef and Dairy Industries:**
- *Africa Enterprise Challenge Fund* ([www.aecfafrica.org](http://www.aecfafrica.org)) – a DFID-financed initiative aimed at encouraging private sector companies to compete for investment support for new and innovative business ideas that have a positive impact on the rural poor in Africa. Projects funded include:
  - Dairy Supply Chain Automation Project in Kenya, intended to address systemic issues along the dairy value chain by contributing to reliable, accurate information systems that will improve milk production; increase milk delivery to processors; improve information flow to farmers and increase farmer incomes;
  - Animal Health Skills Development Program in South Africa, an animal health skills development program for emerging stock farmers, owners and workers.
- *Livestock Market Efficiency Fund in Namibia* - a joint US and Namibian government initiative aimed at reducing rural poverty through investments that achieve a sustainable increase in the livestock sector’s economic performance.

**Tourism Industry:**
- DFID Tourism Challenge Funds in The Gambia and Montserrat, which funded a number of different projects;
- Tourism marketing challenges in the United Kingdom (e.g. the East Midlands Tourism Marketing Challenge Fund, which offers grants on a competitive basis for the implementation of tourism marketing campaigns that will raise the profile of the region and encourage more visitors), Australia (a competition run by the government’s tourism marketing agency that offered prizes for the best slogans and images related to Australia’s tourism industry) and several other countries.

**Mining Industry:**
- The Canadian gold mining group, GoldCorp, used crowd-sourcing to identify likely deposits of gold within its concessions. The company put its geological survey data online and offered cash prizes to those that could identify likely areas for exploration.
- Barrick Gold’s “Unlock the Value” program, which challenged the scientific community to come up with an economically viable method to significantly increase silver recovery from the type of ore found at Veladero mine in Argentina. Cash prizes were offered to the scientists that identified a viable method and additional prizes to those that made it to the concept testing phase.